Wavelink Terminal Emulation
Scripting Reference Guide

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Chapter 1: Introduction

This document provides information about creating and executing scripts for the Wavelink Terminal Emulation (TE) Client using the TE Script Editor.

The Script Editor is a component of the Wavelink TE Client. The Script Editor provides the ability to create and execute scripts that automate processes on the TE Client. The information in this document is for 7.3.5.9 and later builds of the TE Client.

The following steps outline the process of creating scripts using the Script Editor:

1 **Launch the Script Editor.**Launch the Script Editor from the TE Client installation utility or from the Avalanche Console.

2 **Create scripts using the Script Editor.** Use the Script Editor to manually build the script code.

-Or-

Create scripts using the Script Capture option. Capture the actions you want to include in your script to build the script code.

-Or-

Create scripts from text. Import a text file or create a text-based script using the Text Editor.

3 **Configure an execution method for the script.** Select from the available options the method you want to use to execute your script.

4 **Deploy the script to the TE Client.** Using Wavelink Avalanche, ActiveSync, or a third-party application, deploy the script to the devices.

5 **Execute the script from the TE Client.** Using the activation method you selected for the script, activate and execute the script.

NOTE: You can only run scripts while a Terminal Emulation session is active. If the connection drops, the script is terminated. If you switch between sessions, the script running in the inactive session remains suspended until that session is active again.

This document is written with the assumption the reader and user of the TE Client possess:

- Knowledge of wireless networks and wireless networking protocols.
- Knowledge of TCP/IP.
- Knowledge of Wavelink Terminal Emulation.
- Knowledge or rudimentary experience with programming/scripting languages.

The following table lists the document conventions used in this manual.

`Courier New`	Any time you type specific information (such as a file name) or press keys, those options appear in the `Courier New` text style. This text style is also used for sample code. Example: Press `CTRL+ALT+DELETE`.
`Italic Courier New`	Parameters are represented in italic Courier New font. The descriptions of the parameters, when necessary, are listed at the right.
Bold	Any time you interact with an option (such as a button or descriptions of different options in a dialog box), that option appears in the **Bold** text style. Examples: Click **File > Open**. Click the **Update** button.
Italics	Titles of dialog boxes are represented with an *italic* text style. Example: The *Script Editor* dialog box appears.

NOTE: If you copy and paste the sample code, you may need to edit out returns.

For concision and clarity, the name "Avalanche" is used to refer to both Avalanche MC and Avalanche SE. For more information about each product, refer to the specific user guide.

Chapter 2: Creating Scripts

There are three ways you can create scripts:

- **Manually.** Using this method, you build the script code from scratch using the Script Editor.
- **Script Capturing.** Using this method, you generate the script code by enabling script capturing and performing the action you want the script to automate. The Script Editor records the key presses and cursor movements and saves the information as script code. You can edit the captured code to customize the way the script runs.
- **From Text.** Using this method, you generate the script code by importing text from any text editor or entering text in the Script Editor.

For testing scripts, Wavelink recommends you install the TE Client for Windows. Once the script has been refined, you can save and deploy the script to the mobile devices you want to run the script.

This section provides information about creating scripts, including:

Launching the Script Editor

The Script Editor can be launched from the TE Client for Windows, the Configuration Utility for an ActiveSync installation, or from the Avalanche Console. Wavelink recommends creating and performing initial testing using the TE Client for Windows, then importing the scripts using either the ActiveSync utility or the Avalanche Console.

To launch the Script Editor from the TE Client:

1 Click **Options > Configure > Script Editor**.

The Script Editor appears.

2 Click **Add** to access the *Script Editor Configuration* dialog box.

To launch the Script Editor for a Client installed via ActiveSync:

1 From the Wavelink Product Configuration Utility, click **Script Editor**.

The Script Editor appears.

2 Click **Add** to access the *Script Editor Configuration* dialog box.

To launch the Script Editor from Avalanche Console:

1 Ensure that the TE Client package is installed in the Avalanche Console.

2 Launch the Avalanche Console.

3 In the **Software Profiles** tab, locate the profile that contains the TE Client software package.

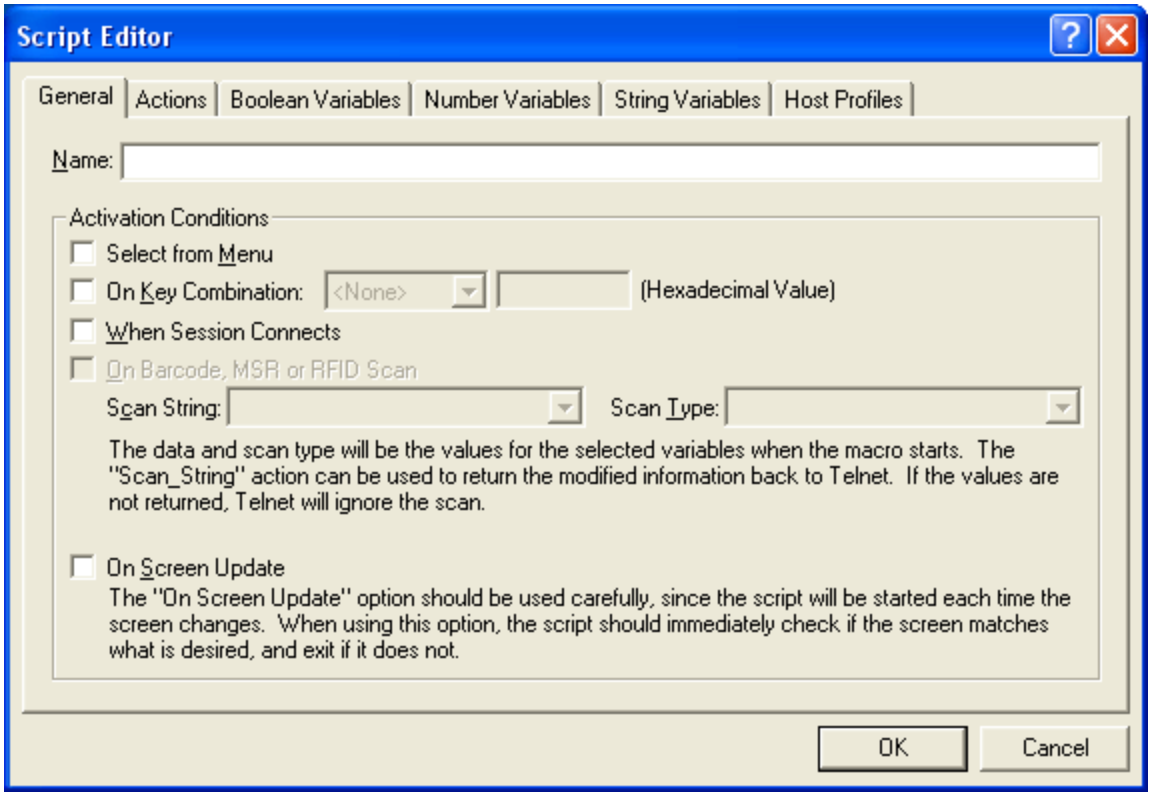
4 In the **Software Packages** tab, select the TE Client software package and click **Configure**.

The *Configure Package* dialog box appears.

5 From the menu list, select **Script Editor** and click **OK**.

The Script Editor appears.

6 Click **Add** to access the *Script Editor Configuration* dialog box.



Script Editor Configuration Dialog Box

From this dialog box, you can configure and create scripts. You must create a name for the script before you can begin editing it.

Building Scripts Manually

When building a script manually, you build the code for the script line by line in the Script Editor. The Script Editor allows you to name the script, select an activation method, use prompts to write the code, create variables, and select the host profiles to associate with the script.

This section provides the following information:

- Selecting Activation Methods
- Building the Script Code
- Creating Variables
- Selecting Host Profiles

Selecting Activation Methods

The activation method determines the way you execute the script from the TE Client. A script with no activation method selected can only be called by another script. It cannot activate alone.

Activation methods are selected in the **General Settings** tab of the *Script Editor Configuration* dialog box. This section provides information about the different activation methods including:

- Select from Menu
- Called from Another Script
- On Key Combination
- When Session Connects
- On Barcode, MSR or RFID Scan
- On Screen Update

Select from Menu

The **Select from Menu** option places a script execution selection in the TE Client **Options** or **Term** menu.

Called from Another Script

The **Called from Another Script** option allows the script to be called from another script. This option is automatically enabled when a script uses parameters.

On Key Combination

If you enable the **On Key Combination** option, you can launch the script by pressing the specified keys.

Use the Diagnostic Utility to obtain the key value. For more information about using the Diagnostic Utility, see the *Wavelink Terminal Emulation Client User Guide*.

When Session Connects

If you enable the **When Sessions Connects** option, the script activates when the host profile it supports is activated.

If you use this option, Wavelink strongly recommends that you limit the script to the appropriate host profiles. Because the script activates before any information appears on the emulation screen, you need to have your script wait for the appropriate screen to appear before activates. You should not have more than one script set to start when a session connects because the first script that starts will prevent any other scripts from running while it waits for the initial screen. For more information, see Selecting Host Profiles on page 27.

On Barcode, MSR or RFID Scan

If you want to perform special processing on items scanned into the computer, the Scan Handler is often powerful enough to make the changes you need. The Scan Handler settings, found in the Configuration Manager, are located in **Emulation Parameters > Scanner > Common > Scan Handler**. However if the Scan Handler is insufficient, you can use a script to perform any processing you need.

Before you can activate the script for a scan, you must create a string variable and a number variable.

- The string variable allows you to obtain the initial scan data.
- The number variable allows you to obtain the type of scan data.

Refer to Symbologies and Values on page 369 for the values of different symbologies. You can also use the `Get_Scan_Type_Name` and `Get_Scan_Type_Value` commands to display or handle scan types. Using the `Get_Scan_Type_Value` means all types are specified in the editor and you can select the type you want to use.

Calling the `Scan_String` command before your script exits allows Terminal Emulation to handle the scanning data. Because you are specifying the data and type returned, the script can change either one. If the script exits without calling `Scan_String`, the scanned data disappears.

To configure the On Barcode, MSR, or RFID Scan method:

1 Create the `Scan_String` and `Scan_Type` variables.

Once you create these variables, the **On Barcode, MSR or RFID Scan** option becomes available.

Create these variables in the String Variables and Number Variables tabs. For information on variables, see Creating Variables on page 25.

2 Select the **General** tab or **Activate** tab in the Script Editor.

3 Enable the **On Barcode, MSR or RFID Scan** option.

4 From the drop-down menu, select the **Scan_String**.

5 From the drop-down menu select the **Scan_Type**.

6 Click **OK**.

On Barcode, MSR or RFID Scan Example 1

The following is a sample script you can use if you want to insert a string (which could be just one character long) after the first six characters of any barcode at least six characters long.

A few notes about the sample script:

- **ScanData** is a string variable with the original barcode.
- **NewString** is a variable where you store the new barcode.
- **ScanType** is the number variable that keeps the type of scan data received.
- **OldLength** is an integer variable.
- **XXYY** is the string you insert.

```
OldLength=String_Length(ScanData)
        If (Number_Greater_Than_Or_Equal(OldLength,6))
NewString=String_Combine(String_Left(ScanData,6), "XXYY" )
        NewString = String_Combine(NewString,String_Right(ScanData, Number_
Minus(OldLength,6)))
        Else
        NewString = ScanData
        End_If
        Scan_String(NewString,ScanType)
        Return
```

On Barcode, MSR or RFID Scan Example 2

This example converts any DataMatrix scan values to PDF417 scan values. The **ScanData** and **ScanType** variables described for the previous example are used again.

```
If (Number_Equal(ScanType,Get_Scan_Type_Value("DATAMATRIX")))
Scan_String(ScanData,Get_Scan_Type_Value("PDF417"))
Else
```

```
Scan_String(ScanData,ScanType)
End_If
Return
```

On Screen Update

This option activates the script (if activation is allowed) every time the text on the emulation screen changes. This includes updates from the host or when the user presses a key and the key value is shown on the screen. It is recommended that you limit the host profiles that the script supports.

The following example generates a script that enters a command each time a particular string appears on the screen:

```
Label:Start:
If (String_Equal(Get_Screen_Text_Columns(1,1,5),"Ready", 0,FALSE))
Keypress_String("Proceed")
Keypress_Key("Enter")
End_If
Wait_For_Screen_Update
Goto: Start
Return
```

If the script is set to activate when the session first connects, it will work as desired with one limitation. Because it is always activated, no other scripts can be activated during the emulation session.

Here is an alternate implementation:

```
If (String_Equal(Get_Screen_Text_Columns(1,1,5), "Ready", 0, FALSE))
Keypress_String("Proceed")
Keypress_Key("Enter")
End_If
Return
```

If the script is set to run each time the screen updates, you get the desired behavior. Because the script is not active all the time, other scripts can be activated as well.

NOTE: Use this option carefully as it can cause a script to be executed frequently.

To configure the On Screen Update method:

1. Select the **General** tab or **Activate** tab in the Script Editor.
2. Enable the **On Screen Update** option.
3. Click **OK**.

Building the Script Code

Once you name the script and select an activation method, you can begin entering the code. You build the code in the **Actions** tab.

The sections below use an example script to demonstrate how to create the following script actions:

- Select a specific menu and then exit the script.
- Verifying the Script Starts on the Correct Screen and setting the correct cursor position. If the script is not on the correct screen, the script ends. If the emulation screen is correct, the script enters a user name and password in the correct locations.
- Entering the User Name and Password to send to the host.
- Verifying the Screen and Navigating Menus during a connection session.

Verifying the Script Starts on the Correct Screen

This portion of script verifies that the script is starting on the right screen and sets the correct cursor position. If the script is not on the right screen, the script ends. Once the script verifies that it is starting on the correct screen, a message displays "`Starting Script`."

To build example verification script:

1 From the **Actions** tab, click the **Insert** button.

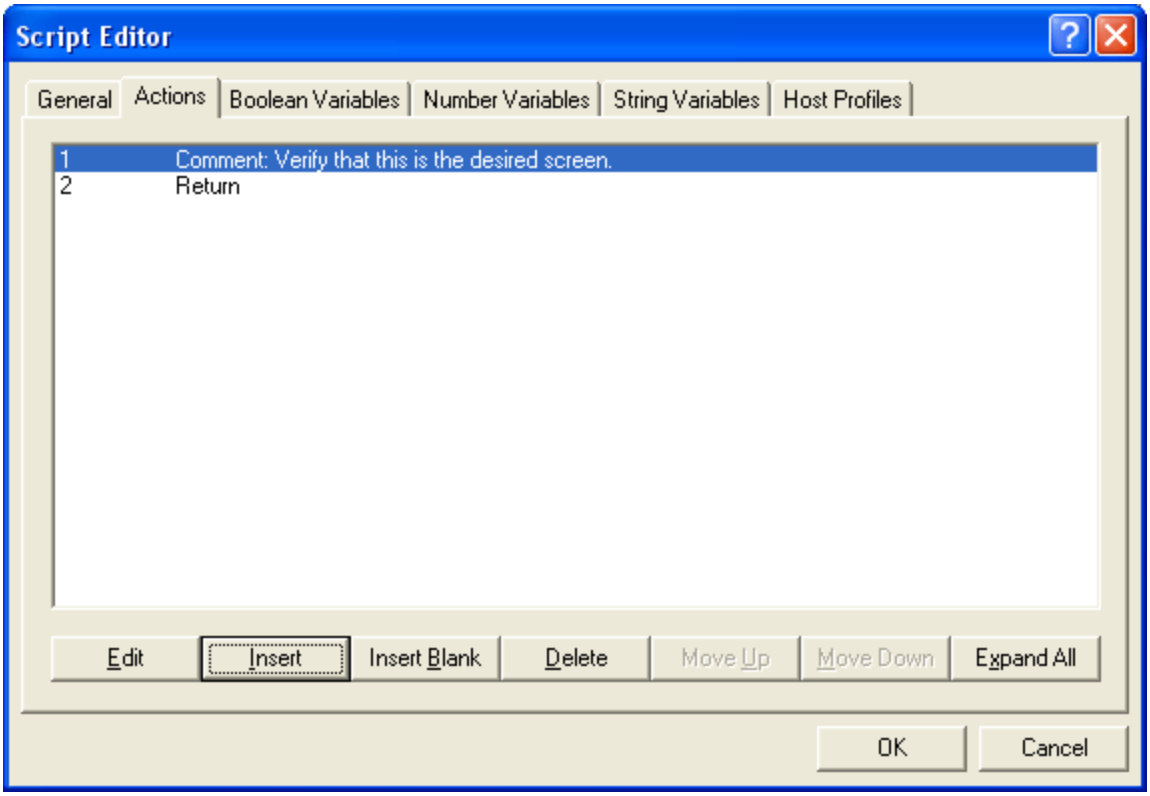
The *Action Editor* dialog box opens.

2 From the **Action** drop-down menu, select **Comment**.

3 Click the **Comment** tab and enter `Verify that this is the desired screen` in the **Constant String** text box.

4 Click **OK**.

The code is added to the **Actions** tab.



Entering a Comment

5 Click the **Insert** button.

6 From the **Action** drop-down menu, select **If_Not**.

7 Click the **Test** tab.

8 Enable the **Action** drop-down option and select **String_Equal** from the drop down menu.

9 Click the **Edit Action Value** button.

10 Click the **Test 1** tab.

11 Enable the **Action** drop-down option and select **Get_Screen_Test_Length** from the drop down menu.

12 Click the **Edit Action Value** button.

13 Click the **Row** tab and enter the number `1`.

14 Click the **Column** tab and enter the number `38`.

15 Click the **Maximum Length** tab and enter the number `7`.

16 Click **OK**.

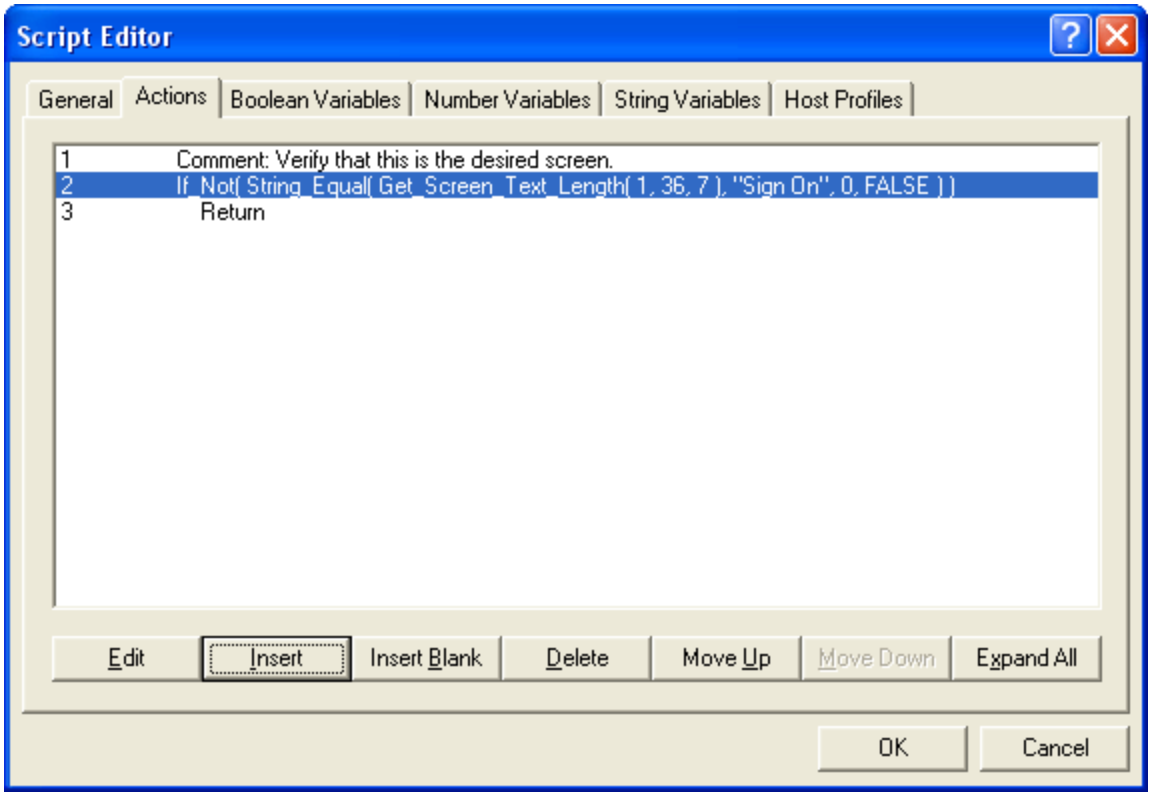
17 Click the **Test 2** tab and enter `Sign On` in the **Constant String** text box.

18 Click the **Maximum Length** tab and enter the number `0` in the **Constant Number** text box.

19 Click the **Ignore Case** tab and enable the **False** option.

20 Click **OK** until you return to the **Actions** tab in the Script Editor.

The code appears in the **Actions** tab.



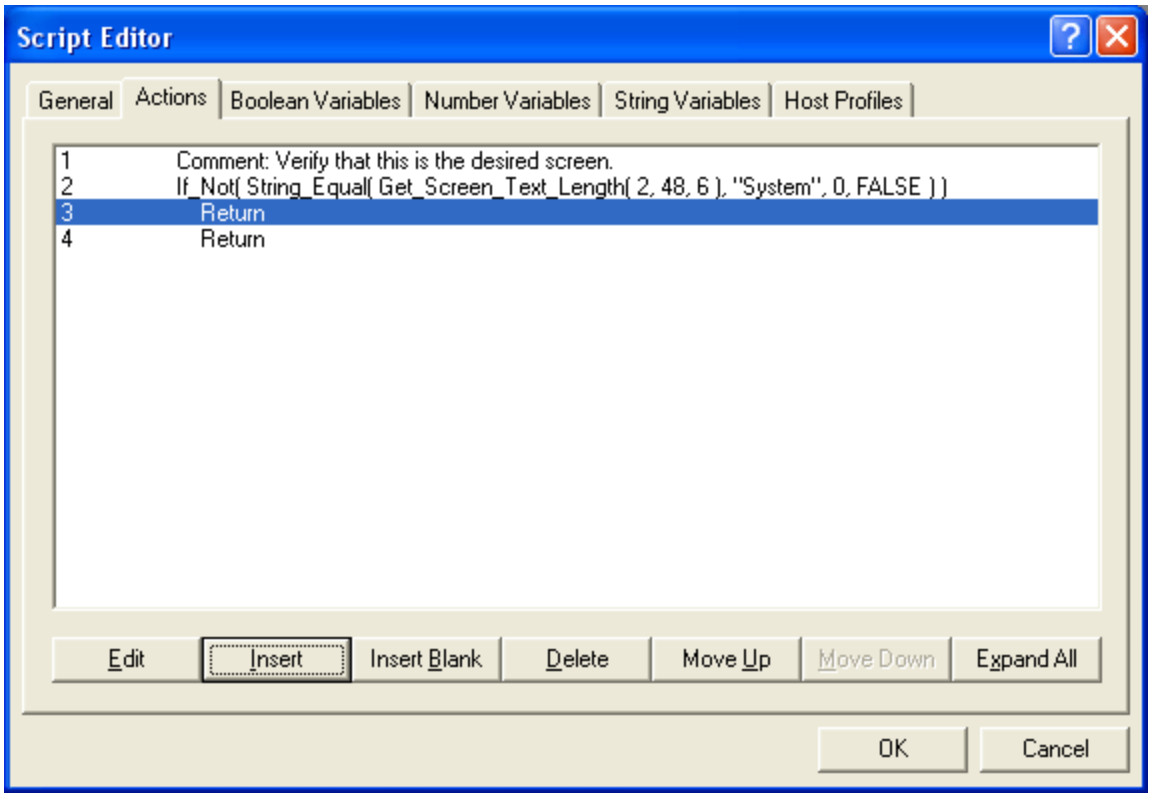
Entering an If_Not Action

21 Click the **Insert** button.

22 From the **Action** drop-down menu, select **Return**.

23 Click **OK**.

The code appears in the **Actions** tab.



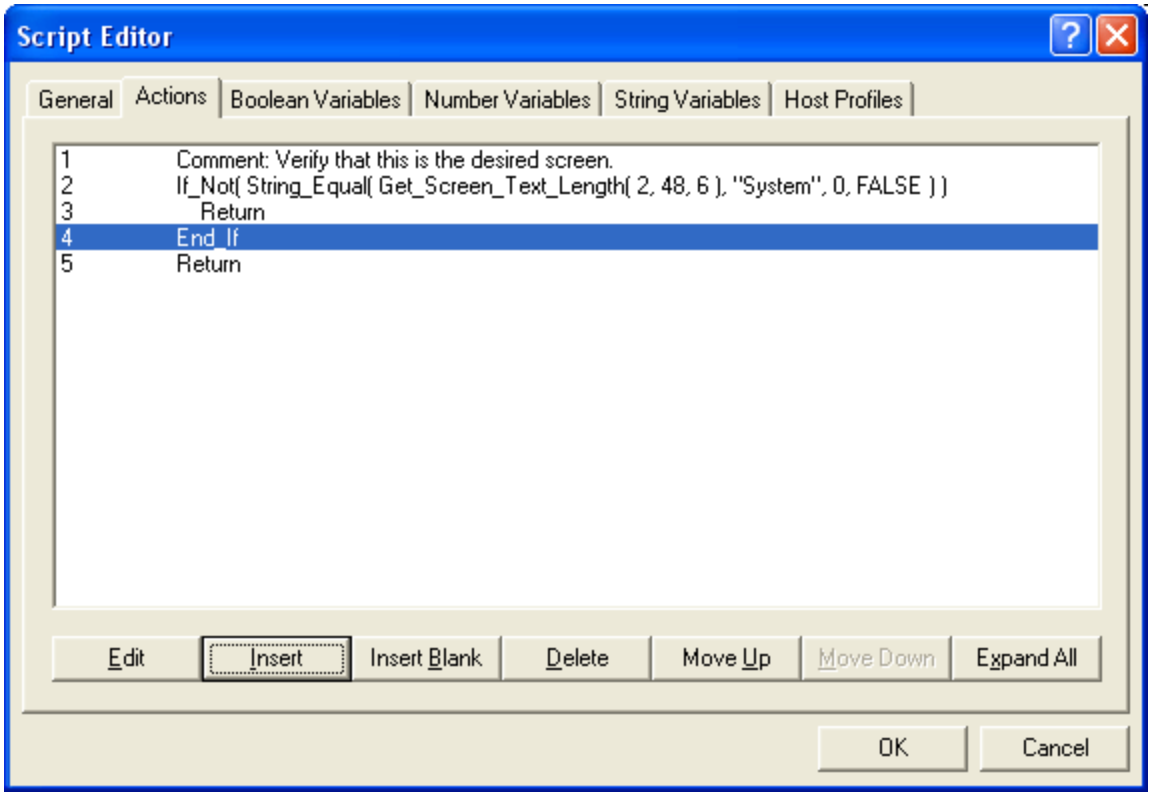
Entering a Return

24 Click the **Insert** button.

25 From the **Action** drop-down menu, select **End_If**.

26 Click **OK**.

The code appears in the **Actions** tab.



Entering the End_If Action

27 Click the **Insert** button.

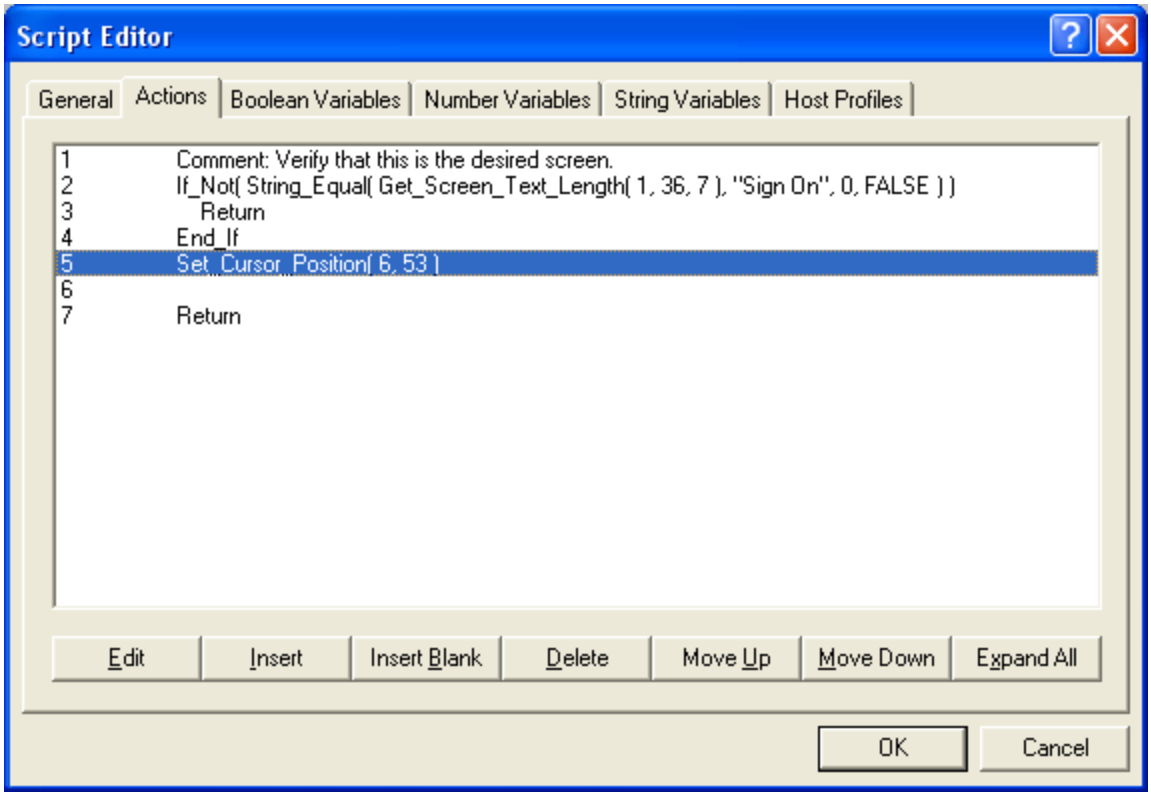
28 From the **Action** drop-down menu, select **Set_Cursor_Position.**

29 Click the **Row** tab and enter `6` in the **Constant Number** text box.

30 Click the **Column** tab and enter `53` in the **Constant Number** text box.

31 Click **OK**.

The code appears in the **Actions** tab.



Entering the Set_Cursor_Position Action

32 From the **Action** tab, click the **Insert Blank** button to insert a blank line in the code.

33 Click the **Insert** button.

34 From the **Action** drop-down menu, select **Message**.

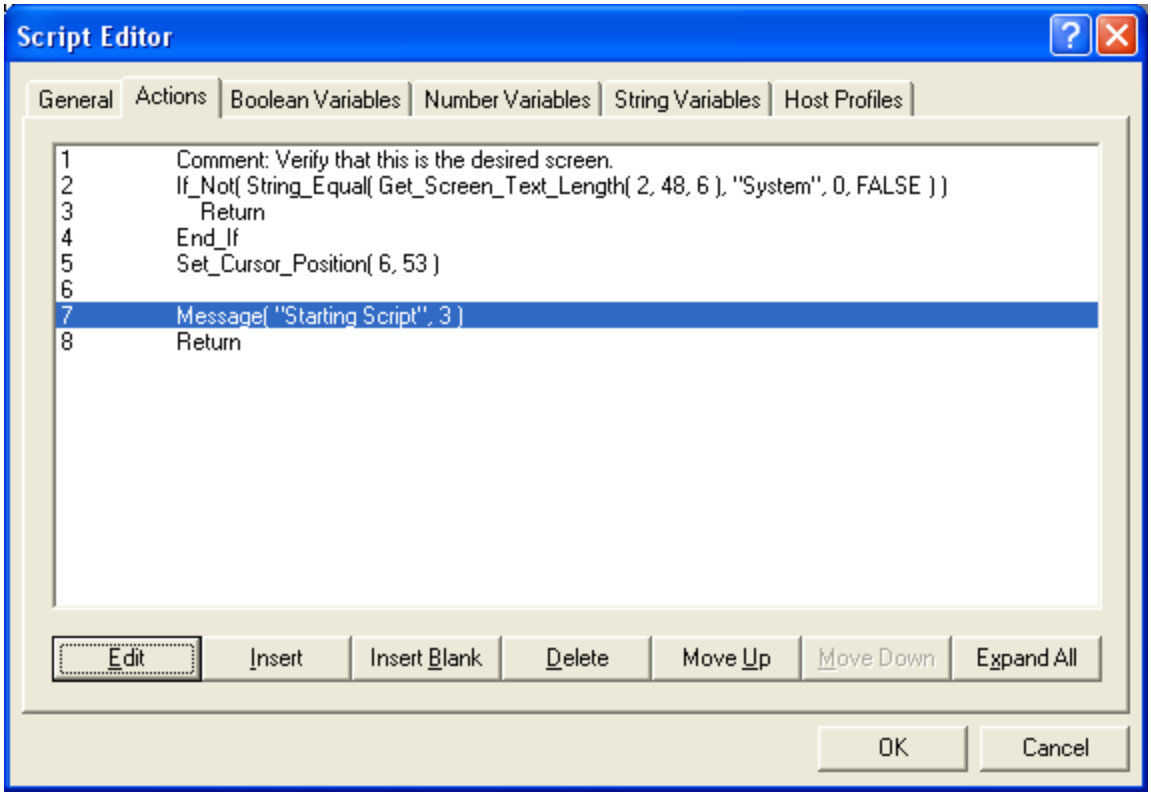
35 Click the **Message** tab and enter `Starting Script` in the **Constant Number** text box.

This code displays a "`Starting Script`" message on the emulation screen.

36 Click the **Timeout (Seconds)** tab and enter the number `3` in the **Constant Number** text box.

37 Click **OK**.

The code appears in the **Actions** tab.



Entering the Message Code

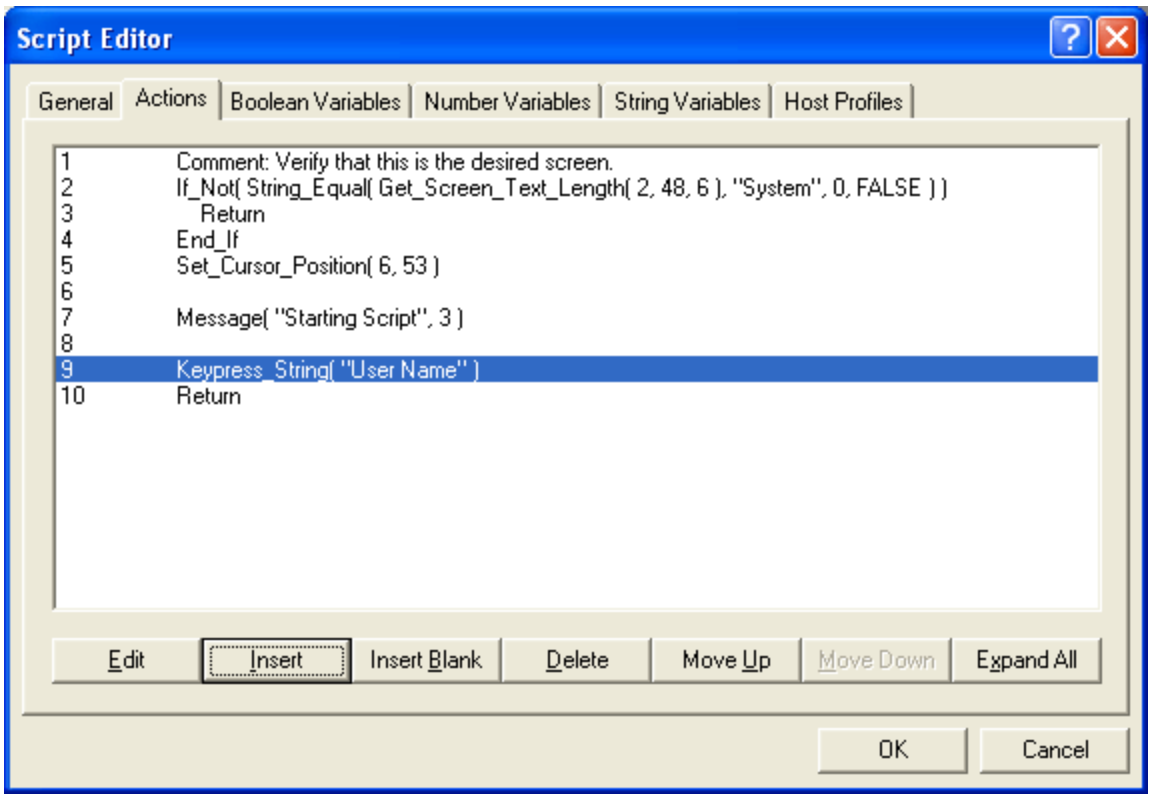
Entering the User Name and Password

This portion of the script enters the login information.

To build the example script:

1. Click the **Insert Blank** button to insert a blank line in the code.
2. Click the **Insert** button.
3. From the **Action** drop-down menu, select **Keypress_String**.
4. Click the **Characters** tab and enter `User Name` in the **Constant String** text box.
5. Click **OK**.

   The code appears in the **Actions** tab.



Entering the User Name Code

6 Click the **Insert** button.

7 From the **Action** drop-down menu, select **Keypress_Key**.

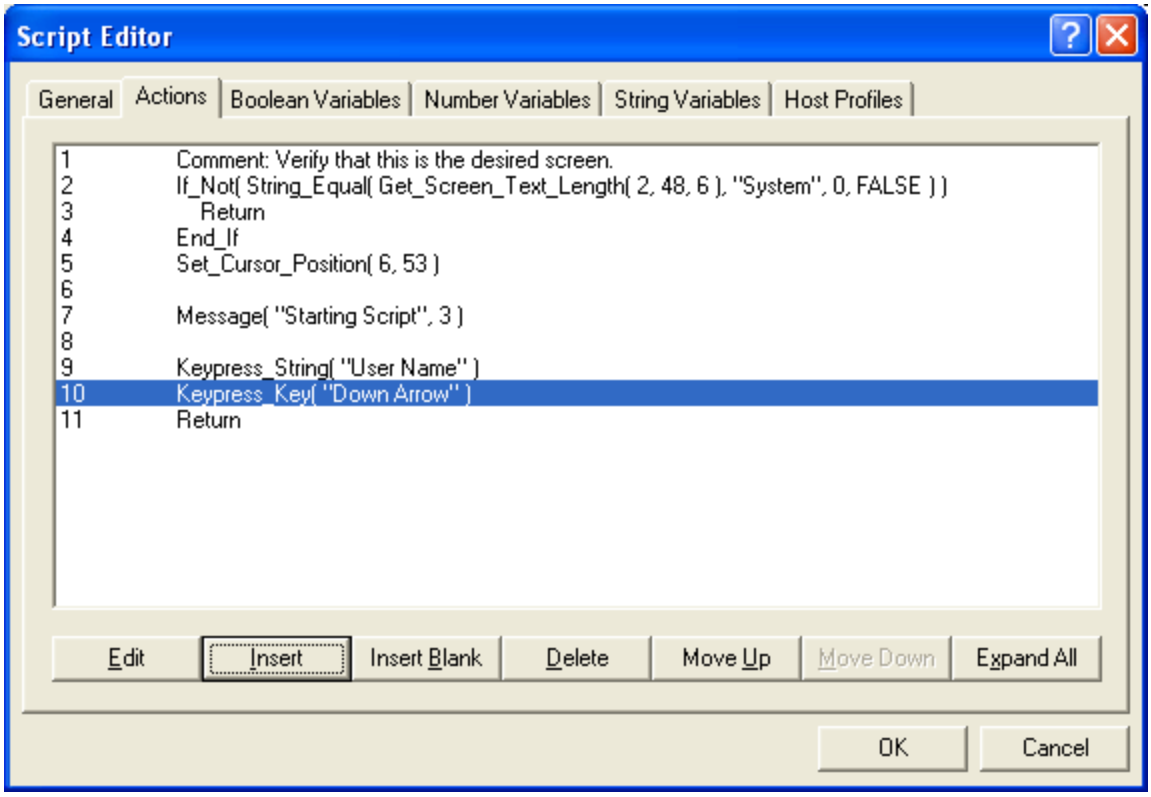
8 Click the **Key** tab.

9 From the **Emulation** drop-down menu, select the emulation type.

10 From the **Key** drop-down menu, select **Down Arrow**.

11 Click **OK**.

The code appears in the **Actions** tab.



Entering the Down Arrow Keypress

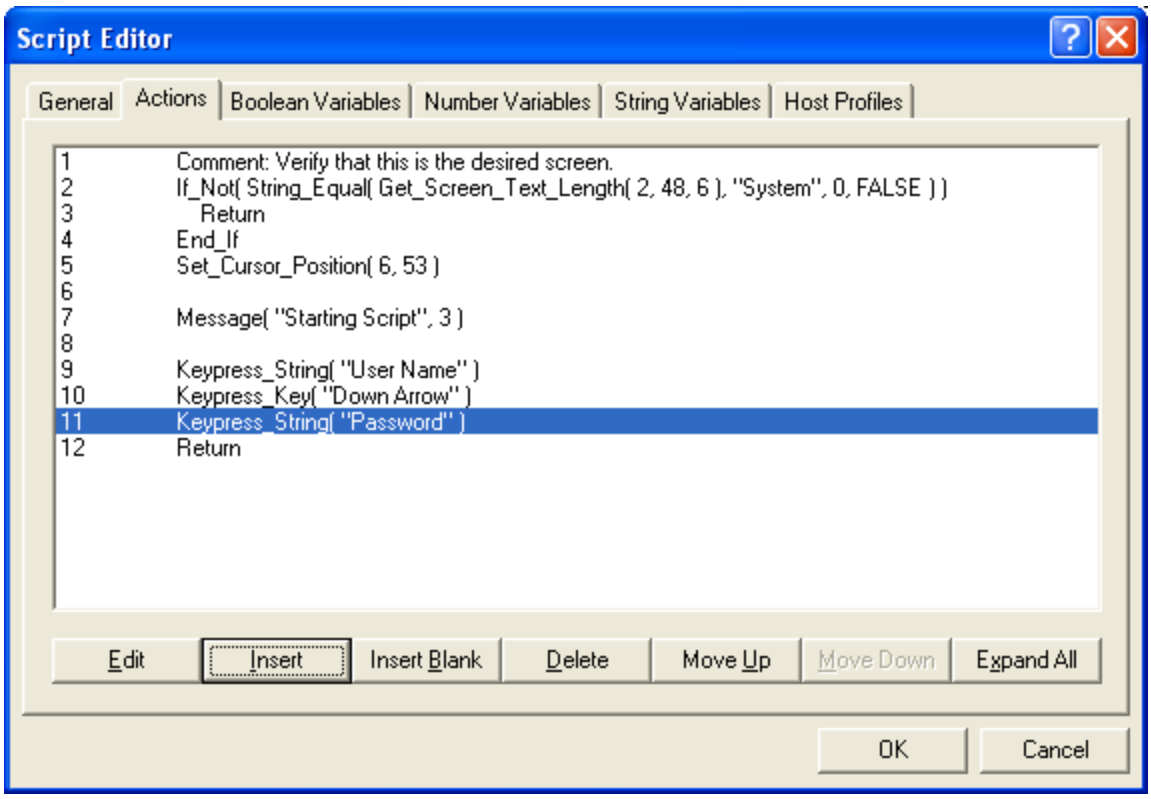
12 Click the **Insert** button.

13 From the **Action** drop-down menu, select **Keypress String**.

14 Click the **Character** tab and enter `Password` in the **Constant String** text box.

15 Click **OK**.

The code appears in the **Actions** tab.



