

## **Creating macros (custom commands)**

for Dragon NaturallySpeaking Preferred and Professional  
versions 11 & 12

This manual is intended for use as an aid to support face-to-face training. You might not be able to follow everything in this manual without additional training.

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## What is a macro?

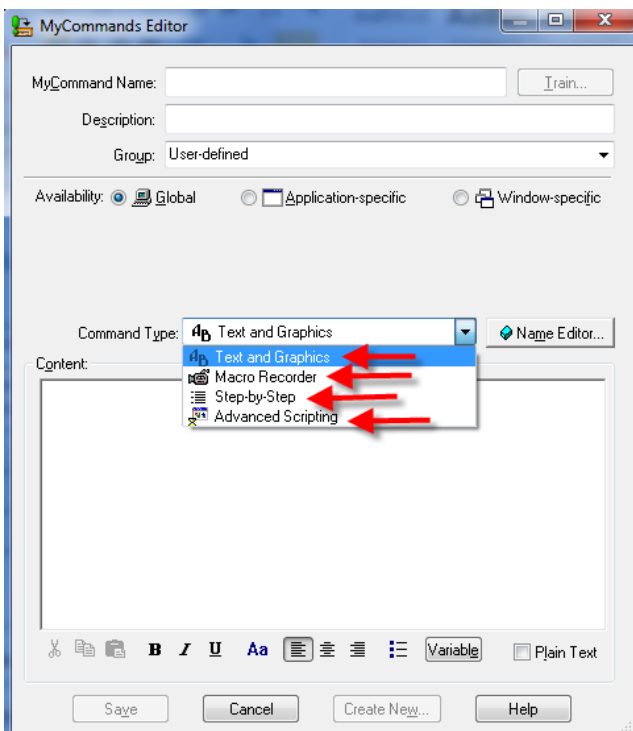
Macros are commands that you create yourself, as opposed to built-in commands that are provided with the software. The terms 'macro' and 'custom command' are used interchangeably.

Macros enable you to do more tasks by voice, and also to work more efficiently by voice.

## What kind of macro to use?

Choose among the four different kinds of macros in the command type drop-down list

What is the nature of the task?	Which macro type to use?
Type text (printing keys e.g. letters, numbers, symbols, punctuation etc )	Text macro A text macro can handle printing keys only.
Action keys (nonprinting keys e.g. Tab, Delete, Ctrl+S, Enter etc) or a combination of printing and action keys	Step-by-step or Advanced Scripting. These macro types can handle both printing and nonprinting keys.
Move the mouse and click	Show mouse position (this is the kind of Advanced Scripting macro), or Macro recorder
Deploy the system key combinations Alt+Tab, Ctrl+Esc	Advanced Scripting (use SendSystemKeys)



## Text macros — preferred and professional editions

1. Prepare the text in Microsoft Word or DragonPad
2. Select and copy the text (say “ Select all” then "copy that")
3. Say “ Add New Command ”
4. Name the macro
5. Availability — consider whether your macro should be global so it will work in any application, or application-specific, e.g. Microsoft Word or Outlook. If you choose application-specific, that application must be open when you create the macro.
6. To make a macro application-specific say “APPLICATION SPECIFIC” then "APPLICATION" and ensure the appropriate application is selected from the drop-down list (say “Drop List” then “MOVE DOWN 3” etc to navigate the list).
7. Say “Content” to move the cursor to that field, then “Paste That ”
8. Say “Plain text” if you want the font to adapt to surrounding font
9. Say "click save"

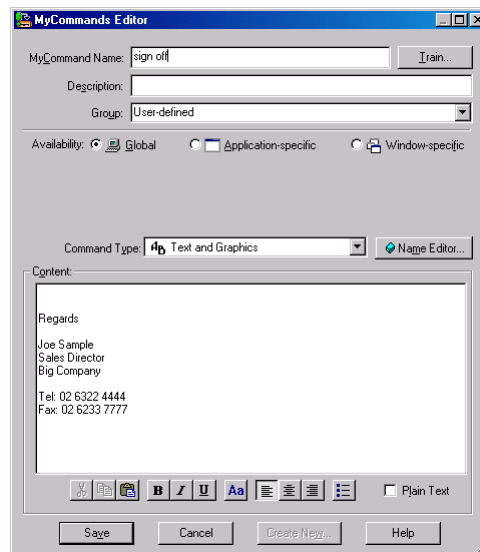
### Shortcut method using the command "make that a shortcut"

