

46517

NEC-TO-GPP

EDITOR

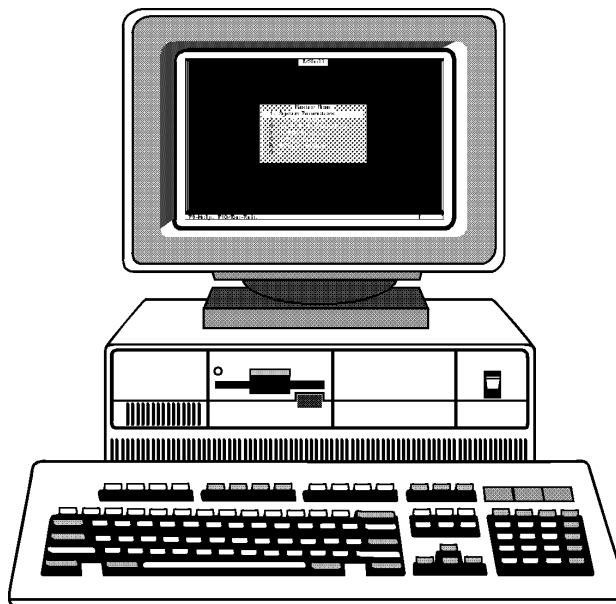


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About this Practice:

This practice has been reissued to:

- Assign a document control number.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: October 1998

UPDATED

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.
- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).
- Keep circuit boards in their antistatic bags when they are not in use.
- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.
- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835**.

OPTION NUMBER	FEATURES
A22-46517-02	NEC GPP Editor

INSTALLATION

The T/Shell program can be installed on an IBM™-compatible computer equipped with the following:

- ◆ 640K of memory
- ◆ CGA/EGA/VGA color (recommended), monochrome, or LCD monitor
- ◆ One serial port
- ◆ One 3.5" diskette drive
- ◆ One hard disk drive
- ◆ DOS version 3.0 or later

This chapter explains how.

To install the software program on your computer:

1. Turn on the power to the computer and monitor. Wait for the DOS (Disk Operating System) prompt to appear.
2. Insert the 46517 software disk from Dantel into the diskette drive.
3. Select the hard disk drive (normally C) where the program is to be installed. At the prompt type **MD TSHELL** to make a directory called TSHELL. Press Enter.
4. At the prompt type **CD TSHELL**. Press Enter.

NOTE: *If a TSHELL directory already exists, you may not be able to copy the new T/Shell program into the same directory. Dantel no longer provides copy protection with its software. T/Shell programs that are not copy-protected must not be placed in the same directory with T/Shell programs that are copy-protected.*

INSTALLATION

The following T/Shell programs, and all earlier versions of these programs, are copy-protected. Current versions are not copy-protected. Do *not* copy any T/Shell program with a version later than those listed here, into a directory that has T/Shell programs with these versions or lower.

Status Monitor GPP Editor	A22-46502-XX, Version 2.0
TL1 GPP Editor	B22-46504-XX, Version 2.2
40 MAP Editor	A22-46508-XX, Version 1.3
41 MAP Editor	A22-46512-XX, Version 1.1
X.25 Sync Editor	A22-46513-XX, Version 2.1
X.25 Cascade Editor	A22-46516-XX, Version 1.0
TL1/NMA Converter Editor	A22-46521-XX, Version 1.0
X.25 Cascade Editor	A22-46522-XX, Version 1.0
Status Monitor GPP Loader	A22-46703-XX, Version 1.0

If you do not know the version number of a T/Shell program that is already installed on your computer, go to the first screen of the program. Press the F1 (Info) key to display the version number.

5. Type **COPY A:*.*** This assumes that the disk is in drive A. If it is in a different drive, type the letter of that drive.
6. Press Enter to copy all the files into your TSHELL directory from the disk in your diskette drive.
7. After the software has been copied into the TSHELL directory, store the disk in a safe place.

STANDARDS

This section describes those commands, key, and standards common to all Dantel software packages.

SOFTWARE STANDARDS

HIGHLIGHT

A highlighted option in a menu is the currently selected option. To activate an option, do either of the following:

1. Press Enter if the option is highlighted.
2. Type the letter of the hot key. A hot key is a specific key that can open an option. With a color monitor, a hot key is indicated by a yellow letter. With a monochrome monitor, a hot key is indicated by a capital letter. In the Master Menu, the hot keys are the option numbers. When you use the hot key method, the option does not have to be highlighted.