Entering the Password Action

16 Click the **Insert** button.

17 From the **Action** drop-down menu, select **Keypress_Key**.

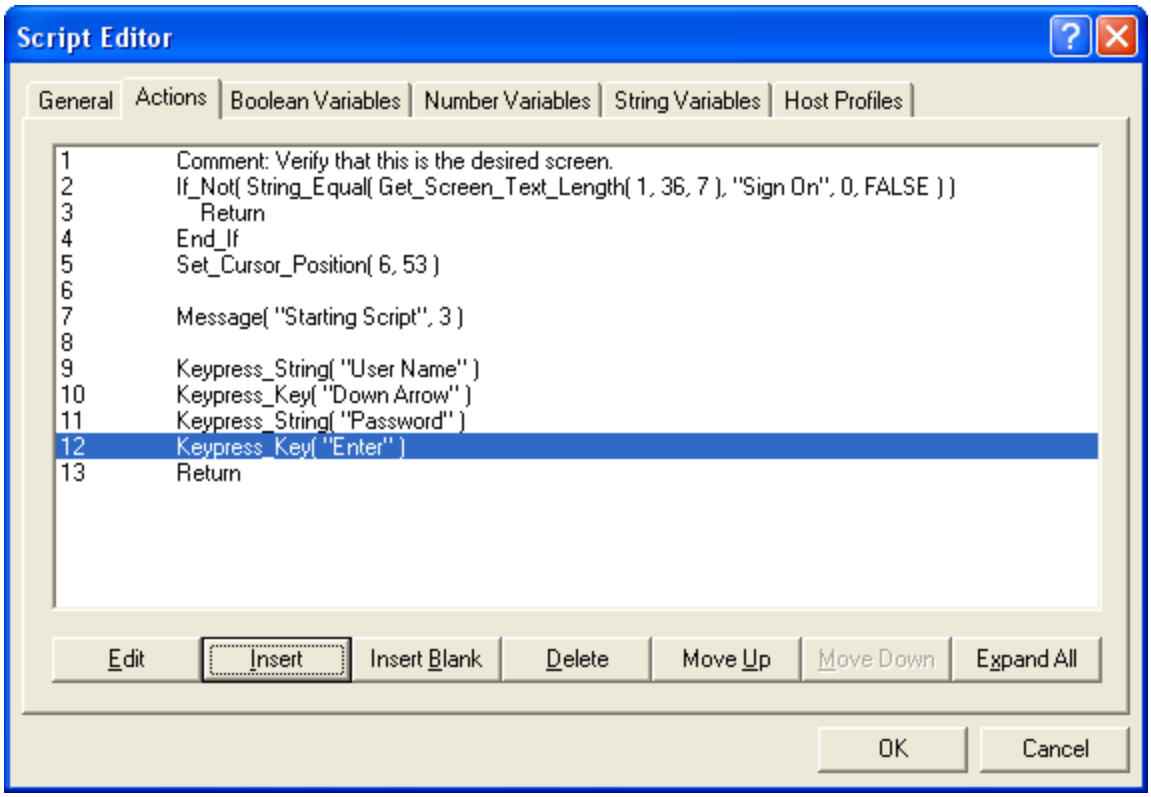
18 Click the **Key** tab.

19 From the **Emulation** drop-down menu, select your emulation type.

20 From the **Key** drop-down menu, select **Enter**.

21 Click **OK**.

The code appears in the **Actions** tab.



Entering an Enter Action

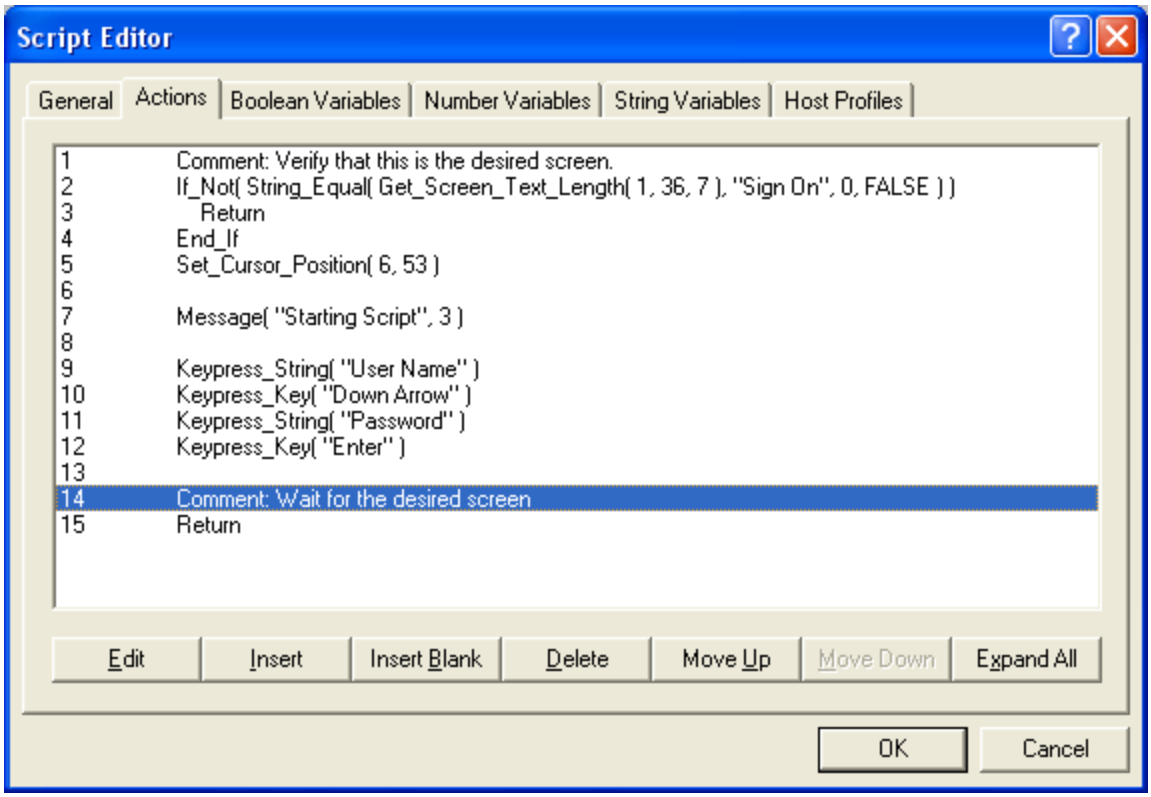
Verifying the Screen and Navigating Menus

This portion of the code verifies that you are on the correct screen after login. If you are not on the correct screen, the script will wait until the correct screen appears. Once the you are on the correct screen, the script navigates to a specific menu. The script displays the message "`Script Done`" and the script exits.

To build the example verification script:

1. Click the **Insert Blank** button.
2. Click the **Insert** button.
3. From the **Action** drop-down menu, select **Comment**.
4. Click the **Comment** tab and enter `Wait for desired screen` in the **Constant String** text box.
5. Click **OK**.

   The code appears in the **Actions** tab.



Entering the Delay Action

6 Click **Insert**.

7 From the **Action** drop-down menu, select **While_Not**.

8 Click the **Test** tab.

9 From the **Action** drop-down menu, select **String_Equal**.

10 Click the **Edit Action Value** button.

11 Click the **Test 1** tab.

12 From the **Action** drop-down menu, select **Get_String _Text_Length**.

13 Click the **Test 2** tab and enter `9. FUNCTION KEYS` in the **Constant String** text box.

14 Click the **Maximum Length** tab and enter the number `0` in the **Constant Number** text box.

15 Click the **Ignore Case** tab and enable the **FALSE** option.

16 Click the **Test 1** tab.

17 Click the **Edit Action Value** button.

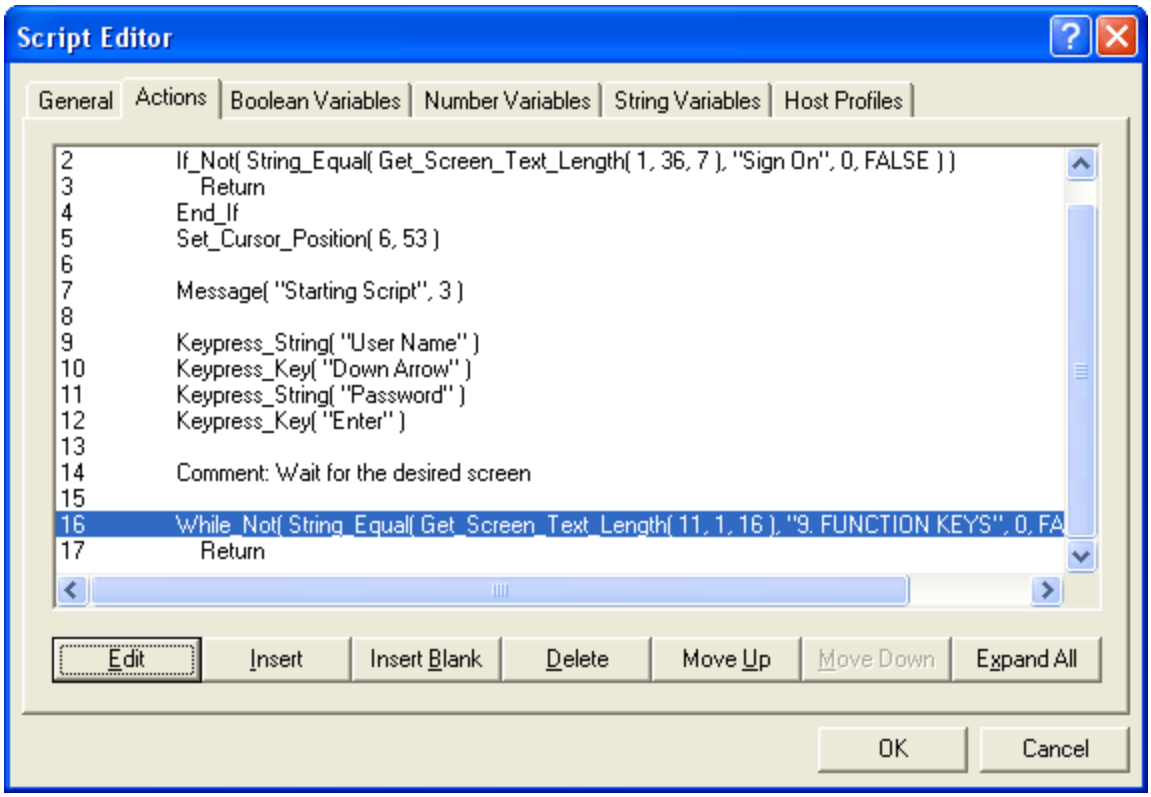
18 Click the **Row** tab and enter the number `11` in the **Constant Number** text box.

19 Click the **Column** tab and enter the number `1` in the **Constant Number** text box.

20 Click the **Maximum Length** tab and enter the number `16` in the **Constant Number** text box.

21 Click **OK** until you return to the **Action** tab.

The code is added to the **Action** tab.



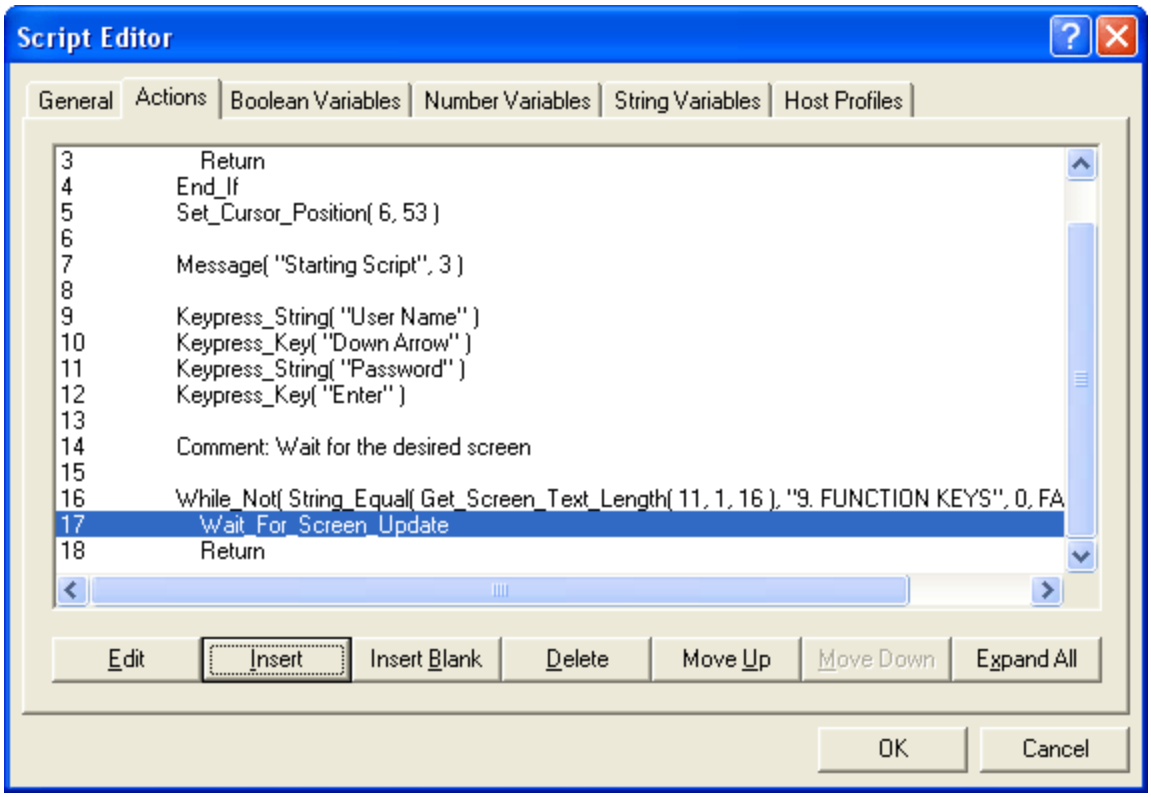
Entering a While_Not Statement

22 Click the **Insert** button.

23 From the **Action** drop-down menu, select **Wait_For_Screen_Update**.

24 Click **OK**.

The code appears in the **Actions** tab.



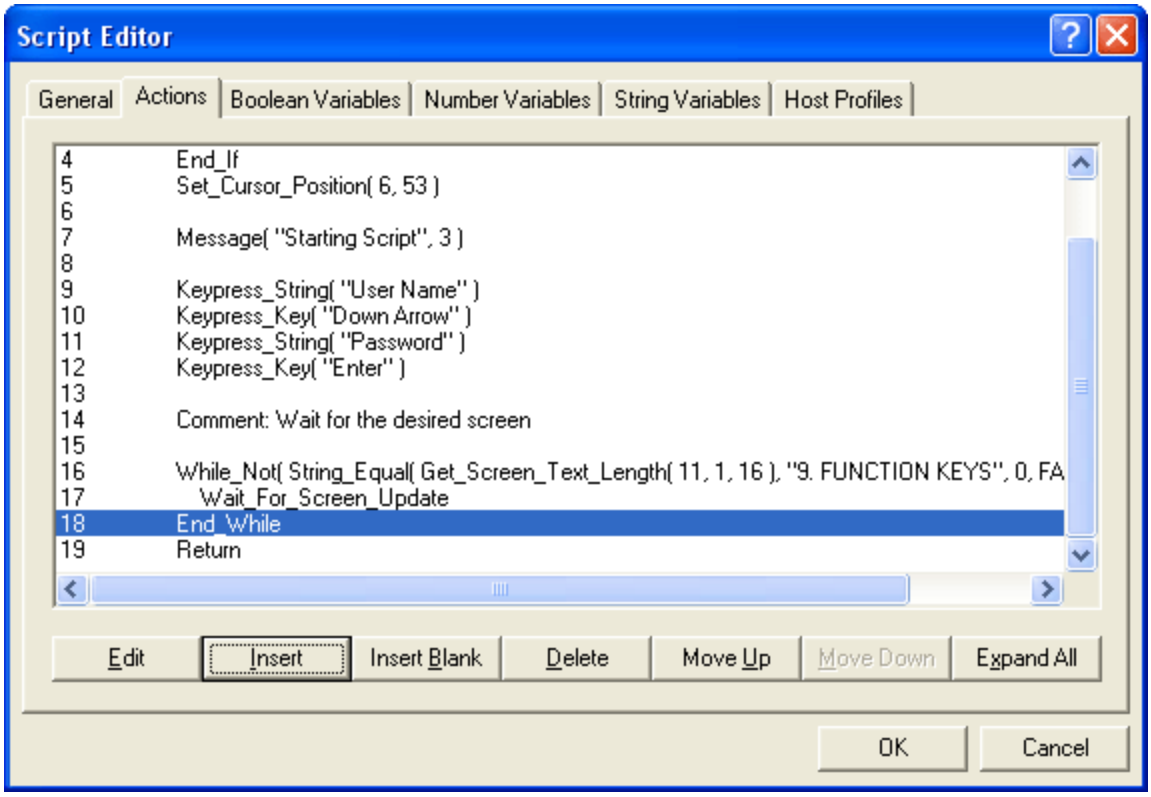
Entering a Wait_For_Screen_Update Action

25 Click the **Insert** button.

26 From the **Action** drop-down menu, select **End_While**.

27 Click **OK**.

The code appears in the **Actions** tab.



Entering an End_While Action

28 Click the **Insert Blank** button to insert a blank line in the code.

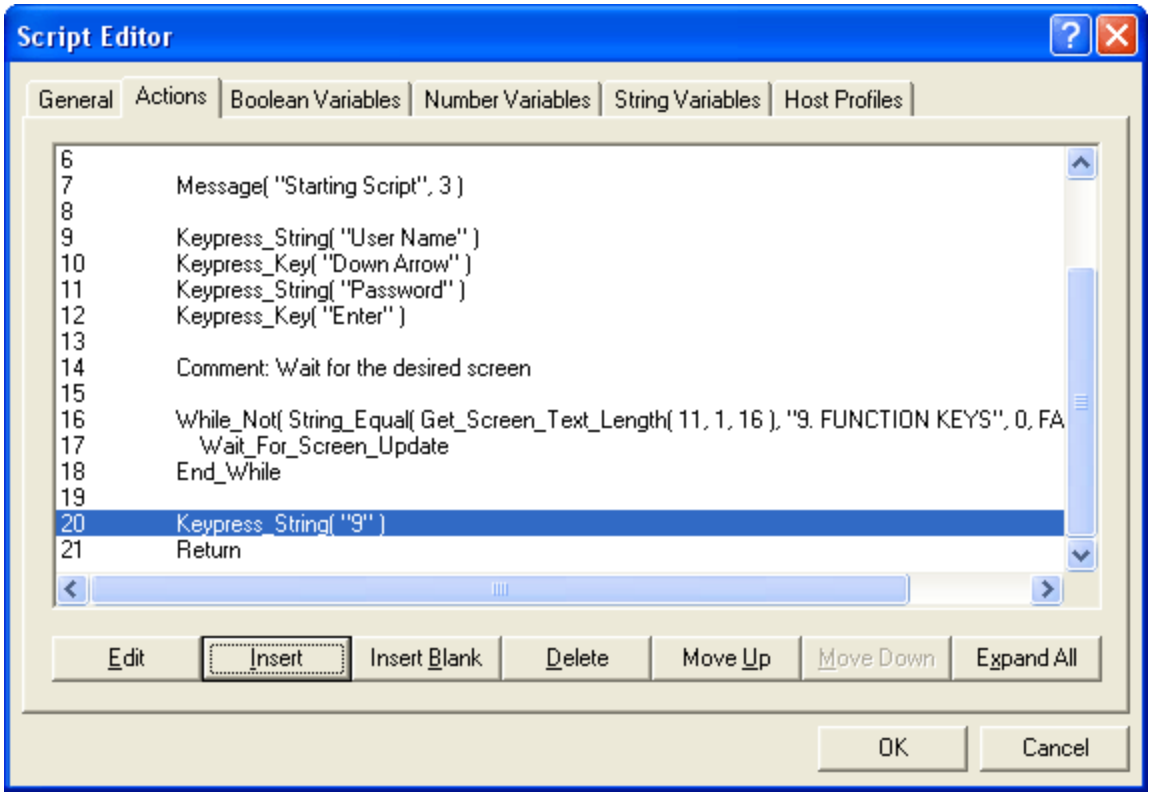
29 Click the **Insert** button.

30 From the **Action** drop-down menu, select **Keypress_String**.

31 Click the **Characters** tab and enter the number `9` in the **Constant String** text box.

32 Click **OK**.

The code is added to the **Actions** tab.



Entering a Keypress Action

33 Click the **Insert Blank** to insert a blank line in the code.

34 Click the **Insert** button.

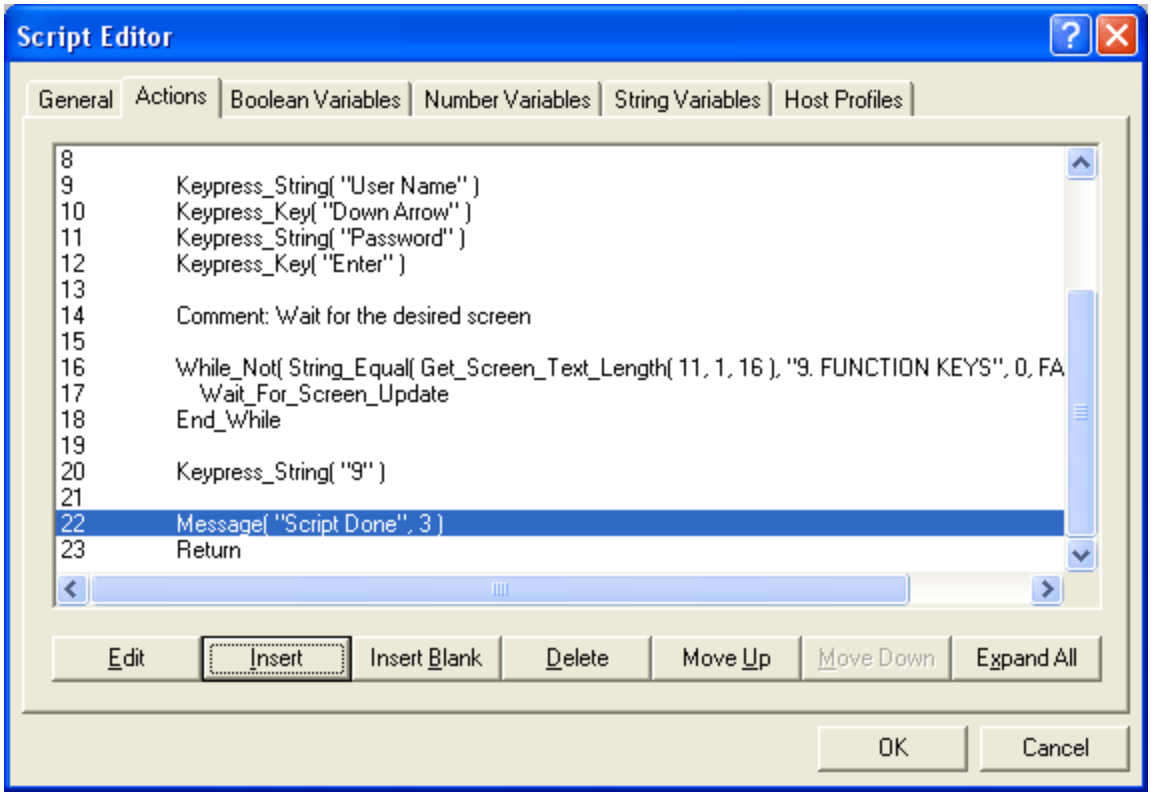
35 From the **Action** drop-down menu, select **Message**.

36 Click the **Message** tab and enter `Script Done` in the **Constant String** text box.

37 Click the **Time(Milliseconds)** tab and enter the number `3` in the **Constant Number** text box.

38 Click **OK**.

The code is added to the **Actions** tab.



Entering a Message Action

The code is complete.

39 Click **OK** to save the code in the Script Editor script list.

Once you complete the script you can deploy it to a device and execute it.

Creating Variables

There are three types of values recognized by scripting:

- Booleans (TRUE or FALSE values only)
- Numbers (integers)
- Strings

Every argument for every action is one of these three value types. Every action that returns a value returns one of these types. Variables provide a way to save the result of an action for later use as an argument for another command.

You can create and edit variables located in the corresponding tabs while editing a script. You can also create new variables while editing an action.

When a variable is persistent, the value remains after the script exits. Persistent variables are not script or session specific; once a value is assigned, any script in any emulation session can use a persistent variable to access that value. Two scripts are considered to be referencing the same persistent variable if both scripts contain persistent variables of the same type and same name.

Because writing new values to persistent variables will slow your application, they should only be used when necessary. If you want to use a persistent variable that will change values frequently, write your script with a regular variable that only changes the value of the persistent variable before the script pauses or exits.

NOTE: When you are using scripting with Speakeasy, any number variables need to be converted to string variables before text-to-speech can read them.

When a script starts, the variables will have known values: boolean variables are FALSE, number variables are 0, and string variables are empty. Possible exceptions to this are persistent variables or when a script activates another script. For more information on using a script to activate another script, see Calling Another Script on page 36.

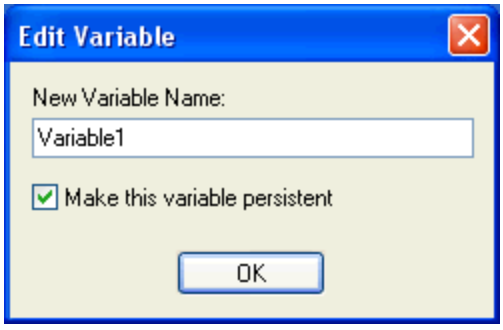
To create variables:

1 Determine which type of variable you want to create: boolean, number, or string.

2 From the Script Editor, select the tab that corresponds with the type of variable you want to create.

3 Click **Add**.

4 In the *Edit Variable* dialog box, enter the name of the new variable.

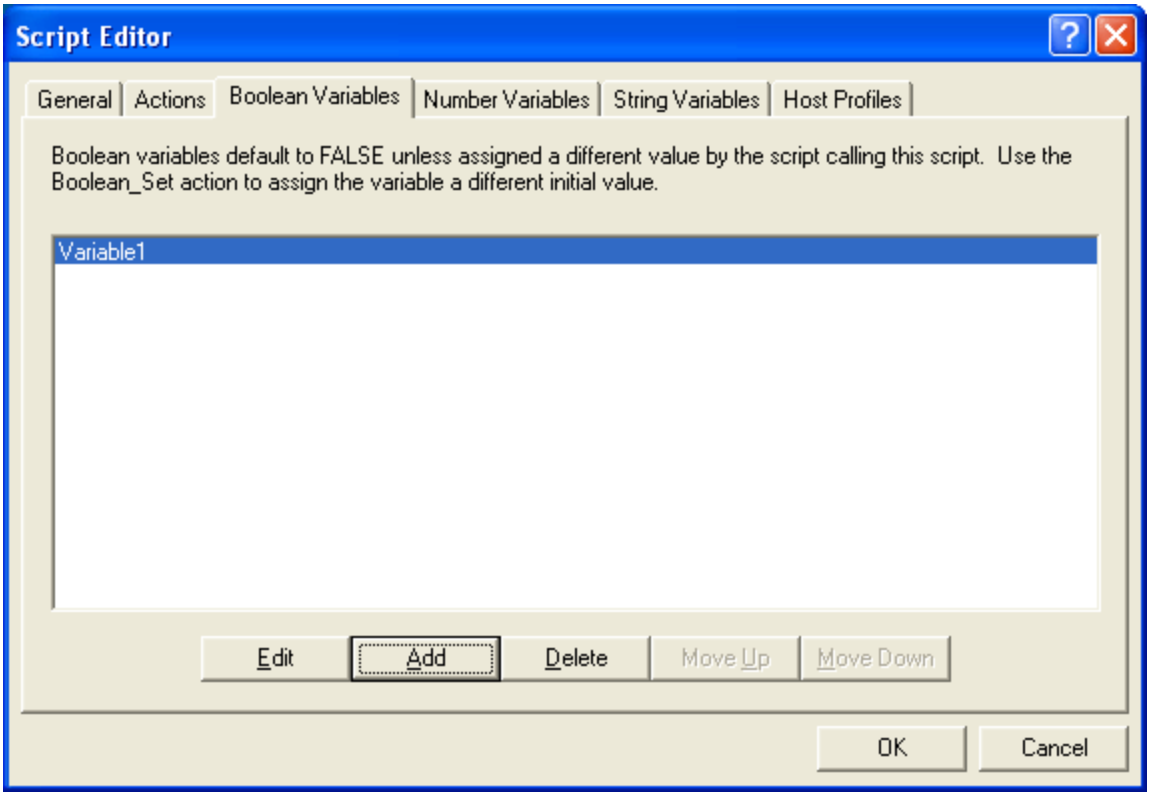


Adding a New Variable

5 If you would like the variable to be a persistent variable, enable the **Make this variable persistent** checkbox.

6 Click **OK**.

The new variable appears in the corresponding tab.



New Variable

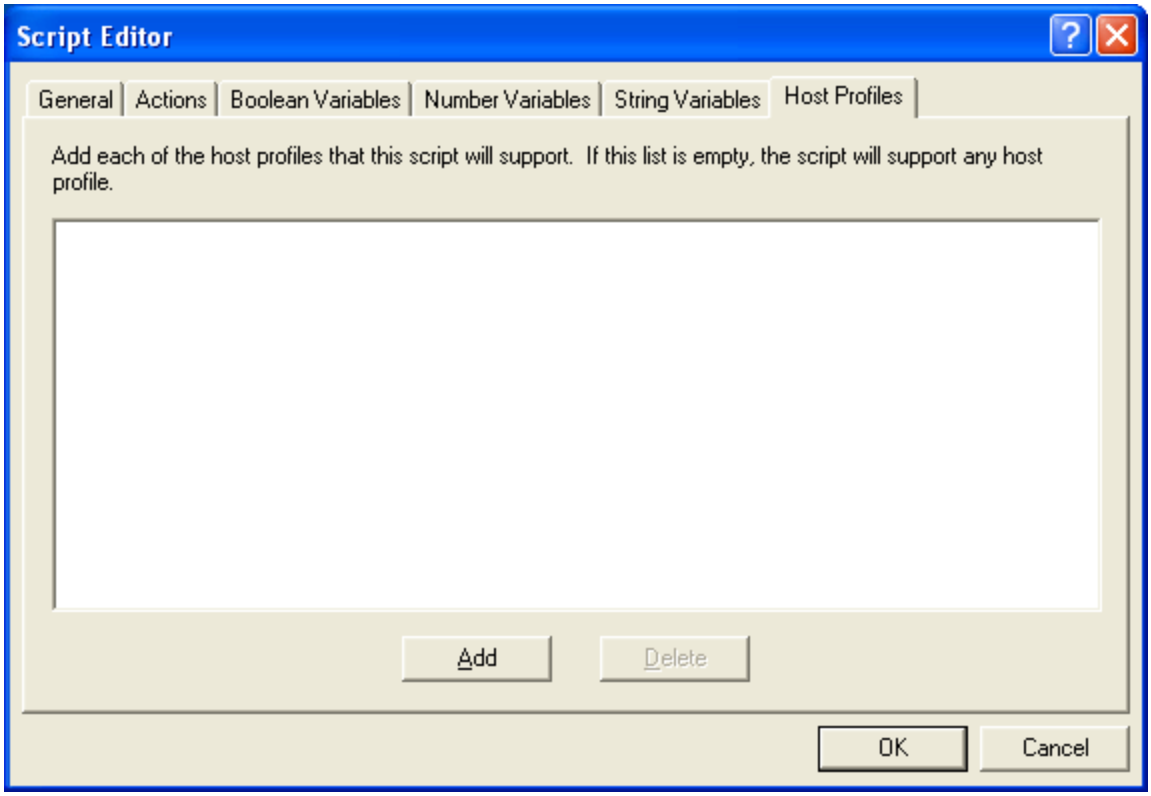
Selecting Host Profiles

For each script, you can specify which host profiles will be supported by that script. You may select host profiles from the **Host Profiles** tab.

If the script is generated by script capturing, limit the script to the host profile that was in use when the script was captured. The default — no host profile — allows the script to be run when any host profile is used.

To select host profiles:

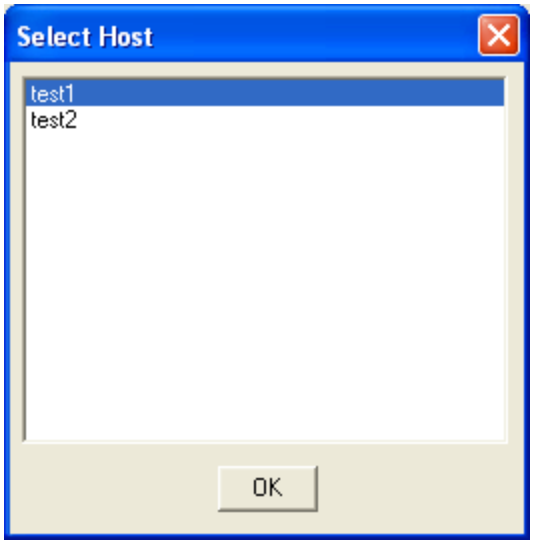
1 From the Script Editor, select the **Host Profiles** tab.



Host Profiles Tab

2 Click **Add**.

The *Select Host* dialog box opens.



Selecting Host Profiles

3 Select which host you want to use from the list of Avalanche hosts.

NOTE: If you have not created any host profiles, this dialog box will be empty.

4 Click **OK**.

The host appears in the **Host Profiles** tab.

Recording Scripts

Script capturing is an easy way to generate a script that automates actions or processes. When script capturing is activated, it captures key presses and mouse/pen cursor movements so those actions can be replayed when the script is activated. The script is saved to a file and can be edited using the Script Editor or a Text Editor after the script has been captured.

In addition to key presses and cursor movements, you can set field data identifiers or symbology values while you are recording a script.

- Recording a Script
- Adding a Field Data ID or Symbology

Recording a Script

When script capturing is activated, it captures key presses and mouse/pen cursor movements so those actions can be replayed when the script is activated. You can record a script from a device running a TE Client or using the TE Client for Windows.

To perform a script capture:

1 Position your mouse or cursor on the emulation screen you want to be at when the automated process starts.

2 From the **Options** or **Term** menu, select **Scripting > Start Capture**.

The *Script Capturing Initialization* dialog box appears, asking if you want to verify the current screen text.

3 Select **Yes** to verify the current screen text.

Select **No** if you do not want to verify the current screen text.

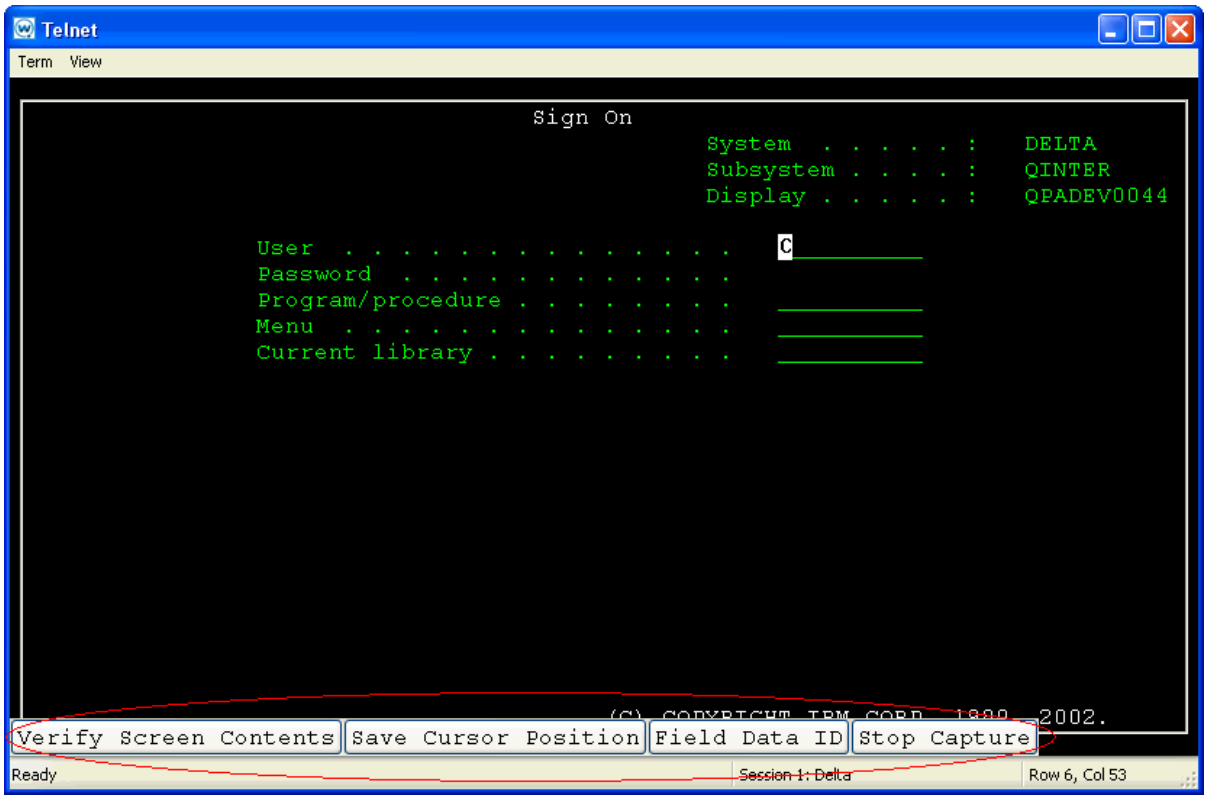
Selecting **Yes** makes the captured script start with an `If_not` command that tells the script to exit if the correct screen is not currently shown. Unless you know that your script will only run from the correct screen (for example, a script that is run only when a session first starts, or a script called by another script), you should select **Yes**.

NOTE: If you select **No**, click **Verify Screen Contents** and **Save Cursor Position** when you start your script capture. This causes your script to wait for the Client to finish updating the screen before processing script actions.

4 Perform any actions you want to include in the script.

5 Each time the screen changes, click **Verify Screen Contents** button.

NOTE: Some devices may only display buttons labeled **Screen**, **Cursor** and **Stop**. The **Screen** button refers to the **Verify Screen Contents** button. The **Cursor** button refers to the **Save Cursor Position** button. The **Stop** button refers to the **Stop Capturing** button.



Verify Screen Contents and Save Cursor Position Buttons

NOTE: Clicking the **Verify Screen Contents** button causes the generated script to pause and wait for the screen update. The pauses are necessary because scripts can run much faster than the interaction with the host.

6 When you finish capturing the behaviors you want in the script, click **Stop Capture**.

Once you capture a script, the Script Editor opens, allowing you to name the script and select an activation method. You can use the **Actions** tab to add actions for any error condition that the user may encounter.

Adding a Field Data ID or Symbology

The field data ID feature allows you to use scripting to configure field data identifiers. Field data identifiers assign a unique identification, such as a letter, to each field on the screen. Any time a barcode beginning with that identifier is scanned, the information automatically populates in the corresponding field.

In addition to field data IDs, you can use the barcode symbology to determine the field where scanned data should go.

NOTE: This feature is only available for IBM 5250 emulation.

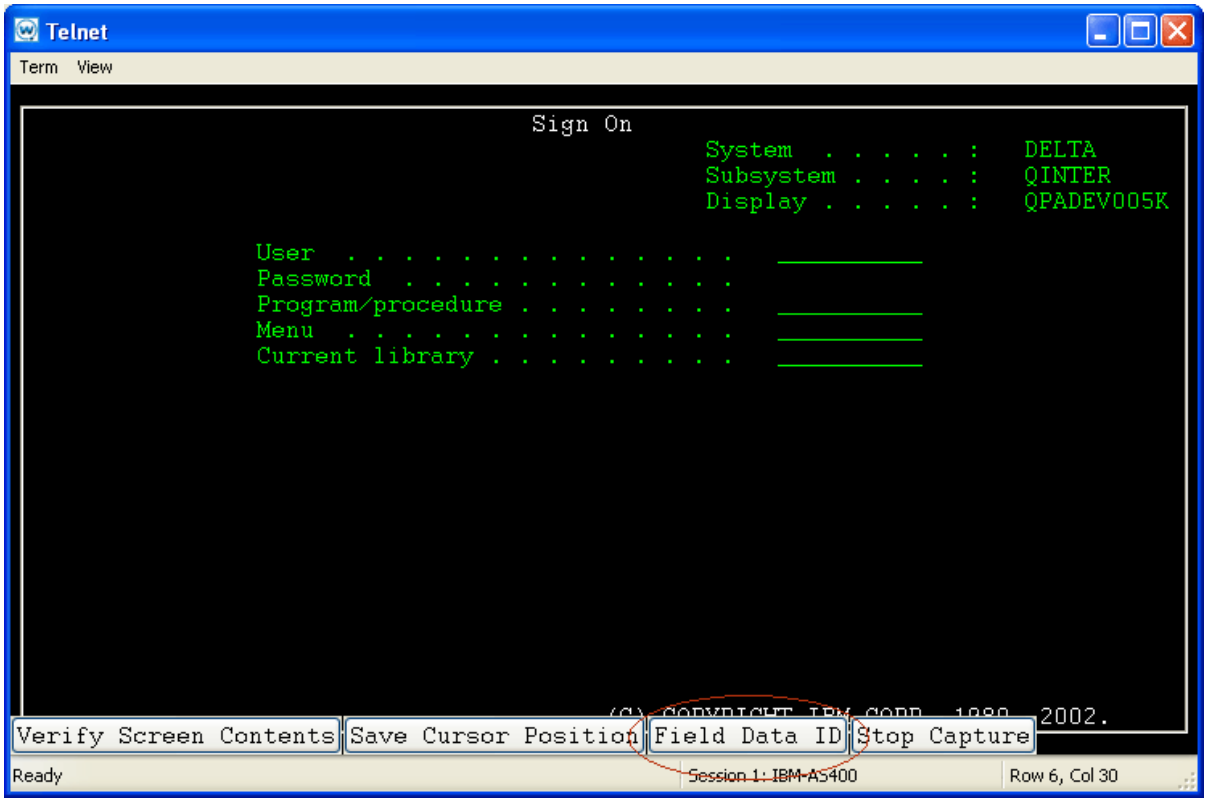
Use the *Field Data ID* dialog box to add a data ID or symbology to a field. If you want to make changes to data ID or symbology that has already been added to a script, you must edit the script manually.

To add a Field Data ID or Symbology:

1. Connect to an IBM 5250 host.
2. From the **Term** menu, select **Scripting > Start Capture**.

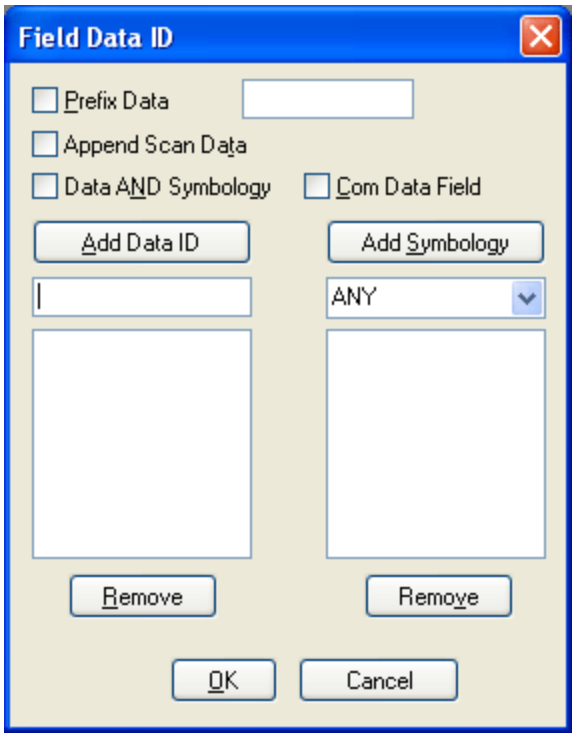
   The *Script Capturing Initialization* dialog box appears.
3. Click **Yes**.

   The *Select Screen Text* dialog box appears.
4. Select the desired text string or strings from the list and click **OK**.
5. Place the cursor on the field where you want to add a Data ID.
6. From the bottom of the emulation screen, click the **Field Data ID** button.



Field Data ID Button

The *Field Data ID* dialog box appears.



Field Data ID Dialog Box

7 In the text box below the **Add Data ID** button, enter the desired field data ID.

8 Click **Add Data ID**.

The new Data ID appears in the list below the text box.

9 If you want to remove a data ID, select the desired ID from the list and click **Remove**.

10 From the drop-down menu below the **Add Symbology** button, select the desired symbology.

11 Click **Add Symbology**.

The new symbology appears in the list below the text box.

12 If you want to remove a symbology, select the desired symbology from the list and click **Remove**.

13 If you want to add a prefix to the data, enable the **Prefix Data** checkbox and enter the prefix in the available text box.

- If you want to append scan data in the field, enable the **Append Scan Data** checkbox.
- If you want to add a data ID and a symbology, enable the **Data AND Symbology** checkbox.

- If you want the field to be the Com Data Field for the screen, enable the **Com Data Field** checkbox.

14 Click **OK** to close the *Field Data ID* dialog box and save your changes.

Creating Scripts From Text

You can use the Script Editor to generate scripts from standard text. The text can be entered in the Script Editor's built-in text editor, or imported from a text-editing program such as Notepad. This section provides information about creating scripts from text, including the following:

- Importing a Text File
- Building Scripts with the Text Editor

Importing a Text File

Create a script in any standard text editor and then import the script into the Text Editor.When creating the script text, you must use the same actions and commands provided in the Script Editor.

To import a text file:

1 Launch the Script Editor.

2 Click **Import Text**.

The *Select the Script Text File* dialog box appears.

3 Navigate to and select the text file.

4 Click **Open**.

The file is imported into the Script Editor.

