MTUII

MANUAL (VERSION 1.2)

15 character sign

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(1)GETTING STARTED

It is suggested that the person working with the MTUII program is familiar with DOS(disk operating system). This entire manual should be read before attempting to use the system.

Before you start the program you should make a backup copy of the program diskette.

If you have a hard drive there is 2 ways you can configure MTUII to work;

BOOT your computer; then insert the MTUII 1.4 diskette into drive A.

1.   Make a directory and copy all the files from drive A to that
     directory.

     ex: C:MD\MTUII
           COPY A:*.EXE C:\MTUII

2.   Copy all the files from drive A to the MAIN directory.

     ex: COPY A:*.EXE C:\

     NOTE:
           When using the MTUII program from the main directory you should
           set the PATH on BOOTUP to the MAIN directory, so when you enter
           another directory you can still RUN the MTUII program.

           ex: PATH \

Any of MTUII's modules may be operated independly, if you choose you may delete the MTUII.exe program and select the other functions by name;

     To delete MTUII.EXE type DEL MTUII.EXE

     To select a function type in the name;

           EDITOR   to create or edit files
           PRINTER   to print files to a printer
           DOWNLOAD to download files to the MTU

(2)CREATING OR EDITING A FILE

1)   Enter "2"(CREATE OR EDIT A FILE) from the menu or enter EDITOR from DOS.

2)   ENTER FILENAME OR PRESS RETURN.

Enter the file name you wish to create/edit in the form "dr:FILENAME", where "dr:" is the drive and "FILENAME" is your filename (maxium letters 8, and no extension allowed). If no drive is specified the default drive is used.

A)   Pressing ENTER will exit EDITOR.

B)   If a filename was entered, a creating/loading sequence will begin.

2 files are created; the file specifed, and a index file.

ex:
        If "TEST" was the file specified then "TEST", and "TEST.IDX" would be created.

3)   Once the file is loaded you will see;

3A)   FILE NAME
3B)   SYSTEM TYPE
3C)   7 lines of text
3D)   DOT SIGN WINDOW

you will also see a set of function keys labeled F1-F10;

F1)   SAVE
F2)   LOCATION
F3)   INSERT A LINE
F4)   DELETE A LINE
F5)   DEFAULTS
F6)   CHANGE SYSTEM TYPE
F7)   VIEW A MESSAGE (CURSOR)
F8)   AUTO VIEW OFF
F9)   FILL LINE (SPACES)
F10) KILL LINE

3A)   FILE NAME

The FILE NAME that you are editing is listed.

3B)   SYSTEM TYPE

There are 2 different system types; STANDARD, and MATRIX. The default for a created file is STANDARD. To change the system type press the "F6" key, select the number of the choice you wish for the system type; 1) STANDARD, 2) MATRIX.   Once the file is saved so is the system type. After selecting the system type you will be asked to give the number of columns that your sign has. If your system type is STANDARD, or you do not have a special system (such like route numbers taken from the monitor instead of memory), then press return (this gives a default for using the full sign, 75 columns). If you have a special system then use the following information to select the proper number of columns:

If your route numbers are to appear normal (standard font type), then each route number can be a maxium of 5 columns wide, and each number will have 1 column space between them.

ex:
If you have 3 route numbers, the total number of columns they will take up is 3 x 5 + (3 x 1)=18. This makes the total number of columns for the sign (75-18)=57.

If your route numbers are to appear bold, then each route number can be a maxium of 6 columns wide, and each number will have 1 column space between them.

ex:
If you have 4 route numbers, the total number of columns they will take up is 4 x 6 + (4 x 1)=28. This makes the total number of columns for the sign (75-28)=47.

STANDARD means that the dot signs you use are module type, and there is a physical space between characters on the sign.

ex: DVS7000,DVS7100,DVS8000,AND DVS8050

MATRIX means that the dot sign(s) you use are not module type, and there is no physical space between characters thoughout the sign.

ex: DVS10000,DVS10401

3C) 7 lines of text.

This is where the messages are entered. There are 4 headings across the screen above the top line; DEST., READING, RUN#, AND CONTROL.

a) DEST.

This is the actual location number (THUMBWHEELS) of the message stored in memory.

b) READING

This is the message.

c) RUN#

This shows the run numbers for the message.

d) CONTROL

This shows the control functions for the message.

If the system type is STANDARD, it will show 2 functions, CENTERING AND LAST LINE. If the message is centered a "C" will appear in the 1st position of the control. If the message is not a cycled message "LAST LINE" will appear in the 3rd position of the control.