STANDARDS

F3

Opens the Terminal Emulation mode in most cases.

F8

Saves the entries that you make to the database configuration. If there is more than one entry field on a line, the cursor must be in the first field in order to save the information. See rule 1 of **F10 & Esc**.

F9

Activates on-line help.

F10 & Esc

In most cases the F10 and Esc keys work interchangeably. The following rules apply to these keys:

- ◆ When editing a group of fields, returns the cursor to the first field. When editing the first field, they exit that window.
- ◆ When at a submenu, they return cursor to the previous menu.
- ◆ When at the Master Menu, they exit the program.

Up Arrow

The up arrow usually does one of the following two things:

- ◆ Selects the preceding option from a menu.
- ◆ Selects the previous field within an option.

Dn Arrow

The down arrow usually does one of the following two things:

- ◆ Selects the next option from a menu.
- ◆ Selects the next field within an option.

FIELD EDITING STANDARDS

The software program checks each field for the correct type of entry. If a valid entry for a certain field is alphabetic and a numeric key is pressed, the computer beeps.

STANDARDS

When editing fields, the following keys are active:

KEY	FUNCTION
Enter	Accepts the field.
Ctrl-Z	Erases the current field.
Ctrl-R	Restores the default value.
Back Arrow	Deletes the previous character.
Ctrl-H	Lists the editing keys that are available.
Left Arrow	Moves the cursor <i>left</i> within the field.
Right Arrow	Moves the cursor <i>right</i> within the field.
Ctrl-Home	Moves the cursor to the <i>start</i> of the field.
Ctrl-End	Moves the cursor to the <i>end</i> of the field.
Del	Deletes the current character.
Ins	Toggles insert mode.
Ctrl-Left Arrow	Moves the cursor <i>left</i> to the previous word.
Ctrl-Right Arrow	Moves the cursor <i>right</i> to the previous word.
Ctrl-K or Alt-K	Deletes to the end of the field.
Ctrl-D	Calls up the Default Box if there is one.

There may be times when the screen cannot display all the data. In such cases, use special keys to scroll different parts of the data onto the screen.

Usually these special keys are active only when the cursor is at the first item (far left) in a given line of data. The special keys and their functions are as follows:

KEY	FUNCTION
Up Arrow	Moves the cursor up one line. When the cursor is on the top line, the previous line scrolls into the window.
Down Arrow	Moves the cursor down one line. When the cursor is on the bottom line, the next line scrolls up into the window.
Home	Brings the first page of data into the window.
End	Brings the last page of data into the window.
PgUp	Brings the previous page of data into the window.
PgDn	Brings the next page of data into the window

DEFAULT BOX

NOTE:

The arrow keys are not active in these default boxes. Choices can be made only with the TAB or SHIFT-TAB keys.

When defining certain fields, a default box appears to aid in the selection process. The default box displays the valid selections for the current field that is being editing. Select from the default box or type the entry. To select from the default box, use the keys below, then press Enter.

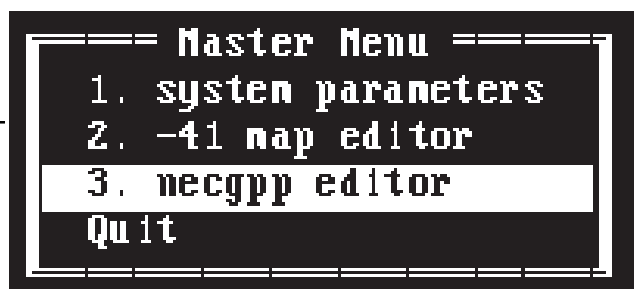
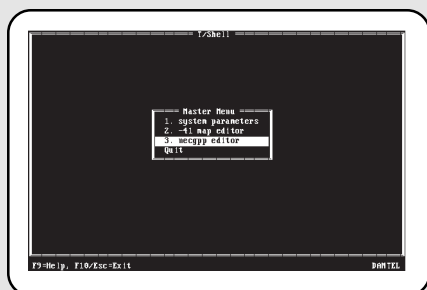
KEY	FUNCTION
Tab	Moves the select bar down one selection.
Shift-Tab	Moves the select bar up one selection.

GETTING STARTED

The T/Shell software program with the 46517 NEC-to-GPP Editor lets you configure 46062 General Purpose Processor (GPP) databases.