Building Scripts with the Text Editor

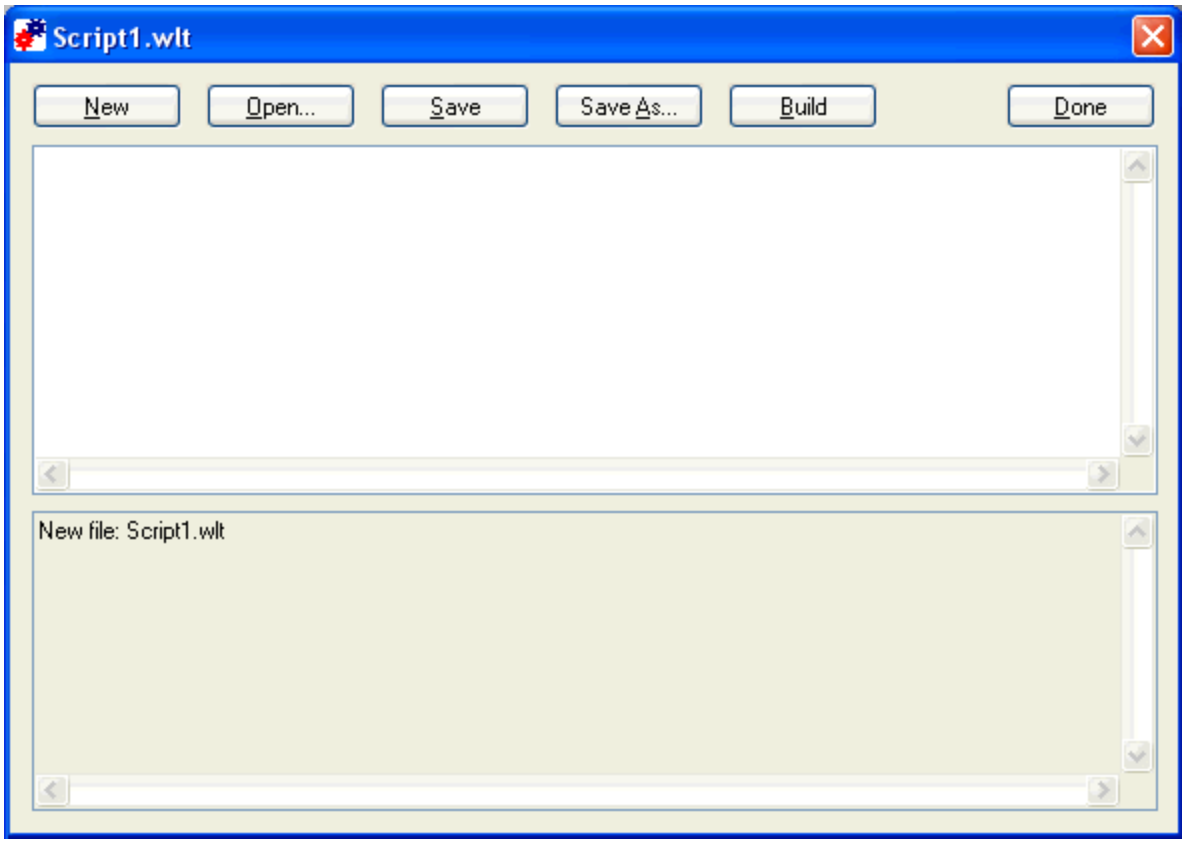
You can also create a text-based script using the Text Editor. The Text Editor will validate the script syntax when you build the script.

To build a script:

1 Launch the Script Editor.

2 Click **Add As Text**.

The Text Editor opens.

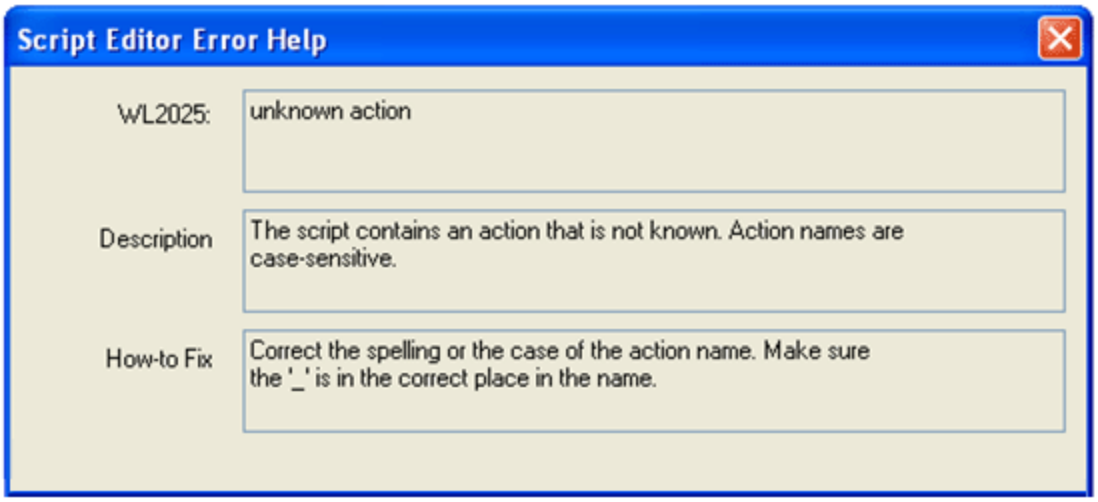


Text Editor

3 Enter the text into the Text Editor. You must include a script name, along with script variables and activation methods. If desired, you may also assign a Host Profile to be supported by the script.

4 After entering your text, click **Build** to verify the script text. The Text Editor displays build information in the bottom section of the window. If the build information includes an error message, single-click the message to display the *Script Editor Error Help* dialog box.

The *Script Editor Error Help* dialog box displays the error number, a description of the error, and explains how to fix the error.



Script Editor Error Help

For a full description of each error message, refer to Script Build Errors on page 377.

5 When you have finished building the script, click **Save** or **Save As** to save a copy of the script text.

6 Click **Done** to add the script to the Script Editor, or click **New** to begin building a new script.

Calling Another Script

You can program a script to call other scripts or to call itself. Nesting scripts makes it easier to take a block of functionality and use it multiple times or to solve problems that can be described recursively.

The following example script shows how to use recursion (a script calling itself) to calculate factorials:

```
        If (Number_Equal(ArgumentValue,1))
Comment: The factorial of 1 is 1
 Return
        End_If
        If (Number_Not_Equal(ArgumentValue,0))
Comment: The factorial of X is X multiplied by the factorial of X - 1
        Temp=ArgumentValue
        ArgumentValue=Number_Minus(Temp,1)
        Call: Factorial
        ArgumentValue <-> ArgumentValue
        ArgumentValue = Number_Multiply(Temp,ArgumentValue)
        Return
        End_If
```

```
        ArgumentValue = Ask_Number("Enter a number:", "Factorial
Calculator",1,12,0)
        Call: Factorial
        ArgumentValue <-> ArgumentValue
Ask_OK(String_Combine("The factorial is", Number_To_String_
Decimal(ArgumentValue)), "Result")
        Return
```

This script uses two integer variables, `ArgumentValue` and `Temp`.

When a script calls another script, the calling script can assign values to the called script variables. The factorial example script knows it is being called recursively because the `ArgumentValue` variable is not 0. If `ArgumentValue` is 0, the script will ask for the number to calculate the factorial with. Each time the script is called, the `ArgumentValue` variable of the calling script is assigned the final value in the called script's `ArgumentValue` variable. This keeps the results of the called script's actions from being lost. (If the value were not returned, then there would be a "<--" instead of a "<->" in the Call action's argument list.) When you add the action for calling a script, you need to specify which variables in the called script will be assigned a value, and what that initial value will be.

NOTE: If you wanted to be more efficient, you could create a `While` loop that performs the multiplications to calculate the factorial. You could also return the proper response for each factorial, since numbers higher than 12 exceed the maximum number value. However, there are some problems that are easiest to solve using recursion. The example above may give you an idea how you could use it.

Chapter 3: Editing Scripts

Regardless of how a script is created, edit it using either the Script Editor or a text editor. You can debug a TE Client script from the TE Text Editor or have the script generate a log file. Once you have completed editing the script you can export the script to use on a different device or deploy it for use during an emulation session.

When the script generates a log file, each action executed, with the values of its arguments and the results of the action, is written to the log file. The file path for where the log file is stored is configured using the `Logging_On` action.

When a script calls another script, the logging for the calling script is suspended. Logging resumes when the called script exits. It is possible to have a script called by another script (or a script calling itself recursively) use the same logging file.

For more information on using script logging, see the following sections:

- Turn Script Logging On
- Turn Script Logging Off

To debug a script:

1. From the main screen of the Script Editor, click **Add As Text** to open the Text Editor.
2. Build your script. When your script is complete, click **Build** to verify the script text.

   The Text Editor displays build information in the bottom section of the window.
3. If the build information includes an error message, click the message to display the *Script Editor Error Help* dialog box.

The *Script Editor Error Help* dialog box displays the error number, a description of the error, and explains how to fix the error.

To edit a script with the Text Editor:

1. Launch the Script Editor.
2. Select the script you want to edit from the script list and click **Edit As Text**.

   The Text Editor appears.
3. Edit the script as desired, then click **Build** to verify the script syntax.
4. When you have finished editing the script, click **Save** or **Save As** to save a copy of the script text.
5. Click **Done** to return to the Script Editor, or click **Open** to edit another script.

Turn Script Logging On

Include a `Logging_On` action in your script code to generate a log file. Place the `Logging_On` action at the point you want to begin logging.

To enter the Logging_On action:

1 From the **Actions** tab, click **Insert**.

2 From the **Action** drop-down menu, select **Logging_On**.

3 Click the **File Path** tab.

4 In the **Constant String** text box, enter the location where you want to store the log file.

5 Click the **Overwrite Previous** tab.

6 Set the Override Previous option.

When you set the **Override Previous** option to FALSE, the latest log file will not replace the existing file. Instead, a separate log file is created for each log.

When you set the **Override Previous** option to TRUE, the most recent log file will replace the existing log file.

NOTE: Because logging slows the performance of Terminal Emulation and takes up space on your devices, you may not want to include it in end-user scripts. Set the **Override Previous** value to TRUE to keep the log files from getting too large.

7 Click **OK**.

The code is added to the **Actions** tab.

Turn Script Logging Off

If the script exits, logging automatically terminates, so you usually will not need the `Logging_Off` action. However, if you only want to log a portion of the script, you can enter a `Logging_Off` action to stop the logging.

To enter a Logging_Off action:

1 From the **Actions** tab, click the **Insert** button.

2 From the **Action** drop-down menu, select **Logging_Off**.

3 Click **OK**.

The code is added to the **Actions** tab.

Chapter 4: Importing and Exporting Scripts

After you finish building a script, your script is automatically saved in the Script Editor. You can also export a script and save it in a specific location on the network.

Scripts are saved as `.wls` files if you click **Export**, or as `.wlt` files if you save them as a text file. Scripts saved in `.wls` format can't be viewed outside the Script Editor and must be imported back into the Script Editor to view or edit.

This section provides information on importing a `.wls` file. For information on importing a text file, see Importing a Text File on page 34.

To export a script:

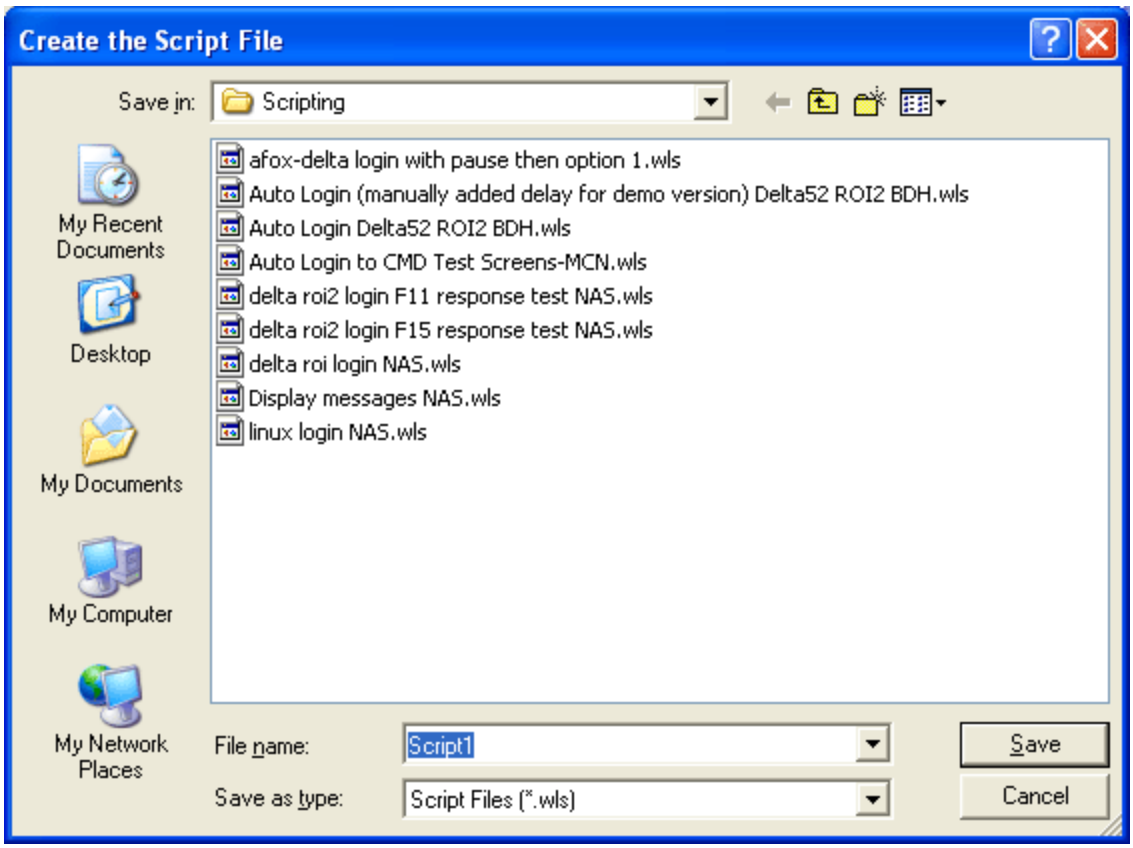
1 From the script list, select the script you want to export.

2 Click **Export**.

-Or-

To save the script as text, select **Save As Text**.

The *Create the Script File* dialog box opens.



Exporting a Script

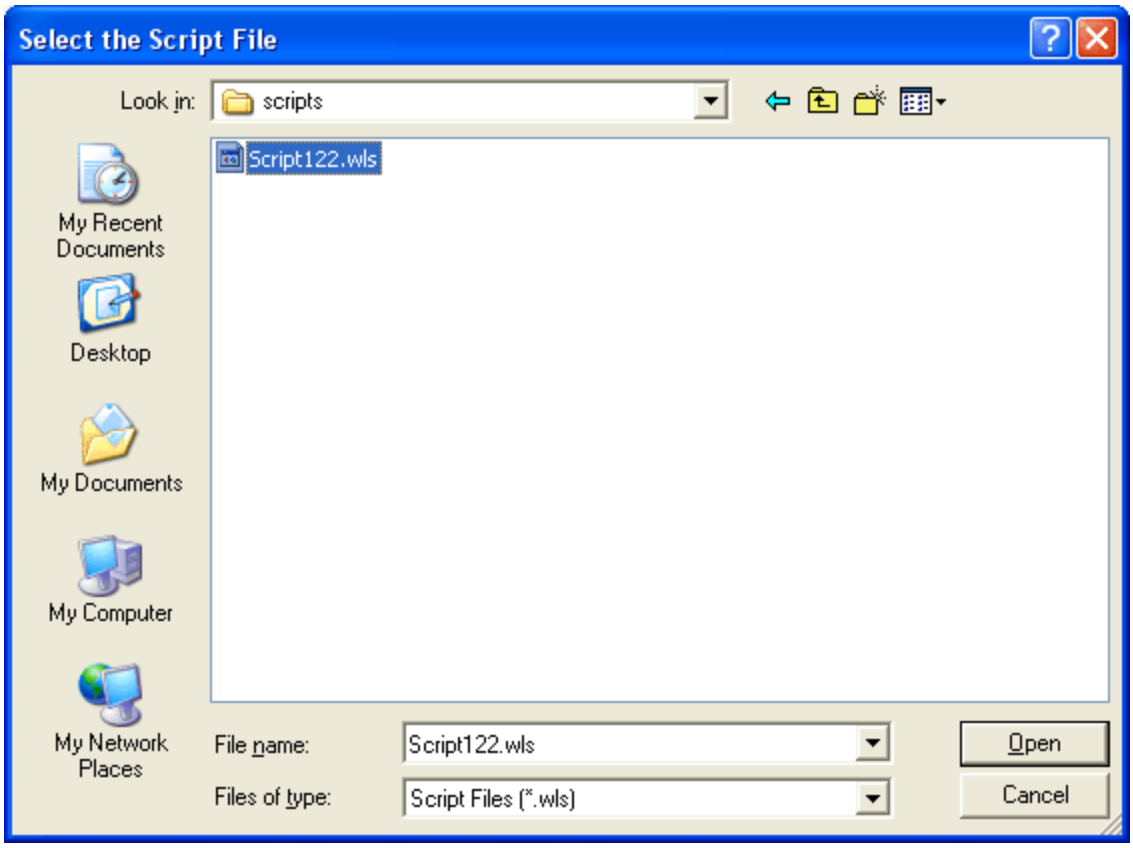
3 Navigate to the location where you want to export your script.

4 Click **Save**.

To import a script:

1 From the Script Editor, click **Import**.

The *Select the Script File* dialog box opens.



Importing a Script File

2 Navigate to and select the script file.

3 Click **Open**.

The name of the file is imported into the Script Editor.

Once you have imported the file, you can edit the script.

Chapter 5: Organizing Scripts

The TE Script Editor allows you to organize scripts into groups to make them easier to manage. Groups can be nested inside other groups, and a group can contain both scripts and other groups. To see the scripts in alphabetical order without any script grouping, click the **Show as list** option in the top left corner of the Script Editor.

Organizing scripts into groups does not change how the scripts are deployed to a device.

NOTE: To create groups or move and copy scripts, you should not have the **Show as list** option enabled.

To create a group:

1. From the Script Editor, select the place in the tree where you want to add a group. Click **Add Group**.

   The *Add Group* dialog box appears.

2. Type the **New group name** in the text box. If you want the group to be a top-level group instead of nested inside another group, enable the **Top-level group** option. Click **OK**.

3. The group is added to the tree and you can move scripts into it, rename it, or move it.

To move a script:

1. From the Script Editor, select the script in the tree you want to move. Click **Move Script**.

   The *Move Script* dialog box appears.

2. Select the group you want to move the script to and click **OK**.

3. The script is moved to the new group.

To copy a script:

1. From the Script Editor, select the script in the tree you want to copy. Click **Copy Script**.

   The *Copy Script* dialog box appears.

2. Type a name for the new copy of the script in the text box and click **OK**.

3. The copy of the script, with a new name, appears in the same group as the original. Move the copy to the desired location.

Chapter 6: Executing Scripts

When a script is created, it has an activation method assigned that specifies how it is activated. Once a script is deployed to the device (using Avalanche, ActiveSync, or a third-party utility), you can create a connection session and run the script.

This section provides information about activating scripts using each of the available activation methods:

- Select From Menu
- On Key Combination
- When Session Connects
- On Barcode, MSR, or RFID Scan
- On Screen Update
- From Web Pages

For information on assigning an activation method to a script, refer to Selecting Activation Methods on page 5.

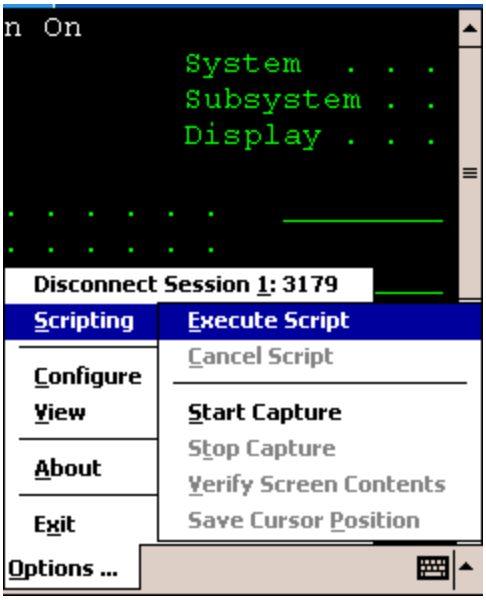
Select From Menu

With this activation method, you can activate the script from the **Options** or **Term** menu of the TE Client.

To activate:

1 Launch the TE Client on the mobile device.

2 From the **Options** or **Term** menu, select **Scripting > Execute Script**.



Executing Scripts from the Menu

3 If more than one script is available for the current host profile, select which script you want to use from the list.

NOTE: This option is not available if a script is running for the current session or if the session is not connected.

On Key Combination

With this activation method, the script activates when you press the specified key combination (as long as it is currently possible for script to run).

To activate:

1 Launch the TE Client.

2 Enter the key combination you assigned to execute the script.

When Session Connects

With this activation method, the script activates when a session connects using the specified host profile.

To execute when the session connects:

1 Launch the TE Client.

2 From the **Options** or **Term** menu, select **Connect**.

3 Select the host to which you want to connect.

4 Click **OK**.

The script runs upon connection.

On Barcode, MSR, or RFID Scan

With this activation method, the script activates with each barcode, MSR, or RFID scan.

On Screen Update

With this activation method, the script activates (if activation is allowed) every time the text on the emulation screen changes. This includes updates from the host or when the user presses a key and the key value appears on the screen.

From Web Pages

You can execute Wavelink scripts from web pages using the `wls` type, followed by the script name. If you plan to launch a script from a web page, do not select a script activation method when you create the script.

Executing Scripts from Web Pages Example 1

This example launches a script called `WebAuto` when the web page first loads.

```
<title>TE70 Test1 - Launch Telnet Scripts</title>
<meta http-equiv="OnStartup" content="wls:WebAuto">
```

Executing Scripts from Web Pages Example 2

This example launches a script called `WebClick` when a user clicks the hyperlink "`here`" on the web page.

```
<p>
Click <a href="wls:WebClick">here</a> to launch the &quot;WebClick&quot;
script.
</p>
```

Chapter 7: Overview of Actions

This section provides an overview of the actions in the Terminal Emulation Script Editor. The actions are grouped by function. For details on each action, click the name of the action in the tables below.

Blank Line and Comment Actions

Action	Description
Blank_Line	Proceeds to the next instruction without taking any action.
Comment	Proceeds to the next instruction without taking any action.

Goto Support Actions

Action	Description
Goto	Jumps to the supplied label.
Label	Label to which a Goto can jump.

Macro Existing

Action	Description
Return	Exits the script normally.
Abort	Exits the script immediately.
Abort_All	Exits all scripts for the session.
Disconnect	Exits all scripts for the session and disconnects the session.
Exit_Application	Shuts down the Terminal Emulation application.

Conditionals

Action	Description
If	Determines which actions to execute.
If_Not	Determines which actions to stop executing.
Else	Starts statements to be executed if an `If` test fails.
End_If	End of statements to be executed for an `If` test.
While	Determines which statements to execute.
While_Not	Determines which statements to stop executing.
End_While	End of statements to be executed for a `While` test.
Continue	Jumps back to the last `While` statement and re-tests the test value.

Action	Description
Break	Jumps to the first statement following the next `EndWhile` statement (exiting the loop). In a `Case` statement, jumps to the first statement following the `End_Switch` statement.
Switch	The Switch action block consists of a series of Case actions and an optional Default action, ending with an End_Switch action.
Case	If the Test parameter matches the value of the previous Switch parameter, the script continues executing until the next Break or End_Switch statement.
Default	If none of the Case parameter values match the value of the previous Switch parameter, the script continues executing until the next Break or End_ Switch statement.
End_Switch	End of statements to be executed for a Switch test.

General Queries

Action	Description
Ask_OK	Displays a message in a dialog box with an **OK** button.
Ask_OK_Cancel	Displays a message and waits until the user selects a button.
Ask_Yes_No	Displays a message and waits until the user selects a button.
Ask_Yes_No_Cancel	Displays a message in a dialog box with a Yes, No, and Cancel button and waits until the user selects a button.
Run_Application	Starts an application with the flags (optional).

Send Characters

Action	Description
Keypress_String	Creates one or more key presses to send the supplied string to the Terminal Emulation session.
Keypress_Key	Sends a single keypress to the Terminal Emulation session.
Scan_String	Treats the string as scanned data of the type specified.
Set_Cursor_Position	Moves the cursor to the specified row and column.

Message

Action	Description
Message	Displays a message on the Terminal Emulation screen.
Message_Clear	Clears the message on the Terminal Emulation screen.

Sounds

Action	Description
Beep	Causes the device to beep.
Play_Sound	Causes the device to play the sound specified by the sound name.

Waiting

Action	Description
Wait_For_Screen_Update	Suspends the current script until the screen has been updated.
Delay	Suspends the current script until the specified time has passed.

Logging

Action	Description
Logging_On	Creates a log file that records all subsequent script execution activity.
Logging_Off	Turns off logging for the script.

Call Other Macros

Action	Description
Call	Suspends the current script and executes another script.

Screen Buttons

Action	Description
Button_Bitmap_Create_Emulation	Creates a button with the specified bitmap name using the specified text position.
Button_Bitmap_Create_View	Creates a button with the specified bitmap name using the specified screen position.
Button_Create_Emulation	Creates a button with the specified text using the specified text position.
Button_Create_View	Creates a button with the specified text using the specified screen position.
Button_Remove	Removes buttons created with the previous actions.
Button_Remove_All	Removes all buttons created with the previous actions.

Reboot

Action	Description
Reboot	Reboots the device.

KeyPress Capture

Action	Description
Keypress_Capture	Begins a specific key capture and modifier combination.
Keypress_Capture_Stop	Stops the specified key capture and modifier combination.
Keypress_Capture_Stop_All	Stops all key press captures and modifier combinations

Keyboard

Action	Description
Keyboard_Disable	Disables all keyboards.

Boolean Assignments

Action	Description
Overview of Actions	Set the value of a Boolean variable.
Boolean_Not	Set the value of a Boolean variable to FALSE if the parameter is TRUE. Set the value to TRUE if the parameter is FALSE.
Boolean_And	Test each of the parameters and return TRUE if all are TRUE or FALSE if one or more are FALSE.
Boolean_Or	Test each of the parameters and return TRUE if one or more are true or FALSE if all are FALSE.

Boolean Comparisons

Action	Description
Boolean_Equal	Compare the two parameters and return TRUE if they are both TRUE or if they are both FALSE.
Boolean_Not_Equal	Compare the two parameters and return TRUE if they do not have the same value.

String Comparisons

Action	Description
String_Empty	Check the length of the string to determine if it's an empty string.
String_Less_Than	Compare the two strings and determine their alphabetical order.
String_Less_Than_Or_Equal	Compare the two strings and determine whether one precedes the other in alphabetical order, or if they are the same string.
String_Equal	Compare the two strings and determine if they are both TRUE or are both FALSE.
String_Greater_Than_Or_Equal	Compare the two strings and determine whether one follows the other in alphabetical order, or they are the same string.
String_Greater_Than	Compare the two strings and determine whether one follows the other in alphabetical order.
String_Not_Equal	Compare the two strings and return TRUE if they do not have the same value.

Field Identifiers and Data

Action	Description
Set_Field_Data_ID	Sets the Data ID for a field.
Set_Field_Symbology_ID	Sets the Symbology ID for a field.
Get_Field_Symbology_Operator	Query whether the field data matches the Data ID and/or Symbology ID.
Set_Field_Append_Scan_Data	Controls whether to append scan data in the field.
Set_Field_Com_Data_Field	Sets a field to be the Com Data Field for the screen.
Set_Field_Prefix_Scan_Data	Sets the data prefixed to a field when the field is scanned.
Get_Field_Append_Scan_Data	Query whether data is appended when the field is scanned.

Action	Description
Get_Field_Index	Get the index of a field at the specified row and column.
Get_Num_Fields	Get the number of fields on the screen.
Get_Field_Index_Row_Text	Get the index of a field that is in the same row as the text.
Get_Field_Index_Column_Text	Get the index of a a field that is in the same column as the text.
Get_Field_Row	Get the row number of the field.
Get_Field_Column	Get the column number of the field.
Get_Field_Length	Get the length of the field.
Get_Num_Field_Data_IDs	Get the number of data IDs in a field.
Get_Num_Field_Symbology_IDs	Get the number of symbology IDs in a field.
Get_Field_Com_Data_Field	Get the index of the field that is the Com Data Field.
Get_Field_Data_ID	Gets the Data ID for the specified field.
Get_Field_Prefix_Scan_Data	Gets the prefixed data for the specified field.

Integer Comparison

Action	Description
Number_Less_Than	Compares two numbers and determines if one is less than the other.
Number_Less_Than_Or_Equal	Compares two numbers and determines if one is less than the other or if they are the same.
Number_Equal	Compare two numbers and determines whether they are equal.
Number_Greater_Than_Or_Equal	Compare two numbers and determines if one is greater than the other or if they are equal.

Action	Description
Number_Greater_Than	Compare two numbers and determines if one is greater than the other.
Number_Not_Equal	Compares two numbers and determines if they are equal.

Suspend

Action	Description
Suspend	Suspends the device.
Wait_For_Screen_Update_With_Timeout	Suspends the current script until the screen has been updated.

Search the Screen

Action	Description
Search_Screen	Searches the screen for the supplied text.

WEB Emulation Commands

Action	Description
Web_Navigate	Navigates WEB emulation to the URL provided.
Web_Navigate_Frame	Navigates WEB emulation to the URL provided within the indicated frame.
Web_Navigate_Post_Data	Navigates WEB emulation to the URL provided.
Web_Scripting	Instructs WEB emulation to execute the scripting information.
Web_Search_Source	Searches the page source of the current WEB emulation page.

Speech Commands

Action	Description
Speech_From_Text_Available	Determines whether text-to-speech is supported.
Speech_From_Text	Converts text into sound and plays it on the computer.
Speech_To_Text_Available	Determines whether speech-to-text is supported.
Speech_To_Text	Listens to the user speak and returns the text equivalent of what he/she said in the string variable.
Speech_To_Text_No_Wait	Listens to the user speak and returns the text equivalent.
Speech_To_Text_Cancel	Provides a way for the script to perform other functions while the speech-to-text action occurs.
Speech_Setting_Available	Identifies speech settings by case-insensitive name strings.
Speech_Change_Setting	Changes the speech setting to the specified value.
Speech_Get_Setting	Gets the value of the speech setting.
Speech_Get_Setting_Max	Gets the largest value for the speech setting.
Speech_Find_Setting_Value	Searches all possible value descriptions for the speech setting.
Speech_Get_Setting_Value_Desc	Gets a description of the speech setting value.
Speech_To_Text_Get_User_Name	Gets the user name.
Speech_To_Text_Change_User_Name	Changes the user name being used by the speech-to-text engine.

Action	Description
Speech_From_Text_Error_Desc	Gets an error description for the last speech-from-text action.
Speech_To_Text_Error_Desc	Gets an error description for the last speech-to-text action.
Speech_From_Text_Cancel	Provides a way for the script to perform other functions while the text-to-speech action occurs.
Speech_Get_Confidence_Level	Gets the confidence value for the last Speech_To_Text action.

Stop Commands

Action	Description
Keypress_Capture_Stop	Stops capturing the specified key and modifier combination.
Cancel_Other_Scripts	Cancels all other scripts for the session with the script name.

Printer Commands

Action	Description
Printer_Data	Sends data directly to the currently defined printer.
Printer_Repeat	Instructs the printer to reprint the last item printed.
Printer_Cancel	Instructs the printer to discard all Printer_Data data already received.

Get System Information

Action	Description
Overview of Actions	Gets the number of columns on the screen.
Get_Screen_Rows	Gets the number of rows on the screen.
Get_Position_Column	Gets the column number on which the cursor is currently located.
Get_Position_Row	Get the row number on which the cursor is currently located.
Get_Session_Number	Get the number for the session in which this script is executing
Get_Time	Get the amount of time passed since January 1, 2000.
Get_Time_Since_Reset	Gets the amount of time since the last reboot.
Overview of Actions	Gets the MAC address of the device.
Get_IP_Address	Gets the IP address of the device.
Get_Field_Symbology_ID	Gets the symbology ID of the specified field.
Get_Screen_Text	Gets the text at the specified location.
Get_Screen_Text_Length	Gets the specified amount of text on the screen.
Get_Screen_Text_Columns	Get text from a row on the screen, starting at a specific column.
Get_Workstation_ID	Gets the Workstation ID of the device.
Get_Avalanche_Property_Value	Gets the value of the specified Avalanche property.

Scanner Information

Action	Description
Get_Scan_Type_Value	Get the number value of the supplied scan type name.
Get_Scan_Type_Name	Gets the name of the scan type.

String Handling

Action	Description
String_Length	Get the number of characters in a string.
String_Find_First	Finds the first instance of the substring inside the string, and returns the position where that substring starts.
String_Find_Last	Finds the last instance of the substring inside the string, and returns the position where that substring starts.

Integer Assignments

Action	Description
Number_Set	Set the value of a number variable.
Number_Plus	Add two numbers together and return the sum.
Number_Minus	Subtract the second term from the first term to get the difference.
Number_Multiply	Multiply the first term by the second term and returns the product.
Number_Divide	Divide the first term by the second term and return the product.
Number_Divide_Remainder	Divide the first term by the second term and return the remainder. For example, 7 divided by 3 would return a remainder of 1.

Convert Strings to Integers

Action	Description
String_To_Number_Binary	Get a string's binary representation.
String_To_Number_Octal	Gets a string's octal representation.
String_To_Number_Decimal	Gets a string's decimal representation.
String_To_Number_Hexadecimal	Gets a string's hexadecimal representation.

Ask User for Integer

Action	Description
Ask_Number	Displays a dialog box asking the user for a decimal number.

Number/Character Conversion

Action	Description
Character_To_Number	Converts the character at position Index in the string into the number value for that character.

Bitwise Arguments

Action	Description
Bitwise_And	The resulting number will have a bit set when both input numbers have that bit set.
Bitwise_Or	The resulting number will have a bit set when either input numbers has that bit set (inclusive or).
Bitwise_Xor	The resulting number will have a bit set when exactly one input number has that bit set (exclusive or).
Bitwise_Not	The resulting number will have a bit set when the input number does not have that bit set (ones complement).

Web Elements

Action	Description
Web_Get_Source	Returns the HTML code of the search string.
Web_Get_Current_Element	Returns the HTML code for the Web element with the focus.

ESC Sequence Support

Action	Description
Escape_Sequence	Handles the supplied Wavelink Custom or Telxon ESC Sequence for all emulation types.

String Variable Assignments

Action	Description
String_Set	Gets the specified string.
String_Combine	Returns the concatenated value of two strings.
String_Left	Returns the specified characters of the input string.
String_Right	Returns the specified characters of the input string.
String_Middle	Returns the specified characters of the input string.
String_Upper	Converts the specified text to uppercase letters.
String_Lower	Converts the specified text to lowercase letters.
String_Replace	Replaces the specified text with another string.
String_Only_Characters	Gets a string with the specified characters.
String_Strip_Characters	Strips the specified characters from the string.
String_Trim_Spaces_Start	Gets the specified text with all tabs and spaces deleted.
String_Trim_Spaces_End	Gets the specified text with all tabs and spaces deleted.
Number_To_String_Binary	Gets the binary representation of the specified number.
Number_To_String_Octal	Gets the octal representation of the specified number.
Number_To_String_Decimal	Gets the decimal representation of the specified number.
Number_To_String_Hexadecimal_Lowercase	Gets the hexadecimal representation of the specified number.
Number_To_String_Hexadecimal_Uppercase	Gets the hexadecimal representation of the specified number.

Action	Description
Ask_String	Displays a dialog box asking the user for a string.
Ask_String_Password	Displays a dialog box asking the user for a string.
Ask_String_Uppercase	Displays a dialog box asking the user for a string.
Ask_String_Lowercase	Displays a dialog box asking the user for a string.

Number to Character Conversion

Action	Description
Number_To_Character	Converts the specified number to the character value.

Abort

Exits the script immediately. If this script was started by another script, the calling script's variables are not updated and the calling script resumes.

Example

```
Script(Abort_Test)
Activate(From_Menu)
 Comment: This script doesn't do anything.
        Abort
```

See Also

Return, Abort_All, Disconnect, Exit_Application

Abort_All

Exits all scripts for the session.

Example

```
Script(Abort_All_Test)
Activate(From_Menu)
        Comment: This script causes all of the session's scripts to abort.
        Abort_All
```

See Also

Return, Abort, Disconnect, Exit_Application, Reboot

Ask_Number

Displays a dialog box asking the user for a decimal number. The supplied default value is returned if the user cancels the dialog.

Parameters

Message Text	The message displayed in the box.
Title Text	The title of the message box.
Minimum Value	The smallest value of the number.
Maximum Value	The largest value of the number.
Default Value	The initial value in the message box.

Format

```
Ask_Number ("Message Text", "Title Text", Minimum Value, Maximum Value,
Default Value)
```

Return Value

Returns the number supplied by the user.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
```

```
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of ", strEntered))
        Return
```

See Also

Ask_OK, Ask_OK_Cancel, Ask_Yes_No, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, Ask_Yes_No_Cancel, Message

Ask_OK

Displays a message in a box with an **OK** button and waits until the user presses the button.

Parameters

Message Text The message displayed in the box.

Title Text The title of the message box.

Format

```
Ask_Ok(Message Text, "Title Text")
```

Example

```
Script( Test_Ask_Ok )
Activate( From_Menu )
        Message_Clear
        Ask_OK( "Press OK and the script will end.", "Test_Ask_Ok" )
        Return
```

See Also

Ask_OK_Cancel, Ask_Yes_No, Ask_Yes_No_Cancel, Message

Ask_OK_Cancel

Displays a message in a dialog box with an **OK** and **Cancel** button and waits until the user selects a button.

Parameters

Message Text	The message that the script displays in the message box.
Title Text	The message that the script displays in the title bar of the message box.
Make Cancel Default	Indicates whether the **Cancel** button is the default button.

Format

```
Ask_OK_Cancel ("Message Text", "Title Text", Make Cancel Default)
```

Return Value

Returns a Boolean. TRUE if the user selects **OK**, returns FALSE if the user selects **Cancel**.

Example

```
Script(Ask_OK_Cancel_Test)
Boolean(bResult)
Activate(From_Menu)
        bResult = Ask_OK_Cancel("OK for TRUE, Cancel for FALSE", "Ask_OK_
Cancel_Test", FALSE)
        If(bResult)
                Message("Selected: OK", 5)
        Else
                Message("Selected: Cancel", 5)
        End_If
        Return
```

See Also

Ask_Yes_No, Ask_Yes_No_Cancel, Ask_OK, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, Message, Ask_Number

Ask_String

Displays a dialog box asking the user for a string. The supplied default string is returned (unaltered) if the user cancels the dialog.

Parameters

Message Text	The message displayed in the dialog box.
Title Text	The title displayed in the dialog box.
Minimum Length of String	The minimum number of characters the string must have.
Maximum Length of String	The maximum number of characters the string can have.
Default String	The initial value in the message box which can be changed by the user.

Format

```
Ask_String ("Enter a string", "Ask_String_Test", Minimum Length of
String, Maximum Length of String, Default String)
```

Return Value

Returns the string supplied by the user.

Example

```
Script(Ask_String_Test)
String(strEntered)
Activate(From_Menu)
        strEntered = Ask_String("Enter a string", "Ask_String_Test", 1, 99, "")
        Ask_OK(strEntered, "You Entered")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Ask_String_Lowercase

Displays a dialog box asking the user for a string. Any uppercase letters are converted to lowercase characters. The supplied default string is returned (unaltered) if the user cancels the dialog.

Parameters

Message Text	The message displayed in the dialog box.
Title Text	The title displayed in the dialog box.
Minimum Length of String	The minimum number of characters the string must have.
Maximum Length of String	The maximum number of characters the string can have.
Default String	The initial value in the message box which can be changed by the user.

Format

```
Ask_String_Lowercase ("Enter a string", "Ask_String_Test", Minimum
Length of String, Maximum Length of String, Default String)
```

Return Value

Returns the string supplied by the user.

Example

```
Script(Ask_String_Lowercase_Test)
String(strEntered)
Activate(From_Menu)
        strEntered = Ask_String_Lowercase("The string you enter will be lower
case", "Ask_String_Lowercase", 1, 99, "")
        Ask_OK(strEntered, "The lower case string")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_

String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, String_Equal

Ask_String_Password

Displays a dialog box asking the user for a string. The string is displayed as a password (a series of asterisks). The supplied default string is returned (unaltered) if the user cancels the dialog.

Parameters

Message Text	The message displayed in the dialog box.
Title Text	The title displayed in the dialog box.
Minimum Length of String	The minimum number of characters the string must have.
Maximum Length of String	The maximum number of characters the string can have.
Default String	The initial value in the message box which can be changed by the user.

Format

```
Ask_String_Password ("Enter a string", "Ask_String_Test", Minimum Length
of String, Maximum Length of String, Default String)
```

Return Value

Returns the string supplied by the user.

Example

```
Script(Ask_String_Password_Test)
String(strEntered)
Activate(From_Menu)
        strEntered = Ask_String_Password("Enter a password", "Ask_String_
Password_Test", 1, 99, "")
        Ask_OK(strEntered, "The password is")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_

String_Hexadecimal_Uppercase, Ask_String, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Ask_String_Uppercase

Displays a dialog box asking the user for a string. Any lowercase letters are converted to uppercase characters. The supplied default string is returned (unaltered) if the user cancels the dialog.

Parameters

Message Text	The message displayed in the dialog box.
Title Text	The title displayed in the dialog box.
Minimum Length of String	The minimum number of characters the string must have.
Maximum Length of String	The maximum number of characters the string can have.
Default String	The initial value in the message box which can be changed by the user.

Format

```
Ask_String_Uppercase ("Enter a string", "Ask_String_Test", Minimum
Length of String, Maximum Length of String, Default String)
```

Return Value

Returns the string supplied by the user.

