



Controls

Diagnostics

Communications

Static Controls Corporation

**1000 SERIES
NETWORK CONTROLLER
USERS MANUAL**



Static Controls Corp.
Series 1000 Network
Users Manual

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MN-1000-010
Network Software Manual
Rev. B

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Network Software Installation Program

When installing the SCC1000 Network software, the installation process will install the Network operation files, and check the computers system for correct operating parameters.

To install, insert the SCC1000 Disk #1 into a disk drive.

Change the current drive to the SCC1000 disk drive.

Type in the word **INSTALL** followed by a return.

```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

  DOS version 5.00
DESTINATION DIRECTORY : C:\SCC1000
YOU MUST SPECIFY THE DRIVE AND FULL PATH !
PRESS [ENTER] TO ACCEPT DEFAULT NAME OR
TYPE A NEW DIRECTORY NAME :
```

In the opening screen, the program will identify the current MS-DOS version running on the computer, and ask the operator for a directory path to load the network system files into. Press **ENTER** to accept the default directory of **C:\SCC1000**.

```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

  DOS version 5.00
DESTINATION DIRECTORY : C:\SCC1000
YOU MUST SPECIFY THE DRIVE AND FULL PATH !
PRESS [ENTER] TO ACCEPT DEFAULT NAME OR
TYPE A NEW DIRECTORY NAME :

Would you like the demonstration files installed (Y or N) N
```

The program will now ask the operator if the demo files should be loaded onto the network computer. The demo files contain a complete set of files for use in running the network system

without having set up the network system. These are demo files only and are not required for proper system operation. If the operator does not wish to install these files, answer "N" to this question. If the demo files are to be installed, the network system will search to see that no files have been already been set up by the operator on the network computer. If previously set up by the operator, the install program will notify that set up files were located on the network computer, and confirm that the operator indeed wishes to install the demo files.

```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

DOS version 5.00

DESTINATION DIRECTORY : C:\SCC1000

YOU MUST SPECIFY THE DRIVE AND FULL PATH !

PRESS [ENTER] TO ACCEPT DEFAULT NAME OR
TYPE A NEW DIRECTORY NAME :

Would you like the demonstration files installed (Y or N) Y

If you wish to save the message text filename(s), log filename(s),
device address(es) or message text id's that were previously setup,
please select 'ND' at this time.

Are you sure (Y or N) N
```

If the demo files are installed, they will **OVERWRITE** the existing set up files that were found on the network computer. If existing device names, message file names, device addresses and log file names are not to be deleted, **DO NOT** install the demo files onto the network computer. Answer "N" to the confirming question at this time. If the demo files were accidentally installed, exit the installation program and call Static Controls for a recovery procedure to re-locate the old files and re-install those old files back on the network computer.

When this is completed, press ENTER to continue installation, or press ESC to quit the installation.

```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

DOS version 5.00

DESTINATION DIRECTORY : C:\SCC1000

YOU MUST SPECIFY THE DRIVE AND FULL PATH !

PRESS [ENTER] TO ACCEPT DEFAULT NAME OR
TYPE A NEW DIRECTORY NAME :

Would you like the demonstration files installed (Y or N) Y

If you wish to save the message text filename(s), log filename(s),
device address(es) or message text id's that were previously setup,
please select 'ND' at this time.

Are you sure (Y or N) N

Press any key to begin installation or [ESC] to exit !
```

As the files are copied from the install disk to the network computer's hard disk, the file names and the quantity of the files will be displayed on the install screen.

```
STATIC CONTROLS CORPORATION  SERIES 1600 NETWORK INSTALLATION  UER 1.05 01/93

DOS version 5.00

UTILIZING EXISTING SUBDIRECTORY : C:\SCC1600

COPYING FILES FROM : A:\
                                TO : C:\SCC1600
File 4 of 96
Copying SCC_NET.COM
1 file(s) copied
```

If the demo files are not installed, the demo files are shown as being not copied on the screen.

```
STATIC CONTROLS CORPORATION  SERIES 1600 NETWORK INSTALLATION  UER 1.05 01/93

DOS version 5.00

UTILIZING EXISTING SUBDIRECTORY : C:\SCC1600

COPYING FILES FROM : A:\
                                TO : C:\SCC1600
File 96 of 96
Copying DEMO.062
SKIP DEMO FILE !
```

After all of the selected files are copied into the network computer, the files are checked and verified by the install program. If all of the network files are verified the install program will notify the operator that the installation was successful. If the files did not verify for any reason the operator is notified that the installation was not successful.


```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

DOS version 5.00
VERIFYING FILES FROM : A:\
                TO : C:\SCC1000

96 of 96 files copied successfully

Press [ENTER] to complete this installation or
any other key to install in another directory, or [ESC] to exit !
```

After installing the network system files into the specified directory on the network computer, the install program will allow the operator to install the files in another directory also, or continuing the installation process. To continue with the installation process, press the ENTER key. To install another network system in another directory, press any other key.

The install program will now check both the AUTOEXEC.BAT and CONFIG.SYS files on the network computer to determine if they need to be modified to allow the network system to operate properly. If they need to be modified, the install program will ask permission to modify those files.

```
STATIC CONTROLS CORPORATION  SERIES 1000 NETWORK INSTALLATION  VER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y
```

If permission is granted to modify those files, the install program will rename the old files to be AUTOEXEC.OLD and CONFIG.OLD.

```
STATIC CONTROLS CORPORATION  SERIES 1600 NETWORK INSTALLATION  UER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y

Searching for Dos graphics driver ...
Renaming old autoexec.bat to autoexec.old !
LH C:\WINDOWS\SMARTDRV.EXE 1824 512 /L
```

Install modifying AUTOEXEC.BAT.

```
STATIC CONTROLS CORPORATION  SERIES 1600 NETWORK INSTALLATION  UER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y

Searching for Dos graphics driver ...
Renaming old autoexec.bat to autoexec.old !
* WIN/3
Reading old config.sys ...

Renaming old config.sys to config.old !

Writing new config.sys

DEVICEHIGH=C:\DOS\HIS1.SYS
```

Install modifying CONFIG.SYS.

When the AUTOEXEC.BAT and the CONFIG.SYS files have been checked and / or changed the install program will ask the operator if one of three post installation processes are to be performed.

STATIC CONTROLS CORPORATION SERIES 1000 NETWORK INSTALLATION VER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y

Searching for Dos graphics driver ...

Renaming old autoexec.bat to autoexec.old 1

= WIN/3

Reading old config.sys ...

Renaming old config.sys to config.old 1

Writing new config.sys

BUFFERS=25

INSTALLATION COMPLETED.

Run the network tutorial program now (Y or N) N

STATIC CONTROLS CORPORATION SERIES 1000 NETWORK INSTALLATION VER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y

Searching for Dos graphics driver ...

Renaming old autoexec.bat to autoexec.old 1

= WIN/3

Reading old config.sys ...

Renaming old config.sys to config.old 1

Writing new config.sys

BUFFERS=25

INSTALLATION COMPLETED.

Run the network diagnostics program now (Y or N) N

STATIC CONTROLS CORPORATION SERIES 1000 NETWORK INSTALLATION VER 1.05 01/93

DOS version 5.00

THE DOS ENVIRONMENT MUST BE MODIFIED, BEFORE THE NETWORK SOFTWARE
CAN FUNCTION PROPERLY.

Modify Autoexec.bat and Config.sys to support network (Y or N) Y

Searching for Dos graphics driver ...

Renaming old autoexec.bat to autoexec.old 1

= WIN/3

Reading old config.sys ...

Renaming old config.sys to config.old 1

Writing new config.sys

BUFFERS=25

INSTALLATION COMPLETED.

Start the network controller program now (Y or N) N

The installation program will ask the operator if the Network Tutorial, the Network Diagnostics, or the Network Controller programs are to be run. If none of these are to be run, the installation is complete, and the install program exits to the MS-DOS prompt.

Network Tutorial

The Network Tutorial will demonstrate the keystrokes that are required to get the Network Controller System to do specific operations. The operator will chose an operation, and the Tutorial will switch into the Network Controller and automatically do specific operations, then returning to the Tutorial program.

```
STATIC CONTROLS CORPORATION   SERIES 1000 NETWORK TUTORIAL   VERSION 1.01 11/82

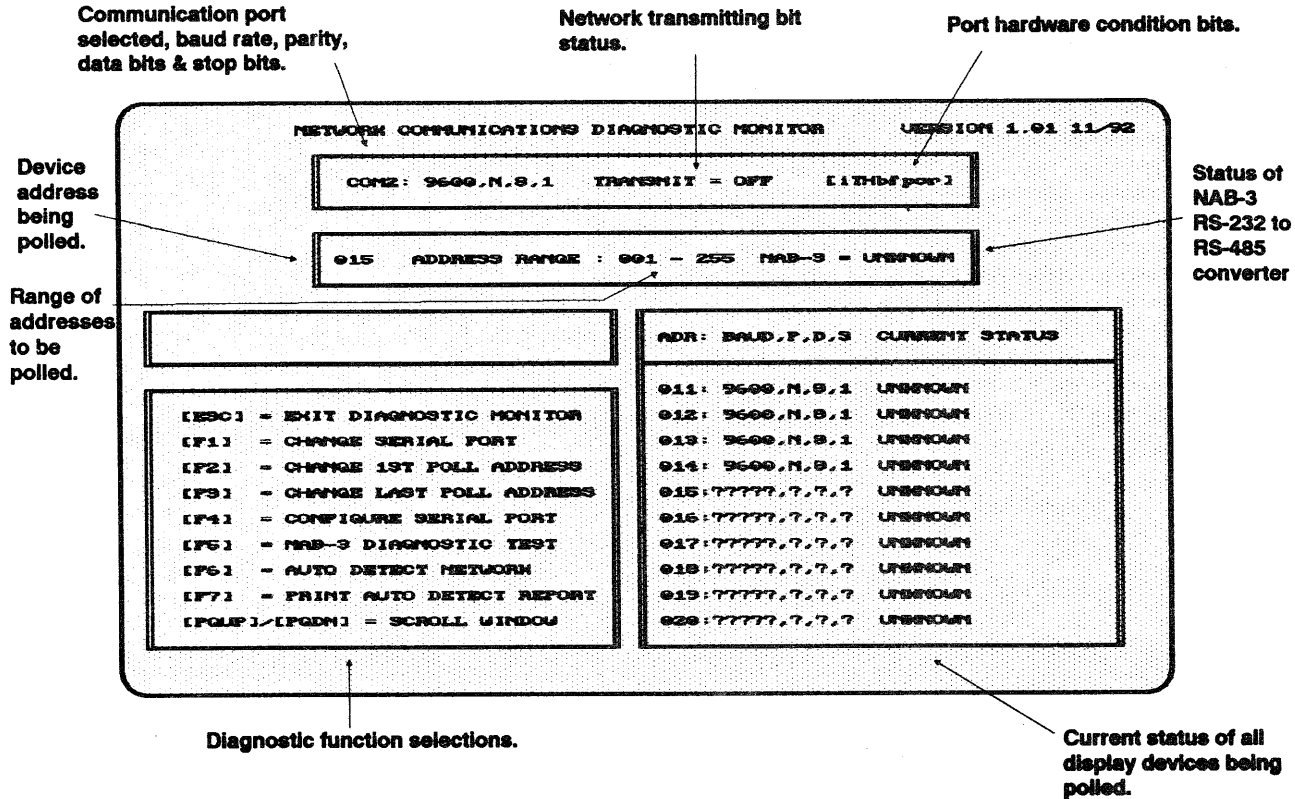
A) TRANSFER A MESSAGE FILE TO A NETWORK DEVICE (DISPLAY).
B) TRANSFER A LOG FILE FROM A NETWORK DEVICE (DISPLAY).
C) SET ALL NETWORK DEVICE (DISPLAY) CLOCKS WITH THE CURRENT TIME.
D) CHANGE SERIAL FORT CONFIGURATION PARAMETERS.
E) ADD/EDIT/DELETE NETWORK DEVICES (DISPLAYS).
F) CHANGE MESSAGE TEXT ID ASSIGNMENTS.
G) ADD/REMOVE USER DEFINED MESSAGE TEXT ID'S.
H) SCAN THE MESSAGE TEXT FILE.
I) GENERATE A LOG FILE REPORT AND VIEW IT ON THE SCREEN.
J) GENERATE A LOG FILE REPORT AND PRINT IT LOCALLY.
K) GENERATE A LOG FILE REPORT AND SAVE IT TO DISK.
L) GENERATE A LOG FILE REPORT WITH GRAPHICS.
M) EXIT TO DOS

SELECTION PLEASE (A - M) ? M
```

Shown above are the selections available to the operator.

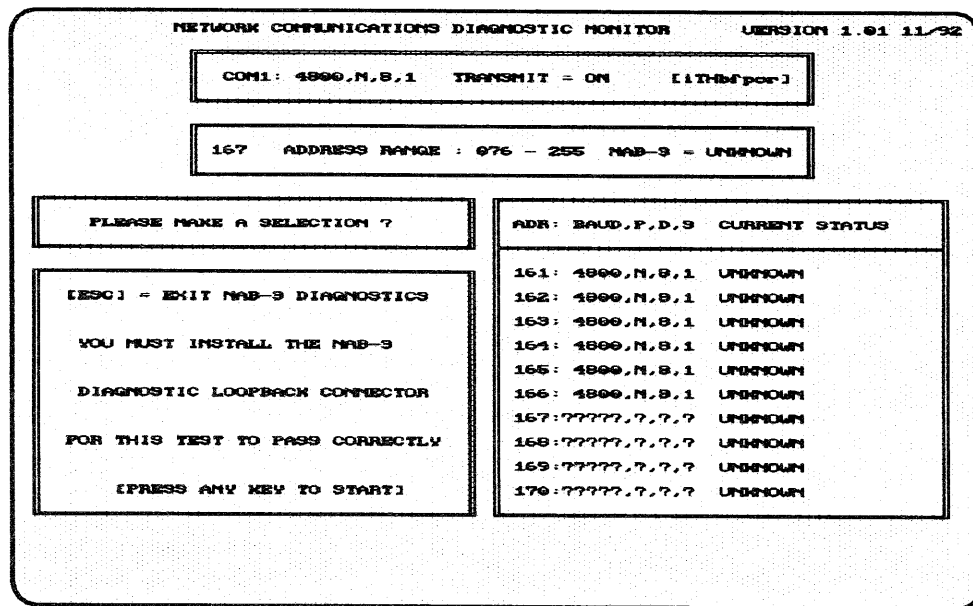
Network Diagnostics

The Network Diagnostics program will attempt to locate and verify all of the display devices that are connected and operating on the network. The diagnostics will also find and verify that the Network Adapter is functioning properly.

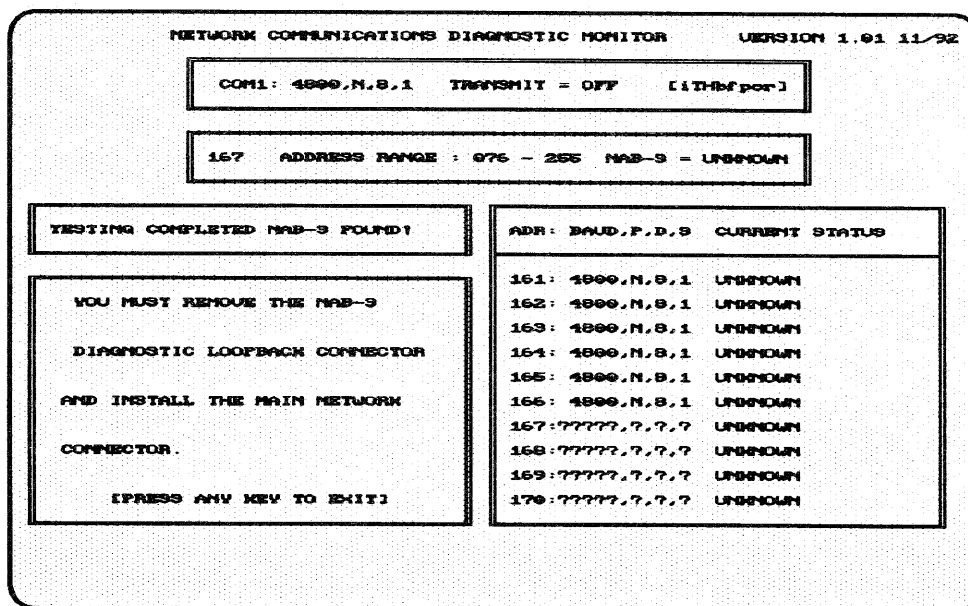


The diagnostic program will attempt to communicate (poll) with each display device on the network. It will try to communicate with each device using the selected communications parameters, and the range of display device addresses selected. As the diagnostic program attempts to poll each device, it will record the parameters that were required to communicate with each display device. The diagnostic program will try all baud rates, parities, data bits and stop bits for each display device to attempt to communicate with each one.

There is a procedure for running the diagnostic program on a network system. First is verifying that the NAB-3 converter is functioning correctly with the network controller computer. From the opening screen press the [F5] function to test the NAB-3 or any other converter.

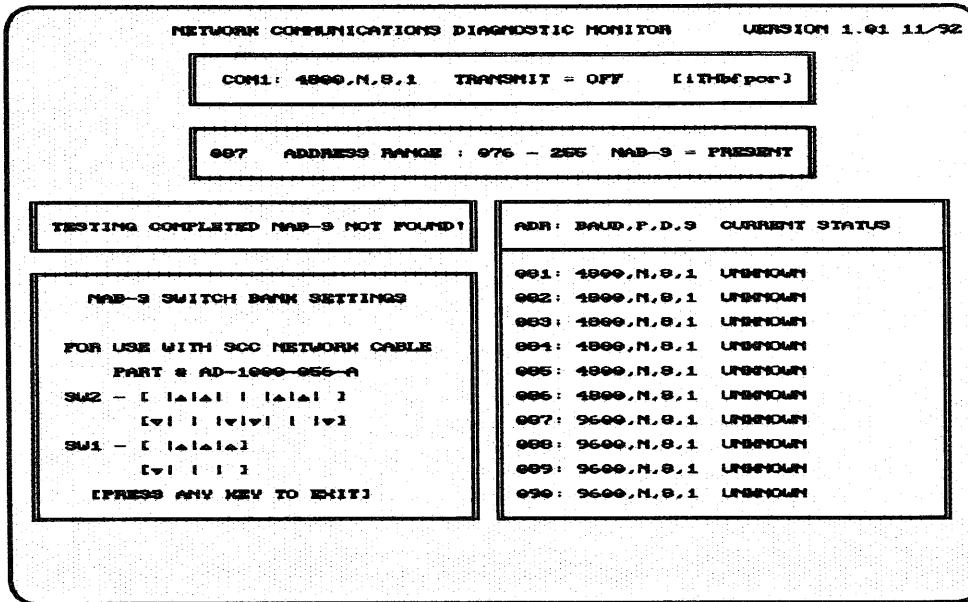


When entering the NAB-3 test, the diagnostic program will ask that a loop-back connector be inserted on the RS-485 side of the converter. To do this, disconnect the connector that is wired to all of the display devices on the network. Insert a connector that has pin #1 connected to pin#3, and pin #2 to pin #4.

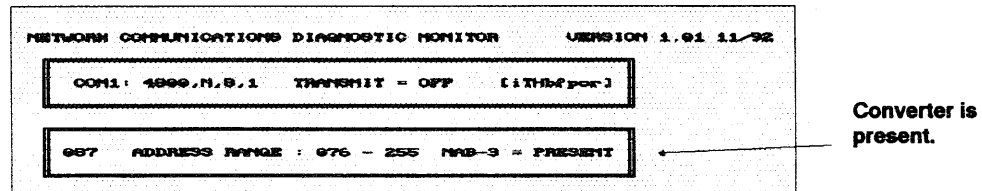


If the NAB-3 converter was found, and communicated correctly the screen shown above will be displayed. Disconnect the loop-back connector and replace the original connector that is wired to the display devices on the network.

If the diagnostic program could not communicate with the NAB-3 converter, the screen shown below will be displayed.



This will show the operator the correct DIP switch settings that are to be made on the converter. Check to see that the correct cable is connected between the computer and the converter, and check the DIP switch settings to see that they match the settings shown on this screen. If they are correct, also check or change the communication port number from the main function screen selection.



When the converter is communicating with the computer the NAB-3 status will be listed as PRESENT in the NAB-3 status location.

After the converter has been tested and found, the diagnostic program is now ready to try to communicate with all of the display devices on the network. The diagnostic program will use all of the selected communications parameters and the address range selected to poll.

```

[ESC] = EXIT DIAGNOSTIC MONITOR
[F1]  = CHANGE SERIAL PORT
[F2]  = CHANGE 1ST POLL ADDRESS
[F3]  = CHANGE LAST POLL ADDRESS
[F4]  = CONFIGURE SERIAL PORT
[F5]  = NAB-3 DIAGNOSTIC TEST
[F6]  = AUTO DETECT NETWORK
[F7]  = PRINT AUTO DETECT REPORT
[PGUP]/[PGDN] = SCROLL WINDOW

```

From the main screen, the function selections are shown above. The [F1] function will toggle thru communications ports #1 thru #4. The [F2] and [F3] functions will increment the first or the last polling address. Pressing [SHIFT] [F2] or [SHIFT] [F3] will decrement the first or last polling address.

The [F4] function will allow the operator to change the serial port configuration.

From the configure serial port screen, function selections are:

NETWORK COMMUNICATIONS DIAGNOSTIC MONITOR VERSION 1.01 11/92

CONS: 2400,N,7,1 TRANSMIT = ON [1 thru 4 port]

149 ADDRESS RANGE : 076 - 255 NAB-3 = UNKNOWN

CONFIGURE CURRENT SERIAL PORT.	ADR: BAUD,P,D,S CURRENT STATUS																														
<pre> [ESC] - EXIT CONFIG SERIAL PORT [F1] - CHANGE SERIAL PORT [F2] - CHANGE BAUD RATE [F3] - CHANGE PARITY CHECK [F4] - CHANGE DATA BITS [F5] - CHANGE STOP BITS [F6] - CHANGE TRANSMIT ENABLE </pre>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>141</td><td>9600,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>142</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>143</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>144</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>145</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>146</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>147</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>148</td><td>2400,N,8,1</td><td>UNKNOWN</td></tr> <tr><td>149</td><td>?????,?,?,?</td><td>UNKNOWN</td></tr> <tr><td>150</td><td>?????,?,?,?</td><td>UNKNOWN</td></tr> </table>	141	9600,N,8,1	UNKNOWN	142	2400,N,8,1	UNKNOWN	143	2400,N,8,1	UNKNOWN	144	2400,N,8,1	UNKNOWN	145	2400,N,8,1	UNKNOWN	146	2400,N,8,1	UNKNOWN	147	2400,N,8,1	UNKNOWN	148	2400,N,8,1	UNKNOWN	149	?????,?,?,?	UNKNOWN	150	?????,?,?,?	UNKNOWN
141	9600,N,8,1	UNKNOWN																													
142	2400,N,8,1	UNKNOWN																													
143	2400,N,8,1	UNKNOWN																													
144	2400,N,8,1	UNKNOWN																													
145	2400,N,8,1	UNKNOWN																													
146	2400,N,8,1	UNKNOWN																													
147	2400,N,8,1	UNKNOWN																													
148	2400,N,8,1	UNKNOWN																													
149	?????,?,?,?	UNKNOWN																													
150	?????,?,?,?	UNKNOWN																													

- [F1] Change the serial port from #1 thru #4.
- [F2] Change the baud rate from 300 to 19,200 baud.
- [F3] Change parity from none to odd to even.
- [F4] Change the data bits from 8 to 7.
- [F5] Change the stop bits from 1 to 2.
- [F6] Change transmit enable from hi (on) to lo (off).