If the system type is MATRIX, it will show numbers from 1 to 7 corresponding to the DEFAULTS (F5) at the time the message was entered. If the message is a last line a "L" will be displayed after the numbers coresponding to the DEFAULTS.

3D) THE DOT SIGN WINDOW

This window will display a message at any location, and is used with the function keys F7 and F8. If the system type is STANDARD it will display as a standard sign. If the system type is MATRIX it will display the message using the control (but only 1,2,3, and 4 of the control(see DEFAULTS)).

FUNCTION KEYS

F1 — SAVE

Use this key for exiting and saving your file. When "F1" is pressed the index file is saved, when asked for a filename type in a new filename or press ENTER to exit EDITOR.

F2 — LOCATION

Use this key for starting at a specific destination, or public service address. When this key is pressed you will be asked for the location you wish. If you want a public service address, enter PS and a hex number 1 - F. If you want a destination enter the destination code (thumbwheel settings).

ex: 800   this is location 800.

ex: PS5   this is public service address 5.

F3 — INSERT A LINE

Use this key for inserting a line at the current cursor position.

note:
All lines following the cursor are moved 1 location down.

F4 — DELETE A LINE

Use this key for deleting a line at the current cursor position.

note:
All lines following the cursor are moved 1 location up.

WARNING!

Take great care when using F3 and F4. The systems memory configuration is all in ONE file (unlike the standard equipment that uses many eproms). When inserting lines (F3), remember all messages (including public service) get shifted down one line, it is recommended to delete (F4) the number of lines you are going to insert (F3) at a unused location so that information that resides at the end of the file is not lost. When deleting lines (F4), remember all messages (including public service) get shifted up one line, to keep the messages in the proper locations you must insert the same number of lines you deleted at a unused location.

MEMORY CONFIGURATION:

The encoder uses location 000 for operations. If the user selects location 000 the encoder will blank the signs.

All locations from 001 thru FC3 are used for destination messages.

All location from FC4 thru FFF are used for public service messages.

F5   -   DEFAULTS

Use this key for changing the defaults. When this key is pressed a mini menu will appear:

1) BOLD LETTERS NO
2) BOLD NUMBERS NO
3) BOLD RUN NUMBERS YES
4) BOLD RUN LETTERS YES
5) 2 COLUMN SPACING YES
6) CENTERING YES
7) COLUMN SHIFTING NO
PRESS RETURN TO EDIT

Enter your choice by pressing a number key from 1-7.   A "NO" at the end of a DEFAULT means that function is not used, and a "YES" means that function is used.

BOLD LETTERS means that any letter entered in a message that is not a run letter will be bold.

BOLD NUMBERS means that any number entered in a message that is not a run number will be bold.

BOLD RUN NUMBERS means that any number entered as a run number will be bold.

BOLD RUN LETTERS means that any letter entered as a run number will be bold.

2 COLUMN SPACING means that if possible the bus sign will have 2 column spaces between each letter/number, instead of 1.

CENTERING means that the message to be displayed on the bus sign will be centered between the run number(s) and the end of the sign. If there are no run numbers then the message will be centered using the entire sign.

COLUMN SHIFTING means that the message to be displayed on the front sign (if MATRIX) will be shifted to the right the number of columns specified in the 4th character of destination 000. When COLUMN SHIFTING is turned on, the first time a VIEWING function is used on a message that has been COLUMN SHIFTED you will be prompted as to how many columns to shift (0-9), this value is the same as entered at the 4th character of destination 000.

Press the "RETURN" key to continue editing.

F6   -   CHANGE SYSTEM TYPE

Use this key to select the system type, 1)STANDARD or 2)MATRIX. Use this key to also select the number of columns your sign has.

F7   -   VIEW A MESSAGE (CURSOR)

Use this key to view the message that the cursor is on, the message does not need to be entered. When using this key with MATRIX signs the computer will use the DEFAULT values, instead of the CONTROL values

F8   -   AUTO VIEW OFF

There are 4 modes of this key; OFF, FAST, PRE, and ON. Press "F8" to toggle between the 4 modes.

OFF means that no message will be displayed on the dot sign window.

FAST means the number of columns the message that the cursor is on will be displayed below the dot sign window.

PRE means that as a message is entered it will be displayed on the dot sign window.

ON means the message that the cursor is on will be displayed on the dot sign window.

When using this key with MATRIX signs the computer will use the CONTROL values, instead of the DEFAULTS.

