RAVE 99

"99/4A Products to Rave About"

MODEL MX01

MACRO LOADER

INSTALLATION AND OPERATING MANUAL

C O P Y R I G H T

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INTRODUCTION

The RAVE 99 MX01 Keyboard MACRO Loader program allows multiple key
presses to be defined as a group or "MACRO". This MACRO is
associated with a "single" keypress, which, when pressed, causes
the keypresses defined in the group to be sent to the computer as
if they were being typed one at a time.

Typical use for a MACRO would be to define the printer setup of
your printer. The string "RS232.BA=4800.DA=8" could be defined as
MACRO "Control-P". Whenever "Control-P" is pressed, the above
string would be sent to the computer. It may now be clear as to the
power of this system.

The Keyboard MACRO's are active on any E/A 5 type program "LOADED"
using the MACRO LOADER. Programs of this type include TI-WRITER
and Editor. Keyboard MACRO's are NOT available in BASIC or Extended
BASIC.

Once a MACRO is loaded into memory, it is retained even when the
power is turned Off because of the memory protection provided by
the MX01 Memory Enhancement System. MACRO's may be SAVED and LOADED
from disk so that custom MACRO's may be defined for different
programs. The file MAC/SAMPLE contains a set of MACRO's for
demonstration purposes.

Requirements

To use the MX01 Keyboard MACRO Loader you need:

    a) TI-99/4A console and TV or monitor.

    b) 99/4A Perpherial Expansion System (PEB).

    c) TI compatible Disk controller card.

    d) At least one floppy disk drive.

    e) The following Command Modules:

        TI Extended BASIC

        Editor/Assembler

    f) MX01 Memory Enhancement System

    g) MX01 RAMDISK SOFTWARE

    h) MX01 RAVE_OS SOFTWARE

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"MACRO LOADER"

The MACRO LOADER is the program which reads in the E/A type 5 files
and modifies them so that the key presses are checked to see if
they are MACRO's. Only programs loaded with the MACRO LOADER will
have the use of MACRO's.

The MACRO LOADER must be installed before program loading will take
place. This program is loaded into the backed-up memory and only
needs to be loaded once.

Installing the "MACRO LOADER"

The "MACRO LOADER" is normaly installed as part of the "LOADING"
sequence of the RAVE_OS Software. No other steps are required.
Should it become necessary to reload the this program, the steps
below load only the "MACRO LOADER". This reloading operation erases
all currently defined "MACRO's" in memory.

To install the MACRO LOADER, use the E/A Cartridge option #3. With
the MACRO's disk located in Drive #1, enter "DSK1.MACRO" then
enter. Press FUNCTION-9 twice to exit the E/A Cartridge. The MACRO
LOADER is now installed.

Load Programs onto the First RAMDISK

The MACRO LOADER always looks for programs to load from the first
MX01 RAMDISK drive. All programs that wish to use the MACRO LOADER
must therefore be copied onto the first RAMDISK drive. Refer to the
MX01 RAMDISK Manual if the RAMDISK software is not currently
installed.

"LOADING A PROGRAM using the "MACRO LOADER"

The Main menu screen of the RAVE_OS program allows loading of E/A
type 5 program with or without MACRO support. See figure 1.

Option 3 of the Main menu screen loads programs without searching
for keyboard MACRO's. This loader is similar to option 5 of the E/A
cartridge.

Option 4 of the Main menu screen loads programs using the MACRO
LOADER". Programs loaded with this option are modified to search
for "MACRO's" when key's are being pressed.

User program names in the RAVE_OS main menu screen may use either
loader when loading that program. An "M" near the program number
selects the MACRO LOADER. A "SPACE" uses the standard loader.
Pressing F7 with the program highlighted toggles loaders.

Programs may also be loaded using the "MACRO LOADER" from the
Directory Command of the Main menu screen. Pressing "R" during a
disk catalog loads the program highlighted in the directory. Refer
to the RAVE_OS manual for additional directory commands.