On the main screen function selections [F6] and [F7] are for the auto detect function. With the auto detect, the diagnostic program will attempt to find any and all display devices on the network. This function will try to communicate with any display on the network by trying all communications parameters possible to communicate with the display. The auto detect function will try all addresses between 1 and 255, all com ports, and every combination of communication parameters to detect what displays are on the network. The auto detect function will log internally all results from this test, and the log report can be printed out on the network computers printer. This test can take quite some time to run depending on the results of the test.

Static Controls Corporation

Network Controller

Users Manual

Static Controls Corporation

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System Operation

The SCC Series 1000 Network program allows communication between a Network control computer and Static Controls Corporation Series 1000 Displays. The network program allows for sending and receiving message text files to and from the displays, receiving log files from the displays, setting clocks on the displays and other commands to the displays.

The series 1000 Displays can log the time and date of the displaying of any message stored internally to the display.

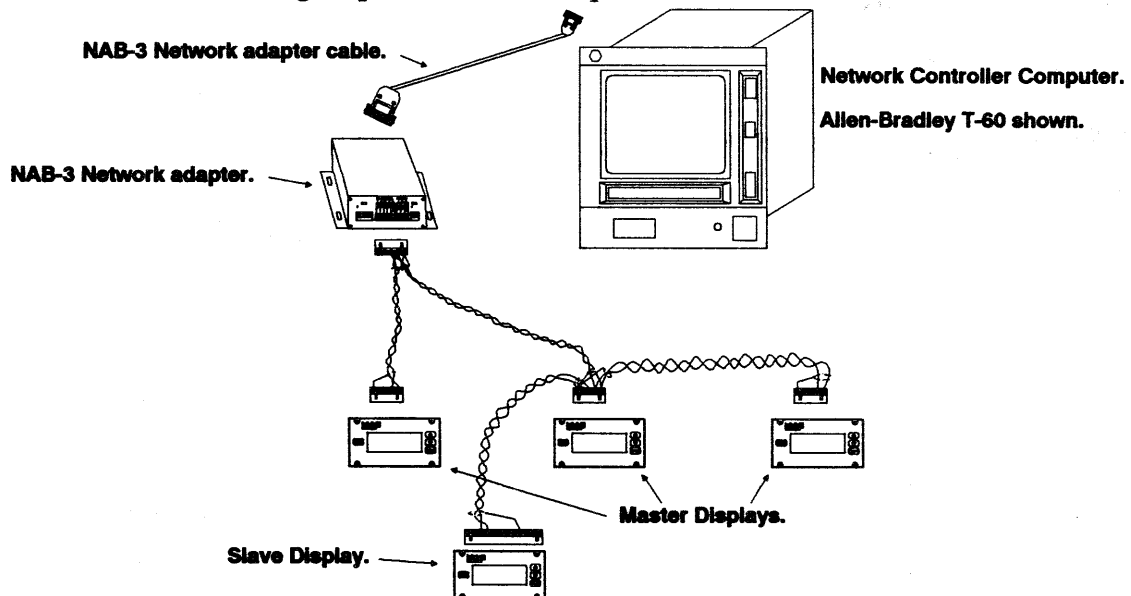
The SCC 1000 Network system consists of 3 major components. These are:

- 1) **Host Network computer.**
- 2) **Network adapter.**
- 3) **Master 1000 Series Displays.**

The Network computer issues commands via an RS-232 serial communications port with commands for a specific 1000 Series display. These commands are converted to an RS-485, half-duplex protocol in the network adapter. Each Series 1000 display decodes the commands, and if the commands are applicable to the display, acts upon the command.

The Network computer also keeps records of the message text files that are loaded into each of the displays on the network, message I.D. files that identify each message in the display as to their type, and all log files generated by the display.

Log files of the displayed messages in each display are used to create statistical data based on the operation of a machine or group of machines or processes.



Network Computer Requirements

The minimum network computer requirements are listed below:

- 1) I.B.M. compatible computer with a 80286 microprocessor.
- 2) 512K of free system memory.
- 3) MS-DOS 3.3 operating system.
- 4) Hard disk drive with 20M Bytes free space.
- 5) Floppy disk drive of 1.2M Byte or 1.44M Byte capacity.
- 6) E.G.A. resolution monitor.

For maximum operating capability, recommendations are:

- 1) I.B.M. compatible computer with a 80386 or 80486 microprocessor.
- 2) 2M Extended system memory.
- 3) MS-DOS 5.0 operating system.
- 4) 105M Byte hard disk drive.
- 5) V.G.A. resolution monitor.
- 6) System printer.

Software Disk

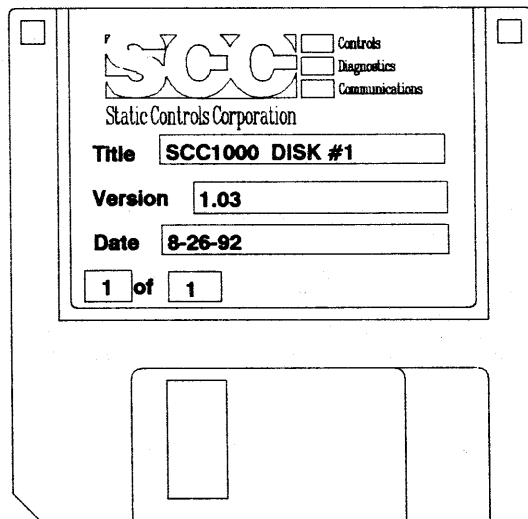
MAKE A BACKUP COPY OF ALL SOFTWARE DISKS!

The software disks provided are not copy protected and can be duplicated using the dos command "DISKCOPY".

Store the original software disks in a safe place.

Refer to the Installation portion of this manual for installation procedure.

The program is supplied on 1.44 M byte I.B.M. compatible, 3 1/2" floppy disk.



Initial Program Start-up

Change to the directory where the network system is saved. The default directory is "SCC1000". The program is started by typing the word "SCC1000" followed by a return.

```
C:>CD\SCC1000 ↵  
C:\SCC1000>SCC1000 ↵
```

The first time the network program is run a series of questions need to be answered by the operator. These will be asked before the program will operate.

Static Controls Corporation Series 1800 NETWORK Controller U 1.00 7/92

```
----- BOOT DISK -----  
Current setting = C  
[ A or C ]  
Enter new setting : C
```

Answer this question as to the disk that the network computer boots up from.

Static Controls Corporation Series 1800 NETWORK Controller U 1.00 7/92

```
----- CRT TYPE -----  
Current setting = COLOR  
[ M or C ]  
Enter new setting : C
```

Answer this question as to the type of monitor used on the network computer.

Static Controls Corporation Series 1800 NETWORK Controller U 1.00 7/92

SELECT A COMMUNICATIONS PORT.

- (1) Use COM1: port
- (2) Use COM2: port
- (3) Use COM3: port
- (4) Use COM4: port

Enter choice (1-4) : 2

Answer this question as to the serial port that is to be used for network communications.

SELECT SERIAL COMMUNICATION SPEED.

- (A) 38.4K
- (B) 19.2K
- (1) 9600
- (2) 4800
- (3) 2400
- (4) 1200
- (5) 600
- (6) 300

Enter baud rate choice (A,B,1-6) : 1

Answer this question as to the baud rate for the network communication port. Recommended baud rate is 9600 baud.

SELECT THE NUMBER OF DATA AND STOP BITS.

- (1) 8bits + 1 stop
- (2) 8bits + 2 stop
- (3) 7bits + 1 stop
- (4) 7bits + 2 stop

Enter format choice (1-4) : 1

Answer this question as to the data bits and stop bits on the network communication port. 8 data bits are required for correct network operation.

SELECT PARITY CHECK.

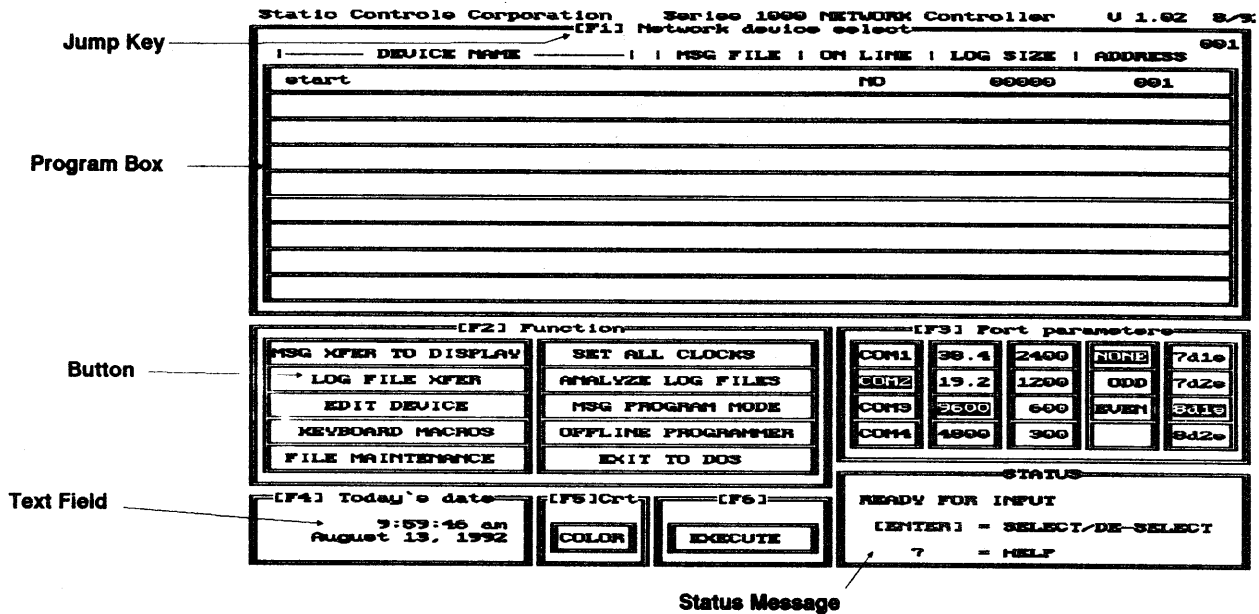
- (1) None
- (2) Even
- (3) Odd

Enter parity choice (1-3) : 1

Answer this question as to the parity type to be used on the network communications port.

Moving Around The Program

Below is the main menu screen. Operation and movement across the menu is typical of all of the different menu screens in the program.

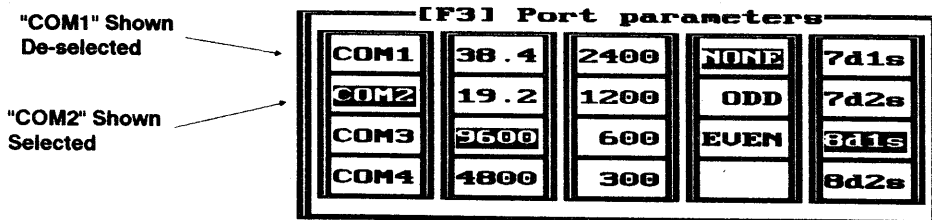


Each menu screen contains several sections. Each major section is referred to as a program box. In a program box, there can be up to 3 different sub-sections. There can be buttons, text fields and status messages.

Moving between program boxes is done by pressing a jump key. Each program box that has buttons or text fields has a jump key. The jump keys are the Network Computers function keys. Each program box has a label and a jump key on the top line of the box.

Within a program box, a "cursor" is movable to a button or a text field. The "cursor" is shown by blinking the button or text field. To move the cursor within a program box, using the arrow keys will move the cursor up, down, left or right. The Network Computers HOME and END keys will move the cursor to the first or the last entry in the program box. In cases that all of the available buttons are not shown within the program box, the PAGE UP and PAGE DOWN keys will also move the cursor up or down a page of button selections.

To Select a button or a text field, move the cursor until the desired selection is blinking, and "click" the selection on or off by pressing the ENTER key. When a button or text field is "selected" the button will be shown with a black background with white lettering. "Clicking" the button again will de-select the selection.



Movement Keys

TO PROGRAM BOX

Jump keys [Function Key]
Moves cursor to the selected program box.

[SHIFT] Jump keys
Moves cursor to selected program box, and selects or deselects all of the buttons in the program box. Works only with program boxes with multiple selections available.

WITHIN PROGRAM BOX

Up, Down, Right, Left Arrow keys
Moves cursor position 1 place up, down, right or left.

HOME, END keys
HOME moves cursor to the first entry in the box.
END moves cursor to the last entry in the box

PAGE UP, PAGE DOWN keys
Moves a new set of buttons into view if more buttons are available than can be seen in the program box at once.

ENTER key
Selects or deselects button or text field at the cursor position.

OTHERS

ESCAPE [Esc] key
Aborts current operation.

"?" key
Invokes current help screen for cursor position.

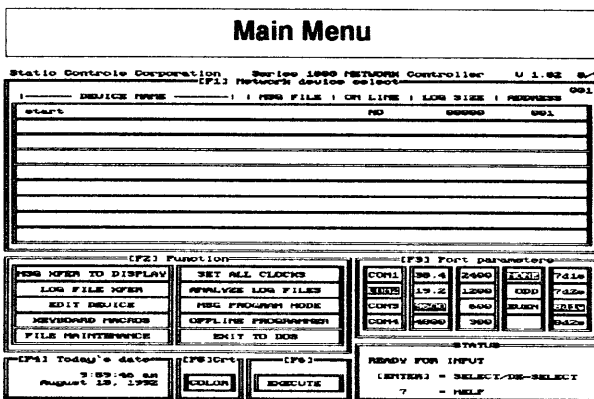
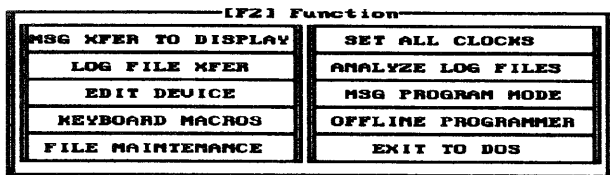
Current cursor position is button or text field that is blinking.

Program boxes that supports multiple selections are:

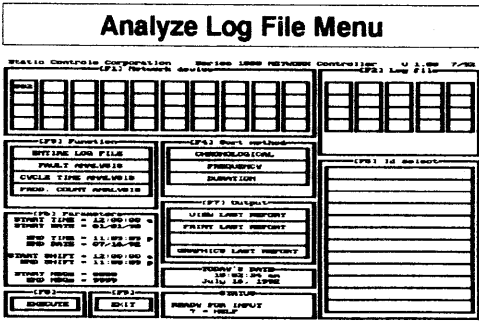
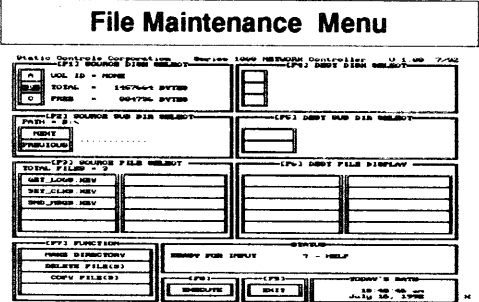
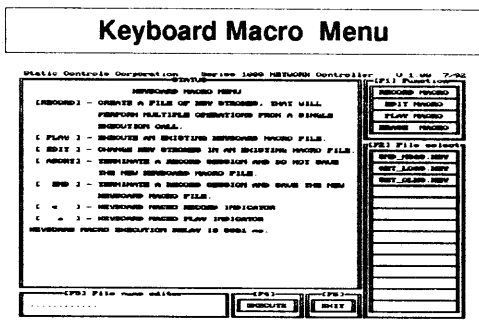
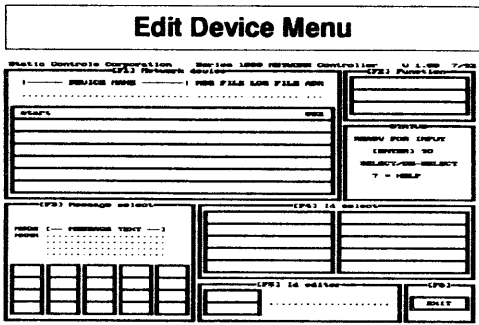
MAIN MENU	[F1] NETWORK DEVICE SELECT
EDIT DEVICE MENU	[F4] I.D. SELECT
FILE MAINTENANCE MENU	[F3] SOURCE FILE SELECT
ANALYZE LOG FILE MENU	[F1] NETWORK DEVICE [F2] LOG FILES [F7] OUTPUT TYPE

Menu Tree Structure

From the Main Menu's [F2] Function program box, all of the software's other menu screens can be accessed.



When exiting any of the submenu's, the program will exit back to the main menu.



Menu Definitions And Functions

MAIN MENU

Send message text file to a display.
Receive log file from display.
Set display clocks.
Select other menu.

EDIT DEVICE MENU

Assign a message text file to a display
Assign an address to the display.
Assign a log file name to the display.
Assign a message I.D. to each message in the message text file.
Add or remove a message I.D. type.

KEYBOARD MACRO MENU

Create (record) a keyboard macro.
Play (execute) a keyboard macro.
Edit an existing keyboard macro.
Erase (delete) a keyboard macro.

FILE MAINTENANCE MENU

Delete files from disk.
Copy files to another location or disk.
Make a directory on the disk.
Delete an entire directory from the disk.

ANALYZE LOG FILE MENU

Create log file statistical data.
View log file report.
Print log file report.
Run graphics of log file report.

Main Menu

Static Controls Corporation Series 1000 NETWORK Controller U 1.02 8/92
 [F1] Network device select

DEVICE NAME	MSG FILE	ON LINE	LOG SIZE	ADDRESS
Master display	MSGTEXT	NO	00000	002
Display at post #1204	TEXT_01	NO	00000	003

[F2] Function

MSG XFER TO DISPLAY	SET ALL CLOCKS
LOG FILE XFER	ANALYZE LOG FILES
EDIT DEVICE	MSG PROGRAM MODE
KEYBOARD MACROS	OFFLINE PROGRAMMER
FILE MAINTENANCE	EXIT TO DOS

[F3] Port parameters

COM1	38.4	2400	NONE	7d1e
COM2	19.2	1200	ODD	7d2e
COM3	2600	600	EVEN	3d1e
COM4	4800	300		8d2e

[F4] Today's date

10:09:33 am
August 13, 1992

[F5] Cr

[F6]

STATUS

READY FOR INPUT

[ENTER] = SELECT/DE-SELECT

? = HELP

Each of the main menu's program boxes are described below:

[F1] Network Device

Device address that is currently being polled for online status.

[F1] Network device select

DEVICE NAME	MSG FILE	ON LINE	LOG SIZE	ADDRESS
Master display	MSGTEXT	NO	00000	002
Display at post #1204	TEXT_01	NO	00000	003

Device name up to 28 characters long.

Message text file name that is loaded into each display.

Indicates if the display is currently online.

Indicates the current number of log entries that are stored in the display (5458 entries maximum)

Address assigned to the individual displays.

[F2] Function

[F2] Function	
MSG XFER TO DISPLAY	SET ALL CLOCKS
LOG FILE XFER	ANALYZE LOG FILES
EDIT DEVICE	MSG PROGRAM MODE
KEYBOARD MACROS	OFFLINE PROGRAMMER
FILE MAINTENANCE	EXIT TO DOS

MSG XFER TO DISPLAY

This function will send a pre-defined message text file to the selected display(s).

LOG FILE XFER

This function will receive a log file from the selected display(s).

EDIT DEVICE

This function changes the network software to the edit device menu.

KEYBOARD MACROS

This function changes the network software to the keyboard macros menu.

FILE MAINTENANCE

This function changes the network software to the file maintenance menu.

SET ALL CLOCKS

This function will set all displays with the current time and date on the network computer.

ANALYZE LOG FILES

This function changes the network software to the analyze log files menu.

PROGRAM MODE

This function changes the network software to the message text program operation.

OFFLINE PROGRAMMER

This function allows the operator to enter the SCCOFFL offline message program. This program will allow for message programming, printing of the message and I.D. files, ect. Refer to the SCC OFFLINE MANUAL for complete operation.

EXIT TO DOS

This function will exit the network software program and return to DOS.

[F3] Port Parameters

COM1	38.4	2400	NONE	7d1s
COM2	19.2	1200	ODD	7d2s
COM3	9600	600	EVEN	8d1s
COM4	4800	300		8d2s

This program box allows for setting of the serial communication port that will operate the network of displays. Recommended parameters are 9600 baud, no parity, 8 data bits, 1 stop bit.

[F4] Today's Date

[F4] Today's date
3:29:46 pm
July 15, 1992

This box will contain a running clock of the current time and date. This is also a text field box, and the time and date may be changed in this box.

[F5] Color / Monochrome

[F5] Cr t
COLOR

This box and button will change the monitor between color and monochrome.

[F6] Execute

[F6]
EXECUTE

This box and button is used to execute any of the commands that have been selected by all of the other buttons and boxes.

Edit Device Menu

```

Static Controls Corporation   Series 1000 NETWORK Controller   U 1.00 7/92
[F1] Network device
-----
|----- DEVICE NAME -----| MSG FILE LOG FILE ADR
Master display               msgtext logfile 002

Master display               msgtext logfile 002
Display at post #1204        text_01 log_01 003
-----
-----
-----
-----
-----
-----
-----
-----
-----
-----

[F2] Function
-----
ADD
REMOVE
EDIT

-----
STATUS
READY FOR INPUT
[ENTER] TO
SELECT/DE-SELECT
? = HELP
-----

[F3] Message select
FILENAME = msgtext.FIL
MSG# [--- MESSAGE TEXT ---]
0001 STATION #1 DOWN
TRANSFER NOT ADV'D.

0001 0005 0009 0013
0002 0006 0010
0003 0007 0011
0004 0008 0012

[F4] Id select
NO FAULT
STATUS
CYCLE TIME
PRODUCTION COUNT
INVALID MSG NUMBER

UNKNOWN MSG ID
DOWN TIME
IDLE TIME
WAIT TIME

[F5] Id editor
ADD
.....

[F6]
EXIT
  
```

The edit device menu is used to set up each of the network device displays on the network. All files associated with a network display are "attached" to the display in this menu. Each of the program boxes in this menu are shown below.

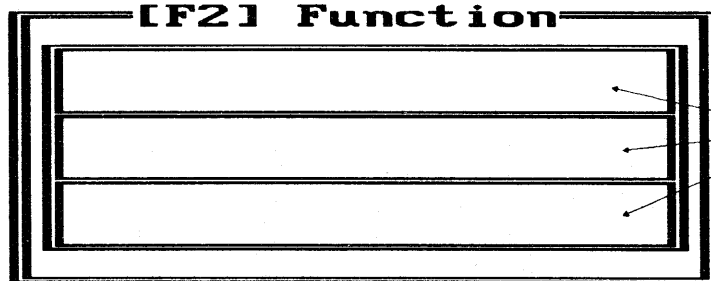
[F1] Network Device

The diagram shows the [F1] Network Device menu with several callouts:

- Shown selected:** Points to the first row of the table, which is highlighted with a thick border.
- Shown de-selected:** Points to the second row of the table, which has a normal border.
- Text field for editing the network device:** Points to the 'ADR' column of the selected row.
- A device must be selected with a button for the edit text field to be filled in.** Points to the 'ADD' button in the [F5] Id editor section.
- Device name as shown on the Main Menu.** Points to the 'DEVICE NAME' column of the selected row.
- Message text file as shown on the Main Menu.** Points to the 'MSG FILE' column of the selected row.
- Log file name. This is the log file name less the extension. The extension is added to the name when the log file is saved to disk.** Points to the 'LOG FILE' column of the selected row.
- Device address as shown on the Main Menu.** Points to the 'ADR' column of the selected row.