F9   -   FILL LINE (SPACES)

Use this key to quickly fill a message with spaces, an all black sign.

F10   -   KILL LINE

Use this key to quickly erase a message and begin it again. By pressing "F10" and then "RETURN", you get an all yellow sign with the desired DEFAULT settings.

(3)USING THE EDITOR

The first thing that you must do is choose the type of system that you have. If you dont know what the difference is between MATRIX and STANDARD, see SYSTEM TYPE (3B pg 5). The editor always starts out at location "000". This location describes to the bus encoder how to organize the system. The 1st character in the line tells how many route numbers long the rear sign is. The 2nd character tells whether to "C"enter, "L"eft justify, or "R"ight justify the route numbers. The 3rd character tells your second choice if the first cannot be accomplished. The 4th character tells how many columns to shift on the front sign, if the front sign is matrix type, this number can be 0 to 9. The fifth character tells the system what the update speed is, this number can be 0 to 9 (you may choose the default, 3 seconds, by entering a space). The 6th character selects the number of cycles to display on the monitor, this number can be 0 to 9 and A to F (0 to 15 cycles). If you wish to leave the monitor on and use the electronic switch to turn it off/on, enter a space.

000 3CL015

This line entered at location "000" will tell the bus encoder that there are 3 route numbers, center the routes, if the routes cant be centered then put them to the left, do not shift the front sign, use 1 second for the update time, and display a new message for 5 cycles on the monitor before turning the monitor display off.

Entering a line

There are 2 ways to enter a line, as a cycling message, or as a end of line. To enter a line so it will cycle to the next location press the "RETURN" key. To enter a line as the end of the message press the right "SHIFT" key hold it down and press the "RETURN" key.

Entering a route number

To enter a route number press the "TAB" key and then the key you wish as a route. Only enter the number of route number(s) within a message, and you must use a TAB for every route.

ex:
If destination 000 is 4CL01 and the message is 23 DOWNTOWN and 23 is my route number. The entry would be as follows:

"TAB"2"TAB"3 DOWNTOWN

note:
The encoder is setup for 4 route numbers, and I only entered 2. The encoder takes care of the rest.

Editing a line

There are only 2 ways to edit a line, "BACK SPACE" thru the message, or kill the line by pressing "F10". The reading is not changed until the "RETURN" key is pressed, this means if the cursor is moved from the line before the "RETURN" key is pressed the new message will not be entered, and the orignal message will be displayed.

Moving the cursor

You may move the cursor by using the "UP" or "DOWN" arrow keys.

Using the matrix signs to their full ability

The 2 things to remember with matrix signs is that you must make sure the reading is going to fit on the sign, and the letters appear how you want them.

If you have a lot of messages to enter, keep the AUTO VIEW OFF or FAST (the "F8" key) and use the column counter below the window. If it says more than 75 the message extends past the end of the sign.

When you have finished entering all the messages;

1) Go back to the begining location

2) Set the AUTO VIEW to ON

3) Use the "UP" and "DOWN" arrow keys to display the messages.

If the message appears correct, continue to the next. If the message appears incorrect, adjust the line by changing the DEFAULTS or taking a letter(s) out of the line. When you have corrected the message, press the "F7" key before you press the "RETURN", so you may see the new line. Please note that the "F7" key uses the DEFAULTS and not the ones listed in the control for that line.

If you have a few messages to enter set the AUTO VIEW to PRE. Now as you press the "RETURN" key the message will display in the dot sign window.

note:

Above is one of the fastest ways possible to enter your messages, you may enter them any way that you feel comfortable with.

Using AUTO VIEW FAST mode will not tell you if the reading looks right.

Saving a file

To save the file press the "F1" key, the file will be saved. There are no backups made by the MTUII program, once the file has been entered it is considered changed and must be saved. If you wish to have backups (which are recomended), you can use the DOS system COPY comand. To back up a file you must copy the file, and the index for that file.

ex:

If your filename was "TEST" then you would have to copy "TEST" and "TEST.IDX".

(4)DOWNLOADING TO THE MTU3

1) Enter "1" DOWNLOAD TO MTU3 on the menu or enter DOWN18 from DOS.

2) Enter the name of the file you wish to be transfered or press ENTER to exit from DOWN18.

3) COM1 or COM2 <DEFAULT IS COM1>?

   Press ENTER unless your using communications port 2. For communications port 2 ENTER COM2.