To start the T/Shell program:

1. Make sure that you are in the TSHELL directory.
2. Type **TSHELL**.
3. Press Enter. The Dantel logo appears, followed a few moments later by the Master Menu. Here is an example of the Master Menu:

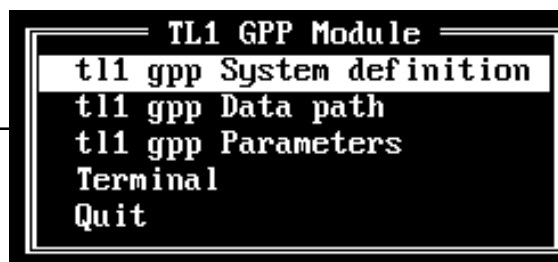


WARNING: Always exit the program cleanly. This means that you must select the Quit option from the Master Menu whenever you want to leave the T/Shell program. NEVER turn off the computer without properly exiting the program. Doing so could corrupt the data files.

4. If you wish to change the system parameters, highlight *System Parameters* and press Enter.

The System Parameters window appears. It lets you configure the system for LCD or color mode, menu verification, and pulse or tone dialing. Refer to the **System Parameters** section of this chapter. When you are finished, the Master Menu appears.

5. At the Master Menu, highlight the *NEC GPP Editor* option.
6. Press Enter. The NEC Edit Module menu appears:



CONTINUED . . .

GETTING STARTED

From this menu, you can fully interact with the T/Shell software. (A brief description of each option on the NEC Edit Module menu appears below.)

7. Highlight an option.
8. Press Enter.
9. Go to the chapter that explains the option you selected.

NEC GPP System Definition - Does the following:

- ◆ Creates NEC T/Shell TL1 GPP configurations that define how the 46062 GPP operates.
- ◆ Uploads and downloads configurations between the 46517 NEC-to-GPP Editor and the 46062 GPP.
- ◆ Generates reports about configurations.

NEC GPP Data Path - Sets the DOS path where T/Shell configuration files created by the program will be stored.

NEC GPP Parameters - Does the following:

- ◆ Sets the communications parameters for uploading and downloading T/Shell configurations between the 46517 NEC-to-GPP Editor and the 46062 GPP.
- ◆ Specifies where to store reports on configurations on your computer.
- ◆ Sets the defaults that the T/Shell software will use to configure alarm levels.

Terminal - Allows you to use a terminal emulator program to communicate with devices, such as the 46062 GPP, that have a terminal interface.

Quit - Returns you to the T/Shell Master Menu.

F1 Command Key - Displays the product name, version, and product number of the software.

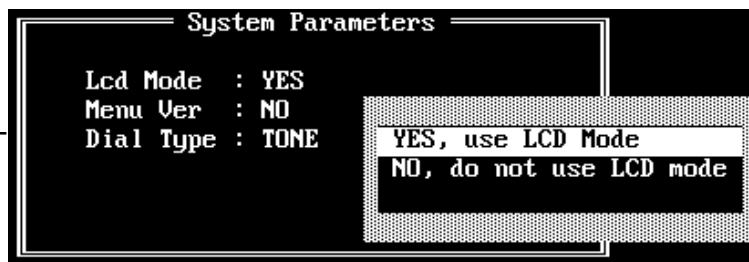
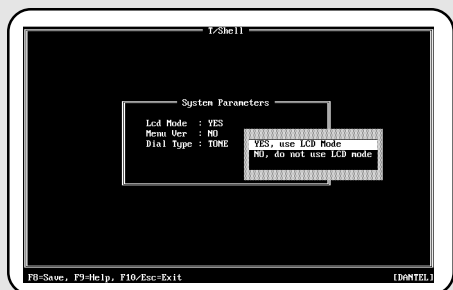
SYSTEM PARAMETERS

After you select the System Parameters option from the Master Menu, the System Parameters window appears. It lets you configure the system for the following:

- ◆ LCD or color mode
- ◆ Menu verification
- ◆ Pulse or tone dialing

GETTING STARTED

Here is the System Parameters window:



To change the parameters:

1. Use the Tab key to select the desired value.
2. Press Enter.

If you do not want to change a value at a particular field, press Enter to advance to the next field.

If you have changed some fields and all the remaining fields are acceptable, press F8 to save the changes.