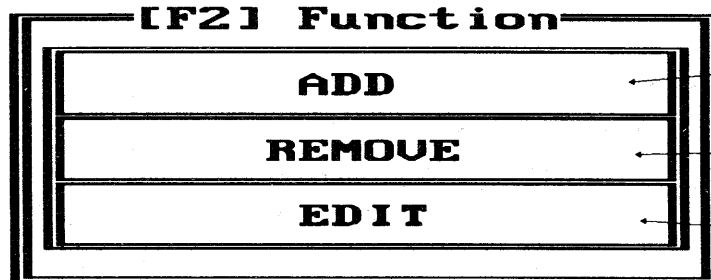
[F2] Function

This program box and buttons are used to add a new device, remove or edit an existing device. Initially the program box will have no visible button selections. The buttons will become visible after a device has been selected in the [F1] Network Device program box.



With no Network Device selected, the buttons in the [F2] program box are not visible. When a device has been selected, the buttons become visible.

When a device is selected, the buttons in the [F2] program box become visible.



Add a new device after the currently selected network device.

Remove the currently selected network device.

Edit the currently selected network device. Edit the device in the text field area inside the [F1] program box.

Edit device text field.
(shown highlighted for clarity.)

List of all available network devices.

[F1] Network device			
DEVICE NAME	MSG FILE	LOG FILE	ADR
Master display	msgtext	logfile	002
Master display	msgtext	logfile	002
Display at post #1204	text_01	log_01	003

"Master display" shown selected. When adding a new network device, it will be placed after the selected device, and before the network device labeled "Display at post #1204".

When editing, selected network device is edited in the text field.

If removing the network device, this selected device will be removed.

Network devices may be added, removed or edited in any order. Devices may be added, removed or edited at any time during operation of the network system. The device needs to be in the list of available network devices to do any operations with the display.

[F3] Message Select

The message select program box shows the operator the messages that are currently in the message text file for a selected network device. A network device needs to be selected in the [F1] program box before the [F3] Message Select program box will become visible. After a network device is selected the [F3] program box will become partially visible.

[F3] Message select

FILENAME = msgtext.FIL

MSG# [--- MESSAGE TEXT ---]

XXXX

.

.

0001	0005	0009	0013	
0002	0006	0010		
0003	0007	0011		
0004	0008	0012		

Selected devices message text file name.

Message numbers of all messages in the selected devices message text file.

Shown with no message number selected.

When a message number is selected with the [F3] program boxes buttons, the message text will be shown in the message text field.

[F3] Message select

FILENAME = msgtext.FIL

MSG# [--- MESSAGE TEXT ---]

0001 STATION #4 DOWN
TRANSFER NOT ADU'D.

0001	0005	0009	0013	
0002	0006	0010		
0003	0007	0011		
0004	0008	0012		

Text in message text file for message number 0001.

Each devices message number's text will be shown in this text field, when the message number is selected.

Shown with message number 0001 selected.

STATUS

LOADING MSGS

LOADING ID FILE .

0013 : F

After jumping to program box [F3], the message file is loaded. The status box reflects that the message text file and the ID file are being loaded and checked.

[F4] Id Select

The [F4] ID Select program box shows the message type for a message selected in the [F3] Message Select program box. This program box will become visible after a network device has been selected, and a message number has been selected.

[F4] Id select	
NO FAULT	UNKNOWN MSG ID
STATUS	DOWN TIME
CYCLE TIME	IDLE TIME
PRODUCTION COUNT	WAIT TIME
INVALID MSG NUMBER	

All of the currently available message ID's are shown in this program box. Initially all messages are defined as "UNKNOWN MSG ID". Select any of the currently available message ID's by clicking the desired button to select an ID for a message number. The [F4] program box will reflect the current message ID for the currently selected message number.

[F5] ID Editor

The [F5] ID Editor program box allows the operator to do a few different operations with the message ID's. Each of these different operations will have a different set of buttons in the [F5] program box.

With a network device selected, and the [F3] program box selected, and no message number selected in the [F3] program box, the [F5] program box buttons are shown below.

[F5] Id editor	
FIND ID
SET ALL	

With no message number selected, the [F5] program box's buttons allow the operator to set all messages to a specific ID, or to find a message(s) of a specific ID type. Clicking the SET ALL button in the program box will allow the operator to set all messages in the message text file for the selected network device to a selected ID. Selecting FIND ALL allows the operator to find each message that is set to a specific ID type.

After selecting SET ALL the [F4] program box will become visible, and the text field in the [F5] program box will show the currently selected message ID. Change the ID type text field by using the up and down arrow keys. When the ID type that is to be attached to all of the messages appears in the text field, press enter to set all messages to that ID type.

[F4] program box buttons reflect the currently selected message ID type.

ID type text field. (Shown highlighted for clarity.)

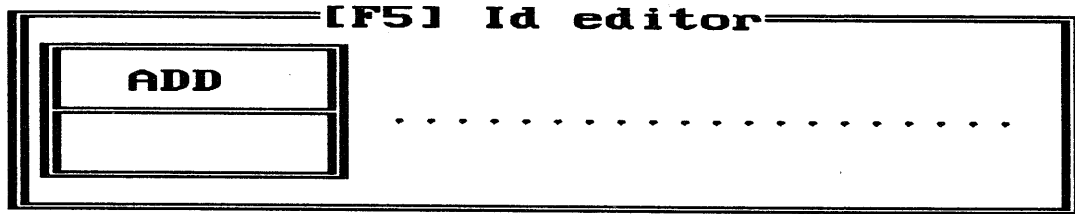
Selecting FIND ID works in the same manner as the SET ALL button. The menu below shows the screen after a message of the specified type of ID type has been found. To find the next message with the same specified ID type, press ENTER. To quit searching, press the ESC key.

Message number and message text of the type of ID specified for in the FIND ALL search.

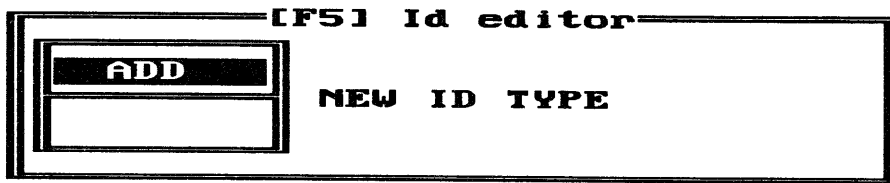
Status box shows keys to find the next message of that ID type, or to quit the search.

The [F4] program box buttons reflect the ID being searched for.

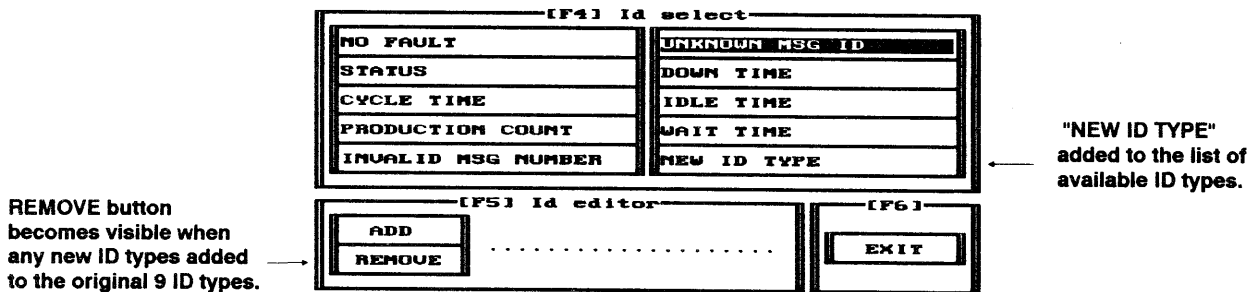
With a message number selected in the [F3] message select program box, the [F5] program box will contain a different set of button(s).



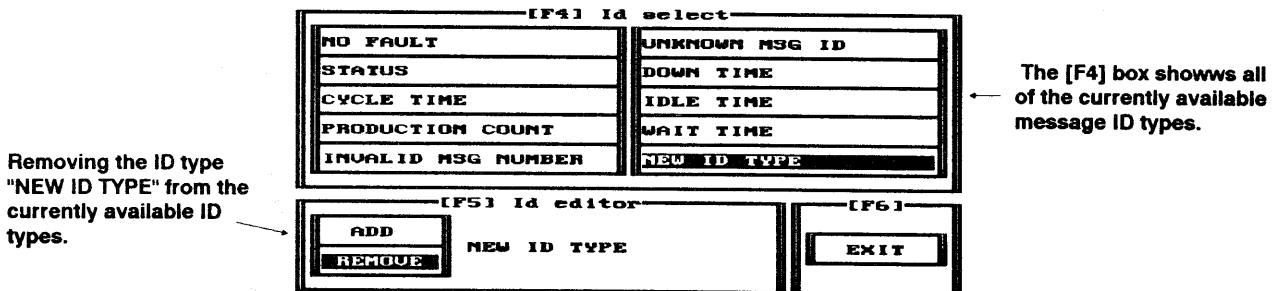
In the above [F5] ID Editor program box, selecting the ADD button will allow the operator to add a new ID type to the current list of message ID types.



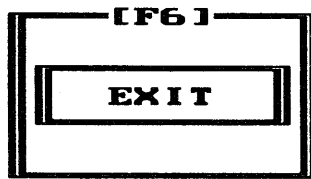
After selecting ADD, the text field in the [F5] box becomes visible and allows the operator to type in a new ID type name. Pressing ENTER after typing in the new name adds that ID type to the list of currently available ID types.



Once an ID type is added to the list of 9 permanent ID types, a REMOVE button becomes visible in the [F5] ID Editor box. The REMOVE button is only visible if an ID type has been added to the original 9 ID types. The 9 permanent ID types cannot be removed. Removing an ID type works in the same manner as adding an ID type. The ID type shown in the [F5] text field will be the ID type that is removed. Press ENTER to remove the specified ID type.



[F6] Exit



This box and button when selected will jump the network software program back to the main menu.

Keyboard Macro Menu

The keyboard macro menu allows the operator to save a set of keystrokes into a file that can be played back later. This allows the operator to save a method of operation that can be used over and over again with the same keystrokes.

Static Controls Corporation Series 1000 NETWORK Controller U 1.00 7/92

STATUS

KEYBOARD MACRO MENU

[RECORD] - CREATE A FILE OF KEY STROKES, THAT WILL PERFORM MULTIPLE OPERATIONS FROM A SINGLE EXECUTION CALL.

[PLAY] - EXECUTE AN EXISTING KEYBOARD MACRO FILE.

[EDIT] - CHANGE KEY STROKES IN AN EXISTING MACRO FILE.

[ABORT] - TERMINATE A RECORD SESSION AND DO NOT SAVE THE NEW KEYBOARD MACRO FILE.

[END] - TERMINATE A RECORD SESSION AND SAVE THE NEW KEYBOARD MACRO FILE.

[α] - KEYBOARD MACRO RECORD INDICATOR

[Δ] - KEYBOARD MACRO PLAY INDICATOR

KEYBOARD MACRO EXECUTION DELAY IS 0001 ms.

[F1] Function

RECORD MACRO

EDIT MACRO

PLAY MACRO

ERASE MACRO

[F2] File select

SND_MSGS.KEY

GET_LOGS.KEY

SET_CLNS.KEY

[F9] File name editor

.....

[F4] EXECUTE

[F5] EXIT

[F1] Function

[F1] Function

RECORD MACRO

EDIT MACRO

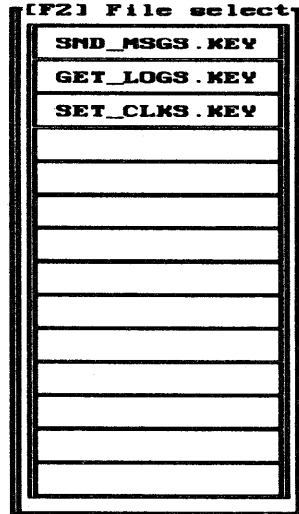
PLAY MACRO

ERASE MACRO

- ← Make and save a new macro.
- ← Change an existing macro.
- ← Operate an existing macro.
- ← Delete an existing macro.

The [F1] Function box and buttons select the macro function that is to be preformed.

[F2] File Select



The buttons in the [F2] program box list the currently available macro files.

This program box and buttons list the currently available keyboard macro files that can be **PLAYED**, **EDITED** or **ERASED**. If recording a new macro file, the list allows the operator to see what file names are currently being used.

[F3] File Name Editor

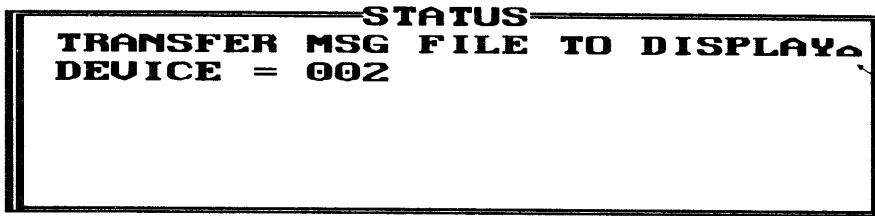


The [F3] File Name Editor is a text field that the operator uses to insert a new file name when recording a new macro file. If a currently available macro file is selected for playing, editing, or erasing, the file name will also be shown in this box's text field.

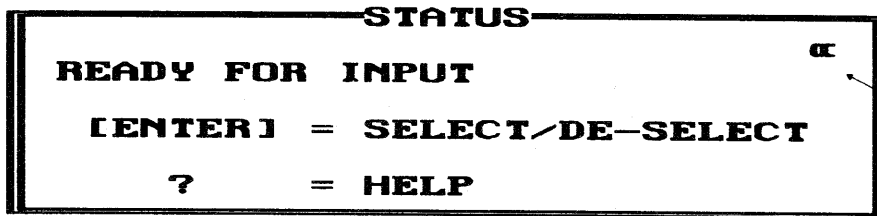


Shown here with the text field filled in with the macro file name "NEUMACRO".

The status box in each of the menu's will show if a macro file is being used. A special symbol is displayed in the corner of the status box for recording or playing. (Edit shows the same symbol as recording with text showing the next key in the macro file.

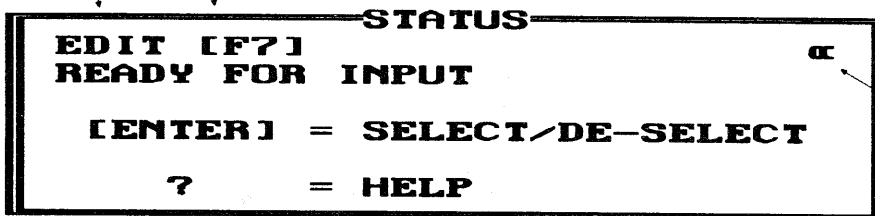


When PLAYING a keyboard macro file, this symbol will appear in the status box of each menu.



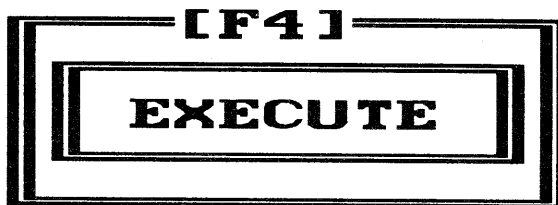
When RECORDING a keyboard macro file, this symbol will appear in the status box of each menu.

Edit verbage and the next key in the macro file are displayed in the status box of each menu.



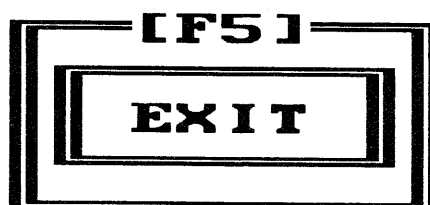
When EDITING a keyboard macro file, this symbol will appear in the status box of each menu.

[F4] Execute



This box and button is used to execute the other selected functions.

[F5] Exit



This box and button is used to go back to the Main Menu.

File Maintenance Menu

Static Controls Corporation Series 1000 NETWORK Controller U 1.00 7/92

<p>[F1] SOURCE DISK SELECT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">A</td><td>UOL ID = NONE</td></tr> <tr><td style="text-align: center;">B</td><td>TOTAL = 1457664 BYTES</td></tr> <tr><td style="text-align: center;">C</td><td>FREE = 884736 BYTES</td></tr> </table>	A	UOL ID = NONE	B	TOTAL = 1457664 BYTES	C	FREE = 884736 BYTES	<p>[F4] DEST DISK SELECT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table>														
A	UOL ID = NONE																				
B	TOTAL = 1457664 BYTES																				
C	FREE = 884736 BYTES																				
<p>[F2] SOURCE SUB DIR SELECT</p> <p>PATH = B:\</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">NEXT</td></tr> <tr><td style="text-align: center;">PREVIOUS</td></tr> </table>	NEXT	PREVIOUS	<p>[F5] DEST SUB DIR SELECT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table>																		
NEXT																					
PREVIOUS																					
<p>[F3] SOURCE FILE SELECT</p> <p>TOTAL FILES = 9</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20%;">GET_LOGS.KEY</td><td style="width: 80%;"> </td></tr> <tr><td>SET_CLKS.KEY</td><td> </td></tr> <tr><td>SND_MSGS.KEY</td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	GET_LOGS.KEY		SET_CLKS.KEY		SND_MSGS.KEY						<p>[F6] DEST FILE DISPLAY</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;"> </td><td style="width: 50%;"> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>										
GET_LOGS.KEY																					
SET_CLKS.KEY																					
SND_MSGS.KEY																					
<p>[F7] FUNCTION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">MAKE DIRECTORY</td></tr> <tr><td style="text-align: center;">DELETE FILE(S)</td></tr> <tr><td style="text-align: center;">COPY FILE(S)</td></tr> <tr><td> </td></tr> </table>	MAKE DIRECTORY	DELETE FILE(S)	COPY FILE(S)		<p>STATUS</p> <p>READY FOR INPUT ? = HELP</p>																
MAKE DIRECTORY																					
DELETE FILE(S)																					
COPY FILE(S)																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">[F8] EXECUTE</td> <td style="width: 33%; text-align: center;">[F9] EXIT</td> <td style="width: 33%; text-align: center;">TODAY'S DATE</td> </tr> <tr> <td> </td> <td> </td> <td style="text-align: center;">10:48:46 am July 16, 1992</td> </tr> </table>	[F8] EXECUTE	[F9] EXIT	TODAY'S DATE			10:48:46 am July 16, 1992	<p style="text-align: right;">X</p>														
[F8] EXECUTE	[F9] EXIT	TODAY'S DATE																			
		10:48:46 am July 16, 1992																			

This menu is used to copy files, delete files, make a directory or remove a directory.

Source program boxes

The source drive letter and information on that drives disk space are shown here.

[F1] SOURCE DISK SELECT

A	UOL ID = NONE
B	TOTAL = 1457664 BYTES
C	FREE = 834560 BYTES

The selected directory on the selected source drive is shown here.

[F2] SOURCE SUB DIR SELECT

PATH = B:\

NEXT
PREVIOUS

Buttons to move to the next or previous directory.

[F3] SOURCE FILE SELECT

TOTAL FILES = 9

GET_LOGS.KEY	
SET_CLKS.KEY	
MSGTEXT.FIL	

Buttons containing the files in the selected directory are shown here.

Destination program boxes.

The destination drive letter and information on that drives disk space are shown here.

[F4] DEST DISK SELECT	
A	VOL ID = SLATER
B	TOTAL = 30756864 BYTES
C	FREE = 10741760 BYTES

The selected directory on the selected destination drive is shown here.

[F5] DEST SUB DIR SELECT	
PATH = C:\ORCADPCB	
NEXT	
PREVIOUS	

Buttons to move to the next or previous directory.

Buttons containing the files in the selected directory are shown here.

[F6] DEST FILE DISPLAY	
TOTAL FILES = 2	
BOARDBAK.000	
BOARDBAK.001	

The source boxes [F1], [F2], and [F3] are the source program boxes. [F4], [F5], and [F6] are the destination boxes.

All files and directories are created or removed from the source program boxes. The destination boxes only become visible when copy is selected in the [F7] Function box. Copied files are copied from the source selection to the destination selection.

[F7] Function

[F7] FUNCTION	
MAKE DIRECTORY	
DELETE FILE(S)	
COPY FILE(S)	

This program box and buttons are used to select the function of the selected file(s) in the source boxes. Files can be deleted or copied to the destination boxes.

[F8] Execute

[F9] Exit

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">[F8]</td> </tr> <tr> <td colspan="2" style="text-align: center;">EXECUTE</td> </tr> </table>	[F8]		EXECUTE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">[F9]</td> </tr> <tr> <td colspan="2" style="text-align: center;">EXIT</td> </tr> </table>	[F9]		EXIT	
[F8]									
EXECUTE									
[F9]									
EXIT									

The EXECUTE and EXIT program boxes and buttons work in the same manner as in the main or any other menu.

Analyze Log File Menu

Static Controls Corporation Series 1000 NETWORK Controller U 1.00 7/92

[F1] Network device [F2] Log file

Transfer c-145 c_145 004

002	006	012							
003	007	010							
004	008	011							
005	009								

000	004			
001	005			
002	006			
003	007			

03:54:12 pm 07/14/92
12:17:38 pm 07/23/92

[F3] Function

ENTIRE LOG FILE
FAULT ANALYSIS
CYCLE TIME ANALYSIS
PROD. COUNT ANALYSIS

[F4] Sort method

CHRONOLOGICAL
FREQUENCY
DURATION

[F5] Id select

NO FAULT
STATUS
CYCLE TIME
PRODUCTION COUNT
INVALID MSG NUMBER
UNKNOWN MSG ID
DOWN TIME
IDLE TIME
WAIT TIME
NEW ID TYPE
MECHANICAL ERROR
INCORRECT PART

[F6] Parameters

START TIME = 03:54:12 p
START DATE = 07/14/92
END TIME = 12:17:38 p
END DATE = 07/23/92
START SHIFT = 12:00:00 a
END SHIFT = 11:59:59 p
START MSG# = 0000
END MSG# = 9999

[F7] Output

VIEW ON SCREEN
SEND TO PRINTER
SEND TO FILE
GRAPHICS

TODAY'S DATE
8:29:37 am
July 28, 1992

[F8] EXECUTE [F9] EXIT

STATUS
READY FOR INPUT
? = HELP

Within this menu all reports are generated from log files saved on the disk. Log files are uploaded from the displays to the network controller and saved on disk in the Main Menu. The log files saved on the disk are used in this menu to generate reports on faults encountered in the network system.

Reports can be viewed on the screen, printed or displayed in a graphic representation.

[F1] Network Device

Device name, message text file name, and device address of the selected device.

[F1] Network device

Transfer c-145 c_145 004

002	006	012							
003	007	010							
004	008	011							
005	009								

List of all available network devices. Devices are listed by their address.

The [F1] program box and buttons select the network device(s) who's log files are to be analyzed. Multiple devices may be selected.

[F2] Log Files

The screenshot shows a menu titled "[F2] Log file" with a text field containing "demo.007". Below this is a table of log files:

000	004			
001	005			
002	006			
003	007			

At the bottom of the menu, two lines of text show the start and end times for the selected log file:

03:54:12 pm 07/14/92
12:17:38 pm 07/23/92

Annotations: "Log files on the disk for the currently selected network device." points to the table. "Starting and ending time and date of the log entries in the currently selected log file." points to the time/date text. "Log file name that is currently selected." points to the "demo.007" text field.

This box and buttons allow the operator to select one or more log files for the selected network device. These log files will be used for reports.

[F3] Function

The screenshot shows a menu titled "[F3] Function" with four options listed in a vertical stack:

- ENTIRE LOG FILE
- FAULT ANALYSIS
- CYCLE TIME ANALYSIS
- PROD. COUNT ANALYSIS

This box and buttons select the type of messages that are to be used in the log file reports. Any messages that are not to be used will be "stripped" out of the report. The shown selection "ENTIRE LOG FILE" will use all logged messages in the report.

The screenshot shows the same "[F3] Function" menu as above, but with "FAULT ANALYSIS" selected. Below the menu is a text field labeled "MORE THAN :" containing the value "00h 01m 30s".

