

**MachV**

**COLLABORATORS**

	<i>TITLE :</i> MachV		
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# Chapter 1

## MachV

### 1.1 MachV.guide

Documetation for MachV and SetMachV - Release 5.0 Version 37.9

October 22, 1994

Introduction  
SetMachV

Macros  
Windows  
Screens

Environment Variables

Clipboard Features  
Clock Features  
Mouse Features  
Miscellaneous Features

ARexx

Configurations

Appendices

Macro Functions  
Escape Characters  
Some Useful Macros  
Common Questions

Indices

Index  
Function Index

Copyright and Disclaimer

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## 1.2 MachV.guide/Introduction

### Introduction

\*\*\*\*\*

MachV is a multi-function utility program that provides many mouse enhancements as well as hotkeys for both shell and Workbench users. While there are other programs that do some of these, none provide the special functions or let you set up different settings for each window, screen or program. In fact, the real power of MachV is in its special functions. Macros can be written using these functions to do any mouse action from the keyboard, run programs at a desired time, or interface with ARexx.

A macro may have a gadget in the clock which will execute the macro when clicked on. The gadget's image may be created with an icon editing tool like IconEdit, or it may display the name of the macro.

Keystrokes and mouse movements may be recorded and played back at the touch of a key or the click of a gadget.

Macros may be split into multiple parts with each part functioning when its turn comes.

You can quickly view the contents of the clipboard. The contents may be pasted (even to windows that do not support the clipboard) or printed. Files may be loaded directly to the clipboard or saved from the clipboard.

SetMachV is a separate program that is used to change all options, edit macros and create alarms.

Both MachV and SetMachV require Workbench 2.04 or higher.

Both programs will use the users preferred language when run under Workbench 2.1 or higher.

See Preferred Language.

#### \*IMPORTANT\*

1. All hotkeys referred to in this documentation are included in the sample MachV.prefs file. In order to do the examples, MachV needs to load this settings file. You may change the hotkeys later.
2. MachV.020 has been optimized for the 68020 and 68030 processor chips. It will not run on a 68000 or 68010. MachV.020 available only to registered users.
3. Some later versions of amigaguide.library will not display a backslash (\) unless it is doubled (\\). If you are using a version that does this, you must use an editor to replace all backslashes with 2 backslashes.

Sample Hotkeys

Terms Used

---

String Matching  
Starting MachV  
Terminating MachV  
Preferred Language

### 1.3 MachV.guide/Sample Hotkeys

Sample Hotkeys  
=====

These hotkeys are in the MachV.prefs file included on the disk. They are required in order to perform the examples in this documentation.

`Left-Amiga-J'  
Window to front. ('J'ump to front)

`Right-Amiga-K'  
Window to back. ('K'ick back)

`Left-Amiga-N'  
Screen to front and activate window.

`Right-Amiga-M'  
Screen to back and activate window.

`Left-Amiga-ESC'  
Create a new shell.

`Alt-ESC'  
Start or stop macro recording.

`Ctrl-Alt-ESC'  
Start or stop named macro recording.

`Ctrl-Left-Amiga-ESC'  
Run SetMachV.

`Ctrl-Left-Amiga-B'  
Blank the screen.

`Ctrl-Left-Amiga-N'  
Execute a named macro.

`Ctrl-Left-Amiga-C'  
Toggle the clock on/off.

`Ctrl-Left-Amiga-V'  
View the clipboard.

`Ctrl-Left-Amiga-Q'  
Send a close gadget message.

`Alt-Help'  
"Quick Edit" a macro.

---

## 1.4 MachV.guide/Terms Used

### Terms Used

=====

All keys are enclosed in <>. <Ctrl>, <Ctrl-ESC>, <Alt-Shift-F1> etc.

- \* "Qualifiers" mean the keys <Ctrl>, <Shift>, <Alt>, <Left-Amiga> (C=), and <Right-Amiga>.
- \* "Hotkey" means any key pressed in combination with zero or more qualifiers. A hotkey has a macro attached.
- \* "Macro" is a quoted string of characters that are played back as keystrokes, special functions that are to perform some particular action, or a combination of these. A macro may be attached to a hotkey or to no key at all. A single key may have up to 32 macros attached to it, each with a unique qualifier combination. For example, <F1> may have a macro and so may <Ctrl-F1>, <Ctrl-Alt-F1>, <Shift-F1> etc.

A macro that is not attached to a hotkey is usually executed by its name, by clicking on its gadget in the clock window, or automatically executed at some specified time.

- \* "Macro Name" indicates a descriptive name for a macro. It may be up to 14 characters long. Named macros may be executed by their name. The name may also be used as its gadget text.

Some names have special significance. A macro named "Blank" will be executed when screen blanking would otherwise occur. "Unblank" will be executed if a "Blank" macro was executed and the screen should be unblanked.

A macro name "MachVQuit" will execute when MachV is terminated.

If you have multiple configurations, a macro whose name matches the configuration name will be executed when that configuration becomes active.

- \* "CLI and Shell" are used interchangeably. They mean the system window that you use to issue commands like: dir, info, list, copy, date etc.

## 1.5 MachV.guide/String Matching

In most cases when attempting to match title bar names, macro names or configuration titles, the case is insignificant. Also, if no wild cards are used, matching stops when the source string ends. For example:

```
workb matches Workbench
workb#? matches Workbench
workbench matches Workbench
work?e does not match Workbench (wild card used, full string must match)
```

Exact matches are required for certain macro names. These are:

Blank, Unblank, MachVQuit and the joystick directions: JoyUp, JoyUpRight, JoyRight, JoyDownRight, JoyDown, JoyDownLeft, JoyLeft, JoyUpLeft, JoyFire1, JoyFire2 and JoyFire3.

## 1.6 MachV.guide/Starting MachV

Starting MachV  
=====

You can start MachV by double clicking on its icon, by putting it in the WBStartup drawer, by entering in your s:User-Startup "Run >nil: <nil: MachV" or typing from the shell the same command.

You may follow the command with the settings file to load. For example:

```
Run >nil: <nil: MachV ENVARC:MachV/MachV.prefs
```

or

```
Run >nil: <nil: MachV Sample.prefs
```

The ">nil: <nil:" prevents the startup message which displays your registered named and serial number and allows the shell window to close.

In your s:User-Startup file you may use something like this after your path command:

```
Stack 10000
```

```
Run >nil: <nil: MachV
```

When you run MachV with no file name to load as a settings file, it automatically attempts to load MachV.prefs from the same directory that MachV was run from. Failing that, it tries to load:

```
ENVARC:MachV/MachV.prefs.
```

ENVARC: is the assigned named for sys:Prefs/Env-Archive. This is the directory that many programs save their preferences.

If MachV still cannot locate the file, it will use some default setting, but there WILL BE NO MACROS! Use SetMachV to load MachV.prefs using the menu selection Project/Open...

You may also specify where SetMachV is to be found. Use SETMACH= or

SM= followed by the full path and name.

```
Run MachV SETMACH=sys:utils/SetMachV
```

The settings file and the path for SetMachV may also be entered in the Tool Types gadget in the icon. Use:

```
SETTINGS=path/filename.prefs SETMACH=path/SetMachV
```

After MachV is running, the only obvious indication of the presence of MachV is the (optional) title bar clock. The real power of MachV is lying in the background waiting to assist you. Exactly what it can do will depend on your settings file.

In order to start a new shell with a current directory other than MachV's, enter in your s:shell-startup file the command "cd Work:" or whatever is the directory that you wish to be current.

\*Note:\*

You may put MachV in the WBStartup drawer, but do not put SetMachV there as it will be automatically run when you reset the computer.

## 1.7 MachV.guide/Terminating MachV

Terminating MachV

=====

There are several ways to remove MachV.

1. Activate the clock and press <Ctrl-C>.
2. Double click on its icon.
3. Type MachV in a shell.
4. Issue a "Break C" command.
5. Execute a MSC\_QUIT macro.

## 1.8 MachV.guide/Preferred Language

Preferred Language

=====

MachV and SetMachV can use languages other than English if run under AmigaDOS 2.1 or higher. The user selects his preferred language using the "Prefs/locale" program provided with 2.1. Then when MachV or SetMachV is run, gadget, menu and message text is in the selected language.

---

MachV opens a "catalog" named:

```
locale:catalogs/your_language/machv/machv.catalog
```

SetMachV opens:

```
locale:catalogs/your_language/machv/setmachv.catalog
```

PrintMacros opens:

```
locale:catalogs/your_language/machv/printmacros.catalog
```

These must be placed in the users preferred catalog directory. For example, for German users, the catalogs would be placed in the directory:

```
locale:catalogs/deutsch/machv
```

French users would place them in:

```
locale:catalogs/français/machv
```

The script CopyLanguages is provided to copy the catalogs to your Locale: directory.

Currently, these are the only languages supported. If you are interested in other languages, write to us.

## 1.9 MachV.guide/SetMachV

SetMachV

\*\*\*\*\*

The main window of SetMachV is where you do most of the work with macros. Macros may be created, modified, copied or appended in this window.

All other features are accessed through sub-windows "Clip Features", "Mouse Features", "Clock Features" and "Miscellaneous Features".

You may also create new or delete additional configurations with the list gadget and the "Add" and "Del" gadgets located in the upper left corner.

There are (at least) five ways to run SetMachV.

1. The easiest is to click the left button on the clock and then press the right button.
  2. Use the hotkey <Ctrl-Left-Amiga-ESC>, which has EXE\_SETMACH as its macro.
-

3. Type SetMachV in your shell window.
4. Double click on the SetMachV icon.
5. Execute an EXE\_CMD"SetMachV" macro.

Method 1 and 2 are preferred because MachV will signal SetMachV to move to the front immediately if it is already running, while EXE\_CMD"SetMachV" must load SetMachV from the disk.

See Macros, and see Functions in Macros for information on these macros.

\*NOTE\*

- \* MachV searches for a program named SetMachV in the path as it was set when MachV was first run. You may also specify the name and path on the command line or in the icon's Tool Types gadget with SETMACH=path/name.
- \* Do not put SetMachV in the WBStartup drawer as it will be automatically run when you reset the computer.

Using SetMachV  
SetMachV Gadgets  
Function Completion  
Loading MachV.prefs  
SetMachV Preferences  
Terminating SetMachV

## 1.10 MachV.guide/Using SetMachV

Using SetMachV  
=====

Changing The Current Hotkey  
Selecting By Name  
Modifying Macros  
Function Completion  
Copying and Appending  
Copying To a Named Macro  
Copying To Another Configuration  
Add Macro  
Del Macro  
Buffer Size  
SetMachV Help  
Flags  
Sorting Macros  
Printing Your Macros

---

## 1.11 MachV.guide/SetMachV Gadgets

### SetMachV Gadgets

=====

Some gadgets have a letter underlined. Pressing that letter will have the same effect as clicking on the gadget. Note that this will not happen if a string gadget is active.

Pressing <Return> will close the active window or quit SetMachV if the main window is active.

Pressing <up-arrow> and <down-arrow> has the same effect as clicking on the up and down gadgets located under the current hotkey text. These gadgets step you from one key to the next.

Pressing <Tab> will activate the first string gadget in the active window.

When the "Macro" string gadget is active, pressing <Tab> will move the cursor to the right edge. Repeated pressing will shift the text to the left. Pressing <Shift-Tab> has the opposite effect. This is useful when you have very long macros.

SetMachV also provides function name completion when you press <Alt-Tab> when the "Macro" string gadget is active.

See Function Completion.

## 1.12 MachV.guide/Changing the Current Hotkey

### Changing the Current Hotkey

=====

The current Hotkey is displayed in the text box just under the "Select Hotkey" gadget. The qualifiers needed for this hotkey will be highlighted below and to the left. The actual macro will be displayed both in the "Macros" list box and in the string gadget underneath. If more than one macro is attached to a particular key, they will also be displayed in the list box. The macro's name, if any, will be displayed in both the "Macro Names" list box and the string gadget underneath.

It is important to note that the two list boxes are independent. A macro name and its associated macro may not be the same horizontally if you use the scroll gadgets on the side. They will, however, be directly opposite each other after you select a macro or hotkey.

To modify or delete a macro, you first must make that macro the current one. The simplest way is to click on "Select Hotkey" and then when prompted by the

Select A Hotkey.  
Use Caps Lock For No Key.

Press ESC To Abort.

message, press the desired hotkey. (If you want to make a mouse button current, hold down your selected qualifier keys and click INSIDE the message box.)

If you have Clock Gadgets, you may also click on the desired clock gadget that you want to become current.

Because you can abort by pressing <ESC>, you cannot select <ESC> this way. If you want to select <ESC>, click on "Select Hotkey" and press <Ctrl-ESC> or <Shift-ESC> (for example) and then click on the qualifier gadgets until none are highlighted.

Also, because you rarely want a macro attached to the left mouse button and because it is easy to accidentally click it, you must select it in a similar manner as for <ESC>.

You may step through all the keys that have macros one by one with the up and down gadgets. These are located next to the <Shift> qualifier gadget. Only the keys that have macros attached will be displayed. You may also use the up and down arrow keys.

If the macro is in the list box, you may click on it or on its name. The macro will then be displayed in the string gadget and the qualifiers for the hotkey will be highlighted.

You may also click on the qualifier gadgets to make a hotkey current. If you select qualifiers that have no macro, the "Macro" string gadget will be empty, ready to accept a new macro.

If you have a non-standard keyboard, additional keys will display their hexadecimal keycode in the current hotkey gadget.

## 1.13 MachV.guide/Selecting by Name

Selecting by Name

=====

The "Macro Names" list box displays the (possibly) descriptive names for the macros.

If you want to display a macro by its name, click on "Select Named" and select or enter the name in the list gadget that will pop up. The string gadget may not be initially activated. You may activate it by clicking in it, or by pressing the <Tab> key.

You may also select a named macro by entering the name in the "Macro Names" string gadget and pressing <Shift-Return>. Pressing just <Return> will simply change the name of the current macro.

To display macros that are not attached to any key, click on "Select Hotkey" and then press <Caps Lock>.

---

## 1.14 MachV.guide/Modifying Macros

### Modifying Macros

=====

Once that you have made the desired macro current, you may modify or delete it, or copy or append it to another hotkey.

Click in the "Macro" string gadget or press <Tab> to activate it. Make your changes and press <Return>. Press <Right-Amiga-X> or click on "Del Macro" to delete it. Pressing <Tab> will move the cursor to the right edge of the gadget. Repeated pressing will shift the text left. Pressing <Shift-Tab> will move the cursor left. This is useful when editing long macros.

To enter the example (see Recording Macros), click on "Select Hotkey" and then press <Alt-D>. Now enter "dir df0:\N" (with the quotes!) in the "Macro" string gadget and press <Return>. That's it! "dir df0:<Return>" will be played back when you press <Alt-D>. If you recorded the previous example, the macro will already be there.

For "quick completion" of function names see Function Completion.

## 1.15 MachV.guide/Copying and Appending

### Copying and Appending

=====

"Copy" will copy a macro from one hotkey to another and "Append" will append a macro to another hotkey.

First make the hotkey that you want to copy or append from the current hotkey, then select "Copy" or "Append". When prompted by the flashing message, press the desired hotkey combination that you want to copy or append to.

See Copying to Another Configuration.

## 1.16 MachV.guide/Copying to a Named Macro

### Copying to a Named Macro

=====

To copy or append to an unkeyed named macro, proceed like a normal copy but press <Caps Lock> when prompted for a hotkey and then enter or select the name from the list gadget that will appear.

---

## 1.17 MachV.guide/Copying to Another Configuration

### Copying to Another Configuration

=====

Proceed like a normal copy but when the message is flashing, select the desired configuration by clicking on the "Next" or "Prev" gadgets. Do not use "Select Cfg". When the desired configuration is current, press the destination hotkey.

CAUTION!

Once the "Select A Hotkey." message is flashing, any key that you press will receive the macro...except <ESC>. Use this key to abort. You cannot copy to the <ESC> key.

## 1.18 MachV.guide/Add Macro

### Add Macro

=====

Selecting "Add Macro" will prompt you to select a new hotkey unless the "NO KEY" macros are currently being displayed. If they are, a new macro will be created. You may use <Caps Lock> to select a macro by name.

## 1.19 MachV.guide/Del Macro

### Del Macro

=====

Clicking on "Del Macro" will delete the current macro. This is the same as clicking in the current macro string gadget and pressing <Right-Amiga-X> and <Return>.

## 1.20 MachV.guide/Buffer Size

### Maximum Macro Size

=====

The default maximum macro size is 512 characters but this may be changed in the "Buffer Size" gadget. This controls the size of dynamic

---

buffers which are allocated only during macro recording or when SetMachV is running. The actual macros take up only as much space as they need plus a little bit of overhead. The maximum size allowed is 32,767 characters. If you try to enter too small a size, the minimum needed for your largest macro will be entered for you.

Note: If you are recording all mouse movements, you will need to set the buffer size considerably higher than 512.

Curiosity note: Why 512? Why not 500? 512 is one half of 1024 which is 1K. Programmers have a hard time switching from bits, bytes and Ks (among other things).

## 1.21 MachV.guide/SetMachV Help

Help  
====

Clicking on "Help" (or pressing <Help>) will open a window showing all the escaped characters and special functions that may be used in macros.

The functions will be displayed in lowercase unless you hold down the <Shift> key while clicking on "Help" or pressing <Help>.

Move through the pages of help by clicking on "Page" or pressing <P>. Move backwards by holding the <Shift> key.

## 1.22 MachV.guide/Flags

Flags  
=====

Macros may have seven flags attached to them that are selected from the "Flags" window. Click on "Flags" or press <F> to view or change these flags.

Write Protect

When checked, you cannot record over the existing macro. It may still be modified in SetMachV. It is a good idea to write protect macros like your NewShell macro and the macro that starts and stops recording.

Hex representation - 0x80

Disabled

When this flag is checked, the macro will not execute and the key will be passed through to other programs.

Hex representation - 0x40

---

### Temporary

A hotkey may be marked as temporary by checking this flag. When you save your settings file the name and flags will be saved but not the macro. If you commonly use particular keys for recording "scratch" macros, it may be a good idea to mark these as temporary.

Hex representation - 0x20

### Relative

When this is checked, all mouse moves will be relative to the active window. Mouse actions that select icons should probably be recorded to a macro that is marked as relative so that when playing back the macro it will not matter where you have placed the window containing the icons.

Hex representation - 0x10

### Clock Gadget

Selecting this flag will create a gadget for this macro if it has a name and if "Gadgets" is selected in the Clock Features window.

Hex representation - 0x08

### Non Recursive

If you do not want this macro to be recursive, this should be selected. You might want to do this if you want to intercept a key combination, perform some function and then pass on the key.

For example, if you wanted to send the clock to another screen when you press <Right-Amiga-Q>, set the "Non Recursive" flag for this macro:

```
CLK_TO_NEXT_SCREEN "\RQ"
```

Hex representation - 0x04

### Global

Macros in the first configuration with this flag set will be accessible from other configurations. This eliminates the need for duplicate macros.

Hex representation - 0x02

### Auto Execute

This macro will be executed based on the time supplied at the beginning of the macro. All EXE\_AUTO functions should have this flag set. This flag is automatically set when you create an EXE\_AUTO macro in SetMachV.

Hex representation - 0x01

### No Execute Message

When checked, the 'Executing Macro' message will not be displayed in the clock.

Hex representation - 0x100

---

The "Clear All" and "Set All" gadgets in the "Flags" window will clear or set the flags that are displayed for all macros in the current configuration. For example, you could check the "Write Protected" flag and then click on "Set All". All macros would then be protected.

These may also be set with the macro function:

```
MSC_SET_FLAGS"xx,name"
```

```
MSC_SET_FLAGS"40,StartStop"
```

Set the "Disabled" flag for the macro named 'StartStop'.

```
MSC_SET_FLAGS"80,#?"
```

Set the "Write Protect" flag on all macros. The #? is the AmigaDos wildcard for 'all'.

```
MSC_SET_FLAGS"40,NewShell,0"
```

Clear the "Disabled" flag for the macro named 'NewShell'. The '0' as the third argument indicates 'Clear'. A '1' is the default and indicates 'Set'.

At the bottom of the "Flags" window are two integer gadgets. You may position a clock gadget with these. They are disabled if the current macro does not have a gadget. See Quick Edit.

## 1.23 MachV.guide/Sorting Macros

Sorting Macros

=====

If a key has just a few macros, it probably doesn't need to be sorted. But if you have a large number of named macros, it is easier to locate them if they are sorted.

First make the hotkey current (or "NO KEY" for unkeyed macros), select "By Name" or "By Macro" and then click on "Do Sort".

## 1.24 MachV.guide/Printing Your Macros

Printing Your Macros

=====

If you find that it is getting difficult to remember all your macros, SetMachV provides the ability to print them in a table format.

Click on "Print Macros". A small window will appear with three gadgets. You can select to have the output sent to a window for viewing, sent to your printer, or sent to a file for later editing.

When the desired destination has been selected, click on "Go". If you have selected to have the output sent to a window, after each window full of macros have been displayed, press <Return> to continue. Press <Ctrl-C> or click on the close gadget to quit.

Just the current configuration will be printed. To print another configuration, make it active and then select "Print Macros".

"PrintMacros" is actually a separate program. SetMachV merely runs this program when you click on the gadget. PrintMacros must be in the current path or in the same directory as SetMachV. The source for PrintMacros is included as an example of interfacing with MachV.

## 1.25 MachV.guide/Function Completion

### Function Completion

=====

Function name completion is a quick way to enter function names in the macro string gadget. When entering a function, pressing <Alt-Tab> will complete the entry for you. If what you have entered is ambiguous, a window with possible completions is opened. You may then select the desired function by pressing the associated letter. You may also press <Return> or click on the close gadget to close the window.