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FIGURE 1

RAVE_OS main menu screen

RAVE 99 Co.   V1.3

_____

_____
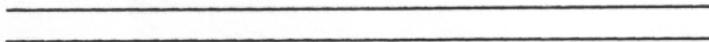
        [1]   Show Directory

        [2]   Display File

        [3]   Run Program, STD Loader

        [4]   Run Program, MACRO Loader

        [5]   Editor

        [6]   DM1000

        [7]   option 3

        [8]   option 4

        [9]   option 5

        [C]   TI EXTENDED BASIC

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"MACRO LOADER" WARNING

The "MACRO LOADER" must modify the program loaded into memory to
provide the necessary "HOOKS" required for the keyboard MACRO
operation. Under most circumstances, this doesn't present a problem
unless the program which was loaded has the ability to save it's
memory image. If it does, it will save away the "HOOKS" that were
made to the program when loaded. This will cause the program to
crash if used in a system without a MX01 card and MACRO software.
To avoid this, use the standard loader when "configuring" programs
which save their memory image.

"LOADING THE SAMPLE MACRO's"

After the MACRO LOADER is installed, the next step in using MACRO's
is to load them from file. MACRO's may be defined by the user to
meet specific requirements and the format for the creation of
MACRO's is discussed later in this manual. For now, lets load the
sample MACRO's supplied on disk with the file name MAC/SAMPLE. The
XB Keyboard Manager (MLOAD) is the program that performs this.

Select XB and type RUN "DSK1.MLOAD" . This RUNs Keyboard MACRO
Manager.

Select "1: Load Macros" from the option screen.

Type DSK1.MAC/SAMPLE to select the sample MACRO file. Notice the
screen while the MACRO's are loading into memory.

Select "5: Exit" to exit the Keyboard MACRO Manager.

At this point, the sample MACRO's have been loaded into memory. Go
to the Main menu screen and "press" 5 to select TI-Writer. Press
"E" to enter the edit mode. Press "CTRL-T. Notice that the string
"TI-99/4A" is displayed. Press "ENTER". Press "CTRL-P". This time
the printer setup for a serial printer is typed. Press "ENTER".
Press "CTRL-H". RAVE's address and telephone number is typed. Now
exit TI-Writer.

Select the directory from the main menu screen. Select the first
RAMDISK drive # which contains the MAC/SAMPLE file. Using the arrow
keys, highlight the MAC/SAMPLE filename. Press "CTRL-Q". Notice
that this MACRO string EXITS the directory, "LOADs" the editor
program, selects the LOAD FILE option, types in the filename
HIGHLIGHTED in the directory program, and "PRESSES" enter to LOAD
the file for editing. All of the above with 1 Keystroke.

The "filename" in the previous example was picked up as part of a
MAILBOX operation. Whenever the directory is exited, the filename
highlighted is moved to the MAILBOX. The MAILBOX is accessed from
the KEYBOARD MACRO definition by the string [$M]. Study the
MAC/SAMPLE file to see how they are defined.

Now that you understand Keyboard MACRO's better, the next section
describes the Keyboard MACRO Manager in greater detail.

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XB Keyboard MACRO Manager

The MLOAD file is the XB Keyborad Macro Manager. It allows the
MACRO's to be Listed, Created, Modified, Deleted, Loaded and Saved
to disk. It runs under TI Extended BASIC or MYARC XBII. In either
case, to use the program you must first have the MACRO LOADER file
loaded.

Loading the XB Keyboard MACRO Manager

Select Extended Basic or MYARC XBII from the TI Title Screen. With
the MACRO disk in drive 1, type RUN "DSK1.MLOAD" and enter. The
program shall start and display the XB Keyboard MACRO Manager menu
selections.

XB Keyboard MACRO Manager Menu

The Macro Manager has a main menu with five options:
1: Load Macros
2: Erase All Macros
3: List Macros
4: Modify Single Macro
5: Exit

LOADING MACROS

Option 1, Load Macros, will load a DIS/VAR 80 file from a device
name which you are prompted for. This file is expected to be in
the macro load format or all sorts of error messages will be
generated and the load terminated. The Load Macro option loads
macros into the current set of defined macros. If there is a macro
in the file that is already defined in memory, the one in the file
will over ride the one in memory. If you want to make sure there
are no macros currently in memory use option 2 (Erase All Macros,
explained below).

ERASING ALL MACRO's

Option 2, Erase All Macros, will simply delete all macros currently
stored in memory, to provide a clean slate to work from. It will
prompt for erase verification before erasing the macros.

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LISTING MACRO's

Option 3, List Macros, allows listing of all currently loaded macros.
A filename for output is prompted for. To output to the screen simply
press Enter. The program will list the macros to screen or the file
in the Macro Format File so that they may be later reloaded. Note
that a List Macro output file should not be edited in the TI-Writer
Editor as it may contain control and function codes that could be lost
during editing. If listing to the screen, output may be paused by
holding down the space bar. At the end of a macro listing a count of
the number of loaded macros is given for reference.