Annotations: "Fault analysis of fault messages that have a fault duration of greater than 1 minute 30 seconds are to be included in the report." points to the "FAULT ANALYSIS" option. "Text field for setting the minimum fault duration." points to the "00h 01m 30s" text field.

"FAULT ANALYSIS" will only use messages that are generated by a fault condition. In addition a text field allows the operator to set a time limit that the fault must be greater than to be included in the report.

[F3] Function

ENTIRE LOG FILE
FAULT ANALYSIS
CYCLE TIME ANALYSIS
PROD. COUNT ANALYSIS

MORE THAN 000.30 seconds

Text field set to a minimum of 0.3 seconds in this example. Cycle times less than 000.30 seconds are not included in the report.

"CYCLE TIME ANALYSIS" will do a report on messages that have a variable cycle time in the message text. The text field is set to the minimum cycle time that is to be included in the report.

[F3] Function

ENTIRE LOG FILE
FAULT ANALYSIS
CYCLE TIME ANALYSIS
PROD. COUNT ANALYSIS

MORE THAN 000005 counts

Production count analysis of counts greater than 5 pieces.

"PRODUCTION COUNT ANALYSIS" will do a report on the messages that are production counts with a variable inserted into the message text.

[F4] Sort Method

[F4] Sort method

CHRONOLOGICAL
FREQUENCY
DURATION

This box and buttons determine the method of sorting of the messages determined in the [F3] box. "CRONOLOGICAL" will list the messages in order of thier time and date. The time and date of each logged message is saved along with the message when the message was called up by the controlling P.L.C. attached to each of the network displays.

[F4] Sort method

CHRONOLOGICAL
FREQUENCY
DURATION

LIST most

Shown with the top 10 messages in order of frequency to be shown on the report.

"FREQUENCY" will sort the messages in order of the most called up messages to the least called up messages. A text field allows the operator to set the number of messages that are to be seen on the report.

[F4] Sort method

CHRONOLOGICAL
FREQUENCY
DURATION

LIST longest

List the 12 longest duration fault messages on the report.

"DURATION" lists the messages in order of the time duration of each of the messages. The text field is filled in with the number of messages to be seen on the report.

[F5] I.D. Select

[F5] Id select

NO FAULT
STATUS
CYCLE TIME
PRODUCTION COUNT
INVALID MSG NUMBER
UNKNOWN MSG ID
DOWN TIME
IDLE TIME
WAIT TIME
NEW ID TYPE
MECHANICAL ERROR
INCORRECT PART

This box and buttons select the message I.D. types to be used in the report. The I.D.'s are initially selected when picking a function in the [F3] box. The I.D. types can be selected or deselected manually by clicking on any of the shown buttons in the box.

[F6] Parameters

[F6] Parameters	
START TIME	= 03:54:12 P
START DATE	= 07/14/92
END TIME	= 12:17:38 P
END DATE	= 07/23/92
START SHIFT	= 12:00:00 a
END SHIFT	= 11:59:59 P
START MSG#	= 0000
END MSG#	= 9999

This box with its text fields allows the operator to exclude messages from the report. Only messages that fit within the settings of this program box will be included in the report.

"**START TIME & DATE**" This text field defines the starting time and date of the messages to be included in the report. This field will be automatically filled in when selecting log files in the [F2] box.

"**END TIME & DATE**" This text field defines the ending time and date of the messages to be included in the report. This field is automatically filled in when selecting log files with the [F2] box.

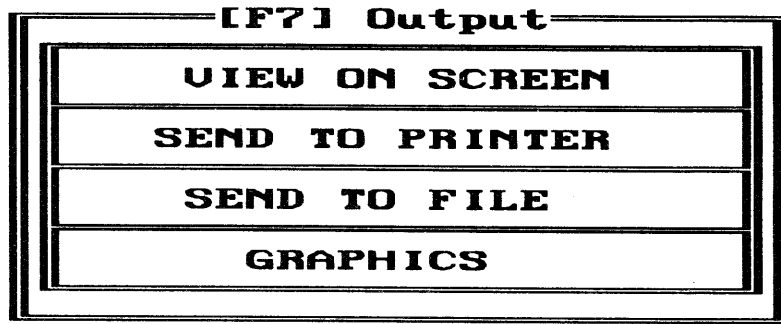
"**START & END SHIFT**" This allows the operator to exclude all message entries that are not within the start and end shift time.

"**START & END MESSAGE NUMBER**" This allows the operator to exclude any message number that does not fall within the message numbers set in this text field.

[F7] Output

[F7] Output
VIEW LAST REPORT
PRINT LAST REPORT
GRAPHICS LAST REPORT

This box and buttons determine where the output of the report is sent. If no selection has been made with the [F3] box the [F7] box will reflect that the only reports that can be seen are the last report on the disk.



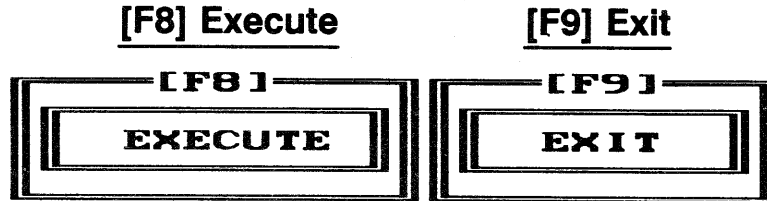
If a selection has been selected in the [F3] box the [F7] box will reflect that a new report is to be generated, and where to send that report.

"VIEW ON SCREEN" allows the operator to see the report on the network computers C.R.T. screen.

"SEND TO PRINTER" allows the operator to print out the report.

"SEND TO FILE" allows the operator to put the report on to the disk.

"GRAPHICS" allows the operator to do a graphic report on the report data.



The EXECUTE button executes a command determined by all of the other selections in the menu. The EXIT button will return the operator to the main menu.

Log File Reporting Sequence

Select a network device(s).

[F1] Network device								
Transfer c-145			c_145				804	
002	006	012						
003	007	010						
004	008	011						
005	009							

Select a log file(s).

[F2] Log file			
demo.007			
000	004		
001	005		
002	006		
003	007		

03:54:12 pm 07/14/92
12:17:30 pm 07/23/92

Select a function. (Selects specific message types to use.)

[F3] Function
ENTIRE LOG FILE
FAULT ANALYSIS
CYCLE TIME ANALYSIS
PROD. COUNT ANALYSIS

Set any parameters. (Omits blocks of messages.)

[F6] Parameters
START TIME = 03:54:12 P
START DATE = 07/14/92
END TIME = 12:17:30 P
END DATE = 07/23/92
START SHIFT = 12:00:00 A
END SHIFT = 11:59:59 P
START MSGs = 0000
END MSGs = 9999

Select the sorting method. (Determines output sorting of messages.)

[F4] Sort method
CHRONOLOGICAL
FREQUENCY
DURATION

Select the final output.

[F7] Output
VIEW ON SCREEN
SEND TO PRINTER
SEND TO FILE
GRAPHICS

Execute the selected options

[F8]
EXECUTE

Initial Setup

Initially all network displays come from the factory with no messages stored in the display's internal memory. All of the displays on the network system are to be loaded with messages for proper operation. Also the network controller is shipped with no network display information saved in it's internal setup. Before the network system can become operational both of these items need to be set up.

Network display message set up

There are several ways to set up and load messages into each of the network's master displays. This manual will go thru several methods for loading the message memory in each display.

Message Creation

Messages can be created from two different sources. Static Controls OFFLINE message programming software, or internally from the network program. Both of these programs use the same basic kernel and operate in the exact same manner when creating and saving message text files for a display. Refer to Static Controls OFFLINE manual for specific operation of the message programming software. Using the SCC OFFLINE software, create a message file for each display on the network system, saving each of those message text files on your computers hard disk. When completed the message text files will need to be copied to the network's hard disk in the SCC1000 subdirectory. **Note: the message text files on the network system MUST have the file name extention ".FIL".**

The second method for creating message text files is from within the network program. The Network System must be set up first to be able to create message text files from within the Network software.

Network System Set Up

From the Main Menu select [F2] Function "EDIT DEVICE" and then [F6] "EXECUTE". This will send the program into the Edit Device Menu.

All of the Network Set up is done in the Edit Device Menu.

For each Network device on the network system, some information is required to be set in the network software. Each device is required to be "tagged" with the file name of the message text file, the log file name, and an address. Additionally a 28 character device name can be "tagged" to each network device, but is not required. Once a message text file is created for each device, a message I.D. tag must also be set for each message in the message text file.

Initially the Edit Device Menu will show 1 network device with a device name of "start" and an address of 002. This is the default value when the software is shipped.

Continue adding devices until all devices on the network system are defined and tagged with the file names and addresses.

[F1] Network device			
DEVICE NAME	MSG FILE	LOG FILE	ADR
Display #3	Message3	Message3	004
Display #1	Message1	Message1	002
Display #2	Message2	Message2	003
Display #3	Message3	Message3	004

Creating Message Files

With the network devices all "tagged" with file names and addresses, a message file may be edited or created from within the network software. From the Main Menu, select a specific device in the [F1] Network Device box, and select "PROGRAM MODE" in the [F2] Function box. When executing this function, the program will first check to see if the selected device is "ONLINE". If the device is online, the display will send it's message file to the network controller to see if the message file in the display matches the message file on the network controllers hard disk. For initially creating message files, force any network devices on the wires to "OFFLINE" by disconnecting the communications cable out of the network controller.

When "PROGRAM MODE" is executed, the software will load up and run the kernel of the SCC OFFLINE software to create messages.

If the network device is "ONLINE" when executing "PROGRAM MODE", the network controller will command the network display to upload the display's message text file from the display to the network controller. The message text file is checked against the message text file located on the network controllers hard disk. If the two files do not match, the network controller will display the differences in the two files, and ask the operator which message file is to be saved. After the files are checked, the program will run the kernel of SCC OFFLINE to allow message file editing. When leaving the kernel of SCC OFFLINE, the network controller will download the message text file back to the selected network display automatically.

Network Controller Files

Associated with the network controller are various support files for both network controller operation and network display operation. When the network controller is started up, the controller will check all of the files that have been tagged to each of the network device displays.

SCANNING TEXT AND ID FILES !

The above dialog box will appear when the network controller is checking the files on the network controller's hard disk.

DEVICE 004 : MESSAGE TEXT FILE DOES NOT EXIST !

The above dialog box will be shown if a file that has been tagged to a network device does not exist on the network controllers hard disk.

Once the files are located, the network controller will check each of the files to determine that the files all match and are valid.

```
===== ID FILE VALIDATION =====
MESSAGE TEXT FILE = msgtext.FIL
MESSAGE ID FILE   = msgtext.ID
TEXT MSG NUMBER   = 0005
  ID MSG NUMBER   = 0006
      STATUS      = GOOD
```

Files that are saved on the network controllers hard disk are of two different types. The first are the files that determine the network controllers operation. The second type are the files that are tagged to each of the network device displays.

SCC_NET.ID This file contains all of the currently available I.D. types that can be assigned to a message text.

SCC_NET.DEV This file contains all of the network devices that are defined in this network system.

SCC_NET.EXE	This is the main kernel of the network operational program.
SCC_NET.COM	This is the startup of the network program.
SCC_NET.CFG	This is the file that contains the network configuration parameters. This file is hidden and cannot be viewed in the DOS directory.
NETSHELL.EXE	This is the startup shell for all of the network systems program.
SCCOFFLE.EXE	This is the kernel of the message creation program.
?????????.HLP	These files contain the help file for the message creation portion of the program
?????????.KEY	This is a keyboard macro file.
SCC_NET.OUT	This is the last viewable log file report.
SCC_NET.PRN	This is the last printable log file report.
SCC_NET.GPH	This is the last graphable log file report.
SCC1000.BAT	This is the batch file program that is used to start up the network system.

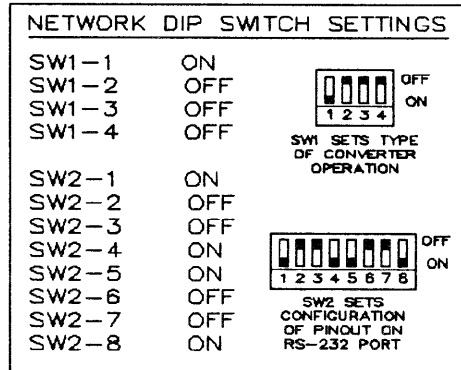
The files for the network device displays are listed below.

?????????.FIL	This is the message text file for a given display.
?????????.000 thru ?????????.999	These are the raw log files that have been uploaded from a display.
?????????.ID	This is the ID file for the message text file in each display.

NAB-3 Network Converter

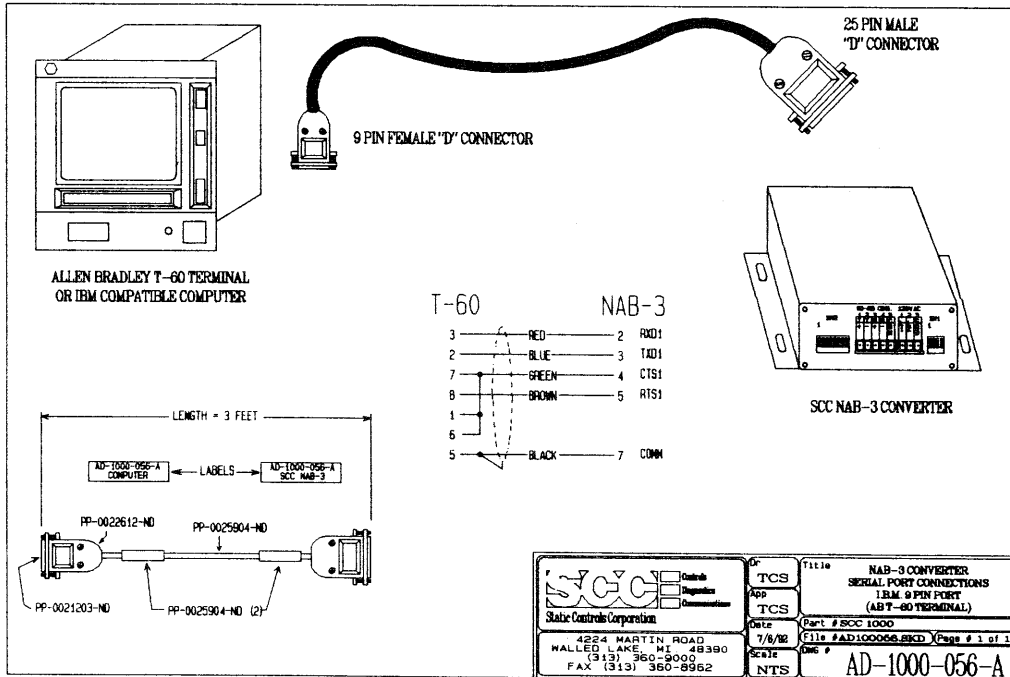
The NAB-3 converter converts the network controllers RS-232 communications to the 2 wire half duplex, RS-485 communications for use with the network displays. The converter can also be used as a 4 wire, full duplex, RS-422 converter for loading a message text file to the display on the plant floor right at the display.

When using the converter as the network RS-485 converter with the supplied SCC cable to the network controller the D.I.P. switches on the converter are to be set as shown.



To operate the NAB-3 converter as a 4 wire, RS-422 converter, change SW1 #1 to off and set SW1 #3 to on.

Below is the cable supplied for the RS-232 side of each NAB-3 converter.



Network Device Set-up

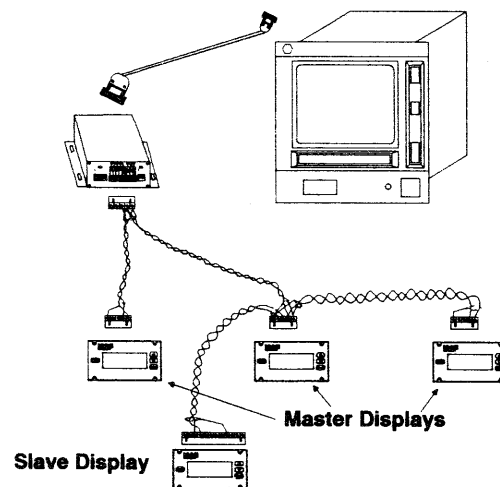
Each of the network devices requires that the device (display) be set up to the proper network operating parameters.

*Note: Master displays are tied to both the network controller computer, and the machine's P.L.C.
Slave displays are displays tied only to a master display.*

DISPLAY MODEL Each device on the network system is required to be ordered with the correct options. Valid S.C.C. part numbers are:

MASTER DISPLAY 1040-P4-03-128-C-FN
1040-P4-04-128-C-FN
1040-P4-13-128-C-FN
1040-P4-14-128-C-FN
1080-P4-03-128-C-FN
1080-P4-04-128-C-FN
1080-P4-13-128-C-FN
1080-P4-14-128-C-FN

SLAVE DISPLAY 1040-S-03-X-X-FN
1040-S4-03-X-X-FN
1040-S-04-X-X-FN
1040-S4-04-X-X-FN
1080-S-03-X-X-FN
1080-S4-03-X-X-FN
1080-S-04-X-X-FN
1080-S4-04-X-X-FN



MODE Each of the network devices is required to be set to the correct operating mode for correct network operation.

MASTER DISPLAY NETWORK MODE

SLAVE DISPLAY SLAVE MODE, SCC1000 SLAVE

All of the serial port parameters must match between the network controller and the master display device. Recommended parameters are 9600 baud, 8 data bits, 1 stop bit, no parity, and no handshake. Recommended parameters for the master to slave serial ports are 1200 baud, 8 data bits, 1 stop bit, no parity, and no handshake. Fully shielded cable is required for all of the serial communications wiring. See Series 1000 operation manual for installation of Series 1000 displays.

When programming messages for each display on the network, insure that the display has been set up to enable the logging function, and turn the log on for each message that is to be logged.

```

***** SYSTEM PARAMETERS ***** NOTE: System parameters for this file
AUTO BLANK BEFORE CLOCK..... OFF          are as shown. Changes can be
BYPASS DISPLAY OF CLOCK..... OFF          made as needed by entering
THE CLOCK IS SET TO LINE..... #1          the special feature menu and
THE CLOCK IS SET TO..... TERM            selecting the appropriate
SCROLL DELAY TIME IS..... 5              category as listed below.
FLASH TIME IS..... 5                    (C) Clock Maintenance
NUMBER OF FLASHES IS..... 05            (F) Format message tms & cnts
DELAY AFTER MESSAGE IS..... 3            (P) Printing Parameters
INSERT CHARACTER IS..... *              (I) Parallel input parameters
PRINTER IS SET TO..... OFF              Any parameter which has been
# OF COLUMNS FOR PRINTER..... 40        modified from it's original
PRINTER BAUD RATE IS..... DIP SETTING    default setting is designated
PRINTER LINE FEED DELAY IS... 000        by an * in the column to it's
PARALLEL LOGIC TRUE = ..... HIGH        right.
PARALLEL STROBE/SAMPLE ..... STROBE
PARALLEL DEBOUNCE TIME IS.... 3          *
PARALLEL MSG # SELECT IS..... BCD
PARALLEL VARIABLE DATA IS.... BCD
NUMBER OF BCD DIGITS IS..... 4          *
NUMBER OF BINARY BITS IS..... 08
LOG SELECTED MESSAGES IS..... ON        *
CLEAR LOG BUFFER WHEN READ IS OFF
Press any key to continue ...

```

SYSTEM PARAMETER SCREEN OF SCCOFFL OFFLINE MESSAGE PROGRAMMING SOFTWARE.

LOG SELECTED MESSAGES IS "ON" should be selected to enable the logging function of the display.

CLEAR LOG BUFFER WHEN READ IS "OFF". When this is "OFF", the log buffer is not cleared after the log buffer is read by the network controller. When "ON" the buffer is cleared after it has been read by the controller.

MSG #	LINE #	TYPE	CNT	LOG	ALRM	SLU #	[MESSAGE]	TERM	RPT	DELAY
0001	#1	BLK	005	ON	OFF	01	STA.#1	CONT	OFF	OFF
0001	#2	BLK	005	ON	OFF	01	SHUTTLE TRANSFER	CONT	OFF	OFF
0001	#3	BLK	005	ON	OFF	01	PRODUCTION RUNNING	CONT	OFF	OFF
0001	#4	BLK	005	ON	OFF	01	NO FAULTS!	TERM	OFF	OFF
0002	#1	BLK	001	ON	OFF	01	CYCLE TIME	CONT	OFF	OFF
0002	#2	BLK	001	ON	OFF	01	**. sec.'s	CONT	OFF	OFF
0002	#3	BLK	001	ON	OFF	01	2.4 sec.'s	CONT	OFF	OFF
0002	#4	BLK	001	ON	OFF	01	STANDARD.	TERM	OFF	OFF
0003	#1	BLK	001	ON	OFF	01	PRODUCTION COUNT	CONT	OFF	OFF
0003	#2	BLK	001	ON	OFF	01	*****	CONT	OFF	OFF
0003	#3	BLK	001	ON	OFF	01	600 PARTS PER HOUR	CONT	OFF	OFF
0003	#4	BLK	001	ON	OFF	01	STANDARD.	TERM	OFF	OFF
0004	#1	BLK	003	ON	OFF	01	STA.#1	CONT	OFF	OFF
0004	#2	BLK	003	ON	OFF	01	CYCLE START	CONT	OFF	OFF
0004	#3	BLK	003	ON	OFF	01	PRODUCTION RUNNING	CONT	OFF	OFF
0004	#4	BLK	003	ON	OFF	01	A.O.K.	TERM	OFF	OFF
0005	#1	BLK	004	ON	OFF	01	STA.#1	CONT	OFF	OFF
0005	#2	BLK	004	ON	OFF	01	END OF CYCLE	CONT	OFF	OFF
0005	#3	BLK	004	ON	OFF	01	PART AT EXIT	CONT	OFF	OFF
0005	#4	BLK	004	ON	OFF	01	LOCATION.	TERM	OFF	OFF

F1-HELP F2-AUTOCENTER OFF F3-REPLACE F4-EXIT F5-LOWERASCII

VIEW MESSAGES SCREEN OF SCCOFFL OFFLINE MESSAGE PROGRAMMING SOFTWARE.

Set each message's LOG flag to "ON" for each message that is to be logged.

Reports

The reports generated by the Analyze Log File Menu are used for statistical evaluation of a machine or process. Listed below are the reports and their contents.

Current report page number

Device Name, Address, Message file name and log files that are used in this report. Shown with multiple devices and log files. [F1] + [F2]

Parameters that were selected for this report. [F6]

Report function and sorting method selected for this report. [F3] + [F4]

Report paging keys.

```

ecc_net.out pg: 1          STATIC CONTROLS CORPORATION          214215 BYTE(S)
Static Controls Corporation  Series 1000 NETWORK Controller      U 1.03  8/92
SERIES 1000 NETWORK LOG FILE REPORT  10:17:03  01/03/1990
-----
LOG FILE PARAMETERS
-----
SOC DEMO                ADDRESS : 002  MESSAGE FILE : DEMO.F11
LOG FILE(S) : DEMO.000 001 002 003 004 005 006 007
MUSTANG ROBOT STA.2(demo) ADDRESS : 003  MESSAGE FILE : 202STA2.F11
LOG FILE(S) : 202STA2.000

STARTING TIME          = 03:54:12 pm
STARTING DATE          = 07/14/92
ENDING TIME            = 05:56:58 pm
ENDING DATE            = 07/29/92
START SHIFT TIME      = 12:00:00 am
END SHIFT TIME        = 11:53:59 pm

START MESSAGE          = 0000
END MESSAGE            = 9999

FUNCTION                = ENTIRE LOG FILE
SORT METHOD              = CHRONOLOGICAL ORDER

[ESC] [HOME] [END] [PGUP] [PGDN] [F7] [F4]
  
```

Typical page #1 of all reports.