Text entered will be in the same case as you entered. If you typed:

win\_to\_f<Alt-Tab>

win\_to\_front

will be entered. If you typed:

Msc\_C<Alt-Tab>

Msc\_Chg\_Dir

will be entered. If you typed:

MSC\_B<Alt-Tab>

MSC\_BLANK\_SCREEN

will be entered.

Functions that do not require the 3 letter prefix may also be completed using this method.

z<Alt-Tab>

expands to:

zoom\_window

## 1.26 MachV.guide/Loading MachV.prefs

Loading MachV.prefs

=====

MachV.prefs is a text file that contains all your settings and macros. It is loaded when MachV is first run. If MachV is unable to find the file, you can load it using SetMachV. Run MachV and then running SetMachV, use the Project/Open... menu selection and pick the MachV.prefs file from the file requester.

See Starting MachV.

## 1.27 MachV.guide/SetMachV Preferences

SetMachV Preferences

=====

SetMachV may open its main window on the Workbench screen or on a custom interlaced or non-interlaced screen. If desired, the custom screen may scroll up from the bottom. The screen's title bar may be made accessible by selecting "Preferences/Screen Options/Title Bar" from the menu.

The changes will take affect immediately. If you want it to always open the way that you have selected, save from the "Project/Save As..." or "Project/Save" menu items. This saves all changes, macros, options etc.

## 1.28 MachV.guide/Terminating SetMachV

Terminating SetMachV

=====

You may quit SetMachV in several ways. Simply press <Return> while SetMachV's main window is active, click on the close gadget, select "Project/Quit" from the menu or press <Right-Amiga-Q>. These all accomplish the same thing - shut down SetMachV.

You may also select "Project/Hide" from the menu or press <Right-Amiga-H>. This will close the SetMachV screen or window but will leave SetMachV in memory waiting for you to run SetMachV again.

---

## 1.29 MachV.guide/Macros

Macros

\*\*\*\*\*

The real power of MachV is its macro ability. A macro may simply be keystrokes or mouse movements that can be played back. But they can also perform many window and screen functions, bring up a list of windows or screens, display the clipboard and execute other programs. Macros may pause for input, execute ARexx programs, send environment variables as keystrokes and display alarms.

- Recording Macros
- Correcting Mistakes
- Executing Macros
- Aborting Execution
- Clearing a Macro
- Accidents Happen!
- Recording Mouse Button Clicks
- Recording All Moves
- Recording Menu and Gadget Selections
- Notes On Recording
- Using Escaped Characters
- Functions in Macros
- Function Arguments
- Multi-Function Macros
- Pausing
- Comments
- Quick Edit
- Auto Executing Macro
- Executing Programs

## 1.30 MachV.guide/Recording Macros

Recording Macros

=====

One of the more important functions is MAC\_RECORD\_KEYED. This is the function that starts or stops a recording session. In the sample MachV.prefs file, this is attached to the key combination <Alt-ESC>. By pressing this, and then pressing the key combination that you want for the hotkey, you begin a recording session. Press any keys or mouse buttons that you want recorded and then press <Alt-ESC> again. The macro is now ready to be played back.

A practice session may help you to understand. To do this, you must be in a Shell window. You also need a MAC\_RECORD\_KEYED macro already setup and attached to <Alt-ESC>. You should have this already if MachV loaded the sample MachV.prefs file.

Press <Alt-ESC>            You will hear a beep and the clock will  
display the message "Select Hotkey..."

Press <Alt-D>            The clock will display "Recording Macro..."

Now type <dir df0:> without the <> and press <Return>.

The directory of the disk in df0: will be displayed.

Now press <Alt-ESC> again to end recording.

You may now press <Alt-D> and your recorded keystrokes will be played back.

You will hear a short beep for each keystroke and mouse button entered during recording.

Besides having text in macros, you may include any special key by preceding a letter with a backslash. These are called escape characters. Some examples:

\F1 is Function key 1

\E is the ESC key

\5 is numeric key pad 5

These will be entered for you during recording. You can see all of them by pressing "Help" in SetMachV. The above macro will actually be recorded as "dir df0:\N".

This macro may be viewed with SetMachV by clicking on "Select Hotkey" and then pressing <Alt-D>. The macro should be in the top of the Macro list box and in the string gadget underneath. You may edit it if you like or delete all the characters to free the hotkey.

Notice that while you did not type the quotes, they appeared in the macro in SetMachV. All text that you want played back as keystrokes must be enclosed in quotes.

You may also "Quick Edit" the macro by pressing <Alt-Help> and then <Alt-D> when the QuickEdit window appears. Press <Return> or click on the close gadget to close the edit window.

See Quick Edit.

#### REMEMBER

All keystrokes in a macro must be enclosed in double quotes. If you need to enter double quotes within the macro, you must precede them with a backslash. Example:

"This is a macro with a \" in it."

Also note:

Some editors or word processors may not seem to accept played back keystrokes immediately. This can usually be corrected by setting the "Playback Priority" to 0 or to whatever the priority of the application

---



the macro.

### 1.33 MachV.guide/Correcting Mistakes

Correcting Mistakes

=====

If you are recording a macro and you press <Backspace> to correct a typing error, the error and the backspace will be recorded. You may use <Ctrl-H> to correct a keystroke without recording the mistake or the backspace. A notable exception to this is gnuemacs which uses <Ctrl-H> for online help. This is not a real problem though, because gnuemacs has good macro recording built in.

Notes:

1. This works only with programs that accept <Ctrl-H> as a backspace.
2. If you press any non-printable key that you wish to erase, <Ctrl-H> will delete it from the buffer, but it cannot undo whatever action that key performed.
3. Because of this feature, you cannot record <Ctrl-H>. If you need to, you may enter it as \Ch in the macro from SetMachV.

### 1.34 MachV.guide/Clearing a Macro

Clearing a Macro

=====

To clear a macro, that is, to free it from a hotkey, press <Alt-ESC>, then the hotkey, then <Alt-ESC> again. This records no keystrokes which means that the macro is empty and the hotkey is free.

You may also clear macros using SetMachV or Quick Edit.

See Quick Edit.

### 1.35 MachV.guide/Accidents Happen!

Accidents Happen!

=====

If you should accidentally press the <Alt-ESC> hotkey, the clock will display "Select A Hotkey...". Simply press <Alt-ESC> again. No harm done! You may also press <ESC> which aborts a macro.

---

If you accidentally press <Alt-ESC> and then more keys, the first key pressed after <Alt-ESC> will become a hotkey with the following keys the macro. You can press <Alt-ESC> again to stop recording (you cannot simply press <ESC> since MachV must allow you the ability to record that key). Then press <Alt-ESC> (to start recording), then the "accidental" hotkey, then <Alt-ESC> again to stop recording.

Now you may not even remember what key you pressed that became the hotkey. Then the easiest thing to do is run SetMachV and step through each hotkey.

## 1.36 MachV.guide/Recording Mouse Button Clicks

### Recording Mouse Button Clicks

=====

Mouse button clicks may be recorded, or entered manually in the "Macro" string gadget. When recording a button click, MachV records the mouse position, which button it was and whether it was pressed or released. For example:

```
XY"155,075" LBD
```

(Note that recorded MOU\_ and PAU\_ functions are optimized to not record the 3 letter prefix.)

When played back, the mouse will be moved to x = 155, y = 75 and a left button down will be sent.

A SECONDS"nn" will be inserted for every nn seconds delay between clicks. This will allow for menus to drop or requesters and windows to open. You may adjust or delete them from your macro if desired. Values with tenths such as SECONDS".4" or SECONDS"1.6" are allowed.

If you record just the left button, you might see something like this:

```
XY"155,075" LBD SECONDS"1" LBU
```

unless you moved the mouse between pressing and releasing the mouse button, in which case the new x and y values would be entered before the LBU.

Mouse coordinates are relative to the left and top edge of the screen. For coordinates relative to the left and top edge of a window, set the "Relative Moves" flag in the Flags window. See Flags. This flag must be set prior to the recording of mouse movements.

## 1.37 MachV.guide/Recording All Moves

### Recording All Moves

=====

If you need all mouse movements recorded, for a painting demonstration for example, you need to set the Playback Delay value in Mouse Features somewhere between 1-99. These represent delays of 50ths of a second between moves. 1 = 1/50, 2 = 2/50 etc. This is needed during playback by many programs or the movements may come too quickly.

Note that this value must be set to some positive number both BEFORE recording and during playback. During playback, you may get acceptable (although fast) results by setting "Play Delay" and "Playback Priority" to 0.

During recording, the clock message should show "Recording Macro...ALL".

Recording all moves requires MUCH more memory than you would normally need. Use it only if you need to. You may need to increase the recording buffer. See Buffer Size.

## 1.38 MachV.guide/Recording Menu and Gadget Selections

### Recording Menu and Gadget Selections

=====

When a menu item has a subitem it may be necessary to bring the mouse down to the menu item, click the left button on it, then move the mouse over the subitem and click the left button or release the right button.

Sometimes gadgets will not respond to a quick button down/up. It may require pausing between the down and up. See Pausing.

Do not use a pause larger than one second after the right button is pressed for a menu selection. The macro may stop executing.

For a better method, see Sending IDCMP Messages directly to a program with the functions:

See WIN\_SEND\_MENU.

See WIN\_SEND\_GADGET\_DOWN.

See WIN\_SEND\_GADGET\_UP.

See WIN\_SEND\_CLOSE.

## 1.39 MachV.guide/Notes On Recording

## Notes On Recording

=====

The mouse will be moved to the same position as when recorded which may or may not be over the desired gadget or icon. See Flags, for relative movements.

If you are pressing a qualifier such as <Shift>, it (the \S) will be placed before a XY"xxx,yyy" and will affect the mouse movement and the first click. For example, the left button down will have the <Shift> qualifier attached with this macro:

```
"\S" XY"330,122" LBD
```

Do not depend on the SunMouse to activate a window during play back. When recording, click in the window to activate it, even if it is activated by the SunMouse.

If you have "Mouse To Menu" selected, you also must press and release the left button after the mouse is over the desired menu.

## 1.40 MachV.guide/Using Escaped Characters

## Using Escaped Characters

=====

All non-printable keys are preceded by a backslash "\". For example, \B is the Backspace key, \H is the help key and \F3 is function key 3.

These qualifiers modify the key or mouse activity immediately following them:

```
\C Control.
\S <Shift> (Left Shift played back).
\A Alternate (Left Alt played back).
\L Left-Amiga (C=).
\R Right-Amiga.
```

```
"\Cc\u\A\S\l"
```

This plays back the key combinations:

```
Ctrl-C Up-Arrow Alt-Shift-Left-Arrow
```

You do not need \S or \A before any character that is printable. For example <Alt-E> displays the copyright symbol ©. You can press <Alt-E> instead of entering \Ae.

Note that all escape characters must be used in the case as shown.

Also, the backslash itself and double quote marks must be preceded by a backslash. For example:

"A backslash \"

"A double quote \"

When a character is also on the numeric keypad, that key is the one that is sent when played back. This can cause problems if you have a macro attached to the keypad key. For example, suppose you have a macro:

```
"/* */\1\1\1"
```

This will send the keypad key for '\*' since on the standard portion of the keyboard the '\*' is on a shifted key (<Shift-8>). To play this back not using the keypad, you would need to use the following:

```
"/\S8 \S8/\1\1\1"
```

or

```
"/\S* \S*/\1\1\1"
```

On the American keyboard, the following keys are affected: (, ), \*, and +.

## 1.41 MachV.guide/Functions in Macros

Functions in Macros

=====

All special functions have the same basic format - they all begin with an (usually) optional three letter category code followed by an underscore, followed by the function. Examples:

```
SCR_WB_TO_FRONT          Send the Workbench screen to the front.
```

```
WIN_FRONT_TO_BACK       Send the front window to the back.
```

The functions:

```
Win_Back_To_Front      Clk_To_Front
Scr_Back_To_Front      Win_To_Front
                        Scr_To_Front
Win_Front_To_Back
Scr_Front_To_Back
```

are ambiguous without the prefix. Be sure to use the prefix in these cases.

Functions are not case sensitive: CLP\_VIEW, Clp\_View and clp\_view are all acceptable. Without the prefix, you can use VIEW or View or view.

Some functions require function arguments which follow the function and are enclosed in double quotes. Examples:

```
EXE_CMD"NewShell"       Create a new shell.
```

```
WIN_ACTIVATE"Workbench"   Activate the Workbench window.
```

In order to tell whether or not a quoted string is an argument or keystrokes, spaces are not allowed between the function and its arguments.

```
WIN_ACTIVATE"NewShell"    is okay but
```

```
WIN_ACTIVATE "NewShell"   is not.
```

See Function Arguments.

Functions cannot be recorded, they must be entered using SetMachV. The two exceptions are mouse functions and PAU\_SECONDS. These are recorded when needed.

The functions are described in their individual sections. See Windows, see Screens.

## 1.42 MachV.guide/Function Arguments

Function Arguments

=====

Many functions accept one or more arguments that are often optional. For many WIN\_ functions the first argument specifies which window to apply the function to.

All window functions operate on the window as selected in this manner:

Top window

```
WIN_function"T" WIN_function"T,arg2,arg3,..."
```

Active window -

```
WIN_function"A" WIN_function"A,arg2,arg3,..."
```

Under mouse window -

```
WIN_function"M" WIN_function"M,arg2,arg3,..."
```

Titled window -

```
WIN_function"title" WIN_function"title,arg2,arg3,..."
```

There is only the remote possibility of a conflict if you must specify a window whose title is one of these single characters. In these cases you could use:

```
WIN_function"(A)"      WIN_function"(M)"      WIN_function"(T)"
```

Titles may also include AmigaDos wild cards or environment variables. See Window Titles, and see Environment Variables.

When using "title", you may precede the title with the '\$' symbol to indicate a window based on the name of the program that owns it.

Example:

```
WIN_ACTIVATE"$program".
```

This MUST be the first character. It cannot be used together with wildcards.

Use the "Select Title" in SetMachV to determine the correct title to use. Use the list only to browse through the titles - selecting one will set it as your configuration title.

As in quoted text, if you need a backslash \ or double quote ", you must precede it with a backslash. In argument strings, commas are argument separators. You must also precede them with a backslash if they are not intended to separate arguments.

This is most frequently encountered in EXE\_CMD functions. As an example, you should use:

```
EXE_CMD"echo > speak: \"time for lunch\", now!\""
```

## 1.43 MachV.guide/Multi-Function Macros

Multi-Function Macros

=====

A vertical bar "|" is used to separate a macro into sections. Each section will be executed in turn. For example, when this macro is executed the first time,

```
WIN_SEND_MENU",Icon" | WIN_SEND_MENU",Name" |
WIN_SEND_MENU",Date" | WIN_SEND_MENU",Size"
```

the menu selection with the text "Icon" will be sent to the active window. The next time, the "Name" selection will be sent, and so on.

This macro can be useful - it alternately sends ctrl-s and ctrl-q which can start and stop output to the shell or in a term program.

```
"\Cs" | "\Cq"
```

You may use one hotkey to alternate between two functions:

```
SET_MOUSE_PORT"0" | SET_MOUSE_PORT"1"
```

You are not limited to one function in each section, you could do this:

```
SET_MOUSE_PORT"0" CLK_CUSTOM_MSG"Port 0" | SET_MOUSE_PORT"1"
CLK_CUSTOM_MSG"Port 1"
```

A hotkey could toggle the size of a window with this:

```
WIN_SIZE"100,10" | WIN_SIZE"640,200"
```

## 1.44 MachV.guide/Pausing

Pausing Within A Macro

=====

Sometimes it is necessary to pause during macro execution. There are three types of pauses; pause for 0.1 - 99.9 seconds, pause for fixed length input, and pause for variable length input. Examples:

PAU\_SECONDS"1"

Pause for one second.

PAU\_SECONDS".3"

Pause for .3 seconds.

PAU\_SECONDS"2.5"

Pause for 2.5 seconds.

PAU\_FIX\_INPUT"5"

Pause for five keystrokes.

PAU\_VAR\_INPUT

Pause for a variable number of keystrokes. Terminate input with the <ESC>. To abort the macro during input, press <Ctrl-ESC>.

PAU\_VAR\_INPUT"44"

Pause for a variable number of keystrokes. The argument "44" is optional. When supplied, it becomes the terminate keycode used to end input. In this case, 44 is <Return>. The default key is 45, <ESC>. To abort the during input, press <Ctrl-TerminateKey> (<Ctrl-ESC> unless you used the optional argument).

The pause for input functions may be useful in data entry macros where the macro performs some functions, waits for some user input, and then continues with more functions. The macro may even call itself over and over. The number of times is limited by the variable machv\_recursion\_depth.

See Environment Variables.

An easy way to setup such a macro would be to record a complete data entry loop, and then, using SetMachV, enter the pause in the appropriate place.

A data entry macro might look like this:

```
MOU_XY"150,40" MOU_LBD MOU_LBU PAU_VAR_INPUT MOU_XY"460,23" MOU_LBD
MOU_LBU "\F1"
```

With this attached to the <F1> key (for example), the mouse would click at 150,40 (possibly a string gadget), wait for a variable number of keystrokes followed by <ESC>, click at 460,23 (which might be a "Next" gadget), and then execute <F1> which would then cause it to

repeat.

Environment variables can be set with the PAU\_FIX\_INPUT and PAU\_VAR\_INPUT functions. See Environment Variables.

## 1.45 MachV.guide/Comments

Comments  
=====

For the purpose of identifying portions of your macro or for adding comments, any text may be inserted between /\* \*/.

```
XY"167,134" /* move to open gadget. */ LBD LBU /* click on OPEN */
```

## 1.46 MachV.guide/Quick Edit

Quick Edit  
=====

You can quickly edit a macro by executing the MAC\_QUICK\_EDIT function. This is <Alt-Help> in the sample MachV.prefs file. You may press any hotkey while the Quick Edit window is active and its macro will be displayed.

If you have gadgets in the clock, you may click on the gadget to make its macro display in the Quick Edit window. In addition, the QuickEdit window expands to display two XY position string gadgets. You may move a gadget by entering its coordinates here.

While the Quick Edit window is active, all hotkeys pressed will display their macro in the edit string gadget. If the window is not active, hotkeys will function normally.

If the string gadget IS active, pressing:

1. A hotkey will display the macro for that hotkey.
2. <Return> will cause MachV to accept the macro.
3. <Tab> will move the cursor to the right edge of the gadget. Repeated pressing will shift the text left.
4. <Shift-Tab> will move the cursor left.

If the string gadget is NOT active, pressing:

1. <Tab> will activate it.
  2. <Return> will close the Quick Edit window.
-

3. A hotkey will display that hotkey's macro.
4. The underlined letter on the Save gadget will save and close.
5. Any other key will create a new empty macro attached to that key combination.

You may save your changes by clicking on "Save". This does the same thing as running SetMachV and saving. Note that you only need to save to make your changes permanent.

If an ARexx macro is executed while this window is open, the macro will be displayed in the string gadget.

## 1.47 MachV.guide/Auto Executing Macro

### Auto Executing Macro

=====

Macros may be automatically execution in several ways. Some use the EXE\_AUTO function and some execute based on the name of the macro.

In many cases you may find the Clock Alarms in the Clock Features window in SetMachV easier to use.

The general forms are:

EXE_AUTO"hh:mm"	Execute at a specific time (every day).
EXE_AUTO"hh:mm,mm-dd-yy"	Execute at a specific time and date.
EXE_AUTO"hh:mm,Day,Day,..."	Execute at a specific time and day.
EXE_AUTO"+n"	Execute every "n" minutes.

The arguments of this macro are optional, but when supplied indicate the time and possibly the date or day that you wish the macro to execute. Normal AmigaDos wild cards are allowed. The "+n" form indicates that the macro should execute every "n" minutes.

Time must be in 24 hour format.

The "Auto Execute" flag in the "Flags" window must be set. This is done automatically when you enter an Exe\_Auto macro but you may set it yourself.

Examples:

```
EXE_AUTO"09:30"
    Execute at 9:30 am. (Note the leading 0)
```

```
EXE_AUTO"14:45"
    Execute at 2:45 pm. (Use 24 hour time)
```

```
EXE_AUTO"?:15"
```

Execute every 15 minutes past the hour.

```
EXE_AUTO"+5"
```

Execute every 5 minutes.

```
EXE_AUTO"08:45,07-22-94"
```

Execute at 8:45 am on July 22, 1994.

```
EXE_AUTO"19:00,?-10-?"
```

Execute at 7:00 pm on the 10th of the month.

```
EXE_AUTO"19:00,04-1(1|2|3)-94"
```

Execute at 7:00 pm on 04-11-94 and 04-12-94 and 04-13-94.

```
EXE_AUTO"11:00,Mon,Sat"
```

Execute at 11:00 am every Monday and Saturday.

```
EXE_AUTO"12:00,Mon"
```

Execute at 12:00 noon every Monday.

```
EXE_AUTO""
```

Execute when MachV is first run.

This function is used in combination with other functions. For example:

```
EXE_AUTO"?:15" MSC_BEEP
```

Will beep every 15 minutes past the hour.

```
EXE_AUTO"+15" MSC_BEEP
```

Will beep every 15 minutes.

A popular combination of macros is this:

```
EXE_AUTO"?:15" MSC_BEEP
```

```
EXE_AUTO"?:30" MSC_BEEP PAU_SECONDS".5" MSC_BEEP
```

```
EXE_AUTO"?:45" MSC_BEEP PAU_SECONDS".5" MSC_BEEP PAU_SECONDS".5"
MSC_BEEP
```

```
EXE_AUTO"?:00" MSC_BEEP PAU_SECONDS".5" MSC_BEEP PAU_SECONDS"1"
MSC_BEEP PAU_SECONDS".5" MSC_BEEP
```

These will beep once at 15 after, twice on the half hour, three times at three quarters after, and four times on the hour. These are 4 separate macros and may of course, be unkeyed.