1. Prepare the text in Microsoft Word or DragonPad
2. Select the text (say eg "select all" or "select line" or "select paragraph")
3. Say "Make that a shortcut". The MyCommands Editor should appear with the text already copied in.
4. Name the macro
5. Availability — consider whether your macro should be global so it will work in any application, or application-specific, e.g. Microsoft Word or Outlook. If you choose application-specific, that application must be open when you create the macro.
6. To make a macro application-specific say “APPLICATION SPECIFIC” then "APPLICATION" and ensure the appropriate application is selected from the drop-down list (say “Drop List” then “MOVE DOWN 3” etc to navigate the list).
7. Say “Plain text” if you want the font to adapt to surrounding font
8. Say "click save"

Note: If the "make that a shortcut" command doesn't work in Microsoft Word, in Word 2003 go to Word Tools menu/options/ edit and uncheck 'smart cut and paste'. Close and reopen Microsoft Word. If the command still doesn't work after unchecking 'smart cut and paste', consider working in Dragon pad (say "Open Dragon pad").

### Example: create a signature block or “sign off”:

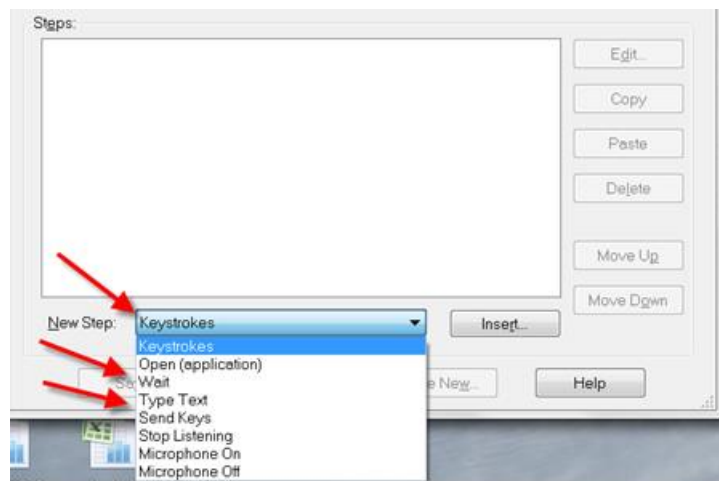
1. In a Word document, dictate the text for your macro e.g. name, title, section and Employer, tel no etc.
2. Say “select all” then “Copy that”
3. say "ADD NEW COMMAND" or go to Dragon bar / tools / add new command.
4. give your macro a name, eg "sign off". You can call the macro whatever you like. Choose a name that is easy for Dragon to recognise and easy for you to remember. It can be a good idea to use the same prefix for all your text macros for example “insert signature”, "insert finance paragraph". Avoid phrases you are likely to use in other circumstances.
5. Availability — consider whether your macro should be global or application-specific.
6. Say "content" to move the cursor to that field, then "paste that"
7. Say “CLICK SAVE”



8. Try your new macro in Word by saying “SIGN OFF”

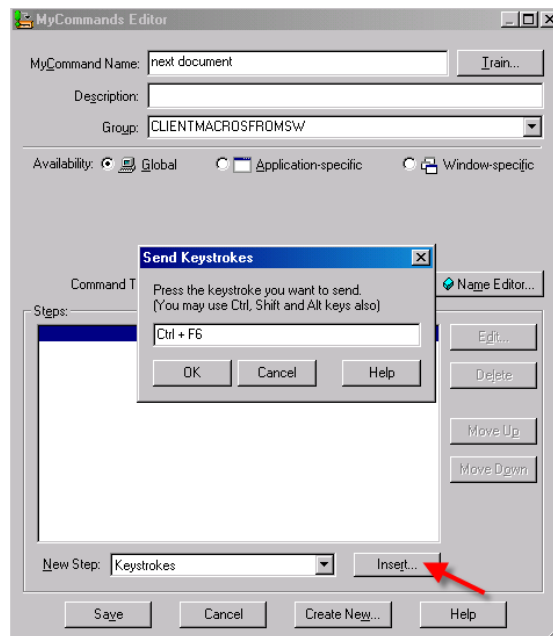
## Step by Step macros — professional edition only