Message I.D. types that were selected for this report. [F5]

Report paging keys.

```

ecc_net.out pg: 2          STATIC CONTROLS CORPORATION          214215 BYTE(S)
-----
SELECTED MESSAGE ID GROUPS
-----
NO FAULT                STATUS
CYCLE TIME              PRODUCTION COUNT
INVALID MSG NUMBER     UNKNOWN MSG ID
DOWNTIME                IDLE TIME
WAIT TIME               OVER TIME

[ESC] [HOME] [END] [PGUP] [PGDN] [F7] [F4]
  
```

Typical page #2 of all reports.

After the first two pages of each report, the reports will differ depending on the type of report being generated. Below is a typical report page generated on 1 entire log file, and sorted in chronological order.

ecc_net.out pg: 113		STATIC CONTROLS CORPORATION		214215 BYTE(S)	
ADR:MSG#	MESSAGE	TIME DATE	MSG ID ENTRY DURATION	TOTAL DURATION	OCCURRENCE LOG DURATION
003:0306	WARNING --- ROBOT #2 U-GUN CAPS NEED TO BE CHANGED SOON @-TIME-@ @-DATE-@	05:37:10 pm 07/23/92	STATUS 00h 00m 14s	13h 04m 04s	0001 00780 000
003:0001	TOOLS 162P-55015 R#1 BODYSIDE STATION 2 NO FAULTS	05:37:24 pm 07/23/92	NO FAULT 00h 00m 16s	13h 04m 20s	0000 00781 000
003:0209	QUARTER PANEL PIN NOT RETD 8BP-C1-1P03 0:00-01 1:000-03 @-TIME-@ @-DATE-@	05:37:40 pm 07/23/92	DOWN TIME 00h 01m 34s	13h 05m 54s	0001 00782 000
003:0256	ROBOT #2 IN TRENCH ON BYPASS I:022/00 I:022/05 @-TIME-@ @-DATE-@	05:39:14 pm 07/23/92	DOWN TIME 00h 00m 24s	13h 06m 18s	0002 00783 000
003:0001	TOOLS 162P-55015 R#1 BODYSIDE STATION 2 NO FAULTS	05:39:38 pm 07/23/92	NO FAULT 00h 00m 24s	13h 06m 42s	0009 00784 000
003:0250	STATION 2 NOT AUTO INITIATED 0:000/00 @-DATE-@	05:40:02 pm 07/23/92	WAIT TIME 00h 00m 34s	13h 07m 16s	0001 00785 000
003:0001	TOOLS 162P-55015 R#1 BODYSIDE STATION 2 NO FAULTS	05:40:36 pm 07/23/92	NO FAULT 00h 00m 25s	13h 07m 42s	0010 00786 000

[ESC] [HOME] [END] [F0UP] [F0DN] [F1] [F2]

Text for this message →

Display address and message number. →

Time and date that this message was logged. →

Duration that this message was logged for. →

This message's I.D. type. →

Total duration of all messages in this report up to this time. →

Number of occurrences of this message number, and total number of messages in this report up to this time. →

Log file number this entry is from. →

Typical summary report page. Used on frequency and duration sorting methods.

Example is from a report using FAULT ANALYSIS function and FREQUENCY sorting method.

ecc_net.out pg: 9		STATIC CONTROLS CORPORATION		4278 BYTE(S)	
FAULT ANALYSIS					
HIGHEST FREQUENCY	MSG #	003:0256	DOWN TIME	The message number that occurred the most is #256 on address 003.	
MESSAGE ID	=	DOWN TIME	this message has an I.D. type of DOWN TIME.		
LAST TIME MESSAGE LOGGED	=	05:39:14 pm	The last time and date the message was logged.		
LAST DATE MESSAGE LOGGED	=	07/23/92	This message was logged 2 times.		
HIGHEST FREQUENCY COUNT	=	2	There were 35 fault messages in this report.		
TOTAL FAULTS	=	35			

[ESC] [HOME] [END] [F0UP] [F0DN] [F1] [F2]

Summary report used for frequency and duration types of sorting methods.

ecc_net.out pg: 1		STATIC CONTROLS CORPORATION		6869 BYTE(S)	
FINAL REPORT RESULTS (FREQUENCY)					
ADR:MSG#	MESSAGE	MSG ID	OCCURENCES	TOTAL DURATION	
003:0256	ROBOT #2 IN TEACH OR BYPASS I:022/00 I:022/05 \$-TIME-\$ \$-DATE-\$	DOWN TIME	0002	00h 06m 56s	
003:0069	Q/H LIFTER NOT RSED OHS-C1-1PXS O:009/17 I:002/14 \$-TIME-\$ \$-DATE-\$	DOWN TIME	0001	00h 02m 02s	
003:2101	STATION 2 DAMAGED PART SEDAN	WAIT TIME	0001	00h 00m 30s	
003:0268	STATION 2 CYCLE OVERTIME T:30 \$-TIME-\$ \$-DATE-\$	OVER TIME	0001	00h 01m 36s	
003:0219	PART FAULT QUARTER PANEL NO P/P SAC-3PXS I:007/05 \$-TIME-\$ \$-DATE-\$	WAIT TIME	0001	00h 00m 22s	
003:0209	QUARTER PANEL PIN NOT RETD SEP-C1-1PXS O:001/01 I:003/03 \$-TIME-\$ \$-DATE-\$	DOWN TIME	0001	00h 01m 31s	
003:0250	STATION 2 NOT AUTO INITIATED O:000/00 \$-TIME-\$ \$-DATE-\$	WAIT TIME	0001	00h 00m 31s	
[ESC] [HOME] [END] [PGUP] [PGDN] [F7] [F1]					

Device address and message number. →

Message text. →

Message I.D. type. →

Frequency of this message number's occurrences in this report. →

Total duration of this message numbers fault time. →

Typical data report page when using the frequency or duration sorting methods for a report. This report was run being sorted by frequency.

When reports are run, sorting by duration, the report looks the same as in this example, but the message that was logged for the longest duration would be at the top of the list.

Static Controls Corp.

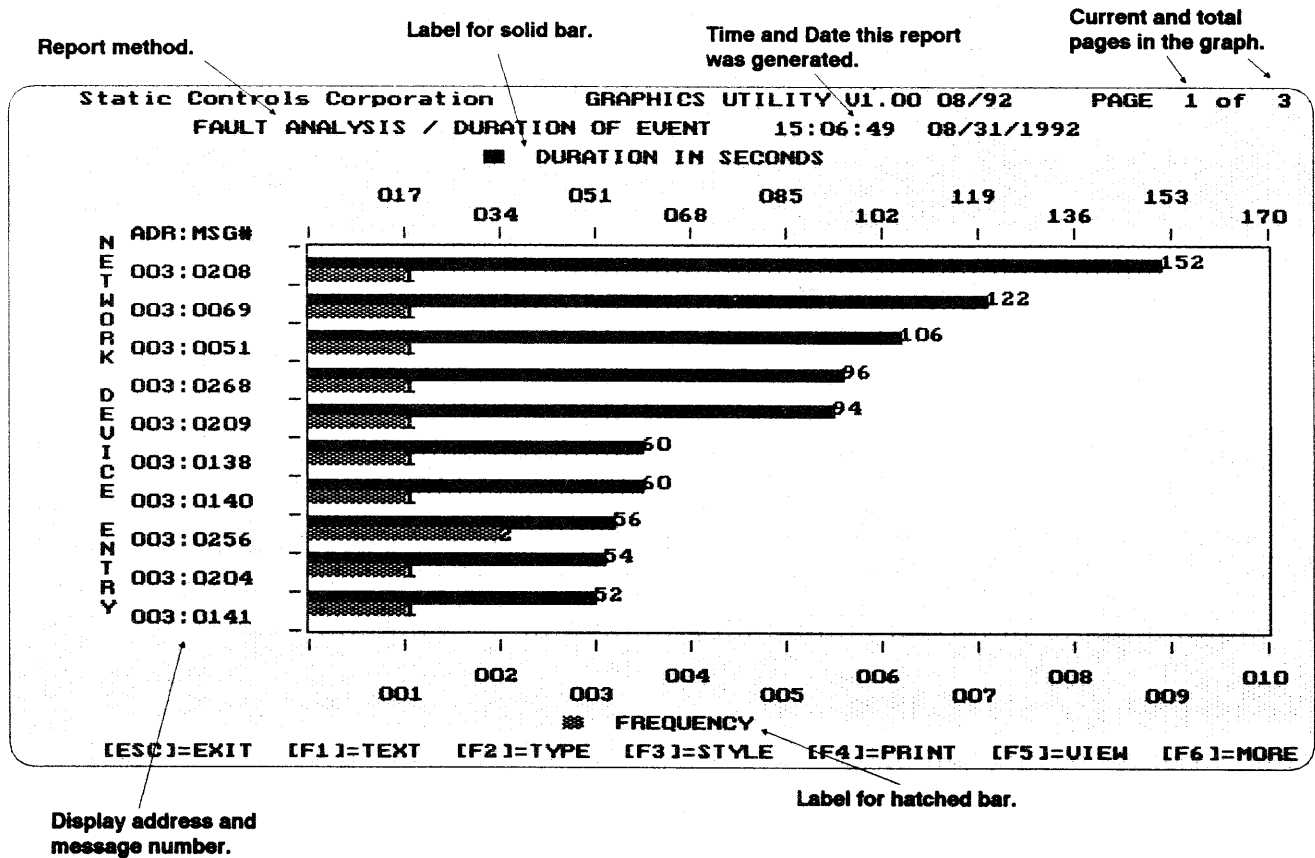
SCC Graph Utility

Users Manual

Report Graphing

The SCC Graph Utility allows for graph representation of report data generated from the SCC 1000 Network System fault analysis.

Below is the default graph generated by the SCC Network.

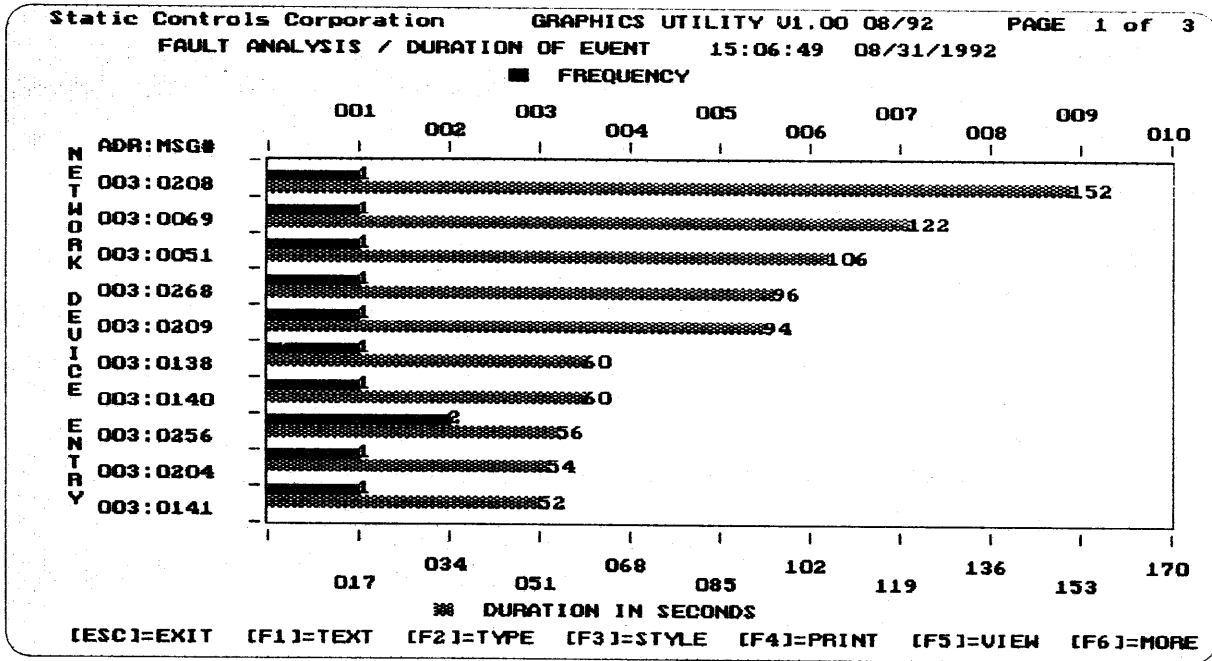


Shown above is the defaulted graph style #1. There are 4 different styles of graph that can be displayed. Style #1 contains both fault duration and fault frequency, with duration on the top "X" axis, and frequency on the lower "X" axis. The "Y" axis of the graph contains the network device address and the message number.

The above graph was generated with FAULT ANALYSIS and sorted by DURATION. This will show the longest duration fault first followed in descending order to the lowest duration fault.

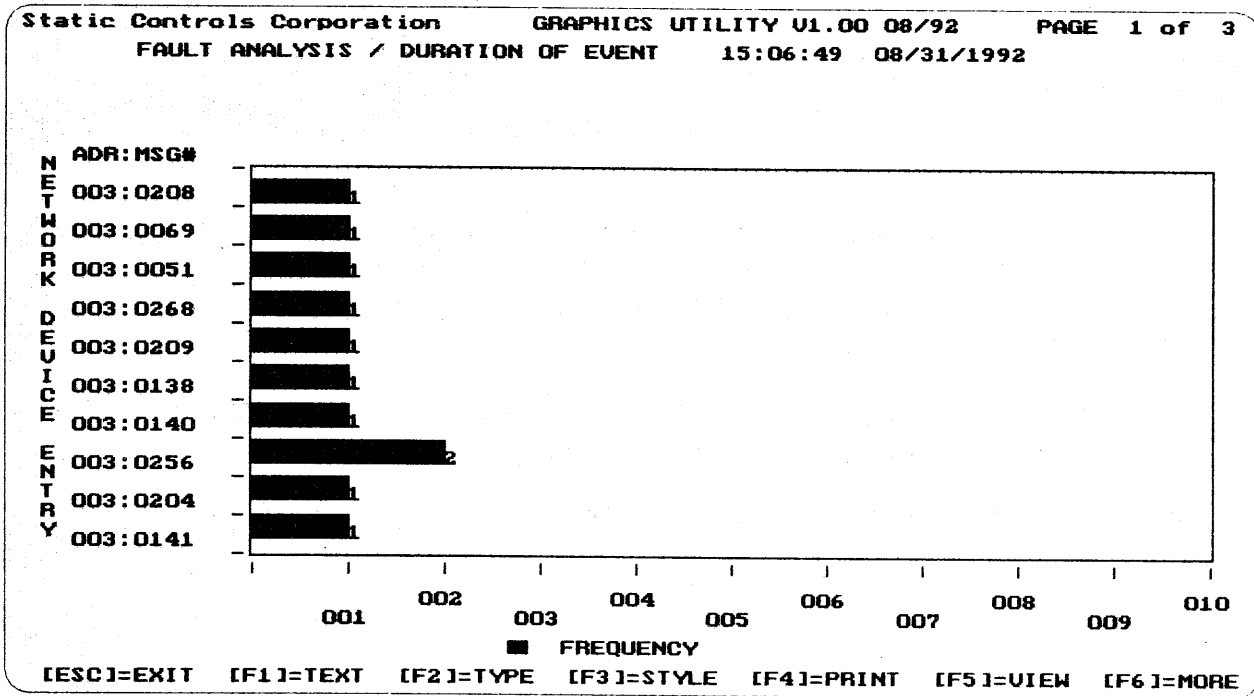
In the above graph, address #003, message number #0208 occurred 1 time for a duration of 152 seconds.

Below is the same report shown as graph style #2.

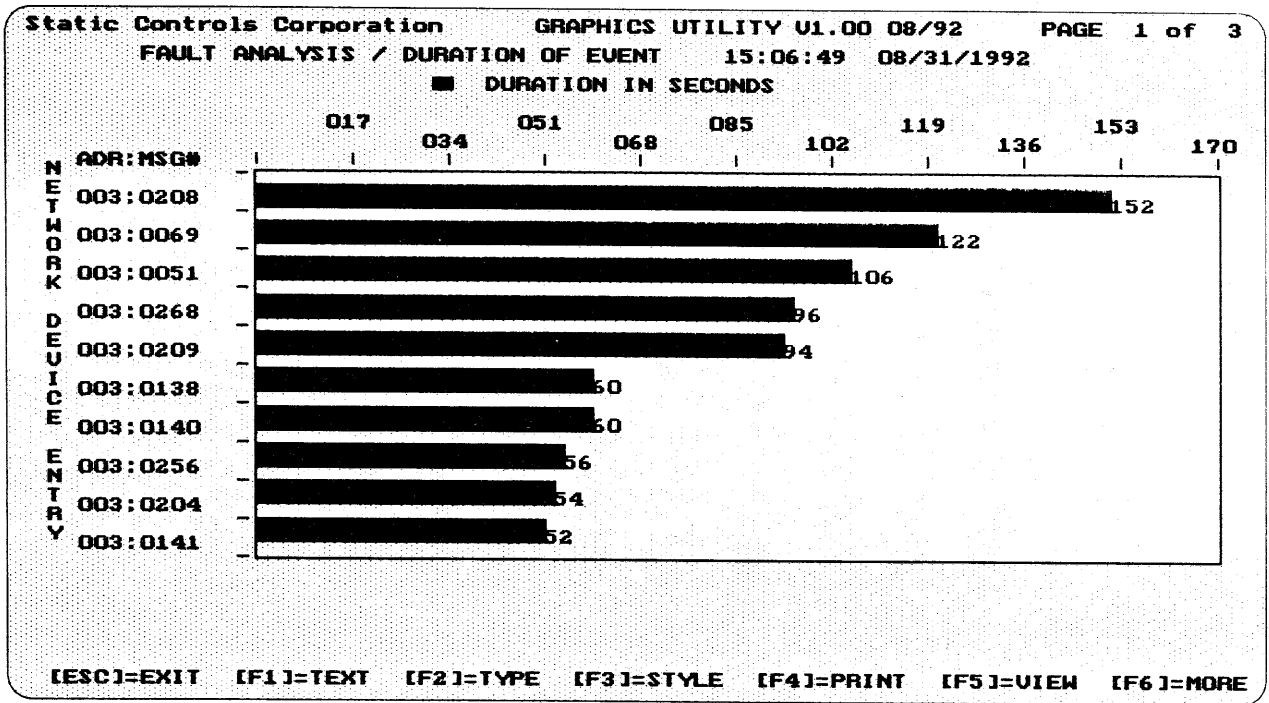


With graph style #2, faults are shown on the upper "X" axis, and duration is shown on the lower "X" axis.

Below is graph style #3, only showing frequency on the "X" axis.

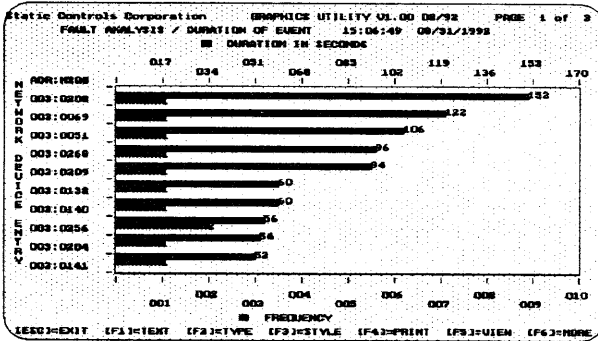


Shown below is graph style #4. Style #4 only shows duration on the "X" axis.

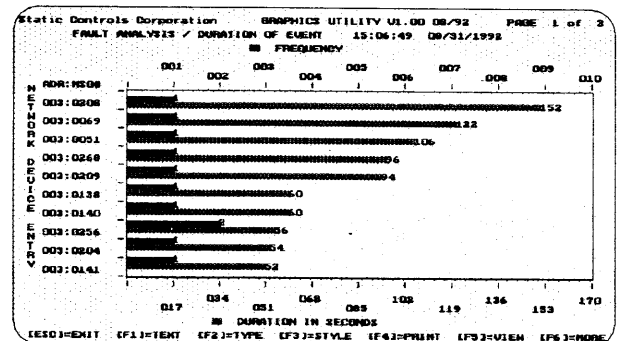


The graph style can be changed at any time by pressing the [F3] STYLE key.

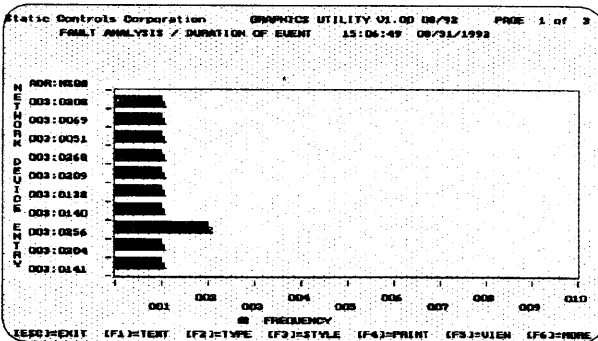
Style #1



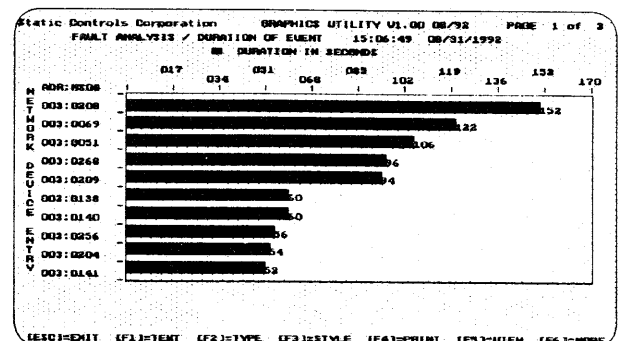
Style #2



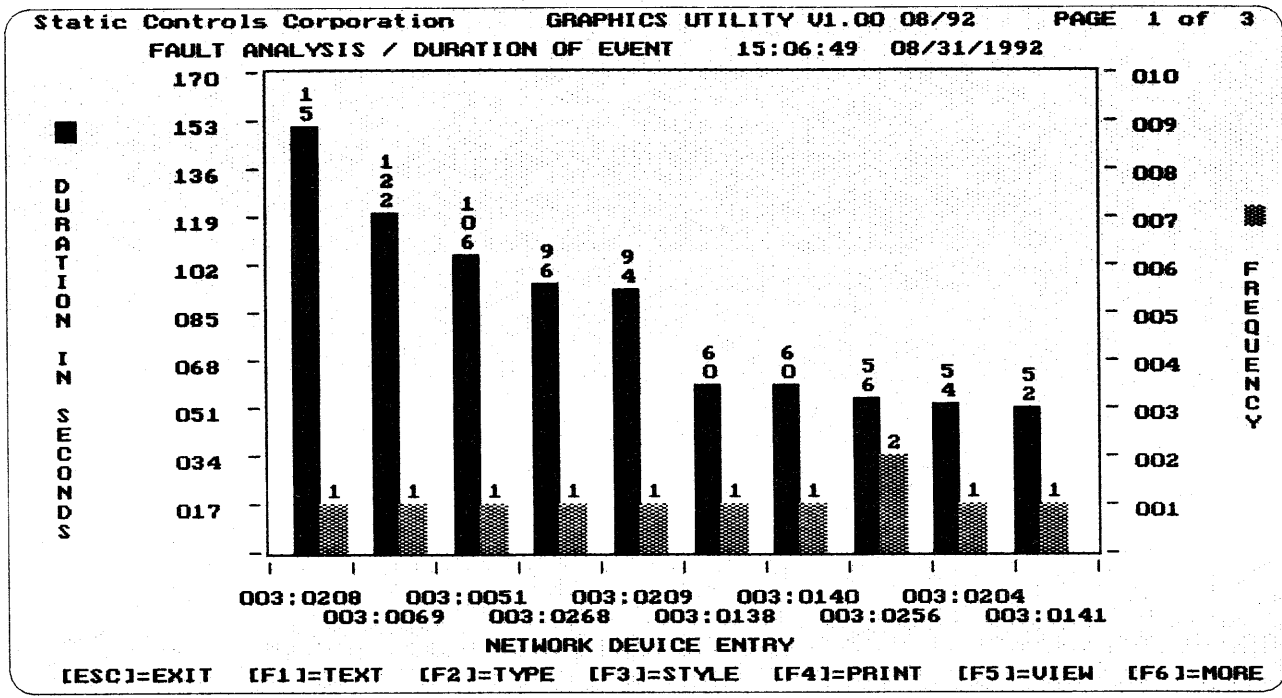
Style #3



Style #4

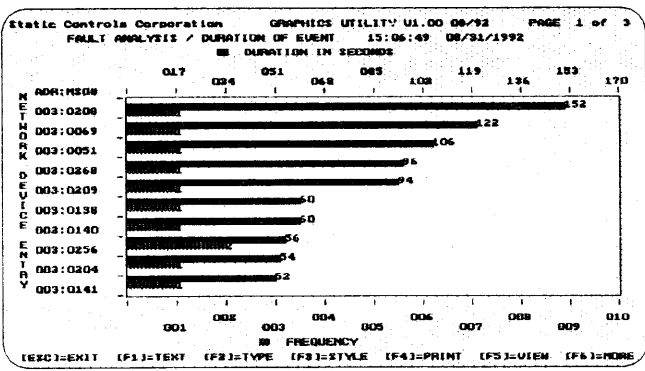


In addition to changing the graph style, the graph type may also be changed by pressing the [F2] key. The currently available types are horizontal (default), and vertical.