If days are specified, they may be just long enough to match the day that is displayed in the clock. That is, 'Tuesday', 'Tues', or even 'tu' will match Tuesday. Ranges are not supported. You must enter each day.

To make EXE\_AUTO macros in the first configuration execute when other

configurations are active, check the macro's "Global" flag in the "Flags" window.

To enter these as unkeyed macros, click on "Select Hotkey" and press <Caps Lock> when prompted. The current hotkey gadget should now show "NO KEY" and all the qualifier gadgets should be disabled.

Now click on "Add Macro". The string gadget under the "Macros" list box should be activated. Enter the first macro and press <Return>. The macro should now be displayed in both the string gadget and in the list box.

Click on "Add Macro" again and repeat these steps for the other three macros.

Note: EXE\_AUTO macros attached to "NO KEY" in the first configuration of multiple configuration setups will always get executed, even if that configuration is not the current one. You need not duplicate auto executing macros in all your configurations.

## 1.48 MachV.guide/Executing Programs

### Executing Programs

=====

Many programs can be run from a hotkey by simply putting

```
EXE_CMD"program"
```

in a macro. For example, EXE\_CMD"run myapp" would run a program named myapp. Usually, you would want to use "Run" in your command string to keep from suspending MachV during the application's execution.

The macro attached to <Left-Amiga-ESC> that opens a new shell is an example of this kind of function.

```
SCR_WB_TO_FRONT EXE_CMD"NewShell \"con:0/0/640/100/NewShell\""
```

This macro first brings the Workbench screen to the front and then executes the NewShell program. Note that the double quotes within double quotes must be preceded by a backslash.

If you need a comma in the quoted string, use \, otherwise it will be treated as an argument separator.

If the program run returns an error code, that will be displayed in the clock. If the program set a DOS error code the error message will also be displayed. If Debug is on, SetMachV will be run.

#### Avoid Re-Running Programs:

You may follow the command with a window or screen title. If that window or screen is found, it will be brought to the front. If it is not found, the command will be executed. For example:

```
EXE_CMD"Run >nil: FinalCopy,Final Copy"
```

If the screen titled "Final Copy" is found, it will be brought to the front. Otherwise the program will be run.

The title is optional and may be omitted. If supplied, MachV searches first for a window title match and then for a screen title match. It needs to be just long enough to match the title and it is case insensitive, "final c" will match "Final Copy". You may also use AmigaDos wild cards to match a title.

```
exe_cmd"ttx,#?.(c|h)"
```

This will run the program "ttx" (TurboText), but if it finds a window or screen whose title ends in .c or .h, that window or screen will be brought to the front.

If the screen or window does not have a title, or has one that changes, you may use the task name prefaced by a '\$'. Click on "Select Title" to list task names. Example of running the text viewer View80:

```
EXE_CMD"View80,$View80"
```

Program Stack Size:

Programs executed with EXE\_CMD will have the same stack size as it was set when MachV was first run. Many programs need a larger stack than the default 4000. You should use the stack command in your User-Startup file to at least 10000. You can often check a program's icon (using them Workbench menu selection "Information") to see what the recommended size is for that particular program.

## 1.49 MachV.guide/Windows

Windows

\*\*\*\*\*

This chapter deals with the most powerful and complicated macro functions. For this reason, they are described here as well as listed in the Appendix.

- Window Titles
- Moving and Sizing
- Organizing
- Zooming
- Killing
- Sending IDCMP Messages
- Selecting String Gadgets
- Selecting Windows
- Window Waiting
- Window Open

## 1.50 MachV.guide/Window Titles

### Window Titles

=====

Window and screen functions that require a title may use standard AmigaDos wild cards. This allows you to specify any window that ends in .doc, for example, by using #?.doc. If no wild cards are used, the title in the function needs to be just long enough to match the actual title. "Workb" will match "Workbench". All comparisons are case insensitive.

Examples:

```
WIN_TO_FRONT"#?.(c|h)"
```

Matches any window title ending in .c or .h

```
WIN_SEND_MENU"$cygnusEd,Open..."
```

Sends the menu selection "Open..." to a window that is owned by the program CygnusEd.

```
WIN_TO_FRONT"NewSh#?"
```

The first window found with a title beginning with "NewSh" will be brought to the front.

Title matching also works when executing programs:

```
EXE_CMD"Run >nil: FinalCopy,Final#?"
```

This brings the window or screen that has a title beginning with 'Final' to the front if it is found, otherwise, the program is run.

You can match a window with no title by using two vertical bars.

```
WAIT_WINDOW"||"
```

Windows may be specified by 'T', 'A', 'M' or title.

T = Top window.

A = Active window.

M = Window under mouse.

See Environment Variables, for using variables in titles.

## 1.51 MachV.guide/Moving and Sizing

## Moving and Sizing Windows

=====

There are many functions for moving and sizing windows. Here are some examples:

```
WIN_TO_FRONT"title"
```

Move titled window to the front.

```
WIN_TO_BACK"A"
```

Move active window to the back.

```
WIN_BACK_TO_FRONT
```

Move the back window to the front.

```
WIN_FRONT_TO_BACK
```

Move the front window to the back.

```
WIN_MOVE_WINDOW"title,100,10"
```

Move a window to 100x, 10y. Use +0 to leave a position alone.

```
WIN_MOVE_WINDOW"title,+0,+10"
```

Move a window down 10 pixels.

```
WIN_SIZE_WINDOW"title,640,200"
```

Size a window to 640x 200y.

```
WIN_SIZE_WINDOW"title,+10,+0"
```

Grow a window 10 pixels wider.

```
WIN_CHANGE_WINDOW"title,le,te,w,h"
```

Move and size a window to position le = left edge, te = top edge, w = width, h = height.

```
WIN_CHANGE_WINDOW"A,le,te,w,h"
```

Move and size the active window.

When sizing, an omitted number is assumed to be 0, which will leave that dimension unchanged. When moving, a 0 will move to the pixel coordinate 0. If it is omitted, it will not move in that direction. For example:

```
WIN_MOVE_WINDOW"A,,200"
```

Will move the active window to the Y coordinate 200 and the X position will not change.

```
WIN_MOVE_WINDOW"A,0,100"
```

Will move the active window to the Y coordinate 100 and to the X coordinate 0.

If the requested size is too large for the window's position, the window will be moved. If it is too large for the screen, the screen size will be used. Finally, if it is too small, it will be ignored.

So, to make a full sized window, it is safe to use:



function call.

## 1.54 MachV.guide/Killing

Killing Windows

=====

Use WIN\_KILL\_WINDOW to close the active window. This is NOT the same as clicking on the close gadget. It closes a window that may be owned by another program. This function is included to provide a way of closing an errant window that a program left behind. USE WITH CAUTION! MAY CAUSE A SYSTEM CRASH!

A useful macro to use this with is:

```
WIN_SELECT_WINDOW"Window To Kill?" WIN_KILL_WINDOW
```

See Sending IDCMP Messages, to send a close message.

You may also specify a title: WIN\_KILL\_WINDOW"Errant window title"

## 1.55 MachV.guide/Sending IDCMP Messages

Sending IDCMP Messages

=====

IDCMP messages (Intuition's Direct Communications Message Ports) are the system's method of notifying a program that an event has taken place. This event may be a close gadget, menu selection, key pressed or released, or a gadget down or up message.

Many programs do not provide keyboard equivalents for menu selections. You can create your own by using:

```
WIN_SEND_MENU"Title,Text"
```

or

```
WIN_SEND_MENU"Title,m,i,s"
```

You can send other IDCMP messages to any window that is able to receive them. When a user clicks on the close gadget, for example, intuition (part of the operating system) sends a special message to the program that owns the window. The program then closes the window. MachV can also send these messages from macros by using WIN\_SEND\_CLOSE. You may find it convenient to create a close gadget macro attached to the hotkey <Ctrl-LeftAmiga-C> or <LeftAmiga-Q>. Pressing this will then close the window.

To send gadget messages, you need to find the desired gadget number.

The program AllGadgets may be used to find these numbers. It must be run from the shell while the window with the gadget in it is open. You cannot send messages to many gadgets, especially those created with the GadTools library. If AllGadgets shows GadgetIDs of 0, they were probably created by GadTools.

Include that gadget number in the functions:

```
WIN_SEND_GADGET_DOWN
```

```
WIN_SEND_GADGET_UP
```

```
WIN_SEND_GADGET_DOWN"A,5"
```

Send a gadget down message from gadget number 5 to the active window.

```
WIN_SEND_GADGET_UP"A,1"
```

Send a gadget up message from gadget number 1 to the active window.

Some programs need only the gadget up message while others need both the down and up message. Some programs may also even need a pause between the two. You will need to experiment with your particular application.

You may select a string gadget (that is, perform the same task as if you clicked in it with the mouse) with the function WIN\_SELECT\_GADGET. See Selecting String Gadgets.

Menu selections may be sent using either the menu item text or its menu, item and subitem number.

```
WIN_SEND_MENU"Workbench,All Files"
```

will simulate a "Window/Show/All Files" menu selection.

```
WIN_SEND_MENU"Workbench,1,7,1" does the same thing.
```

If you have difficulty getting the program to respond to your macro using the item text, try the menu and item numbers. Menu, menu item and menu subitem numbers start at 0. If you wish to send a menu select message of the 2nd item in the 1st menu, you would use:

```
WIN_SEND_MENU"A,0,1"
```

In rare cases, the program that receives the message may not reply to it and leave MachV waiting forever. Simply press <ESC>.

#### Window Message Examples

```
WIN_SEND_CLOSE"A"
```

Send Close gadget message to active window.

```
WIN_SEND_CLOSE"Prefs"
```

Send Close gadget message to the window titled Prefs.

```
WIN_SEND_MENU"A,1,6,0"
```

Send a menu selection to the active window, menu number 1, item

number 6, subitem number 0.

```
WIN_SEND_MENU"A,Quit"
```

Find the menu selection "Quit" in the active window and send it.

\*Note\*

Console windows that have a close gadget or menus are not expecting a normal intuition message and cannot be closed with WIN\_SEND\_CLOSE or receive WIN\_SEND\_MENU functions. A console window is a special type of window that uses the console device instead of intuition for its input and output. Shell windows and "Ed" are two examples of console windows.

If you have "Debug" selected and you don't want SetMachV running when you execute a WIN\_SEND\_CLOSE macro, use this macro:

```
msc_debug"off" WIN_SEND_CLOSE"A" msc_debug"on"
```

## 1.56 MachV.guide/Selecting String Gadgets

Selecting String Gadgets

=====

Many 2.04 compatible programs allow you to select a string gadget by pressing <Tab>. For those that don't (like Workbench's Information), the function:

```
WIN_SELECT_GADGET
```

may be used. This will select a string gadget in the active window if another string gadget is not already active. The next gadget in the window may be selected by pressing <Return> (to deselect the current string gadget) and then executing this macro. To avoid the necessity of pressing <Return>, you could use:

```
"\N" WIN_SELECT_GADGET
```

which sends a <Return> before activating the string gadget.

A good hotkey to attach this macro to would be <Left-Amiga-Tab>. This way, you could press <Tab> with programs that do select gadgets, and <Left-Amiga-Tab> for those that don't, or to all programs. Don't attach this to <Alt-Tab> as that will conflict with "Function Completion" in SetMachV.

Note that many programs that don't activate the first gadget with <Tab> do activate subsequent gadgets with <Tab>.

To select a gadget in a specific window, use:

```
WIN_ACTIVATE"title" WIN_SELECT_GADGET
```

## 1.57 MachV.guide/Selecting Windows

Selecting Windows

=====

You can have a list box open with a list of all windows that are currently open. The selected window will then become the active window.

WIN\_SELECT\_WINDOW

Select a window from a list box and make it active. Uses the default list box title "Select A Window".

WIN\_SELECT\_WINDOW"List Box Title"

Select a window from a list box and make it active. Enclose your desired title in quotes.

If a window does not have a title, a pointer to that window will be displayed in hexadecimal form. e.g. 0x7c5e3d0. If there is only one unnamed window then it's usually easy to know which it is. Some windows may have a blank title. If you don't see the title or pointer in the list, try clicking where one might be in the list.

You may also activate and bring a window to the front with:

Win\_Activate\_Next Win\_To\_Front"A"

See WIN\_ACTIVATE\_NEXT, and WIN\_TO\_FRONT, for more information.

## 1.58 MachV.guide/Window Waiting

Window Waiting

=====

A macro can wait for a window to become active before continuing. This is better than using a pause function which may wait too long or too short. MachV continues to function normally while waiting, but you should not call another wait function before it returns.

The title can be an AmigaDos pattern if desired. Example:

WIN\_SEND\_MENU"A,Quit" WIN\_WAIT\_WINDOW"Are You Sure#?" "O"

This sends a menu selection of 'Quit' to the active window, waits for a window titled 'Are You Sure...' to become active, then sends the letter 'O' (which may simulate clicking on an 'Okay' gadget).

When WIN\_WAIT\_WINDOW returns, it still may not be safe to do a function like WIN\_SEND\_MENU -- the menu strip or user port may not be set yet. These cases are especially likely if other tasks are also running. You may follow the window title with a 'U' or 'M' or both. When the desired window becomes active, MachV will wait until the MenuStrip or UserPort is set, or upto 2 seconds. The order of 'U' or 'M' does not matter.

```
WIN_WAIT_WINDOW"$terminus1,U,M"
```

Wait for the window owned by the program 'terminus1' to become active and set both its UserPort and MenuStrip.

```
WIN_WAIT_WINDOW"$Workbench,M,U,4"
```

Wait for a Workbench window upto a maximum of 4 seconds instead of 2. Allowed values are 1 - 9 seconds.

```
WIN_WAIT_WINDOW"$Workbench,M,,5"
```

Wait for a window owned by Workbench to set its MenuStrip. Wait no longer than 5 seconds.

A program may still change a menu strip or user port after WIN\_WAIT\_WINDOW returned but before you could send a message. A pause may be still be necessary:

```
WIN_WAIT_WINDOW"Serial,U" PAU_SECONDS".5" "bbo"
```

This will wait for the window 'Serial' to become active, then the user port to be set, then it will pause for .5 seconds, then send the keystrokes 'bbo'.

You can match an untitled window by using two vertical bars in the title.

```
WIN_WAIT_WINDOW"||"
```

The message "Waiting For Window" is displayed in the clock while waiting.

Abort a WIN\_WAIT\_WINDOW function by pressing ESC.

Note that this function returns when the desired window becomes active or immediately if it is already active.

## 1.59 MachV.guide/Window Open

Window Open

```
=====
```

A ARexx script may test to see if a window is open with:

```
WIN_WINDOW_OPEN"title"
```

This returns a '1' in the ARexx variable RESULT if the window is open.

```
/* ARexx example of testing to see if a window is open. */
```

```
OPTIONS RESULTS
```

```
ADDRESS MACHV_REXX 'WINDOW_OPEN"Pref"'
if RESULT = "1" then
```

```

    say "The window is open"
else
    say "The window is not open"

```

See ARexx, for more information.

## 1.60 MachV.guide/Screens

Screens

\*\*\*\*\*

The screen functions operate in a similar manner to the window functions. You can bring screens to the front or send them to the back, you can select a screen from a list which will bring it to the front and you can close an errant screen (cautiously!).

Functions that require a title may include AmigaDos wild cards. See Window Titles.

SCR\_BACK\_TO\_FRONT

Send the back screen to the front.

SCR\_TO\_FRONT"title"

Send titled screen to the front.

SCR\_FRONT\_TO\_BACK

Send front screen to the back.

SCR\_TO\_BACK"title"

Send titled screen to the back.

SCR\_WB\_TO\_FRONT

Send Workbench screen to the front.

SCR\_WB\_TO\_BACK

Send Workbench screen to the back.

SCR\_SELECT\_SCREEN"Optional title"

Select a screen from a list box using the default list box title "Select A Screen". Bring the screen to the front.

SCR\_KILL\_SCREEN

Request confirmation then close the front screen. USE WITH CAUTION! Some programs in some situations do not close their custom screen when they terminate. With this function, you can close it, but be careful, the system may crash!

Normally this is used with SCR\_SELECT\_SCREEN like:

```
SCR_SELECT_SCREEN SCR_KILL_SCREEN
```

You may also specify a title:

```
SCR_KILL_SCREEN"Bad screen"
```

You can replace Workbench's standard combination <Left-Amiga-N> with the macro SCR\_BACK\_TO\_FRONT to bring the back screen (instead of the Workbench screen) to the front. Replace <Left-Amiga-M> with SCR\_FRONT\_TO\_BACK. You can add WIN\_ACTIVATE"M" to these, which will activate the window under the mouse after the screen is moved. Or use WIN\_ACTIVATE"T" to activate the top (front) window.

The <Amiga-N> macro might look like this:

```
SCR_BACK_TO_FRONT WIN_ACTIVATE"M"
```

## 1.61 MachV.guide/Environment Variables

Environment Variables

\*\*\*\*\*

Environment variables can be used as function arguments or output as text. They can be set with the PAU\_FIX\_INPUT and PAU\_VAR\_INPUT functions, the SET\_VARIABLE"name,value,optional flags" function, or, if using global variables, from the shell using "setenv name value".

Environment variables can be either global - accessible from anywhere, or local - accessible only from MachV.

The variable format is \${varname}. This will expand to the value of varname when the function executes. For example, if "window" was set to "Workbench", this would bring it to the front:

```
WIN_TO_FRONT"${window}"
```

A special variable "MachVar" is set to the name of an icon dropped into the clock window. A macro could then use that name. For example:

```
EXE_CMD"show ${MachVar}"
```

See Clock Displays, for more about "MachVar" and AppWindows.

Other possible uses of variables:

```
PAU_FIX_INPUT"1,clipunit" CLP_PASTE"${clipunit}"
```

This pauses for you to enter one number. That number is then set to the variable "clipunit" which is then used as an argument for CLP\_PASTE. Using the above macro, you can paste from clipboard units 0 - 9.

```
PAU_VAR_INPUT",file" EXE_CMD"${editor} ${file}"
```

This pauses for a variable number of keystrokes which are stored in the variable "file" when you press <ESC>. The program whose name is stored in "editor" is then run using the variable 'file' as an argument. Note the ', ' in ",file". The first argument (the input termination key) is optional, it defaults to <ESC> (hex 45). This could

have been written:

```
PAU_VAR_INPUT"45,file"
```

During a PAU\_VAR\_INPUT or PAU\_FIX\_INPUT function, characters are displayed in the clock as they are entered. Ctrl-H may be used to correct mistakes.

Note that the variable name is used without the `${}` when using it as an argument in a setting type function. If `${}` were used, then the value of the variable would be used instead.

```
EXE_CMD"ttx ${MachVar}"
```

This will run the editor `ttx` with the arguments from the variable `"MachVar"`. This variable is set when an icon is dropped into the clock.

From within text in a macro:

```
"The contents of var is ${var}"
```

```
"This is the username environment var ${username}"
```

To use `${}` without expanding it, you must escape the `$` with a `\`.

```
"This is the variable \${var}"
```

Using variables lets you change a setting in just one place. For example, in your user-startup file you could set an overscan width variable:

```
SetEnv OSWidth 680
```

And then use it in your NewShell command:

```
EXE_CMD"NewShell con:0/0/${OSWidth}/200/Shell"
```

Or,

```
SetEnv shell NewWShell
```

```
EXE_CMD"${Shell} con:0/0/${OSWidth}/200/${Shell}/CLOSE"
```

There is also the variable `machv_recursion_depth` which limits the number of times a macro may call itself. It defaults to 10. This variable is either global or local, depending on your setting in Miscellaneous Features.

Global and Local Environment Variables

## 1.62 MachV.guide/Global and Local Environment Variables

---

## Global and Local Environment Variables

=====

In the Miscellaneous Features window you may set certain parameters used by MachV when handling variables.

If "Local/Global Vars" is selected then expanding a variable will first try a local variable and then a global variable. You could instead select either "Global Only Vars" or "Local Only Vars".

Both PAU\_FIX\_INPUT and PAU\_VAR\_INPUT functions and the SET\_VARIABLE function can accept a third argument which is the hexadecimal representation of these options.

The values for these options are:

Local then global	-	0
Global	-	100
Local	-	200
Save Var	-	1000

```
SET_VARIABLE"test,abcd,1100"
```

This would set the global variable "test" to "abcd" and also save it to ENVARC:. Only global variables may be saved.

```
PAU_VAR_INPUT"45,test,100"
```

This waits for variable length input terminated with ESC (45) and then sets the global variable 'test' to that input.

Also in the Miscellaneous window, you may select "Save Vars". This will cause all global variables to be saved to ENVARC: when a PAU\_XXX\_INPUT or SET\_FUNCTION is used.

## 1.63 MachV.guide/Clipboard Features

### Clipboard Features

\*\*\*\*\*

The clipboard is a special software device used by many applications. When you perform a copy or cut in the application, it copies the text to the clipboard. This text is then available both to the application that copied or cut it and to any other application that uses the clipboard.

MachV has several functions that enhance this feature. You may view the contents of the clipboard, paste the clipboard to an application's window that does not support the clipboard, print the clipboard contents and you can transfer one unit to another.

The clipboard supports multiple buffers or "units", 0 - 255. All functions have an optional argument that specifies the clipboard unit

to use. If you do not provide the argument, unit 0 or the last unit selected will be used.

The clipboard functions all require that the `iffparse.library` is in your `libs: directory`.

```
Viewing The Clipboard
Pasting The Clipboard
Printing The Clipboard
Transferring To Other Units
Clip Features
```

## 1.64 MachV.guide/Viewing The Clipboard

Viewing The Clipboard

=====

This opens a window and displays the contents of the clipboard. From this viewer window, the unit number may be changed by entering a number in the string gadget, by clicking on the Next/Prev gadgets, by pressing a function key from <F1> - <F10> which will show units 0 - 9, or by pressing the <Shift-Up> and <Shift-Down> arrow keys. Close the viewer window with either the close gadget or by pressing <ESC>. Pause the display scrolling by pressing any key - stop it by pressing <Return>. The viewer window will automatically update itself when the contents of the currently displayed unit have changed.