MODIFING SINGLE MACRO

Option 4, Modify Single Macro, provides a method to list, modify, and
delete an single macro. The command first prompts for the Keycode,
which is of the same format as in the Macro Format File. It will then
display the definition of that macro, if it is defined, or prompt for
creation of a new macro if it does not exist. If you choose to create
a new macro, you will procede to the Macro Editor, described below.
If the macro exists, the definition is displayed at the bottom of the
screen, and then a sub-menu:

SINGLE MACRO SUB-MENU

1: Modify Macro
2: Delete Macro
3: Return to Main Menu

Option 3 exits this command. Option 2 will delete the macro from the
current list, after verification. Option 1 will take you to the Macro
Editor with the current macro definition provided as a default.

MACRO EDITOR

The Macro Editor provides up to 8 screen lines to define the macro.
The format is identical to the data lines in the Macro File Format.
You may hold down up arrow to go to the previous line. To exit the
Macro Editor, you must enter a line where the first character and only
character is a period. You are then prompted to verify that this
macro should be entered into the table. If you choose Yes, the macro
will be written to the table and may then be used.

EXITING Keyboard MACRO Manager

Option 5 of the main menu EXITS the program. It is important to use
this option to leave the program, as certain pointers may not be
correctly updated if the program is exited by other means. Problems
arising from such an exist may not manifest themselves immediately.

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MACRO FILE FORMAT

The Macro File Format is as follows:

Keycode:
macro data
more macro data

.

The Keycode must be followed by a colon, and the colon must be the
last character on the line. The Keycode represents the key that the
following macro will define. The Keycode can be a single character, or
it can be a bracketed expression. For example, the ASCII code of the
character can be given in brackets. [42] would be the same as an
asterisk.   Function and Control keys may also be named in bracketed
expressions. For example, [F9] would define Function 9, just as [CB]
would define Control B.

On the lines following the key code are the actual data for the macro.
This can be literal data, bracketed data, or a combination.   For
example, since the ASCII code for the letter B is 67 the following
would define a macro of "ABC":

A[67]C

A Macro can be multiple lines line, although no bracketed expression
may be split across a line boundry.   The macro is terminated with a
line containing only a period in the first space.

A Macro Format File may be created in TI-Writer.   It should be saved
with the PF (Print File) option rather than SaveFile, to avoid the
saving of the final tab record, which may confuse the Macro Manager
software.

Other notes:
There is no real limit on the size of a macro, but the largest macro
that the program can reasonably handle is about 250 characters, which
should not pose a problem in most cases.   Once a satisfactory macro
load has been created in memory, it is advisable to List it to disk
and reload it after erasing all macros in memory.   This will tend to
compact the data.   Since the List file output is not the best format
to edit in, the original Macro Format Files (if any exist) should be
maintained for future changes.

The Function and Control code translation using the bracketed
expressions assume that the program is using keyboard mode 5.   If this
is not the case, some codes may not be valid.   In such cases, refer to
the Users Reference Guide for keyboard layouts and enter the ASCII
codes directly.

Also note, since ASCII codes may be entered directly for Keycodes is
it possible to assign macros to the "missing" keys provided on the
Rave 99 Keyboards, which means that some macros may be added to
programs without losing any of the existing normal key presses.

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MACRO Examples

The following examples are present here to demostrate the possible
uses for keyboard MACROs. All of the examples are available for
immediate use by loading the file MAC/SAMPLE from the MACRO disk.
We have documented each line of MACRO's use in the folloing
examples. These comments are not part of the actual MACRO
definition.

Example 1. This MACRO defines the phrase "TI-99/4A" as CONTROL-T.

[CT]:   § Defines the KEYCODE as CONTROL-T.
TI-99/4A   § Defines the MACRO contents as TI-99/4A.
.   § defines the end of this MACRO.

Example 2. This MACRO defines the printer setup RS232.BA=4800.DA=8
           as CONTROL-P.

[CP]:   § Defines the KEYCODE as CONTROL-P.
RS232.BA=4800.DA=8 §Defines the MACRO as RS232.BA=4800.DA=8
.   § defines the end of this MACRO.