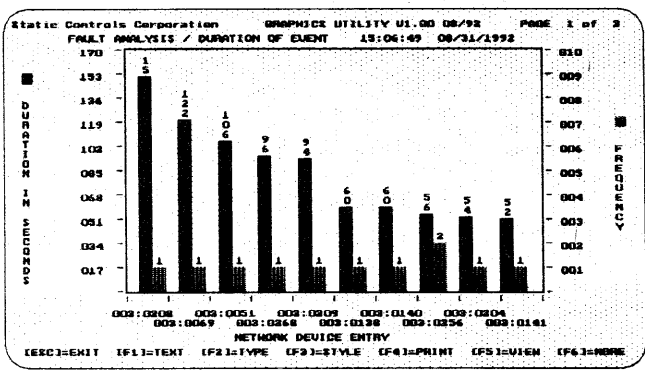


Shown above is a vertical type of graph. This graph is shown as style #1. All of the available styles can be shown in either type of graph.

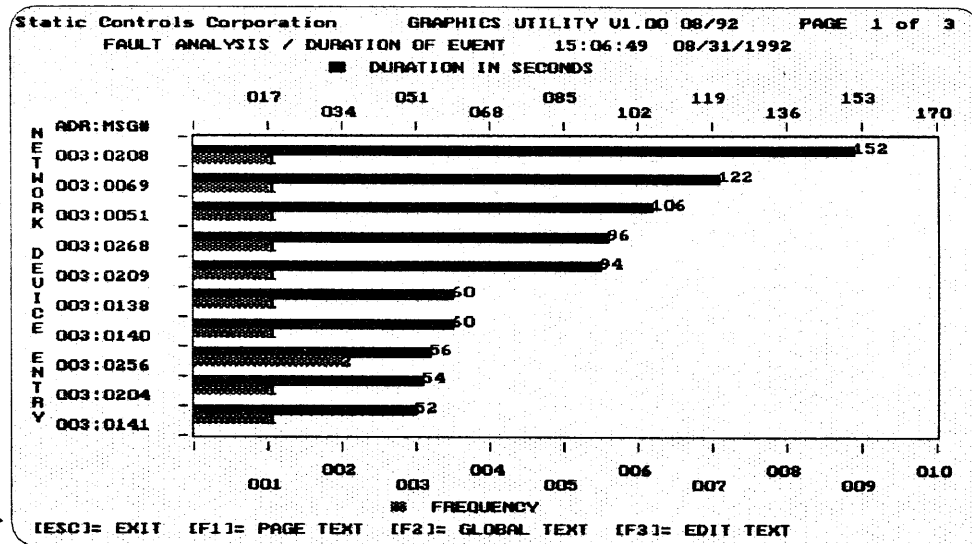
Horizontal type.



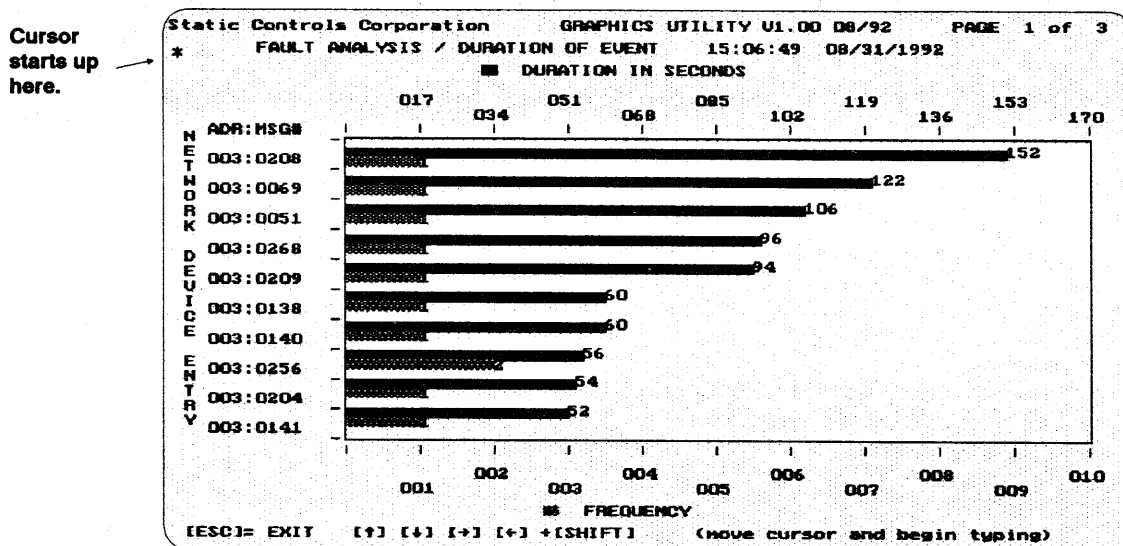
Verticle type.



Text can be added to the graph by the operator. There are 2 different types of text that can be added to the graph. The first type is GLOBAL TEXT. This text will appear in the same place on each page of the graph. The second is PAGE TEXT which will appear only on the page that the text was put on.

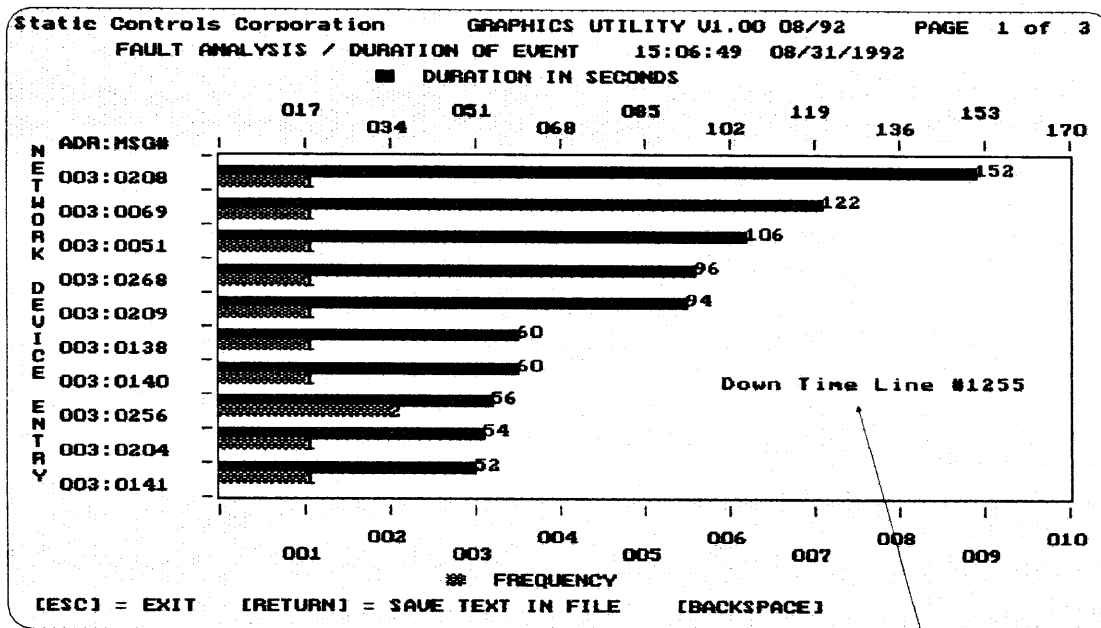


After pressing [F1] TEXT, a new lower line of the graph program will appear. Press [F1] for page text or [F2] for global text.



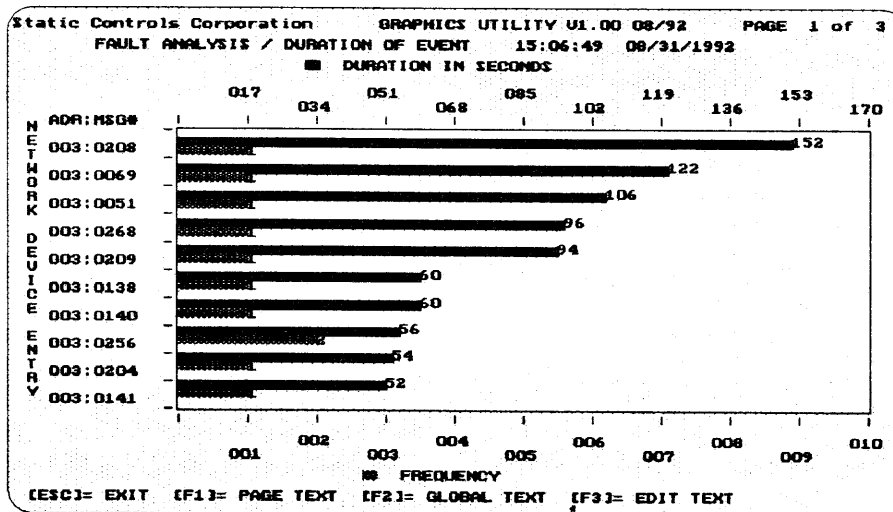
After selecting GLOBAL or PAGE text, move the cursor to the desired location by using the up, down, left and right arrow keys. The cursor is represented by a flashing "*" character. The cursor moves in character positions normally, to move in smaller increments, press the shift key while moving the cursor. This will move the cursor in screen dot increments for fine control of the cursor position.

After typing in the text, press enter to save the text in the graphics file. To insert more text, move the cursor to a new location and type in the new text. To exit the text mode press the escape key.



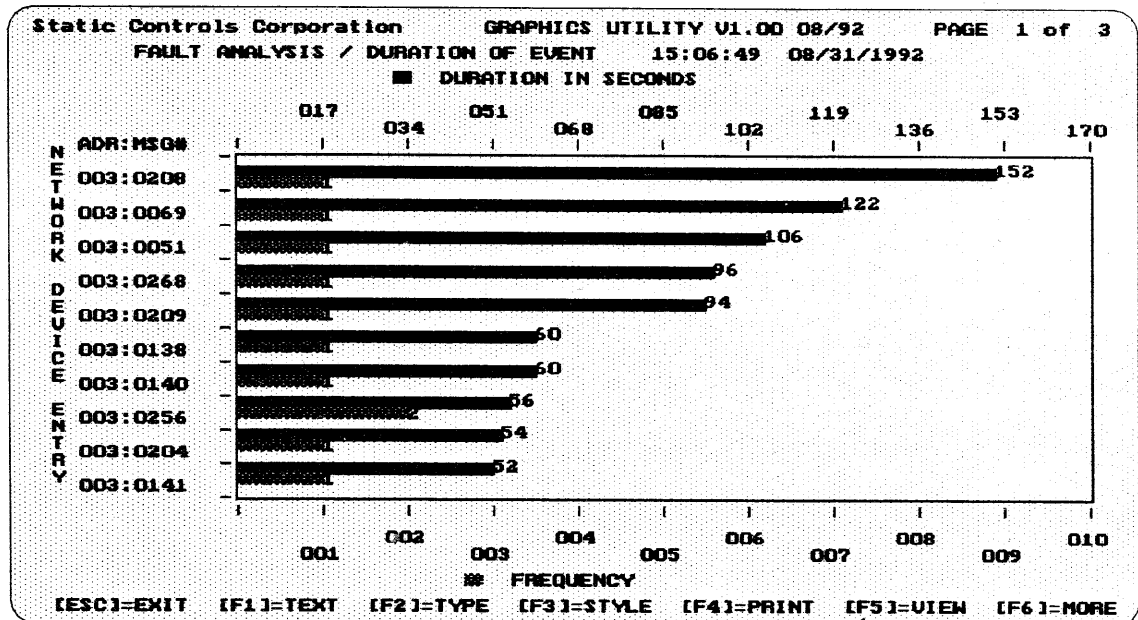
Text inserted to the graph file.

When using the text mode, text that has been inserted into the graph may also be edited. After selecting the text mode, press the [F3] key to edit the text. The cursor will appear at the end of any text that is on the graph. Backspace over the old text and insert new text at this time. The editing function will pick each and every piece of text one at a time for editing. Press the enter key to leave the text and move to the next piece of text.



[F3] Edit Text key.

When viewing the graph, it may be required that the operator see the report that was generated to draw the graph from. At any time in the graph utility, pressing the [F5] key will display on the screen the text report that was used to generate the graphics. This is used to see the report parameters, the message text, the message I.D. and other extensive report data.

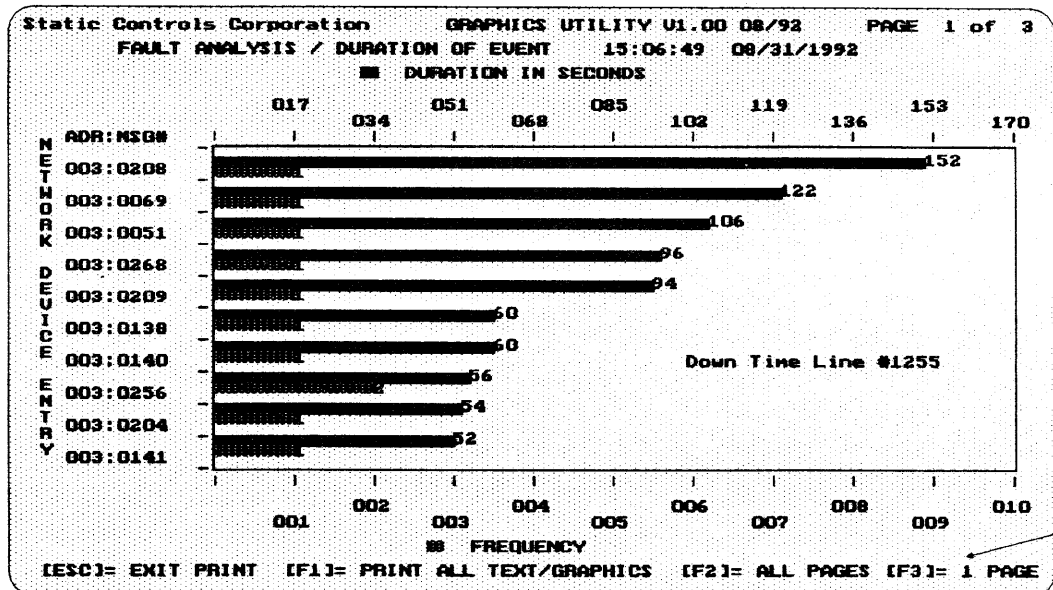


[F4] Print graph key.

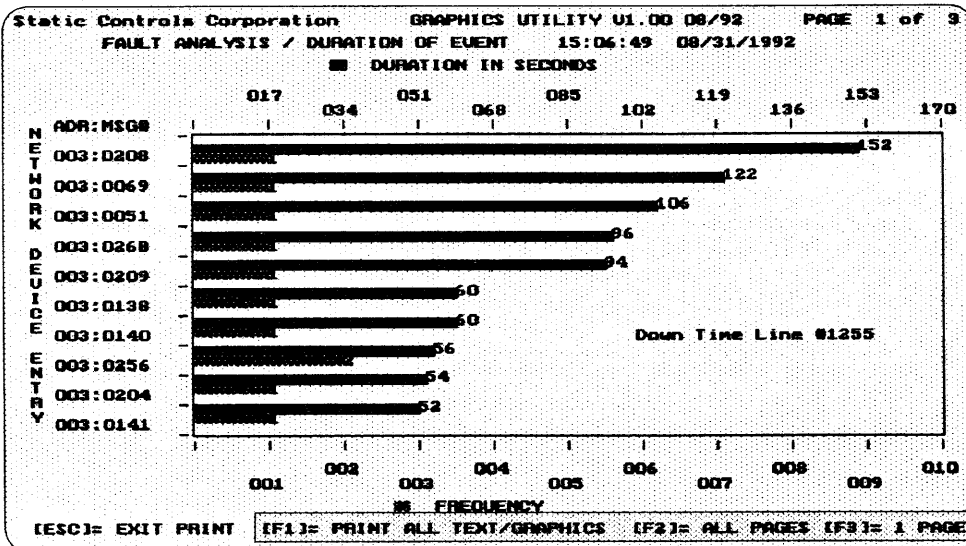
[F5] view report text key.

The graph may also be printed out on the network controllers system printer. Press the [F4] PRINT key to invoke the graph printing. There are several printing options for a graph report.

The printing options are listed below:



Print graph options.



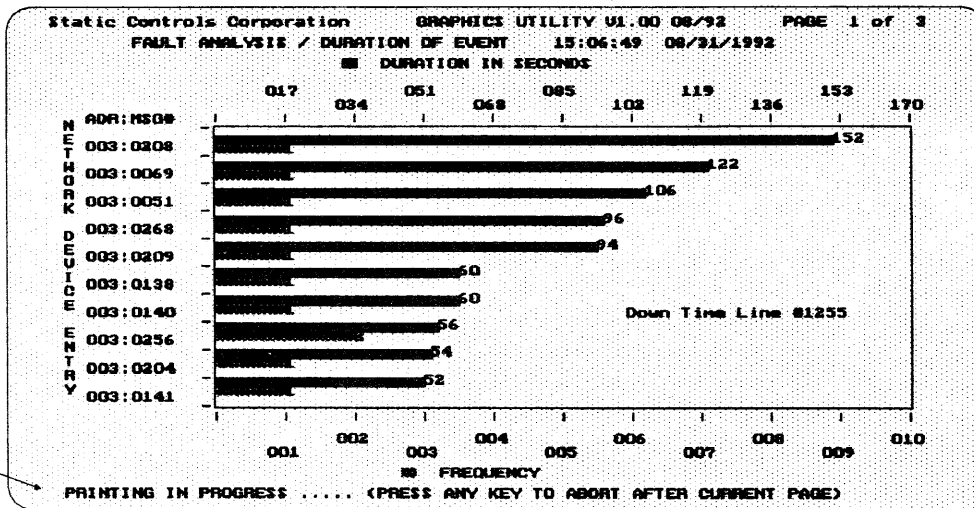
Print graph options.

[F1] PRINT ALL This will print all pages of the graph, and print the report text.

[F2] ALL PAGES This will print all graph pages.

[F3] 1 PAGE This will print the current graph page.

Once printing has started, the printing can be aborted by pressing the escape key. This will abort after the currently printed page is complete.



Abort print message.

The printing portion on the graphics utility requires that MSDOS graphic printing driver is installed. The INSTALL portion of the SCC Network program will install the graphics driver if possible. If the driver is not installed, printing of the graph files cannot be done. Also required is that the system printer emulates an I.B.M. printer in graphics mode.

SCC 1000 NETWORK SYSTEM

Memory Requirements

Controller Files

Required controller ram allocation.

SCC_NET

MSDOS (THRU 4.01)	60K
MSDOS (5.0)	30K
SCC SHELL	20K
SCC_NET	475K
	10K EDIT MENU
	10K MACRO MENU
	10K FILE MENU
	10K REPORT MENU
	0.1K PER DEVICE ENTRY
	0.5K I.D.FILE PER DEVICE
	0.03K PER LOG REPORT ENTRY
	0.01K PER LOG REPORT ENTRY

SCCOFFL

MSDOS (THRU 4.01)	60K
MSDOS (5.0)	30K
SCC SHELL	20K
SCCOFFL	465K

HIDDEN FUNCTIONS

"SCC" Menu

There are several diagnostic functions that may be accessed through any of the button/box menus. While the menu is displayed, press any function key, so that the password buffer will be cleared. Type in the following sequence of characters, 'SCC', to gain access to the internal record display utility menu. The menu will appear, and wait for the operator to make 1 of 9 possible selections, or press the [ESC] key to return to the previous menu.

'1' DISPLAY MESSAGE FILE

If the operator selects item #1 from the debug menu, The message file view utility dialog will appear. This dialog informs the operator of the possible selections that can be made while viewing the message file. The [SPACEBAR] is used to step through the entire message file, viewing 24 records at a time. There can be a maximum of 1891 records in a message file, however the first record is always reserved for system parameters. Each record may hold one 20 character message with all of its specific parameters. Each record will occupy one line on the display, with 52 characters per record. Each pair of characters represents one HEXA-DECIMAL byte, used by the message. The end of the message record is indicated by a colon ':', followed by the record's offset into the message file. The [ENTER] key is used to jump through the message file 408 records at a time. The operator may press the [ESCAPE] key at any time, to exit the message file view utility.

'2' DISPLAY LOG FILE

If the operator selects item #2 from the menu, The log file display utility dialog will appear. This dialog informs the operator of the possible selections that can be made while viewing the log file. The [SPACEBAR] is used to step through the entire log file, viewing 24 records at a time. There can be a maximum of 5458 records in a log file. Each record may hold one message number with the time and date that it was logged, and a maximum of 6 insert characters for use by the message. Each record will occupy one line on the display, with 24 characters per record. Each pair of characters represents one HEXA-DECIMAL byte, used by the record. The log record is preceded by the record number and a colon ':'. Following the record data, is the translation of the message number, the time and date stamp, and the insert characters. The [ENTER] key is used to jump through the log file 775 records at a time. The operator may press the [ESCAPE] key at any time, to exit the log file display utility.

'3' DISPLAY DEVICE RECORD FILE

If the operator selects item #3 from the menu, The device record file will be display, one record at a time. The operator may use the Next or Previous selection keys to move through the file. the device record file dialog will display the address of the device, along with the required file names. The record also holds the latest polling status of that device. The operator may press the [ESC] key to exit from the device record display utility.

'4' PROGRAM REVISIONS

If the operator selects item #4 from the debug menu, the program will display the name, version number, and release date of all the executable files associated with the network software.

'5' DISPLAY FREE MEMORY

If the operator selects item #5 from the debug menu, the program will display the amount of free ram memory available to the program, and the amount of free disk space on the default drive.

'6' PROGRAM CONFIGURATION

If the operator selects item #2 from the debug menu, The program configuration default selection dialog will appear. The operator may preset the configuration values defined by STATIC CONTROLS CORPORATION, by selecting 'Y' for yes. If the operator selects 'N' for no, then each configuration parameter will be displayed, and may be altered at this time.