1. Plot the steps you want the macro to do
2. Say “Add New Command”
3. Name the macro
4. Availability — consider whether your macro should be global so it will work in any application, or application-specific, e.g. Microsoft Word or Outlook. If you choose application-specific, that application must be open when you create the macro.
5. To make a macro application-specific say “APPLICATION SPECIFIC” then "APPLICATION" and ensure the appropriate application is selected from the drop-down list (say “Drop List” then “MOVE DOWN 3” etc to navigate the list).
6. Say “Command Type” then “ Move down 2” to choose " Step by Step " from the drop-down list
7. The *New Step* drop down list:
  - a. The default is ‘Keystrokes’, which should be used for non-printing keys, ie ‘action’ keys such as Enter, Delete, Tab etc, or for combinations of nonprinting in printing keys e.g. CTRL+S. ‘Keystrokes’ can also be used for typing 1 letter or number.
  - b. if you need Dragon to type more than one letter or number, select ‘Type Text’ from the *New Step* drop-down list.
  - c. Select ‘Wait’ if you need to slow the macro down to ensure that the macro doesn't run faster than the computer can keep up.
8. For each step, click Insert then press the keys by hand, then press Enter
9. Click Save
10. Don't forget to add the macro to your list of macros



**Example 1: create a “Next Document” macro. This macro will allow you to cycle through open Word or Excel documents by voice.**

1. Plot the steps. The keyboard shortcut is: Ctrl+F6
2. Say "ADD NEW COMMAND"
3. Name your macro “Next Document”.
4. Say “COMMAND TYPE” then “MOVE DOWN 2” to choose ‘Step by Step’ from the drop down list
5. Say "CLICK INSERT” to bring up the Send Keystrokes dialog, then turn the microphone off.



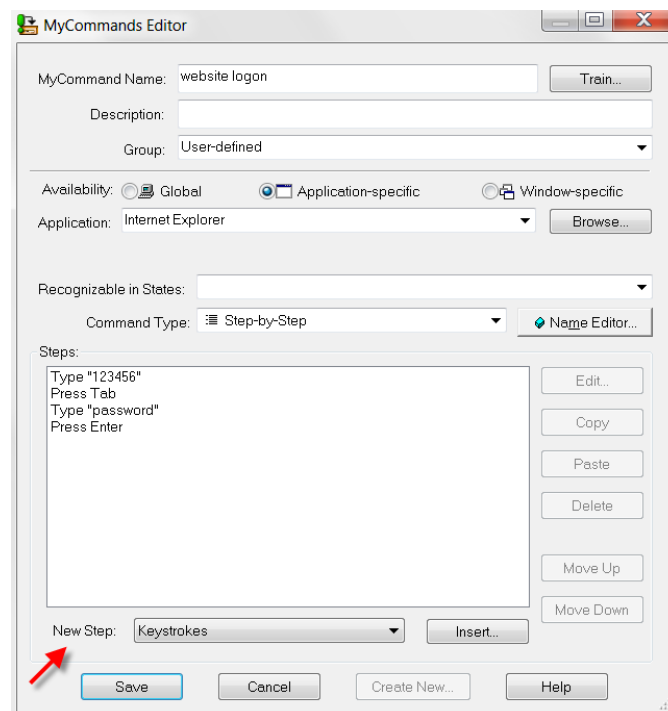
6. Type in the Ctrl and F6 keys together, by hand.
7. Press the Enter key by hand.
8. Turn the microphone on and say “Click Save”.
9. Try the macro in Microsoft Word or Excel by saying “Next Document” (assuming you have more than one document open).