Example

```
Script(Ask_String_Uppercase_Test)
String(strEntered)
Activate(From_Menu)
        strEntered = Ask_String_Uppercase("The string you enter will be upper
case", "Ask_String_Uppercase", 1, 99, "")
        Ask_OK(strEntered, "The upper case string")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_

String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Lowercase, String_Equal

Ask_Yes_No

Displays a message in a box with a **Yes** and **No** button and waits until the user selects a button.

Parameters

Message Text	The message that the script displays in the message box.
Title Text	The message that the script displays in the title bar of the message box.
Make No Default	Indicates whether **No** is the default button. If this is FALSE, the **Yes** button is the default button.

Format

```
Ask_Yes_No ("Message Text", "Title Text", TRUE)
```

Return Value

Returns a Boolean. TRUE if the user selects **Yes**, returns FALSE if the user selects **No**.

Example

```
Script(Ask_Yes_No_Test)
Boolean(bResult)
Activate(From_Menu)
        bResult = Ask_Yes_No("Yes for TRUE, No for FALSE", "Ask_Yes_No_Test",
FALSE)
        If(bResult)
                Message("Selected: Yes", 5)
        Else
                Message("Selected: No", 5)
        End_If
        Return
```

See Also

Ask_OK_Cancel, Ask_Yes_No_Cancel, Ask_OK, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, Message, Ask_Number

Ask_Yes_No_Cancel

Displays a message in a dialog box with a **Yes**, **No**, and **Cancel** button and waits until the user selects a button.

Parameters

Message Text	The message displayed in the message box.
Title Text	The title displayed on the message box.
Make No Default	Indicates whether **No** is the default button. If this is FALSE, the **Yes** button is the default button.

Format

```
Ask_Yes_No_Cancel ("Message Text", "Title Text", Make No Default)
```

Return Value

Returns 2 if the user presses **Yes**, 1 if the user presses **No**, and 0 if the user presses **Cancel**.

Example

```
Script(Ask_Yes_No_Cancel_Test)
Number(nResult)
Activate(From_Menu)
        nResult = Ask_Yes_No_Cancel("Select Yes, No, or Cancel", "Ask_Yes_No_
Cancel", FALSE)
        If(Number_Equal(nResult, 0))
                Message("Cancel", 3)
        Else
                If(Number_Equal(nResult, 1))
                Message("No", 3)
        Else
                Message("Yes", 3)
        End_If
End_If
Return
```

See Also

Ask_Number, Ask_OK, Ask_OK_Cancel, Ask_Yes_No, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, Message

Beep

Causes the device to beep. A frequency of 1000 is a good default.

Parameters

Frequency(Hz)	The frequency of the beep in cycles per second.
Duration (Milliseconds)	The length of the beep. A value of 1000 would be one second.
Volume	The volume at which the beep is played. The volume is a value between 0 and 9, where 0 is the softest and 9 is the loudest.

Format

```
Beep (Frequency, Duration, Volume)
```

Example

```
Script(Beep_Test)
        Activate(From_Menu)
        Comment: Beep for one-half second at 1000Hz, maximum volume:
        Beep(1000, 500, 9)
        Comment: Beep for three seconds at 2500Hz, medium volume:
        Beep(2500, 3000, 5)
        Return
```

See Also

Play_Sound, Speech_From_Text

Bitwise_And

The resulting number will have a bit set when both input numbers have that bit set.

Parameters

Value1 Number; Number 1

Value2 Number; Number 2

Format

```
Bitwise_And (Value1, Value2)
```

Example

```
Script( Bitwise_And_Test )
String( strEntered )
String( strMessage )
String( strBinary1 )
String( strBinary2 )
String( strBinaryResult )
String( strDecimal1 )
String( strDecimal2 )
String( strDecimalResult )
String( strHexUpper1 )
String( strHexUpper2 )
String( strHexUpperResult )
Number( nHexadecimal1 )
Number( nHexadecimal2 )
Number( nHexResult )
Activate( From_Menu )
        strEntered = Ask_String( "Enter first hexadecimal number", "Bitwise_
And", 1, 8, "A5" )
        nHexadecimal1 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper1 = strEntered

        strEntered = Ask_String( "Enter second hexadecimal number", "Bitwise_
And", 1, 8, "83" )
        nHexadecimal2 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper2 = strEntered

        nHexResult = Bitwise_And( nHexadecimal1, nHexadecimal2 )
        strHexUpperResult = Number_To_String_Hexadecimal_Uppercase(nHexResult)
```

```
        strBinary1 = Number_To_String_Binary( nHexadecimal1 )
        strBinary2 = Number_To_String_Binary( nHexadecimal2 )
        strBinaryResult = Number_To_String_Binary( nHexResult )
        strDecimal1 = Number_To_String_Decimal( nHexadecimal1 )
        strDecimal2 = Number_To_String_Decimal( nHexadecimal2 )
        strDecimalResult = Number_To_String_Decimal( nHexResult )

        strMessage = String_Combine(strHexUpper1, " AND " )
        strMessage = String_Combine(strMessage, strHexUpper2 )
        strMessage = String_Combine(strMessage, " = " )
        strMessage = String_Combine(strMessage, strHexUpperResult )
        Ask_OK( strMessage, "Bitwise_And: Hexadecimal" )

        strMessage = String_Combine(strBinary1, " AND " )
        strMessage = String_Combine(strMessage, strBinary2 )
        strMessage = String_Combine(strMessage, " = " )
        strMessage = String_Combine(strMessage, strBinaryResult )
        Ask_OK( strMessage, "Bitwise_And: Binaryl" )

        strMessage = String_Combine(strDecimal1, " AND " )
        strMessage = String_Combine(strMessage, strDecimal2 )
        strMessage = String_Combine(strMessage, " = " )
        strMessage = String_Combine(strMessage, strDecimalResult )
        Ask_OK( strMessage, "Bitwise_And: Decimal" )
Return
```

Bitwise_Not

The resulting number will have a bit set when the input number does not have that bit set (ones complement).

Parameters

Value1 Number; Number

Format

```
Bitwise_And (Value1)
```

Example

```
Script( Bitwise_Not_Test )
String( strEntered )
String( strMessage )
String( strBinary )
String( strBinaryResult )
String( strDecimal )
String( strDecimalResult )
String( strHexUpper )
String( strHexUpperResult )
Number( nHexadecimal )
Number( nHexResult )
Activate( From_Menu )
        strEntered = Ask_String( "Enter hexadecimal number", "Bitwise_Not", 1,
8, "AF" )
        nHexadecimal = String_To_Number_Hexadecimal( strEntered )
        strHexUpper = strEntered

        nHexResult = Bitwise_Not( nHexadecimal )
        strHexUpperResult = Number_To_String_Hexadecimal_Uppercase (nHexResult)

        strBinary = Number_To_String_Binary( nHexadecimal )
        strBinaryResult = Number_To_String_Binary( nHexResult )
        strDecimal = Number_To_String_Decimal( nHexadecimal )
        strDecimalResult = Number_To_String_Decimal( nHexResult )

        strMessage = String_Combine("Not ", strHexUpper )
        strMessage = String_Combine(strMessage, " = " )
        strMessage = String_Combine(strMessage, strHexUpperResult )
        Ask_OK( strMessage, "Bitwise_Not: Hexadecimal" )
```

```
strMessage = String_Combine("Not ", strBinary )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strBinaryResult )
Ask_OK( strMessage, "Bitwise_Not: Binaryl" )

strMessage = String_Combine("Not ", strDecimal )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strDecimalResult )
Ask_OK( strMessage, "Bitwise_Not: Decimal" )
Return
```

Bitwise_Or

The resulting number will have a bit set when either input numbers has that bit set (inclusive or).

Parameters

Value1 Number; Number 1

Value2 Number; Number 2

Format

```
Bitwise_Or (Value1, Value2)
```

Example

```
Script( Bitwise_Or_Test )
String( strEntered )
String( strMessage )
String( strBinary1 )
String( strBinary2 )
String( strBinaryResult )
String( strDecimal1 )
String( strDecimal2 )
String( strDecimalResult )
String( strHexUpper1 )
String( strHexUpper2 )
String( strHexUpperResult )
Number( nHexadecimal1 )
Number( nHexadecimal2 )
Number( nHexResult )
Activate( From_Menu )
        strEntered = Ask_String( "Enter first hexadecimal number", "Bitwise_
Or", 1, 8, "A5" )
        nHexadecimal1 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper1 = strEntered

        strEntered = Ask_String( "Enter second hexadecimal number", "Bitwise_
Or", 1, 8, "5A" )
        nHexadecimal2 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper2 = strEntered

        nHexResult = Bitwise_Or( nHexadecimal1, nHexadecimal2 )
        strHexUpperResult = Number_To_String_Hexadecimal_Uppercase (nHexResult)
```

```
strBinary1 = Number_To_String_Binary( nHexadecimal1 )
strBinary2 = Number_To_String_Binary( nHexadecimal2 )
strBinaryResult = Number_To_String_Binary( nHexResult )
strDecimal1 = Number_To_String_Decimal( nHexadecimal1 )
strDecimal2 = Number_To_String_Decimal( nHexadecimal2 )
strDecimalResult = Number_To_String_Decimal( nHexResult )

strMessage = String_Combine(strHexUpper1, " Or " )
strMessage = String_Combine(strMessage, strHexUpper2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strHexUpperResult )
Ask_OK( strMessage, "Bitwise_Or: Hexadecimal" )

strMessage = String_Combine(strBinary1, " Or " )
strMessage = String_Combine(strMessage, strBinary2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strBinaryResult )
Ask_OK( strMessage, "Bitwise_Or: Binaryl" )

strMessage = String_Combine(strDecimal1, " Or " )
strMessage = String_Combine(strMessage, strDecimal2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strDecimalResult )
Ask_OK( strMessage, "Bitwise_Or: Decimal" )
Return
```

Bitwise_Xor

The resulting number will have a bit set when exactly one input number has that bit set (exclusive or).

Parameters

Value1 Number; Number 1

Value2 Number; Number 2

Format

```
Bitwise_Xor (Value1, Value2)
```

Example

```
Script( Bitwise_Xor_Test )
String( strEntered )
String( strMessage )
String( strBinary1 )
String( strBinary2 )
String( strBinaryResult )
String( strDecimal1 )
String( strDecimal2 )
String( strDecimalResult )
String( strHexUpper1 )
String( strHexUpper2 )
String( strHexUpperResult )
Number( nHexadecimal1 )
Number( nHexadecimal2 )
Number( nHexResult )
Activate( From_Menu )
        strEntered = Ask_String( "Enter first hexadecimal number", "Bitwise_
Xor", 1, 8, "A5" )
        nHexadecimal1 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper1 = strEntered

        strEntered = Ask_String( "Enter second hexadecimal number", "Bitwise_
Xor", 1, 8, "FF" )
        nHexadecimal2 = String_To_Number_Hexadecimal( strEntered )
        strHexUpper2 = strEntered

        nHexResult = Bitwise_Xor( nHexadecimal1, nHexadecimal2 )
        strHexUpperResult = Number_To_String_Hexadecimal_Uppercase (nHexResult)
```

```
strBinary1 = Number_To_String_Binary( nHexadecimal1 )
strBinary2 = Number_To_String_Binary( nHexadecimal2 )
strBinaryResult = Number_To_String_Binary( nHexResult )
strDecimal1 = Number_To_String_Decimal( nHexadecimal1 )
strDecimal2 = Number_To_String_Decimal( nHexadecimal2 )
strDecimalResult = Number_To_String_Decimal( nHexResult )

strMessage = String_Combine(strHexUpper1, " Xor " )
strMessage = String_Combine(strMessage, strHexUpper2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strHexUpperResult )
Ask_OK( strMessage, "Bitwise_Xor: Hexadecimal" )

strMessage = String_Combine(strBinary1, " Xor " )
strMessage = String_Combine(strMessage, strBinary2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strBinaryResult )
Ask_OK( strMessage, "Bitwise_Xor: Binaryl" )

strMessage = String_Combine(strDecimal1, " Xor " )
strMessage = String_Combine(strMessage, strDecimal2 )
strMessage = String_Combine(strMessage, " = " )
strMessage = String_Combine(strMessage, strDecimalResult )
Ask_OK( strMessage, "Bitwise_Xor: Decimal" )
Return
```

Blank_Line

Proceeds to the next instruction without taking any action.

Example

```
Script(Blank_Line_Test)
Activate(From_Menu)
        Comment: This script has some blank lines:


Return
```

See Also

Comment

Boolean_And

Test each of the parameters and return TRUE if all parameters are TRUE. Return FALSE if one or more parameters are FALSE. One to five parameters may be used for this action.

All tests will be evaluated each time this action is taken. Use Boolean variables as the parameters instead of actions to make the script easier to read and understand.

Parameters

Test1 A Boolean variable, constant, or action.

Test2 An optional Boolean variable, constant, or action.

Test3 An optional Boolean variable, constant, or action.

Test4 An optional Boolean variable, constant, or action.

Test5 An optional Boolean variable, constant, or action.

Format

```
Boolean_And (Test1, Test2, Test3, etc.)
```

Return Value

Returns a Boolean. TRUE if all test values are TRUE; returns FALSE otherwise.

Example

```
Script(Boolean_And_Test)
Boolean(bResultAll)
Boolean(bResult1)
Boolean(bResult2)
Activate(From_Menu)
        bResult1 = Ask_OK_Cancel("Hit OK in every message box", "Message 1",
FALSE)
        bResult2 = Ask_OK_Cancel("Hit OK again", "Message 2", FALSE)
        bResultAll = Boolean_And(bResult1, bResult2)
        If(bResultAll)
                Message("bResultAll is TRUE", 5)
        Else
                Message("bResultAll is FALSE", 5)
        End_If
        Return
```

See Also

Boolean_Set, Boolean_Not, Boolean_Or, Boolean_Equal, Boolean_Not_Equal, Ask_OK_Cancel, Ask_Yes_No

Boolean_Equal

Compare the two parameters and return TRUE if they are both TRUE or if they are both FALSE. If the parameters do not have the same value, return FALSE. Use Boolean variables as the parameters instead of actions to make the script easier to read and understand.

Parameters

Test1 A Boolean variable, constant, or action.

Test2 A Boolean variable, constant, or action.

Format

```
Boolean_Equal (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if both Test1 and Test2 are TRUE, or both Test1 and Test2 are FALSE. Returns FALSE otherwise.

Example

```
Script(Boolean_Equal_Test)
Boolean(bResultAll)
Boolean(bResult1)
Boolean(bResult2)
Activate(From_Menu)
        bResult1 = Ask_Yes_No("Hit Yes in each message box", "Message 1",
FALSE)
        bResult2 = Ask_Yes_No("Hit Yes again", "Message 2", FALSE)
        bResultAll = Boolean_Equal(bResult1, bResult2)
        If(bResultAll)
                Message("Both responses were the same", 5)
        Else
                Message("The responses were different", 5)
        End_If
        Return
```

See Also

Boolean_Not_Equal, Boolean_Set, Boolean_Not, Boolean_And, Boolean_Or, Ask_OK_Cancel, Ask_Yes_No

Boolean_Not

Set the value of a Boolean variable to FALSE if the parameter is TRUE. Set the value of a Boolean variable to TRUE if the parameter is FALSE.

Parameters

Test May be a Boolean action, variable, or constraint.

Format

```
Boolean_Not (Test)
```

Return Value

Returns a Boolean. FALSE if the test is TRUE, returns TRUE otherwise.

Example

```
Script(Boolean_Not_Test)
Boolean(bResult)
Activate(From_Menu)
        bResult = Ask_OK_Cancel("OK for FALSE, Cancel for TRUE", "Boolean_Not_
Test", FALSE)
        bResult = Boolean_Not(bResult)
        If(bResult)
                Message("bResult is TRUE", 5)
        Else
                Message("bResult is FALSE", 5)
        End_If
        Return
```

See Also

Boolean_Set, Boolean_And, Boolean_Or, Boolean_Equal, Boolean_Not_Equal, Ask_OK_Cancel, Ask_Yes_No

Boolean_Not_Equal

Compare the two parameters and return TRUE if they do not have the same value. Use Boolean variables as the parameters instead of actions to make the script easier to read and understand.

Parameters

Test1 A Boolean variable, constant, or action.

Test2 A Boolean variable, constant, or action.

Format

```
Boolean_Not_Equal (Test1, Test2)
```

Return Value

Returns a Boolean. FALSE if both Test1 and Test2 are TRUE, or both Test1 and Test2 are FALSE. Returns TRUE otherwise.

Example

```
Script(Boolean_Not_Equal_Test)
Boolean(bResultAll)
Boolean(bResult1)
Boolean(bResult2)
Activate(From_Menu)
        bResult1 = Ask_Yes_No("Hit Yes in one message box", "Message 1", FALSE)
        bResult2 = Ask_Yes_No("Hit No if you hit Yes in the last message box",
"Message 2", FALSE)
        bResultAll = Boolean_Not_Equal(bResult1, bResult2)
        If(bResultAll)
                Message("The responses were different", 5)
        Else
                Message("Both responses were the same", 5)
        End_If
        Return
```

See Also

Boolean_Equal, Boolean_Set, Boolean_Not, Boolean_And, Boolean_Or, Ask_OK_Cancel, Ask_Yes_No

Boolean_Or

Test each of the parameters and return TRUE if one or more parameters are TRUE. Return FALSE if all parameters are FALSE. One to five parameters may be used for this action.

All tests will be evaluated each time this action is taken. Use Boolean variables as the parameters instead of actions to make the script easier to read and understand.

Parameters

Test1 A Boolean variable, constant, or action.

Test2 An optional Boolean variable, constant, or action.

Test3 An optional Boolean variable, constant, or action.

Test4 An optional Boolean variable, constant, or action.

Test5 An optional Boolean variable, constant, or action.

Format

```
Boolean_Or (Test1, Test2, Test 3, etc.)
```

Return Value

Returns a Boolean. TRUE if one or more test values are TRUE. Returns FALSE otherwise.

Example

```
Script(Boolean_Or_Test)
Boolean(bResultAll)
Boolean(bResult1)
Boolean(bResult2)
Activate(From_Menu)
        bResult1 = Ask_OK_Cancel("Hit OK in one message box", "Message 1",
FALSE)
        bResult2 = Ask_OK_Cancel("Hit OK if you hit Cancel in the last box",
"Message 2", FALSE)
        bResultAll = Boolean_Or(bResult1, bResult2)
        If(bResultAll)
                Message("bResultAll is TRUE", 5)
        Else
                Message("bResultAll is FALSE", 5)
        End_If
        Return
```

See Also

Boolean_Set, Boolean_Not, Boolean_And, Boolean_Equal, Boolean_Not_Equal, Ask_OK_Cancel, Ask_Yes_No

Boolean_Set

Set the value of a Boolean variable. A typical use of `Boolean_Set` is to set a variable to the return value of another action. The equal sign (=) is the symbol for `Boolean_Set` in the Script Editor.

Parameters

`Test` May be a Boolean action, variable, or constraint.

Format

```
Boolean_Set (Test)
```

Return Value

Returns a Boolean. TRUE if the test is TRUE, returns FALSE otherwise.

Example

```
Script(Boolean_Set_Test)
Boolean(bResult)
Activate(From_Menu)
        bResult = Ask_OK_Cancel("OK for TRUE, Cancel for FALSE", "Boolean_Set_
Test", FALSE)
        If(bResult)
                Message("bResult is TRUE", 5)
        Else
                Message("bResult is FALSE", 5)
        End_If
        Return
```

See Also

Boolean_Not, Boolean_And, Boolean_Or, Boolean_Equal, Boolean_Not_Equal, Ask_OK_Cancel, Ask_Yes_No

Break

Jumps to the first statement following the next `EndWhile` statement (exiting the loop). In a Case statement, jumps to the first statement following the End_Switch statement.

This command is only valid inside of a `While` loop or a `Case` statement.

Example #1

```
Script(Continue_Test)
  Boolean(bContinue)
  Activate(From_Menu)
    While(TRUE)
      bContinue = Ask_OK_Cancel("Press OK to keep getting this
message.", "Test", FALSE)
    If(bContinue)
      Continue
    Else
      Break
    End_If
    End_While
    Return
```

Example #2

```
  strEntered = Ask_String("Type a string", "Switch_Test", 0, 0, "")
  Switch( strEntered )
  Case( "Hi" )
    Ask_Ok("Hi", "Switch Result")
    Break
  Case( "Bye" )
    Ask_Ok("Bye", "Switch Result")
    Break
  Case( "OK" )
  Case( "Ok" )
  Case( "ok" )
    Ask_Ok("OK", "Switch Result")
    Break
  Default
    Ask_Ok("Default action", "Switch Result")
    Break
  End_Switch
Return
```

See Also

While, While_Not, End_While, Continue, Switch, Case, Default, End_Switch

Button_Bitmap_Create_Emulation

Creates a button with the specified bitmap name, and puts the left side of it where emulation text at the supplied coordinates would be.

Each time the button is pressed, the Boolean variable specified will be set to TRUE. You will need to reset the variable if you want to detect future button presses. All buttons created by the script will be removed when the script exits. The `Wait_For_Screen_Update` action can be used to wait for a button to be pressed.

The button will be hidden if the emulation text at that location is hidden.

You can add bitmaps to the resource file by using the Resource Editor. For information about the Resource Editory, see*Wavelink Terminal Emulation Client User Guide*. Row-1 is the top line of text on the screen; column-1 is the left-most column of text on the screen.

Parameters

Bitmap Name	The name of the bitmap.
Row	The top of the bitmap starts in this text row.
Column	The left side of the bitmap starts in this text column.
Pressed	Indicates whether the button has been pressed by the user.

Format

```
Button_Bitmap_Create_Emulation ("Bitmap Name", Row, Column, Pressed)
```

Example

```
Script( Button_Bitmap )
Boolean( Pressed )
Activate( From_Menu )
        Button_Bitmap_Create_Emulation( "GOCONTROL", 6, 17, Pressed )
        While_Not( Pressed )
                Wait_For_Screen_Update
        End_While
        Button_Remove( "GOCONTROL" )
        Pressed = FALSE
        Return
```

See Also

Wait_For_Screen_Update, Button_Bitmap_Create_View, Button_Create_Emulation, Button_Create_View, Button_Remove, Button_Remove_All

Button_Bitmap_Create_View

Creates a button with the specified bitmap name. This command is the same as Button_Bitmap_Create_Emulation, except that the screen position is used instead of text position, allowing the button to always be visible.

If `Button_Bitmap_Create_View` is used to create a button at position 1,1, that button will always be in the upper-left corner of the Terminal Emulation view screen. A `Button_Bitmap_Create_Emulation` button will be hidden if the emulation text at that location is hidden.

A bottom and/or right value of 1000 represents the bottom or right side of the screen. For example, a button at position 1,990 would start 11 columns left of the upper-right corner of the screen.

Each time the button is pressed, the Boolean variable specified will be set to TRUE. You will need to reset the variable if you want to detect future button presses. The `Wait_For_Screen_Update` action can be used to wait for a button to be pressed. All buttons created by the script will be removed when the script exits.

Parameters

Bitmap Name	The name of the bitmap.
Row	The top of the bitmap starts in this text row.
Column	The left side of the bitmap starts in this text column.
Pressed	Indicates whether the button has been pressed by the user.

Format

```
Button_Bitmap_Create_View ("Bitmap Name", Row, Column, Pressed)
```

Example

```
Script( Button_Bitmap_Create_View_Test )
Boolean( Pressed )
Activate( From_Menu )
        Button_Bitmap_Create_View( "STOPCONTROL", 1000, 1000, Pressed )
        While_Not( Pressed )
                Wait_For_Screen_Update
        End_While
        Button_Remove_All
        Return
```

See Also

Button_Bitmap_Create_Emulation, Button_Create_Emulation, Button_Create_View, Button_Remove, Button_Remove_All

Button_Create_Emulation

Creates a button with the specified text and puts the left side of it where emulation text at the supplied coordinates would be.

If the width value is 0, the button will be sized to fit the text. Each time the button is pressed, the Boolean variable specified will be set to TRUE. You will need to reset the variable if you want to detect future button presses. All buttons created by the script will be removed when the script exits. The `Wait_For_Screen_Update` action can be used to wait for a button to be pressed.

The button will be hidden if emulation text at that location is hidden.

Parameters

Text	The text displayed in the button.
Row	The top of the bitmap starts in this text row.
Column	The left side of the bitmap starts in this text column.
Width	The number of characters in the button text.
Pressed	Indicates whether the button has been pressed by the user.

Format

```
Button_Create_Emulation ("Text", Row, Column, Width, Pressed)
```

Example

```
Script( Button_Create_Emulation_Test )
Boolean( Pressed )
Activate( From_Menu )
        Button_Create_Emulation( "Emulation Button", 2, 1, 0, Pressed )
        While_Not( Pressed )
                Wait_For_Screen_Update
        End_While
        Button_Remove( "Emulation Button" )
        Pressed = FALSE
        Return
```

See Also

Wait_For_Screen_Update, Button_Create_View, Button_Remove, Button_Remove_All, Button_Bitmap_Create_Emulation, Button_Bitmap_Create_View

Button_Create_View

Creates a button with the specified text. This command is the same as Button_Create_Emulation except that the screen position is used instead of the text position, allowing the button to always be visible.

If `Button_Create_View` is used to create a button at position 1,1, that button will always be in the upper-left corner of the Terminal Emulation view screen. A `Button_Create_Emulation` button will be hidden if the emulation text at that location is hidden. A bottom and/or right value of 1000 represents the bottom or right side of the screen. For example, a button at position 1,900 would start 11 columns left of the upper-right corner of the screen.

Each time the button is pressed, the Boolean variable specified will be set to TRUE. You will need to reset the variable if you want to detect future button presses. The `Wait_For_Screen_Update` action can be used to wait for a button to be pressed. All buttons created by the script will be removed when the script exits.

Parameters

Text	The text displayed in the button.
Row	The top of the bitmap starts in this text row.
Column	The left side of the bitmap starts in this text column.
Width	The number of characters in the button text.
Pressed	Indicates whether the button has been pressed by the user.

Format

```
Button_Create_View ("Text", Row, Column, Width, Pressed)
```

Example

```
Script( Button_Create_View_Test )
Boolean( Pressed )
Activate( From_Menu )
        Button_Create_View( "This is a button", 1, 1, 0, Pressed )
        While_Not( Pressed )
                Wait_For_Screen_Update
        End_While
        Button_Remove_All
        Return
```

See Also

Button_Create_Emulation, Button_Remove, Button_Remove_All, Button_Bitmap_Create_Emulation, Button_Bitmap_Create_View

Button_Remove

Removes a button created with the `Button_Create_Emulation` and `Button_Create_View` actions with the specified text.

Parameters

`Text` The text displayed in the button.

Format

```
Button_Remove ("Text")
```

Example

```
Script( Button_Remove_Test )
Boolean( Pressed )
Activate( From_Menu )
        Button_Create_View( "This is a button", 1, 1, 0, Pressed )
        While_Not( Pressed )
                Wait_For_Screen_Update
        End_While
        Button_Remove( "This is a button" )
        Ask_OK( "The button was removed.", "Button_Remove_Test" )
        Return
```

See Also

Button_Create_Emulation, Button_Create_View, Button_Remove_All

Button_Remove_All

Removes all buttons created with the `Button_Create_Emulation` and `Button_Create_View` action for this script.

Example

```
Script( Button_Remove_All_Test )
Boolean( Pressed )
Activate( From_Menu )
    Button_Create_View( "This is a button", 1, 1, 0, Pressed )
    Button_Create_View( "Another button", 4, 1, 0, Pressed )
    While_Not( Pressed )
        Wait_For_Screen_Update
    End_While
    Button_Remove_All
    Ask_OK( "All buttons removed.", "Button_Remove_All_Test" )
    Return
```

See Also

Button_Create_Emulation, Button_Create_View, Button_Remove, Button_Bitmap_Create_Emulation, Button_Bitmap_Create_View

Call

Suspends the current script and executes another script. The current script resumes when the called script exits. The name of the script is case-sensitive.

There are two ways to use the Call function. The first way allows passing an unlimited number of arguments to the called script. The second way allows you to pass up to four arguments to the called script and allows you to return a value. See the examples below for the format to use when passing arguments to a called script.

Parameters

Script Name	The name of the script to call.
*Arg**	Arguments to pass to the called script.

Format

See below.

Example #1

The snippet of code below demonstrates a call to another script and how to pass arguments back and forth between scripts. On the lines following the Call statement, The variables on the left are in the called script while the variables on the right are in the calling script. The <--- means that data from the calling script will be passed to the called script variables but not returned to the calling script. The <--> means that data from the calling script will be passed to the called script variables on the left and the called script will return values to the variables found in the calling script.

```
Comment: Call sapFieldEntry to update the field on the web page.
  If( bVerifySpeechValue )
    Comment: Assign value to appropriate field
    Call: sapFieldEntry
      strFieldName  <---  "s4000_binp[1]"
      strFieldValue  <---  strPromptBinValue
    Speech_To_Text_Cancel
    Break
  Else
    Call: sapSpeechEntryBin
      strPromptBin  <---  strPromptBin
      strPromptBinValue  <---  strPromptBinValueStripped
      bVerifySpeech  <-->  bVerifySpeechValue
      bRepeatPrompts  <-->  bRepeatPrompts
      bBackFunction  <-->  bBackFunction
```

```
      bClearFunction  <-->  bClearFunction
  End_If
```

Example #2

The first script `callFunctionSample` calls the scripts `callConcatenateStrings` and `callSumsTotal`, passing them parameters and using the return values from the scripts. All three scripts are included in this example.

callFunctionSample

```
Script( callFunctionSample )
String( strEntry )
String( strArg1 )
String( strArg2 )
String( strArg3 )
String( strArg4 )
String( strResultString )
Number( nTotalSum )
Number( nIndex )
Number( nArg1 )
Activate( From_Menu )

  nArg1 = Ask_Number( "Enter a Number:", "Sum Multiple Numbers", 1, 200,
25 )

    nTotalSum = Call( "callSumTotal", nArg1, Number_Plus( nArg1, 5 ),
Number_Plus( nArg1, 10 ), Number_Plus( nArg1, 20 ) )
    strResultString = String_Combine( "The sum is: ", Number_To_String_
Decimal( nTotalSum ) )
    Ask_OK( strResultString, "Sum Result" )
    strResultString = ""

    nIndex = 0
    While( Number_Less_Than( nIndex, 4 ) )
      strEntry = Ask_String( "Enter String:", "Concatenate strings", 1,
20, "hello" )

      Switch( nIndex )
      Case( 0 )
        strArg1 = strEntry
        Break
      Case( 1 )
        strArg2 = strEntry
        Break
      Case( 2 )
```

```
        strArg3 = strEntry
        Break
      Case( 3 )
        strArg4 = strEntry
        Break
      End_Switch

      nIndex = Number_Plus( nIndex, 1 )
      strEntry = ""
    End_While

    strResultString = Call( "callConcatenateStrings", strArg1, strArg2,
strArg3, strArg4 )
    Ask_OK( strResultString, "String Concatenation" )
    Return
```

callSumTotal

```
Script( callSumTotal )
Parameter( Number, nArg1 )
Parameter( Number, nArg2 )
Parameter( Number, nArg3 )
Parameter( Number, nArg4 )
Activate( From_Other_Script )

  nArg1 = Number_Plus( nArg1, nArg2 )
  nArg1 = Number_Plus( nArg1, nArg3 )
  nArg1 = Number_Plus( nArg1, nArg4 )

  Return( nArg1 )
```

callConcatenateStrings

```
Script( callConcatenateStrings )
Parameter( String, strCat1 )
Parameter( String, strCat2 )
Parameter( String, strCat3 )
Parameter( String, strCat4 )
Activate( From_Other_Script )

  strCat1 = String_Combine( strCat1, strCat2, strCat3, strCat4 )
  strCat1 = String_Combine( "The result is: ", strCat1 )

  Return( strCat1 )
```

See Also

Abort, Abort_All, Return

Cancel_Other_Scripts

Cancels all other scripts for the session with the script name. If the name is left blank, all other scripts for the session are canceled.

The calling script is never canceled.

Parameters

Value1 This is the script name (a string).

Format

```
Cancel_Other_Scripts("Value1")
```

Example

```
Script( Cancel_Script_All )
String( sMessage )
Number( nScriptsCancelled )
Activate( From_Menu )
        nScriptsCancelled = Cancel_Other_Scripts( "" )
        sMessage = String_Combine( Number_To_String_Decimal( nScriptsCancelled
), " script(s) cancelled." )
        Ask_OK( sMessage, "Results" )
        Return
```

Case

If the Test parameter matches the value of the previous Switch parameter, the script continues executing until the next Break or End_Switch statement.

Otherwise, the next Case action is executed to check if its Test matches the Switch parameter value. If none of the Case parameters match the Switch parameter, then the Default action is executed.

This command is only valid inside a Case statement. Test may be a constant or variable String or Number.

Parameters

Test If the value matches the value of the previous Switch parameter, then the next set of actions gets executed, up to the Break or End_Switch, whichever comes first.

Format

```
Case( Test )
```

Example

```
Script(Switch_Test)
String(strEntered)
Activate(From_Menu)
  strEntered = Ask_String("Type a string", "Switch_Test", 0, 0, "")
  Switch( strEntered )
  Case( "Hi" )
    Ask_Ok("Hi", "Switch Result")
    Break
  Case( "Bye" )
    Ask_Ok("Bye", "Switch Result")
    Break
  Case( "OK" )
  Case( "Ok" )
  Case( "ok" )
    Ask_Ok("OK", "Switch Result")
    Break
  Default
    Ask_Ok("Default action", "Switch Result")
    Break
  End_Switch
  Return
```

See Also

Switch, Break, Default, End_Switch

Character_To_Number

Converts the character at position Index in the string into the number value for that character. An index of 0 indicates the left-most character in the string.

Parameters

String The string containing the conversion character.

Index The index of the character in the string.

Format

```
Character_To_Number (String, Index)
```

Return Value

Returns a character's number value. If the index does not point to a character, a value of 0 is returned.

Example

```
Script(Character_To_Number_Test)
String(strCharacters)
String(strTitle)
Number(nIndex)
Number(nCharacter)
Number(nToConvert)
Activate(From_Menu)
        strCharacters = Ask_String("Enter a string", "Character_To_Number", 1,
99, "abcde")
        nIndex = Ask_Number("Enter the index of the character to convert to a
number", "Character_To_Number", 0, 99, 0)
        nCharacter = Character_To_Number(strCharacters, nIndex)
        strTitle = String_Combine("""", strTitle)
        strTitle = String_Combine(Number_To_Character(nCharacter), strTitle)
        strTitle = String_Combine("Character_To_Number of """, strTitle)
        Ask_OK(Number_To_String_Decimal(nCharacter), strTitle)
        Return
```

See Also

Ask_String, Search_Screen, Speech_To_Text, Get_Screen_Text

Comment

Proceeds to the next instruction without taking any action.

Parameters

Comment Text that describes the script.

Format

```
Comment: (Comment)
```

Example

```
Script(Comment_Test)
        Activate(From_Menu)
                Comment: This script pops up a message, for testing.
                Message("Testing...", 0)
                Return
```

See Also

Blank_Line

Continue

Jumps back to the last `While` statement and re-tests the test value. This action is only valid inside of a `While` loop.

Example

```
Script(Continue_Test)
  Boolean(bContinue)
  Activate(From_Menu)
    While(TRUE)
      bContinue = Ask_OK_Cancel("Press OK to keep getting this
message.", "Test", FALSE)
      If(bContinue)
        Continue
      Else
        Break
      End_If
    End_While
    Return
```

See Also

While, While_Not, End_While, Break

Default

If none of the Case parameter values match the value of the previous Switch parameter, the script continues executing until the next Break or End_Switch statement. Otherwise, jumps to the first statement following the next End_Switch statement. This command is only valid inside a `Case` statement.

Example

```
Script(Switch_Test)
String(strEntered)
Activate(From_Menu)
  strEntered = Ask_String("Type a string", "Switch_Test", 0, 0, "")
  Switch( strEntered )
  Case( "Hi" )
    Ask_Ok("Hi", "Switch Result")
    Break
  Case( "Bye" )
    Ask_Ok("Bye", "Switch Result")
    Break
  Case( "OK" )
  Case( "Ok" )
  Case( "ok" )
    Ask_Ok("OK", "Switch Result")
    Break
  Default
    Ask_Ok("Default action", "Switch Result")
    Break
  End_Switch
  Return
```

See Also

Switch, Case, Break, End_Switch

Delay

Suspends the current script until the specified time has passed.

Parameters

Time (Milliseconds) The duration of the delay.

Format

```
Delay (Time)
```

Example

```
Script(Delay_Test)
        Activate(From_Menu)
        Message("Showing a message for a few seconds.", 0)
        Delay(4000)
        Message_Clear
        Return
```

See Also

Wait_For_Screen_Update, Wait_For_Screen_Update_With_Timeout , Get_Time

Disconnect

Exits all scripts for the session and disconnects the session.

Example

```
Script(Disconnect_Test)
  Activate(From_Menu)
    Comment: This script causes all of the session's scripts to end and
the session to disconnect.
    Disconnect
```

See Also

Return, Abort, Abort_All, Exit_Application, Reboot, Abort, Abort_All, Exit_Application, Suspend

Else

Start of statements to be executed if an `If` test fails. This command is only valid inside of an `If` block.

Example

```
Script(If_Else_Test)
        Boolean(bOK)
        Activate(From_Menu)
                bOK = Ask_OK_Cancel("Press OK or Cancel.", "Test", FALSE)
                If(bOK)
                Message("OK is TRUE", 0)
        Else
                Message("OK is FALSE", 0)
        End_If
        Return
```

See Also

If, If_Not, End_If

End_If

End of statements to be executed for an `If` test.

Example

```
Script( If_Test )
Boolean( bOK )
Activate( From_Menu )
        Message_Clear
        bOK = Ask_OK_Cancel( "Press OK to see another message.", "Press OK",
FALSE )
        If( bOK )
                Message( "bOK is TRUE", 0 )
        End_If
        Return
```

See Also

If, If_Not, Else

End_Switch

End of statements to be executed for a Switch test.

Example

```
Script(Switch_Test)
String(strEntered)
Activate(From_Menu)
  strEntered = Ask_String("Type a string", "Switch_Test", 0, 0, "")
  Switch( strEntered )
  Case( "Hi" )
    Ask_Ok("Hi", "Switch Result")
    Break
  Case( "Bye" )
    Ask_Ok("Bye", "Switch Result")
    Break
  Case( "OK" )
  Case( "Ok" )
  Case( "ok" )
    Ask_Ok("OK", "Switch Result")
    Break
  Default
    Ask_Ok("Default action", "Switch Result")
    Break
  End_Switch
  Return
```

See Also

Switch, Case, Default, Break

End_While

End of statements to be executed for a `While` test.

Example

```
Script(End_While_Test)
  Boolean(bOK)
  Activate(From_Menu)
    bOK = TRUE
    While(bOK)
      bOK = Ask_OK_Cancel("Press OK to keep getting this message.",
"Test", FALSE)
    End_While
    Return
```

See Also

While, While_Not, Continue, Break

Escape_Sequence

Handles the supplied Wavelink Custom or Telxon ESC Sequence for all emulation types. The sequence should be all the characters that will follow the first ESC character.

Parameters

Sequence The escape sequence.

Format

```
Escape_Sequence (Sequence)
```

Return Value

The string returned will be the sequence returned by the ESC sequence (without the initial ESC) or an empty string if the sequence returns nothing.

Example

```
Script(Quite_Mode_Escape_Sequence)
String(sResult)
Activate(From_Menu)
        sResult = Escape_Sequence("%2Q")
        Ask_OK(sResult, "Quiet Mode ESC Sequence Result")
        Return
```

Exit_Application

Shuts down the Terminal Emulation application.

Parameters

Return Value	The value that the Terminal Emulation application returns to the system as it exits.

Format

```
Exit_Application (Return Value)
```

Return Values

The return value is the application exit value Terminal Emulation will use when exiting.

Example

```
Script(Exit_Application_Test)
Activate(From_Menu)
        Comment: this script shuts down the Terminal Emulation application.
        Exit_Application(1)
```

See Also

Return, Abort, Abort_All, Disconnect, Reboot

Get_Avalanche_Property_Value

Returns a string with the value of the Wavelink Avalanche property. Returns an empty string if Avalanche is not installed or does not have that property.

Parameters

Value1 The property name (a string).

Format

```
Get_Avalanche_Property_Value(Value1)
```

Example

```
Script( Avalanche_Property )
String( sName, True )
String( sResult )
Activate( From_Menu )
  sName = Ask_String( "What is the name of the Avalanche property?",
"Avalanche Property Test", 1, 200, sName )
  If_Not( String_Empty( sName ) )
    sResult = Get_Avalanche_Property_Value( sName )
    If_Not( String_Empty( sResult ) )
      Ask_OK( String_Combine( "The property value is ", sResult ),
"Result" )
    Else
      Ask_OK( "No property value available.", "Result" )
    End_If
  End_If
  Return
```

Get_Field_Append_Scan_Data

Query whether data is appended when the field is scanned. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index The numeric index of the 5250 data field, index 0 is the first field.

Format

```
Get_Field_Append_Scan_Data (Field Index)
```

Example

```
Script(Get_Field_Append_Scan_Data_Test)
Boolean(bAppend)
Activate(From_Menu)
        bAppend = Get_Field_Append_Scan_Data(0)
        If(bAppend)
                Message("Appending scan data", 5)
        Else
                Message("Not appending scan data", 5)
        End_If
        Return
```

See Also

Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Get_Field_Column

Get the column number of the field.

Parameters

Field Index The index of the field.

Format

```
Get_Field_Column (Field Index)
```

Example

```
Script(Get_Field_Row_Column_Length)
String(strMessage)
Number(numFields)
Number(nLoops)
Number(nFieldRow)
Number(nFieldColumn)
Number(nFieldLength)
Activate(From_Menu)
  numFields = Get_Num_Fields
  Message(String_Combine("Number of fields:", Number_To_String_
Decimal(numFields)), 60)
  nLoops = 0
  While(Number_Less_Than(nLoops, numFields))
    nFieldRow = Get_Field_Row(nLoops)
    nFieldColumn = Get_Field_Column(nLoops)
    nFieldLength = Get_Field_Length(nLoops)
    strMessage = String_Combine("Field:", Number_To_String_
Decimal(nLoops))
    strMessage = String_Combine(strMessage, ":row")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldRow))
    strMessage = String_Combine(strMessage, ", column")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldColumn))
    strMessage = String_Combine(strMessage, ", length")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldLength))
    Ask_OK(strMessage, "Field Info")
    nLoops = Number_Plus(nLoops, 1)
  End_While
```

```
  Comment: The following should return zero because the field index is
invalid.
  nFieldRow = Get_Field_Row(nLoops)
  nFieldColumn = Get_Field_Column(nLoops)
  nFieldLength = Get_Field
  Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Com_Data_Field

Get the index of the field that is the Com data field. An index of `-1` means that no field is the Com data field. This action is only valid when using IBM 5250 or 5555 emulation.

Example

```
Script(SetGet_Field_Com_Data_Field_Test)
Boolean(bSetOK)
Number(nFieldID)
Activate(From_Menu)
  bSetOK = Set_Field_Com_Data_Field(2, TRUE)
  If(bSetOK)
    nFieldID = Get_Field_Com_Data_Field
    Message(String_Combine("Get_Field_Com_Data_Field: ", Number_To_
String_Decimal(nFieldID)), 7)
  Else
    Message("Set_Field_Com_Data_Field failed", 5)
  End_If
  Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Data_ID

Gets the data ID for the specified field. A blank string means no Data ID is set for the field or the field index is invalid. A field may have more than one data ID. Use `Get_Num_Field_Data_IDs` to determine the number of data IDs for a field. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

`Field Index` The index of the field.

`Data ID Index` The index of the Data ID.

Format

```
Get_Field_Data_ID (Field Index, Data ID Index)
```

Return Value

Returns the field's Data ID.

Example

```
Script( Get_Field_Data_ID_Test )
String( strDataID )
Boolean( bSetOK )
Number( numDataIDs )
Number( counter )
Activate( From_Menu )
        bSetOK = Set_Field_Data_ID( 0, "N" )
        numDataIDs = Get_Num_Field_Data_IDs( 0 )
        counter = 0
        While( Number_Less_Than( counter, numDataIDs ) )
                strDataID = Get_Field_Data_ID( 0, counter )
                Ask_OK( strDataID, "Data ID for Field 0" )
                counter = Number_Plus( counter, 1 )
        End_While
        Return
```

See Also

Get_Field_Prefix_Scan_Data, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Set_Field_Symbology_ID,

Set_Field_Data_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data

Get_Field_Index

Get the index of a field at the specified row and column. An index of `-1` means there is no field at the row and column. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Row The row containing the field.

Column A column in the field.

Format

```
Get_Field_Index (Row, Column)
```

Example

```
Script( Get_Field_Index_Test )
String( strMessage )
Number( nRow )
Number( nColumn )
Number( nFieldIndex )
Activate( From_Menu )
        nRow = Ask_Number( "Enter the row number containing the field", "Get_
Field_Index", 1, 999, 1 )
        nColumn = Ask_Number( "Enter a column number in the field", "Get_Field_
Index", 1, 999, 1 )
        nFieldIndex = Get_Field_Index( nRow, nColumn )
        strMessage = String_Combine( "Field at row ", Number_To_String_Decimal(
nRow ) )
        strMessage = String_Combine( strMessage, ", column " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nColumn ) )
        strMessage = String_Combine( strMessage, ": " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nFieldIndex ) )
        Message( strMessage, 12 )
        Return
```

See Also

Get_Screen_Columns, Get_Screen_Rows, Get_Position_Column, Get_Position_Row, Get_Session_Number, Get_Time, Get_Time_Since_Reset, Get_Num_Fields, Get_Field_Index_Row_

Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Column, Get_Field_Length, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field

Get_Field_Index_Column_Text

Get the index of a field that is in the same column as the text. The text may be above or below the field in the same row as the field. An index of `-1` means either the text was not found or there is no field before or after the text in the column where the text was found.This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Screen Text	The text in the same column as the field.
Text Above Field	Indicates whether the text is above or below the field.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
Get_Field_Index_Column_Text (Screen Text, Text Above Field, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if the text is above the field, FALSE if the text is below the field.

Example

```
Script(Get_Field_Index_Column_Text_Test)
String(strTextInColumn)
Boolean(bTextAboveField)
Number(nFieldIndex)
Activate(From_Menu)
        strTextInColumn = Ask_String("Enter some text in the same column as the
field", "Get_Field_Index_Column_Text", 1, 99, "")
        bTextAboveField = Ask_Yes_No("Is the text above the field?", "Get_
Field_Index_Column_Text", FALSE)
        nFieldIndex = Get_Field_Index_Column_Text(strTextInColumn,
bTextAboveField, FALSE)
        Message(String_Combine("Field ID (0 is first field): ", Number_To_
String_Decimal(nFieldIndex)), 5)
        Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_

Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Index_Row_Text

Get the index of a field that is in the same row as the text. The text may be before or after the field in the same row as the field. An index of `-1` means either the text was not found or there is no field before or after the text in the row where the text was found.This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Screen Text	The text on the same row as the field.
Text Before Field	Indicates whether the text is before or after the field.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
Get_Field_Index_Row_Text (Screen Text, Text Before Field, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if the text is before the field, FALSE if the text is after the field.

Example

```
Script(Get_Field_Index_Row_Text_Test)
String(strTextInRow)
Boolean(bTextBeforeField)
Number(nFieldIndex)
Activate(From_Menu)
        strTextInRow = Ask_String("Enter some text on the same row as the
field", "Get_Field_Index_Row_Text", 1, 99, "")
        bTextBeforeField = Ask_Yes_No("Is the text before the field?", "Get_
Field_Index_Row_Text", FALSE)
        nFieldIndex = Get_Field_Index_Row_Text(strTextInRow, bTextBeforeField,
FALSE)
        Message(String_Combine("Field ID (0 is first field): ", Number_To_
String_Decimal(nFieldIndex)), 5)
        Return
```

See Also

Get_Num_Fields, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_

Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Length

Get the length of the field.

Parameters

Field Index The index of the field.

Format

```
Get_Field_Length (Field Index)
```

Example

```
Script(Get_Field_Row_Column_Length)
String(strMessage)
Number(numFields)
Number(nLoops)
Number(nFieldRow)
Number(nFieldColumn)
Number(nFieldLength)
Activate(From_Menu)
  numFields = Get_Num_Fields
  Message(String_Combine("Number of fields:", Number_To_String_
Decimal(numFields)), 60)
  nLoops = 0
  While(Number_Less_Than(nLoops, numFields))
    nFieldRow = Get_Field_Row(nLoops)
    nFieldColumn = Get_Field_Column(nLoops)
    nFieldLength = Get_Field_Length(nLoops)
    strMessage = String_Combine("Field:", Number_To_String_
Decimal(nLoops))
    strMessage = String_Combine(strMessage, ":row")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldRow))
    strMessage = String_Combine(strMessage, ", column")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldColumn))
    strMessage = String_Combine(strMessage, ", length"
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldLength))
    Ask_OK(strMessage, "Field Info")
    nLoops = Number_Plus(nLoops, 1)
  End_While
```

```
  Comment: The following should return zero because the field index is
invalid.
  nFieldRow = Get_Field_Row(nLoops)
  nFieldColumn = Get_Field_Column(nLoops)
  nFieldLength = Get_Field_Length(nLoops)
  Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Prefix_Scan_Data

Gets the prefixed data for the specified field. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index The index of the field.