Example 3. This MACRO is like example 2 but includes the control
           characters to leave the edit mode and to start the
           printer. This MACRO's keycode is FUNCTION-Q.

.[FQ]:   § Defines the KEYCODE as FUNCTION-Q.
[F9]   § FUNCTION-9, Leaves the editor.
PF[13]   § "PF" for PRINT FILE. [13] is ENTER.
RS232.BA=4800.DA=8 §Defines the MACRO as RS232.BA=4800.DA=8
[13]   § [13] is enter and starts the printer.
.   § defines the end of this MACRO.

Example 4. This MACRO could be used to define the heading of a
letter. The keycode is CONTROL-H.

[CH]:   § Defines the KEYCODE as CONTROL-H.
RAVE 99 Co.[13]   § first line of MACRO and enter.
112 Rambling Road[13] § second line of MACRO and enter
Vernon CT 06066[13]   § third line of MACRO and enter
(203) 871-7824[13]   § fourth line of MACRO and enter.
.   § defines the end of this MACRO.

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THREE-MONTH LIMITED WARRANTY

This RAVE 99 MX01 kEYBOARD MACRO LOADER Warranty Extends To The
Original Consumer Purchaser of the Accessory.

WARRANTY DURATION

This MX01 KEYBOARD MACRO LOADER is Warranteed for a period of three(3)
months from the date of the original purchase by the consumer.

WARRANTY COVERAGE

This MX01 KEYBOARD MACRO LOADER is Warranted against defective
materials or workmanship. THIS WARRANTY IS VOID IF THE ACCESSORY HAS
BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLECT, IMPROPER SERVICE
OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR
WORKMANSHIP.

WARRANTY DISCLAIMERS

ANY IMPLIED WARRANTIES ARISING OUT OF THIS SALE, INCLUDING BUT NOT
LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE THREE-MONTH
PERIOD. RAVE 99 SHALL NOT BE LIABLE FOR LOSS OF USE OF THE SOFTWARE OR
OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED
BY THE CONSUMER OR ANY OTHER USER.

Some states do not allow the exclusion or limitation of implied
warranties or consequential damages, so the limitations or exclusions
may not apply to you in these states.

LEGAL REMEDIES

This warranty gives you specific legal rights, and you may have other
rights that vary from state to state.

WARRANTY PERFORMANCE

During the above three month period, your MX01 KEYBOARD MACRO LOADER
diskette will be replaced with a new diskette of the same or
equivalent model(at RAVE 99's option) when the diskette is returned by
prepaid shipment to RAVE 99 at the address below. Other than the
postage requirement, no charge will made for replacement of
in-warranty units.

REPLACEMENT AFTER WARRANTY

After the 90 day Warranty has expired you may return any original
defective diskette, along with a check for $5.00 to cover the shipping
and diskette cost, and we will replace it.

SHIP TO :   RAVE 99 CO.
                             112 RAMBLING ROAD
                             VERNON, CT.   06066

WARRANTY REGISTRATION

THE INFORMATION BELOW SHOULD BE COMPLETED AND RETURNED TO RAVE 99 IN ORDER
TO SPEED REPLACEMENT OF YOUR DISK IF IT EVER SHOULD NEED WARRANTY SERVICE.

PLEASE ALSO INDICATE IF YOU DESIRE TO HAVE YOUR NAME ADDED TO THE RAVE 99
MAIL LIST IN ORDER TO BE INFORMED OF NEW PRODUCTS AND SPECIAL OFFERS.

**** NOTE ****

IN THE EVENT YOUR IN-WARRANTY UNIT REQUIRES SERVICE, PROOF OF PURCHASE MAY
BE REQUIRED. DATED SALES SLIP, RECIEPT, OR INVOICE IS SATISFACTORY PROOF
OF PURCHASE.

_____
NAME

_____
ADDRESS

_____
CITY   STATE   ZIP

                                              # AA
_____
RAVE 99 PRODUCT   SERIAL NUMBER

_____   _____
DATE OF PURCHASE   PURCHASED FROM

_____
TYPE OF SYSTEM PRODUCT WILL BE USED WITH (99/4A,9640,ETC.)

I DO_____/ DO NOT_____ WISH TO BE ADDED TO THE RAVE 99 MAIL LIST.

   (PLEASE CHECK ONE)

MAIL TO: RAVE 99
          112 RAMBLING RD
          VERNON, CT.   06066
          ATTN: WARRANTY