## Example 2: Create a “Logon” macro, to log on to an application or website by voice

1. Plot the steps, eg User or account name > Tab > password > Enter
2. Say "ADD NEW COMMAND"
3. Name your macro eg “Website logon”
4. To make the macro application-specific say “APPLICATION SPECIFIC” then "APPLICATION" and ensure the appropriate application is selected from the drop-down list (say “Drop List” then “MOVE DOWN 3” etc to navigate the list). The application must be open, otherwise it will not appear in the list.
5. Say “COMMAND TYPE” then “MOVE DOWN 2” to choose ‘Step by Step’ from the drop down list
6. Say "New Step" then “Type T” to select 'Type text' from the *New Step* drop-down list.
7. Say “CLICK INSERT” to bring up the Send Keystrokes dialog. By hand, type in the first step. It might be your user ID, or account number > Say “OK”
8. Say "New Step" then “Type K” to select 'Keystrokes' from the *New Step* drop-down list
9. Say “CLICK INSERT” to bring up the *Send Keystrokes* dialog, then say “Press Tab”, then “OK”
10. Say "New Step" then “Type T” to select 'Type Text' from the *New Step* drop-down list. By hand, type in the third step, eg your password, then say “OK”
11. Say "New Step" then “Type K” to select 'Keystrokes' from the *New Step* drop-down list. Say “Press Tab”, then “OK”
12. Say “Click Save”

### Note:

There are obvious security implications associated with logging on to an application or website by voice. If you are concerned about security issues, you could create your macro using the first two steps only ie your user ID and Tab, then you could type your password by hand.





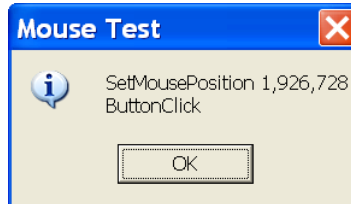
## Macros to move the mouse pointer and click — professional edition only

### Method 1: "Show Mouse Position" (recommended method)

To create Mouse Position macros you will need the "show Mouse Position" macro, available from Sue Woodward on request.

#### 1. Plot the pixel coordinates

- 1.1. Move the mouse pointer over the target
- 1.2. Say "Show Mouse Position"



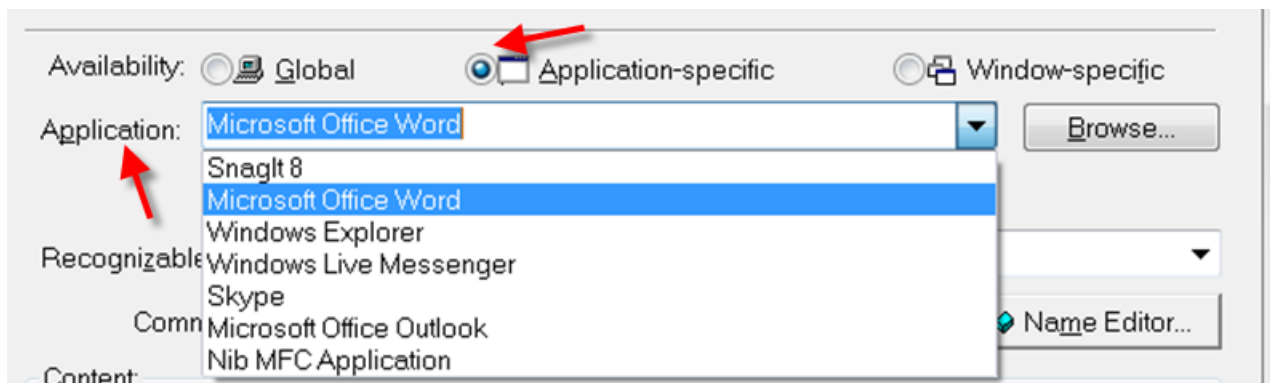
- 1.3. Say "OK" or "Press Enter"

#### 2. Open the MyCommands Editor to create the macro

- 2.1. Say "Add New Command" or go to Dragon bar/Tools/add new command
- 2.2. Give the macro a name

#### 3. Availability — decide whether the macro should be Global (default), or specific to a particular application

- 3.1. If you want the macro to work in more than one application, leave Availability as Global.
- 3.2. If you want the macro to be specific to a particular application, say "Application Specific". If the appropriate application does not appear in the list, say "Application" to select the drop down list, then "drop list" or "show choices". To navigate the list, say "move down 3" etc then "Press Enter". The application must be open at the time.