At the beginning of a clip, the clipboard viewer displays:

```
Clipboard Unit # U   (nnnnnn bytes)
-----
```

"U" is the unit number and "nnnnnn" is the clip size.

You may enter a clipboard unit number in the "Copy To ->#" gadget to copy the current unit to another unit. Press <Tab> to activate the string gadgets.

The "Load" gadget allows you to load a file to the unit currently displayed.

The "Save" gadget allows you to save the unit currently displayed to a file.

Both of these will open a file requester for you to select from. If you precede the file name with a '\$', you may load or save an environment variable.

You may append a clip to a file by specifying a file name preceded with ">>" in the ClipViewer file requester. Select the desired directory and enter ">>filename".

```
Drawer |ram: | | ~~~~~
_____ | File |>>dummy |
```

~~~~~ If the file does not exist, it will be created.

The clipboard viewer is also an AppWindow. This means that you can drop icons into it and they will be immediately copied to the clipboard and displayed in the viewer.

See Transferring To Other Units.

Because the clipboard viewer is a "console" window, you may use the mouse to highlight text and press <Right-Amiga-C> to copy it to the clipboard. The text may be edited, highlighted and then copied to the clipboard. The editing features are rather limited. Press "Help" to show the editing keys.

The view window may be kept opened if desired and zoomed to a large or small size. MachV will function normally while it is open.

You could quickly view the clipboard and close the viewer with a macro like this:

```
CLP_VIEW PAU_SECONDS"1" WIN_SEND_CLOSE"A"
```

The Clip Viewer executes the system program "ConClip" when changing units. This keeps console window copying and pasting in sync with the viewer. If you change units often, it is recommended that you make this program resident with:

```
Resident >nil: c:ConClip pure add
```

just before the line that reads "c:ConClip" in your startup-sequence. This will reduce disk access when changing units.

You may also change the current unit with CLP\_CURRENT\_UNIT"N" where N = the desired unit number.

\*Note\*

Some programs do not correctly handle the clipboard device. If the viewer refuses to display a unit, it was caused by improper usage by an application. At a minimum, the clipboard viewer should show:

```
Clipboard Unit # 0 ( 0 bytes)
-----
** This Unit Is Empty **
```

If it doesn't, the only recourse usually is, unfortunately, to reset the computer.

## 1.65 MachV.guide/Pasting The Clipboard

Pasting The Clipboard  
=====

The function CLP\_PASTE will paste the contents of the clipboard to the active window. You would normally use this to paste to a window that does not provide clipboard support, or to one that only supports unit #0 and you want to paste from a different unit. You can even paste to a string gadget!

This function sends the text as keystrokes so it is not as fast as a normal paste. You may choose to not send an 'up' keystroke for each key sent by not checking "Send Up Keys". When checked, an 'up key' message is sent for each 'down key' that is sent from a macro. This doubles the time required to send keystrokes, but some programs expect to receive key up messages.

The two strings in the gadgets "Prepend" and "Append" will be sent before and after each line. The delay between characters and lines sent are of interest mainly to telecommunication users. They are in 50ths of a second.

You can remove linefeeds when pasting a paragraph by checking "Remove Line Feeds" in SetMachV and you can send both a return and line feed for each line feed by checking "Line Feeds To CRLF".

To abort pasting, press <ESC>.

## 1.66 MachV.guide/Printing The Clipboard

Printing The Clipboard

=====

The function CLP\_PRINT will print the contents of the clipboard. Most word processors provide this ability, but now you can print text from the shell. In a shell, you can select text with the mouse and press <Right-Amiga-C> to copy it to the clipboard. CLP\_PRINT could then be used to print it, or CLP\_PASTE to paste it.

You may also click on "Print" in the clipboard viewer.

To abort printing, press <ESC>.

## 1.67 MachV.guide/Transferring To Other Units

Transferring To Other Units

=====

The function CLP\_TRANSFER will transfer the clipboard contents from one unit to another. This can be extremely useful when your application supports only unit 0. You could create one or more macros that copy from unit 0 and one or more that copy back to unit 0. This will allow you to copy and paste from multiple buffers. For example:

```
CLP_TRANSFER"0,1"
    Transfer unit 0 to unit 1.
```

```
CLP_TRANSFER"1,0"
    Transfer unit 1 to unit 0.
```

```
CLP_TRANSFER"0,2"
    Transfer unit 0 to unit 2.
```

```
CLP_TRANSFER"2,0"
    Transfer unit 2 to unit 0.
```

You could follow these with CLP\_VIEW to verify the transfer:

```
CLP_TRANSFER"0,1" CLP_VIEW
```

or close the viewer in one second:

```
CLP_TRANSFER"0,1" CLP_VIEW"1" PAU_SECONDS"1" WIN_SEND_CLOSE"Clip
Viewer"
```

You may also transfer to or from a file or environment variable and the clipboard by using the file or variable name.

```
CLP_TRANSFER"ram:temp,0"
    Transfer file named ram:temp to unit 0.
```

```
CLP_TRANSFER"$username,0"
    Transfer environment variable username to unit 0.
```

```
CLP_TRANSFER"0,$TERM"
    Transfer unit 0 to variable "TERM".
```

```
CLP_TRANSFER"0,>>capture"
    Append unit 0 to the file "capture".
```

```
CLP_TRANSFER"1,dh0:texts/scratch"
    Transfer unit 1 to file "dh0:texts/scratch".
```

Notes:

If the file name starts with a digit, a clipboard unit will be assumed.

Currently, only text of the IFF type FTEXT may be viewed. ILBM support may be added later.

## 1.68 MachV.guide/Clip Features

Clip Features

=====

The window "Clip Features" in SetMachV contains some options that affect text pasting using CLP\_PASTE.

Prepend Chars

Append Chars

These are string gadgets that contain characters to send before and after text pasting.

Char Delay

Line Delay

These are delays in 50ths of a seconds.

Remove Line Feeds

Removes the end of line characters so you may paste a paragraph to a word processor.

Line Feeds To CRLF

Send a carriage return before the line feed.

Send Up Keys

This will send the up key message after each key down is sent. This is not normally needed, but some programs may require it. When selected, text being pasted takes almost twice as long to paste.

## 1.69 MachV.guide/Mouse Features

Mouse Features

\*\*\*\*\*

All mouse features are adjusted or toggled on or off in this section of SetMachV. Some features may also be modified with macros.

To open the window, click on the "Mouse Features" gadget or press <M>.

Many mouse features have an associated string gadget in which you may enter the name of a window or an AmigaDos pattern. This can be used to limit when a function can be used. For example, setting ~(MachV#?) in the SunMouse gadget will prevent SunMouse from activating the clock (or any other window that begins with MachV).

Mouse Accelerator

Mouse Off

SunMouse

Auto PopTop

Key Activate

Window Cycling

Click To Front

Mouse To Menu

Menu Wrap

Button Swap

Alternate Mouse Port

Middle Mouse Button

Mouse Freeze

Playback Delay

## 1.70 MachV.guide/Mouse Accelerator

Mouse Accelerator  
=====

The mouse speed and threshold may be adjusted. "Speed" is an acceleration factor applied to mouse movements. The "Threshold" adjusts the sensitivity of the mouse (how fast the mouse must move before the accelerator kicks in).

Low values decrease the sensitivity. Set "Speed" to 0 to disable the accelerator.

The accelerator also allows you to use negative values to slow it down. This is sometimes useful for fine control in painting programs. The values may range from -9 to 9. The speed may also be set by using the macro function MOU\_SPEED.

## 1.71 MachV.guide/Mouse Freeze

Mouse Freeze  
=====

You can freeze vertical and horizontal mouse movements by executing the macros:

```
MOU_FREEZE_VERT and MOU_FREEZE_HORZ
```

This is helpful when attempting to line up icons for example.

An interesting possibility is to effectively "lock out" other users by executing both macros and a MSC\_FREEZE\_KEYS function. If someone does not know the hotkey combination, he would be unable to move the mouse or type. The unauthorized user could reboot, but you could use this macro which is an auto executing macro:

```
EXE_AUTO"" FREEZE_VERT"Tog" FREEZE_HORZ"Tog" FREEZE_KEYS"Tog"
```

You would need to manually execute this macro to unfreeze the mouse and keyboard.

## 1.72 MachV.guide/Mouse Off

---

## Mouse Off =====

You can have the mouse disappear after a set number of seconds or when you press any key (except qualifiers). This is useful when typing - the mouse stays out of the way.

Set "Mouse Off" to 0 to disable this feature. You can set the delay time with MOU\_OFF in a macro.

### Notes:

1. The mouse will always briefly appear and then disappear when a window opens.
2. The mouse will reappear if you use the Left Amiga Arrow keys to move the pointer.
3. This feature seems to offset the hotspot of the pointer by one pixel when using an Amiga 1200 or 4000. If this is a problem, set "Mouse Off" to 0.

## 1.73 MachV.guide/SunMouse

### SunMouse =====

You can activate a window by simply moving the mouse into it - no need to click. This is called "SunMouse", named for the way in which mice behave on Sun workstations.

To prevent windows that the mouse is merely passing over from becoming active, a window is not activated until the mouse comes to a stop. The SunMouse does not activate a window if a string gadget is active.

The "SunMouse" may be turned on and off with MOU\_SUNMOUSE in a macro.

## 1.74 MachV.guide/Key Activate

### Key Activate =====

Instead of (or in addition to) using the SunMouse feature, you may select "Key Activate" so the window that is under the mouse will become active when you press a key.

---

## 1.75 MachV.guide/Auto PopTop

Auto PopTop

=====

A window pops to the top when it becomes active if this is set.

Note!

This may cause unexpected results if you click on a window's depth gadget to bring it to the front - it will be brought to the front by Auto PopTop, but then releasing the mouse button will cause the depth gadget to send it to the back.

## 1.76 MachV.guide/Window Cycling

Window Cycling

=====

This provides an easy way to move windows and screens to the back.

With the mouse over a window, press and hold the left button and press and release the right button. The window will move to the back.

The new top window will also become the active window.

A screen may be moved to the back in these situations:

1. If the mouse is over a "backdrop" window. (This type of window cannot be depth arranged.)
2. There is only one window on the screen.
3. The mouse is not over a window.

## 1.77 MachV.guide/Click To Front

Click To Front

=====

You can bring a window to the front by clicking anywhere in it a set number of times. The number in the cycle gadget may be from 0 to 4. 0 disables this feature.

Note:

You may experience problems with some programs with this feature set to 1 or 2. This is especially true when double clicking on icons. The only solution to this is to set it to 0,3 or 4.

## 1.78 MachV.guide/Mouse To Menu

Mouse To Menu  
=====

When this feature is on, every time you press the right mouse button the pointer will jump to the menu bar. When you release the button it will return to where it was.

This feature may also be changed with MOU\_TO\_MENU in a macro.

## 1.79 MachV.guide/Menu Wrap

Menu Wrap  
=====

With this option selected the mouse will "wrap" to the leftmost menu item when the mouse moves to the right of the rightmost menu. It will wrap around to the right side when you move to the left of the first menu.

Note:

There are a few programs that, because of their menu layout, you may not be able to select some items. Your only option is to disable "Menu Wrap".

## 1.80 MachV.guide/Button Swap

Button Swap  
=====

Selecting this will swap the left and right buttons. This also means that the Window Cycling combination is also swapped. You will need to use Right/Left instead of Left/Right.

When recording a macro, a right button will be recorded and played back as a left button. This allows a macro to be played back correctly even if you turn "Button Swap" off after recording.

## 1.81 MachV.guide/Alternate Mouse Port

Alternate Mouse Port  
=====

If you wish to use port 1 instead of port 0 for mouse input, you may

---

change it with "Mouse Port" or with the SET\_MOUSE\_PORT function.

You could plug a trackball or other input device into port 1 and easily switch between the two.

Note:

When changing ports in Mouse Features, once you select another port, you must use a device in that port to select back. Or, use <Left-Amiga Left-Alt> to simulate a left button click on the gadget.

## 1.82 MachV.guide/Middle Mouse Button

Middle Mouse Button

=====

Some third party mice have a middle button that may be put to good use. While most users prefer to have the middle button behave like the <Shift> key, it can function as any qualifier that you want. It may, of course, also have a macro attached to it.

To change the middle mouse button to a qualifier, simply select the desired qualifiers in the "Mouse Features" window.

## 1.83 MachV.guide/Playback Delay

Playback Delay

=====

When recording and playing back mouse movements, you may set a delay in this gadget. The values are in 50ths of a second. See Recording All Moves, for more information.

## 1.84 MachV.guide/Clock Features

Clock Features

\*\*\*\*\*

To open this window, click on the "Clock Features" gadget or press the letter <L>.

Clock Displays  
Clock Borders  
Clock On and Off  
PopTop  
Float

Gadgets  
 Clock To Screen  
 Clock Gadgets  
 Clock Alarms  
 Online Meter  
 Low Memory Warning  
 Alternating Date and Memory Display  
 Clock Position  
 Clock Size  
 Time Position and Color  
 Horizontal and Vertical Clocks  
 12 and 24 Hour Time  
 Clock Font  
 Date Format  
 Custom Messages

## 1.85 MachV.guide/Clock Displays

Clock Displays

=====

You may select from a wide variety of clocks by clicking on the gadget that cycles through the available types. These are shown below.

Clock+Memory

```

|Chip  456 Fast  357  4:32:45|
-----

```

Memory Only

```

|Chip  456 Fast  357|
-----

```

Clock+Date

```

|05-01-92  12:32:45|
-----

```

Clock+Date (DOS Format)

```

|05-Apr-92  12:32:45|
-----

```

Clock Only

```

|12:32:45|
-----

```

Coordinates

```

|XXX  YYY|
-----

```

Selecting "Sec." will display seconds with the time. The clock will adjust its width if "Gadgets" is not selected. ("Sec." is located at the bottom of the "Clock Features" window.)

Besides showing time and memory, the clock also displays many helpful

messages such as "Select Hotkey...", "Recording Macro...", "Executing Macro..." and "Macro Aborted!".

The "Gadget Bar" clock is a special type. It is not really a clock at all but a clock-like window in which gadgets may be placed. Macros may be executed by clicking on their gadgets. See Clock Gadgets, for more information.

See Clock Borders, for changing the border.

The clock window is an AppWindow in which you may drop icons. Icons dropped into this window will set the environment variable "MachVar" to the full path and name of the icon. If multiple icons are dropped, the variable will contain all names separated by a space. e.g.

```
dh0:src/app/main.c ram:readme
```

This may be very useful when used with a macro (which may have a gadget) such as:

```
EXE_CMD"view80 ${MachVar}"
```

You may want to delete or unset this variable afterwards:

```
EXE_CMD"view80 ${MachVar}" Set_Variable"MachVar,"
```

See Environment Variables.

## 1.86 MachV.guide/Clock Borders

Clock Borders

=====

Clocks that have gadgets can modify the border somewhat. Select these in "Clock Features":

- \* Right Border The size gadget uses the right border.
- \* Bottom Border The size gadget uses the bottom border.
- \* Borderless The clock has no border.

## 1.87 MachV.guide/Clock On And Off

Clock On And Off

=====

The "Clock" gadget in the "Clock Features" window turns the clock on and off.

Within a macro, a clock may be toggled with CLK\_CLOCK, sent to the front screen with CLK\_TO\_FRONT and the next screen with CLK\_TO\_NEXT\_SCREEN.

## 1.88 MachV.guide/PopTop

Clock To Top Window  
=====

You may select to have the clock pop to the top window by selecting "PopTop". Whenever a window opens on top of the clock, the clock will move to the top.

This is not the same as Clock To Screen.

## 1.89 MachV.guide/Float

Clock Float  
=====

If you are using a virtual Workbench screen (one that is larger than the display area), the screen can automatically be scrolled with the mouse. This is a feature of Workbench. The clock would normally remain in its original position but if you select "Float", the clock will keep its position relative to the display's left and top edge.

## 1.90 MachV.guide/Gadgets

Gadgets  
=====

Selecting this will allow the clock to accept macro gadgets. Any macro with the Clock Gadgets flag set and a name will have a gadget in the clock.

See Clock Gadgets.

## 1.91 MachV.guide/Clock To Screen

Clock To Screen  
=====

The clock may also move to any screen by entering "#?" or "(#?|)"

---

in the string gadget under the "Clock Type" gadget. You may use any AmigaDos pattern that you wish. Entering nothing in this gadget will keep the clock on the Workbench screen. "(Workbench#?|Final Copy#?)" will let it open only on the Workbench or Final Copy screen. Two vertical bars '|' will match untitled screens.

#### CAUTIONS

These must be used with some caution as not all programs work properly with another window on their screen. Some programs refuse to close their screen while the clock is on it. Some programs terminate but leave their screen behind. If you feel adventurous, you can close a screen that has been left behind with SCR\_KILL\_SCREEN in a macro. Killing a screen may cause a system crash if the program owning the screen still expects it to be there.

This option also replaces the CloseScreen vector. You may experience some incompatibility if you, for example, run another program that also replaces this vector, run MachV and then terminate the first program. The general rule for running programs that do this is to terminate them in the reverse order that they were run.

When a program refuses to close its screen if another window is on it, you could create this macro: CLK\_TO\_NEXT\_SCREEN "\RQ", and in Flags, set the "Non Recursive" flag and attach it to <Right-Amiga-Q>. This will put the clock on another screen and then pass <Right-Amiga-Q> on to the program. You may also need a PAU\_SECONDS"n" at the end of this macro.

## 1.92 MachV.guide/Clock Gadgets

### Clock Gadgets

=====

After you become more familiar with macros, you may wish to create gadgets to execute them. The section assumes that you understand how create and use macros.

A macro gadget is a gadget in the clock that you may click on to execute the macro. These gadgets may display the macro's name or it may use a custom image created with an icon editing program. The name of the icon should be the same as the macro name plus ".info".

Any clock type can accept macro gadgets if the Gadgets gadget is selected. A macro will have a gadget in the clock if it has a name and if the "Clock Gadget" flag gadget in the Flags window is selected.

A "dock" type window can be created with gadgets executing many functions before running the desired program. See the configuration file dock.prefs" for an example.

Adding Gadgets

Global Gadgets

Custom Images  
Moving Gadgets  
Updating the Gadgets  
Using the Gadgets  
Gadget Clock  
Helpful Hints

## 1.93 MachV.guide/Adding Gadgets

Adding Gadgets  
-----

Adding a gadget is simply a matter of selecting the "Clock Gadget" gadget in the Flags window. The desired macro to be "gadgetized" must be the current one (the macro must be in the "Macros" string gadget) and it must have a name.

The gadget will be immediately added to the clock. MachV will attempt to place it in a reasonable location, but see Moving Gadgets. The window will be resized vertically if necessary to enable the gadget to be visible.

## 1.94 MachV.guide/Global Gadgets

Global Gadgets  
-----

If you want a gadget to appear in all configurations, you may create it in the first configuration as a "No Key" macro and select both the "Gadget" flag and the "Global" flag.

The gadget's position will be the same in all configurations.

Macros attached to a key and also have a gadget will not appear in other configurations.

## 1.95 MachV.guide/Custom Images

Custom Images  
-----

If there is an icon with the same name as the macro in the same directory as your MachV.prefs file, the icon's image will be used instead of the macro's name. For example, if you have a macro named "ClipView" and an icon named "ClipView.info" in the same directory as your MachV.prefs file, the icon's image will be used.

---

## 1.96 MachV.guide/Moving Gadgets

Moving Gadgets  
-----

Gadgets may be placed anywhere in the clock. Hold the <Alt> key and click on the gadget (release the left mouse button). Then while still holding the <Alt> key down, move the gadget outline to the desired location and release the <Alt> key.

The position may be more precisely set either in the Flags window of SetMachV or in the Quick Edit window. See Quick Edit.

## 1.97 MachV.guide/Updating the Gadgets

Updating the Gadgets  
-----

In order to reduce disk access, MachV does not check for .info files when changing screens and reopening the clock window. Instead, it checks only when first run and when you click on the "Clock Gadget" flags gadget or the "Gadgets" checkbox in Clock Features.

It also updates whenever a file is written to the MachV.prefs directory. It does this so you can change the image using IconEdit and see the results immediately in the clock.

## 1.98 MachV.guide/Using the Gadgets

Using the Gadgets  
-----

Simply clicking on the gadget will execute the macro. If the macro requires an active window to act upon or for output, the window that was previously active before clicking on the gadget will be used.

The clock can be "zoomed" to a larger size to expose more gadgets and then zoomed back to normal size.

In SetMachV, after clicking on "Select Hotkey", you may click on a gadget to make it current.

## 1.99 MachV.guide/Gadget Clock

Gadget Clock  
-----

---

A clock with "Gadgets" checked or "Gadget Bar" selected will also have a zoom and sizing gadget. The size may also be set with the "Width" and "Height" gadgets in "Clock Features". These gadgets are disabled if you do not have "Gadgets" or "Gadget Bar" selected.

You may enter -1 in the Left Edge, Top Edge, Width and Height gadgets and the current values will be entered for you when you press <Return>.

The letter "Z" will replace the first character in the clock display when the window is in its zoomed state.

## 1.100 MachV.guide/Helpful Hints

### Helpful Hints

-----

If you want to have very many gadgets in the clock, it is best to use the "zoom" gadget to expand and contract the window. Resizing it with the size gadget means that you will have to resize it back manually.

A clock with gadgets has a "normal" size and position, and an alternate "zoomed" size and position. MachV will remember its size in each state.

To save your "zoomed" window size and position, save your settings with the clock in its zoomed state.

If you want to create gadgets for all or most of your macros, you can set the "Clock Gadget" gadget in the Flags window and then click on "Set All". This will create gadgets for all macros that have names.

You may want to create a zoom macro for the clock. Here is an example that will also ensure that the window is up front:

```
WIN_TO_FRONT"MachV" WIN_ZOOM_WINDOW"MachV"
```

## 1.101 MachV.guide/Clock Alarms

### Clock Alarms

=====

Although you may create auto-executing macros by entering the EXE\_AUTO function in a macro, a simple interface for creating alarms can be found in the "Clock Features" window.

Under "Alarms" are the gadgets "Create/Modify", and "Delete". Clicking on either of these will prompt you to enter or select a name

from a list of macro alarms.

All alarms are placed in the first configuration. They will be "NO KEY" macros. They will have the 'Auto Execute' and 'Global' flags set.

Date and Time  
Alarm Message  
Beeps  
Say Text  
Later  
Auto Delete  
Auto Save  
Delete

## 1.102 MachV.guide/Date and Time

Date and Time  
-----

You may select the days or date of the alarm, but not both. You may also set the time or repeat interval. If you enter the date instead of checking the days, you may use the same AmigaDOS wild cards as for EXE\_AUTO functions. For example:

??-23-92 Will execute on the 23rd of every month.

You should one date format. The format that was used to create the alarm must be the same as when the alarm executes. Also, the date separator must be the same as entered in the "Sep." gadgets, or a "?" may be used, such as 12?03?94.

You may also use wild cards in the time:

?::15 Will execute at 15 minutes past any hour.

Enter only the hour and minutes separated by a colon. Do not use seconds.

Instead of entering the time, you may check the "Repeat" box and enter the number of minutes in the "Minutes" gadget. You may not select both time and repeat.

## 1.103 MachV.guide/Alarm Message

Alarm Message  
-----

The desired message may be entered in the long string gadget above the "Say Text" and "Show Text" gadgets. Up to 80 characters may be used.

---

Below this you may select Say Text and "Show Text".

If you select "Show Text", a requester will be displayed when the alarm executes. You will then be able to click on "Okay", "Later" or "Remove".

Click on "Okay" to shut off the alarm (closes the requester).

Click on "Later" to have the alarm to come back in 5 minutes.

Click on "Remove" to delete the macro and save your configuration without the alarm macro.

Change the "come back later" delay value in the "Later" gadget. This gadget is disabled unless "Show Text" is checked.

If you have selected "Auto Delete", only the "Okay" gadget will be in the requester.

If you have selected "Auto Save", your configuration will be saved after the alarm executes. This would be used together with "Auto Delete" to save after deleting the alarm.

## 1.104 MachV.guide/Beeps

Beeps

-----

You may choose to have a number of beeps instead of or in addition to speaking and showing of a message. Simply enter the number of beeps desired in the "Beeps" gadget.

## 1.105 MachV.guide/Say Text

The Say Command

-----

The command used to speak the message may be changed if desired. The default is "echo > speak:". You could use:

```
echo > speak:opt/p65/s125
```

or

```
say FEMALE PITCH 200
```

or execute some entirely different program.

---

## 1.106 MachV.guide/Later

Later  
-----

When an alarm executes and you have "Show Text" checked, you may click on "Later". The alarm will execute again a set number of minutes later.

Change the "come back later" delay value in the "Later" gadget in "Alarms" interface window. This gadget is disabled unless "Show Text" is checked.

When an alarm puts up a requester AND if "Later" is > 0 AND if you do not click on any gadget in the alarm requester, the alarm will re-execute when the "Later" time expires. The message will be spoken again if "Say Text" is selected. It will beep again if "Beeps" were greater than 0. "Show Text" must be selected for this feature to function.

In other words, if the alarm puts up a requester and you do not respond to it, the alarm will execute again when the "Later" time expires. A new requester is not put up.

If you enter 0 in the "Later" string gadget it will not come back unless you click on the "Later" requester gadget which will cause a default 5 minute delay.

Note that you cannot make an alarm repeat or come back without "Show Text" selected because there needs to be a "Later" gadget to click on.

## 1.107 MachV.guide/Auto Delete

Auto Delete  
-----

Selecting this will cause the alarm to delete itself after executing. Your configuration without the alarm will be saved if you also select Auto Save.

This option simply adds a MAC\_DELETE function to the alarm macro.

## 1.108 MachV.guide/Auto Save

Auto Save  
-----

Selecting this will save your configuration after the alarm executes. This is usually used in combination with Auto Delete.

---

This option adds a CFG\_SAVE function to the alarm macro.

## 1.109 MachV.guide/Delete

Delete

-----

Clicking on "Delete" will prompt you to enter or select a name from a list of macro alarms. The macro will then be deleted. It will remain in your MachV.prefs file until you save your settings.

## 1.110 MachV.guide/Online Meter

Online Meter

=====

You may select to have the time portion of your clock keep track of your online costs by selecting "Meter". Clear your costs with "Meter Reset". Put the online rate (cents per hour) in the "Rate" gadget.

You may use CLK\_SET\_RATE in a macro to set the rate and CLK\_RESET\_METER to set the meter to 0.

If the rate is set to 0, the meter will measure in time instead of dollars. This is useful if you need to keep track of how much time you are spending on a project. The time meter does not run when the screen is blanked. (You are not working then, are you?)

## 1.111 MachV.guide/Low Memory Warning

Low Memory Warning

=====

If you would like to be alerted to low memory situations, enter the memory warning level in the "Low Mem" gadget. When available chip (graphics) memory drops below this value (in kilobytes), the clock's text color will change. The color will depend what you have selected for the normal text and background color. See Time Position and Color.

## 1.112 MachV.guide/Alternating Date And Memory Display

### Alternating Date And Memory Display

=====

If you want the clock's display to alternate between memory and time, and the date, enter the number of seconds to show the memory and time in the "Date/Time" gadget.

## 1.113 MachV.guide/Clock Position

### Clock Position

=====

You can change the clock's position by entering values in the "Left Edge" and "Top Edge" gadgets. An alternate method is to position the clock with the mouse and then enter a -1 in these gadgets. The current values will then be entered for you. Turn off Float when doing this.

## 1.114 MachV.guide/Clock Size

### Clock Size

=====

You only can change the size of the clock if "Gadgets" or the clock type "Gadget Bar" is selected. You may set these values in "Width" and "Height". Otherwise, these gadgets are disabled.

## 1.115 MachV.guide/Time Position and Color

### Time Position and Color

=====

The left and top edge of the time may be set in the "Time" section. These are normally 3 and 1, but if you have gadgets in your clock, you may wish to position the time someplace else.

The text and background color may also be changed to your liking with the two palette gadgets. These will display the number of colors of the screen that the clock is currently on. The actual colors will be those of the screen that SetMachV is on.

If you change the number of colors of the Workbench screen, you may need to re-run MachV to update certain visual attributes.

## 1.116 MachV.guide/Horizontal and Vertical Clocks

Horizontal and Vertical Clocks  
=====

You can select "Vert" or "Horz" to change the clock's orientation. In some applications users find it convenient to place the clock in the left border area.

You can also change the orientation by activating the clock with the mouse and pressing <Alt-H> or <Alt-V>.

## 1.117 MachV.guide/12 and 24 Hour Time

12 and 24 Hour Time  
=====

Select 12 Hr or 24 Hr to show the desired format.

## 1.118 MachV.guide/Clock Font

Clock Font  
=====

You may select the font for the clock to use by entering it in the "Clock Font" gadget. Enter the font name (with or without out the .font extension) and the point size. The following are all valid:

```
Opal 12
Diamond 15
TermISO.font 8
pearl, 8
topaz.font, 11
```

If you want to use the same font that is used for the screen, enter nothing.

The diskfont library must be available to use this feature. Only non-proportional fonts are recommended,

The font selected will also be used in the text of any clock gadgets in the clock.

Each configuration may have its own font.

## 1.119 MachV.guide/Date Format

---

Date Format  
=====

The date is available in four formats selectable in the "Clock Features" window. As you cycle through these, the date will be displayed above the gadget. You may also choose your desired separator character in the adjacent string gadget labeled "Sep.".

The date format selected will be used in the clock and in TXT\_DATE\_PASTE and TXT\_DATE\_PRINT macros functions.

These two features may also be changed with the Set Functions:

```
SET_DATE_FORMAT"DOS/INT/USA/CDN"
```

```
SET_DATE_SEPARATOR"-"
```

The date format and separator character must be the same as is used in any clock alarms that you may have.

## 1.120 MachV.guide/Custom Messages

Custom Messages  
=====

Many messages are displayed in the clock. They range from error messages to prompts to custom messages.

In a macro you can display custom messages with:

```
CLK_CUSTOM_MSG"message"
```

This could be combined with other functions like:

```
MOU_SET_PORT"1" CLK_CUSTOM_MSG"Using Port 1"
```

See Macros, for additional information.

These messages may also be spoken by selecting Speak Messages in the Miscellaneous Features window. The device "Speak:" must be mounted.

## 1.121 MachV.guide/Miscellaneous Features

Miscellaneous Features  
\*\*\*\*\*

These features are accessible from the "Miscellaneous Features" window.

---

Priorities  
Screen Blanking  
Macro Screen Blanking  
Splines  
Password  
Suspend  
No Caps Lock  
Speak Messages  
Beep  
Hold Qualifiers  
Debug  
Trace  
Gameport

## 1.122 MachV.guide/Priorities

Priorities  
=====

All tasks in the Amiga's multitasking operating system run at a particular priority. Higher priority tasks have higher numbers and will run while tasks with lower priorities wait. Most user tasks run at a priority of 0 and have an equal share of time. MachV runs well at 1. MachV also has the ability to change its priority temporarily while playing back a macro. A priority of 1 is usually okay here too. You may experiment with these numbers and your particular applications to find what works best. Don't try to set them very high though, usually no more than 6 and certainly no more than 10. By setting the "Playback Priority" to 0, the application and MachV will alternate between sending and receiving of keystrokes.

The playback priority may also be temporarily changed from a macro with MSC\_PRIORITY. Using this you can run an application at a specific priority. For example, this macro will run the program at a priority of 1:

```
MSC_PRIORITY"1" EXE_CMD"Run FinalCopy"
```

The priority of the input handler may also be set. Valid priorities are 51 - 127. 55 is recommended, but if you have other programs with their own input handler, you may want to change this. Changes will not take effect until you save and run MachV again. Note that this is NOT the same thing as task priority. This is the priority of the handler that intercepts input before intuition has a chance to see it. It must be set above intuition which is 50.

## 1.123 MachV.guide/Screen Blanking

---

## Screen Blanking

=====

After a preset length of time, you may have the screen either go blank or just dim. If you select a dimness of 0 and have Splines on, there will be a line pattern drawn on the blanked screen.

If you select a dimness value of 1-15, the front screen will go dim. This uses no extra memory because it doesn't open its own screen.

The screen may also be blanked with MSC\_BLANK\_SCREEN in a macro. Executing this macro will immediately blank the screen. The dimness and spline settings may also be changed in this macro. See MSC\_BLANK\_SCREEN.

By selecting "Quick Blank" and setting some positive value for the Mouse Off feature, the screen can be blanked when the mouse turns off by first moving the mouse to the upper left corner.

You may also choose to require a password before the screen will unblank. See Password.

If the screen cannot be opened because of low memory, the front screen will be set to black.

If another screen opens up while the screen blanker is on, the blanking screen will be closed.

Instead of using these methods to blank the screen, you may use an external blanker or even run some animation. This is done by Macro Screen Blanking.

## 1.124 MachV.guide/Macro Screen Blanking

### Macro Screen Blanking

=====

If you wish, you can execute a macro named "Blank" instead of blanking the screen. With this feature, you could run an animation or any other program. In addition, you could send a message to a custom screen blanker telling it to blank. The function:

```
MSC_PUTMSG"PortName,xx,xx,xx"
```

could be used for this. A sample screen blanking program is included. This requires some knowledge of the "C" programming language.

If a macro was executed instead of the normal screen blanking, a macro named "Unblank" will execute when the user presses a key or moves the mouse. This could be a macro that tells another program to quit or unblank. These macros are examples:

| Name | Macro |
|------|-------|
| ---- | ----- |

```
Blank      EXE_CMD"Run movie animfile"  
Unblank    WIN_SEND_CLOSE"MovieWindowTitle"
```

or maybe just

```
Unblank    WIN_SEND_CLOSE"A"
```

A macro named "MachVQuit" will execute when MachV is terminated. This could be used to send a message to a screen blanker telling it to quit.

## 1.125 MachV.guide/Splines

Splines  
=====

When you have selected 0 in "Blanking Dimness", and you have "Splines" on, screen blanking will include line pattern drawing.

Spline features:

1. Runs as a separate task at -1 priority. If you have other tasks running, the lines will move very slowly. But this allows your main task(s) to work faster.
2. Opens a screen to your overscan height (in interlace if your default public screen is). Width is 640.
3. If it cannot open the screen, the front screen will be set to black.
4. Lines drawn vary between straight and curved, and between open and closed loops.
5. If you do not see the lines being drawn, it is because:
  1. "Dimness" is not 0.
  2. Splines are not selected.
  3. There was not enough memory to open the screen.
  4. There was not enough memory to start the task.

## 1.126 MachV.guide/Password

Password  
=====

If a password is entered in the "Pasword" gadget in the Miscellaneous Features window of SetMachV, MachV will require that password before

---

unblinking the screen. If the screen is merely dimmed, you will not be prompted for the password. Just type it in and press Return.

The password may also be set with the macro function SET\_PASSWORD.

## 1.127 MachV.guide/Suspend

Suspend  
=====

MachV may be temporarily suspended by clicking on the "Suspend" gadget.

You may also create a macro that has a MSC\_SUSPEND function. Pressing the hotkey that this macro is attached to will either suspend or reactivate MachV.

You must use the same hotkey to un-suspend MachV. Also, if you use an <Alt> or <Shift> qualifier, you need to un-suspend with the <Left-Shift> or <Left- Alt> qualifier.

## 1.128 MachV.guide/No Caps Lock

No Caps Lock  
=====

Selecting "No Caps Lock" on will disable your Caps Lock key. The light will remain on after it is pressed, however.

You still can use it by pressing <Left-Amiga-CapsLock>.

## 1.129 MachV.guide/Speak Messages

Speak Messages  
=====

All messages that are displayed in the clock may be spoken (except "Executing Macro") when this option is selected. The "speak:" device must be mounted.

See MSC\_SPEAK.

---

## 1.130 MachV.guide/Beep

Beep  
=====

MachV will beep to prompt you for certain actions, when you set an alarm or when you execute a macro that has MSC\_BEEP in it.

You can use a custom sound for the beep. Just enter the name and complete path of the sound file in the "Beep File Name" gadget in the "Miscellaneous Features" window. The sound may be an IFF 8SVX sound file or a "raw data" file with the file size in bytes 1 to 4 and the period value in bytes 5 and 6. Many sound digitizing programs provide the ability to save in a raw format. Several samples of both are provided. The sound file should be as small as possible. Less than 500 bytes is recommended although you could use up to 3000 to 4000 byte files.

This sound is not the sound used when recording macros.

You may specify the number of beeps with MSC\_BEEP"nn" such as:

MSC\_BEEP"1" or MSC\_BEEP"4"

The volume is set in the "Miscellaneous Features", but may be over-riden with a second argument:

MSC\_BEEP"1,30" or MSC\_BEEP"4,64"

You can also load a new sound file with:

MSC\_LOAD\_BEEP"Path/Beep Name"

## 1.131 MachV.guide/Hold Qualifiers

Hold Qualifiers  
=====

If "Hold Qualifiers" is checked, you may press and release any qualifier and it will be remembered and added to the next non-qualifier key or mouse button. The "held" qualifiers will then be released. See below for holding for multiple keystrokes.

Many disabled people find it difficult if not impossible to type key combinations such as <Ctrl-Shift-F1>. So you could for example, press <Ctrl> then <Shift>, and then <F1>. The <Ctrl> and <Shift> would be added to the <F1> just as if they were pressed at the same time.

This feature is not intended for someone who doesn't need it as it sometimes may cause unexpected results. For example, if you press <Alt> and then change your mind, the <Alt> will still be added to the next key pressed.

Pressing <Caps Lock> or the right mouse button will clear the qualifiers. Pressing a qualifier again will clear that qualifier.

Qualifiers may be held for multiple keystrokes if you first press <Alt-CapsLock>. For example, if you press

```
<Alt-CapsLock> <Shift> <1> <2> <3> <CapsLock>
```

!@# will be the characters displayed (usa keymap).

This may also be used with Workbench's extended selection. Press the <Shift> key, then click on your icons.

When using "Hold Qualifiers", the keys being held are displayed in the clock.

```
C = Control
S = Shift
A = Alternate
L = Left Amiga
R = Right Amiga
```

This feature may also be controlled by a macro function. See MSC\_HOLD\_QUALS.

## 1.132 MachV.guide/Debug

Debug  
=====

With this feature checked, MachV will be in the debugging mode. When a macro is executed and for whatever reason fails, SetMachV will be run and the offending macro will be displayed with the cursor on the function that failed. This may be disabled by using MSC\_DEBUG"Off" in a macro.

This is useful with the WIN\_SEND\_CLOSE macro because most shell windows cannot receive this message.

```
MSC_DEBUG"Off" WIN_SEND_CLOSE"A" MSC_DEBUG"On"
```

This turns debugging off, send a close window message to the active window, and then turns debugging back on.

## 1.133 MachV.guide/Trace

Trace  
=====

As a debugging aid, you can have each macro dumped as it executes to

---

a console window or serial port. This is not to be confused with 'Debug' which runs SetMachV when an error is detected. Select 'Trace Serial' and 'Trace Console' in the 'Miscellaneous Features' window, or set it with the MSC\_TRACE function.

Examples:

```
MSC_TRACE"Tog,S"
    Toggle serial tracing.
```

```
MSC_TRACE"Tog,C"
    Toggle console tracing.
```

As each function is executed, the remaining portion of the macro will be sent. If you executed the macro 'WIN\_BACK\_TO\_FRONT WIN\_ACTIVATE"T"', you will see:

```
WIN_BACK_TO_FRONT WIN_ACTIVATE"T"
WIN_ACTIVATE"T"
```

Console Tracing

A window will be opened for output. This window will close when a MSC\_TRACE function turns off tracing. Pressing Ctrl-C will remove MachV.

Serial Tracing

Output will be sent to the serial device at whatever rate you have selected by 'Prefs/Serial' or your terminal program. You can run a terminal program to receive this output.

See MSC\_TRACE.

## 1.134 MachV.guide/Gameport

Gameport  
=====

Macros may also be executed from a joystick or similar device plugged into gameport 2. This is designed mainly for users with extreme mobility impairments. Because the gameport operates differently from the keyboard, a different implementation is necessary.

First, gameport monitoring must be turned on. You use the function:

```
MSC_GAMEPORT"On"
```

to do this. If another program is using the gameport, this function will fail. While MachV is using the gameport, no other program can use it. To turn it off, use the function:

```
MSC_GAMEPORT"Off"
```

To toggle between on and off, use:

```
MSC_GAMEPORT"Tog"
```

For a macro to be executed, it must have the appropriate name. When the user presses the joystick forward or up, it must have the name "JoyUp". The four names are:

```
JoyUp  
JoyRight  
JoyDown  
JoyLeft
```

There is an optional second argument to the gameport function. It specifies the number of allowed directions. There are only two valid values that may be used, 4 and 8. When 8 is used, you have the following directions in addition to the four above:

```
JoyUpRight  
JoyDownRight  
JoyDownLeft  
JoyUpLeft
```

These are the "in between" positions. Since it can be difficult to position precisely on these, the default mode is 4 directions.

You could create this macro named "JoyDown":

```
EXE_CMD"run application"
```

When the user pushes the joystick down (or back), the program "application" would be run.

The three names:

```
JoyFire1,  
JoyFire2  
JoyFire3
```

are used for the fire buttons.

Note that all names must be spelled exactly as shown. Joyup is not a match.

If you want to always have the gameport monitored, you can have it turn on automatically when MachV is run by using one of the following macros:

```
EXE_AUTO"" MSC_GAMEPORT"On"  
EXE_AUTO"" MSC_GAMEPORT"On,4"  
EXE_AUTO"" MSC_GAMEPORT"On,8"  
EXE_AUTO"" MSC_GAMEPORT"Tog,8"
```

This macro should be attached to "No Key" in the first configuration. See Changing the Current Hotkey.

---

See MSC\_GAMEPORT.

## 1.135 MachV.guide/ARexx

ARexx

\*\*\*\*\*

MachV has a complete ARexx interface. You can execute ARexx programs, send ARexx messages to other ports, execute MachV macros from a file and inquire about the status of many of MachV's features.

Sending Commands To An ARexx Port  
 Sending Commands From ARexx To MachV  
 Executing ARexx Programs  
 Executing ARexx Commands  
 MachV Status

## 1.136 MachV.guide/Sending Commands To An ARexx Port

Sending Commands To An ARexx Port

=====

```
MSC_PUTMSG_AREXX"PORTNAME,command,results_variable"
```

Use this to send a command directly to an ARexx port. With this function, you can avoid using 'run rx command'. This function is synchronous! It will not return until replied to by the receiving process. If for some reason the receiving process will not reply, MachV will quit waiting if you press <ESC>. This can cause a crash if the process does at some point try to reply.

Examples:

```
MSC_PUTMSG_AREXX"TURBOTEXT0,openfile ${ttxfile}"
```

```
MSC_PUTMSG_AREXX"EMACS1,(fill-paragraph nil)"
```

```
MSC_PUTMSG_AREXX"rexx_ced,cedtofront"
```

There is an optional 3rd argument. If supplied, the message to the ARexx port will request a result and use the 3rd argument as the name of an environment variable to store it. The variable will be local or global, depending on the variable setting in Miscellaneous Features.

Examples:

This sets the environment variable ttx\_word to the word under the cursor when using TurboText.

```
MSC_PUTMSG_AREXX"TURBOTEXT0,getword,ttx_word"
```

This sets the environment variable `ced_line` to the line under the cursor.