4) Connect all cables to the MTU (including battery pack), flip switch to CPU position, and then flip power switch ON.

   note: When the MTU 3 is first turned on it will perform a memory check to see if the file loaded last is still intact. L.E.D.s 1 and 2 will light for a very short time and turn off, if the check is good, both L.E.D.s will light at the end of the check.

5) DELAY NUMBER <DEFAULT IS 20 - XT-AT-286>.

   The delay number is no more than a for next loop that counts up to the number specified. There is no handshaking from the MTU to the computer. Extremely fast computers will need to be slowed down. Slower computers you may wish to speed them up by entering 1, which will bypass the loop and go as fast as possible.

6) CLEARING MEMORY.

   The computer will try 3 times to clear memory, if it suceeds, communications have been established. While the computer is trying to clear the memory in the MTU 3, L.E.D. 1 should be ON and L.E.D. 2 should be OFF.

7) MESSAGE #XXX TRANSFERED.

   Once the memory is cleared all messages are downloaded into the MTU 3. As each message is transfered an acknowledgement on the screen is displayed. L.E.D. 1 should be OFF and L.E.D. 2 should be ON.

(4)DOWNLOADING TO THE MTU3 (CONT.)

9)   SENDING CHECKSUM.

After all messages are downloaded, a checksum value is sent to the MTU 3 for verification. If the checksum fails the test all messages are downloaded again (this is done 3 times before it quits trying).

10)   TRANSFER COMPLETE.

Once the checksum passes, the transfer is complete. Unplug the communication cable from the MTU 3, and then turn off the MTU 3.

11)   ENTER <D>OWNLOAD AGAIN OR PRESS RETURN.

You may download the same file again to another MTU or press ENTER to download a different file.

(5)PRINTING A FILE

1) Enter "4" PRINT A FILE on the menu or enter PRINT18 from DOS.

2) ENTER FILENAME TO PRINT OR PRESS RETURN.

Enter the filename to be printed or press ENTER to exit PRINT18.

3) ENTER BAUD RATE OR RETURN FOR PARALLEL.

Enter a baud rate for serial printers, or press RETURN for parallel printers.

note:
> When using serial printers, the printer must be redirected to com1 before entering the MII18C program. See the dos manual for further information on how to redirect the ports.

4) ENTER DATE.

This entry can consist of any character/number, there are 2 restrictions; no commas and no semi-colons can be used in the entry.

5) ENTER START LOCATION <DEFAULT 000>.

Enter your destination code of where to begin printing. This code can be any from 000 to FFF. Press RETURN for the default value of 000 (the start of the program).

6) ENTER END LOCATION <DEFAULT FFF>.

Enter your destination code of where to end printing. This code can be any from 000 to FFF. Press RETURN for the default value of FFF (the end of the program).

note:
> The last available location that destination messages reside at is FC3. If you wish to print public service messages seperate from the destination messages, use FC3 for the END location. Use FC4 for the start location for listing public service messages, and FFF (or RETURN) for the END location.

(5)PRINTING A FILE (CONT.)

8)   SET PRINTER TO TOF AND PRESS RETURN ENTER <PAGE> FOR PAGE PRINTING.

Set the printer to the top of the form (TOF), and press RETURN (Enter PAGE for page printing). The computer will print all destinations requested.

9)   ALL MESSAGES PRINTED PRESS RETURN.

All messages have been printed, those messages that appear different on the side sign will have an * next to them. Press the "RETURN" key to print another file.

(7)EXITING TO THE DOS.

1)   Enter "4" EXIT TO DOS on the menu.

This will exit the MTUII program and return to DOS.

note:
        If you are not using the MTUII.EXE menu program, when asked for a
        filename press ENTER and you will return to DOS.

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(1)GETTING STARTED

It is suggested that the person working with the MII18C program is familiar with DOS(disk operating system). This entire manual should be read before attempting to use the system.

The MII18C 1.3 DISK DOE'S NOT AUTOBOOT. YOU MUST INSTALL ALL THE FILES ONTO A HARD DRIVE BEFORE YOU CAN USE THE PROGRAM.

BOOT your computer; then insert the MII18C 1.3 diskette into drive A.

There is 2 ways you can configure MII18C to work;

1. Make a directory and copy all the files from drive A to that directory.

       ex: C:MD\MII18C
            COPY A:*.EXE C:\MII18C

2. Copy all the files from drive A to the MAIN directory.

       ex: COPY A:*.EXE C:\

   NOTE:
           When using the MII18C program from the main directory you should set the PATH on BOOTUP to the MAIN directory, so when you enter another directory you can still call the MII18C program.

           ex: PATH \

Any of MII18C's modules may be operated indepently. If you choose, you may delete the MII18C.EXE program and select the other functions by name.