3.3. If you want the macro to be specific to a particular window in the application<sup>1</sup> (this is optional, and is not usually required), say "Window specific", and choose the appropriate window from the drop-down list.

#### 4. Choose 'Advanced Scripting' from the 'command type' drop-down list

4.1. Say "Command Type" then "Move down 3" to change the command type to Advanced Scripting.

#### 5. Paste the script

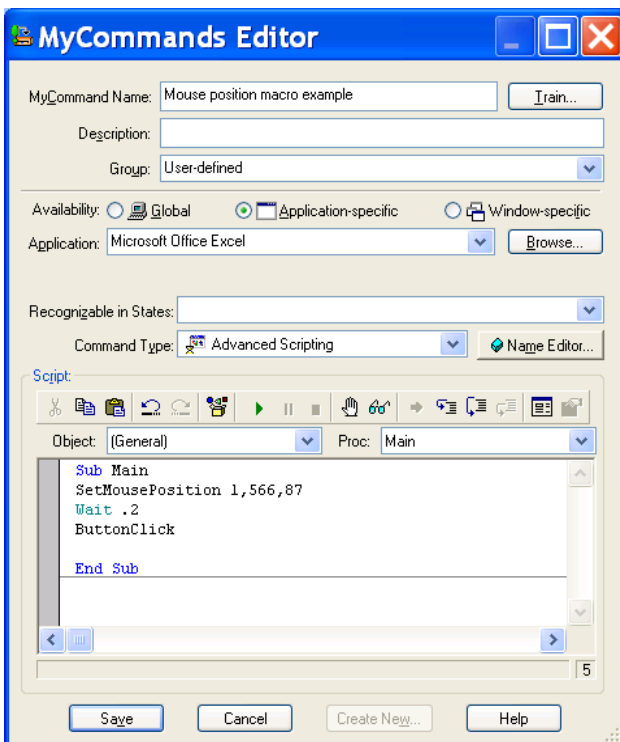
5.1. Say "Script", to move the cursor between Sub Main and End Sub, then "Paste That"

5.2. Add a Wait of .2 of a second between the two lines of script (ie type in 'Wait .2'). This will add a pause after moving the mouse pointer and before clicking, and will make the macro more reliable.

#### 6. Save the macro

6.1. Say "Click Save"

Your macro will look like this:



To create other kinds of clicks, replace the last line of script with:

#### For left double-click

ButtonClick 1,2

#### For right click

ButtonClick 2,1

---

<sup>1</sup> You might want to make a macro specific to a particular window so you can for example have two macros that do different things in different windows but have the same name.

## Method 2: Macro recorder

1. Say "add new command"
2. Name macro
3. Say "command type" and choose "macro recorder" from the drop-down list
4. Do the actions, mouse movements, clicks and or keystrokes
5. to stop recording, click the black square button on the Recorder toolbar (usually at bottom left of screen).
6. To return to the macro, click the X at top right of Recorder toolbar



To stop recording

7. Click Save

## Advanced scripting macros — professional edition only

1. Plot the steps you want the macro to do
2. It can be a good idea to create the script in Microsoft Word. Use the macro writing macros<sup>2</sup> below to create the script by voice
3. Say “ Select All” then “ Copy That ” to copy the script
4. Say “Add New Command ”
5. Name the macro
6. Say “Command Type” then “Move down 3” to choose ‘ Advanced Scripting ’ from the drop-down list
7. Say “Script” to move the cursor to that field, then "Paste That"
8. Click Save

Note: The quotes in Microsoft Word are different from those in the MyCommands Editor and will not be accepted there. If you use the macro writing macros you will get the correct quotation marks.