```
MSC_PUTMSG_AREXX"rexx_ced,status 55,ced_line"
```

## 1.137 MachV.guide/Sending Commands From ARexx To MachV

Sending Commands From ARexx To MachV

```
=====
```

Macros may be sent to MachV from ARexx programs with the ARexx command:

```
address 'MACHV_REXX' 'macro string'
```

MachV will execute the macro just as if you pressed the hotkey. MachV will return a result of 10 if the macro fails. Example:

```
address 'MACHV_REXX' 'WIN_TO_FRONT"AppTitle"
WIN_SIZE"AppTitle,500,50"'
```

If the Quick Edit window is open, the ARexx macro will be shown in its string gadget instead of being executed. This is a debugging aid - it shows exactly what MachV is actually receiving.

Macros sent to MachV from ARexx programs may be executed synchronously or asynchronously. An asynchronous macro will return before it has actually begun execution. To do this, simply prefix the macro with a "0". Examples:

```
address 'MACHV_REXX' 'clk_clock"off"'          synchronous
```

```
address 'MACHV_REXX' '0 clk_clock"off"'        asynchronous
```

When this is executed from the shell, the prompt will return immediately:

```
address 'MACHV_REXX' '0 pau_seconds"3" clk_clock"off"'
```

As many macros as you wish may be sent to MachV. They will be executed in turn.

You may also send a command to an ARexx port with:

```
MSC_PUTMSG_AREXX
```

## 1.138 MachV.guide/Executing ARexx Programs

### Executing ARexx Programs

=====

You can execute ARexx programs with the function EXE\_AREXX\_COMMAND. This eliminates the need for "rx" or "run rx" and also allows scripts with just MachV macros without "address MACHV\_REXX".

The default filename extension is .mach.

If your ARexx program or script ends with a "return value", that will be set to the environment variable that is specified as the 2nd argument. If you had this program named rexx:test.mach -

```
/* Return an answer to MachV which will set an env variable. */
```

```
parse arg arg1
```

```
a=2
```

```
return a*arg1
```

and you executed this macro:

```
EXE_AREXX_COMMAND"test 5,answer"
```

the env variable "answer" will be set to 10. The passed argument could also have been a variable:

```
EXE_AREXX_COMMAND"test ${count},answer"
```

## 1.139 MachV.guide/Executing ARexx Commands

### Executing ARexx Commands

=====

This allows you to execute arexx functions directly. A trivial example:

```
EXE_AREXX_STRING"return time(hours),results"
```

The env variable "results" would get set to hours past midnight.

You could insert text that is self-incrementing with this:

```
EXE_AREXX_STRING"return ${count}+1,count" "${count}"
```

This has ARexx increment the variable count, and then the results are sent as keystrokes.

## 1.140 MachV.guide/MachV Status

MachV Status

=====

Check the condition of various flags with:

```
MSC_STATUS"N"
```

"N" may be one of the following:

|                  |    |                 |    |
|------------------|----|-----------------|----|
| sunmouse         | 0  | splines         | 14 |
| keyactivate      | 1  | quick blank     | 15 |
| mouse to menu    | 2  | speak messages  | 16 |
| menu wrap        | 3  | debug           | 17 |
| window cycle     | 4  | button swap     | 18 |
| auto poptop      | 5  | hold quals      | 19 |
| keyclick         | 6  | hotkeys enabled | 20 |
| clock            | 7  | send up keys    | 21 |
| vertical clock   | 8  | nocapslock      | 22 |
| clock top window | 9  | remove lf       | 23 |
| clock float      | 10 | crlf            | 24 |
| clock gadgets    | 11 | freeze vert     | 25 |
| seconds          | 12 | freeze horz     | 26 |
| meter            | 13 | keysoff         | 26 |

MSC\_STATUS returns a '1' in the ARexx variable RESULT if the flag is set. Example:

```
address 'MACHV' 'status"17"'
if RESULT = 1 then
  say 'debugging is on'
else
  say 'debugging is off'
```

## 1.141 MachV.guide/Configurations

Configurations

\*\*\*\*\*

You may have more than one configuration within your MachV.prefs file. The title of each may match window or screen titles and become active when that window becomes active.

Let's assume that you've set some macros attached to function keys and other features that work well in a shell. Now you want to run an application program such as WordPerfect which uses the function keys. You could disable all macros while using WordPerfect, but there is an alternative. You can add another configuration to the one that you have already set up and modify it to work with WordPerfect.

To do this, select "Add" in SetMachV. A duplicate configuration will be made and numbered 2. Add whatever macros you want for this

configuration, and change any settings that you want.

You can click on "Select Title" to obtain a list of available titles. They are listed window titles first, then screen titles, and finally, program names (which are prefaced with the '\$'). Selecting one of these will place it in your configuration title string gadget.

If WordPerfect (or your desired application) is not running, you can manually enter the title by typing in " WordPerfect" (without the quotes). Notice the space before the WordPerfect, that's like it is in the title bar. You may need to add '#?' if the window title is longer. Examples:

```
" WordPerfect#?"      " WordP#?"      "ProWri#?"      "Final#?"
```

In your first configuration, you could type in the title "AmigaShell" or whatever is in the title bar of your shell. Now, when a WordPerfect window becomes active, the second configuration becomes active. Click in your shell window and its configuration becomes active.

If you are using the SunMouse feature you do not need to click in the window - the configuration will become active when the window becomes active.

Configuration titles may use case-insensitive standard AmigaDOS wild cards to match a variety of windows.

In order to avoid confusion, configurations will not change automatically when SetMachV is running.

```
Changing Configurations
Default Configuration
Windows and Screens With No Title
Attach To The Program Name
Adding And Deleting
Global Hotkeys
Loading And Saving
The Settings File
```

## 1.142 MachV.guide/Changing Configurations

Changing Configurations  
=====

You may have as many configurations as you like. Each one may be attached to a window or screen through its title. The title may use standard AmigaDOS wild card pattern matching to match a window's title.

An "@" symbol as the first character will lock a configuration which may then only be changed from SetMachV or by executing a macro with a function such as CFG\_NEXT. When a configuration is changed from within a macro, there will be no further execution of that macro. That is, with the macro:

```
CFG_NEXT WIN_ACTIVATE"title"
```

The WIN\_ACTIVATE"title" will not be executed.

You may put in multiple window titles by enclosing them in () separated by the vertical bar | (next to the Backspace key).

```
(Ashell#?|TextEd#?| WordP#?)
```

Up to a maximum of 80 characters may be used. This example shows a configuration that will become active when you click in a window titled "Ashell", "TextEd", or " WordPerfect".

You can also use something like this:

```
#?.c
```

to match all windows with C source files. Or:

```
#?.(c|h)
```

to match .c and .h files.

You may find that when a file requester opens, your configuration changes. You could include its title also. For example, the above #?.(c|h) could be:

```
(#?.(c|h)|Select File#?)
```

When a new configuration is made active, its title will appear in the clock for about one second.

If you name a macro the same name as the configuration title, that macro will be executed when the configuration changes. That could be something simple like a MSC\_BEEP to let you know that it did change.

When searching for a macro name when configurations are changing, the macro name can be matched by the wild cards in the configuration name. For example, a macro named "gads.c" will execute when a configuration named #?.c becomes active. So would a macro named #?.c.

When a configuration first becomes active, it will not change to another if the window that opens is owned by the same task. This keeps it from changing when something like a requester opens.

If it does not change when you think it should, try activating a window that is owned by another task (like the MachV clock) and then activate the desired window.

## 1.143 MachV.guide/Default Configuration

Default Configuration

=====

---

The first configuration with no title will be activated when no title matches. This means that you can set up a default configuration that will be active when you click in a window that does not match any of your configuration titles.

## 1.144 MachV.guide/Windows and Screens With No Title

Windows and Screens With No Title  
=====

Not all windows or screens have real titles. It may be just text written where the title should be. MachV cannot locate these titles and thus cannot change to the proper configuration automatically unless you attach to the program name.

You can manually change to these configurations with a CFG\_NEXT or CFG\_CHANGE macro.

In SetMachV, you can click on "Select Title" to obtain a list of available titles. Scroll down until you see ">> Programs <<" followed by program names (which are prefaced with the '\$'). Selecting one of these will place it in your configuration title string gadget.

When the window that is owned by that program becomes active, the configuration will change.

See Attach To The Program Name.

## 1.145 MachV.guide/Attach To The Program Name

Attach To The Program Name  
=====

You may change to untitled windows by specifying the program's name. Do this by prefacing the configuration title with the "\$" symbol followed by the program name. For example: a configuration titled "\$dh0:DPaint" will become active when you click in the Deluxe Paint window. Click on "Select Title" for a list of program or task names available.

Note that you can't mix program names and window/screen titles. When matching program names, the first character must be the '\$'. Example:

\$ (dpaint|FinalCopy)

Not:

(\$dpaint|\$FinalCopy)

## 1.146 MachV.guide/Adding And Deleting

Adding And Deleting

=====

"Add" duplicates the current configuration and then makes that one current. You may then add macros and change other settings in the new configuration.

Enter the name for this configuration in the string gadget under "Select Title". This title usually matches a window, screen or program name. When a window becomes active that has a title that matches it, that configuration becomes the current one. The title can use AmigaDos wildcards.

Delete a configuration with the "Del" gadget. You cannot delete the sole remaining configuration.

## 1.147 MachV.guide/Global Hotkeys

Global Hotkeys

=====

If you have some hotkeys in your first configuration that you would like to be available to all configurations, simply check that hotkey's "Global" flag in the Flags window. Here are some points to remember:

1. Only hotkeys in the first configuration may be made global.
2. When a configuration other than the first one is active and a key is pressed, MachV first checks the current configuration for a hotkey and then checks the first configuration for a global hotkey. This allows local hotkeys to override global ones.
3. When executing macros from the select list, the list will contain local and global macros.
4. When selecting by name from SetMachV, only local macros will be listed.
5. Macros that execute when a configuration is changed, that is, macros with the same name as the configuration title, may be global.
6. Screen blanking macros may be global.
7. The MSC\_SET\_FLAGS function operates only on macros in the current configuration - NOT on global macros.

For example, if you always want your <Left-Amiga-ESC> NewShell hotkey to be available no matter what configuration is current, you just need to create the macro in the first configuration and check the "Global" flag.

If you want to use a global hotkey in another configuration as a normal key, you can override it by either just marking that key as "Temporary" or by entering the key itself as a "Non Recursive" macro. See Flags.

Assume that F5 is global and you wish to use it as a normal F5 in another configuration. Run SetMachV and select the desired configuration and then select F5. Open the Flags window and click on the "Temporary" flag.

Another way would be to select F5 and enter "\F5" (with the quotes!) as its macro. Then click on the "Non Recursive" flag. This will simply pass the F5 key through.

## 1.148 MachV.guide/Loading And Saving

Loading And Saving  
=====

For any changes to be permanent, you just need to select "Project/Save" or "Project/Save As..." from the menu. When MachV is first run, it looks for MachV.prefs from the command line or Tool Types, then from the current directory. If it is not found, it tries to load ENVARC:MachV/MachV.prefs.

Select "Project/Open" to load other settings files.

MachV will also reload your MachV.prefs file if you edit it with an editor and save. In other words, MachV is notified of any changes to ENVARC:MachV (or whatever your prefs directory is) and reloads the MachV.prefs file and updates gadget imagery.

Configurations can also be saved with the function CFG\_SAVE and loaded with the function CFG\_LOAD.

You may also save from the "Quick Edit" window.

## 1.149 MachV.guide/The Settings File

The Settings File  
=====

This section describes the settings file itself. Most users will not need to do anything to it, as it is read and saved automatically.

The MachV.prefs file is straight ASCII text which may be edited with any text editor that can save normal ASCII text.

Multiple configurations are all saved together under one file name.

---

Each configuration within this file must start with ID=5.0. The specific order of everything else is not important.

Long lines are broken into smaller lengths (252 characters) and terminated with a backslash. These allows some text editors that cannot handle long lines to be used to edit a settings file.

Macros must be in the following format:

```
Macro=qualifiers key{macroname}[XXX]Macro body
```

Set Escape Characters for the keys and qualifiers. The name should be no more than 12 characters. To enter no name use {}. The [XXX] is the hexadecimal representation of the selected flags. If the macro has a gadget, the left and top edges will also be saved. Example:

```
Macro={Slow Mouse}[008,525,10]MOU_SPEED"-1"
```

This macro named "Slow Mouse" is a "NO KEY" macro with a gadget at 525x 10y.

More Examples:

```
Macro=\Lj{WinToFront}[000]WIN_BACK_TO_FRONT
```

This is the <Left-Amiga-J> window to front hotkey.

```
Macro=\L\E{NewShell}[080]SCR_WB_TO_FRONT EXE_CMD"NewShell
\"con:0/0/640\~/100/NewShell\""
```

This is the <Left-Amiga-ESC> NewShell command.

```
Macro=\A\E2{StartStop}[080]MAC_RECORD_KEYED
```

This is <Alt-ESC> and begins or ends a "recording to key" recording session.

## 1.150 MachV.guide/Macro Functions

Macro Functions

\*\*\*\*\*

```
CLK_CUSTOM_MSG
CLK_CLOCK
CLK_TO_FRONT
CLK_TO_NEXT_SCREEN
CLK_RESET_METER
CLK_SET_RATE
CLK_ALARM
CLP_PASTE
CLP_PRINT
CLP_TRANSFER
CLP_VIEW
```

---

CLP\_CURRENT\_UNIT  
CFG\_CHANGE  
CFG\_NEXT  
CFG\_SELECT  
CFG\_LOAD  
CFG\_SAVE  
EXE\_AUTO  
EXE\_CMD  
EXE\_AREXX\_COMMAND  
EXE\_AREXX\_STRING  
EXE\_SETMACH  
MAC\_SELECT\_NAMED  
MAC\_EXECUTE\_NAMED  
MAC\_FINISH  
MAC\_MACROS  
MAC\_RECORD\_KEYED  
MAC\_RECORD\_NAMED  
MAC\_QUICK\_EDIT  
MAC\_DELETE  
MOU\_LBD  
MOU\_MBD  
MOU\_RBD  
MOU\_XY  
MOU\_OFF  
MOU\_SPEED  
MOU\_THRESHOLD  
MOU\_SUNMOUSE  
MOU\_TO\_MENU  
MOU\_FREEZE\_VERT  
MOU\_FREEZE\_HORZ  
MSC\_FREEZE\_KEYS  
MSC\_BEEP  
MSC\_LOAD\_BEEP  
MSC\_BLANK\_SCREEN  
MSC\_CHG\_DIR  
MSC\_PRIORITY  
MSC\_DEBUG  
MSC\_GAMEPORT  
MSC\_HOLD\_QUALS  
MSC\_PUTMSG  
MSC\_PUTMSG\_AREXX  
MSC\_QUIT  
MSC\_SET\_FLAGS  
MSC\_SPEAK  
MSC\_STATUS  
MSC\_SUSPEND  
MSC\_TRACE  
PAU\_SECONDS  
PAU\_FIX\_INPUT  
PAU\_VAR\_INPUT  
SCR\_BACK\_TO\_FRONT  
SCR\_TO\_FRONT  
SCR\_FRONT\_TO\_BACK  
SCR\_TO\_BACK  
SCR\_WB\_TO\_FRONT  
SCR\_WB\_TO\_BACK  
SCR\_SELECT\_SCREEN

---

```
SCR_KILL_SCREEN
SET_DATE_FORMAT
SET_DATE_SEPARATOR
SET_NO_LAYER
SET_PASSWORD
SET_MOUSE_PORT
SET_TASK_PRIORITY
SET_VARIABLE
TXT_TIME_PASTE
TXT_TIME_PRINT
TXT_DATE_PASTE
TXT_DATE_PRINT
WIN_ACTIVATE
WIN_ACTIVATE_NEXT
WIN_TO_FRONT
WIN_TO_BACK
WIN_BACK_TO_FRONT
WIN_FRONT_TO_BACK
WIN_MOVE_WINDOW
WIN_LAYER
WIN_SIZE_WINDOW
WIN_CHANGE_WINDOW
WIN_ZOOM_WINDOW
WIN_SEND_CLOSE
WIN_SEND_GADGET_DOWN
WIN_SEND_GADGET_UP
WIN_SEND_MENU
WIN_SEND_OTHER
WIN_SELECT_GADGET
WIN_SELECT_WINDOW
WIN_WAIT_WINDOW
WIN_WINDOW_OPEN
```

## 1.151 MachV.guide/CLK\_CUSTOM\_MSG

```
CLK_CUSTOM_MSG
=====
```

This function displays a message in the clock. It takes one argument, the message to display.

```
CLK_CUSTOM_MSG"Hello"
    Display the message "hello" in the clock.
```

You could combine this with another function to tell you what happened. For example:

```
SET_MOUSE_PORT"0" CLK_CUSTOM_MSG"Mouse Port 0"
```

## 1.152 MachV.guide/CLK\_CLOCK

---

CLK\_CLOCK  
=====

This function turns the clock on and off. It takes one argument.

CLK\_CLOCK"Tog"  
Toggle the clock on or off.

CLK\_CLOCK"Off"  
Turn the clock off.

CLK\_CLOCK"On"  
Turn the clock on.

### 1.153 MachV.guide/CLK\_TO\_FRONT

CLK\_TO\_FRONT  
=====

This function sends the clock to the top screen. It takes no arguments.

CLK\_TO\_FRONT

### 1.154 MachV.guide/CLK\_TO\_NEXT\_SCREEN

CLK\_TO\_NEXT\_SCREEN  
=====

This function sends the clock to the next screen. It takes no arguments.

CLK\_TO\_NEXT\_SCREEN

### 1.155 MachV.guide/CLK\_RESET\_METER

CLK\_RESET\_METER  
=====

This function resets the meter. It takes no arguments.

CLK\_RESET\_METER

---

## 1.156 MachV.guide/CLK\_SET\_RATE

CLK\_SET\_RATE  
=====

This function sets the rate for the meter. It takes one argument.

CLK\_SET\_RATE"600"  
Set the rate to use to 6.00 per hour.

## 1.157 MachV.guide/CLK\_ALARM

CLK\_ALARM  
=====

This function executes an alarm. It takes one to four arguments. It is used automatically by the clock alarms interface. It is usually prefaced by an EXE\_AUTO function.

1. The alarm message.
2. If 1, the message will be spoken.
3. If 1, the message will be displayed in a requester.
4. Minutes to wait before coming back. Requires the above argument = 1.

CLK\_ALARM"Dentist appointment,1,1,5"  
Display a requester with the message "Dentist appointment", speak the message, wait five minutes if user clicks on "Later".

CLK\_ALARM"Time for Seinfeld!,1,0"  
Say the message.

## 1.158 MachV.guide/CLP\_PASTE

CLP\_PASTE  
=====

This function pastes (sends as keystrokes) the contents of the clipboard. It takes one optional argument, a clipboard unit number from 0 to 255.

CLP\_PASTE"1"  
Paste the clipboard to the active window from unit 1.

CLP\_PASTE  
Paste the clipboard to the active window from the current unit..

See Pasting The Clipboard.

---

## 1.159 MachV.guide/CLP\_PRINT

CLP\_PRINT  
=====

This function prints the contents of the clipboard. It takes one optional argument, a clipboard unit number from 0 to 255.

CLP\_PRINT"1"  
Print the clipboard from unit 1.

CLP\_PRINT  
Print the clipboard from the current unit.

See Printing The Clipboard.

## 1.160 MachV.guide/CLP\_TRANSFER

CLP\_TRANSFER  
=====

This function transfers the contents of the clipboard from one unit to another. It takes two arguments, a source and destination clipboard unit number from 0 to 255.

You may also transfer to or from a file or environment variable and the clipboard by using the file or variable name.

CLP\_TRANSFER"0,1"  
Transfer the contents of the clipboard from unit 0 to unit 1.

CLP\_TRANSFER"ram:temp,0"  
Transfer file named ram:temp to unit 0.

CLP\_TRANSFER"0,\$capture"  
Transfer unit 0 to variable "capture".

See Transferring To Other Units.

## 1.161 MachV.guide/CLP\_VIEW

CLP\_VIEW  
=====

This function opens a window and displays the clipboard. It takes one optional argument that specifies the desired clipboard unit.

---

CLP\_VIEW

See Viewing The Clipboard.

## 1.162 MachV.guide/CLP\_CURRENT\_UNIT

CLP\_CURRENT\_UNIT  
=====

This function changes the current unit. It takes one argument, the desired clipboard unit.

CLP\_CURRENT\_UNIT"N"

See Viewing The Clipboard.

## 1.163 MachV.guide/CFG\_CHANGE

CFG\_CHANGE  
=====

This function changes to another configuration. It takes one argument.

CFG\_CHANGE"Workbench"  
Change to a configuration "Workbench".

## 1.164 MachV.guide/CFG\_NEXT

CFG\_NEXT  
=====

This function changes to the next configuration. It takes no arguments.

CFG\_NEXT  
Change to the next configuration.

## 1.165 MachV.guide/CFG\_SELECT

CFG\_SELECT  
=====

This function opens a list box with available configurations. It takes one optional argument, the title to display in the list box.

CFG\_SELECT

## 1.166 MachV.guide/CFG\_LOAD

CFG\_LOAD  
=====

This function loads a new configuration (prefs) file. It takes one argument.

CFG\_LOAD"ENVARC:MachV/backup.prefs"  
Load the prefs file ENVARC:MachV/backup.prefs.

## 1.167 MachV.guide/CFG\_SAVE

CFG\_SAVE  
=====

This function saves a configuration (prefs) file. It takes one optional argument, a file name. If no file name, the current name is used.

CFG\_SAVE"ENVARC:MachV/MachV.prefs"  
Save the prefs file ENVARC:MachV/MachV.prefs.

## 1.168 MachV.guide/EXE\_AUTO

EXE\_AUTO  
=====

This function executes a macro at a specific time. It takes one to seven arguments. The first is the time, optionally then, either the date, or day(s) of the week. The standard AmigaDos wild cards ? and # may be used in these arguments.

EXE\_AUTO"17:35" ...more macro functions...  
Execute this macro at 5:35pm.

EXE\_AUTO"15:30,12-09-93" ...more macro functions...  
Execute this macro at 3:30pm on 12-09-93.

---

EXE\_AUTO"15:30,??-05-??" ...more macro functions...  
 Execute this macro at 3:30pm on the 5th of every month.

EXE\_AUTO"5:00,Mon" ...more macro functions...  
 Execute this macro at 5:00am on every Monday.

EXE\_AUTO"15:30,Mon,Wed,Fri" ...more macro functions...  
 Execute this macro at 3:30pm on every Monday, Wednesday and Friday.

EXE\_AUTO"+30" ...more macro functions...  
 Execute every 30 minutes.

EXE\_AUTO"" ...more macro functions...  
 Execute when MachV is first run.

See Auto Executing Macro.

## 1.169 MachV.guide/EXE\_CMD

EXE\_CMD  
 =====

This function runs a program. It takes one or two arguments.

EXE\_CMD"Run ProWrite"  
 Run the program "ProWrite"

EXE\_CMD"Packer20,PowerPack"  
 If the window or screen title is found, bring it to the front,  
 otherwise run the program Packer20.

EXE\_CMD"Run FinalCopy,Final Copy"  
 Run FinalCopy unless the screen titled "Final Copy" is open.

EXE\_CMD"\${shell}"  
 Environment variables may also be used.

See Executing Programs, and See Environment Variables.

## 1.170 MachV.guide/EXE\_AREXX\_COMMAND

EXE\_AREXX\_COMMAND  
 =====

This function eliminates the need for "rx" or "run rx" and also allows scripts with just MachV macros without "address MACHV\_REXX". It takes one or two arguments.

EXE\_AREXX\_COMMAND"test.rexx"

---

Execute the program test.rexx.