Format

```
Get_Field_Prefix_Scan_Data (Field Index)
```

Return Value

Returns the data prefixed when the field is scanned.

Example

```
Script(Get_Field_Prefix_Scan_Data_Test)
String(strPrefix)
Boolean(bOK)
Activate(From_Menu)
        bOK = Set_Field_Prefix_Scan_Data(0, "SCAN")
        strPrefix = Get_Field_Prefix_Scan_Data(0)
        Ask_OK(strPrefix, "String that will be prefixed to scan data in field")
        Return
```

See Also

Get_Field_Data_ID, Get_Field_Prefix_Scan_Data, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Set_Field_Symbology_ID, Set_Field_Data_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data

Get_Field_Row

Get the row number of the field.

Parameters

Field Index The index of the field.

Format

```
Get_Field_Row (Field Index)
```

Example

```
Script(Get_Field_Row_Column_Length)
String(strMessage)
Number(numFields)
Number(nLoops)
Number(nFieldRow)
Number(nFieldColumn)
Number(nFieldLength)
Activate(From_Menu)
  numFields = Get_Num_Fields
  Message(String_Combine("Number of fields:", Number_To_String_
Decimal(numFields)), 60)
  nLoops = 0
  While(Number_Less_Than(nLoops, numFields))
    nFieldRow = Get_Field_Row(nLoops)
    nFieldColumn = Get_Field_Column(nLoops)
    nFieldLength = Get_Field_Length(nLoops)
    strMessage = String_Combine("Field:", Number_To_String_
Decimal(nLoops))
    strMessage = String_Combine(strMessage, ":row")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldRow))
    strMessage = String_Combine(strMessage, ", column")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldColumn))
    strMessage = String_Combine(strMessage, ", length")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldLength))
    Ask_OK(strMessage, "Field Info")
    nLoops = Number_Plus(nLoops, 1)
  End_While
```

```
  Comment: The following should return zero because the field index is
invalid.
  nFieldRow = Get_Field_Row(nLoops)
  nFieldColumn = Get_Field_Column(nLoops)
  nFieldLength = Get_Field_Length(nLoops)
  Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Field_Symbology_ID

Gets the symbology ID of the specified field.

There may be more than one symbology ID in a field; pass in the zero-based Symbology Index. For example, Symbology Index 0 gets the first symbology ID. The return ID ANY means Use All Symbologies. An empty or blank return ID means either the filed has no symbology IDs or the field index is not valid.Use Get_Num_Field_Symbology_Ids to determine the number of symbologies for a field. This action is only valid when using IBM 5250 or 5555 emulation.

Scanner symbology values can be found in Symbologies and Values on page 369.

Parameters

Field Index The index of the field.

Symbology Index The index of the symbology.

Format

```
Get_Field_Symbology_ID (Field Index, Symbology Index)
```

Return Value

Returns the field symbology ID.

Example

```
Script(Get_Field_Symbology_ID_Test)
String(strSymbologyID)
Boolean(ok)
Number(numSymbologies)
Number(counter)
Activate(From_Menu)
        Comment: Set some symbologies for field 0, then display them.
        ok = Set_Field_Symbology_ID(0, "UPCE0", FALSE)
        ok = Set_Field_Symbology_ID(0, "CODE 39", FALSE)
        ok = Set_Field_Symbology_ID(0, "EAN8", FALSE)
        numSymbologies = Get_Num_Field_Symbology_IDs(0)
        counter = 0
        While(Number_Less_Than(counter, numSymbologies))
                strSymbologyID = Get_Field_Symbology_ID(0, counter)
                Ask_OK(strSymbologyID, "Symbology for Field 0")
                counter = Number_Plus(counter, 1)
        End_While
        Return
```

See Also

Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Get_Field_Data_IDGet_Num_Field_Symbology_IDs, Get_Num_Fields

Get_Field_Symbology_Operator

Query whether the field data must match both the field Data ID and the field symbology ID. Use the `Set_Field_Symbology_ID` And-Or parameter to set whether the field data must match both the field data ID and the field symbology ID.

Parameters

`Field Index` The numeric index of the 5250 data field, index 0 is the first field.

Format

```
Get_Field_Symbology_Operator (Field Index)
```

Return Value

Returns a Boolean. TRUE if the field data must match both the Data ID and the Symbology ID. Returns FALSE if the field data must match either the Data ID or Symbology ID.

Example

```
Script( Get_Field_Symbology_Operator_Test )
Boolean( bSetOK )
Boolean( bOperator )
Activate( From_Menu )
  bSetOK = Set_Field_Data_ID( 0, "N" )
  bSetOK = Set_Field_Symbology_ID( 0, "UPCA", TRUE )
  bOperator = Get_Field_Symbology_Operator( 0 )
  If( bOperator )
    Message( "Field data must match both the Data ID and the Symbology
ID", 15 )
  Else
    Message( "Field data must match one or the other of Data ID and
Symbology ID", 15 )
  End_If
  Return
```

See Also

Set_Field_Data_ID, Set_Field_Symbology_ID, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Get_IP_Address

Get the IP address of the device.

Return Value

Returns the current IP address for the device.

Example

```
Script(Get_IP_Address_Test)
String(stripAddress)
Activate(From_Menu)
        stripAddress = Get_IP_Address
        Ask_OK(stripAddress, "IP Address")
        Return
```

See Also

Get_MAC_Address, Get_Workstation_ID, Get_Session_Number

Get_MAC_Address

Get the MAC address of the device.

Return Value

Returns the current MAC address for the device.

Example

```
Script(Get_MAC_Address_Test)
String(strMacAddress)
Activate(From_Menu)
        strMacAddress = Get_MAC_Address
        Ask_OK(strMacAddress, "MacAddress")
        Return
```

See Also

Get_IP_Address, Get_Workstation_ID, Get_Session_Number

Get_Num_Field_Data_IDs

Get the number of data IDs in a field. The number `-1` means that the field index is not valid. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

`Field Index` The index of the field.

Format

```
Get_Num_Field_Data_IDs (Field Index)
```

Example

```
Script(Get_Field_Data_ID_Test)
String(strDataID)
Number(numDataIDs)
Number(counter)
Activate(From_Menu)
        numDataIDs = Get_Num_Field_Data_IDs(0)
        counter = 0
        While(Number_Less_Than(counter, numDataIDs))
        strDataID = Get_Field_Data_ID(0, counter)
        Ask_OK(strDataID, "Data ID for Field 0")
        counter = Number_Plus(counter, 1)
        End_While
        Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Num_Field_Symbology_IDs

Get the number of symbology IDs in a field. The number `-1` means the field index is not valid. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

`Field Index` The index of the field.

Format

```
Get_Num_Field_Symbology_IDs (Field Index)
```

Example

```
Script(Get_Field_Symbology_ID_Test)
String(strSymbologyID)
Boolean(ok)
Number(numSymbologies)
Number(counter)
Activate(From_Menu)
        Comment: Set some symbologies for field 0, then display them.
        ok = Set_Field_Symbology_ID(0, "UPCE0", FALSE)
        ok = Set_Field_Symbology_ID(0, "CODE 39", FALSE)
        ok = Set_Field_Symbology_ID(0, "EAN8", FALSE)
        numSymbologies = Get_Num_Field_Symbology_IDs(0)
        counter = 0
        While(Number_Less_Than(counter, numSymbologies))
                strSymbologyID = Get_Field_Symbology_ID(0, counter)
                Ask_OK(strSymbologyID, "Symbology for Field 0")
                counter = Number_Plus(counter, 1)
        End_While
        Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Num_Fields

Get the number of fields on the screen. This action is only valid when using IBM 5250 or 5555 emulation.

Example

```
Script(Get_Field_Row_Column_Length)
String(strMessage)
Number(numFields)
Number(nLoops)
Number(nFieldRow)
Number(nFieldColumn)
Number(nFieldLength)
Activate(From_Menu)
  numFields = Get_Num_Fields
  Message(String_Combine("Number of fields:", Number_To_String_
Decimal(numFields)), 60)
  nLoops = 0
  While(Number_Less_Than(nLoops, numFields))
    nFieldRow = Get_Field_Row(nLoops)
    nFieldColumn = Get_Field_Column(nLoops)
    nFieldLength = Get_Field_Length(nLoops)
    strMessage = String_Combine("Field:", Number_To_String_
Decimal(nLoops))
    strMessage = String_Combine(strMessage, ":row")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldRow))
    strMessage = String_Combine(strMessage, ", column")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldColumn))
    strMessage = String_Combine(strMessage, ", length")
    strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nFieldLength))
    Ask_OK(strMessage, "Field Info")
    nLoops = Number_Plus(nLoops, 1)
  End_While
  Comment: The following should return zero because the field index is
invalid.
  nFieldRow = Get_Field_Row(nLoops)
  nFieldColumn = Get_Field_Column(nLoops)
  nFieldLength = Get_Field_Length(nLoops)
  Return
```

See Also

Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Position_Column

Get the column number on which the cursor is currently located. The left-most column is 1.

Example

```
Script(Screen_Info)
String(StrMessage)
Number(nColumns)
Number(nRows)
Number(nPositionRow)
Number(nPositionColumn)
Activate(From_Menu)
        nRows = Get_Screen_Rows
        nColumns = Get_Screen_Columns
        nPositionRow = Get_Position_Row
        nPositionColumn = Get_Position_Column
        strMessage = String_Combine("Screen:", Number_To_String_Decimal(nRows))
        strMessage = String_Combine(strMessage, "rows,")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nColumns))
        strMessage = String_Combine(strMessage, "columns")
        Message(strMessage, 10)
        strMessage = String_Combine("Cursor position: row", Number_To_String_
Decimal(nPositionRow))
        strMessage = String_Combine(strMessage, " column")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nPositionColumn))
        Ask_OK(strMessage, "Screen_Info")
        Return
```

See Also

Get_Screen_Columns, Get_Screen_Rows, Get_Position_Row, Set_Cursor_Position, Get_Field_Row, Get_Field_Column

Get_Position_Row

Get the row number on which the cursor is currently located. The top-most row is 1.

Example

```
Script(Screen_Info)
String(StrMessage)
Number(nColumns)
Number(nRows)
Number(nPositionRow)
Number(nPositionColumn)
Activate(From_Menu)
        nRows = Get_Screen_Rows
        nColumns = Get_Screen_Columns
        nPositionRow = Get_Position_Row
        nPositionColumn = Get_Position_Column
        strMessage = String_Combine("Screen:", Number_To_String_Decimal(nRows))
        strMessage = String_Combine(strMessage, "rows,")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nColumns))
        strMessage = String_Combine(strMessage, "columns")
        Message(strMessage, 10)
        strMessage = String_Combine("Cursor position: row", Number_To_String_
Decimal(nPositionRow))
        strMessage = String_Combine(strMessage, " column")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nPositionColumn))
        Ask_OK(strMessage, "Screen_Info")
        Return
```

See Also

Get_Screen_Columns, Get_Screen_Rows, Get_Position_Column, Set_Cursor_Position, Get_Field_Row, Get_Field_Column

Get_Scan_Type_Name

Get the name of the scan type. An empty string is returned if the scan type is not recognized. Scanner symbology values can be found in Symbologies and Values on page 369.

Parameters

Scan Type The scan type number.

Format

```
Get_Scan_Type_Name (Scan Type)
```

Return Value

Returns the name of the supplied scan type.

Example

```
Script( Get_Scan_Type_Name_Test )
String( barcode )
String( strScanType )
Number( type )
Activate( On_Input, barcode, type )
        strScanType = Get_Scan_Type_Name( type )
        Ask_OK( strScanType, "Scan Type Name" )
        type = Ask_Number( "Enter a scan type", "Get_Screen_Text_Test", 0, 255,
60 )
        strScanType = Get_Scan_Type_Name( type )
        Ask_OK( strScanType, "Scan Type Name" )
        Return
```

See Also

Scan_String, Get_Scan_Type_Value

Get_Scan_Type_Value

Get the number value of the supplied scan type name. A value of 0 is returned if the scan type name is not recognized. Scanner symbology values can be found in Symbologies and Values on page 369.

Parameters

Scan Type Name The name of the scan type.

Format

```
Get_Scan_Type_Value (Scan Type Name)
```

Return Value

Returns the value of the supplied scan type name.

Example

```
Script( Get_Scan_Type_Value_Test )
String( strScanType )
String( strMessage )
Number( nScanNumberValue )
Activate( From_Menu )
        strScanType = Ask_String_Uppercase( "Enter the scan type, like
""UPCA""", "Get_Scan_Type_Value", 1, 99, "" )
        nScanNumberValue = Get_Scan_Type_Value( strScanType )
        strMessage = String_Combine( "Scan value for """, strScanType )
        strMessage = String_Combine( strMessage, """: " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nScanNumberValue ) )
        Message( strMessage, 7 )
        Return
```

See Also

Get_Num_Fields, Get_Field_Index_Row_Text, Get_Field_Index_Column_Text, Get_Field_Row, Get_Field_Length, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Column, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_ID

Get_Screen_Columns

Gets the number of columns on the screen. This is the total number of columns, not the number of columns visible.

Example

```
Script(Screen_Info)
String(StrMessage)
Number(nColumns)
Number(nRows)
Number(nPositionRow)
Number(nPositionColumn)
Activate(From_Menu)
        nRows = Get_Screen_Rows
        nColumns = Get_Screen_Columns
        nPositionRow = Get_Position_Row
        nPositionColumn = Get_Position_Column
        strMessage = String_Combine("Screen:", Number_To_String_Decimal(nRows))
        strMessage = String_Combine(strMessage, "rows,")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nColumns))
        strMessage = String_Combine(strMessage, "columns")
        Message(strMessage, 10)
        strMessage = String_Combine("Cursor position: row", Number_To_String_
Decimal(nPositionRow))
        strMessage = String_Combine(strMessage, " column")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nPositionColumn))
        Ask_OK(strMessage, "Screen_Info")
        Return
```

See Also

Get_Screen_Rows, Get_Position_Column, Get_Position_Row, Get_Time, Get_Field_Row, Get_Field_Column, Set_Cursor_Position

Get_Screen_Rows

Get the number of rows on the screen. This is the total number of rows, not the number of rows visible.

Example

```
Script(Screen_Info)
String(StrMessage)
Number(nColumns)
Number(nRows)
Number(nPositionRow)
Number(nPositionColumn)
Activate(From_Menu)
        nRows = Get_Screen_Rows
        nColumns = Get_Screen_Columns
        nPositionRow = Get_Position_Row
        nPositionColumn = Get_Position_Column
        strMessage = String_Combine("Screen:", Number_To_String_Decimal(nRows))
        strMessage = String_Combine(strMessage, "rows,")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nColumns))
        strMessage = String_Combine(strMessage, "columns")
        Message(strMessage, 10)
        strMessage = String_Combine("Cursor position: row", Number_To_String_
Decimal(nPositionRow))
        strMessage = String_Combine(strMessage, " column")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nPositionColumn))
        Ask_OK(strMessage, "Screen_Info")
        Return
```

See Also

Get_Screen_Columns, Get_Position_Column, Get_Position_Row, Get_Field_Row, Get_Field_Column, Set_Cursor_Position

Get_Screen_Text

Get the text at the specified location. The top row is row 1; the left-most column is column 1.

Parameters

Row The row of text to return.

Column The column of text to return.

Format

```
Get_Screen_Text (Row, Column)
```

Return Value

Returns the text starting at the specified screen position up to the right side of the display.

Example

```
Script(Get_Screen_Text_Test)
String(strScreenText)
Number(nRow)
Number(nColumn)
Activate(From_Menu)
        nRow = Ask_Number("Enter row, top row is 1", "Get_Screen_Text_Test", 1,
99, 1)
        nColumn = Ask_Number("Enter column, left-most column is 1", "Get_
Screen_Text_Test", 1, 99, 1)
        strScreenText = Get_Screen_Text(nRow, nColumn)
        Ask_OK(strScreenText, "Screen Text")
        Return
```

See Also

Get_Screen_Text_Columns, Get_Position_Row, Get_Screen_Text_Length, Get_Field_Index, Get_Field_Row, String_Equal, Ask_String, Get_Screen_Rows, Search_Screen, Speech_To_Text

Get_Screen_Text_Columns

Get text from a row on the screen, limited by the specified number of columns. The string will not include information past the number of columns specified.

Parameters

Row	The row of text to return.
Column	The column of text to return.
Number of Columns	The maximum number of columns to get from the screen.

Format

```
Get_Screen_Text_Columns (Row, Column, Number of Columns)
```

Return Value

Returns the text starting at the specified screen position up to the right side of the display.

Example

```
Script( Get_Screen_Text_Columns_Test )
String( strScreenText )
Number( nRow )
Number( nColumn )
Number( nMaxColumns )
Activate( From_Menu )
        nRow = Ask_Number( "Enter row, top row is 1", "Get_Screen_Text_Test",
1, 99, 1 )
        nColumn = Ask_Number( "Enter column, top column is 1", "Get_Screen_
Text_Test", 1, 99, 1 )
        nMaxColumns = Ask_Number( "Enter maximum number of columns", "Get_
Screen_Text_Test", 1, 99, 10 )
        strScreenText = Get_Screen_Text_Columns(nRow, nColumn, nMaxColumns)
        Ask_OK( strScreenText, "Screen Text" )
        Return
```

See Also

Get_Screen_Text, Get_Screen_Text_Length, Get_Field_Index, Get_Field_Row, Speech_To_Text, Search_Screen, Get_Screen_Rows, Get_Position_Row, Ask_String, String_Equal

Get_Screen_Text_Length

Get the specified amount of text on the screen. The string will be truncated if it is longer than the number of characters specified. The top row is row 1; the left-most column is 1.

Parameters

Row	The row of text to return.
Column	The column of text to return.
Maximum Length	The maximum number of characters to get from the screen.

Format

```
Get_Screen_Text_Length (Row, Column, Maximum Length)
```

Return Value

Returns the text starting at the specified screen position up to the right side of the display.

Example

```
Script(Get_Screen_Text_Length_Test)
String(strScreenText)
Number(nRow)
Number(nColumn)
Number(nMaxCharacters)
Activate(From_Menu)
        nRow = Ask_Number("Enter row, top row is 1", "Get_Screen_Text_Test", 1,
99, 1)
        nColumn = Ask_Number("Enter column, top column is 1", "Get_Screen_Text_
Test", 1, 99, 1)
        nMaxCharacters = Ask_Number("Enter maximum text length", "Get_Screen_
Text_Test", 1, 99, 25)
        strScreenText = Get_Screen_Text_Length(nRow, nColumn, nMaxCharacters)
        Ask_OK(strScreenText, "ScreenText")
        Return
```

See Also

Speech_To_Text, Search_Screen, Get_Field_Index, Get_Field_Row, Get_Screen_Text, Get_Screen_Text_Columns, Get_Screen_Rows, Get_Position_Row, String_Equal, Ask_String

Get_Session_Number

Get the number for the session in which this script is executing.

Example

```
Script(Get_Session_Number_Test)
String(strMessage)
String(strSessionNumber)
Number(nSession)
Activate(From_Menu)
        nSession = Get_Session_Number
        strSessionNumber = Number_To_String_Decimal(nSession)
        strMessage = String_Combine("Session Number:", strSessionNumber)
        Message(strMessage, 7)
        Return
```

See Also

Get_MAC_Address, Get_IP_Address, Get_Workstation_ID

Get_Time

Get the amount of time passed since January 1, 2000.

Return Value

Returns the number of seconds that have elapsed since January 1, 2000.

Example

```
Script( Get_Time_Test )
Number( nStartTimeSeconds )
Number( nDelayMilliseconds )
Number( nDelaySeconds )
Number( nEndTimeSeconds )
Activate( From_Menu )
        nStartTimeSeconds = Get_Time
        nDelaySeconds = 2
        nDelayMilliseconds = Number_Multiply( nDelaySeconds, 1000 )
        Message( String_Combine( Number_To_String_Decimal( nDelaySeconds ), "
second delay..." ), nDelaySeconds )
        Delay( 2000 )
        nEndTimeSeconds = Get_Time
        nDelaySeconds = Number_Minus( nEndTimeSeconds,  nStartTimeSeconds )

        Message( String_Combine( "The delay, in seconds, was: ", Number_To_
String_Decimal( nDelaySeconds ) ), 10 )
        Return
```

See Also

Delay, Get_Time_Since_Reset, Wait_For_Screen_Update_With_Timeout

Get_Time_Since_Reset

Gets the amount of time since the last reboot.

Return Value

Returns the number of milliseconds that the computer has been non-suspended since the last reboot.

Example

```
Script( Get_Time_Since_Reset_Test )
String( strTitle )
String( strMessage )
Number( nMilliseconds )
Number( nSeconds )
Number( nMinutes )
Number( nHours )
Number( nDays )
Activate( From_Menu )
        strTitle = "The time since the last reboot, excluding time the device
was suspended"
        nMilliseconds = Get_Time_Since_Reset
        nSeconds = Number_Divide( nMilliseconds, 1000 )
        nMinutes = Number_Divide( nSeconds, 60 )
        nHours = Number_Divide( nMinutes, 60 )
        nDays = Number_Divide( nHours, 24 )
        strMessage = String_Combine( Number_To_String_Decimal( nMilliseconds ),
" milliseconds = " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nSeconds ) )
        strMessage = String_Combine( strMessage, " seconds = " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nMinutes ) )
        strMessage = String_Combine( strMessage, " minutes = " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nHours ) )
        strMessage = String_Combine( strMessage, " hours = " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nDays ) )
        strMessage = String_Combine( strMessage, " days" )
        Ask_OK( strMessage, strTitle )
        Return
```

See Also

Delay, Wait_For_Screen_Update_With_Timeout , Get_Time, Reboot

Get_Workstation_ID

Get the Workstation ID of the device. This is only valid when using IBM emulation (3270, 5250, or 5555) and a Workstation ID has been specified for the current host profile. Otherwise, an empty string is returned.

Return Value

Returns the current Workstation ID.

Example

```
Script(Get_Workstation_ID_Test)
String(strWorkstationID)
        strWorkstationID = Get_Workstation_ID
        Ask_OK(strWorkstationID, "Workstation ID")
        Return
```

See Also

Get_MAC_Address, Get_IP_Address, Get_Session_Number

Goto

Jumps to the supplied label.

Parameters

Label The label where the script starts running after the `Goto`.

Format

```
Goto: (Label)
```

Example

```
Script(Goto_Test)
        Activate(From_Menu)
                Goto: end_script
                Message("Skipped...", 0)
        Label: end_script
                Message("The End.", 0)
                Return
```

See Also

Label

If

If the test is TRUE, the script continues executing until the next `Else` or `EndIf` statement. Otherwise, only executes actions (if any) between the next `Else` and `EndIf` statements.

Parameters

`Test` If TRUE, then the next set of actions get executed, up to the `Else` or `End_If`, whichever comes first.

Format

```
If (Test)
```

Example

```
Script( If_Test )
Boolean( bOK )
Activate( From_Menu )
        Message_Clear
        bOK = Ask_OK_Cancel( "Press OK to see another message.", "Press OK",
FALSE )
        If( bOK )
                Message( "bOK is TRUE", 0 )
        End_If
        Return
```

See Also

If_Not, Else, End_If

If_Not

If the test is FALSE, the script continues executing until the next `Else` or `EndIf` statement. Otherwise, only executes actions (if any) between the next `Else` and `EndIf` statements.

Parameters

`Test` If FALSE, then the next set of actions get executed, up to the `Else` or `End_If`, whichever comes first.

Format

```
If_Not (Test)
```

Example

```
Script( If_Not_Test )
Boolean( bOK )
Activate( From_Menu )
        Message_Clear
        bOK = Ask_OK_Cancel( "Press Cancel to see another message.", "Press
Cancel", FALSE )
        If_Not( bOK )
                Message( "bOK is FALSE", 0 )
        End_If
        Return
```

See Also

If, Else, End_If

Keyboard_Disable

Disables the keyboards. The keyboards will remain disabled until a script calls this action with a FALSE Disable value.

If Disable is TRUE, the hardware and on-screen keyboards for the session are disabled or the session is disconnected.

Parameters

Value1 Boolean (Disable)

Format

```
Keyboard_Disable(Value1)
```

Example

```
Script( Keyboard_Disable_Test )
Activate( From_Menu )
        Keyboard_Disable( TRUE )
        Message( "Keyboard is disabled for a few seconds", 0 )
        Delay( 3000 )
        Keyboard_Disable( FALSE )
        Message( "Keyboard is enabled", 3 )
        Return
```

Keypress_Capture

Begins a keypress capture. The Key Value is the Diagnostics Windows Keyboard Test value for the keypress (for example, 0079 would become 0x0079). When the specified key and modifier combination is pressed, the Boolean variable will be set to TRUE.

Parameters

Value1 The Key Value (integer).

Value2 The modifier (Shift, Ctrl, Alt, None).

Value3 A Boolean variable.

Format

```
Keypress_Capture(Value1, "Value2", Value3)
```

Example

```
Script( Ctrl-F10_Keypress_Test )
Boolean( bKeyPressed )
Boolean( bF1Pressed )
Activate( From_Menu )
        Message( "F1 is captured; press control-F10 to exit", 0 )
        Keypress_Capture( 0x79, "Ctrl", bKeyPressed )
        Keypress_Capture( 0x70, "", bF1Pressed )
        While_Not( bKeyPressed )
                Wait_For_Screen_Update
                If( bF1Pressed )
                        bF1Pressed = FALSE
                        Keypress_Capture_Stop( 0x70, "" )
                        Message( "F1 Pressed; capturing stopped for F1.", 3 )
                End_If
        End_While
        Keypress_Capture_Stop( 0x79, "C" )
        Keypress_Capture_Stop_All
        Message( "Ctrl-F10 Pressed - script is done", 5 )
        Return
```

Keypress_Capture_Stop

Stops capturing the specified key and modifier combination. Supported modifiers are Shift, Ctrl, Alt and None. An empty string is treated as None.

Parameters

Value1 The Key Value (integer).

Value2 The modifier (Shift, Ctrl, Alt, None).

Format

```
Keypress_Capture_Stop (Value1, "Value2")
```

Example

```
Script( Ctrl-F10_Keypress_Test )
Boolean( bKeyPressed )
Boolean( bF1Pressed )
Activate( From_Menu )
        Message( "F1 is captured; press control-F10 to exit", 0 )
        Keypress_Capture( 0x79, "Ctrl", bKeyPressed )
        Keypress_Capture( 0x70, "", bF1Pressed )
        While_Not( bKeyPressed )
                Wait_For_Screen_Update
                If( bF1Pressed )
                        bF1Pressed = FALSE
                        Keypress_Capture_Stop( 0x70, "" )
                        Message( "F1 Pressed; capturing stopped for F1.", 3 )
                End_If
        End_While
        Keypress_Capture_Stop( 0x79, "C" )
        Keypress_Capture_Stop_All
        Message( "Ctrl-F10 Pressed - script is done", 5 )
        Return
```

Keypress_Capture_Stop_All

Stops capturing all key and modifier combinations.

Example

```
Script( Ctrl-F10_Keypress_Test )
Boolean( bKeyPressed )
Boolean( bF1Pressed )
Activate( From_Menu )
        Message( "F1 is captured; press control-F10 to exit", 0 )
        Keypress_Capture( 0x79, "Ctrl", bKeyPressed )
        Keypress_Capture( 0x70, "", bF1Pressed )
        While_Not( bKeyPressed )
                Wait_For_Screen_Update
                If( bF1Pressed )
                        bF1Pressed = FALSE
                        Keypress_Capture_Stop( 0x70, "" )
                        Message( "F1 Pressed; capturing stopped for F1.", 3 )
                End_If
        End_While
        Keypress_Capture_Stop( 0x79, "C" )
        Keypress_Capture_Stop_All
        Message( "Ctrl-F10 Pressed - script is done", 5 )
        Return
```

Keypress_Key

Sends a single keypress to the Terminal Emulation session. This is useful for emulation keys that `Keypress_String` cannot handle.

Parameters

`Emulation Key Value`	The number value of the key to send to the Terminal Emulation session.

Format

```
Keypress_Key ("Emulation Key Value")
```

Example

```
Script(Test_Keypress)
        Activate(From_Menu)
                Keypress_String("N")
                Keypress_Key("VT220", "Enter")
                Return
```

See Also

Keypress_String, Scan_String, Set_Cursor_Position

Keypress_String

Creates one or more key presses to send the supplied string to the Terminal Emulation session.

Parameters

Characters The text characters to send to the Terminal Emulation session.

Format

```
Keypress_String ("Characters")
```

Example

```
Script(Test_Keypress)
        Activate(From_Menu)
                Keypress_String("N")
                Keypress_Key("VT220", "Enter")
                Return
```

See Also

Keypress_Key, Scan_String, Set_Cursor_Position

Label

Label to which a `Goto` can jump.

Parameters

`Label` Identifies a line in the script for using `Goto` to change where the script is running.

Format

```
Label: (Label)
```

Example

```
Script(Goto_Test)
        Activate(From_Menu)
                Goto: end_script
                Message("Skipped...", 0)
        Label: end_script
                Message("The End.", 0)
                Return
```

See Also

Goto

Logging_Off

Turns off logging for the script.

Example

```
Script( Logging_Off_Test )
Activate( From_Menu )
        Logging_On( "TestingLogfile.txt", FALSE )
        Message( "A short message, followed by a delay...", 3 )
                Delay( 1500 )
                Logging_Off
                Message( "This message does not get logged", 3 )
                Return
```

See Also

Logging_On

Logging_On

Creates a log file that records all subsequent script execution activity. This can be useful while developing a script, but is not recommended for production use. Logging is only turned on for the current script. Scripts called by this script will not have logging enabled.

If `Overwrite Previous` is TRUE, a previous log file will be overwritten. Otherwise, the new information will be appended to the existing file.

Parameters

`File Path`	The log file path name.
`Overwrite Previous`	Indicates whether the previous log file is overwritten.

Format

```
Logging_On ("File Path", Overwrite Previous)
```

Example

```
Script(Logging_Test)
        Activate(From_Menu)
        Logging_On("TestingLogfile.txt", FALSE)
        Message("A short message, followed by a delay...", 3)
        Delay(1500)
        Logging_Off
        Return
```

See Also

Logging_Off, Get_MAC_Address, Get_IP_Address, Get_Workstation_ID, Get_Session_Number

Message

Displays a message on the Terminal Emulation screen. Use 0 for the message box to be displayed until the user selects **OK**.

If the time-out value is greater than 0, the message is removed after that number of seconds elapses.

Parameters

Message	The text that appears in the message box.
Timeout (Seconds)	After the designated number of seconds until the message is removed.

Format

```
Message ("Message", Timeout)
```

Example

```
Script(Message_Test)
        Activate(From_Menu)
        Message("Message shows for five seconds", 5)
        Return
```

See Also

Message_Clear, Ask_OK

Message_Clear

Clears the message on the Terminal Emulation screen.

Example

```
Script(Message_Test)
        Activate(From_Menu)
        Message("Waiting for screen update", 0)
        Wait_For_Screen_Update
        Message_Clear
        Return
```

See Also

Message

Number_Divide

Divide the first term by the second term and return the product. Because the numbers are integers, the remainder is ignored. For example, 7 divided by 3 would return 2.

Parameters

Number1 The first term.

Number2 The second term.

Format

```
Number_Divide (Number1, Number2)
```

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Asl_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber1, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ",")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nSum), strTitle)
        strTitle = String_Combine("Number_Minus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
```

```
strTitle = String_Combine("Number_Multiply", strNumbers)
Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
strTitle = String_Combine("Number_Divide", strNumbers)
Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
Return
```

See Also

Number_Set, Number_Plus, Number_Minus, Number_Multiply, Number_Divide_Remainder, Ask_Number, Number_Equal

Number_Divide_Remainder

Divide the first term by the second term and return the remainder. For example, 7 divided by 3 would return a remainder of 1.

Parameters

Number1 The first term.

Number2 The second term.

Format

```
Number_Divide_Remainder (Number1, Number2)
```

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Asl_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber1, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ",")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nSum), strTitle)
        strTitle = String_Combine("Number_Minus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
```

```
strTitle = String_Combine("Number_Multiply", strNumbers)
Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
strTitle = String_Combine("Number_Divide", strNumbers)
Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
Return
```

See Also

Number_Set, Number_Plus, Number_Minus, Number_Multiply, Number_Divide, Ask_Number, Number_Equal

Number_Equal

Compare two numbers and determine whether they are equal.

Parameters

Test1 Gets compared to Test2.

Test2 Gets compared to Test1.

Format

```
Number_Equal (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if Test1 is the same as Test2, FALSE otherwise.

Example

```
Script(Number_Equal_Test)
Number(nEntered1)
Number(nEntered2)
Boolean(bEqual)
Activate(From_Menu)
        nEntered1 = Ask_Number("Type the first number", "Number_Equal_Test", 0,
999, 0)
        nEntered2 = Ask_Number("Type the second number", "Number_Equal_Test",
0, 999, 0)
        bEqual = Number_Equal(nEntered1, nEntered2)
        If(bEqual)
                Message("First number is equal to the second number", 5)
        Else
                Message("First number is not equal to the second number", 5)
        End_If
        Return
```

See Also

Number_Less_Than, Number_Less_Than_Or_Equal, Number_Greater_Than_Or_Equal, Number_Greater_Than, Number_Not_Equal, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Greater_Than

Compare two numbers and determine if one is greater than the other.

Parameters

Test1 Gets compared to Test2.

Test2 Gets compared to Test1.

Format

```
Number_Greater_Than (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if Test1 is larger than Test2, FALSE otherwise.

Example

```
Script(Number_Greater_Than_Test)
Number(nEntered1)
Number(nEntered2)
Boolean(bGreaterThan)
Activate(From_Menu)
        nEntered1 = Ask_Number("Type the first number", "Number_Greater_Than_
Test", 0, 999, 0)
        nEntered2 = Ask_Number("Type the second number", "Number_Greater_Than_
Test", 0, 999, 0)
        bGreaterThan = Number_Greater_Than(nEntered1,
        nEntered2)
        If(bGreaterThan)
                Message("First number is greater than second number", 5)
        Else
                Message("First number is not greater than second number", 5)
        End_If
        Return
```

See Also

Number_Less_Than, Number_Less_Than_Or_Equal, Number_Equal, Number_Greater_Than_Or_Equal, Number_Not_Equal, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Greater_Than_Or_Equal

Compare two numbers and determine if one is greater than the other or if they are equal.

Parameters

Test1 Gets compared to Test2.

Test2 Gets compared to Test1.

Format

```
Number_Greater_Than_Or_Equal (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if Test1 is no smaller than Test2, FALSE otherwise.

Example

```
Script(Number_Greater_Than_Or_Equal_Test)
Number(nEntered1)
Number(nEntered2)
Boolean(bGreaterThan)
Activate(From_Menu)
  nEntered1 = Ask_Number("Type the first number", "Number_Greater_Than_
Or_Equal_Test", 0, 999, 0)
  nEntered2 = Ask_Number("Type the second number", "Number_Greater_Than_
Or_Equal_Test", 0, 999, 0)
  bGreaterThan = Number_Greater_Than_Or_Equal(nEntered1, nEntered2)
  If(bGreaterThan)
    Message("First number is greater than or equal to the second
number", 5)
  Else
    Message("First number is not greater than or equal to the second
number", 5)
  End_If
  Return
```

See Also

Number_Less_Than, Number_Less_Than_Or_Equal, Number_Equal, Number_Greater_Than, Number_Not_Equal, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Less_Than

Compares two numbers and returns TRUE if Test1 is smaller than Test2, FALSE otherwise. The largest number is 2147483647. The smallest number is -2147483648

Parameters

Test1 Gets compared to Test2.

Test2 Gets compared to Test1.

Format

```
Number_Less_Than (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if Test1 is smaller than Test2, FALSE otherwise.

Example

```
Script(Number_Less_Than_Test)
Boolean(bLessThan)
Number(nEntered1)
Number(nEntered2)
Activate(From_Menu)
        nEntered1 = Ask_Number("Type the first number", "Number_Less_Than_
Test", 0, 2147483647, 0)
        nEntered2 = Ask_Number("Type the second number", "Number_Less_Than_
Test", 0, 999, 0)
        bLessThan = Number_Less_Than(nEntered1, nEntered2)
        If(bLessThan)
                Message("First number is less than second number", 5)
        Else
                Message("First number is not less than second number", 5)
        End_If
        Return
```

See Also

Number_Less_Than_Or_Equal, Number_Equal, Number_Greater_Than_Or_Equal, Number_Greater_Than, Number_Not_Equal, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Less_Than_Or_Equal

Compare two numbers and determine if one is less than the other or if they are equal.

Parameters

Test1 Gets compared to Test2.

Test2 Gets compared to Test1.

Format

```
Number_Less_Than_Or_Equal (Test1, Test2)
```

Return Value

Returns a Boolean. TRUE if Test1 is no greater than Test2, FALSE otherwise.

Example

```
Script(Number_Less_Than_Or_Equal_Test)
Number(nEntered1)
Number(nEntered2)
Boolean(bLessThan)
Activate(From_Menu)
  nEntered1 = Ask_Number("Type the first number", "Number_Less_Than_Or_
Equal_Test", 0, 999, 0)
  nEntered2 = Ask_Number("Type the second number", "Number_Less_Than_Or_
Equal_Test", 0, 999, 0)
  bLessThan = Number_Less_Than_Or_Equal(nEntered1, nEntered2)
  If(bLessThan)
    Message("First number is less than or equal to the second number",
5)
  Else
    Message("First number is not less than or equal to the second
number", 5)
  End_If
  Return
```

See Also

Number_Less_Than, Number_Equal, Number_Greater_Than_Or_Equal, Number_Greater_Than, Number_Not_Equal, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Minus

Subtract the second term from the first term to get the difference.

Parameters

Number1 The first term.

Number2 The second term.

Format

```
Number_Minus (Number1, Number2)
```

Return Value

Returns the value when Number2 is subtracted from Number1.

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Asl_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ", ")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
```

```
Ask_OK(Number_To_String_Decimal(nSum), strTitle)
strTitle = String_Combine("Number_Minus", strNumbers)
Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
strTitle = String_Combine("Number_Multiply", strNumbers)
Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
strTitle = String_Combine("Number_Divide", strNumbers)
Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
Return
```

See Also

Number_Set, Number_Plus, Number_Multiply, Number_Divide, Number_Divide_Remainder, Ask_Number, Number_Equal

Number_Multiply

Multiply the first term by the second term and returns the product. Each parameter may be a constant, variable, or action.

Parameters

Number1 The first term.

Number2 The second term.

Format

```
Number_Multiply (Number1, Number2)
```

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Asl_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber1, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ",")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nSum), strTitle)
        strTitle = String_Combine("Number_Minus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
```

```
strTitle = String_Combine("Number_Multiply", strNumbers)
Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
strTitle = String_Combine("Number_Divide", strNumbers)
Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
Return
```

See Also

Number_Set, Number_Plus, Number_Minus, Number_Divide, Number_Divide_Remainder, Ask_Number, Number_Equal

Number_Not_Equal

Compares two numbers.

Parameters

Parameter1(Number):"Test1" Gets compared to Test2

Parameter1(Number):"Test2" Gets compared to Test1.

Format

```
Number_Not_Equal:"Test1"
```

Return Value

Returns a Boolean. FALSE if Test1 is the same as Test2, TRUE otherwise.

Example

```
Script( Number_Not_Equal_Test )
Boolean( bNotEqual )
Number( nEntered1 )
Number( nEntered2 )
Activate( From_Menu )
        nEntered1 = Ask_Number( "Type the first number", "Number_Not_Equal_
Test", 0, 999, 15 )
        nEntered2 = Ask_Number( "Type the second number", "Number_Not_Equal_
Test", 0, 999, 704 )
        bNotEqual = Number_Not_Equal( nEntered1, nEntered2 )
        If( bNotEqual )
                Message( "First number is not equal to the second number", 8 )
        Else
                Message( "First number is equal to the second number", 8 )
        End_If
```

See Also

Number_Less_Than, Number_Less_Than_Or_Equal, Number_Equal, Number_Greater_Than_Or_Equal, Number_Greater_Than, Number_Set, Ask_Number, String_To_Number_Decimal

Number_Plus

Add two numbers together and return the sum. Each parameter may be a constant or a variable or an action.

Parameters

Number1 The first term.

Number2 The second term.

Format

```
Number_Plus (Number1, Number2)
```

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Asl_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber1, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ",")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nSum), strTitle)
        strTitle = String_Combine("Number_Minus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
```

```
strTitle = String_Combine("Number_Multiply", strNumbers)
Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
strTitle = String_Combine("Number_Divide", strNumbers)
Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
Return
```

See Also

Number_Set, Number_Minus, Number_Multiply, Number_Divide, Number_Divide_Remainder, Ask_Number, Number_Equal

Number_Set

Set the value of a number variable. The equal sign (=) is the symbol for Number_Set in the Script Editor.

Parameters

Number A constant, variable, or action.

Format

```
Number_Set (Number)
```

Return Value

Returns the value of the number.

Example

```
Script(Number_Actions)
String(strMessage)
String(strTitle)
String(strNumbers)
Number(nNumber1)
Number(nNumber2)
Number(nSum)
Number(nDifference)
Number(nProduct)
Number(nQuotient)
Number(nRemainder)
Activate(From_Menu)
        nNumber1 = Ask_Number("Enter the first number", "Number_Actions", 0,
2147483647, 36)
        nNumber2 = Ask_Number("Enter the second number", "Number_Actions", 0,
2147483647, 5)
        nSum = Number_Plus(nNumber1, nNumber2)
        nDifference = Number_Minus(nNumber1, nNumber2)
        nProduct = Number_Multiply(nNumber1, nNumber2)
        nQuotient = Number_Divide(nNumber1, nNumber2)
        nRemainder = Number_Divide_Remainder(nNumber1, nNumber2)
        strNumbers = String_Combine(Number_To_String_Decimal(nNumber1), ", ")
        strNumbers = String_Combine(strNumbers, Number_To_String_
Decimal(nNumber2))
        strTitle = String_Combine("Number_Plus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nSum), strTitle)
        strTitle = String_Combine("Number_Minus", strNumbers)
        Ask_OK(Number_To_String_Decimal(nDifference), strTitle)
        strTitle = String_Combine("Number_Multiply", strNumbers)
        Ask_OK(Number_To_String_Decimal(nProduct), strTitle)
        strTitle = String_Combine("Number_Divide", strNumbers)
        Ask_OK(Number_To_String_Decimal(nQuotient), strTitle)
        strTitle = String_Combine("Number_Divide_Remainder", strNumbers)
        Ask_OK(Number_To_String_Decimal(nRemainder), strTitle)
        Return
```

See Also

Number_Plus, Number_Minus, Number_Multiply, Number_Divide, Number_Divide_Remainder, Ask_Number, Number_Equal

Number_To_Character

Converts the specified number to the character value. For example, a number value of 87 would return a string consisting of a "W", the ASCII character value for 87.

Parameters

Number The number to convert to a character.

Format

```
Number_To_Character (Number)
```

Return Value

Returns a string one character in length, where the value for that character is the supplied number.

Example

```
Script( Number_To_Character_Test )
String( strCharacter )
String( strTitle )
Number( nToConvert )
Activate( From_Menu )
        nToConvert = Ask_Number( "Enter a number that will be converted into a
character", "Number_To_Character", 30, 126, 65 )
        strCharacter = Number_To_Character( nToConvert )
        strTitle = Number_To_String_Decimal( nToConvert )
        strTitle = String_Combine( "Number_To_Character of ", strTitle )
        Ask_OK( strCharacter, strTitle )
        Return
```

Number_To_String_Binary

Gets the binary representation of the specified number.

Parameters

Number The number to convert to binary.

Format

```
Number_To_String_Binary (Number)
```

Return Value

Returns a string with the binary representation of the number.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of", strEntered))
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Number_To_String_Decimal

Gets the decimal representation of the specified number.

Parameters

Number The number to convert to decimal.

Format

```
Number_To_String_Decimal (Number)
```

Return Value

Returns a string with the decimal (base 10) representation of the number.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of ", strEntered))
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Number_To_String_Hexadecimal_Lowercase

Gets the hexadecimal representation of the specified number.

Parameters

Number The number to convert to hexadecimal.

Format

```
Number_To_String_Hexadecimal_LowerCase (Number)
```

Return Value

Returns a string with the hexadecimal (base 16) representation of the number using lowercase characters.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of ", strEntered))
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Number_To_String_Hexadecimal_Uppercase

Gets the hexadecimal representation of the specified number.