Use this script	To do this action
SendDragonKeys "text"	To type text
SendDragonKeys "{Ctrl+P}"	Use curly brackets for non-printing keys or combination of printing and nonprinting keys
HeardWord "go","to","sleep"	Use to refer to a command within a macro
Wait .5	Wait .5 of 1 second
SendSystemKeys "{Ctrl+Esc}"	Use for system key combinations Alt+Tab and Ctrl+Esc
AppBringUp "H:\Dragon Information"	Use to open a folder or document. For documents you will need to include the file extension.

### Macro writing macros

Use these macros to create the script by voice (these macros are available on request from Sue Woodward)

Say this	To write this script by voice
“Send Dragon keys”	SendDragonKeys "text"
“SendDragonKeys with brackets”	SendDragonKeys "{text}"
“Insert Wait point 2”	Wait .2
“Insert control plus”	Ctrl+
“Insert alt plus”	Alt+

---

<sup>2</sup> For unknown reasons these macro writing macros do not always work in the MyCommands Editor.

## How to write the keynames

Key	Script
ALT	{Alt}
BACKSPACE	{BackSpace}
BREAK	{Break}
CAPS LOCK	{CapsLock}
CENTER	{Center}
CONTROL	{Ctrl}
DEL	{Del}
DOWN ARROW	{Down}
END	{End}
ENTER	{Enter}
ESC	{Esc}
HELP	{F1}
HOME	{Home}
INS	{Ins}
PAUSE	{Pause}
PRINT SCREEN	{Prtsc}
RIGHT ARROW	{Right}
SCROLL LOCK	{ScrollLock}
SHIFT	{Shift}
SPACE	{Space}
SYS REQ	{SysReq}
TAB	{Tab}
MULTIPLE TABS	{Tab 5}
TAB BACKWARDS	{Shift+Tab}
UP ARROW	{Up}
F1, F2, F3,...F16	{F1}, {F2}, {F3},...{F16}
LEFT ARROW	{Left}
NUM LOCK	{NumLock} (extended keyboards only)
PAGE DOWN	{PgDn}
PAGE UP	{PgUp}

## Numeric keypad

```
{NumKey/}, {NumKey*}, {NumKey-}{NumKey+}  
{NumKey0},...{NumKey9}  
{NumKey.}, {NumKeyEnter}
```

(These codes are handled as if NUM LOCK were on)

### Example: create a "delete to end" macro (to delete text from cursor to end of line).

1. Copy the 3 lines of script below

```
SendDragonKeys "{Shift+end}" 'To select from cursor to end of line
```

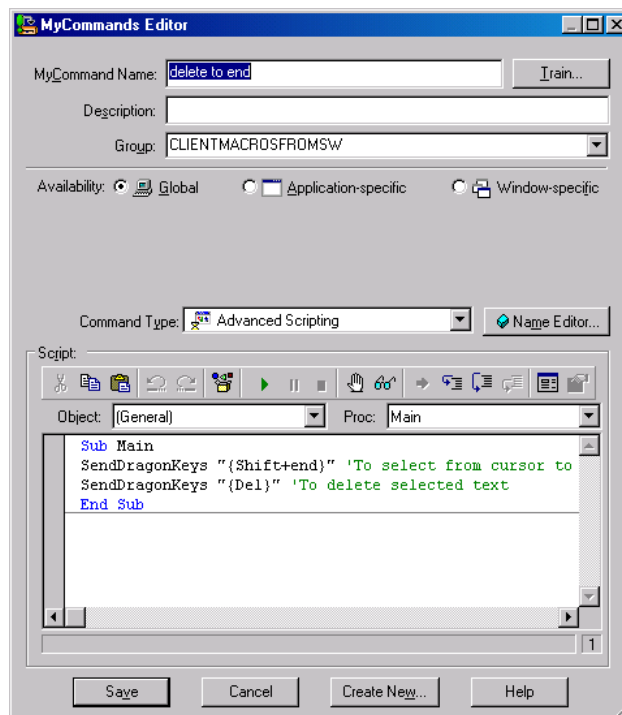
```
Wait .2 'wait .2 of 1 second
```

```
SendDragonKeys "{Del}" 'To delete selected text
```

2. Say "Add new command"
3. Say "Command type", then "move down three" to select Advanced Scripting from the drop-down list.
4. Say "Script" to position the cursor between Sub Main and End Sub.
5. Say "paste that"
6. Say "Save"

### Notes:

- You can add descriptive text after a single quotation mark without affecting the script. Descriptive text will appear in green.
- You can also add comments in the description field to remind you of what the macro does



### **Note on compact keyboards**

Say you want to write a macro using F11 key but your compact keyboard does not have an F11 key. You can use a symbolic or 'virtual' key stroke in your macro instead of a fixed, literal keystroke.