       To delete MII18C.EXE type   DEL MII18C.EXE

       To select a function type in the name;

            EDIT18   to create or edit files
            PRINT18   to print files to a printer
            DOWN18   to download files to the MTU
            LGO18   to create or edit a logo

(2) CREATING OR EDITING A FILE

1) Enter "2" CREATE OR EDIT A FILE on the menu or enter EDIT18 from DOS.

2) ENTER FILENAME OR PRESS RETURN

Enter the file name you wish to create/edit in the form "dr:FILENAME", where "dr:" is the drive and "FILENAME" is your filename (maxium letters 8, and no extension allowed). If no drive is specified, the default drive is used.

A) Pressing ENTER will exit from EDIT18.

B) If a filename was entered a creating/loading sequence will begin.

3 files are created; the file specifed, a index file, and a logo file.

ex: If "TEST" was the file specified then "TEST", "TEST.IDX", and "TEST.LGO" would be created.

C) Add or edit logos to your file.

After loading the logo file, all the logo files present in the program are displayed next to the letter that it represents. To change a logo, enter the letter of the logo to be changed and type in the filename of the new logo. To clear a logo from the list, enter the letter of the logo and type "CLEAR". To EXIT to the EDITOR, type EXIT.

3)   Once the file is loaded you will see;

    3A)   NAME
    3B)   TYPE
    3C)   8 lines of text
    3D)   2 DOT SIGN WINDOWS

    You will also see a set of function keys labeled F1-F10;

    F1)   SAVE
    F2)   LOCATION
    F3)   INSERT A LINE
    F4)   DELETE A LINE
    F5)   DEFAULTS
    F6)   CHANGE SYSTEM TYPE
    F7)   VIEW A MESSAGE (CURSOR)
    F8)   AUTO VIEW OFF
    F9)   FILL LINE (SPACES)
    F10) KILL LINE

3A)   NAME

    The FILENAME that you are editing is listed.

3B)   TYPE

    There are 2 different system types; STANDARD and MATRIX. The default for a created file is STANDARD. To change the system type, press the "F6" key and select the number of the system type; 1) STANDARD, 2) MATRIX. Once the file is saved so is the system type.

        STANDARD means that the dot signs you use are module type, and there is a physical space between characters on the sign.

            ex: DVS7000,DVS7100,DVS8000,AND DVS8050

        MATRIX means that the dot sign(s) you use are not module type, and there is no physical space between characters thoughout the sign.

            ex: DVS10000,DVA10401,DVA10015

3C) 8 lines of text.

This is where the messages are entered. There are 4 headings across the screen above the top line; DST., RUN#, READING, AND CONTROL.

    a) DST.

       This is the actual location number (THUMBWHEELS) of the message stored in memory.

    b) RUN#

       This shows the run numbers for the message.

    c) READING

       This is the message.

    d) CONTROL

       This shows the control functions for the message.

       If the system type is STANDARD, it will show 2 functions, CENTERING and LAST LINE. If the message is centered a "C" will appear in the 1st posistion of the control. If the message is not a cycled message, "LAST LINE" will appear in the 3rd position of the control.

       If the system type is MATRIX, it will show numbers from 1 to 6 corresponding to the DEFAULTS (F5) at the time the message was entered. If the message is a last line, a "L" will be displayed after the numbers corresponding to the DEFAULTS.

3D) THE DOT SIGN WINDOW

This window will display a message at any location, and is used with the function keys F7 and F8. If the system type is STANDARD, it will display as a standard sign. If the system type is MATRIX, it will display the message using the control (it will not show 2 column spacing (see DEFAULTS)).

FUNCTION KEYS

F1   -   SAVE

Use this key for exiting and saving your file. When "F1" is pressed, the index file is saved. When asked for a filename, type in a new filename or press ENTER to exit EDIT18.

F2   -   LOCATION

Use this key for starting at a specific destination, or public service address. When this key is pressed you will be asked for the location you wish. If you want a public service address, enter PS and a hex number 1 - F. If you want a destination, enter the destination code (thumbwheel settings).

     ex: 800   this is location 800.

     ex: PS5   this is public service address 5.

F3   -   INSERT A LINE

Use this key for inserting a line at the current cursor position.

note:
    All lines following the cursor are moved 1 location down.