Parameters

Number The number to convert to hexadecimal.

Format

```
Number_To_String_Hexadecimal_Uppercase (Number)
```

Return Value

Returns a string with the hexadecimal (base 16) representation of the number using uppercase characters.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of ", strEntered))
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Number_To_String_Octal

Gets the octal representation of the specified number.

Parameters

Number The number to convert to octal.

Format

```
Number_To_String_Octal (Number)
```

Return Value

Returns a string with the octal (base 8) representation of the number.

Example

```
Script(Number_Convert)
String(strEntered)
String(strBinary)
String(strHexLower)
String(strHexUpper)
String(strOctal)
Number(numEntered)
Activate(From_Menu)
        numEntered = Ask_Number("Enter the decimal number to convert", "Number_
Convert", -22, 2000000000, 31)
        strEntered = Number_To_String_Decimal(numEntered)
        strBinary = Number_To_String_Binary(numEntered)
        strHexLower = Number_To_String_Hexadecimal_Lowercase(numEntered)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(numEntered)
        strOctal = Number_To_String_Octal(numEntered)
        Ask_OK(strBinary, String_Combine("Binary value of", strEntered))
        Ask_OK(strHexLower, String_Combine("Hex (lower case) value of ",
strEntered))
        Ask_OK(strHexUpper, String_Combine("Hex (upper case) value of ",
strEntered))
        Ask_OK(strOctal, String_Combine("Octal value of ", strEntered))
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Play_Sound

Causes the device to play the sound specified by the sound name. The sound name may be any `.wav` file located in the folder specified by the emulation parameters: **Emulation > Sound > Sound Resource** folder. The sound name may also be any of the sounds in the Resource Editor.

Parameters

`Sound Name` The name of the `.wav` file.

Format

```
Play_Sound ("Sound Name")
```

Example

```
Script(Play_Sound_Test)
        Activate(From_Menu)
        Comment: Play the Chimes sound from the Resource Editor.
        Play_Sound("Chimes")
        Return
```

See Also

Beep, Speech_From_Text

Printer_Cancel

Instructs the printer to discard all Printer_Data information already received.

Example

```
Script( Printing_Example )
String( sScanData )
Number( sScanType )
Activate( On_Input, sScanData, sScanType )
        Comment: Prints a label containing displaying the barcode scanned.
        If_Not( Printer_Data( "! 0 200 200 148 1\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "LABEL\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "BARCODE CODE39 2 1 45 30 70 ", FALSE ) )
                Goto: Print_Error
        End_If
        If( Number_Greater_Than( String_Length( sScanData ), 20 ) )
                Printer_Cancel
                Message( "Barcode is too long.", 5 )
                Return
        End_If
        If_Not( Printer_Data( sScanData, FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "\0D\0A", TRUE ) )
                Goto: Print_Error
        End_If
        Comment: Offer to let the user print additional labels.
        While( Ask_Yes_No( "Do you want to print the label again?", "Reprint",
TRUE ) )
                If_Not( Printer_Repeat )
                        Goto: Print_Error
                End_If
        End_While

        Message( "Printing successful.", 5 )
        Return
Label: Print_Error
        Printer_Cancel
        Message( "Unable to print the label.", 5 )
        Return
```

Printer_Data

Sends data directly to the currently defined printer. If All Data Sent is TRUE, then printing will begin after the latest data is sent. Otherwise, printing will wait for additional data.

Parameters

Value1 Print data (a string).

Value2 All Data Sent (Boolean).

Format

```
Print_Data("Value1"), Value2
```

Example

```
Script( Printing_Example )
String( sScanData )
Number( sScanType )
Activate( On_Input, sScanData, sScanType )
        Comment: Prints a label containing displaying the barcode scanned.
        If_Not( Printer_Data( "! 0 200 200 148 1\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "LABEL\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "BARCODE CODE39 2 1 45 30 70 ", FALSE ) )
                Goto: Print_Error
        End_If
        If( Number_Greater_Than( String_Length( sScanData ), 20 ) )
                Printer_Cancel
                Message( "Barcode is too long.", 5 )
                Return
        End_If
        If_Not( Printer_Data( sScanData, FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "\0D\0A", TRUE ) )
                Goto: Print_Error
        End_If

        Comment: Offer to let the user print additional labels.
```

```
        While( Ask_Yes_No( "Do you want to print the label again?", "Reprint",
TRUE ) )
                If_Not( Printer_Repeat )
                        Goto: Print_Error
                End_If
        End_While

        Message( "Printing successful.", 5 )
        Return

Label: Print_Error
        Printer_Cancel
        Message( "Unable to print the label.", 5 )
        Return
```

Printer_Repeat

Instructs the printer to reprint the last item printed. If TRUE, the printer will printer will produce the last item printed.

Example

```
Script( Printing_Example )
String( sScanData )
Number( sScanType )
Activate( On_Input, sScanData, sScanType )
        Comment: Prints a label containing displaying the barcode scanned.
        If_Not( Printer_Data( "! 0 200 200 148 1\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "LABEL\0D\0A", FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "BARCODE CODE39 2 1 45 30 70 ", FALSE ) )
                Goto: Print_Error
        End_If
        If( Number_Greater_Than( String_Length( sScanData ), 20 ) )
                Printer_Cancel
                Message( "Barcode is too long.", 5 )
                Return
        End_If
        If_Not( Printer_Data( sScanData, FALSE ) )
                Goto: Print_Error
        End_If
        If_Not( Printer_Data( "\0D\0A", TRUE ) )
                Goto: Print_Error
        End_If

        Comment: Offer to let the user print additional labels.
        While( Ask_Yes_No( "Do you want to print the label again?", "Reprint",
TRUE ) )
                If_Not( Printer_Repeat )
                        Goto: Print_Error
                End_If
        End_While

        Message( "Printing successful.", 5 )
        Return

Label: Print_Error
```

```
Printer_Cancel
Message( "Unable to print the label.", 5 )
Return
```

Reboot

Reboots the device. Any subsequent commands will not be executed unless the reboot fails. If Cold Boot is TRUE, the device will cold boot. Some applications and settings may be lost. If Cold Boot is FALSE, the device will not perform a cold boot.

NOTE: Cold boot is only supported by some mobile devices.

Parameters

Cold Boot Indicates whether the device will cold boot.

Format

```
Reboot (Cold Boot)
```

Example

```
Script(Reboot_Test)
        Activate(From_Menu)
                Comment: Do a regular reboot of the device, not a cold boot.
                Reboot(FALSE)
                Return
```

See Also

Ask_Yes_No, Disconnect, Exit_Application, Abort_All, Suspend, Get_Time_Since_Reset

Return

Exits the script normally. If this script was started by another script, the calling script's variables are updated and the calling script resumes.

Example

```
Script(Return_Test)
Activate(From_Menu)
        Comment: This script doesn't do anything
Return
```

See Also

Abort, Abort_All, Disconnect, Exit_Application

Run_Application

Starts an application with the flags (optional) or a known type file with no flags. Specifying the full path to the application or file is recommended.

Parameters

Value1 The path to the application (a string).

Value2 The flags to run the application (a string).

Value3 Boolean (Wait Until Exit).

Format

```
Run_Application ("String", "String", Boolean)
```

Returns

If the application fails to start, a value of `-1` will be returned.

If the `\"Wait Until Exit\"` value is TRUE, the value returned will be the exit code for the application. Otherwise, a value of 0 will be returned.

Example

```
Script( Run_Application_Test )
String( strExit )
Number( nExitCode )
Activate( From_Menu )
        nExitCode = Run_Application( "Notepad.exe", "", TRUE )
        strExit = Number_To_String_Decimal( nExitCode )
        Ask_OK( strExit, "Exit Code" )
        Return
```

Scan_String

Treats the string as scanned data of the type specified. Scanner symbology values can be found in Symbologies and Values on page 369.

Parameters

Characters The string that will be treated as scan data.

Scan Type The scanner symbology of the scanned data.

Format

```
Scan_String (Characters, Scan Type)
```

Example

```
Script(Scan_String_Test)
  String(sScanData)
  Number(nScanType)
  Activate(On_Input, sScanData, nScanType)
    Comment:See if this is a special barcode to indicate a keypress.
    Comment: You can adjust the barcode type and test strings to suit
your purposes.
    If(Number_Equal(nScanType, Get_Scan_Type_Value("CODE 128")))
      If(String_Equal(sScanData, "Ctrl-A", 0, TRUE))
        Keypress_Key("VT220", "Ctrl-A")
        Return
      End_If
    End_If
  Comment: We didn't use the scan data. Pass it along for standard
processing.
    Scan_String(sScanData, nScanType)
    Return
```

See Also

Keypress_String, Keypress_Key, Set_Cursor_Position, Get_Scan_Type_Name, Get_Scan_Type_Value

Search_Screen

Searches the screen for the supplied text. The rows to be searched can be specified, where 1 is the top row. If the bottom row value is less than 1, searching continues to the bottom of the screen. If `Ignore Case` is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Search String	The string to find on the screen.
Top Search Row	The row in which the search begins.
Bottom Search Row	The row in which the search ends.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
Search_Screen (Search String, Top Search Row, Bottom Search Row, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if the text is found, FALSE otherwise.

Example

```
Script( Search_Screen_Test )
String( strSearch )
Boolean( bFound )
Boolean( bIgnoreCase )
Number( nStartRow )
Number( nEndRow )
Activate( From_Menu )
        strSearch = Ask_String( "Enter string to search for", "Search_String_
Test", 0, 999, "" )
        nStartRow = Ask_Number( "Enter starting row (1 is top of
screen)","Search_String_Test", 0, 999, 0 )
        bIgnoreCase = Ask_Yes_No( "Ignore case?", "Search_String_Test", FALSE )
        bFound = Search_Screen( strSearch, nStartRow, nEndRow, bIgnoreCase )
        If( bFound )
                Message( "Search string found.", 5 )
        Else
```

```
            Message( "Search string not found.", 5 )
        End_If
        Return
```

See Also

Get_Screen_Rows, Get_Position_Row, Get_Field_Row, Get_Field_Index, Set_Field_Data_ID, String_Set, Ask_String

Set_Cursor_Position

Moves the cursor to the specified row and column. The top-most row is 1, and the left-most column is 1.

Parameters

Row The row where the cursor will go, starting at row 1 for the top row.

Column The column where the cursor will go, starting at column 1 for the left-most column.

Format

```
Set_Cursor_Position (Row, Column)
```

Example

```
Script(Set_Cursor_Position_Test)
        Activate(From_Menu)
        Set_Cursor_Position(15, 6)
        Return
```

See Also

Keypress_String, Keypress_Key, Scan_String, Get_Screen_Columns, Get_Screen_Rows, Get_Position_Column, Get_Position_Row, Get_Field_Index, Get_Field_Row, Get_Field_Column

Set_Field_Append_Scan_Data

Controls whether to append scan data in the field. This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index	The numeric index of the 5250 data field, index 0 is the first field.
Append Scan Data	Use TRUE to cause the scan data to be appended to the scanned value when scanning a field.

Format

```
Set_Field_Append_Scan_Data (Field Index, Append Scan Data)
```

Return Value

Returns a Boolean. TRUE if successful, returns FALSE if the field index is not valid.

Example

```
Script(Set_Field_Append_Scan_Data_Test)
Boolean(bSetOK)
Activate(From_Menu)
        bSetOK = Set_Field_Append_Scan_Data(0, FALSE)
        If(bSetOK)
                Message("Set_Field_Append_Scan_Data worked", 5)
        Else
                Message("Set_Field_Append_Scan_Data failed", 5)
        End_If
        Return
```

See Also

Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Set_Field_Com_Data_Field

Sets a field to be the Com Data Field for the screen. There can be only one Com Data Field per screen. Use FALSE to remove the Com Data Field setting.

NOTE: This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index	The numeric index of the 5250 data field, index 0 is the first field.
Set Com Data Field	Use TRUE to make this field a Com Data Field.

Format

```
Set_Field_Com_Data_Field (Field Index, Set Com Data Field)
```

Return Value

Returns a Boolean. TRUE if successful, FALSE if the index is not valid.

Example

```
Script(Set_Field_Com_Data_Field_Test)
Boolean(bSetOK)
Activate(From_Menu)
        bSetOK = Set_Field_Com_Data_Field(2, FALSE)
        If(bSetOK)
                Message("Set_Field_Com_Data_Field worked", 5)
        Else
                Message("Set_Field_Com_Data_Field failed", 5)
        End_If
        Return
```

See Also

Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Set_Field_Data_ID

Sets the Data ID for a field. A field may have more than one Data ID. If the field already has a Data ID, this command will add another Data ID. Use a blank string to clear all Data IDs for the field.

Use actions like `Get_Field_Index()` to determine the index of a field.

NOTE: This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index	The numeric index of the 5250 data field, index 0 is the first field.
Data ID String	The data identifier for the 5250 data field, blank to clear all data identifiers for the field.

Format

```
Set_Field_Data_ID (Field Index, "Data ID String")
```

Return Value

Returns a Boolean. TRUE if successful, FALSE if the field index is not valid.

Example

```
Script(Set_Field_Data_ID_Test)
Boolean(bSetOK)
Activate(From_Menu)
        bSetOK = Set_Field_Data_ID(0, "N")
        If(bSetOK)
                Message("Set_Field_Data_ID worked", 5)
        Else
        Message("Set_Field_Data_ID failed", 5)
        End_If
        Return
```

See Also

Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Set_Field_Prefix_Scan_Data

Sets the data prefixed to a field when the field is scanned. Use a blank string to clear the prefix data.

NOTE: This action is only valid when using IBM 5250 or 5555 emulation.

Parameters

Field Index The numeric index of the 5250 data field, index 0 is the first field.

Data To Prefix Gets prefixed to the field data.

Format

```
Set_Field_Prefix_Scan_Data (Field Index, "Data To Prefix")
```

Return Value

Returns a Boolean. TRUE if successful, FALSE if the field index is not valid.

Example

```
Script(Set_Field_Prefix_Scan_Data_Test)
Boolean(bSetOK)
Activate(From_Menu)
        bSetOK = Set_Field_Prefix_Scan_Data(0, "99")
        If(bSetOK)
                Message("Set_Field_Prefix_Scan_Data worked", 5)
        Else
                Message("Set_Field_Prefix_Scan_Data failed", 5)
        End_If
        Return
```

See Also

Set_Field_Data_ID, Set_Field_Symbology_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Set_Field_Symbology_ID

Sets the Symbology ID for a field. A field may have more than one Symbology ID. If the field already has a Symbology ID, this command will add another Symbology ID. Use Symbology ID ANY to clear the symbologies, which will then allow you to use All Symbologies. ANY causes `Get_Num_Field_Symbology_IDs ()` to return zero, and `Get_Field_Symbology_ID ()` to return an empty string.

NOTE: This action is only valid when using IBM 5250 or 5555 emulation.

Scanner symbology values can be found in Symbologies and Values on page 369.

Parameters

Field Index	The numeric index of the 5250 data field, index 0 is the first field.
Symbology ID	The name of the symbology.
And-Or with Data ID	Indicates whether the field data must match the Data ID and/or Symbology ID.

Format

```
Set_Field_Symbology_ID (Field Index, "Symbology ID", And-Or with Data
ID)
```

Return Value

If `And-Or` with Data ID is TRUE, then the field data must match both the Data ID and the Symbology ID. If `And-Or` is FALSE, then the field data must match either the Data ID or the Symbology ID.

Example

```
Script( Set_Field_Symbology_ID_Test )
Boolean( bSetOK )
Activate( From_Menu )
        bSetOK = Set_Field_Symbology_ID( 2, "UPCA", FALSE )
        If( bSetOK )
                Message( "Set_Field_Symbology_ID worked", 5 )
        Else
                Message( "Set_Field_Symbology_ID failed", 5 )
        End_If
        Return
```

See Also

Set_Field_Data_ID, Get_Field_Symbology_Operator, Set_Field_Append_Scan_Data, Set_Field_Com_Data_Field, Set_Field_Prefix_Scan_Data, Get_Field_Append_Scan_Data, Get_Field_Data_ID, Get_Num_Field_Data_IDs, Get_Num_Field_Symbology_IDs, Get_Field_Com_Data_Field, Get_Field_Symbology_ID, Get_Num_Fields, Get_Field_Prefix_Scan_Data

Speech_Change_Setting

Changes the speech setting to the specified value.

If the return is FALSE and the setting starts with "stt", call `Speech_To_Text_Error_Desc` to get the reason for the error.

If the return is FALSE and the setting starts with "tts", call `Speech_From_Text_Error_Desc` to get the reason for the error.

Parameters

`Setting` The name of the setting to change.

`Value` The new value for the setting.

Format

```
Speech_Change_Setting ("Setting", Value)
```

Return Value

Returns a Boolean. TRUE if the setting is supported and the value is valid for that setting, returns FALSE otherwise.

Example

```
Script(Speech_Change_Setting_Test)
String( strDescription )
Boolean( bChanged )
Activate( From_Menu )
Comment: Increase the speech-to-text timeout to twenty seconds
        bChanged = Speech_Change_Setting("stt_timeout", 20000)
        If( bChanged )
                Message( "Changed OK", 3 )
        Else
                strDescription = Speech_To_Text_Error_Desc
                Message( String_Combine( "Change Failed: ", strDescription ), 5 )
        End_If
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_

Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_Find_Setting_Value

Searches all possible value descriptions for the speech setting.

Parameters

Setting	The name of the setting to search.
Value Description	The value description to match.
Exact Only	Indicates whether only an exact match is returned.

Format

```
Speech_Find_Setting_Value ("Setting", Value Description, Exactly Only)
```

Return Value

Returns the value of the setting that is the closest match. If `\"Exact Only\"` is TRUE, then only exact matches are returned. Returns `-1` if no match is found.

Example

```
Script(Speech_Find_Setting_Value_Test)
String(strMessage)
Number(nLanguage)
Activate(From_Menu)
        nLanguage = Speech_Find_Setting_Value("stt_language", "enu", FALSE)
        strMessage = String_Combine("stt_language match for enu:", Number_To_
String_Decimal(nLanguage))
        Message(strMessage, 5)
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_NameSpeech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_From_Text

Converts text into sound and plays the resulting sound on the computer. If the parameter `Wait Until Done` is FALSE, the script will continue to execute while the sound is being played.

For Temporary Settings, each setting must start with "tts_" and use the format setting=value. Multiple settings may be specified, and should be separated by comma (,) characters. Quotes around the value are optional. If a value is not a number, then the Text-to-Speech engine uses the value closest to the value text description provided. Temporary Settings are only in effect only while the speech is being played.

Parameters

Text	The text that is converted into sound.
Wait Until Done	Indicates whether the script resumes execution before the speech has completely played.
Temporary Settings	An optional string to set one or more speech settings only for the duration of this Text-to-Speech action.

Format

```
Speech_From_Text ("Text", Wait Until Done)
```

or

```
Speech_From_Text ("Text", Wait Until Done, "Optional Temporary
Settings")
```

Return Value

Returns a Boolean. TRUE if the sound was played successfully, FALSE if otherwise.

Example

```
Script( Speech_From_Text_Test )
Activate( From_Menu )
        Speech_From_Text( "Hello again.", FALSE )
        Speech_From_Text( "A508421", FALSE, "tts_readmode=character,
        tts_rate=200" )
        Speech_From_Text( "Goodbye", FALSE )
        Return
```

See Also

Speech_From_Text_Available, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel, Speech_Get_Confidence_Level

Speech_From_Text_Available

Determines whether text-to-speech is supported.

Return Value

Returns a Boolean. TRUE if text-to-speech is supported on the computer, returns FALSE otherwise.

Example

```
Script(Speech_From_Text_Available_Test)
Boolean(bAvailable)
Activate(From_Menu)
        bAvailable = Speech_From_Text_Available
        If(bAvailable)
                Message("Speech From Text is available", 5)
        Else
                Message("Speech From Text is not available", 5)
        End_If
        Return
```

See Also

Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_From_Text_Cancel

Provides a way for the script to perform other functions while the text-to-speech action occurs. Returns immediately if there is no action to cancel.

Return Value

Returns after canceling any unspoken speech-from-text actions.

Example

```
Script(Speech_From_Text_Cancel_Test)
Activate(From_Menu)
        Speech_From_Text("The quick brown fox jumped over the lazy dogs.",
FALSE)
        Delay(1000)
        Speech_From_Text_Cancel
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_To_Text_Cancel, Speech_Get_Confidence_Level

Speech_From_Text_Error_Desc

Gets an error description for the last speech-from-text action. An empty string is returned if no errors have occurred.

Return Value

Returns a string describing the last error from a speech-from-text action.

Example

```
Script( Speech_From_Text_Error_Desc_Test )
String( strDescription )
Activate( From_Menu )
        strDescription = Speech_From_Text_Error_Desc
        Message( String_Combine( "Last speech error:", strDescription ), 5 )
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_Get_Confidence_Level

Gets the confidence value for the last Speech_To_Text action.

Return Value

Returns a number that is the confidence value for the last successful Speech_To_Text result.

The number is zero if the confidence value is not available.

Example

```
Script( Speech_Get_Confidence_Level_Test )
String( szResult )
String( szMessage )
Number( nConfidence )
Activate( From_Menu )
        If_Not( Speech_To_Text_Available )
                Ask_OK( "Speech to text is not available.", "Error" )
                Return
        End_If
        Message( "Say one or more digits", 0 )
        If_Not( Speech_To_Text( szResult, "connected_digits" ) )
                Message_Clear
                Ask_OK( "No results returned from the speech.", "Error" )
                Return
        End_If
        Message_Clear
        nConfidence = Speech_Get_Confidence_Level
        szMessage = String_Combine( szResult, ", confidence: " )
        szMessage = String_Combine( szMessage, Number_To_String_Decimal(
nConfidence ) )
        Ask_OK( szMessage, "Speech-to-text-confidence" )
        Return
```

See Also

Speech_From_Text, Speech_From_Text_Cancel

Speech_Get_Setting

Gets the value of the speech setting.

Parameters

Setting Get the value for this setting name.

Format

```
Speech_Get_Setting ("Setting")
```

Return Value

Returns the current value of the speech setting. Returns `-1` if the speech setting is not valid.

Example

```
Script(Speech_Get_Setting_Test)
String(strTimeout)
Number(nTimeout)
Activate(From_Menu)
        nTimeout = Speech_Get_Setting("stt_timeout")
        strTimeout = Number_To_String_Decimal(nTimeout)
        Message(strTimeout, 3)
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_NameSpeech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_Get_Setting_Max

Gets the largest value for a speech setting.

Parameters

Setting Get the maximum value for this setting name.

Format

```
Speech_Get_Setting_Max ("Setting")
```

Return Value

Returns the largest possible value for a speech setting. Returns 0 if only one setting value is supported, returns -1 if the speech setting is not valid.

Example

```
Script(Speech_Get_Setting_Max_Test)
String(strMessage)
Number(nTimeout)
Activate(From_Menu)
        nTimeout = Speech_Get_Setting_Max("stt_timeout")
        strMessage = String_Combine("stt_timeout maximum:", Number_To_String_
Decimal(nTimeout))
        Message(strMessage, 5)
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_NameSpeech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_Get_Setting_Value_Desc

Get a description of the speech setting value.

Parameters

Setting The name of the setting.

Value The description for this value.

Format

```
Speech_Get_Setting_Value_Desc ("Setting", Value)
```

Return Value

Returns a string that describes the value for the speech setting (this does not need to be the setting's current value). Returns an empty string if the setting or value is not valid.

Example

```
Script( Speech_Get_Setting_Value_Desc_Test )
String( strDescription )
Activate( From_Menu )
        strDescription = Speech_Get_Setting_Value_Desc( "stt_language", 1 )
        Message( strDescription, 7 )
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_NameSpeech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_Setting_Available

Identifies speech settings by case-insensitive name strings. For a list of available setting names, see Speakeasy Settings on page 309.

Parameters

Setting Check if this setting name is supported.

Format

```
Speech_Setting_Available (Setting)
```

Return Value

Returns a Boolean. TRUE if the speech setting mane is supported, FALSE otherwise.

Example

```
Script(Speech_Setting_Available_Test)
Boolean(bAvailable)
        bAvailable = Speech_Setting_Available("stt_language")
        If(bAvailable)
                Message("Speech setting stt_language is available", 5)
        Else
                Message("Speech setting stt_language is not available", 5)
        End_If
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text

Listens to the user speak and returns the text equivalent of what he/she said in the string variable. If a grammar is specified, the grammar file with that name is used for speech recognition; otherwise, the previous grammar file is reused.

Parameters

Text The string variable into which the converted speech is placed.

Grammar The grammar file to use.

Return Value

Returns a string, the text equivalent of a user's speech. Returns an empty string if no acceptable speech was detected. An empty string result may indicate a timeout condition or an error condition.

Example

```
Script( Speech_To_Text_Test )
String( szResult )
Activate( From_Menu )
        If_Not( Speech_To_Text_Available )
                Ask_OK( "Speech to text is not available.", "Error" )
                Return
        End_If
        Message( "Say one or more digits", 0 )
        If_Not( Speech_To_Text( szResult, "connected_digits" ) )
                Message_Clear
                Ask_OK( "No results returned from the speech.", "Error" )
                Return
        End_If
        Message_Clear
        Ask_OK( szResult, "Speech-to-text-results" )
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_Available

Determines whether speech-to-text is supported.

Return Value

Returns a Boolean. TRUE if speech-to-text is supported on the computer, returns FALSE otherwise.

Example

```
Script(Speech_To_Text_Available_Test)
Boolean(bAvailable)
Activate(From_Menu)
        bAvailable = Speech_To_Text_Available
        If(bAvailable)
                Message("Speech To Text is available", 5)
        Else
                Message("Speech To Text is not available", 5)
        End_If
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_Cancel

Provides a way for the script to perform other functions while the speech-to-text action occurs.

Return Value

Returns after cancelling the last `Speech_To_Text_No_Wait` action. Returns immediately if there is no action to cancel.

Example

See the example for Speech_To_Text_No_Wait.

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_Change_User_Name

Changes the user name being used by the speech-to-text engine.

Return Value

Returns a Boolean. TRUE if the user name was changed, FALSE if this feature is not supported.

Example

```
Script( Speech_To_Text_Change_User_Name_Test )
String( strUsername )
Activate( From_Menu )
        strUsername = Ask_String( "Enter the new user name", "New User Name",
1,25, "" )
        Speech_To_Text_Change_User_Name( strUsername )
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_Error_Desc

Gets an error description for the last speech-to-text action. An empty string is returned if no errors have occurred.

Return Value

Returns a string describing the last error from a speech-to-text action.

Example

```
Script( Speech_To_Text_Error_Desc_Test )
String( strDescription )
Activate( From_Menu )
Speech_Change_Setting( "stt_unknown", 2 )
strDescription = Speech_To_Text_Error_Desc
Message( String_Combine( "Last speech-to-text error:", strDescription),5
)
Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_Get_User_Name

Gets the user name.

Return Value

Returns a string with the user name being used by the speech-to-text engine. An empty string is returned if no user name has been assigned.

Example

```
Script( Speech_To_Text_Get_User_Name_Test )
String( strUsername )
Activate( From_Menu )
        strUsername = Speech_To_Text_Get_User_Name
        Message( strUsername, 4 )
        Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_No_Wait, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

Speech_To_Text_No_Wait

Listens to the user speak and returns the text equivalent of what the user said. The Boolean variable is set to TRUE when the speech is recognized or times out. If a grammar is specified, the grammar file with that name is used for the speech recognition. Otherwise, the previous grammar file is reused.

Parameters

Done Indicates when the speech is recognized or times out.

Text The string variable into which the converted speech is placed.

Grammar The grammar file to use.

Format

```
Speech_To_Text_No_Wait (Done, Text, Grammar)
```

Return Value

Returns the text equivalent of a user's speech in the string variable. Returns a Boolean value of either TRUE or FALSE. It returns TRUE if the speech-to-text started successfully, or FALSE otherwise.

Example

```
Script( Speech_Demo )
Profile( Speech_Demo_Profile )
String( sSpeechResult )
Boolean( bSpeechStarted )
Boolean( bSpeechDone )
Number( nCurrentGrammar )
Number( nDesiredGrammar )
Number( nCurrentScreen )
Activate( Connection )
  Comment: Is Speech available?
  If_Not( Speech_To_Text_Available )
    Message( "Speech To Text Not available", 3 )
    Return
  End_If
  If_Not( Speech_From_Text_Available )
    Message( "Speech From Text Not Available", 3 )
    Return
  End_If
```

```
  Comment: We are using English.
  Speech_Change_Setting( "stt_language_long", Speech_Find_Setting_Value(
"stt_language_long", "English", FALSE ))
  Speech_Change_Setting( "tts_language_long", Speech_Find_Setting_
Value("tts_language_long", "English", FALSE ))

  While( TRUE )

    Comment: Perform Speech-to-Text with the desired grammar.
    If( Number_Not_Equal( nCurrentGrammar, nDesiredGrammar ) )
      Speech_To_Text_Cancel
      bSpeechStarted = FALSE
      bSpeechDone = FALSE
      sSpeechResult = ""
    End_If
    If( Boolean_And( bSpeechDone, String_Empty( sSpeechResult ) ) )
      Comment: The string was cleared because the result was used. Reset
for the next use.
      bSpeechStarted = FALSE
      bSpeechDone = FALSE
    End_If
    If_Not( bSpeechStarted )
      If( Number_Equal( nDesiredGrammar, 1 ) )
        Comment: Set the threshold for this grammar.
        Comment: Lower values are more likely to get results, but they
are more likely to be wrong.
        Speech_Change_Setting( "stt_threshold", 4500 )

        Comment: Use the digit.bnf grammar file.
        bSpeechStarted = Speech_To_Text_No_Wait( bSpeechDone,
sSpeechResult, "digit" )
      End_If

      Comment: Can add support for other grammars here.

      nCurrentGrammar = nDesiredGrammar
  End_If

    Comment: Look for screens where we include speech support.
    If( Boolean_And( String_Equal( Get_Screen_Text_Length( 1, 1, 6 ),
"Pick ", 0, FALSE ), String_Equal( Get_Screen_Text_Length( 7, 1, 4 ),
"Pick", 0, FALSE ) ) )
      Comment: The first time we see this screen, tell the user what we
want.
      If( Number_Not_Equal( nCurrentScreen, 101 ) )
```

```
        nCurrentScreen = 101
        Speech_From_Text( "Pick a menu item from 1 to 5.", FALSE )
      End_If

      Comment: Prepare to get the user's response.
      nDesiredGrammar = 1
      If( Number_Not_Equal( nDesiredGrammar, nCurrentGrammar ) )
        Continue
      End_If

      Comment: Handle any user responses.
      If_Not( String_Empty( sSpeechResult ) )
        If( Boolean_And( Number_Greater_Than_Or_Equal( String_To_Number_
Decimal( sSpeechResult ), 1 ), Number_Less_Than_Or_Equal( String_To_
Number_Decimal( sSpeechResult ), 5 ) ) )
          Comment: Type the response the user supplied.
          Keypress_String( sSpeechResult )
          Keypress_Key( "VT220", "Enter" )
          Wait_For_Screen_Update
          nDesiredGrammar = 0
          sSpeechResult = ""
          Continue
        End_If

        Speech_From_Text( "Unexpected result. Please try again.", FALSE
)
        sSpeechResult = ""
        Continue
      End_If

      Comment: Wait for the user to respond.
      Wait_For_Screen_Update
      Continue
    End_If

    Comment: Can add support for other screens here.

    Comment: If we reach this point, we don't recognize the current
screen.
    Comment: Wait for a screen we recognize.
    nCurrentScreen = 0
    nDesiredGrammar = 0
    Wait_For_Screen_Update
  End_While
```

```
Return
```

See Also

Speech_From_Text_Available, Speech_From_Text, Speech_To_Text_Available, Speech_To_Text, Speech_To_Text_Cancel, Speech_Setting_Available, Speech_Change_Setting, Speech_Get_Setting, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_Get_Setting_Value_Desc, Speech_To_Text_Get_User_Name, Speech_To_Text_Change_User_Name, Speech_From_Text_Error_Desc, Speech_To_Text_Error_Desc, Speech_From_Text_Cancel

String_Combine

Returns the concatenated value of two to five strings.

Parameters

String1 The first part of the returned string.

String2 The second part of the returned string.

String3 The optional third part of the returned string.

String4 The optional fourth part of the returned string.

String5 The optional fifth part of the returned string.

Format

```
String_Combine (String1, String2)
```

Return Value

Returns the value of string1 concatenated with string2. The optional strings are concatenated if they are present.

Example

```
Script(String_Set_Test)
String(strResult)
String(strTitle)
Activate(From_Menu)
        strTitle = "Scripting String"
        strResult = Ask_String("Enter some text", "String_Set_Test", 1, 99, "")
        strResult = String_Combine("Text Entered:", strResult)
        Ask_OK(strResult, strTitle)
        Return
```

See Also

String_Set, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Empty

Check the length of the string to determine if it is an empty string.

Parameters

String Check if this string is empty.

Format

```
String_Empty (String)
```

Return Value

Returns Boolean. TRUE if the string is 0 characters in length, FALSE otherwise.

Example

```
Script(String_Empty_Test)
String(strEntered)
Boolean(bEmpty)
Activate(From_Menu)
        strEntered = Ask_String("Type a string", "String_Empty_Test", 0, 0, "")
        bEmpty = String_Empty(strEntered)
        If(bEmpty)
                Message("String is empty.", 5)
        Else
                Message("String is not empty.", 5)
        End_If
        Return
```

See Also

String_Less_Than, String_Less_Than_Or_Equal, String_Equal, String_Greater_Than_Or_Equal, String_Greater_Than, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Equal

Compare the two strings and determine if they are both TRUE or are both FALSE. If the `Maximum Length` value is greater than 0, any characters after the specified number of characters are ignored. If `Ignore Case` is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Equal ("Test1", "Test2", Maximum Length, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if Test1 precedes Test2 are the same string, FALSE otherwise.

Example

```
Script(String_Equal_Test)
String(strEntered1)
String(strEntered2)
Boolean(bEqual)
Activate(From_Menu)
        strEntered1 = Ask_String("Type the first string", "String_Equal_Test",
0, 0, "")
        strEntered2 = Ask_String("Type the second string", "String_Equal_Test",
0, 0, "")
        bEqual = String_Equal(strEntered1, strEntered2, 0, TRUE)
        If(bEqual)
                Message("First string is equal to second string", 5)
        Else
                Message("First string is not equal to second string", 5)
        End_If
        Return
```

See Also

String_Empty, String_Less_Than, String_Less_Than_Or_Equal, String_Greater_Than_Or_Equal, String_Greater_Than, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Find_First

Finds the first instance of the substring inside the string, and returns the position where that substring starts. The left-most position is 0, so a value of 0 would be returned if the string started with the substring. A value of -1 is returned if no instances of the substring are in the string.

Parameters

String to Parse	The string that gets searched.
Substring to Find	The instance of the substring to find in the parsed string.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Find_First (String to Parse, Substring to Find, Ignore Case)
```

Example

```
Script( String_Find )
String( strOriginal )
String( strMessage )
String( strTitle )
String( strSearchFor )
Number( nFirstIndex )
Number( nLastIndex )
Activate( From_Menu )
        strOriginal = Ask_String( "Enter a string to search", "String_Find", 1,
99, "abcdef ABCDE" )
        strSearchFor = Ask_String("Search for:", "String_Find", 1, 99, "bc")
        nFirstIndex = String_Find_First( strOriginal, strSearchFor, TRUE )
        nLastIndex = String_Find_Last( strOriginal, strSearchFor, TRUE )
        strTitle = String_Combine( "Search """, strOriginal )
        strTitle = String_Combine( strTitle, """ for """ )
        strTitle = String_Combine( strTitle, strSearchFor )
        strTitle = String_Combine( strTitle, """" )
        strMessage = String_Combine( "String_Find_First: ", Number_To_String_
Decimal( nFirstIndex ) )
        Ask_OK( strMessage, strTitle )
        strMessage = String_Combine( "String_Find_Last: ", Number_To_String_
Decimal( nLastIndex ) )
        Ask_OK( strMessage, strTitle )
```

```
Return
```

See Also

String_Length, String_Find_Last, String_Equal, String_Set

String_Find_Last

Finds the last instance of the substring inside the string, and returns the position where that substring starts. The left-most position is 0, so a value of 0 would be returned if the string started with the substring. A value of -1 is returned if no instances of the substring are in the string.

Parameters

String to Parse	The string that gets searched.
Substring to Find	The instance of the substring to find in the parsed string.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Find_Last (String to Parse, Substring to Find, Ignore Case)
```

Example

```
Script( String_Find )
String( strOriginal )
String( strMessage )
String( strTitle )
String( strSearchFor )
Number( nFirstIndex )
Number( nLastIndex )
Activate( From_Menu )
        strOriginal = Ask_String( "Enter a string to search", "String_Find", 1,
99, "abcdef ABCDE" )
        strSearchFor = Ask_String("Search for:", "String_Find", 1, 99, "bc")
        nFirstIndex = String_Find_First( strOriginal, strSearchFor, TRUE )
        nLastIndex = String_Find_Last( strOriginal, strSearchFor, TRUE )
        strTitle = String_Combine( "Search """, strOriginal )
        strTitle = String_Combine( strTitle, """ for """ )
        strTitle = String_Combine( strTitle, strSearchFor )
        strTitle = String_Combine( strTitle, """" )
        strMessage = String_Combine( "String_Find_First: ", Number_To_String_
Decimal( nFirstIndex ) )
        Ask_OK( strMessage, strTitle )
        strMessage = String_Combine( "String_Find_Last: ", Number_To_String_
Decimal( nLastIndex ) )
        Ask_OK( strMessage, strTitle )
        Return
```

See Also

String_Length, String_Find_First, String_Equal, String_Set

String_Greater_Than

Compare the two strings and determine whether one follows the other in alphabetical order. If the `Maximum Length` value is greater than 0, any characters after the specified number of characters are ignored.If `Ignore Case` is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Greater_Than ("Test1", "Test2", Maximum Length, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if Test1 follows Test2 in alphabetical ordering, FALSE otherwise.

Example

```
Script( String_Greater_Than_Test )
String( strEntered1 )
String( strEntered2 )
Boolean( bGreaterThan )
Activate( From_Menu )
        strEntered1 = Ask_String( "Type the first string", "String_Greater_
Than_Test", 0, 0, "" )
        strEntered2 = Ask_String( "Type the second string", "String_Greater_
Than_Test", 0, 0, "" )
        bGreaterThan = String_Greater_Than( strEntered1, strEntered2, 0, TRUE )
        If( bGreaterThan )
                Message( "First string is greater than second string", 5 )
        Else
                Message( "First string is not greater than second string", 5 )
        End_If
        Return
```

See Also

String_Empty, String_Less_Than, String_Less_Than_Or_Equal, String_Equal, String_Greater_Than_Or_Equal, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Greater_Than_Or_Equal

Compare the two strings and determine whether one follows the other in alphabetical order, or they are the same string. If the `Maximum Length` value is greater than 0, any characters after the specified number of characters are ignored. If `Ignore Case` is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Greater_Than_Or_Equal ("Test1", "Test2", Maximum Length, Ignore
Case)
```

Return Value

Returns a Boolean. TRUE if Test1 precedes Test2 in alphabetical ordering or they are the same string, FALSE otherwise.

Example

```
Script(String_Greater_Than_Or_Equal_Test)
String(strEntered1)
String(strEntered2)
Boolean(bGreaterThan)
Activate(From_Menu)
        strEntered1 = Ask_String("Type the first string", "String_Greater_Than_
Or_Equal_Test", 0, 0, "")
        strEntered2 = Ask_String("Type the second string", "String"Greater_
Than_Or_Equal_Test", 0, 0, "")
        bGreaterThan = String_Greater_Than_Or_Equal(strEntered1, strEntered2,
0, TRUE)
        If(bGreaterThan)
                Message("First string is greater than second string", 5)
        Else
                Message("First string is not greater than second string", 5)
        End_If
        Return
```

See Also

String_Empty, String_Less_Than, String_Less_Than_Or_Equal, String_Equal, String_Greater_Than, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Left

Returns the specified characters of the input string.

Parameters

String	The string from which to get the characters.
Number of Characters	The number of characters to get, starting at the beginning of the string.

Format

```
String_Left (String, Number of Characters)
```

Return Value

Returns a string with just the first n characters of the input string. If the input string is less than n characters, the entire string is returned.

Example

```
Script(String_Left_Test)
String(strEntered)
String(strLeftPart)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Left_Test", 1, 99,
"")
        strLeftPart = String_Left(strEntered, 2)
        Ask_OK(strLeftPart, "String_Left 2 characters")
        Return
```

See Also

String_Set, String_Combine, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Length

Get the number of characters in a string.

Parameters

String The string whose length is to be determined.

Format

```
String_Length (String)
```

Return Value

Returns the number of characters in the string. Returns 0 if the string is empty (has no characters).

Example

```
Script( String_Length_Test )
String( strForLength )
String( strTitle )
Number( nStringLength )
Activate( From_Menu )
        strForLength = Ask_String( "Enter a string", "String_Length", 1, 99,
"abcde" )
        nStringLength = String_Length( strForLength )
        strTitle = String_Combine( "Length of """, strForLength )
        strTitle = String_Combine( strTitle, """" )
        Ask_OK( Number_To_String_Decimal( nStringLength ), strTitle )
        Return
```

See Also

String_Find_First, String_Find_Last, String_Equal, String_Set

String_Less_Than

Compare the two strings and determine their alphabetical order. If the Maximum Length value is greater than 0, any characters after the specified number of characters are ignored. If Ignore Case is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Less_Than ("Test1", "Test2", Maximum Length, Ignore Case)
```

Return Value

Returns a Boolean. TRUE if Test1 precedes Test2 in alphabetical ordering, FALSE otherwise.

Example

```
Script(String_Less_Than_Test)
String(strEntered1)
String(strEntered2)
Boolean(bLessThan)
Activate(From_Menu)
        strEntered1 = Ask_String("Type the first string", "String_Less_Than_
Test", 0, 0, "")
        strEntered2 = Ask_String("Type the second string", "String_Less_Than_
Test", 0, 0, "")
        bLessThan = String_Less_Than(strEntered1, strEntered2, 0, TRUE)
        If(bLessThan)
                Message("First string is less than second string", 5)
        Else
                Message("First string is not less than second string", 5)
        End_If
        Return
```

See Also

String_Empty, String_Less_Than_Or_Equal, String_Equal, String_Greater_Than_Or_Equal, String_Greater_Than, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Less_Than_Or_Equal

Compare the two strings and determine whether one precedes the other in alphabetical order, or they are the same string. If the `Maximum Length` value is greater than 0, any characters after the specified number of characters are ignored. If `Ignore Case` is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Less_Than_Or_Equal ("Test1", "Test2", Maximum Length, Ignore
Case)
```

Return Value

Returns a Boolean. TRUE if Test1 precedes Test2 in alphabetical ordering or they are the same string, FALSE otherwise.

Example

```
Script(String_Less_Than_Or_Equal_Test)
String(strEntered1)
String(strEntered2)
Boolean(bLessThan)
Activate(From_Menu)
        strEntered1 = Ask_String("Type the first string",
        "String_Less_Than_Or_Equal_Test", 0, 0, "")
        strEntered2 = Ask_String("Type the second string",
        "String_Less_Than_Or_Equal_Test", 0, 0, "")
        bLessThan = String_Less_Than_Or_Equal(strEntered1,
        strEntered2, 0, TRUE)
        If(bLessThan)
                Message("First string is less than or equal to second string", 5)
        Else
                Message("First string is not less than or equal to
                second string", 5)
```

```
End_If
Return
```

See Also

String_Empty, String_Less_Than, String_Equal, String_Greater_Than_Or_Equal, String_Greater_Than, String_Not_Equal, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Lower

Converts the specified text to lowercase letters.

Parameters

String The string to convert to lowercase.

Format

```
String_Lower (String)
```

Return Value

Returns a string with all characters converted to lowercase.

Example

```
Script(String_Upper_Lower_Test)
String(strEntered)
String(strUpper)
String(strLower)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Upper_Lower_Test",
1, 99, "")
        strUpper = String_Upper(strEntered)
        Ask_OK(strUpper, "String_Upper_Test")
        strLower = String_Lower(strEntered)
        Ask_OK(strLower, "String_Lower_Test")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Middle

Returns the specified characters of the input string. The string parsing starts at the position specified, with 0 being the left-most character, so a position value of 0 is the same as `String_Left`.

Parameters

`String`	The string from which to get the characters.
`Starting Position`	The character with which to start.
`Number of Characters`	The number of characters to get from the end of the string.

Format

```
String_Middle (String, Starting Position, Number of Characters)
```

Return Value

Returns a string with just the middle *n* characters of the input string. If the input string is less than *n* characters, the entire string is returned.