Instead of writing the function as:

```
SendDragonKeys "{F11}"
```

Write it as:

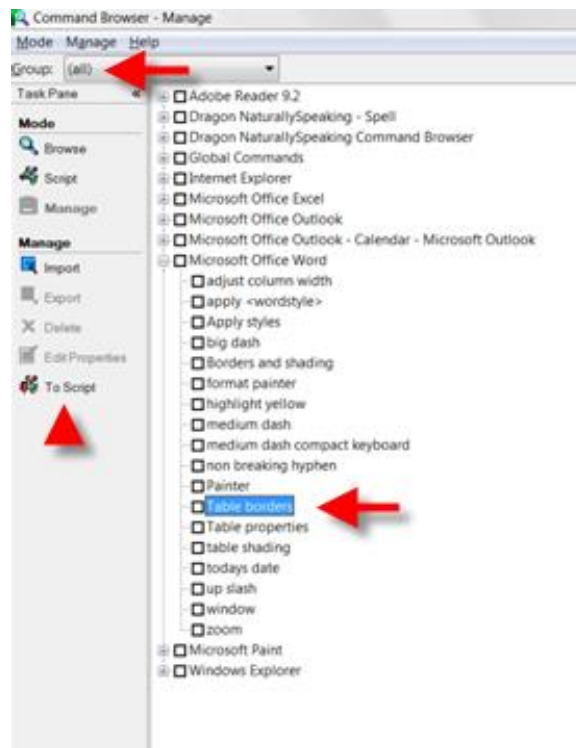
```
specialKey = "{F11}"
```

```
SendDragonKeys specialKey
```

## Command Browser

### To find a macro

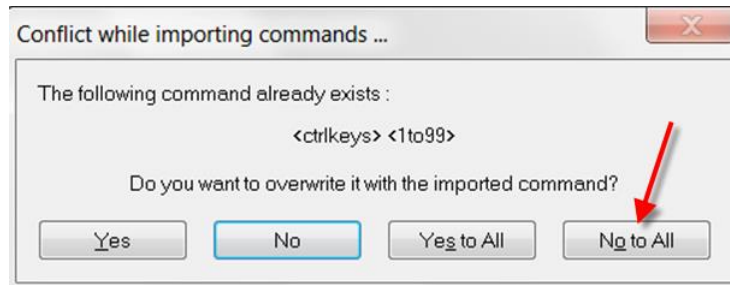
1. Say "Open the Command Browser" (V11) or "Bring up Command Browser" (Versions earlier than 11)
2. Say "Manage" then select 'All' from the *Group* drop down list (it is usually selected by default)
3. Say "Press Tab" to move into the list of macros, grouped by application.
4. Select the appropriate folder by saying e.g. "Global" or "Microsoft Word". That is, if your macro is a global macro select the 'Global' folder. If your macro is specific to Microsoft Word, select 'Microsoft Office word'. To navigate the list you can also say "move down 3" etc.
5. Expand the folder by saying "Move right"
6. Select the macro in the list (say eg "Type c" to move to the first macro in the list beginning with that letter, or "Move down 6" etc)
7. To open the macro for editing say "To script" then "Edit"; OR to copy macro say "To Script" then "New Copy"
8. If you get lost in Command Browser say "Manage"
9. If you make changes don't forget to say "Click save"





## To import macros

1. Say "Open the Command Browser" (V11) or "Bring up Command Browser" (Versions earlier than 11)
2. "Manage"> "Import" > Browse to the macro file (.dat file) and select it > "Open" > "Import"
3. A macro file has file extension '.dat', and could contain one or several macros
4. Dragon might warn that it will change the name of lists to avoid conflict with existing lists, click OK or Yes.
5. If you already have one or more of the macros that you are importing, Dragon will ask whether you want to overwrite existing commands with the imported macros. To avoid overwriting existing macros, click or say "No to all".