F4   -   DELETE A LINE

Use this key for deleting a line at the current cursor position.

note:
    All lines following the cursor are moved 1 location up.

WARNING!

Take great care when using F3 and F4. The systems memory configuration is all in ONE file (unlike the standard equipment that uses many eproms). When inserting lines (F3), remember all messages (including public service) get shifted down one line. It is recommended to delete (F4) the number of lines you are going to insert (F3) at a unused location, so information that resides at the end of the file is not lost. When deleting lines (F4), remember all messages (including public service) get shifted up one line. To keep the messages in the proper locations, you must insert the same number of lines you deleted at a unused location.

MEMORY CONFIGURATION:

The encoder uses location 000 for operations. If the user selects location 000, the encoder will blank the signs.

All locations from 001 thru D13 are used for destination messages.

All locations from D14 thru D4F are used for public service messages.

F5 – DEFAULTS

Use this key for changing the defaults. When this key is pressed a
mini menu will appear:

1) BOLD LETTERS NO
2) BOLD NUMBERS NO
3) BOLD RUN NUMBERS YES
4) BOLD RUN LETTERS YES
5) 2 COLUMN SPACING YES
6) CENTERING YES

PRESS RETURN TO EDIT

Enter your choice by pressing a number key from 1-6. A "NO" at the
end of a DEFAULT means that function is not used, and a "YES" means
that function is used.

BOLD LETTERS mean that any letter entered in a message that is not a
run letter will be bold.

BOLD NUMBERS mean that any number entered in a message that is not a
run number will be bold.

BOLD RUN NUMBERS mean that any number entered as a run number will
be bold.

BOLD RUN LETTERS mean that any letter entered as a run number will
be bold.

2 COLUMN SPACING means that if possible the bus sign will have 2
column spaces between each letter/number, instead of 1.

CENTERING means that the message to be displayed on the bus sign
will be centered on the sign by column if the sign is matrix, and by
character if the sign is standard.

Press the "RETURN" key to continue editing.

F6 – CHANGE SYSTEM TYPE

Use this key to select the system type, 1)STANDARD or 2)MATRIX.

F7 – VIEW A MESSAGE (CURSOR)

Use this key to view the message that the cursor is on. The message does not need to be entered. When using this key with MATRIX signs, the computer will use the DEFAULT values, instead of the CONTROL values

F8 – AUTO VIEW OFF

There are 2 modes of this key; OFF and ON. Press "F8" to toggle between them.

OFF means that no message will be displayed on the dot sign window.

ON means the message that the cursor is on will be displayed on the dot sign window.

When using this key with MATRIX signs the computer will use the CONTROL values, instead of the DEFAULTS.

F9 – FILL LINE (SPACES)

Use this key to quickly fill a message with spaces, a all black sign.

F10 – KILL LINE

Use this key to quickly erase a message and begin it again. By pressing "F10" and then "RETURN", you get an all yellow sign with the desired DEFAULT settings.

(3)USING THE EDITOR

The first thing that you must do is choose the type of system that you have, if you dont know what the difference is between MATRIX and STANDARD, see SYSTEM TYPE (3B page 5). The editor always starts out at location "000". This location describes to the bus encoder how to organize the system. The 1st character in the line tells how many route numbers long the rear sign is. The 2nd character tells whether to "C"enter, "L"eft justify, or "R"ight justify the route numbers. The 3rd character tells your second choice if the first cannot be accomplished. The 4th character tells how many columns to shift on the front sign, if the front sign is matrix type. This number can be 0 to 9. The fifth character tells the system what the update speed is. This number can be 0 to 9 (you may choose the default, 3 seconds, by entering a space). The 6th character selects the number of cycles to display on the monitor. This number can be 0 to 9 and A to F (0 to 15 cycles). If you wish to leave the monitor on and use the electronic switch to turn it off/on, enter a space.

    000 3CL015

This line entered at location "000" will tell the bus encoder that there are 3 route numbers, center the routes, if the routes cant be centered then put them to the left, do not shift the front sign, use 1 second for the update time, and display a new message for 5 cycles on the monitor before turning the monitor display off.

    note:
        If you have a 7" matrix rear sign the 1st, 2nd, and 3rd characters of location 000 are not used as the matrix rear sign will always center the run number. If you have an 18 character front sign the 4th character of location 0 is not used. FOR THESE SIGNS USE THE CHARACTERS IN THE ABOVE EXAMPLE AS YOUR DEFAULT VALUES.