PROGRAM CONFIGURATION DESCRIPTOR TABLE

CONFIGURATION PARAMETER	DEFAULT VALUE	VALUE RANGE
Character transmit delay time	0.000 seconds	0 - 9.999 seconds
This delay value determines how long the program will pause after each character is transmitted.		
Character receive time out	3.000 seconds	0 - 9.999 seconds
This delay value determines how long the program will wait for an individual character before terminating.		
Turn around timer	0.100 seconds	0 - 9.999 seconds
This timer value is used to determine how long to wait before turning on the serial port transmitter.		
Inter command timer	0.005 seconds	0 - 9.999 seconds
This timer value is used for delays allowing multi drop devices to decode the command on the network bus		
Primary command timer	0.500 seconds	0 - 9.999 seconds
This timer value determines how long the program will wait for an initial command response		
Minimum poll delay timer	1.045 seconds	0 - 9.999 seconds
This timer determines the minimum time the program will wait before polling a device again.		
Port retry value	2	0 - 99
This retry count determines how many times the program will retry after a communication error occurs.		
Terminate on errors	Yes	Yes or No
This control variable determines if the program will abort on errors or continue indefinitely.		
Handshake enable delay time	0.030 seconds	0 - 9.999 seconds
This delay value determines how long the program will wait after changing the state of the RTS handshake line.		
Handshake logic	True	True or False
This control variable determines if [TRUE:RTS = high] or [FALSE:RTS = low] is the active state for communications.		
Communication mode	Normal	Normal or Extended
This control variables determines if outbound communications is buffered [Extended].		

PROGRAM CONFIGURATION DESCRIPTOR TABLE

CONFIGURATION PARAMETER	DEFAULT VALUE	VALUE RANGE
CRT Type	Color	Color or Monochrome
This control variable determines the type of monitor used by this program.		
Cursor underscore style	1	1 - 8
This control variable allows the cursor style to be change for hard to read monitors.		
Boot disk	C	A or C
This control variable informs the program where the operating system software is stored.		
Maximum number of log files	39	0 - 999
This control variable determines the number of log files that will be actively maintained for each device. Once this value is reached, the program will begin overwriting the oldest log files first.		
Message text enable	N(on)	N = on F = off
This control variable determines if message text will be appended to the report file when any analysis mode is selected.		
Full DIR enable	F(off)	N = on F = off
This control variable determines if the file maintenance menu allows the operator to create/delete subdirectories, and select subdirectories outside of the network environment.		
Printer port	1	1 or 2
This control variable determines which printer port will be used by the program.		
Printer lines per page	66	0 - 99
This control variable informs the program of the lines on each printer page.		

'7' DISPLAY CURRENT MACRO FILES

If the opertor selects item #7 from the menu, The program will display the key values stored internally during macro execution.

'8' LAST KEY BUFFER SUBMENU

If the opertor selects item #8 from the menu, The last key buffer submenu will be displayed. The operator may then select '1' to view the current last key buffer that is stored in memory, or '2' to view the last key buffer file that was saved, the last time the program ended.

'9' DISPLAY LOG FILE ARRAYS

If the opertor selects item #9 from the menu, The program will display the log file select array for each device configured. The log file array corresponds to the 3 digit extension that is added to each log file name as it is created. The upper left corner of the array represents log file '.000', and progresses horizontally across the screen. The next row begins with log file '.050' and progresses in the same manner as the first. The '.' character represents an unselected or non existant log file, the '*' character indicates the log file exists and is selected.

Re-entering Network Diagnostics

The network diagnostic program can be run at any time when exiting the main network program. When exiting the main network program, do not press [ESC] to exit but the character "T". This will run the diagnostic program as described earlier in this manual.

Drawings

Listed below are the drawings for the S.C.C. Series 1000 Network System.

AD-1000-056-A	NAB-3 TO T-60 CABLE
DD-1000-060-A	NAB-3 DIMENSIONS
ED-1000-011-A	DISPLAY WIRING
ED-1000-012-A	PARALLEL COMMUNICATIONS CABLE
ED-1000-027-B #1	MASTER / SLAVE COMMUNICATIONS WIRING
ED-1000-027-B #3	MASTER / SLAVE COMMUNICATIONS WIRING
ED-1000-055-A	ALLEN BRABLEY I/O TO 1000 DISPLAY
ED-1000-057-A	NAB-3 DIP SWITCH SETTINGS
ED-1000-060-A	NAB-3 OUTPUT WIRING TO DISPLAYS
MASTER DISPLAY SET-UP AND EXTENDED SET-UP	
SLAVE DISPLAY SET-UP AND EXTENDED SET-UP	

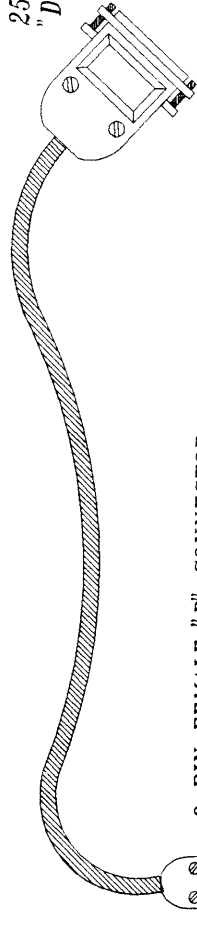
Notes:

Series 1000 Model No. _____

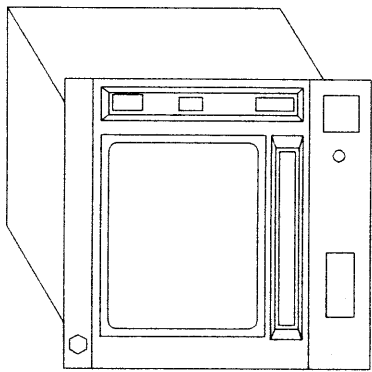
Series 1000 Serial No. _____

SYM	REVISION	APP	DATE

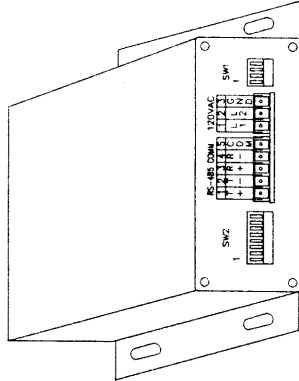
25 PIN MALE "D" CONNECTOR



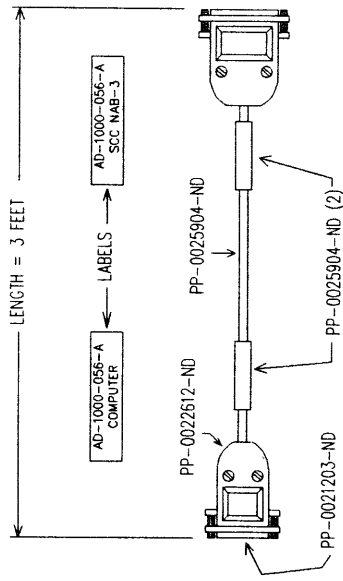
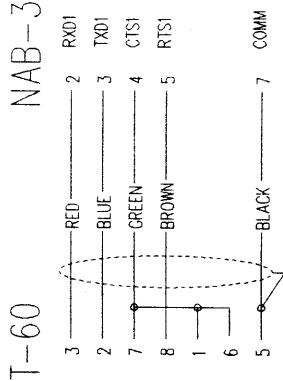
9 PIN FEMALE "D" CONNECTOR



ALLEN BRADLEY T-60 TERMINAL
OR IBM COMPATIBLE COMPUTER



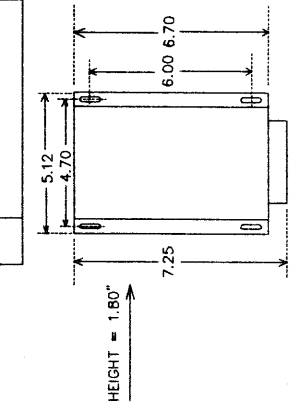
SCC NAB-3 CONVERTER



	Static Controls Corporation 4224 MARTIN ROAD WALLED LAKE, MI. 48390 (313) 360-9000 FAX (313) 360-8962	Dr. TCS App. TCS Date: 7/6/82 Scale: NTS	Title: NAB-3 CONVERTER SERIAL PORT CONNECTIONS I.B.M. 9 PIN PORT (AB T-60 TERMINAL) Part # SCC 1000 File # AD100056.SKD (Page # 1 of 1) DWG # AD-1000-056-A
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SYM	REVISION	APP DATE

RS-232 9 PIN CONNECTOR TO COM2 OF T-60. (6 FOOT CABLE)

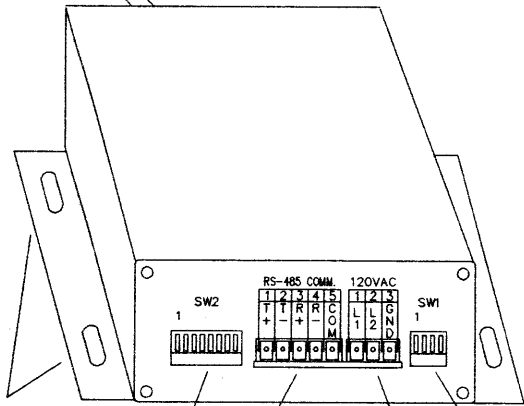


CONFIGURE DIP SWITCHES.

RS-485 CONNECTIONS FOR 2 WIRE NETWORK. (PLUG IN T.S.)

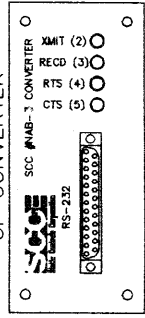
120 VAC JUMP TO SAME ON BACK OF T-60. (PLUG IN T.S.)

CONFIGURE DIP SWITCHES.

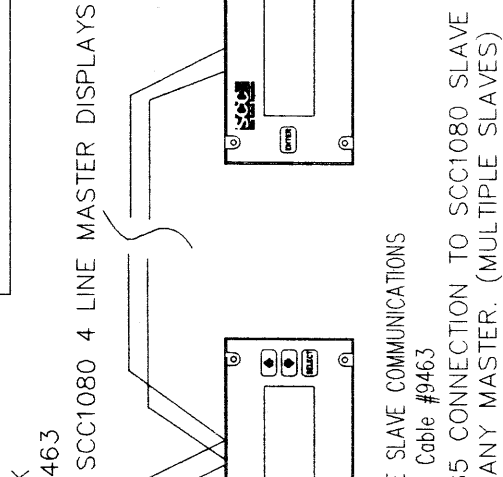


SCC NAB-3 RS-232 TO RS-485 CONVERTER.

VIEW OF RS-232 SIDE OF CONVERTER



- NOTES:
- 1) 254 MASTERS PER COMM. PORT (MAX).
 - 2) 30 SLAVES PER MASTER (MAX).
 - 3) 4000 FOOT MAX. LENGTH OF NETWORK WIRING WITHOUT REPEATER.
 - 4) EACH REPEATER INCREASES LENGTH ANOTHER 4000 FEET.

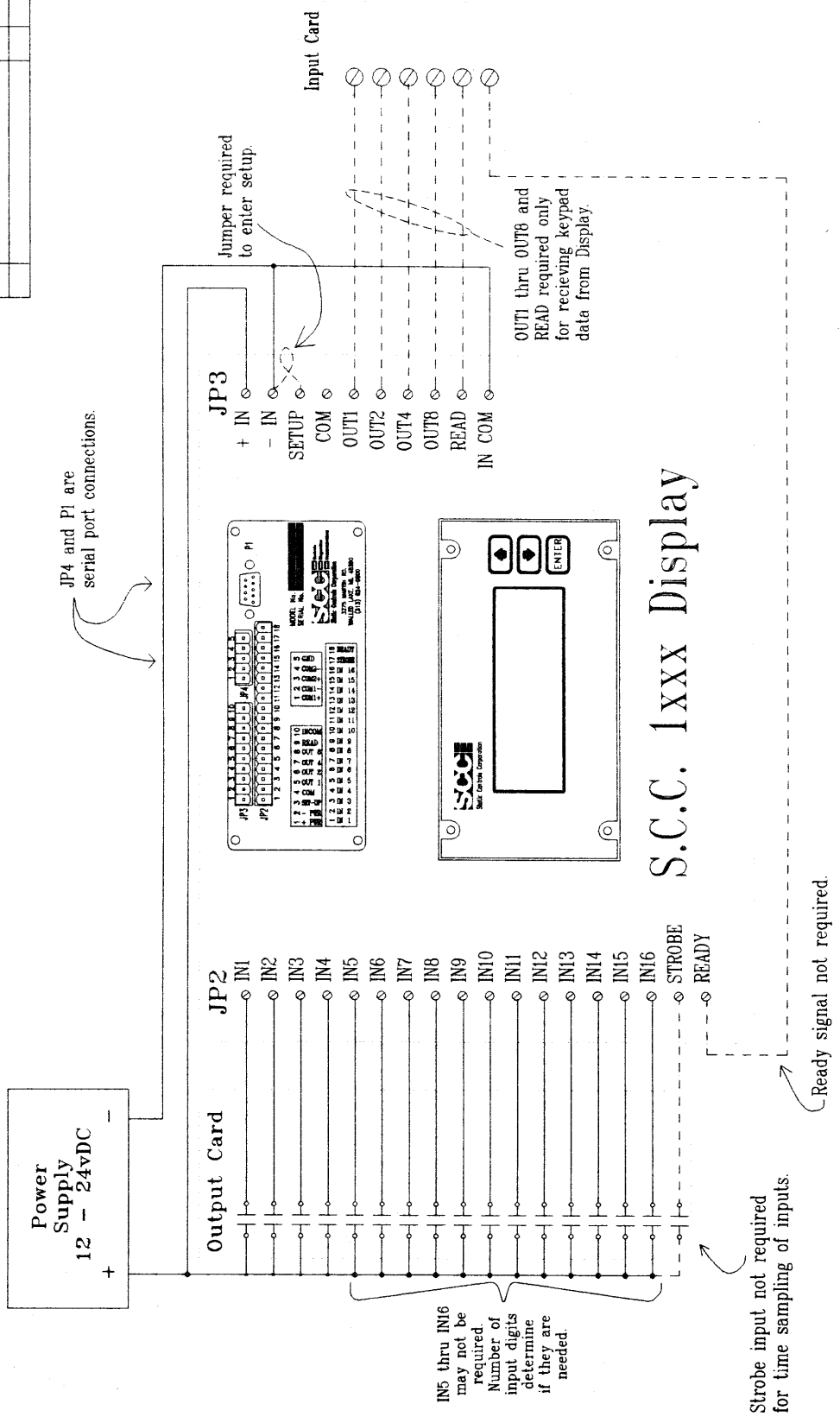


	Dr. TCS	Title	SCC NAB-3 NETWORK ADAPTER
	App. TCS	Part #	SCC NAB-3
4224 MARTIN ROAD WALLED LAKE, WASH. 98390 (313) 386-3333 FAX (313) 360-8962		Date	3/23/92
		File #	DD100000.SKD (Page 1 of 1)
		Scale	NTS
		DWG #	DD-1000-060-A

SCC1080 4 LINE SLAVE DISPLAYS

T-60

SYM	REVISION	APP DATE
	FINALIZED REAR PANEL	TCS 3/9/91



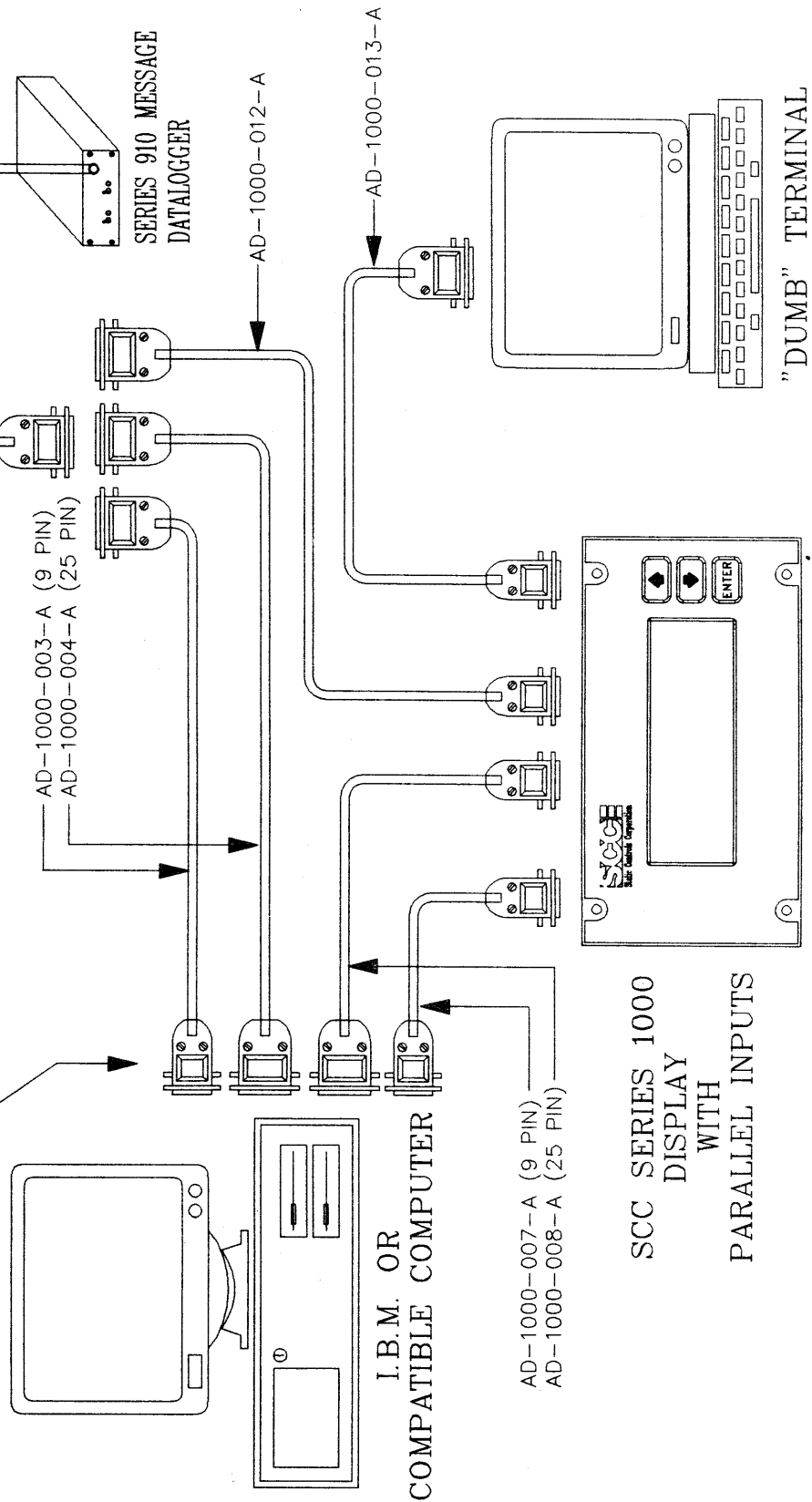
		Dr. TCS App. TCS Date: 4/30/91 Scale: NTS	Title: PARALLEL 1000 DISPLAY INPUT AND OUTPUT WIRING Part # SCC 1000 File # ED100011.SKD (Page # 1 of 1) DWG # ED-1000-011-A
Controls Diagnostics Communications Static Controls Corporation 4224 MARTIN ROAD WALLED LAKE, MI. 48390 (313) 360-9000 FAX (313) 360-8962			

Note: Heavy wiring is minimum requirement.

REDUCED DRAWING

SYM	REVISION	APP	DATE

CABLES THAT CONNECT TO THE I.B.M. ARE AVAILABLE WITH 9 PIN OR 25 PIN CONNECTORS.



I.B.M. OR COMPATIBLE COMPUTER

AD-1000-007-A (9 PIN)
AD-1000-008-A (25 PIN)

SCC SERIES 1000 DISPLAY WITH PARALLEL INPUTS

"DUMB" TERMINAL


SERIES 910 MESSAGE DATALOGGER

AD-1000-012-A

AD-1000-013-A

AD-1000-003-A (9 PIN)
AD-1000-004-A (25 PIN)

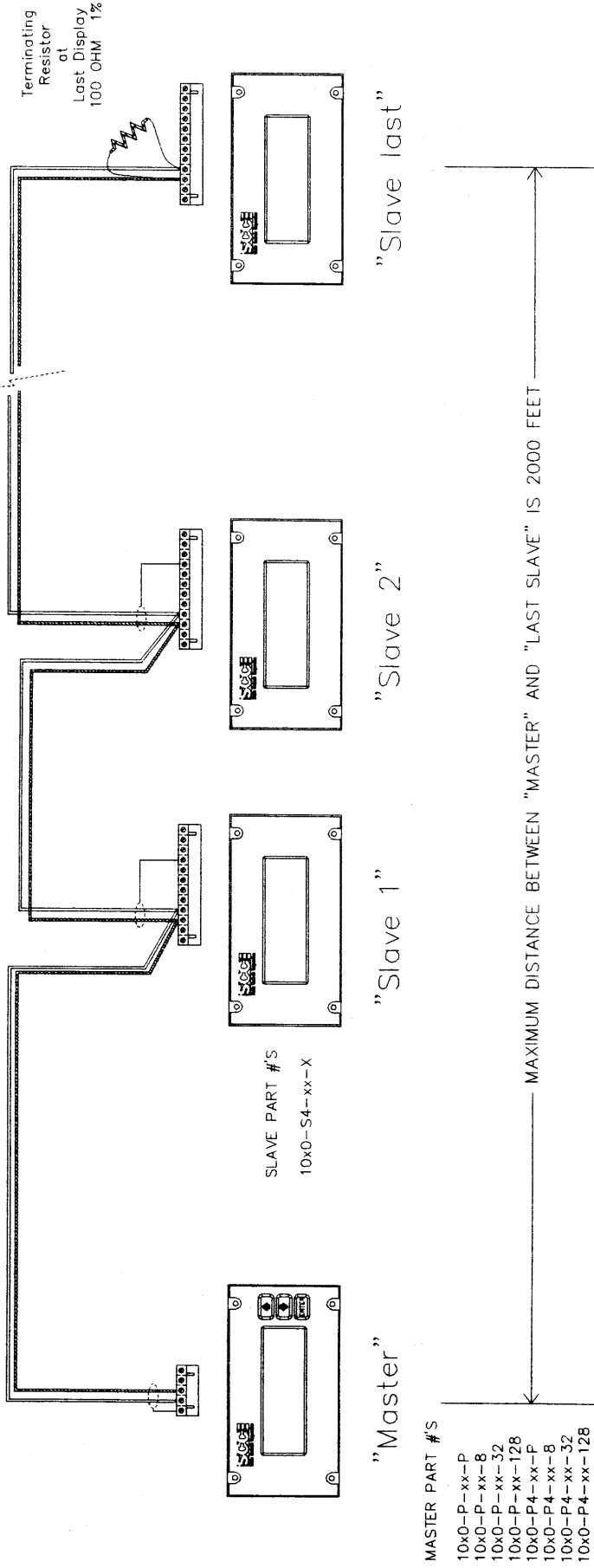
SERIES 1000 & 1100 SERIAL COMMUNICATION CABLES.

 <p>Static Controls Corporation 4224 MARTIN ROAD WALLED LAKE, MI 48390 (313) 360-9000 FAX (313) 360-8962</p>	Dr	TCS	Title	COMMUNICATIONS CABLES FOR 1000 SERIES DISPLAY PARALLEL INPUT
	App	TCS	Part #	SCC-1000 (Layer 3)
	Date	11/14/91	File #	ED100012.SKD (Page # 1 of 1)
	Scale	NTS	DWG #	ED-1000-012-A

REDUCED DRAWING

SYM	REVISION	APP	DATE
A	ADDED MASTER/SLAVE PART #'S		6/26/91
B	ADDED SHIELD PIN #'S		7/9/91

RECOMENDED WIRING METHOD #1 - FULLY SHIELDED TWISTED PAIR CABLE
BELDEN #9729



- MASTER PART #'S
- 10x0-P-xx-P
 - 10x0-P-xx-8
 - 10x0-P-xx-32
 - 10x0-P-xx-128
 - 10x0-P4-xx-P
 - 10x0-P4-xx-8
 - 10x0-P4-xx-32
 - 10x0-P4-xx-128

SCC900 type "Master" & "Slave" communications wiring.

- Master J4 pin #3 ----- Slave J1 pin #10
- Master J4 pin #4 ----- Slave J1 pin #9
- Master Shield J4 pin #5
- Slave Shield J1 pin #4

For RS-485 communications only.