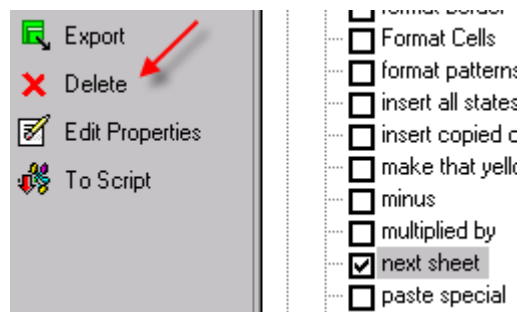
6. Close Command Browser by saying "Close window"

### Note:

If you receive a macro file as an e-mail attachment, don't try to open it *directly*. Instead, save it to a different location, for example your desktop, then follow the instructions above to import.

## To delete a macro

1. follow the instructions above to select the macro in the list
2. Say "Spacebar" to check the square to the left of the macro
3. Say "click delete"



## Troubleshooting — what to do if your macro doesn't work

Look at the results box to see whether Dragon is recognising your command but not executing it, or failing to recognise it. If Dragon interprets what you have said as a command the results box will be outlined in blue.

### For recognition problems

- Train your pronunciation of the command name. To do this, find the macro in Command Browser.
- Hold the Ctrl key down while you say the command. This should force Dragon to recognise what you have said as a command rather than text.
- Remember that macros are commands, and require a pause before and after saying the command name. Don't pause in the middle of the command name.
- Change the name of the Macro to something more easily recognised.

### Availability

- When *creating* application-specific commands the application needs to be open (though it doesn't need to be open when *modifying* an application-specific command)
- Try making the command global rather than application-specific.
- Are you trying to use an application-specific macro in the wrong application?

### Other

- Insert Waits or try a longer Wait. Slow the macro down so you can see at which point it is failing. You can reduce the Waits later.
- Go through the steps on the keyboard — make sure you have the steps right. If the steps don't work by hand on the keyboard they won't work by voice either.
- Are the keystroke steps always the same? The reliability of a macro depends on the steps always being the same.
- Try creating the macro in a different way, eg Step by Step instead of Advanced Scripting, or vice versa.

## Keyboard shortcuts

You will need a good knowledge of keyboard shortcuts to create step-by-step and Advanced Scripting macros.

### Microsoft shortcuts

<http://www.microsoft.com/enable/products/keyboard.aspx?v=t>

### Lotus Notes V8.5 shortcuts

Press CTRL+SHIFT+L for a list of available shortcuts; also see

[http://publib.boulder.ibm.com/infocenter/domhelp/v8r0/index.jsp?topic=/com.ibm.notes85.help.doc/acc\\_shortcuts\\_st\\_and\\_c.html](http://publib.boulder.ibm.com/infocenter/domhelp/v8r0/index.jsp?topic=/com.ibm.notes85.help.doc/acc_shortcuts_st_and_c.html)

HELP: search for “keyboard shortcuts”

Look in Pull-down menus

Refer to the lists of keyboard shortcuts provided in the course training materials.

## For more information and help with writing macros

There is no official Dragon macro manual.

The Dragon NaturallySpeaking manual:

- the Dragon 8 manual is useful only for simple macro writing (see Chapter 14)
- the Dragon 9 manual has no information on macros.

There is some information in Dragon HELP

### **Forums on the Internet**

**For links to speech recognition Internet forums, see**

<http://www.vivavocesrs.com/useful-links.html>

**Yahoo group 'natpro-wp8'** — macro writing group (very technical, mostly writing in Visual Basic):

<http://groups.yahoo.com/>

### **Other sources**

Larry V. Allen “**A Guide to Advanced Scripting for Dragon NaturallySpeaking 11**” (also covers V12), published by Softnet Systems, Inc. Available from: <http://www.knowbrainer.com/NewStore/pc/viewPrd.asp?idproduct=198>. This manual is quite technical, pitched at programmers who write macros using Visual Basic.