```
EXE_AREXX_COMMAND"test,results"
```

Execute the program test.mach (default extension .mach) and store any returned value in the environment variable "results".

See ARExx, and See Environment Variables.

## 1.171 MachV.guide/EXE\_AREXX\_STRING

```
EXE_AREXX_STRING
```

```
=====
```

This function will instruct ARExx to execute the first argument as an ARExx program. It takes one or two arguments.

```
AREXX_STRING"return time(hours),results"
```

Execute the ARExx function time(hours) and store the results in "results".

```
EXE_AREXX_COMMAND"test,results"
```

Execute the program test.mach (default extension .mach) and store any returned value in the environment variable "results".

See ARExx, and See Environment Variables.

## 1.172 MachV.guide/EXE\_SETMACH

```
EXE_SETMACH
```

```
=====
```

This function runs SetMachV. It takes no arguments. If SetMachV is already running, it will be brought to the front.

```
EXE_SETMACH
```

See SetMachV.

## 1.173 MachV.guide/MAC\_SELECT\_NAMED

```
MAC_SELECT_NAMED
```

```
=====
```

This function opens a list box to select a macro name from and executes that macro. It takes one optional argument.

```
MAC_SELECT_NAMED"Macro Selection"
```

Open the list box. "Macro Selection" is the optional title, it replaces the default "Select A Name" title.

### 1.174 MachV.guide/MAC\_EXECUTE\_NAMED

MAC\_EXECUTE\_NAMED  
=====

This function executes a named macro. It takes one argument, the macro name.

```
MAC_EXECUTE_NAMED"zoom"  
    Execute a macro named "zoom".
```

### 1.175 MachV.guide/MAC\_FINISH

MAC\_FINISH  
=====

This function completes a word or phrase by executing a macro based on characters already typed that match a macro's name. It takes no arguments.

MAC\_FINISH

If you have a macro "Polyglot Software" (with quotes) with a name of "Polyglot" (without quotes) attached to the key <F1>, and you type Pol<F1>, then "yglot Software" will be typed out. In other words, it skips what you have already typed and then sends the rest of the macro as keystrokes. You may include special keys like "\N". The macro must be enclosed in quotes. The matching is case insensitive. It will attempt local then global macros.

### 1.176 MachV.guide/MAC\_MACROS

MAC\_MACROS  
=====

This function turns all macros on and off. It takes one argument.

```
MAC_MACROS"Tog"  
    Toggle macros on or off.
```

```
MAC_MACROS"Off"  
    Turn macros off.
```

```
MAC_MACROS"On"
```

Turn macros on.

You must use the same hotkey to enable macros. You cannot depend on "Hold Qualifier" to add the appropriate qualifiers when enabling macros.

### 1.177 MachV.guide/MAC\_RECORD\_KEYED

MAC\_RECORD\_KEYED  
=====

This function starts or stops macro recording. It takes no arguments.

MAC\_RECORD\_KEYED

See Recording Macros.

### 1.178 MachV.guide/MAC\_RECORD\_NAMED

MAC\_RECORD\_NAMED  
=====

This function starts or stops macro recording to a named macro. It takes no arguments.

MAC\_RECORD\_NAMED

See Recording Macros.

### 1.179 MachV.guide/MAC\_QUICK\_EDIT

MAC\_QUICK\_EDIT  
=====

This function opens a window to edit a macro. It takes no arguments.

MAC\_QUICK\_EDIT

See Quick Edit.

### 1.180 MachV.guide/MAC\_DELETE

---

MAC\_DELETE  
=====

This function deletes a macro. It takes one optional argument, a macro name. If no name is provided, this function will delete the macro that contains it. Deletion occurs after the entire macro has executed.

MAC\_DELETE  
Delete this macro.

MAC\_DELETE"Temp"  
Delete a macro named "Temp"

### 1.181 MachV.guide/MOU\_LBD

MOU\_LBD  
=====

These functions simulate left button down and up.

MOU\_LBD  
Send a left button down.

MOU\_LBU  
Send a left button up.

### 1.182 MachV.guide/MOU\_MBD

MOU\_MBD  
=====

These functions simulate middle button down and up.

MOU\_MBD  
Send a middle button down.

MOU\_MBU  
Send a middle button up.

### 1.183 MachV.guide/MOU\_RBD

MOU\_RBD  
=====

These functions simulate right button down and up.

---

MOU\_RBD  
Send a right button down.

MOU\_RBU  
Send a right button up.

### 1.184 MachV.guide/MOU\_XY

MOU\_XY  
=====

This function moves the mouse to the specified x/y coordinates. It takes two arguments.

MOU\_XY"xxx,yyy" Move the mouse to xxx,yyy.

### 1.185 MachV.guide/MOU\_OFF

MOU\_OFF  
=====

This function sets the number of seconds to wait for the mouse pointer to turn off. It takes one argument.

MOU\_OFF"4"  
Set "Mouse Off" to 4 seconds.

### 1.186 MachV.guide/MOU\_SPEED

MOU\_SPEED  
=====

This function sets the mouse accelerator. It takes one argument, a value in the range of -9 to 9. 0 disables the accelerator.

MOU\_SPEED"-3"  
Set "Mouse Speed" to -3.

### 1.187 MachV.guide/MOU\_THRESHOLD

MOU\_THRESHOLD  
=====

---

This function sets the mouse thrshold. It takes one argument, a value in the range of 0 to 9.

```
MOU_THRESHOLD"5"  
    Set "Mouse Threshold" to 5.
```

## 1.188 MachV.guide/MOU\_SUNMOUSE

```
MOU_SUNMOUSE  
=====
```

This function turns the SunMouse on and off. It takes one argument.

```
MOU_SUNMOUSE"Tog"  
    Toggle the SunMouse on or off.
```

```
MOU_SUNMOUSE"Off"  
    Turn the SunMouse off.
```

```
MOU_SUNMOUSE"On"  
    Turn the SunMouse on.
```

## 1.189 MachV.guide/MOU\_TO\_MENU

```
MOU_TO_MENU  
=====
```

This function turns Mouse To Menu on and off. It takes one argument.

```
MOU_TO_MENU"Tog"  
    Toggle "Mouse To Menu" on or off.
```

```
MOU_TO_MENU"Off"  
    Turn "Mouse To Menu" off.
```

```
MOU_TO_MENU"On"  
    Turn "Mouse To Menu" on.
```

## 1.190 MachV.guide/MOU\_FREEZE\_VERT

```
MOU_FREEZE_VERT  
=====
```

This function turns the freezing of vertical mouse on and off. It takes one argument.

```
MOU_FREEZE_VERT"Tog"
```

---

Toggle freezing of vertical mouse movements.

```
MOU_FREEZE_VERT"On"  
    Freeze vertical mouse movements.
```

```
MOU_FREEZE_VERT"Off"  
    Unfreeze vertical mouse movements.
```

### 1.191 MachV.guide/MOU\_FREEZE\_HORZ

```
MOU_FREEZE_HORZ  
=====
```

This function turns the freezing of horizontal mouse on and off. It takes one argument.

```
MOU_FREEZE_HORZ"Tog"  
    Toggle freezing of horizontal mouse movements.
```

```
MOU_FREEZE_HORZ"On"  
    Freeze horizontal mouse movements.
```

```
MOU_FREEZE_HORZ"Off"  
    Unfreeze horizontal mouse movements.
```

### 1.192 MachV.guide/MSC\_FREEZE\_KEYS

```
MSC_FREEZE_KEYS  
=====
```

This function locks out keyboard input. It takes one argument, 'On', 'Off' or 'Tog'.

```
MSC_FREEZE_KEYS"Tog"  
    Toggle keyboard input on or off.
```

```
MSC_FREEZE_KEYS"Off"  
    Keyboard input off.
```

```
MSC_FREEZE_KEYS"On"  
    Keyboard input on.
```

See MOU\_FREEZE\_VERT.

See MOU\_FREEZE\_HORZ.

### 1.193 MachV.guide/MSC\_BEEP

---

MSC\_BEEP  
=====

This function produces a beep. It takes two optional arguments, the number of beeps, and the volume (range 0-64).

MSC\_BEEP"3,64"  
Produce 3 beeps at full volume.

See MSC\_LOAD\_BEEP, for loading a new beep sound file.

## 1.194 MachV.guide/MSC\_LOAD\_BEEP

MSC\_LOAD\_BEEP  
=====

This function loads a new beep sound file. It takes one argument, the path and name of an IFF sound file.

MSC\_LOAD\_BEEP"ENVARC:MachV/vibra.8SVX"  
Load the beep sound file 'vibra.8SVX'.

See Beep, for more information.

## 1.195 MachV.guide/MSC\_BLANK\_SCREEN

MSC\_BLANK\_SCREEN  
=====

This function blanks the screen. It takes two optional arguments, the screen dimness and splines on/off switch. If either is supplied, it will change the previous setting.

MSC\_BLANK\_SCREEN  
Blank the screen. Use dimness as set in Miscellaneous Features.

MSC\_BLANK\_SCREEN"0"  
Blank completely black.

MSC\_BLANK\_SCREEN"0,on"  
Blank completely black and turn on splines.

MSC\_BLANK\_SCREEN"0,off"  
Blank completely black and turn off splines.

MSC\_BLANK\_SCREEN"4"  
Blank at dimness of 4.

See Screen Blanking.

---

## 1.196 MachV.guide/MSC\_CHG\_DIR

MSC\_CHG\_DIR  
=====

This function changes the current directory. It takes one argument, the directory to change to. Some programs require that you be in a specific directory before executing the program. With this, you may do so temporarily.

```
MSC_CHG_DIR"dh0:games"  
    Change to dh0:Games.
```

Example:

```
MSC_CHG_DIR"dh0:games/arcade" EXE_CMD"Run SuperActionGame"
```

See EXE\_CMD.

## 1.197 MachV.guide/MSC\_PRIORITY

MSC\_PRIORITY  
=====

This function changes the priority of MachV until the end of the macro. Programs executed in the same macro after changing the priority will have the new priority. After the macro is completed, the original priority for MachV will be restored.

```
MSC_PRIORITY"3"  
    Change to priority of 3.
```

Example:

```
MSC_PRIORITY"4" EXE_CMD"run myapplication"
```

The priority of myapplication will be 4.

## 1.198 MachV.guide/MSC\_DEBUG

MSC\_DEBUG  
=====

This function turns debugging on and off. It takes one argument.

```
MSC_DEBUG"Tog"  
    Turn debugging on or off.
```

```
MSC_DEBUG"Off"  
    Turn debugging off.
```

---

MSC\_DEBUG"On"

Turn debugging on.

When debugging is on, any macro that has a misspelled function or for any reason fails will run SetMachV and place the cursor on the offending function.

See Debug.

## 1.199 MachV.guide/MSC\_GAMEPORT

MSC\_GAMEPORT

=====

This function turns gameport monitoring on and off. It takes one required argument and one optional argument.

MSC\_GAMEPORT"Tog"

Turn gameport monitoring on or off.

MSC\_GAMEPORT"Off"

Turn gameport monitoring off.

MSC\_GAMEPORT"On,8"

Turn gameport monitoring on using 8 directions.

Valid macro names that will get executed are:

|             |         |              |
|-------------|---------|--------------|
|             | JoyUp   |              |
| JoyUpLeft   |         | JoyUpRight   |
| JoyLeft     |         | JoyRight     |
| JoyDownLeft |         | JoyDownRight |
|             | JoyDown |              |

Also, the names JoyFire1, JoyFire2, and JoyFire3 are used for the fire buttons.

## 1.200 MachV.guide/MSC\_HOLD\_QUALS

MSC\_HOLD\_QUALS

=====

This function turns "Hold Qualifiers" on and off. It takes one argument.

MSC\_HOLD\_QUALS"Tog"

Turn "Hold Qualifiers" on or off.

MSC\_HOLD\_QUALS"Off"

Turn "Hold Qualifiers" off.

MSC\_HOLD\_QUALS"On"

Turn "Hold Qualifiers" on.

See Hold Qualifiers.

## 1.201 MachV.guide/MSC\_PUTMSG

MSC\_PUTMSG

=====

This function sends a message to a port. It takes upto four arguments.

1. Port name. The name (case sensitive) of the destination port.
2. The message class.
3. The message code.
4. The message qualifiers.

MSC\_PUTMSG"blanker,400,45,0"

Send a RAWKEY message to a port named "blanker". The values are in hex. The function actually simulates an IntuiMessage.

You will probably never need this function, but is provided for those rare occasions.

See MSC\_PUTMSG\_AREXX, and also see WIN\_SEND\_OTHER.

## 1.202 MachV.guide/MSC\_PUTMSG\_AREXX

MSC\_PUTMSG\_AREXX

=====

This function sends a message to an ARexx port. It takes upto 3 arguments.

1. Port name. The name (case sensitive) of the destination port.
2. The ARexx command.
3. Optional results variable.

MSC\_PUTMSG\_AREXX"rexx\_ced,cedtofront"

This sends a 'to front' command directly to the CED ARexx port.

See Sending Commands To An ARexx Port.

---

### 1.203 MachV.guide/MSC\_QUIT

MSC\_QUIT  
=====

This function terminates MachV. It takes no arguments.

MSC\_QUIT  
Tell MachV to quit.

### 1.204 MachV.guide/MSC\_SET\_FLAGS

MSC\_SET\_FLAGS  
=====

This function sets (or clears) various macro flags. It takes two or three arguments.

1. The flag to set or clear. See below.
2. The name of the macro.
3. 0 to clear the flags.

MSC\_SET\_FLAGS"80,#?,0"  
Clears the 'Write Protect' flag in all macros.

The flags are:

- \* 80 = Write Protect
- \* 40 = Disable
- \* 20 = Temporary
- \* 10 = Relative
- \* 08 = Gadget
- \* 04 = Non recursive
- \* 02 = Global

See Flags.

### 1.205 MachV.guide/MSC\_SPEAK

---

MSC\_SPEAK  
=====

This function turns message speaking on and off. It takes one argument.

MSC\_SPEAK"Tog"  
Turn the speaking on or off.

MSC\_SPEAK"Off"  
Turn the speaking off.

MSC\_SPEAK"On"  
Turn the speaking on.

## 1.206 MachV.guide/MSC\_STATUS

MSC\_STATUS  
=====

This function checks the condition of various flags. It takes one argument, a status flag. It can be called only from ARexx. Result is "1" if the status is true.

MSC\_STATUS"7" Check to see if the clock is on.

See MachV Status, for all flags.

## 1.207 MachV.guide/MSC\_SUSPEND

MSC\_SUSPEND  
=====

This function suspends MachV. It takes no arguments.

MSC\_SUSPEND Suspend MachV.

See Suspend.

\*Note\*

You must use the same hotkey to un-suspend MachV.

## 1.208 MachV.guide/MSC\_TRACE

---

MSC\_TRACE  
=====

This function turns tracing on and off. It takes two arguments.

MSC\_TRACE"Tog,S"  
Toggle serial tracing.

MSC\_TRACE"Tog,C"  
Toggle console tracing.

MSC\_TRACE"off,S"  
Serial tracing off.

MSC\_TRACE"off,C"  
Console tracing off.

MSC\_TRACE"on,S"  
Serial tracing on.

MSC\_TRACE"on,C"  
Console tracing on.

See Trace.

## 1.209 MachV.guide/PAU\_SECONDS

PAU\_SECONDS  
=====

This function pauses for the specified number of seconds. Whole seconds and tenths are allowed. MachV stops functioning during this time.

PAU\_SECONDS"n.n"  
Pause for n.n seconds.

## 1.210 MachV.guide/PAU\_FIX\_INPUT

PAU\_FIX\_INPUT  
=====

This function pauses for a fixed number of keystrokes. It has one argument, the number of keystrokes.

PAU\_FIX\_INPUT"3"  
Pause for 3 keystrokes.

---

## 1.211 MachV.guide/PAU\_VAR\_INPUT

PAU\_VAR\_INPUT  
=====

This function pauses for a variable number of keystrokes. It has two optional arguments, the key to terminate input (in hex) and a variable to store the input in. Default termination key is <ESC>, hex 45.

PAU\_VAR\_INPUT",varname"  
Pause for keystrokes until <ESC> is typed, then store input in varname. See Environment Variables.

PAU\_VAR\_INPUT"44"  
Pause for keystrokes until <Return> is typed (hex 44).

## 1.212 MachV.guide/SCR\_BACK\_TO\_FRONT

SCR\_BACK\_TO\_FRONT  
=====

This function sends the back screen to the front. It takes no arguments.

SCR\_BACK\_TO\_FRONT  
Send the back screen to the front.

## 1.213 MachV.guide/SCR\_TO\_FRONT

SCR\_TO\_FRONT  
=====

This function sends the titled screen to the front. It takes one argument, a title. AmigaDos wildcards are ok.

SCR\_TO\_FRONT"Workbench"  
Send the Workbench screen to the front.

## 1.214 MachV.guide/SCR\_FRONT\_TO\_BACK

SCR\_FRONT\_TO\_BACK  
=====

This function sends the front screen to the back. It takes no arguments.

---

SCR\_FRONT\_TO\_BACK

Send the front screen to the back.

## 1.215 MachV.guide/SCR\_TO\_BACK

SCR\_TO\_BACK

=====

This function sends the titled screen to the back. It takes one argument, a title. AmigaDos wildcards are ok.

SCR\_TO\_BACK"Workench"

Send the Workench screen to the back.

## 1.216 MachV.guide/SCR\_WB\_TO\_FRONT

SCR\_WB\_TO\_FRONT

=====

This function sends the Workbench screen to the front. It takes no arguments.

SCR\_WB\_TO\_FRONT

Send Workbench screen to the front.

## 1.217 MachV.guide/SCR\_WB\_TO\_BACK

SCR\_WB\_TO\_BACK

=====

This function sends the Workbench screen to the back. It takes no arguments.

SCR\_WB\_TO\_BACK

Send Workbench screen to the back.

## 1.218 MachV.guide/SCR\_SELECT\_SCREEN

SCR\_SELECT\_SCREEN

=====

This function opens a list box of available screens. It takes one optional argument, a title for the list box. When a screen is selected,

---

it will be brought to the front.

SCR\_SELECT\_SCREEN

Open a list box to select a screen from. Use the default list box title "Select A Screen".

SCR\_SELECT\_SCREEN"Kill Screen?"

Open a list box to select a screen from. Use the list box title "Kill Screen?"

## 1.219 MachV.guide/SCR\_KILL\_SCREEN

SCR\_KILL\_SCREEN

=====

SCR\_KILL\_SCREEN

Request confirmation then close the front screen. USE WITH CAUTION! Some programs in some situations do not close their custom screen when they terminate. With this function, you can close it, but the system may crash if the program still expects to have its screen!

## 1.220 MachV.guide/SET\_DATE\_FORMAT

SET\_DATE\_FORMAT

=====

This function sets the date format to use. It takes 1 argument.

DOS

File system format. 18-Feb-92

INT

International. 92-02-18

USA

United States. 02-18-92

CDN

Canadian. 18-02-92

SET\_DATE\_FORMAT"INT"

Set date format to INT (international).

## 1.221 MachV.guide/SET\_DATE\_SEPARATOR

SET\_DATE\_SEPARATOR  
=====

This function sets the separator character. It takes 1 argument.

SET\_DATE\_SEPARATOR"/"  
Set the separator character to /. "-" is default. e.g. 01-01-92

## 1.222 MachV.guide/SET\_NO\_LAYER

SET\_NO\_LAYER  
=====

This function sets the window titles that you do not want layered with the function WIN\_LAYER\_WINDOWS.

SET\_NO\_LAYER"Workbench,MachV"  
Set the titles Workbench and MachV so that WIN\_LAYER will not affect them. Maximum of 10 titles of 10 characters each.

## 1.223 MachV.guide/SET\_PASSWORD

SET\_PASSWORD  
=====

You may set the screen unblinking password with this function. Normally you set it in the Miscellaneous Features window. If set, the password will be required before the screen will unblank.

Example:

Set\_Password"foo" Msc\_Blank\_Screen

Sets the password to "foo" and blanks the screen.

See Password.

## 1.224 MachV.guide/SET\_MOUSE\_PORT

SET\_MOUSE\_PORT  
=====

This function sets which port to use for the mouse. It takes 1 optional argument, the port number 0 or 1.

SET\_MOUSE\_PORT"1"

---

Set mouse port to port 1.