Entering a line

    There are 2 ways to enter a line; as a cycling message, or as an end of line. To enter a line so it will cycle to the next location, press the "RETURN" key.   To enter a line as the end of the message, press the right "SHIFT" key hold it down and press the "RETURN" key.

Entering a route number

    To enter a route number, type in the route number (up to 3 characters) into the first 3 positions of the line. If the route number is less than 3 characters use a space for the other 2 (the route number should always precede the extra spaces).

Editing a line

There are 2 ways to edit a line; "BACK SPACE" thru the message, or kill the line by pressing "F10". The reading is not changed until the "RETURN" key is pressed, this means if the cursor is moved from the line before the "RETURN" key is pressed the new message will not be entered, and the orignal message will be displayed.

Moving the cursor

You may move the cursor by using the "UP" or "DOWN" arrow keys.

Using the matrix signs to their full ability

The 2 things to remember with matrix signs is that you must make sure the reading is going to fit on the sign, and the letters appear how you want them.

If you have a lot of messages to enter, keep the AUTO VIEW OFF (the "F8" key) and use the column counter next to the window. If it says more than 75 the message extends past the end of the sign.

When you have finished entering all the messages;

1) Go back to the begining location

2) Set the AUTO VIEW to ON

3) Use the "UP" and "DOWN" arrow keys to display the messages.

If the message appears correct, continue to the next. If the message appears incorrect, adjust the line by changing the DEFAULTS or taking a letter(s) out of the line. When you have corrected the message, press the "F7" key before you press the "RETURN" so you may see the new line. Please note that the "F7" key uses the DEFAULTS and not the ones listed in the control for that line.

note:

Above is one of the fastest ways possible to enter your messages, you may enter them any way that you feel comfortable with.

Saving a file

To save the file press the "F1" key and the file will be saved. There are no backups made by the MII18C program. Once the file has been entered it is considered changed and must be saved. If you wish to have backups (which are recommended), you can use the DOS system COPY command. To back up a file you must copy the file, the index file, and the logo file.

ex:

If your filename was "TEST" then you would have to copy TEST", "TEST.IDX", and "TEST.LGO".

(4)CREATE OR EDIT A LOGO

Enter "3" CREATE OR EDIT A LOGO on the menu or enter LGO18 from DOS.

In this mode the screen will display a full sign. You may move the cursor anywhere within the sign (arrow control) and turn any DOT on "A" or off "B" (the cursor appears as a period inside a DOT in the sign). You may "F"ill the sign (all YELLOW), "C"LEAR the sign (all BLACK), or "D"isplay the sign from memory to re-construct the display. You can "L"OAD previously saved files, or "S"AVE the sign to a NEW FILE. Then when you are done, press "E" to EXIT LGO18.

note:
You cannot edit a file and save it to the same filename. This is done to prevent destroying old files. If you wish to have the names the same, you will have to use DOS to achieve this.

It is advised to use filenames that correspond to what logo character the logo is to be used with.

ex:
A thru J
LOGOA thru LOGOJ

USING LOGOS

Once a LOGO has been defined, it may be used in any line and in any character position (including public service and run numbers). To enter a logo in a line press and hold the ALT key and press the logo character wished (A thru J). A logo will appear in the line as a special graphics character. This makes logos very distinguishable between them and standard characters. When using logos, remember that a logo can be defined as the entire sign, so check the reading to make sure that it fits in the window. The window will show all logos that are defined. Characters may be placed on either side of a logo, and any number of logos can be used on any line(max 15). LOGOS WILL APPEAR AS A BLANK CHARACTER ON NON-MATRIX SIDE SIGNS AND NON-MATRIX REAR SIGNS.

SAVING A LOGO

1)   Press "S" for saving a logo.   The menu screen will clear.

2)   ENTER FILE NAME <EXIT>

Enter your logo filename(8 characters, no extensions and no duplicate names allowed).

3)   HOW MANY COLUMNS (1 - 75)?

Enter the number of columns that the logo takes up on the sign. This information is VERY IMPORTANT to the encoder, so it knows how long to make the logo.   It is up to the USER to define any spacing between the logo and any other character that is next to it(including other logos). This means that if you want to have 3 column spaces between your logo and the character that is to be placed next to it, YOU MUST ADD 3 COLUMNS TO THE NUMBER OF COLUMNS THAT THE LOGO TAKES UP.

ex:
Say I have a logo that takes up 25 columns and I wish to place the word "SPECIAL" next to the logo.   In order to read the message, I would add 2 columns (BLANK) to the number of columns that my logo takes up(total 27).