At the last field (Dial Type), if you change the value, press Enter to save all changes to the system parameters. If you do not change the value of the dial type, press Enter or F8 to save any other changes to the system parameters.

NOTE: *If you change the LCD mode, you must exit the program to DOS and restart the T/Shell program.*

Here are descriptions of the System Parameters options:

LCD Mode - If you are using a monochrome monitor or a laptop computer with a monochrome LCD display, select *YES, use LCD mode*. If you are using a color monitor, select *NO, do not use LCD mode*. This field defaults to *NO, do not use LCD mode*.

Menu Ver - The Menu Ver field allows you to configure the method of opening menu options when using hot keys. A hot key is a specific key that can select a menu option. Selecting *YES, use menu verification* will force you to press Enter after you press a hot key. Selecting *NO, do not use menu verification* allows you to open an option just by pressing a hot key. This field defaults to *NO, do not use menu verification*.

Dial Type - If your computer is connected to a telephone line, select pulse or tone dialing. If your computer is not connected to a telephone line, it does not matter whether you select pulse or tone dialing. This field defaults to Tone Dialing.

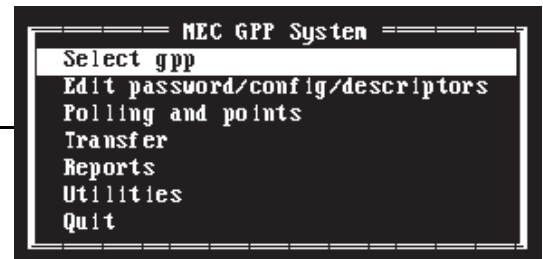
NEC GPP SYSTEM DEFINITION

The NEC GPP System Definition option of the 46517 NEC-to-GPP Editor Module menu lets you do the following:

- ◆ Create T/Shell GPP configurations or select an existing one to edit.
- ◆ Upload and download configurations between the 46517 NEC-to-GPP Editor and the TL1 GPP database or to 46062 GPP memory.
- ◆ Generate reports about configurations.

NOTE: In this manual “definition” and “configuration” are synonymous.

Here is the NEC-to-GPP Editor screen with the NEC GPP System Menu:



To select an option:

1. Highlight an option. For brief descriptions of the options, refer to the next section on **Menu Overview**.

NOTE: Whenever you access the NEC GPP System menu from the NEC Edit Module menu, you must choose Select GPP first.

2. Press Enter.
3. Go to the section of this chapter that explains the option that you selected.

MENU OVERVIEW

Here are brief descriptions of the command keys that you can use while you are in the NEC GPP System menu:

F3 - Terminal - Enters the terminal emulator.

F9 - Help - Describes menu options.

F10/Esc - Exit - Exits to NEC Edit Module menu.

NEC GPP SYSTEM DEFINITION

Here are brief descriptions of each option in the NEC GPP System menu:

SELECT GPP

Opens a new file so that you can create a configuration or selects an existing configuration to edit.

EDIT PASSWORD/CONFIG/DESCRIPTORS

Lets you select the following:

- ◆ The GPP printer port address.
- ◆ The password to access the configuration.
- ◆ A description to identify the configuration.

POLLING AND POINTS

Configures polling list entries and their corresponding alarm points.

TRANSFER

Provides utilities for the following:

- ◆ Downloading the configuration to a TL1 GPP database.
- ◆ Uploading a configuration from a TL1 GPP database.
- ◆ Downloading a configuration from another file.

REPORTS

Generates reports on the configuration.

UTILITIES

Copies the files associated with the configuration for the following purposes:

- ◆ To backup the files.
- ◆ To transfer the files to another computer.
- ◆ To use the files as the basis for creating a new configuration.
- ◆ To delete the configuration from the computer.

QUIT

Exits the NEC GPP System Menu and returns to the NEC Edit Module menu.