```
SET_MOUSE_PORT"0"
```

Set mouse port to port 0.

```
SET_MOUSE_PORT
```

Toggle the mouse port.

## 1.225 MachV.guide/SET\_TASK\_PRIORITY

```
SET_TASK_PRIORITY
```

```
=====
```

This function sets the priority of a task. It takes 2 arguments, a task name and a priority.

```
SET_TASK_PRIORITY"MyApp,1"
```

Set the priority of a "MyApp" to 1.

Task names can be found by clicking on "Select Title" in SetMachV.

## 1.226 MachV.guide/SET\_VARIABLE

```
SET_VARIABLE
```

```
=====
```

This function sets an environment variable. It takes 2 required arguments and 1 optional argument.

1. Variable name.
2. The value to set it to.
3. Optional flags.

```
SET_VARIABLE"file,test.c,100"
```

Sets the global environment variable 'file' to 'test.c'. The optional '100' indicates global.

The optional flags are the hexadecimal numbers:

```
0
  Local then global

100
  Global

200
  Local
```

1000

Save Variable to ENVARC:

```
SET_VARIABLE"fname,readme,1100"
```

This sets the global variable fname to 'readme' and saves it to ENVARC:

## 1.227 MachV.guide/TXT\_TIME\_PASTE

TXT\_TIME\_PASTE

=====

This function pastes the current time. It has 2 optional arguments.

TXT\_TIME\_PASTE

Paste (send as keystrokes) the current time.

```
TXT_TIME_PASTE"am,pm"
```

The optional time function arguments "am,pm" cause the argument text to follow the time. If the time is before noon, the first argument will be sent otherwise the second is sent. This text may be anything upto 80 characters. Example: TXT\_TIME\_PASTE" ante meridiem, post meridiem"

## 1.228 MachV.guide/TXT\_TIME\_PRINT

TXT\_TIME\_PRINT

=====

This function prints the current time. It has 2 optional arguments.

TXT\_TIME\_PRINT

Print the current time.

```
TXT_TIME_PRINT"am,pm"
```

The optional time function arguments "am,pm" cause the argument text to follow the time. If the time is before noon, the first argument will be sent otherwise the second is sent. This text may be anything upto 80 characters. Example: TXT\_TIME\_PRINT" ante meridiem, post meridiem"

## 1.229 MachV.guide/TXT\_DATE\_PASTE

TXT\_DATE\_PASTE

=====

This function pastes the current date. It has one optional argument,

"long", which causes the long form of the date to be used. The short form is the same as selected for the clock.

TXT\_DATE\_PASTE

Paste (send as keystrokes) the current date.

TXT\_DATE\_PASTE"long"

Paste the long form of the current date. Example: December 7, 1993

### 1.230 MachV.guide/TXT\_DATE\_PRINT

TXT\_DATE\_PRINT

=====

This function prints the current date. It has one optional argument, "long", which causes the long form of the date to be used. The short form is the same as selected for the clock.

TXT\_DATE\_PRINT

Print the current date.

TXT\_DATE\_PRINT"long"

Print the long form of the current date. Example: December 7, 1993

### 1.231 MachV.guide/WIN\_ACTIVATE

WIN\_ACTIVATE

=====

This function activates a window. It takes 1 argument, a window title, (AmigaDos wildcards ok, or 'A', 'T', or 'M').

WIN\_ACTIVATE"title" Activate the window by the title.

WIN\_ACTIVATE"M"

Activate the window under the mouse.

WIN\_ACTIVATE"T"

Activate the top window.

This function is often used after a SCR\_FRONT\_TO\_BACK and SCR\_BACK\_TO\_FRONT.

SCR\_BACK\_TO\_FRONT WIN\_ACTIVATE"T"

### 1.232 MachV.guide/WIN\_ACTIVATE\_NEXT

---

WIN\_ACTIVATE\_NEXT  
=====

This function activates the next window in the list maintained by the operating system. It is often used to cycle through all windows. It can take 1 argument, a window title (AmigaDos wildcards ok). Examples:

WIN\_ACTIVATE\_NEXT  
    Activate the next window.

WIN\_ACTIVATE\_NEXT"~(MachV#?)"  
    This will activate the next window that does not begin with a title 'MachV'.

WIN\_ACTIVATE\_NEXT"~(Csh#?|Workbench#?)"  
    This will exclude any window with a title beginning with 'Csh' or 'Workbench'.

WIN\_ACTIVATE\_NEXT"(GNU#?|Csh#?|Workb#?)"  
    This will activate only windows that begin with 'GNU', 'Csh' or 'Workb'.

\*Note\*

A window with no title pointer (w->Title == NULL) will match no matter what your pattern is.

### 1.233 MachV.guide/WIN\_TO\_FRONT

WIN\_TO\_FRONT  
=====

This function brings a window to the front. It takes 1 argument, a window title, (AmigaDos wildcards ok, or 'A', 'T', or 'M').

WIN\_TO\_FRONT"title"  
    Move the titled window to the front.

WIN\_TO\_FRONT"A"  
    Move the active window to the front.

WIN\_TO\_FRONT"M"  
    Move the window under the mouse to the front.

### 1.234 MachV.guide/WIN\_TO\_BACK

WIN\_TO\_BACK  
=====

This function sends a window to the back. It takes 1 argument, a window title, (AmigaDos wildcards ok, or 'A', 'T', or 'M').

WIN\_TO\_BACK"title"

Move the titled window to the back.

WIN\_TO\_BACK"A"

Move the active window to the back.

WIN\_TO\_BACK"T"

Move the top window to the back.

WIN\_TO\_BACK"M"

Move the window under the mouse to the back.

### 1.235 MachV.guide/WIN\_BACK\_TO\_FRONT

WIN\_BACK\_TO\_FRONT

=====

This function sends the back window to the front. There are no arguments.

WIN\_BACK\_TO\_FRONT

Move the back window to the front.

### 1.236 MachV.guide/WIN\_FRONT\_TO\_BACK

WIN\_FRONT\_TO\_BACK

=====

This function sends the front window to the back. There are no arguments.

WIN\_FRONT\_TO\_BACK

Move the front window to the back.

### 1.237 MachV.guide/WIN\_MOVE\_WINDOW

WIN\_MOVE\_WINDOW

=====

This function moves a window. It takes 3 arguments:

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M').
2. X position or a change if +/-.

3. Y position or a change if +/-.

```
WIN_MOVE_WINDOW"title,40,10"
```

Move titled window to 40x, 10y. Use +0 to not move.

```
WIN_MOVE_WINDOW"title,+10,-20"
```

Move titled window left 10 pixels and up 20.

```
WIN_MOVE_WINDOW"A,0,20"
```

Move active window to 0x, 20y.

```
WIN_MOVE_WINDOW"A,+0,+30"
```

Move active window down 30 pixels. do not move horizontally.

## 1.238 MachV.guide/WIN\_LAYER

```
WIN_LAYER
```

```
=====
```

This function arranges all windows into layers. It takes no arguments.

```
WIN_LAYER
```

Layer all windows on the screen.

See SET\_NO\_LAYER.

## 1.239 MachV.guide/WIN\_SIZE\_WINDOW

```
WIN_SIZE_WINDOW
```

```
=====
```

This function sizes a window. It takes 3 arguments:

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M').
2. Width or a change if +/-.
3. Height or a change if +/-.

```
WIN_SIZE_WINDOW"title,640,200"
```

Size titled window to 640x200.

```
WIN_SIZE_WINDOW"A,+10,-20"
```

Increase width of the active window by 10 and decrease height by 20 .

## 1.240 MachV.guide/WIN\_CHANGE\_WINDOW

WIN\_CHANGE\_WINDOW  
=====

This function changes the size and position of a window. It takes 5 arguments:

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M').
2. The left edge.
3. The top edge.
4. The width.
5. The height.

WIN\_CHANGE\_WINDOW"title,le,te,w,h"  
Move and size the titled window to position le = left edge, te = top edge, w = width, h = height.

WIN\_CHANGE\_WINDOW"A,le,te,w,h"  
Move and size the active window.

## 1.241 MachV.guide/WIN\_ZOOM\_WINDOW

WIN\_ZOOM\_WINDOW  
=====

This function zooms a window. It takes 1 argument, a window title, (AmigaDos wildcards ok, or 'A', 'T', or 'M').

WIN\_ZOOM\_WINDOW"title"  
Zoom the titled window.

WIN\_ZOOM\_WINDOW"A"  
Zoom the active window.

WIN\_ZOOM\_WINDOW"T"  
Zoom the top window.

## 1.242 MachV.guide/WIN\_SEND\_CLOSE

WIN\_SEND\_CLOSE  
=====

This function closes a window. It takes 1 argument, a window title, (AmigaDos wildcards ok, or 'A', 'T', or 'M').

---

WIN\_SEND\_CLOSE"title"  
Send Close gadget message to titled window.

WIN\_SEND\_CLOSE"A"  
Send Close gadget message to active window.

WIN\_SEND\_CLOSE"T"  
Send Close gadget message to top window.

### 1.243 MachV.guide/WIN\_SEND\_GADGET\_DOWN

WIN\_SEND\_GADGET\_DOWN  
=====

This function sends a gadget down message to a window. It takes 2 arguments, a window title (AmigaDos wildcards ok, or 'A', 'T', or 'M') and the gadget id number.

WIN\_SEND\_GADGET\_DOWN"A,7"  
Send gadget down message to active window gadget number 7.

WIN\_SEND\_GADGET\_DOWN"title,19"  
Send gadget down message to titled window gadget number 19.

### 1.244 MachV.guide/WIN\_SEND\_GADGET\_UP

WIN\_SEND\_GADGET\_UP  
=====

This function sends a gadget up message to a window. It takes 2 arguments, a window title (AmigaDos wildcards ok, or 'A', 'T', or 'M') and the gadget id number.

WIN\_SEND\_GADGET\_UP"A,34"  
Send gadget down message to active window gadget number 34.

WIN\_SEND\_GADGET\_UP"title,9"  
Send gadget down message to titled window gadget number 9.

### 1.245 MachV.guide/WIN\_SEND\_MENU

WIN\_SEND\_MENU  
=====

This function sends a menu selection message to a window. It takes 2, 3 or 4 arguments:

---

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M')
2. Menu item text. If no item text, this is the menu number.
3. Menu item number.
4. Menu subitem number.

WIN\_SEND\_MENU"A,Quit"

Find the menu item whose text matches "Quit" and send the appropriate menu message.

WIN\_SEND\_MENU"A,0,3,1"

Send a menu selection to active window, menu number 0, item number 3, subitem number 1 (optional).

WIN\_SEND\_MENU"title,0,2"

Send a menu selection to titled window, menu number 0, item number 2.

## 1.246 MachV.guide/WIN\_SEND\_OTHER

WIN\_SEND\_OTHER

=====

This function sends any other IDCMP message to a window. It takes 4 arguments:

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M')
2. Message class.
3. Message code.
4. Message qualifier.

WIN\_SEND\_OTHER"title,400,11,8"

Send <Ctrl-Q> IDCMP\_RAWKEY (400), key Q (11), control (8) to the titled window. All numeric arguments are in hex.

## 1.247 MachV.guide/WIN\_SELECT\_GADGET

WIN\_SELECT\_GADGET

=====

This function activates a string gadget in the active window. It takes no arguments.

WIN\_SELECT\_GADGET

Activate a string gadget in the active window.

---

## 1.248 MachV.guide/WIN\_SELECT\_WINDOW

WIN\_SELECT\_WINDOW  
=====

This function opens a list box of all windows on a screen. It has 1 optional argument, a title for the list box.

When a window is selected, it will be made active. You may then perform some other action on it such as bringing it to the front.

WIN\_SELECT\_WINDOW

Open the select list box. Use default list box title "Select A Window".

WIN\_SELECT\_WINDOW"All Windows"

Open the select list box. Use the title "All Windows" in the list box.

## 1.249 MachV.guide/WIN\_WAIT\_WINDOW

WIN\_WAIT\_WINDOW  
=====

This function waits for a window to open. It has 1 required argument and 3 optional arguments.

1. Window title (AmigaDos wildcards ok, or 'A', 'T', or 'M').
2. U = Wait for UserPort to be set.
3. M = Wait for menustrip to be set.
4. Maximum number of seconds to wait (1 - 9 seconds).

WIN\_WAIT\_WINDOW"Title,U,M,4"

Wait for a window to become active. Then wait for user port 'U', menu strip 'M' and maximum of 4 seconds.

WIN\_WAIT\_WINDOW"Serial,U,,6"

Wait for a window to become active. Then wait for user port 'U' for a maximum of 6 seconds.

## 1.250 MachV.guide/WIN\_WINDOW\_OPEN

---

WIN\_WINDOW\_OPEN  
=====

This function is tests to see if a window is open. It is executed only from ARExx.

WIN\_WINDOW\_OPEN"Title"

Test to see if a window is open. This returns a '1' in the ARExx variable RESULT if the window is open.

## 1.251 MachV.guide/Escape Characters

Escape Characters

\*\*\*\*\*

Note that all are upper case except the arrow keys and Enter.

Function Keys

|     |                |     |                |      |                 |
|-----|----------------|-----|----------------|------|-----------------|
| \F1 | Function key 1 | \F4 | Function key 4 | \F7  | Function key 7  |
| \F2 | Function key 2 | \F5 | Function key 5 | \F8  | Function key 8  |
| \F3 | Function key 3 | \F6 | Function key 6 | \F9  | Function key 9  |
|     |                |     |                | \F10 | Function key 10 |

Numeric Keypad Keys

|    |                  |    |                  |     |                   |
|----|------------------|----|------------------|-----|-------------------|
| \1 | Numeric Keypad 1 | \4 | Numeric Keypad 4 | \7  | Numeric Keypad 7  |
| \2 | Numeric Keypad 2 | \5 | Numeric Keypad 5 | \8  | Numeric Keypad 8  |
| \3 | Numeric Keypad 3 | \6 | Numeric Keypad 6 | \9  | Numeric Keypad 9  |
|    |                  |    |                  | \10 | Numeric Keypad 10 |

\e Numeric Keypad ENTER

The following are for the usa keymap. For other keymaps use the character on the keycap.

|    |                  |    |                  |
|----|------------------|----|------------------|
| \- | Numeric Keypad - | \* | Numeric Keypad * |
| \( | Numeric Keypad ( | \/ | Numeric Keypad / |
| \) | Numeric Keypad ) | \. | Numeric Keypad . |
| \+ | Numeric Keypad + |    |                  |

Other Special Keys

|    |                  |    |             |
|----|------------------|----|-------------|
| \B | Backspace        | \u | Up Arrow    |
| \D | Delete           | \d | Down Arrow  |
| \E | Escape           | \l | Left Arrow  |
| \H | Help             | \r | Right Arrow |
| \N | Return (Newline) |    |             |
| \T | Tab              |    |             |
| \  | Backslash        |    |             |

Qualifier Keys

|    |           |
|----|-----------|
| \A | Alternate |
| \C | Control   |

```
\S Shift
\L Left Amiga
\R Right Amiga
```

## 1.252 MachV.guide/Common Questions

### Common Questions

\*\*\*\*\*

Q Why can't I close my CLI window after running MachV?

Use `Run >nil: MachV`. This will allow the CLI window to close.

Q Why does MachV stop functioning after I run an application from a `EXE_CMD"program"` macro?

Unless you use `"Run"` in the macro, MachV will wait for the application to terminate. You should use something like `EXE_CMD"Run MyProgram"`.

Q I can't drag select text or gadgets with the left mouse button?

`Click To Front` is probably set to 1. Try another value.

Q Why does my application crash when I run it from the NewShell or from an `EXE_CMD""` macro?

Programs executed with `EXE_CMD` (such as NewShell) will have a stack the size that was set when MachV was run. These and ones that you may run from a new shell may need a larger stack. Either set the stack before running MachV, or after you create a NewShell use the `stack` command to set your stack to a larger value. The default stack size is 4000. Many programs need 10000 or more.

Q Why does my `EXE_CMD` function return an error code?

If you are trying to start a program from a macro and you have entered the command as you normally would type it from the shell, the problem is often embedded quotes, commas or backslashes. For example, use:

```
EXE_CMD"echo > speak: \"time for lunch\", now!\""
```

Not:

```
EXE_CMD"echo > speak: "time for lunch, now!""
```

An error code is also returned if the program cannot be found. It is often helpful to turn `"Speak Messages"` and `"Debug"` on when trying to locate these problems.

Q Why am I in the `c:` directory when I create a New Shell?

MachV's current directory is the one that was current when MachV

was run. If you bring up a New Shell and find yourself in the c: directory for example, it is because that was the current directory when MachV was run. You probably did a "cd c:" somewhere before running MachV.

Q Why does the NewShell function start in wb\_2.x:WBStartup?

You started MachV from this directory. In order to start a new shell with a current directory other than that, enter in your s:shell-startup file the command "cd Work:" or whatever is the directory that you wish to be current.

Q Why am I getting a Close Screen Vector message?

MachV replaces the CloseScreen vector with one that will allow MachV to close its clock and other windows. If another program also replaced the vector, you will be given the opportunity to terminate that program before the original vector is replaced. If you get a requester with the message Close Screen Vector Was Changed!, either terminate the program that changed the vector and click Retry or just click Cancel.

Q How can I display only the total memory in the clock?

You can fool the clock into displaying your total memory even if you have fast ram. In your startup-sequence, turn off your fast ram with a command like "NoFastMem", run MachV, then run "NoFastMem" again.

## 1.253 MachV.guide/Some Useful Macros

Some Useful Macros

\*\*\*\*\*

The following are some macros that you might find useful. The suggested hotkeys may, of course, be changed to your own preferences.

-----  
 Attach this to <Ctrl-Amiga-A> to send Workbench the Show All Files menu selection.

WIN\_SEND\_MENU"A,All Files" or WIN\_SEND\_MENU"A,1,7,1"

or this multi-function macro:

WIN\_SEND\_MENU"A,All Files" | WIN\_SEND\_MENU"A,Only Icons"

-----  
 Attach this to <Ctrl-Amiga-Q> to close the active window.

WIN\_SEND\_CLOSE"A"

-----  
 Attach this to an easy to remember key to start your word processor.



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## 1.255 MachV.guide/Index

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| SET_VARIABLE         | Environment Variables                  |
| SET_VARIABLE         | SET_VARIABLE                           |
| TXT_DATE_PASTE       | TXT_DATE_PASTE                         |
| TXT_DATE_PRINT       | TXT_DATE_PRINT                         |
| TXT_TIME_PASTE       | TXT_TIME_PASTE                         |
| TXT_TIME_PRINT       | TXT_TIME_PRINT                         |
| WIN_ACTIVATE         | WIN_ACTIVATE                           |
| WIN_ACTIVATE_NEXT    | WIN_ACTIVATE_NEXT                      |
| WIN_BACK_TO_FRONT    | WIN_BACK_TO_FRONT                      |
| WIN_CHANGE_WINDOW    | Moving and Sizing                      |
| WIN_CHANGE_WINDOW    | WIN_CHANGE_WINDOW                      |
| WIN_FRONT_TO_BACK    | WIN_FRONT_TO_BACK                      |
| WIN_KILL_WINDOW      | Killing                                |
| WIN_LAYER            | Organizing                             |
| WIN_LAYER            | WIN_LAYER                              |
| WIN_MOVE_WINDOW      | Moving and Sizing                      |
| WIN_MOVE_WINDOW      | WIN_MOVE_WINDOW                        |
| WIN_SELECT_GADGET    | Selecting String Gadgets               |
| WIN_SELECT_GADGET    | WIN_SELECT_GADGET                      |
| WIN_SELECT_WINDOW    | WIN_SELECT_WINDOW                      |
| WIN_SELECT_WINDOW    | Selecting Windows                      |
| WIN_SEND_CLOSE       | WIN_SEND_CLOSE                         |
| WIN_SEND_CLOSE       | Sending IDCMP Messages                 |
| WIN_SEND_GADGET_DOWN | WIN_SEND_GADGET_DOWN                   |
| WIN_SEND_GADGET_DOWN | Sending IDCMP Messages                 |
| WIN_SEND_GADGET_UP   | Sending IDCMP Messages                 |

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| WIN_SEND_GADGET_UP | WIN_SEND_GADGET_UP    |
| WIN_SEND_MENU      | Sending ICMP Messages |
| WIN_SEND_MENU      | Multi-Function Macros |
| WIN_SEND_MENU      | WIN_SEND_MENU         |
| WIN_SEND_OTHER     | WIN_SEND_OTHER        |
| WIN_SIZE           | Multi-Function Macros |
| WIN_SIZE_WINDOW    | Moving and Sizing     |
| WIN_SIZE_WINDOW    | WIN_SIZE_WINDOW       |
| WIN_TO_BACK        | WIN_TO_BACK           |
| WIN_TO_FRONT       | Window Titles         |
| WIN_TO_FRONT       | WIN_TO_FRONT          |
| WIN_WAIT_WINDOW    | Window Waiting        |
| WIN_WAIT_WINDOW    | WIN_WAIT_WINDOW       |
| WIN_WINDOW_OPEN    | Window Open           |
| WIN_WINDOW_OPEN    | WIN_WINDOW_OPEN       |
| WIN_ZOOM_WINDOW    | Zooming               |
| WIN_ZOOM_WINDOW    | Helpful Hints         |
| WIN_ZOOM_WINDOW    | WIN_ZOOM_WINDOW       |

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