Example

```
Script(String_Middle_Test)
String(strEntered)
String(strMiddlePart)
Number(nStart)
Number(nCharacters)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Middle_Test", 1, 99,
"")
        nStart = Ask_Number("Enter start characters, zero is the first
character", "String_Middle_Test", 0, 99, 2)
        nCharacters = Ask_Number("Enter number of characters", "String_Middle_
Test", 0, 99, 3)
        strMiddlePart = String_Middle(strEntered, nStart, nCharacters)
        Ask_OK(strMiddlePart, "String_Middle")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_

Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Not_Equal

Compare the two strings and return TRUE if they do not have the same value. If the Maximum Length value is greater than 0, any characters after the specified number of characters are ignored. If Ignore Case is TRUE, then upper-case and lower-case letters are considered to be equal.

Parameters

Test1	Gets compared with Test2.
Test2	Gets compared with Test1.
Maximum Length	Indicates whether the number of characters is limited.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Not_Equal ("Test1", "Test2", Maximum Length, Ignore Case)
```

Return Value

Returns a Boolean. FALSE if Test1 and Test2 are the same string, TRUE otherwise.

Example

```
Script( String_Not_Equal_Test )
String( strEntered1 )
String( strEntered2 )
Boolean( bNotEqual )
Activate( From_Menu )
        strEntered1 = Ask_String( "Type the first string", "String_Not_Equal_
Test", 0, 0, "" )
        strEntered2 = Ask_String( "Type the second string", "String_Not_Equal_
Test", 0, 0, "" )
        bNotEqual = String_Not_Equal( strEntered1, strEntered2, 0, TRUE )
        If( bNotEqual )
                Message( "First string is not equal to second string", 5 )
        Else
                Message( "First string is equal to second string", 5 )
        End_If
        Return
```

See Also

String_Empty, String_Less_Than, String_Less_Than_Or_Equal, String_Equal, String_Greater_Than_Or_Equal, String_Greater_Than, String_Set, Number_To_String_Decimal, Ask_String, Get_Screen_Text, Speech_To_Text, Get_Scan_Type_Name

String_Only_Characters

Gets a string with the specified characters. If `Ignore Case` is TRUE then upper-case and lower-case letters are considered to be equal.

Parameters

String to Parse	The original string that gets stripped of all characters except those specified.
Characters to Keep	The characters that are not stripped from the original string.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Only_Characters (String to Parse, Characters to Keep, Ignore
Case)
```

Return Value

Returns a string where all characters in `String to Parse` that are not in `Characters to Keep` have been deleted.

Example

```
Script(String_Only_Characters_Test)
String(strEntered)
String(strResult)
String(strCharactersToKeep)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Only_Characters_
Test", 1, 99, "abcdefghijk")
        strCharactersToKeep = Ask_String("Enter the characters to keep",
"String_Only_Characters_Test", 1, 99, "abc")
        strResult = String_Only_Characters(strEntered,
        strCharactersToKeep, TRUE)
        Ask_OK(strResult, "String_Only_Characters_Test")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_

Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Replace

Replaces the specified text with another string. If `Ignore Case` is TRUE then upper-case and lower-case letters are considered to be equal.

Parameters

String to Parse	The original string that gets the substring replaced.
Substring to Replace	Find all instances of this and replace them.
Replacement Substring	The replacement text to use.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Replace ("String to Parse", "Substring to Replace", "Replacement Substring", Ignore Case)
```

Return Value

Returns a string where all instances of `Substring to Replace` have been replaced with `Replacement Substring`.

Example

```
Script( String_Replace_Test )
String( strResult )
Activate( From_Menu )
        strResult = String_Replace( "123456789012345", "2", "aaaaa", FALSE )
        Message( strResult, 0 )
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Right

Returns the specified characters of the input string.

Parameters

String The string from which to get the characters.

Sequence The number of characters to get, starting at the beginning of the string.

Format

```
String_Right (String, Sequence)
```

Return Value

Returns a string with just the last *n* characters of the input string. If the input string is less than *n* characters, the entire string is returned.

Example

```
Script(String_Right_Test)
String(strEntered)
String(strRightPart)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Right_Test", 1, 99,
"")
        strRightPart = String_Right(strEntered, 3)
        Ask_OK(strRightPart, "String_Right 3 characters")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Set

Assign a string value. The equal sign (=) is the symbol for `String_Set` in the Script Editor.

Parameters

`String` The String, Variable or Action that returns a string.

Format

```
String_Set (String)
```

Return Value

Returns the value of the string.

Example

```
Script(String_Set_Test)
String(strResult)
String(strTitle)
Activate(From_Menu)
        strTitle = "Scripting String"
        strResult = Ask_String("Enter some text", "String_Set_Test", 1, 99, "")
        strResult = String_Combine("Text Entered:", strResult)
        Ask_OK(strResult, strTitle)
        Return
```

See Also

String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Strip_Characters

Strips the specified characters from the string. If `Ignore Case` is TRUE then upper-case and lower-case letters are considered to be equal.

Parameters

String to Parse	The original string that gets stripped of all characters except those specified.
Characters to Strip	The characters to be stripped from the original string.
Ignore Case	Indicates whether the case of the letters is taken into consideration.

Format

```
String_Strip_Characters (String to Parse, Characters to Strip, Ignore
Case)
```

Return Value

Returns a string where all characters in `String to Parse` that are not in `Characters to Keep` have been deleted.

Example

```
Script( String_Strip_Characters_Test )
String( strEntered )
String( strResult )
String( strCharactersToStrip )
Activate( From_Menu )
        strEntered = Ask_String( "Enter some text", "String_Strip_Characters_
Test", 1, 99, "abcdefghijk" )
        strCharactersToStrip = Ask_String( "Enter the characters to strip",
"String_Strip_Characters_Test", 1, 99, "abc" )
        strResult = String_Strip_Characters( strEntered, strCharactersToStrip,
TRUE )
        Ask_OK( strResult, "String_Strip_Characters_Test" )
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Trim_Spaces_Start, String_Trim_

Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_To_Number_Binary

Get a string's binary representation. Parsing the string continues until a character other than a 0 or 1 is reached.

Parameters

String The string that represents a number.

Format

```
String_To_Number_Binary (String)
```

Return Value

Returns the binary number represented by the string. If the string does not represent a binary number, a 0 is returned.

Example

```
Script( String_To_Number_Binary_Test )
String( strEntered )
String( strMessage )
String( strBinary )
String( strDecimal )
String( strHexUpper )
String( strOctal )
Number( nBinary )
Activate( From_Menu )
        strEntered = Ask_String( "Enter a binary number", "String_To_Number_
Binary", 1, 99, "10100101" )
        nBinary = String_To_Number_Binary( strEntered )
        strBinary = strEntered
        strDecimal = Number_To_String_Decimal( nBinary )
        strHexUpper = Number_To_String_Hexadecimal_Uppercase( nBinary )
        strOctal = Number_To_String_Octal( nBinary )
        strMessage = String_Combine( "Binary:", strBinary )
        strMessage = String_Combine( strMessage, "; Octal: " )
        strMessage = String_Combine( strMessage, strOctal )
        strMessage = String_Combine( strMessage, "; Decimal: " )
        strMessage = String_Combine( strMessage, strDecimal )
        strMessage = String_Combine( strMessage, "; Hexadecimal:" )
        strMessage = String_Combine( strMessage, strHexUpper )
        Ask_OK( strMessage, "String_To_Number_Binary" )
        Return
```

See Also

String_To_Number_Octal, String_To_Number_Decimal, String_To_Number_Hexadecimal, Number_Equal, String_Set, Number_Set

String_To_Number_Decimal

Gets a string's decimal representation. Parsing the string continues until a character other than a 0 - 9 is reached.

Parameters

String The string that represents a number.

Format

```
String_To_Number_Decimal (String)
```

Return Value

Returns the decimal (base-10) number represented by the string. If the string does not represent a decimal number, a 0 is returned.

Example

```
Script(String_To_Number_Decimal_Test)
String(strEntered)
String(strMessage)
String(strBinary)
String(strDecimal)
String(strHexUpper)
String(strOctal)
Number(nDecimal)
Activate(From_Menu)
        strEntered = Ask_String("Enter a decimal number", "String_To_Number_
Decimal", 1, 99, "45")
        nDecimal = String_To_Number_Decimal(strEntered)
        strDecimal = strEntered
        strBinary = Number_To_String_Binary(nDecimal)
        strHexUpper = Number_To_String_Hexadecimal_Uppercase(nDecimal)
        strOctal = Number_To_String_Octal(nDecimal)
        strMessage = String_Combine("Binary:", strBinary)
        strMessage = String_Combine(strMessage, "; Octal:")
        strMessage = String_Combine(strMessage, strOctal)
        strMessage = String_Combine(strMessage, "; Decimal:")
        strMessage = String_Combine(strMessage, strDecimal)
        strMessage = String_Combine(strMessage, "; Hexadecimal:")
        strMessage = String_Combine(strMessage, strHexUpper)
        Ask_OK(strMessage, "String_To_Number_Decimal")
        Return
```

See Also

String_To_Number_Binary, String_To_Number_Octal, String_To_Number_Hexadecimal, Number_Equal, String_Set, Number_Set

String_To_Number_Hexadecimal

Gets a string's hexadecimal representation. Parsing the string continues until a character other than a 0 - 9, a - f, or A - F is reached.

Parameters

String The string that represents a number.

Format

```
String_To_Number_Hexadecimal (String)
```

Return Value

Returns the hexadecimal (base-16) number represented by the string. If the string does not represent a hexadecimal number, a 0 is returned.

Example

```
Script(String_To_Number_Hexadecimal_Test)
String(strEntered)
String(strMessage)
String(strBinary)
String(strDecimal)
String(strHexUpper)
String(strOctal)
Number(nHexadecimal)
Activate(From_Menu)
        strEntered = Ask_String("Enter a hexadeicmal number", "String_To_
Number_Hexadecimal", 1, 99, "A5")
        nHexadecimal = String_To_Number_Hexadecimal(strEntered)
        strHexUpper = strEntered
        strBinary = Number_To_String_Binary(nHexadecimal)
        strDecimal = Number_To_String_Decimal(nHexadecimal)
        strOctal = Number_To_String_Octal(nHexadecimal)
        strMessage = String_Combine("Binary:", strBinary)
        strMessage = String_Combine(strMessage, "; Octal:")
        strMessage = String_Combine(strMessage, strOctal)
        strMessage = String_Combine(strMessage, "; Decimal:")
        strMessage = String_Combine(strMessage, strDecimal)
        strMessage = String_Combine(strMessage, "; Hexadecimal:")
        strMessage = String_Combine(strMessage, strHexUpper)
        Ask_OK(strMessage, "String_To_Number_Hexadecimal")
        Return
```

See Also

String_To_Number_Binary, String_To_Number_Octal, String_To_Number_Decimal, Number_Equal, String_Set, Number_Set

String_To_Number_Octal

Gets a string's octal representation. Parsing the string continues until a character other than a 0 - 7 is reached.

Parameters

String The string that represents a number.

Format

```
String_To_Number_Octal (String)
```

Return Value

Returns the octal (base-8) number represented by the string. If the string does not represent an octal number, a 0 is returned.

Example

```
Script(String_To_Number_Octal_Test)
String(strEntered)
String(strMessage)
String(strBinary)
String(strDecimal)
String(strHexUpper)
String(strOctal)
Number(nOctal)
Activate(From_Menu)
        strEntered = Ask_String("Enter an octal number", "String_To_Number_
Octal", 1, 99, "27")
        nOctal = String_To_Number_Octal(strEntered)
        strOctal = strEntered
        strBinary = Number_To_String_Binary(nOctal)
        strDecimal = Number_To_String_Decimal(nOctal)
        strHexUpper = Number_To_String_Hexadeicmal_Uppercase(nOctal)
        strMessage = String_Combine("BInary:", strBinary)
        strMessage = String_Combine(strMessage, "; Octal:")
        strMessage = String_Combine(strMessage, strOctal)
        strMessage = String_Combine(strMessage, "; Decimal:")
        strMessage = String_Combine(strMessage, strDecimal)
        strMessage = String_Combine(strMessage, "; Hexadecimal:")
        strMessage = String_Combine(strMessage, strHexUpper)
        Ask_OK(strMessage, "String_To_Number_Octal")
        Return
```

See Also

String_To_Number_Binary, String_To_Number_Decimal, String_To_Number_Hexadecimal, Number_Equal, String_Set, Number_Set

String_Trim_Spaces_End

Gets the specified text with all tabs and spaces deleted from the end.

Parameters

String to Parse The original string which is removed of all spaces and tabs at the end.

Format

```
String_Trim_Spaces_End (String to Parse)
```

Return Value

Returns a string where all spaces and tabs at the end of the string have been deleted.

Example

```
Script( String_Trim_Spaces_End_Test )
String( strResult )
String( strOriginal )
String( strMessage )
Activate( From_Menu )
        strOriginal = "abcd    "
        strResult = String_Trim_Spaces_End( strOriginal )
        strMessage = String_Combine( """", strOriginal )
        strMessage = String_Combine( strMessage, """ converted to """ )
        strMessage = String_Combine( strMessage, strResult )
        strMessage = String_Combine( strMessage, """" )
        Message( strMessage, 8 )
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Trim_Spaces_Start

Gets the specified text with all tabs and spaces deleted from the beginning.

Parameters

String to Parse	The original string which is removed of all spaces and tabs at the beginning.

Format

```
String_Trim_Spaces_Start ("String to Parse")
```

Return Value

Returns a string where all spaces and tabs at the start of the string have been deleted.

Example

```
Script( String_Trim_Spaces_Start_Test )
String( strResult )
Activate( From_Menu )
        strResult = String_Trim_Spaces_Start( "      567890" )
        Message( strResult, 0 )
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Upper, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

String_Upper

Converts the specified text to uppercase letters.

Parameters

String The string to convert to uppercase.

Format

```
String_Upper (String)
```

Return Value

Returns a string with all characters converted to uppercase.

Example

```
Script(String_Upper_Lower_Test)
String(strEntered)
String(strUpper)
String(strLower)
Activate(From_Menu)
        strEntered = Ask_String("Enter some text", "String_Upper_Lower_Test",
1, 99, "")
        strUpper = String_Upper(strEntered)
        Ask_OK(strUpper, "String_Upper_Test")
        strLower = String_Lower(strEntered)
        Ask_OK(strLower, "String_Lower_Test")
        Return
```

See Also

String_Set, String_Combine, String_Left, String_Right, String_Middle, String_Lower, String_Replace, String_Only_Characters, String_Strip_Characters, String_Trim_Spaces_Start, String_Trim_Spaces_End, Number_To_String_Binary, Number_To_String_Octal, Number_To_String_Decimal, Number_To_String_Hexadecimal_Lowercase, Number_To_String_Hexadecimal_Uppercase, Ask_String, Ask_String_Password, Ask_String_Uppercase, Ask_String_Lowercase, String_Equal

Suspend

Suspends the device.

If `Prefer Hibernation` is TRUE, the device will hibernate instead of suspend. (Not supported on CE devices.)

If `Force Suspension` is TRUE, the device will suspend immediately and other applications will not be allowed to override.

Parameters

Prefer Hibernation	Indicates whether the device will hibernate instead of suspending.
Force Suspension	Indicates whether other applications can override the suspension.

Format

```
Suspend (Prefer Hibernation, Force Suspension)
```

Return Value

Returns a Boolean. TRUE if the device was suspended; returns FALSE otherwise.

Example

```
Script(Suspend_Test)
Boolean(bHibernate)
Boolean(bForce)
Boolean(bResult)
Activate(From_Menu)
        bHibernate = Ask_Yes_No("Hibernate instead of Suspend?", "Suspend_
Test", FALSE)
        bForce = Ask_Yes_No("Force Suspend?", "Suspend_Test", FALSE)
        bResult = Suspend(bHibernate, bForce)
        Return
```

See Also

Reboot, Get_Time_Since_Reset, Ask_Yes_No, Disconnect, Abort_All, Exit_Application

Switch

The Switch action block consists of a series of Case actions and an optional Default action, ending with an End_Switch action.

The Test parameter is compared to each of the Case parameters up until End_Switch. If Test matches the value of a Case parameter, then the actions following that Case action get executed.

If no Case parameters match Test, then the actions following Default are executed. If no Case parameters match and there is no Default action, then the actions following End_Switch get executed.

The parameter Test may be a constant or variable string or number.

Parameters

Test Compared to each of the Case parameters up until End_Switch. If Test matches the value of a Case parameter, then the actions following that Case action get executed.

Format

```
Switch( Test )
```

Example #1

```
Script(Switch_Test)
String(strEntered)
Activate(From_Menu)
  strEntered = Ask_String("Type a string", "Switch_Test", 0, 0, "")
  Switch( strEntered )
  Case( "Hi" )
    Ask_Ok("Hi", "Switch Result")
    Break
  Case( "Bye" )
    Ask_Ok("Bye", "Switch Result")
    Break
  Case( "OK" )
  Case( "Ok" )
  Case( "ok" )
    Ask_Ok("OK", "Switch Result")
    Break
  Default
    Ask_Ok("Default action", "Switch Result")
    Break
  End_Switch
```

```
Return
```

Example #2

```
Script( switchFunctionSample )
String( strEntry )
Activate( From_Menu )
strEntry = ""
strEntry = Ask_String( "Enter a Command and Control Command:", "Help
Description", 1, 20, "help" )
Switch( strEntry )
Case( "repeat" )
Ask_OK( "Repeats a prompt.", "Repeat Command" )
Case( "speak faster" )
Ask_OK( "Increases the cadence.", "Speak Faster Command" )
Case( "speak slower" )
Ask_OK( "Decreases the cadence.", "Speak Slower Command" )
Case( "volume up" )
Ask_OK( "Increases the volume.", "Increase Volume Command" )
Case( "volume down" )
Ask_OK( "Decreases the volume.", "Decrease Volume Command" )
Case( "main menu" )
Ask_OK( "Returns user to main menu.", "Main Menu Command" )
Case( "go back" )
Ask_OK( "Returns user to previous screen.", "Go Back Command" )
Default
Ask_OK( "Help commands are: repeat, speak faster, speak slower, volume
up, volume down, main menu, and go back.", "Help Commands Available" )
End_Switch
Return
```

See Also

Case, Break, Default, End_Switch

Wait_For_Screen_Update

Suspends the current script until the screen has been updated.

Any changes to the screen will cause the script to resume; so it is recommended that you put the wait command inside a `While` loop, and only exit the loop once you have detected the screen you want.

`Wait_For_Screen_Update` may be used to wait for a script-created button to be pressed, after the action `Button_Bitmap_Create_Emulation` or `Button_Create_Emulation`.

Example

```
Script(Wait_For_Screen_Update_Test)
        Activate(From_Menu)
        Message("Waiting for screen update", 0)
        Wait_For_Screen_Update
        Message_Clear
        Return
```

See Also

Delay, Button_Bitmap_Create_Emulation, Button_Bitmap_Create_View, Button_Create_Emulation, Button_Create_View, Wait_For_Screen_Update_With_Timeout

Wait_For_Screen_Update_With_Timeout

Suspends the current script until the screen has been updated or the specified number of milliseconds have passed. Returns TRUE if the screen was updated, FALSE if the timeout occurred.

Parameters

Value1 The number of milliseconds that the script suspends.

Format

```
Wait_For_Screen_Update_With_Timeout(Value1)
```

Example

```
Script(Wait_For_Screen_Update_With_Timeout_Test)
        Activate(From_Menu)
        Message("Waiting a few seconds for screen update", 0)
        Wait_For_Screen_Update_With_Timeout(3000)
        Message_Clear
        Return
```

Web_Get_Current_Element

Returns the HTML code for the Web element with the focus. Returns an empty string if no Web element has the focus.

Format

```
Web_Get_Source
```

Example

```
Script( Web_Get_Current_Element_Test )
String( strCurrentElement )
Activate( From_Menu )
        strCurrentElement = Web_Get_Current_Element
        Ask_OK( strCurrentElement, "Web Page Current Element Text" )
        Return
```

Web_Get_Source

Returns the HTML code immediately following the first instance of the search string or an empty string if not found.

Returns the start of the page if Search String is blank.

If the maximum length is 0, all the data that will fit in the string is returned.

Parameters

Value1 The Search String.

Value2 The maximum number of characters to return (integer).

Value3 TRUE to ignore the letter case. FALSE if otherwise. Boolean).

Value4 TRUE to search the frames of the page. FALSE if otherwise.

Format

```
Web_Get_Source ("Value1", Value2, Value3, Value4)
```

Example

```
Script( Web_Get_Source_First )
String( strSource )
Activate( From_Menu )
        strSource = Web_Get_Source( "", 0, FALSE, FALSE )
        Ask_OK( strSource, "Web Page Text" )
Return
```

Web_Navigate

Navigates WEB emulation to the URL provided.

Parameters

URL The URL to which the Web emulator navigates.

Format

```
Web_Navigate ("URL")
```

Return Value

Returns a Boolean. TRUE if the navigation was successful, returns FALSE otherwise.

Example

```
Script(Web_Navigate_to_Google)
Activate(From_Menu)
        Comment: This script when launched will navigate to www.google.com
        Web_Navigate("http://www.google.com")
        Return
```

See Also

Web_Navigate_Frame, Web_Navigate_Post_Data, Web_Scripting, Web_Search_Source, Web_Get_Current_Element, Web_Get_Source, String_Set

Web_Navigate_Frame

Navigates WEB emulation to the URL provided within the indicated frame (`\Frame Name\`).

Parameters

URL	The URL to which the Web emulator navigates.
Frame Name	The name of the frame where the navigation takes place.

Format

```
Web_Navigate_Frame ("URL", "Frame Name")
```

Return Value

Returns a Boolean. TRUE if the navigation was successful, returns FALSE otherwise.

Example

```
Script(Web_Navigate_Frame_to_Google)
Activate(From_Menu)
        Comment: This script when launched will navigate to
        www.google.com.
        Web_Navigate_Frame("http://www.google.com",
        "FrameName")
        Return
```

See Also

Web_Navigate, Web_Navigate_Post_Data, Web_Scripting, Web_Search_Source, Web_Get_Current_Element, Web_Get_Source, String_Set

Web_Navigate_Post_Data

Navigates WEB emulation to the URL provided. The `\Post Data\` is sent to the server using an HTTP POST transaction rather than an HTTP GET transaction.

Parameters

URL The URL to which the Web emulator navigates.

Post Data The string of data that the Web emulator sends to the server.

Format

```
Web_Navigate_Post_Data ("URL", "Post Data")
```

Return Value

Returns a Boolean. TRUE if the navigation was successful, returns FALSE otherwise.

Example

```
Script( Web_Navigate_Post_Data_Test )
Activate( From_Menu )
        Comment: This script when launched will post a first and last name to
http://www.snee.com/xml/crud/posttest.cgi
Web_Navigate_Post_Data( "http://www.snee.com/xml/crud/posttest.cgi",
"fname=MyFirstName&lname=MyLastName" )
        Return
```

See Also

Web_Navigate, Web_Navigate_Frame, Web_Scripting, Web_Search_Source, Web_Get_Current_Element, Web_Get_Source, String_Set

Web_Scripting

Instructs WEB emulation to execute the scripting information. The code should start with a `javascript:` or `vbscript:` string to ensure that the correct scripting type is used.

Parameters

`Code` The JavaScript or VBScript that the Web emulator will execute.

Format

```
Web_Scripting ("Code")
```

Return Value

Returns a Boolean. TRUE if the script execution started successfully, returns FALSE otherwise.

Example

This example has two parts: the Wavelink script and HTML with embedded JavaScript. The following Wavelink script annunciates the item prompt and number. It also prompts for a quantity to be picked. The script then waits for a quantity to be stated. This quantity is passed back to the JavaScript.

```
Script( dnwebdemo )
String( strMessage2 )
String( strPickQty )
String( strItemPrompt2 )
String( strItem2 )
String( strCmdLn )
String( sSpeechResult )
Boolean( bSpeechStarted )
Boolean( bSpeechDone )
Number( nReadMode )
  Comment: Enable Speakeasy Support
  If_Not( Speech_To_Text_Available )
    Ask_OK( "Speech-to-Text is not available.", "Error" )
    Return
  End_If
  If_Not( Speech_From_Text_Available )
    Ask_OK( "Text-to-Speech is not available.", "Error" )
    Return
  End_If
  Speech_To_Text_Cancel
```

```
  Speech_Change_Setting( "stt_language", Speech_Find_Setting_Value(
"stt_language", "enu", FALSE ) )
  Speech_Change_Setting( "tts_language", Speech_Find_Setting_Value(
"tts_language", "English", FALSE ) )
  Comment: Ensure read mode is in sentence mode
  nReadMode = Speech_Find_Setting_Value( "tts_readmode", "sentence",
FALSE )
  Speech_Change_Setting( "tts_readmode", nReadMode )
  Comment: Annunciate Item prompt
  Speech_From_Text( strItemPrompt2, TRUE )
  Comment: Change read mode to character mode to annunciate part number
  nReadMode = Speech_Find_Setting_Value( "tts_readmode", "character",
FALSE )
  Speech_Change_Setting( "tts_readmode", nReadMode )
  Comment: Annunciate Item number
  Speech_From_Text( strItem2, TRUE )
  Comment: Change read mode back to sentence mode to annunciate task
  nReadMode = Speech_Find_Setting_Value( "tts_readmode", "sentence",
FALSE )
  Speech_Change_Setting( "tts_readmode", nReadMode )
  Comment: Annunciate task to perform
  Speech_From_Text( strMessage2, TRUE )
  Comment: Acquire pick quantity via speech-to-text
  Comment: Initialize Speech-To-Text variables
  bSpeechStarted = FALSE
  bSpeechDone = FALSE
  sSpeechResult = ""
  Comment: Speech-To-Text Loop used to acquire Speech-To-Text
  While( TRUE )
    Comment: Start Speech-To-Text if not already started
    Comment: This is needed so we start Speech_To_Text again if
    Comment: nothing was stated before it times out.
    If_Not( bSpeechStarted )
      Comment: With this Speech-To-Text function, the script
      Comment: continues script process while waiting for speech.
      bSpeechStarted = Speech_To_Text_No_Wait( bSpeechDone,
sSpeechResult, "four_digits.bnf" )
    End_If
    If( bSpeechDone )
      Comment: If sSpeechResult is not empty it signifies that we
      Comment: received a speech result.
      Comment: The While loop is exited when we get a speech result.
      If_Not( String_Empty( sSpeechResult ) )
        Break
      End_If
```

```
      Comment: Re-Initialize Speech engine if nothing was stated
      bSpeechStarted = FALSE
      bSpeechDone = FALSE
      sSpeechResult = ""
      Continue
    End_If
    Comment: Wait_For_Screen_Update waits for speech as well.
    Wait_For_Screen_Update
  End_While
  Comment: Assign strPickQty to Speech-To-Text Result
  strPickQty = sSpeechResult
  Comment: Web_Scripting( "javascript:alert('sSpeechResult')" )
  strCmdLn = String_Combine( "javascript:ModifyField('", strPickQty )
  strCmdLn = String_Combine( strCmdLn, "');" )
  Web_Scripting( strCmdLn )
  Return
```

The HTML sample with embedded JavaScript uses a meta tag to call an OnLoad function. This function in turn calls the wls:dnwebdemo (Wavelink script). This script displays a prompt with an item number. It also shows an entry field where a quantity can be entered manually or through Speech-To-Text.

```
<html>
<head>
<Title> Simple Speakeasy WIB Demo </Title>
<!--Meta Tag used to launch OnLoad function within Wavelink Industrial
Browser.-->
<META http-equiv=OnStartup content=Javascript:OnLoad();>
</head>
<script type = "text/javascript">
//Prompt at the top of the web page.
document.write("Item Number is 15469.");
// Variables used for Text-To-Speech annunciation. These values are
// passed to the Wavelink Industrial Browser script for processing.
var strItemPrompt = "Item Number is ";
var strItem = 15469;
</script>
<!--The pickqty entry field is defined in this form.-->
<form name="form1">
<input type = "text" name="entryfield" size="20" id="pickqty" value="">
</form>
<script type = "text/javascript">
//This message is passed to the Wavelink script so that it can be
//annunciated via Text-To-Speech.
var strMessage = "Enter quantity of items to be picked!";
//This sets the default value of the pickqty field.
```

```
var strPickQty = document.getElementById("pickqty");
strPickQty.value = "Enter quantity here.";
function ModifyField(strPickQty)
{
//Use this function to change the value of the pickqty field via Speech-
//To-Text from Wavelink Industrial Browser.
document.getElementById("pickqty").value = strPickQty;
}
//With the use of the Meta Tag defined in the Head tag above, the
OnLoad() //function is called.
function OnLoad()
{
// The variable request is set to the call of the Wavelink script. Note
// the wls prefix.
var request =
"wls:dnwe-
bdemo(strMe-
ssage2="+strMessage+",strItemPrompt2="+strItemPrompt+",strItem2="+strItem+")";
// The Wavelink script is called as a hyperlink. Wavelink Industrial
// Browser is required for this call to be understood.
window.location.href = request;
}
</script>
<body>
</body>
</html>
```

See Also

Web_Navigate, Web_Navigate_Frame, Web_Navigate_Post_Data, Web_Search_Source, Web_Get_Current_Element, Web_Get_Source, String_Set

Web_Search_Source

Searches the page source of the current WEB emulation page. If `\Search Frames\` is TRUE, the page source of any frames will be searched as well.

Parameters

Search Text	The text to search for in the page source.
Ignore Case	Indicates whether the case of the letters is taken into consideration.
Search Frames	Indicates whether the page source for the frames is searched as well.

Format

```
Web_Search_Source ("Search Text", Ignore Case, Search Frames)
```

Return Value

Returns a Boolean. TRUE if the text is found anywhere in the page source, returns FALSE otherwise.

Example

```
Script(Web_Search_Source_Test)
Boolean(bFound)
Activate(From_Menu)
        bFound = Web_Search_Source("wavelink", TRUE, TRUE)
        If(bFound)
                Message("I found the word WAVELINK", 5)
        End_If
        Return
```

See Also

Web_Navigate, Web_Navigate_Frame, Web_Navigate_Post_Data, Web_Scripting, Web_Get_Current_Element, Web_Get_Source, String_Set

While

If the test is TRUE, the statements after `While` and before the next `EndWhile` statement are executed and the `While` statement will be executed again. Otherwise, execution will proceed to the next `EndWhile` statement.

The `While` loop will continue to execute until the test fails, a `Break` command is executed, or the script exits.

Parameters

`Test` As long as this is TRUE, then the actions up to the `End_While` get executed.

Format

```
While (Test)
```

Example

```
Script(While_Test)
  Boolean(bOK)
  Activate(From_Menu)
  bOK = TRUE
  While(bOK)
    bOK = Ask_OK_Cancel("Press OK to keep getting this message.",
"Test", FALSE)
  End_While
  Return
```

See Also

While_Not, End_While, Continue, Break

While_Not

If the test is FALSE, the statements after `While` and before the next `EndWhile` statement are executed and the `While` statement will be executed again. Otherwise, execution will proceed to the next `EndWhile` statement.

The `While` loop will continue to execute until the test succeeds, a `Break` command is executed, or the script exits.

Parameters

`Test` As long as this is FALSE, then the actions up to the `End_While` get executed.

Format

```
While_Not (Test)
```

Example

```
Script( While_Not_Test )
Boolean( bOK )
Activate( From_Menu )
        bOK = FALSE
        While_Not( bOK )
                bOK = Ask_OK_Cancel( "Press Cancel to keep getting this
message.","Test", FALSE )
        End_While
        Return
```

See Also

While, End_While, Continue, Break

Chapter 8: Speakeasy Settings

This section lists settings supported by Speakeasy. These settings are to be used in conjunction with the preceding scripting actions.

Wavelink recommends grouping Speakeasy settings together at the beginning of a script.

Text-to-Speech Settings

Setting	Description
tts_calibrate	Opens the speaker volume calibration wizard.
tts_external_speaker_setting	Speaker setting for use on Motorola/Symbol mobile devices.
tts_frequency	Indicates the sampling frequency.
tts_language_long	Displays the full name of the language currently being used.
tts_language_short	Displays the three-letter abbreviation of the language currently being used.
tts_pitch	Indicates the pitch level of spoken text.
tts_rate	Indicates the speed level.
tts_readmode	Indicates how text should be separated.
tts_voice	Indicates the name of the voice that is currently selected.
tts_volume	Indicates the sound level.
tts_waitfactor	Indicates the length of the pause between messages.

Speech-to-Text Settings

Setting	Description
stt_accuracy	This value affects the trade-off between CPU load, memory requirements, and accuracy.
stt_adjust_gain	This feature allows the engine to automatically increase and decrease the microphone input volume.
stt_beep_threshold	If the confidence value for a result is below this value, then a negative acknowledgement beep will not be played.
stt_calibrate	Opens the microphone calibration wizard.
stt_calibration_silence	Sets how long the user is expected to remain silent during a quick microphone calibration.
stt_confidence	Indicates the minimum difference in confidence required between the top two speech-to-text results for the top result to be accepted.
stt_expanded	Use this to get the confidence value along with the speech-to-text result.
stt_fx_detect_start	Indicates the action the speech engine should take before attempting to determine what the user is saying.
stt_fx_microphone	Tells the speech engine the distance between the user and the microphone.
stt_fx_min_duration	Indicates the minimum duration (in ms) of speech before speech detection is activated.
stt_fx_sensitivity	Indicates the speech detection sensitivity.
stt_fx_silence	Indicates the milliseconds of silence used to indicate the user is done speaking.
stt_fx_threshold	Indicates the amount of energy the microphone input must have before the speech detection is activated.

Setting	Description
stt_idle_timeout	Indicates the total milliseconds for the engine to continue collecting results following the last result or timeout.
stt_language_long	Displays the full name of the language currently being used.
stt_language_short	Displays the three-letter abbreviation of the language currently being used.
stt_logging	Creates a Speech-to-Text log file in the root folder of the device.
stt_logging_audio	Sets the engine to log speech-to-text attempts as .wav files.
stt_logging_engine	If set to 1, the speech-to-text engine will create a log file in the root folder of the device.
stt_pool_size	Sets the number of terms the engine will examine closely for the best match.
stt_preserve	Causes the speech engine to save the current engine state for use later.
stt_priority	Determines how aggressively the microphone input is collected and speech analysis is performed.
stt_processing	Indicates the action the speech engine should take when returning a grammar result.
stt_reset	Modifies engine adaptation speed and/or saved engine information.
stt_reset_session_delay	Indicates the total milliseconds for the speech engine to wait for a valid response before reverting back to the last saved state.
stt_result_sound	Causes a sound to play for result recognition.
stt_save_increase	Increases the threshold for saving a new engine state as time progresses.

Setting	Description
stt_save_session_delay	Indicates the total milliseconds for the speech engine to wait before saving the next current state.
stt_save_threshold	Directs the speech engine to save the state if the result confidence is greater than the result confidence for `stt_threshold` and `stt_save_threshold` combined.
stt_server_timeout	When uploading or downloading user training data, the value for this setting is how long (in seconds) the Client will wait for a response from the Avalanche server.
stt_size	Displays the size of the speech-to-text engine being used.
stt_special_sounds	Indicates how the speech engine should interpret special sounds.
stt_threshold	Indicates the minimum amount of confidence for the most-likely result that will be accepted.
stt_timeout	Indicates the total milliseconds (ms) for the system to wait before responding to the speaker.
stt_use_jumpback	Sets a buffer to check if the engine is processing speech.
stt_use_word_ids	Enables support for Word IDs (the !id directive) in grammar files.
stt_volume	Indicates the current volume of the microphone input.

tts_calibrate

Opens the speaker volume calibration wizard when this is set to 0.

Example

```
Script(Alt_F10_Speaker_Calibrate)
Activate(On_Key, 0x79, Alt)
        Comment: Pressing Alt-F10 displays the speaker-calibration dialog.
        Speech_Change_Setting("tts_calibrate", 0)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_external_speaker_setting

Speaker setting for use on Motorola/Symbol mobile devices. If set to 1, only the CE device master volume will be adjusted. If set to 0, the volume will apply to the headset volume.

This setting is ignored for mobile devices from manufacturers other than Motorola/Symbol.

Possible Values

1	on
0	off

The default value is 0 (off).

Example

```
Script( Use_External_Speaker )
Activate( From_Menu )
        Comment: Change the speaker setting so Symbol devices volume changes
affect the external speaker.
        If_Not( Speech_Change_Setting( "tts_external_speaker", 1 ) )
                Ask_OK( "This setting is not supported. Update your Vocalizer
version.", "Error" )
                Return
        End_If
        If_Not( Number_Equal( Speech_Get_Setting( "tts_external_speaker" ), 1 )
)
                Ask_OK( "The setting change was not preserved!", "Error" )
                Return
        End_If
        Comment: Perform a calibration so the user can set the volume.
        Speech_Change_Setting( "tts_calibrate", 0 )
        Return
```

See Also

tts_volume, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_frequency

Indicates the sampling frequency.

Possible Values

8KHz
11KHz
16KHz
22KHz

Example

```
Script( Speech_From_Text_Frequency )
String( strDescription )
String( strSetting )
String( strMessage )
Number( nFrequency )
Activate( From_Menu )
        If_Not( Speech_From_Text_Available )
                Message( "Speech From Text Not Available", 3 )
                Return
        End_If
        strSetting = "tts_frequency"
        nFrequency = Speech_Get_Setting( strSetting )
        strDescription = Speech_Get_Setting_Value_Desc( strSetting, nFrequency
)
        strMessage = String_Combine( "Sampling Frequency:", strDescription )
        strMessage = String_Combine( strMessage, "kilohertz; setting value:" )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nFrequency ) )
        Speech_From_Text( strMessage, FALSE )
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_language_long

Displays the full name of the language currently being used.

For possible language values, see tts_language_short on page 318.

NOTE: An acceptable substitute for tts_language_long is tts_language, but tts_language_long is preferred.

Example

```
Script(Speech_Languages_Voices_Test)
Number(nVoice)
Number(nLanguage)
Activate(From_Menu)
        If_Not(Speech_From_Text_Available)
        Message("Speech From Text Not Available", 3)
                Return
        End_If
        nLanguage = Speech_Find_Setting_Value("tts_language_long", "Mexican
Spanish", FALSE)
        If(Number_Greater_Than_Or_Equal(nLanguage, 0)
                Speech_Change_Setting("tts_language_long", nLanguage)
        End_If
        nVoice = Speech_Find_Setting_Value("tts_voice", "Javier", FALSE)
        If(Number_Greater_Than_Or_Equal(nVoice, 0))
                Speech_Change_Setting("tts_voice", nVoice)
                Speech_From_Text("La voc de Javier esta disponible.", FALSE)
        End_If
        nVoice = Speech_Find_Setting_Value("tts_voice", "Paulina", FALSE)
        If(Number_Greater_Than_Or_Equal(nVoice, 0))
                Speech_Change_Setting("tts_voice", nVoice)
                Speech_From_Text("La voz de Paulina esta disponible.", FALSE)
        End_If
        nLanguage = Speech_Find_Setting_Value("tts_language_long", "English
USA", FALSE)
        If(Number_Greater_Than_Or_Equal(nLanguage, 0))
                Speech_Change_Setting("tts_language_long", nLanguage)
        End_If
        nVoice = Speech_Find_Setting_Value("tts_voice", "tom", FALSE)
        If(Number_Greater_Than_Or_Equal(nVoice, 0))
                Speech_Change_Setting("tts_voice", nVoice)
                Speech_From_Text("Tom's voice is available.", FALSE)
        End_If
```

```
nVoice = Speech_Find_Setting_Value("tts_voice", "samantha", FALSE)
If(Number_Greater_Than_Or_Equal(nVoice, 0))
        Speech_Change_Setting("tts_voice", nVoice)
        Speech_From_Text("Samantha's voice is available.", FALSE)
End_If
nVoice = Speech_Find_Setting_Value("tts_voice", "jill", FALSE)
If(Number_Greater_Than_Or_Equal(nVoice, 0))
        Speech_Change_Setting("tts_voice", nVoice)
        Speech_From_Text("Jill's voice is a available.", FALSE)
End_If
Message("Speech Voice Testing Completed.", 3)
Return
```

See Also

tts_language_short, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_language_short

Displays the three-letter abbreviation of the language currently being used. For example, `ENU` instead of `English USA`.

Possible values may include:

ARE	Arabic Egypt
ARS	Arabic Saudi Arabia
ARA	Arabic United Arab Emirates
ARW	Arabic Worldwide
AMA	Armenian Armenia
BAE	Basque Spain
BEI	Bengali India
BGB	Bulgarian Bulgaria
CAH	Cantonese Hong Kong
CAA	Catalan Andorra
CAE	Catalan Spain
HRH	Croatian Croatia
CZC	Czech Czech Republic
DAD	Danish Denmark
DUB	Dutch Belgium
DUN	Dutch The Netherlands
ENA	English Australia
ENC	English Canada
ENI	English India
ENE	English Ireland
ENN	English New Zealand

ENS	English Scotland
ENZ	English South Africa
ENG	English Great Britain
ENU	English USA
FIF	Finnish Finland
FRB	French Belgium
FRC	French Canada
FRF	French France
FRL	French Luxembourg
FNC	French Switzerland
GEA	German Austria
GEB	German Belgium
GED	German Germany
GRL	German Liechtenstein
GEL	German Luxembourg
GEC	German Switzerland
GRG	Greek Greece
HAH	Haitian Haiti
HEI	Hebrew Israel
HII	Hindi India
HUH	Hungarian Hungary
ISI	Icelandic Iceland
IDI	Indonesian Indonesia
IRE	Irish Ireland
ITI	Italian Italy
ITC	Italian Switzerland

JPJ	Japanese Japan
KAI	Kannada India
KSI	Kashmiri India
KOK	Korean Korea South
MLI	Malayalam India
MNC	Mandarin China
MNH	Mandarin Hong Kong
MNT	Mandarin Taiwan
MAI	Marathi India
NON	Norwegian (Bokmal) Norway
NNN	Norwegian (Nynorsk) Norway
PLP	Polish Poland
PTB	Portuguese Brazil
PTP	Portuguese Portugal
ROR	Romanian Romania
RUR	Russian Russian Federation
SKS	Slovak Slovakia
SLS	Slovenian Slovenia
SPM	Spanish Mexico
SPE	Spanish Spain
SPU	Spanish USA
SWS	Swedish Sweden
THT	Thai Thailand

TRT	Turkish Turkey
URP	Urdu Pakistan
WLG	Welsh United Kingdom
WUC	Wu China

Example

```
Script(Speech_From_Text_Settings_Language)
String(strDescription)
String(strSetting)
Number(nLanguage)
Activate(From_Menu)
        If_Not(Speech_From_Text_Available)
                Message("Speech From Text Not Available", 3)
                Return
        End_If
        strSetting = "tts_language_short"
        nLanguage = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting, nLanguage)
        Ask_OK(strDescription, strSetting)
        strSetting = "tts_language_long"
        nLanguage = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting, nLanguage)
        Ask_OK(strDescription, strSetting)
        strSetting = "tts_language"
        nLanguage = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting, nLanguage)
        Ask_OK(strDescription, strSetting)
        Return
```

See Also

tts_language_long, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_pitch

Indicates the pitch level of spoken text.

Possible Values

Any number from 1-100, with 50 being the default (and normal pitch). Values below 50 are lower-pitched; values above 50 are higher-pitched.

Example

```
Script( Pitch_Values )
Number( nValue )
Activate( From_Menu )
        nValue = Speech_Get_Setting( "tts_pitch" )
        Message( String_Combine( "Initial pitch is ",
        Number_To_String_Decimal( nValue ) ), 5 )
        Speech_From_Text( "This is the initial pitch.", TRUE )
        Speech_Change_Setting( "tts_pitch", 10 )
        Speech_From_Text( "This is a low pitch.", TRUE )
        Speech_Change_Setting( "tts_pitch", 100 )
        Speech_From_Text( "This is a high pitch.", TRUE )
        Speech_Change_Setting( "tts_pitch", nValue )
        Return
Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_rate

Indicates how fast the text should be spoken. Wavelink recommends using the calibration tool to adjust this setting, rather than setting it through a script or the screen reformatter.

Possible Values

Any number from 50-400, with 100 being the default (and "normal" talking speed), 50 being 1/2 normal speed, and 400 being 4 times faster than normal speed.

Example #1

This script is designed to be triggered by a speech-to-text global action to increase the speech rate. The term "faster" could be added to a grammar file to act as a command that calls the following script.

```
Script( IncreaseSpeechRate )
String( sRate )
String( sMessage )
Number( nRate )

        Comment: Increase Speech rate by 10 increments
        nRate = Speech_Get_Setting( "tts_rate" )
        If( Number_Equal( nRate, 400 ) )
                Speech_From_Text( "Speech Rate already at maximum.", TRUE )
                Message( "Speech Rate already at maximum.", 5 )
        Else
                nRate = Number_Plus( nRate, 10 )
                Speech_Change_Setting( "tts_rate", nRate )
                sRate = Number_To_String_Decimal( nRate )
                sMessage = "New Speech Rate is: "
                sMessage = String_Combine( sMessage, sRate )
                Message( sMessage, 5 )
        End_If
        Return
```

Example #2

This script is designed to be triggered by a speech-to-text global action to decrease the speech rate. The term "slower" could be added to a grammar file to act as a command that calls the following script.