See additional drawings for complete wiring of Master or Slave display.

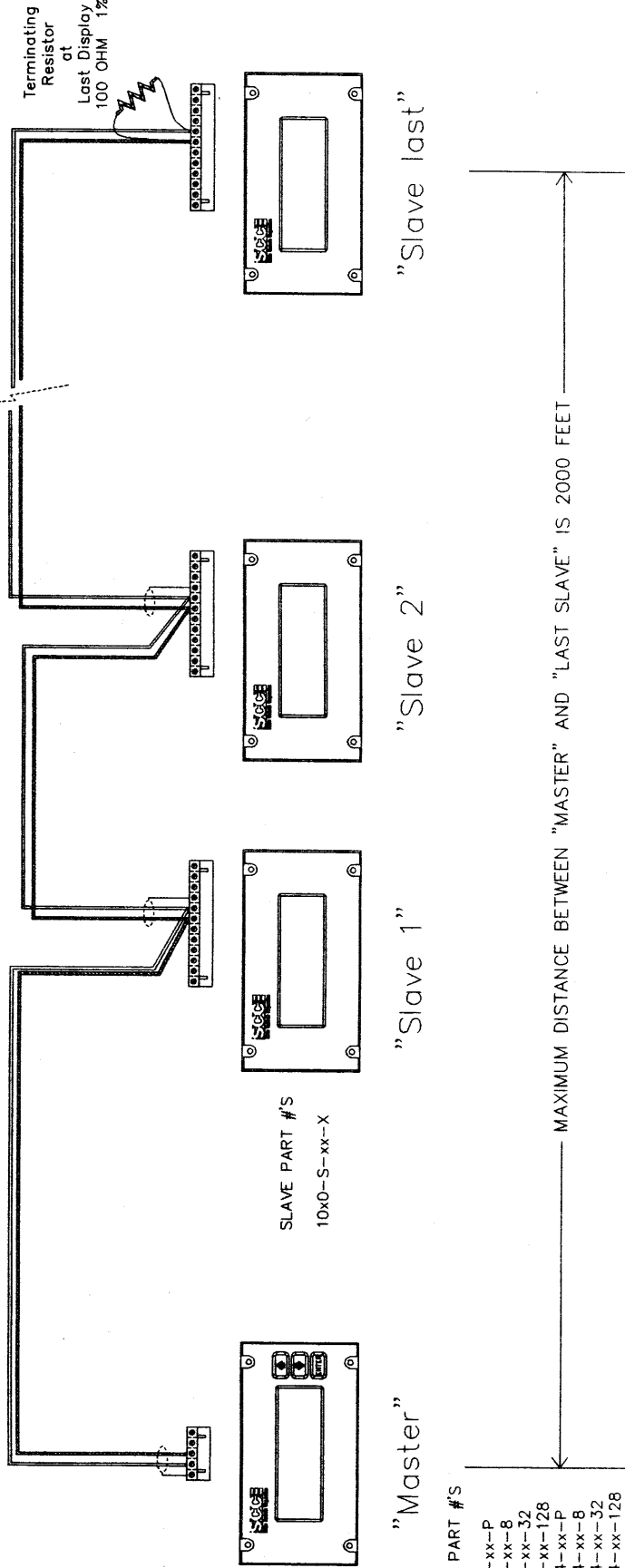
	Title Master / Slave Communication Wiring SCC1000 Series Display
	Part # SCC 1000
Date 6/13/91	File # ED100027-SKD (Page # 1 of 3)
App TCS	DWG # ED-1000-027-B
Scale NTS	

4224 MARTIN ROAD
 WALLED LAKE, MI. 48390
 (313) 360-9000
 FAX (313) 360-8962

REDUCED DRAWING

RECOMENDED WIRING METHOD #1 -- FULLY SHIELDED TWISTED PAIR CABLE
BELDEN #9729

SYM	REVISION	APP	DATE
A	ADDED MASTER/SLAVE PART #'S		6/26/91
B	ADDED SHIELD PIN #'S		7/9/91



SLAVE PART #'S
10x0-S-xx-X

MASTER PART #'S
10x0-P-xx-P
10x0-P-xx-8
10x0-P-xx-32
10x0-P-xx-128
10x0-P4-xx-P
10x0-P4-xx-8
10x0-P4-xx-32
10x0-P4-xx-128

SCC900 type "Master" & "Slave" communications wiring.

- Master J4 pin #3 ----- Slave J1 pin #6
- Master J4 pin #4 ----- Slave J1 pin #5
- Master Shield J4 pin #5
- Slave Shield J1 pin #4

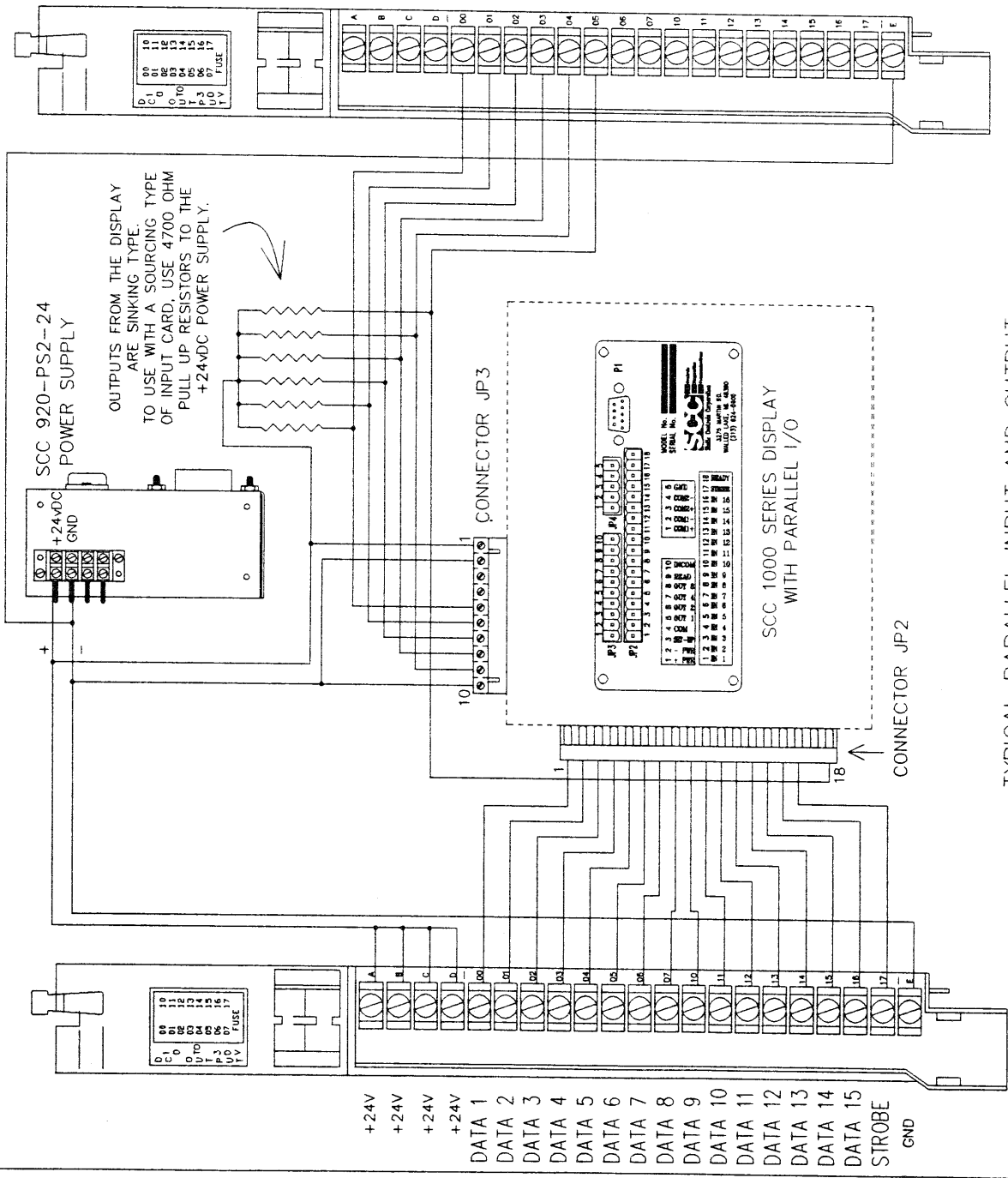
For RS-485 complete wiring of Master or Slave display.

See additional drawings for complete wiring of Master or Slave display.

	Dr	TCS	Title	Master / Slave
	App	TCS	Communication Wiring	
Static Controls Corporation 4224 MARTIN ROAD WALLED LAKE, MI. 48390 (313) 360-9000 FAX (313) 360-8962		Date	Part #	SCC 1000
		6/13/91	File #	ED100027.SKD (Page # 3 of 3)
		Score	DWG #	ED-1000-027-B
		NTS		

REDUCED DRAWING

SYM	REVISION	APP	DATE
	CHANGED RESISTOR VALUE CORRECTED JP3 CONNECTOR		9/15/92



SCC
Skate Controls Corporation

4224 MARTIN ROAD
WALLED LAKE, MI. 48390
(313) 366-9000
FAX (313) 366-8962

Dr. TCS
App. TCS
Date: 8/5/92
Scale: NTS

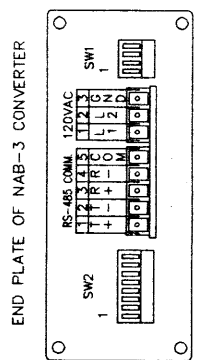
File # ED10055-SKD Page 1 of 1
DWG # ED-1000-055-A

TYPICAL
AB TO SCC 1000
PARALLEL
WIRING

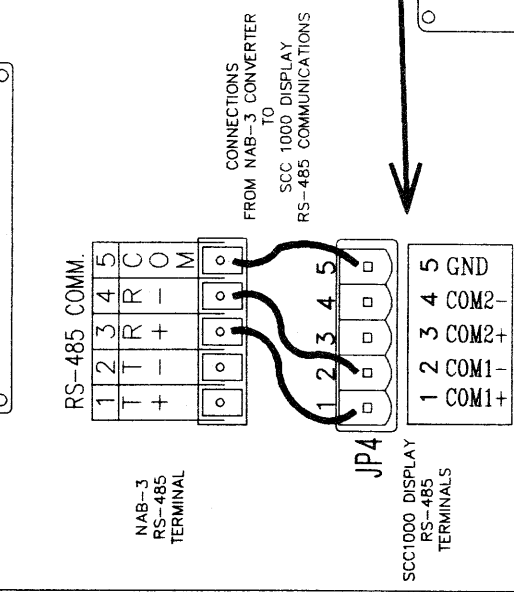
TYPICAL PARALLEL INPUT AND OUTPUT
WIRING WITH
SOURCING OUTPUT CARD
&
SOURCING INPUT CARD

OUTPUT CARD
ALLEN BRADLEY
1771-0BD
DC OUTPUT CARD

SYM	REVISION	APP	DATE

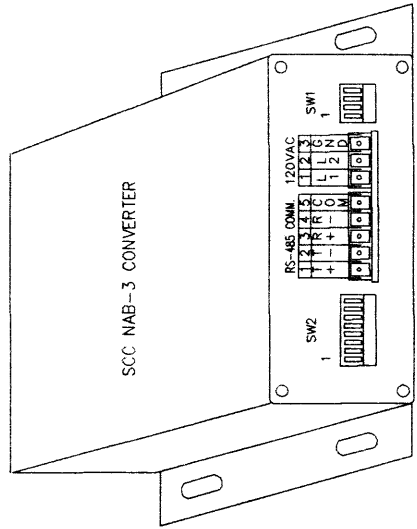


END PLATE OF NAB-3 CONVERTER

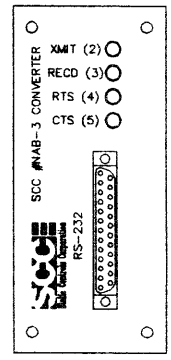


NAB-3
RS-485
TERMINAL

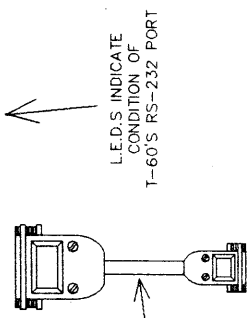
SCC1000 DISPLAY
RS-485
TERMINALS



SCC NAB-3 CONVERTER

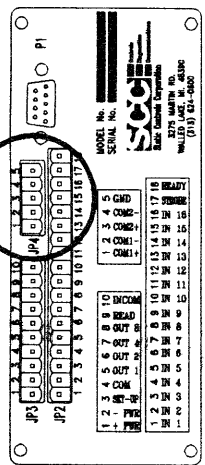


END PLATE OF NAB-3 CONVERTER



L.E.D.'S INDICATE
CONDITION OF
T-60'S RS-232 PORT

SCC #AD-1000-056-A
NAB-3 to AB T-60
CABLE

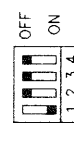


REAR PLATE
SCC 1000 DISPLAY

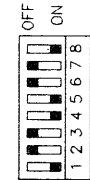
NAB-3 CONVERTER

CONVERTS ALLEN BRADLEY'S
RS-232 SERIAL PORT
TO
STATIC CONTROLS
RS-485 SERIAL PORT
ON NETWORK DISPLAYS

NETWORK DIP SWITCH SETTINGS	
SW1-1	ON
SW1-2	OFF
SW1-3	OFF
SW1-4	OFF
SW2-1	ON
SW2-2	OFF
SW2-3	OFF
SW2-4	ON
SW2-5	ON
SW2-6	OFF
SW2-7	OFF
SW2-8	ON



SW1 SETS, TYPE
OF CONVERTER
OPERATION



SW2 SETS
CONFIGURATION
OF PINOUT ON
RS-232 PORT

Static Controls Corporation

4224 MARTIN ROAD
WALLED LAKE, MI. 48390
(313) 360-9000
FAX (313) 360-8962

Title: NAB-3 CONVERTER NETWORK SETUP AND DIP SWITCHES

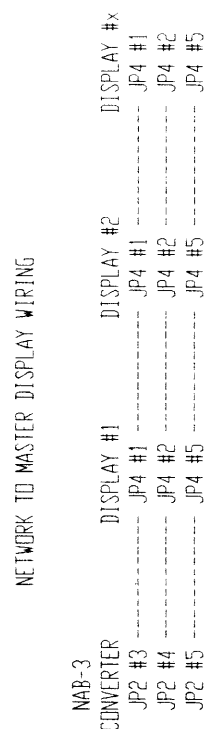
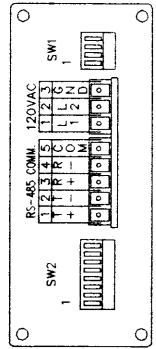
Part # SCC-1000

File # ED100057_SKD Page # 1 of 1

DWG # ED-1000-057-A

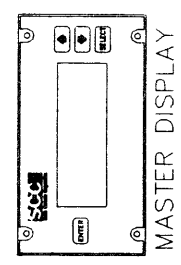
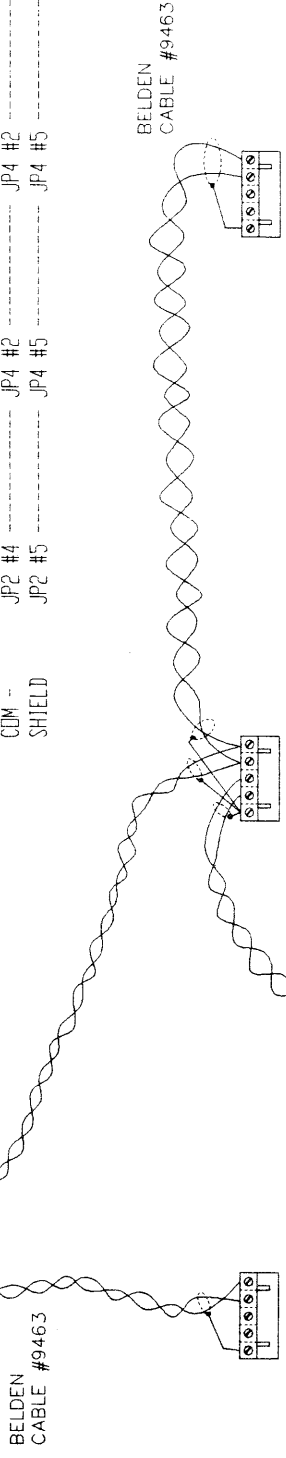
SYM	REVISION	APP	DATE

SCC NAB-3 RS-232 TO RS-485 CONVERTER.

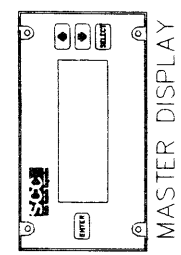


NETWORK TO MASTER DISPLAY WIRING

NOTE:
WIRING CAN EXIT FROM THE CONVERTER IN MULTIPLE DIRECTIONS.

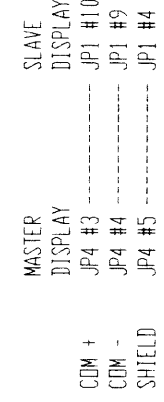


MASTER DISPLAY

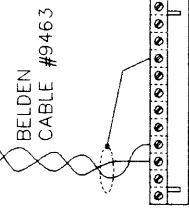


MASTER DISPLAY

MASTER TO SLAVE DISPLAY WIRING



MASTER TO SLAVE DISPLAY WIRING



SLAVE DISPLAY

Static Controls Corporation
4224 MARTIN ROAD
WALLED LAKE, MI 48390
TEL: (313) 366-8800
FAX: (313) 366-8862

File: **SCC NAB-3 NETWORK ADAPTER WIRING**

Draw: **SCC NAB-3** (Copy 1)

Date: **3/23/82**

App: **TCS**

Drawn: **ED-1000-060** (Page 1 of 1)

Scale: **NTS**

SCC MASTER DISPLAYS, NETWORK SYSTEM.

MODE SINGLE UNIT
 MULTI-DROP
 SLAVE
 MESSAGE FILES
 DIAGNOSTIC
 1000 NETWORK

SCC900
 SCC1000
 UTICOR

GROUP ADDRESS

DISPLAY ADDRESS (0-255)

PRIORITY DISPLAY INPUT

SERIAL PORT #1

BAUD RATE 38.4K 19.2K 9600 4800
 2400 1200 600 300

DATA BITS 8 7
 STOP BITS 1 2
 PARITY NONE ODD EVEN
 HANDSHAKE NONE CTS XON

SERIAL PORT #2

BAUD RATE 38.4K 19.2K 9600 4800
 2400 1200 600 300

DATA BITS 8 7
 STOP BITS 1 2
 PARITY NONE ODD EVEN
 HANDSHAKE NONE CTS XON

PARALLEL PORT

INPUT LINES SAMPLED STROBED
 VARIABLES SAMPLED STROBED

INPUT SAMPLE TIME 0 10 20 30 40 50
 60 70 80 90 100 110
 120 130 140 150mSEC.

INPUT FORMAT B.C.D. BINARY
 VARIABLE FORMAT B.C.D. BINARY ASCII

LOGIC INPUTS HI LO
 VARIABLE DATA DIGITS 1 2 3 4 5

OUTPUTS TIMED CONSTANT
 OUTPUT DELAY TIME 1 50 150 300mSEC

CLOCK

CLOCK DISPLAYED AS MESSAGE #0000 YES NO
 BLANK BEFORE CLOCK YES NO
 DISPLAY CLOCK ON LINE # 1 2 3 4
 CLOCK IS SET TO TERMINATE CONTINUE

SHOW SETUP INFO. YES NO

SCC MASTER DISPLAYS, NETWORK SYSTEM.

EXTENDED SETUP

ENTER KEY = NONE CR LF BOTH
 UP ARROW KEY = DEFAULT UP OTHER
 DOWN ARROW KEY = DEFAULT DOWN OTHER
 FILL CHARACTER = DEFAULT _ OTHER
 ESC. CHARACTER = DEFAULT \$1B OTHER

PORTING

MAIN INPUT PORT	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
MSG. INPUT PORT	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
MSG. OUTPUT PORT	<input type="checkbox"/> 0	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
KEYPAD DATA PORT	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
KEY CONTROL PORT	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4
PRINTER OUT PORT	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
SLAVE OUT PORT	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
REPEATER PORT	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

KEYPAD BUFFERED/HDX BUFFERED/FDX INSTANT/HDX INSTANT/FDX

USE AS 1>422 PORT 2>485 PORTS

STROBE DELAY 0 10 20 30 40
50 60 70 80 90mSEC

INVALID MESSAGE # TIMED SHOWN

RECEIVE CHARACTER TIMER = 1500 mSEC
 TRANSMIT CHARACTER TIMER = 01 mSEC
 INTER COMMAND TIMER = 050 mSEC
 TURN AROUND TIMER = 50 mSEC
 INTER LOG TIMER = 060 mSEC
 INTER MESSAGE TIMER = 060 mSEC

SCC SLAVE DISPLAYS, NETWORK SYSTEM

MODE SINGLE UNIT
 MULTI-DROP
 SLAVE SCC900
 MESSAGE FILES SCC1000
 DIAGNOSTIC UTICOR _____ GROUP ADDRESS
 1000 NETWORK

DISPLAY ADDRESS (0-255)

PRIORITY DISPLAY INPUT

SERIAL PORT #1
 BAUD RATE 38.4K 19.2K 9600 4800
 2400 1200 600 300
 DATA BITS 8 7
 STOP BITS 1 2
 PARITY NONE ODD EVEN
 HANDSHAKE NONE CTS XON

SERIAL PORT #2
 BAUD RATE 38.4K 19.2K 9600 4800
 2400 1200 600 300
 DATA BITS 8 7
 STOP BITS 1 2
 PARITY NONE ODD EVEN
 HANDSHAKE NONE CTS XON

NOT APPLIED TO SLAVE UNITS.

PARALLEL PORT
 INPUT LINES SAMPLED STROBED
 VARIABLES SAMPLED STROBED
 INPUT SAMPLE TIME 0 10 20 30 40 50
 60 70 80 90 100 110
 120 130 140 150mSEC.
 INPUT FORMAT B.C.D. BINARY
 VARIABLE FORMAT B.C.D. BINARY ASCII
 LOGIC INPUTS HI LO
 VARIABLE DATA DIGITS 1 2 3 4 5
 OUTPUTS TIMED CONSTANT
 OUTPUT DELAY TIME 1 50 150 300mSEC

CLOCK
 CLOCK DISPLAYED AS MESSAGE #0008 YES NO
 BLANK BEFORE CLOCK YES NO
 DISPLAY CLOCK ON LINE # 1 2 3 4
 CLOCK IS SET TO TERMINATE CONTINUE

SHOW SETUP INFO. YES NO

SCC SLAVE DISPLAYS, NETWORK SYSTEM

EXTENDED SETUP

ENTER KEY = NONE CR LF BOTH
 UP ARROW KEY = DEFAULT UP OTHER
 DOWN ARROW KEY = DEFAULT DOWN OTHER
 FILL CHARACTER = DEFAULT _ OTHER
 ESC. CHARACTER = DEFAULT \$1B OTHER

PORTING

MAIN INPUT PORT 0 1 2 3 4
 MSG. INPUT PORT 0 1 2 3 4
 MSG. OUTPUT PORT 0 1 2 3 4
 KEYPAD DATA PORT 0 1 2 3 4
 KEY CONTROL PORT 0 1 2 3 4
 PRINTER OUT PORT 0 1 2 3 4
 SLAVE OUT PORT 0 1 2 3 4
 REPEATER PORT 0 1 2 3 4

KEYPAD BUFFERED/HDX BUFFERED/FDX INSTANT/HDX INSTANT/FDX

USE AS 1)422 PORT 2)485 PORTS

STROBE DELAY 0 10 20 30 40
 50 60 70 80 90mSEC

INVALID MESSAGE # TIMED SHOWN