Say I have 2 logos; 1 takes 25 columns and 2 takes 30 columns, and I wish to put them next to each other with no space in between.   I would not have to add any columns to the logos to achieve this.

note:
No extra columns are needed in front of a logo, the ENCODER will determine if any columns are necessary.

(5) DOWNLOADING TO THE MTU3

1) Enter "1" DOWNLOAD TO MTU3 on the menu or enter DOWN18 from DOS.

2) Enter the name of the file you wish to be transfered or press ENTER to exit from DOWN18.

3) COM1 or COM2 <DEFAULT IS COM1>?

   Press ENTER, unless your using communications port 2. For communications port 2, ENTER COM2.

4) Connect all cables to the MTU (including battery pack), flip switch to CPU position, and then flip power switch ON.

   note:
   > When the MTU 3 is first turned on, it will perform a memory check to see if the file loaded last is still intact. L.E.D.s 1 and 2 will light for a very short time and turn off. If the check is good, both L.E.D.s will light at the end of the check.

5) DELAY NUMBER <DEFAULT IS 20 - XT-AT-286>.

   The delay number is no more than a for next loop that counts up to the number specified. There is no handshaking from the MTU to the computer. Extremely fast computers will need to be slowed down. Slower computers you may wish to speed up by entering 1, which will bypass the loop and go as fast as possible.

6) CLEARING MEMORY.

   The computer will try 3 times to clear memory, if it suceeds communications have been established. While the computer is trying to clear the memory in the MTU 3, L.E.D. 1 should be ON and L.E.D. 2 should be OFF.

7) MESSAGE #XXX TRANSFERED.

   Once the memory is cleared, all messages are downloaded into the MTU 3. As each message is transfered an acknowledgement on the screen is displayed. L.E.D. 1 should be OFF and L.E.D. 2 should be ON.

8) LOGO #X TRANSFERED.

   There are 10 logos (0 thru 9)

(5)DOWNLOADING TO THE MTU3 (CONT.)

9) SENDING CHECKSUM.

After all messages are downloaded, a checksum value is sent to the MTU 3 for verification. If the checksum fails the test all messages are downloaded again (this is done 3 times before it quits trying).

10) TRANSFER COMPLETE.

Once the checksum passes, the transfer is complete. Unplug the communication cable from the MTU 3, and then turn off the MTU 3.

11) ENTER <D>OWNLOAD AGAIN OR PRESS RETURN.

You may download the same file again to another MTU, or press ENTER to download a different file.

(6) PRINTING A FILE

1) Enter "4" PRINT A FILE on the menu or enter PRINT18 from DOS.

2) ENTER FILENAME TO PRINT OR PRESS RETURN.

   Enter the filename to be printed or press ENTER to exit PRINT18.

3) ENTER BAUD RATE OR RETURN FOR PARALLEL.

   Enter a baud rate for serial printers, or press RETURN for parallel printers.

   note:
   > When using serial printers, the printer must be redirected to com1 before entering the MII18C program. See the dos manual for further information on how to redirect the ports.

4) ENTER DATE.

   This entry can consist of any character/number. There are 2 restrictions; no commas and no semi-colons can be used in the entry.

5) ENTER START LOCATION <DEFAULT 000>.

   Enter your destination code of where to begin the printing. This code can be any from 000 to D4F. Press RETURN for the default value of 000 (the start of the program).

6) ENTER END LOCATION <DEFAULT D4F>.

   Enter your destination code of where to end the printing. This code can be any from 000 to D4F. Press RETURN for the default value of D4F (the end of the program).

   note:
   > The last available location that a destination message resides is D13. If you wish to print public service messages seperate from the destination messages, use D13 for the END location. Use D14 for the start location for listing public service messages, and D4F (or RETURN) for the END location.

(6)PRINTING A FILE (CONT.)

7) USE OPTIONAL CHARACTERS FOR LOGOS <NO>.

If you choose the optional characters the logos will be represented by the logo letter (A - J) with a asterisk printed over top (choose this if your printer does not support the IBM graphic characters).

8) SET PRINTER TO TOF AND PRESS RETURN ENTER <PAGE> FOR PAGE PRINTING.

Set the printer to the top of the form (TOF), and press RETURN (Enter PAGE for page printing). The computer will print all destinations requested.

9) ALL MESSAGES PRINTED PRESS RETURN.

All messages have been printed, those messages that appear different on the side sign will have an   * next to them. Press the "RETURN" key to print another file.