```
Script( DecreaseSpeechRate )
String( sRate )
String( sMessage )
Number( nRate )
```

```
Comment: Decrease Speech rate by 10 increments
nRate = Speech_Get_Setting( "tts_rate" )
If( Number_Equal( nRate, 50 ) )
        Speech_From_Text( "Speech Rate already at minimum.", TRUE )
        Message( "Speech Rate already at minimum.", 5 )
Else
        nRate = Number_Minus( nRate, 10 )
        Speech_Change_Setting( "tts_rate", nRate )
        sRate = Number_To_String_Decimal( nRate )
        sMessage = "New Speech Rate is: "
        sMessage = String_Combine( sMessage, sRate )
        Message( sMessage, 5 )
End_If
Return
```

Example #3

```
Script(Speech_Rates)
Number(nRate)
Activate(From_Menu)
        nRate = Speech_Get_Setting("tts_rate")
        Message(String_Combine("Initial speech rate is ",
        Number_To_String_Decimal(nRate)), 5)
        Speech_From_Text("This is the current speed.", TRUE)
        Speech_Change_Setting("tts_rate", 10)
        Speech_From_Text("This is the slow text.", TRUE)
        Speech_Change_Setting("tts_rate", 99)
        Speech_From_Text("This is the fast text.", TRUE)
        Speech_Change_Setting("tts_rate_", nRate)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_readmode

Indicates how text should be separated.

Possible Values

Sentence	The vocalizer will pronounce the words with attention to punctuation.
Character	The vocalizer will pronounce each character.
Word	The vocalizer will pronounce each word.
Character_Case	The vocalizer will say "capital" before each upper-case letter is pronounced.

Example

```
Script(Speech_From_Text_ReadMode)
String(strDescription)
String(strSetting)
String(strMessage)
Number(nReadMode)
Activate(From_Menu)
        If_Not(Speech_From_Text_Available)
                Message("Speech From Text Not Available", 3)
                Return
        End_If
        strSetting = "tts_readmode"
        nReadMode = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting, nReadMode)
        strMessage = String_Combine("Read-mode:", strDescription)
        strMessage = String_Combine(strMessage, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nReadMode))
        Speech_From_Text(strMessage, FALSE)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_voice

Indicates the name of the voice that is currently selected.

Example

```
Script(Jill_Voice)
Number(nVoice)
Activate(From_Menu)
        If_Not(Speech_From_Text_Available)
                Message("Speech From Text Not Available", 3)
                Return
        End_If
        nVoice = Speech_Find_Setting_Value("tts_voice", "Jill", FALSE)
        If(Number_Greater_Than_Or_Equal(nVoice, 0))
                Speech_Change_Setting("tts_voice", nVoice)
                Speech_From_Text("Jill's voice is available.", TRUE)
        Else
                Speech_From_Text("Jill's voice is not available.", TRUE)
        End_If
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_volume

Indicates the sound level. Wavelink recommends using the calibration tool to adjust this setting, rather than setting it through a script or the screen reformatter.

Possible Values

Any number from 0 to 100, with the default being the value last set in the calibration tool. For devices that support "boost" (a hardware amplifier that can be enabled or disabled), values of 51-100 will be boosted, while 0-50 will not. For devices that don't support boost, the range of 0-100 will just be softest to loudest.

Example #1

This script is designed to be triggered by a speech-to-text global action to increase the volume. The word "louder" could be added to a grammar file to act as a command that calls the following script.

```
Script( IncreaseVolume )
String( sVolume )
String( sMessage )
Number( nVolume )
Number( nVolumeCalc )
        Comment: Increase Volume by 10%
        nVolume = Speech_Get_Setting( "tts_volume" )
        nVolumeCalc = Number_Multiply( nVolume, 11 )
        nVolume = Number_Divide( nVolumeCalc, 10 )
        If( Number_Greater_Than_Or_Equal( nVolume, 100 ) )
                Speech_From_Text( "Volume already at maximum.", TRUE )
                Message( "Volume already at maximum.", 5 )
                Speech_Change_Setting( "tts_volume", 100 )
        Else
                Speech_Change_Setting( "tts_volume", nVolume )
                sVolume = Number_To_String_Decimal( nVolume )
                sMessage = "New Volume Level is: "
                sMessage = String_Combine( sMessage, sVolume )
                Message( sMessage, 5 )
        End_If
        Return
```

Example #2

This script is designed to be triggered by a speech-to-text global action to decrease the volume. The term "softer" could be added to a grammar file to act as a command that calls the following

script.

```
Script( DecreaseVolume )
String( sVolume )
String( sMessage )
Number( nVolume )
Number( nVolumeCalc )
        Comment: Decrease Volume by 10%
        nVolume = Speech_Get_Setting( "tts_volume" )
        nVolumeCalc = Number_Multiply( nVolume, 9 )
        nVolume = Number_Divide( nVolumeCalc, 10 )
        If( Number_Less_Than_Or_Equal( nVolume, 10 ) )
                Speech_From_Text( "Volume already at minimum.", TRUE )
                Message( "Volume already at minimum.", 5 )
                Speech_Change_Setting( "tts_volume", 10 )
        Else
                Speech_Change_Setting( "tts_volume", nVolume )
                sVolume = Number_To_String_Decimal( nVolume )
                sMessage = "New Volume Level is: "
                sMessage = String_Combine( sMessage, sVolume )
                Message( sMessage, 5 )
        End_If
        Return
```

Example #3

```
Script( Speech_From_Text_Volume )
String( strDescription )
String( strSetting )
String( strMessage )
String( strPrompt )
Boolean( bResult )
Number( nVolume )
Number( nSettingMax )
Activate( From_Menu )
        If_Not( Speech_From_Text_Available )
                Message( "Speech From Text Not Available", 3 )
                Return
        End_If
        strSetting = "tts_volume"
        nVolume = Speech_Get_Setting( strSetting )
        strDescription = Speech_Get_Setting_Value_Desc(strSetting, nVolume)
        strMessage = String_Combine( "Volume: ", strDescription )
        strMessage = String_Combine( strMessage, "; setting value: " )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
```

```
nVolume ) )
        Speech_From_Text( strMessage, FALSE )
        nSettingMax = Speech_Get_Setting_Max( strSetting )
        strPrompt = String_Combine( "From 0 to ", Number_To_String_Decimal(
nSettingMax ) )
        While( Number_Not_Equal( nVolume, 0 ) )
                nVolume = Ask_Number( strPrompt, "New volume, 0 to exit", 0,
nSettingMax, nVolume )
                If( Number_Not_Equal( nVolume, 0 ) )
                        bResult = Speech_Change_Setting( strSetting, nVolume )
                        If( bResult )
                                strMessage = String_Combine( "The new volume level is "
String_Decimal( nVolume ) )
                                Speech_From_Text( strMessage, FALSE )
                        Else
                                Message( "Setting volume failed", 3 )
                                nVolume = 0
                        End_If
                End_If
        End_While
        Return
```

See Also

stt_volume, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

tts_waitfactor

Indicates the length of the pause between messages.

Possible Values

0 milliseconds (ms)
200 ms
400 ms
600 ms
800 ms
1000 ms
1200 ms
1400 ms
1600 ms
1800 ms

Example

```
Script( Speech_From_Text_WaitFactor )
String( strDescription )
String( strSetting )
String( strMessage )
Number( nWaitFactor )
Activate( From_Menu )
        If_Not( Speech_From_Text_Available )
                Message( "Speech From Text Not Available", 3 )
                Return
        End_If
        strSetting = "tts_waitfactor"
        nWaitFactor = Speech_Get_Setting( strSetting )
        strDescription = Speech_Get_Setting_Value_Desc( strSetting, nWaitFactor
)
        strMessage = String_Combine( "Wait-factor:", strDescription )
        strMessage = String_Combine( strMessage, ";milliseconds; setting
value:" )
        strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nWaitFactor ) )
        Speech_From_Text( strMessage, FALSE )
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_accuracy

This value affects the trade-off between CPU load, memory requirements, and accuracy. With a lower value, less CPU time and memory are needed, but the accuracy also degrades. With a higher value, more CPU time and memory are needed, but performance increases.

Possible Values

1-1000. The default value is 100 for mobile devices, and 200 for desktop or laptop computers.

stt_adjust_gain

This setting allows the engine to automatically increase and decrease the microphone input volume. This is disabled by default. This feature will often cause the voice detection rate to deteriorate, so its use is not recommended.

Possible Values

0	disabled
1	enabled
2	enabled; save as the new default volume

Example

```
Script( Speech_Adjust_Gain )
Activate( From_Menu )
        If( Ask_Yes_No( "Is microphone calibration just not good enough?",
"Gain Option", FALSE ) )
                Speech_Change_Setting( "stt_adjust_gain", 1 )
                Message( "The volume will be adjusted automatically.", 5 )
        Else
                Speech_Change_Setting( "stt_adjust_gain", 0 )
                Message( "The volume will not be changed.", 5 )
        End_If
        Return
```

stt_beep_threshold

If the confidence value for a result is below this value, then a negative acknowledgement beep will not be played. The default value is 3000. Set the value to 0 to disable this feature.

Possible Values

0-10000. When the value is set to 0, the feature is disabled.

stt_calibrate

Opens the microphone calibration wizard.

Possible Values

0	starts the calibration wizard
1	performs a quick calibration
2	launches the user training

Example

```
Script( Speech_Calibration )
Activate( From_Menu )
        If_Not( Speech_From_Text_Available )
                Comment: Only the calibration wizard is available.
                Speech_Change_Setting( "stt_calibrate", 0 )
                Return
        End_If

        If( Ask_Yes_No( "Do you want to perform user training?", "User
Training", TRUE ) )
                Speech_Change_Setting( "stt_calibrate", 2 )
                Return
        End_If

        If( Ask_Yes_No( "Do you want to perform a full calibration?", "Full
Calibration", TRUE ) )
                Speech_Change_Setting( "stt_calibrate", 0 )
        Else
                Speech_Change_Setting( "stt_calibrate", 1 )
        End_If
        Return
```

See Also

stt_volume, stt_fx_microphone, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_calibration_silence

Sets how long the user is expected to remain silent during a quick microphone calibration.

Possible Values

Any value from 0-60000 ms. The default is 5000 ms (5 seconds). if the value is set to 0, the user will not be asked to remain silent during calibration and the stt_fx_threshold value will not be changed.

stt_confidence

Indicates the minimum difference in confidence required between the top two speech-to-text results for the top result to be accepted. For example, if a grammar contained the terms "faster" and "fastest", the engine may return high confidence values for both words when the user says "faster." If the stt_confidence value is set high and the top two terms return similar confidence values, the engine will reject both results.

Use dissimilar-sounding terms in your grammars to improve speech-to-text results.

Possible Values

The default value is 1.

Example

```
Script(Speech_To_Text_Setting_Confidence)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_confidence"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_expanded, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_expanded

Returns the confidence value along with the speech-to-text result.

There may be more than one result returned; however, the first result is the one with the highest confidence value. You can use this information to determine the appropriate `stt_threshold` and `stt_confidence` values.

Possible Values

1	enabled
0	disabled

The default value is 0 (disabled).

Return Value

If this setting is 1, speech-to-text actions return a string with the top two speech-to-text results and their confidence values.

Example

```
Script(Speech_To_Text_Setting_Expanded)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_expanded"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_confidence, stt_threshold, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_detect_start

Indicates the action the speech engine should take before attempting to determine what the user is saying. You should leave this setting enabled unless you have specific issues that can only be solved by disabling it.

Possible Values

1	The engine will wait until it detects the user is speaking.
0	The engine expects the user to start speaking immediately.

The default value is 1.

Example

```
Script(Speech_To_Text_Setting_Fx_Detect_Start)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_detect_start"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_microphone

Tells the speech engine the distance between the user and the microphone. The default value of 0 indicates that the user's mouth is next to the microphone. A value of 1 should be used if the speaker's mouth will be located at least several inches away from the microphone.

Possible Values

0	close
1	far

The default value is 0.

Example

```
Script(Speech_To_Text_Setting_Fx_Microphone)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_microphone"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_min_duration

Indicates the minimum duration (in milliseconds) of speech before speech detection is activated. The speech must also have the amount of energy required by the stt_fx_threshold setting.

Possible Values

10 ms - 400 ms

The default value is 60 (ms).

Example

```
Script(Speech_To_Text_Setting_Fx_Min_Duration)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_min_duration"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_fx_threshold, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_sensitivity

Indicates the speech detection sensitivity. Wavelink recommends using the calibration tool to adjust this setting, rather than setting it through a script or the screen reformatter. A higher value means speech is more easily detected.

Possible Values

Any number from 0 to 100.

The default value is 50. Once the calibration tool has been used, the value it sets will be used as the default for this setting, persisting through a restart of the Client.

Example

```
Script(Speech_To_Text_Setting_Fx_Sensitivity)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_sensitivity"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_fx_detect_start, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_silence

Indicates the milliseconds of silence used to indicate that the user is done speaking.

NOTE: An acceptable substitute for stt_fx_silence is stt_silence, but stt_fx_silence is preferred.

Possible Values

0 - 5,000 milliseconds

The default value is 500 (ms).

Example

```
Script(Speech_To_Text_Setting_Fx_Silence)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_silence"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_timeout, stt_idle_timeout, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_fx_threshold

Indicates the amount of energy the microphone input must have before the speech detection (`stt_fx_detect_start`) is activated. Wavelink recommends using the calibration tool to adjust this setting, rather than setting it through a script or the screen reformatter. Changing this value using a script or the Screen Reformatter will not change the default value.

Possible Values

0 (-72dB) to 9000 (18dB)

The default value is 2200 (-50dB). Each increase of 100 is equal to 1dB. Once the calibration tool has been used, the value it sets will be used as the default for this setting, persisting through a restart of the Client.

Example

```
Script(Speech_To_Text_Setting_Fx_Threshold)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_fx_threshold"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_fx_detect_start, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_idle_timeout

Indicates the time in milliseconds for the engine to continue collecting results following the last result or stt_timeout. If any changes (settings, grammar, etc.) are made during the stt_idle_timeout period, the results generated during the period will be discarded.

Possible Values

The default value is 2000 ms (2 seconds).

Example

```
Script(Speech_To_Text_Setting_Idle_Timeout)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_idle_timeout"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_timeout, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_language_long

Displays the full name of the language currently being used. For example, `English USA` instead of `ENU`.

For possible language values, see tts_language_short on page 318.

Example

```
Script(Speech_To_Text_Setting_Language_Long)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_language_long"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_language_short, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_language_short

Displays the three-letter abbreviation of the language currently being used.

For possible language values, see tts_language_short on page 318.

NOTE: An acceptable substitute for stt_language_short is stt_language, but stt_language_short is preferred.

Example

```
Script(Speech_To_Text_Setting_Language_Short)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_language_short"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_language_long, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_logging

If enabled, the speech-to-text engine will create a file with information that can be useful for diagnostics. Logging information is written to the `\Temp\STT_Log.txt` file.

Possible Values

0	disabled
1	critical
2	informational
3	verbose

The default value is 0 (disabled).

Example

```
Script( Speech_Logging )
Activate( From_Menu )
        If( Ask_Yes_No( "Do you want to use Speech Logging?", "Logging", FALSE
) )
                Speech_Change_Setting( "stt_logging", 1 )
                Message( "Logging is enabled.", 5 )
        Else
                Speech_Change_Setting( "stt_logging", 0 )
                Message( "Logging is disabled.", 5 )
        End_If
        Return
```

stt_logging_audio

This setting allows the user to create a .wav file of speech-to-text attempts. The audio capture files will be written to the `\Temp` folder. Because of the amount of additional processing and memory required, this setting should only be used on fast devices for diagnostic purposes.

If the device runs out of memory, logging will be disabled.

Possible Values

0	No audio logging.
1	Log audio data until the microphone is closed. When the speech-to-text attempt is complete, this setting will reset to 0.
2	Log audio data, creating a new file each time the microphone is closed.
3	Log audio data until the microphone is closed, a speech-to-text result is returned, or an abnormal condition occurs. When the audio capture is complete, the setting will reset to 0.
4	Log audio data, creating a new file each time the microphone is closed, a speech-to-text result is returned, or an abnormal condition occurs.

The default value is 0.

See Also

stt_logging, stt_logging_engine

stt_logging_engine

Sets the engine to log speech-to-text attempts as .wav files. This file contains information that can be useful for diagnostics. The default value is 0 (disabled).

Possible Values

0	disabled
1	enabled

See Also

stt_logging, stt_logging_audio

stt_pool_size

Sets the number of terms the engine will examine closely for the best match. The engine does a rough match for the grammar file, then compares the best matches with the speech to determine which result to return. This setting is for large grammar files that may have many possible results. Since a higher value requires more resources, increasing this parameter should only be done on machines that have more CPU and memory resources such as a PC or new generation mobile device.

Possible Values

5-1000

The default value is 5 for mobile devices, and 10 for desktop or laptop computers.

stt_preserve

Causes the engine state to be saved. If the stt_preserve setting has been used, the saved session state will no longer be overwritten during that session.

Possible Value

0	Causes the speech engine to save the current engine state for use later. Use this setting if the speech recognition is working very well and you don't want the engine to continue adapting.

Example

```
Script( Speech_To_Text_Preserve )
Activate( From_Menu )
        If( Ask_Yes_No( "Is the speech recognition performing great?",
"Preserve", FALSE ) )
                Speech_Change_Setting( "stt_preserve", 0 )
                Message( "Saving the current state.", 5 )
        Else
                Message( "No action taken.", 5 )
        End_If
        Return
```

stt_priority

Determines how aggressively the microphone input is collected and speech analysis is performed.

You can increase the priority if the results are taking a long time to process, and decrease the priority if you experience issues such as the device locking up or network connections being dropped during speech-to-text processing.

Possible Values

0	low
1	medium
2	high
3	critical

The default value is 1 (medium).

Example

```
Script(Speech_To_Text_Setting_Priority)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_priority"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_processing

Indicates the action the speech engine should take when returning a grammar result.

If the setting is 1, the speech engine will return the semantic result (if available) instead of the actual phrase spoken by the user.

This setting is useful for grammars that incorporate bracket ({}) directives.

This setting will enable and disable both Actions (the !action directive) and semantic ("result" and "@") processing.

Possible Values

1	on
0	off

The default value is 1 (on/enabled).

Example

```
Script(Speech_To_Text_Setting_Processing)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_processing"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_reset

An action that resets the speech engine. The engine may need to be reset if it has adapted poorly (e.g., if the engine is listening for prolonged periods when the user is not speaking, it will try to adapt to the ambient noise).

Possible Values

0	(soft reset) Temporarily increase the engine adaptation speed.
1	(hard reset) Erase any saved state information and temporarily increase the adaptation speed.
2	Restore the last saved state without increasing the adaptation speed.

Example

```
Script( Speech_To_Text_Reset )
Activate( From_Menu )
        If( Ask_Yes_No( "Is the speech-to-text behaving very poorly?", "Speech-
to-Text", TRUE ) )
                Message( "Clearing the speech engine state.", 5 )
                Speech_Change_Setting( "stt_reset", 1 )
        Else
                If( Ask_Yes_No( "Has the user changed?", "Speech User", FALSE ) )
                        Message( "Increasing the adaptation rate.", 5 )
                        Speech_Change_Setting( "stt_reset", 0 )
                Else
                        Message( "Reverting to the last saved state.", 5 )
                        Speech_Change_Setting( "stt_reset", 2 )
                End_If
        End_If
        Return
```

stt_reset_session_delay

Indicates the amount of time in seconds for the speech engine to wait for a valid response before reverting back to the last saved engine state. This setting prevents the performance from degrading if the user does not speak for a long period of time.

Possible Values

The default value is 30 (seconds).

Example

```
Script(Speech_To_Text_Setting_Reset_Session_Delay)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_reset_session_delay"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_save_session_delay, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_result_sound

Determines when a result sound is played for speech-to-text.

Possible Values

2	Two sounds are used: one for successful recognitions, one for unsuccessful recognitions
1	A sound is played for each successful recognition
0	No result sounds are used

Example

```
Script( Speech_To_Text_Result_Sound )
Activate( From_Menu )
        If( Ask_Yes_No( "Do you want to hear a beep on a good recognition?",
"Beep", FALSE ) )
                If( Ask_Yes_No( "Do you want to hear a beep on a bad recognition?",
"Beep", FALSE ) )
                        Speech_Change_Setting( "stt_result_sound", 2 )
                        Message( "Result sounds enabled.", 5 )
                Else
                        Speech_Change_Setting( "stt_result_sound", 1 )
                        Message("Result sounds only played for good recognitions.", 5)
                End_If
        Else
                Speech_Change_Setting( "stt_result_sound", 0 )
                Message( "Result sounds disabled.", 5 )
        End_If
        Return
```

stt_save_increase

How much the session save threshold will increase each minute since the last cold restart (stt_reset of 1). The default value is 100, meaning that the save threshold will increase by 100 for every minute the engine is used. This parameter is used to increase the threshold for saving a new engine state as time progresses, since the engine state can start to degrade after speech-to-text recognition has been used for long periods.

For example, if using the following settings:
stt_threshold=4500, stt_save_threshold=1000, stt_save_increase=100
the save threshold would be 5500 during the first minute following a hard reset (4500+1000+(0*100)). A speech-to-text result with a confidence level of 5500 would match the save threshold and cause the engine state to save. After 8 minutes, a speech-to-text result with a confidence of 6300 (4500+1000+(8*100)) would be required to save the engine state.

When the engine state is restored (using stt_reset_session_delay), it will revert to the last time the engine state was saved. If stt_reset is set to 0 (a soft reset), the threshold will be reduced to account for the accelerated learning that will follow.

If you still find that the recognition rate is decreasing over long periods of time (such as an hour or more), you can make the stt_save_threshold larger. If you are in environments where the background sounds can change, you may want to make stt_save_threshold smaller. Set stt_save_threshold to 0 to disable this feature.

Example

```
Script( Speech_To_Text_Save_Increase )
String( strSetting )
String( strDescription )
String( strMessage )
Number( nSettingValue )
Activate( From_Menu )
    strSetting = "stt_save_increase"
    nSettingValue = Speech_Get_Setting( strSetting )
    strDescription = Speech_Get_Setting_Value_Desc( strSetting,
nSettingValue )
    strMessage = String_Combine( strDescription, "; setting value:" )
    strMessage = String_Combine( strMessage, Number_To_String_Decimal(
nSettingValue ) )
    Ask_OK( strMessage, strSetting )
    Return
```

stt_save_session_delay

Indicates the number of seconds for the speech engine to wait before saving the engine state again. For example, if the engine state was saved 5 seconds ago, and this value is set to 10 seconds, it will not save the engine state again for at least 5 more seconds. The engine will save its state regularly, allowing it to adapt to the speaker and revert back to a saved state if necessary.

Possible Values

The default value is 10 (seconds).

Example

```
Script(Speech_To_Text_Setting_Save_Session_Delay)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_save_session_delay"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_reset_session_delay, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_save_threshold

Directs the speech engine to save the engine state if the result confidence is greater than the values of stt_threshold and stt_save_threshold combined.

When the engine is getting high confidence results, it will save the engine state. If engine adaptation causes results to degrade, you can revert to a saved engine state by using stt_reset or stt_reset_session_delay.

Possible Values

The default value is 2000.

Example

```
Script(Speech_To_Text_Setting_Save_Threshold)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_save_threshold"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage,
        Number_To_String_Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_threshold, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_server_timeout

When uploading or downloading user training data, the stt_server_timeout value is how long (in seconds) the Client will wait for a response from the Avalanche server.

Possible Values

0-60. If the value is set to 0, the Client will not attempt to contact the Avalanche server. The default value is 15.

Example

```
Script( Speech_Server_Timeout )
Number( nTimeout )
Activate( From_Menu )
        nTimeout = Speech_Get_Setting( "stt_server_timeout" )
        If( Number_Less_Than( nTimeout, 0 ) )
                Message( "Server timeout is not supported.", 5 )
                Return
        End_If

        nTimeout = Ask_Number( "How long do you want the server timeout to be
(in seconds)?", "Server Timeout", 1, 60, nTimeout )
        Speech_Change_Setting( "stt_server_timeout", nTimeout )
        Message( "Changed the server timeout.", 5 )
        Return
```

stt_size

Displays the size of the speech-to-text engine being used.

Possible Values

Full
Compact

Example

```
Script(Speech_To_Text_Setting_Size)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_size"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_special_sounds

Indicates how the speech engine should interpret special sounds.

If the setting is 1, the speech engine will examine sounds to determine if they are more likely to correspond to a special sound (empty pauses, coughing, etc.) than a valid grammar result.

If your grammar consists mostly of multi-syllable words or phrases, enabling this setting will result in fewer low-confidence results. However, enabling this setting may result in one- or two-syllable words (such as "yes," "two," etc.) being rejected.

Possible Values

1	on
0	off

The default value is 0 (off).

Example

```
Script(Speech_To_Text_Setting_Special_Sounds)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_special_sounds"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_threshold

Indicates the minimum amount of confidence for the most-likely result that will be accepted.

If the confidence is less than the set value, the result will be discarded and the speech-to-text action will report that it failed.

You may want to use different values for different grammars.

Possible Values

0-10000.

The default value is 5000.

Example

```
Script(Speech_To_Text_Setting_Threshold)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_threshold"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_expanded, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

stt_timeout

Indicates the time in milliseconds for the system to wait before responding that no speech was detected.

Possible Values

0 - 300,000 milliseconds

The default value is 10000 ms (10 seconds).

Example

```
Script(Speech_To_Text_Setting_Timeout)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_timeout"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_idle_timeout, stt_fx_silence, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting, Speech_To_Text_No_Wait

stt_use_jumpback

Sets a buffer to check if the engine is processing speech. If this setting is changed to 0 (disabled), then the engine will use less memory, but will use more CPU cycles in situations where the engine gets a false positive when the user is not speaking.

Possible Values

0	disabled
1	enabled

The default value for this setting is 1 (enabled).

Example

```
stt_use_jumpback(0)
```

stt_use_word_ids

This feature enables support for word IDs (the !id directive) in grammar files. When a term has a word ID assigned in the grammar file, the engine will return a number (converted to a string) rather than the speech result, which can be useful for localization.

For example, if the grammar file specified:
`abort !id(4)`
then when the user said "abort," the engine would return "4".

Possible Values

0	Ignores !id directives in grammar files.
1	Returns the word ID (a number) specified in the grammar for a term.

The default value is 1.

Example

```
Script( word_ids_example )
Number( nUseWordIds )
Activate( From_Menu )
        nUseWordIds = Speech_Get_Setting( "stt_use_word_ids" )
        If( Number_Equal( nUseWordIds, 1 ) )
                Message( "!id values in grammars will be used.", 5 )
        Else
                Message( "!id values in grammars will be ignored.", 5 )
        End_If
        Return
```

stt_volume

Indicates the current volume of the microphone input. Wavelink recommends using the calibration tool to adjust this setting, rather than setting it through a script or the screen reformatter.

This setting is not supported by all mobile devices.

Possible Values

Any number from 0 (lowest) to 100 (highest).

Example

```
Script(Speech_To_Text_Setting_Volume)
String(strSetting)
String(strDescription)
String(strMessage)
Number(nSettingValue)
Activate(From_Menu)
        strSetting = "stt_volume"
        nSettingValue = Speech_Get_Setting(strSetting)
        strDescription = Speech_Get_Setting_Value_Desc(strSetting,
nSettingValue)
        strMessage = String_Combine(strDescription, "; setting value:")
        strMessage = String_Combine(strMessage, Number_To_String_
Decimal(nSettingValue))
        Ask_OK(strMessage, strSetting)
        Return
```

See Also

stt_calibrate, stt_fx_microphone, Speech_Get_Setting, Speech_Get_Setting_Value_Desc, Speech_Get_Setting_Max, Speech_Find_Setting_Value, Speech_To_Text, Speech_From_Text, Speech_Setting_Available, Speech_Change_Setting

Symbologies and Values

The following is a list of symbologies and their values:

Symbology	Value
UPCE0	48
UPCE1	49
UPCA	50
MSI	51
EAN8	52
EAN13	53
CODABAR	54
CODE 39	55
D 2 OF 5	56
I 2 OF 5	57
CODE 11	58
CODE 93	59
CODE 128	60
D 2 OF 5 IATA	62
EAN/UCC 128	63
PDF417	64
TRIOPTIC 39	66
COUPON CODE	67
BOOKLAND	68
MICROPDF	69
CODE 32	70
MACRO PDF	71

Symbology	Value
MAXOCODE	72
DATAMATRIX	73
QR CODE	74
MACRO MICROPDF	75
RSS 14	76
RSS LIMITED	77
RSS EXPANDED	78
SIGNATURE	82
WEBCODE	84
CUECODE	85
COMPOSITE	86
TLC 39	88
POSTNET	97
PLANET	98
BRITISH POSTAL	99
JAPAN POSTAL	100
AUSTRALIA POSTAL	101
DUTCH POSTAL	102
CANADA POSTAL	103
AZTEC	160
AZTEC MESA	161
CODE 49	162
OCR	163
CODABLOCK	164
MATRIX 2 0F 5	165

Symbology	Value
PLESSEY	166
CHINA POSTAL	167
KOREA POSTAL	168
TELEPEN	169
CODE 16K	170
POSICODE	171
UPC	241
MSR	245
RFID	246

Examples

This appendix provides example scripts. Use these script examples to customize your own scripts according to preference.

Beep Sample Script

This is an example of a script that tells the device to beep if the word `ALARM` appears on the top five rows of the screen.

Example Code

```
If_Not(Search_Screen("ALARM",1,5,FALSE))
Return
End_If
Beep(1000,200,5)
Delay(200)
Beep(1500,500,9)
Return
```

Notes

This example should be set to activate each time the screen changes. Make sure that the `ALARM` text disappears quickly after being shown. Otherwise, the alarm will go off each time the screen updates (because the user pressed a key, each character from a bar code scanned was shown on the screen, etc.).

Here is an alternate implementation that waits for the `ALARM` text to disappear. The limitation with this version is that no other scripts will be able to run until the `ALARM` text is removed from the screen.

```
If_Not(Search_Screen("ALARM",1,5,FALSE))
Return
```

```
End_If
Beep(1000,200,5)
Delay(200)
Beep(1500,500,9)
While(Search_Screen("ALARM",1,5,FALSE))
Wait_For_Screen_Update
End_While
```

Escape Sequence Sample Script

This is an example of using an escape sequence to turn off the Codabar symbology.

Example Code

```
Result=Escape_Sequence("%8D")
Return
```

Notes

You need to create a string variable named `Result` for this example, since the `Escape_Sequence` command returns a string value.

Refer to Creating Variables on page 25 for more information on creating variables.

Request Information Sample Script

This example requests the mobile device user to input some information and displays the result.

Example Code

```
Result=Ask_String("Enter a string:","Length Calculator",0,200,"")
Ask_OK(String_Combine("The string"",String_Combine( Result, String_
Combine(""is",String_Combine( Number_To_String_Decimal(String_
Length(Result)),"characters long." )))),"String Length")
Return
```

Notes

This example also requires a string variable named `Result`. The `ASK_OK` instruction uses actions inside of actions to get several layers deep. You could also use variables to break that instruction into several short instructions.

Display Screen Button Sample Script

This example displays a log out button that appears in the in the bottom-left corner of the screen (row two, column five) when the text "`logged out`" appears on the screen. Pressing the button allows you to exit the Client.

Example Code

```
        If_Not(String_Equal( Get_Screen_Text_Columns(2,5,10), "logged out", 0,
FALSE ) )
        Return
        End_If
        Button_Create_View( "Exit", 1000,1,0,ButtonPressed)
        While_Not( ButtonPressed)
        If_Not(String_Equal(Get_Screen_Text_Columns(2,5,10),    "logged
out",0,FALSE))
        Return
        End_If
        Wait_For_Screen_Update
        End_While
        Exit_Application(0)
```

Notes

This example uses a boolean variable `ButtonPressed` to know if the screen button is pressed. The button is destroyed when the script exits so you do not need to delete the script.

The `While_Not` loop uses the `Wait_For_Screen_Update` action to detect if the `logged out` text is no longer there so that the scripts do not continually loop.

Get_Number Sample Script

The following example script is called by the `Get_Number_Test` script. It retrieves the appropriate number for the `Get_Number_Test` script to display.

```
Comment:This script is designed to be called by other
scripts.
Comment:The result of the Speech-to-Text will be in the
nResult variable.
Comment:The number.bnf file must be available as a
grammar file.
Speech_To_Text(sResult,"number")
nResult=0
While_Not(String_Empty(sResult))
 nNextSpace=String_Find_First(sResult,"",FALSE)
```

```
 nResult=Number_Plus(nResult,String_To_Number_Decimal
 (sResult))
 If_Number_Less_Than(nNextSpace,0))
    Break
 End_If
 nNextSpace=Number_Plus(nNextSpace,1)
 sResult=String_Right(sResult,Number_Minus
 (String_Length(sResult),nNextSpace))
End_While
Return
```

Get_Number_Test Sample Script

The following example script converts a spoken number into text that displays on the mobile device. This script must be used in conjunction with the `Get_Number` sample script.

```
Speech_From_Text("Say a number",FALSE)
Call:Get_Number
   nResult <--> nResult
Ask_OK(Number_To_String_Decimal(nResult),
"Number Returned")
Return
```

Play_Screen Sample Script

The following example script converts the current TE Client screen into speech that the user can hear.

```
nNumRows=Get_Screen_Rows
nCurrentRow=1
While(Number_Less_Than_Or_Equal(nCurrentRow,nNumRows))
  Speech_From_Text(Get_Screen_Text
  (nCurrentRow,1),FALSE)
  nCurrentRow=Number_Plus(nCurrentRow,1)
End_While
Return
```

Speech_Button_Demo Sample Script

The following example script creates the following buttons on the screen: `Digits`, `State`, `Play Screen`, `Done`. When selected, the buttons allow the user to verbally input data.

```
While_Not(bExit)
        Wait_For_Screen_Update
```

```
            If(bPlayScreen)
                    bPlayScreen=FALSE
                    Button_Remove_All
                    bButtonsVisible=FALSE
                    Delay(1)
                    nNumRows=Get_Screen_Rows
                    nCurrentRow=1
                    While(Number_Less_Than_Or_Equal(nCurrentRow,nNumRows))
                    Speech_From_Text(Get_Screen_Text (nCurrentRow,1),FALSE)
                    nCurrentRow=Number_Plus(nCurrentRow,1)
                    End_While
            End_If
            If(bGetDigits)
                    bGetDigits=FALSE
                    Button_Remove_All
                    bButtonsVisible=FALSE
                    Message("Say 1 or more digits...",0)
                    szResult=""
                    Speech_To_Text(szResult,"connected_digits")
                    Message_Clear
                    szResult=String_Strip_Characters(szResult,"",FALSE)
                    Keypress_String(szResult)
            End_If
            If(bGetState)
                    bGetState=FALSE
                    Button_Remove_All
                    bButtonsVisible=FALSE
                    Message("Say a USA state...",0)
                    szResult=""
                    Speech_To_Text(szResult,"usa_states")
                    Message_Clear
                    Keypress_String(szResult)
            End_If
    End_While
    Button_Remove_All
    Return
```

Script Build Errors

This appendix describes the error messages that appear in the *Script Editor Error Help* dialog box. For more information about accessing this dialog box, see Building Scripts with the Text Editor on page 34.

Error Number	Error Message	Description	Fixing the Error
WL1001	You should use two backslash characters ("\\") to represent a single backslash character.	Use the string `"\\"` to represent the backslash character.	Add one more backslash in the string, next to the single backslash that is already there.
WL1002	Not enough parameter values for the action; there must be at least two.	The actions `Boolean_And()` and `Boolean_Or()` should have two or more parameters. Each of the actions can have up to five parameters.	Pass 2, 3, 4, or 5 parameters to `Boolean_And()` and to `Boolean_or()`.
WL1003	Call to non-existing script.	This error occurs if the name doesn't exactly match the name of a script or if the script does not exist.	Either call a script that exists or write the non-existing script. Make sure that the name of the script matches exactly, including the case of the letters.
WL1004	Division by 0 is not allowed.	The divisor passed to `Number_Divide()` is zero, and dividing by zero is an undefined mathematical operation.	Make sure to never use 0 as the divisor in `Number_Divide()`.
WL1005	No variable assigned to the value for this action.	The action returns a value, but the script is not using that value.	Create a variable and assign the action's value to the variable.
WL1006	Call to script references non-existing (or incorrect type) variable.	The variable that is being exchanged with the `Call` action cannot be found in the called script, or the variable type doesn't match the type in the called script.	Reference a variable that exists or a variable that is the correct type.
WL1007	The host profile does not exist.	The script activates on a host profile, but that host profile does not exist because the	Either use a host profile that exists or create the host profile. Make sure that the

Error Number	Error Message	Description	Fixing the Error
		name does not exactly match a host profile or because the host profile has not yet been created.	name of the profile matches exactly, including the case of the letters.
WL2001	Text line is too many characters.	The line of text contains too many characters. Long lines of text cause the script to be hard to read or understand.	Break the line into multiple lines. Assign actions to variables instead of passing actions to other actions.
WL2002	Keyword `Script` already used.	There can be one keyword `Script` in each script; this error occurs when more than one `Script` keyword in the script.	Remove any extra `Script` keywords so that there is only one.
WL2003	Keyword `Script` must be the first statement.	The keyword `Script` must be the first statement in a script.	Move all statements before `Script` to after `Script`.
WL2004	Missing `(` after keyword.	Almost all actions and keywords must have a `(` after them. The `(` is missing.	Add a `(` after the keyword.
WL2005	Missing parameter for keyword or action.	The action or keyword requires one or more parameters, and there are no parameters present.	Add the correct number of parameters to the action or keyword.
WL2006	Second parameter for keyword must be TRUE or FALSE. Invalid parameter for keyword. The second parameter must be a quoted string. Unknown terminal type. Unknown keypress key.	This error indicates an invalid parameter passed to an action or keyword. The most common cause of this error is an invalid parameter to `Keypress_Key()`.	Carefully check the parameters passed to the action or keyword and study the error message to help fix the problem.
WL2007	Missing `)` after parameter to	Most actions and keywords use `(` and `)`. This action or keyword is missing the right parenthesis.	Add `)`, probably at the end of the line.

Error Number	Error Message	Description	Fixing the Error
	keyword. `Missing )` after parameter to action.		
WL2008	Extra character(s) after parameter.	There are one or more extra characters after a parameter to an action or to a keyword.	Make sure that after a parameter, there is a right parenthesis `)` or a comma and another parameter. Make sure that after the last `)`, there are no more characters.
WL2009	The variable name is already in use by a string variable.	Variable names may be declared once. This error occurs when a variable name is used in another variable declaration.	Change the name of the variable in the second declaration.
WL2010	The variable name is already in use by a number variable.	Variable names may be declared once. This error occurs when a variable name is used in another variable declaration.	Change the name of the variable in the second declaration.
WL2011	The variable name is already in use by a boolean variable.	Variable names may be declared once. This error occurs when a variable name is used in another variable declaration.	Change the name of the variable in the second declaration.
WL2012	Invalid activation method.	The method in the `Activate` action is not valid because it is not spelled correctly or because it's not a valid method.	Check the spelling. The method is case-sensitive. Make sure the method is in the list of activation methods.
WL2013	Non-printable character is not allowed.	A non-printable character is in the line of text. This can happen when pasting text from another program.	Re-type the line of text in the script editor.
WL2014	Blank characters are not allowed in the label. Blank characters are not allowed in	An invalid character is present in the script text.	Remove or change the character that the error message says is invalid.

Error Number	Error Message	Description	Fixing the Error
	the macro name. Invalid character is not allowed. Invalid character is at the beginning of the line.		
WL2015	Parameter cannot be empty. Not enough parameters; there must be 3 for `On_Key`. Not enough parameters; there must be 3 for `On_Input`. The label cannot be blank. The macro name cannot be blank.	A parameter is missing from `Activate`, `Keypress_Key`, `Label`, `Goto`, or `Call`.	Add the missing parameter. All parameters must be on the same line of text.
WL2016	Too many parameters.	The action contains too many parameters.	Check how many parameters the action needs and remove the extras.
WL2017	Invalid key value; must be 1-0xFFFF.	The key value for `Activate(On_Key)` cannot be zero.	Change the zero value to a valid key value.
WL2018	Invalid key modifier; must be `None` or `Alt` or `Ctrl` or `Shift`.	`Activate(On_Key)` contains a modifier that is not recognized or that is not supported.	Change the modifier to match exactly one of the supported modifiers; `None` or `Alt` or `Ctrl` or `Shift`.
WL2019	Missing `:` after keyword.	There must be a colon (`:`) after the keyword, before the label, for the actions `Goto`, `Label`, and `Call`.	Add a colon after the keyword, before the label.
WL2020	Extra	There are some characters	Remove all characters after

Error Number	Error Message	Description	Fixing the Error
	characters after action.	after the end of the action, after the last `)`.	the last `)`. Each action must be on a separate line.
WL2021	The value `Goto` is an action, which is not allowed. The value `Activate` is a keyword, which is not allowed. No spaces or tabs are allowed in variable names. Unknown string variable.	A keyword or variable is being used for a variable name, or a variable name has spaces or `Activate` is using an unknown variable.	Use a variable name that is not an action or keyword. Make sure there are no spaces or tabs in the variable name. For `Activate`, define the variable before using `Activate`.
WL2022	Missing `=` after variable.	When setting a variable, use `=`.	Add a `=` after the variable.
WL2023	Missing assignment for variable.	After the `=` there must be a variable, action or constant, all on the same line.	If the assignment is split into two lines, combine them. If there is nothing after `=` add a variable or action or constant.
WL2024	Invalid assignment for variable.	A variable is being assigned to an unknown variable or to an unknown action or to an incorrect value.	If assigning to a variable or action, correct the case-sensitive spelling of the variable or action.
WL2025	Unknown action.	The script contains an action that is not known. Action names are case-sensitive.	Correct the spelling or the case of the action name. Make sure the `_` is in the correct place in the name.
WL2026	Variable type is not the same as the action return type.	The return type of the action must be the same as the type of the variable.	Change the type of the variable or use another variable that has the same type as the action.
WL2027	Variable type is not the same as the variable type.	The type of the two variables must be the same.	Change the type of the variable or use another variable that has the same type.

Error Number	Error Message	Description	Fixing the Error
WL2028	Variable type is not the same as the assignment type.	The type of the two variables and the constant must be the same.	Change the type of the variable or constant. Use another variable or constant that has the same type.
WL2029	No closing quote is found in string. The parameter is not valid.	A string must be surrounded by quotation marks. A parameter must be a string, number, variable, or action.	If the string is missing a quotation mark, add one to the end of the string. If the parameter is not valid, check its spelling and the case of its letters. If the parameter is a variable, make sure the variable is declared above this line.
WL2030	The label cannot be an action. The label cannot be a variable. The parameter type doesn't match the return type for the action. The parameter type must be the type.	Labels cannot be variables or actions. If an action is used as a parameter, the action return type must be the same as the parameter type.	For labels, use a unique name that is not an action or variable name. Instead of using an action as a parameter, use a variable that calls the action in a line before.
WL2031	Unexpected character.	The line of text is not quite right because a character is extra or out of place.	Use the error message information to help determine which character is incorrect.
WL2032	Not enough parameter values.	The action is missing one or more parameters.	Check the specification for the action and add parameters to it.
WL2033	Could not open file; error.	A script file could not be opened, probably because the user does not have the correct permission for the file or its folder.	Verify read and write permissions for the file and its folder.
WL2034	File is too small.	A script file must contain at least three bytes so that the script editor can determine if it's Unicode, UTF-8, or ANSI	Use a different file that is larger.

Error Number	Error Message	Description	Fixing the Error
		text.	
WL2035	File encoding not supported: Unicode big endian.	Script files may be encoded as Unicode (little endian), ANSI, or UTF-8. Script files cannot be encoded as Unicode big endian.	Open the file in Notepad, select **File > Save As > Encoding**, and change it to something other than Unicode big endian.
WL2036	Could not write to file.	A script file could not be written, probably because the user does not have the correct permission for the file or its folder.	Verify read and write permissions for the file and its folder.
WL2037	Memory allocation failed.	There is not enough memory left for the program to run correctly.	Restart the computer.
WL2038	Too many nested calls.	An action has a parameter that is an action that has a parameter that is an action and so on, too many times.	Make one action call per line of text, assigning the return value to a variable. Use the variable as a parameter to another action. Do not use actions as parameters.
WL2039	Script error.	The script contains a generic problem.	Use the error message to help determine the cause of the problem. Try commenting-out or removing some lines of the script to isolate the problem.

Wavelink Contact Information

If you have comments or questions regarding this product, please contact Wavelink Customer Service.

E-mail Wavelink Customer Support at: CustomerService@wavelink.com

For customers within North America and Canada, call the Wavelink Technical Support line at 801-316-9000 (option 2) or 888-699-9283.

For international customers, call the international Wavelink Technical Support line at +800 9283 5465.

For Europe, Middle East, and Africa, hours are 9 AM - 5 PM GMT.

For all other customers, hours are 7 AM - 7 PM MST.