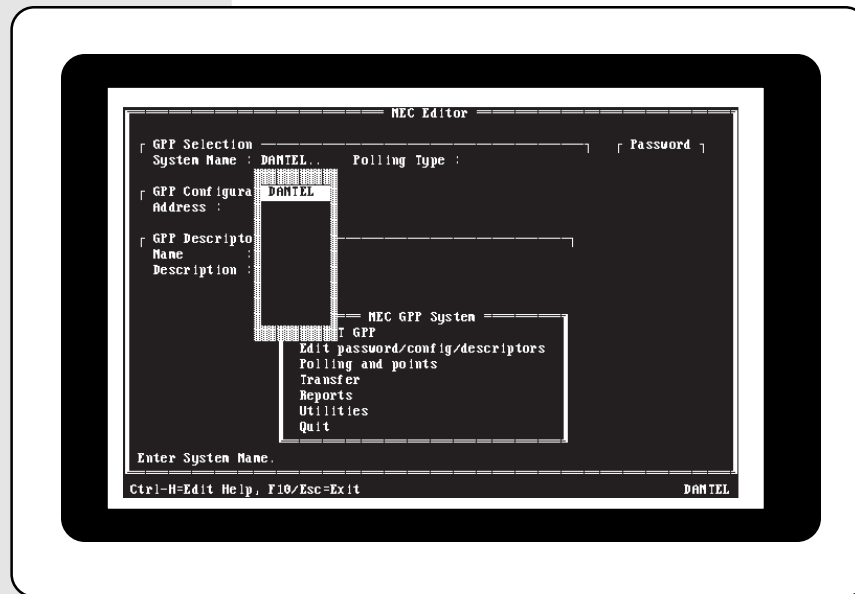
NEC GPP SYSTEM DEFINITION

SELECT GPP

The Select GPP option lets you create a T/Shell GPP configuration or select an existing one to edit.

Before you can use most of the options in the NEC GPP System menu, you must either open a file to create a configuration or select an existing configuration.

Here is the NEC GPP System screen with the GPP selection fields:



Below are the instructions for entering a system name.

SYSTEM NAME

A T/Shell GPP configuration must have a name. If there are existing configurations, a default box appears with their names.

To select an existing name:

1. Use the Tab key to highlight a name.
2. Press Enter.
3. If the configuration has a password, type it and press Enter. If there is no password, just press Enter. To create a password or to change an existing one, refer to the next section on **Edit Password/Config/Descriptors**.
4. Procedure complete.

NEC GPP SYSTEM DEFINITION

To create a new system name (5 steps):

1. Enter a name.
The name can have a maximum of eight characters. The name must use characters that form a valid DOS file name. You can use all alphabetic and numeric characters except those that are reserved by DOS, such as the period and space.
2. Press Enter.
3. The following question appears at the bottom left corner of the screen:
Not there. Wish to add (Y/N)?
Type **Y** to add the new name. If **N** is typed, you will be prompted for another name.
4. The Polling Type field automatically defaults to NEC Level 2A.
5. Press Enter.

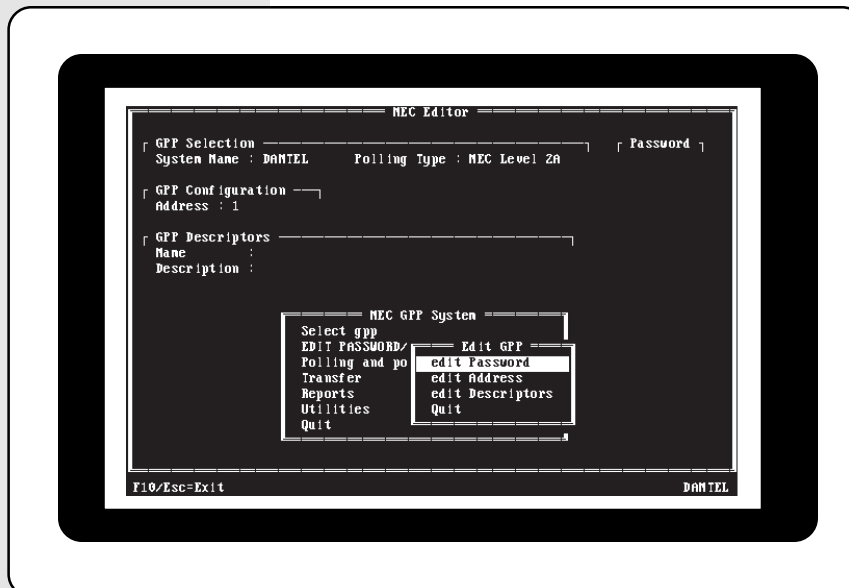
WARNING: Refer to the Utilities section of this chapter for information on copying configurations. Do not use the DOS copy function.

EDIT PASSWORD/CONFIG/DESCRIPTORS

The Edit Password/Config/Descriptors option lets you to create or change the following:

- ◆ A password to access the configuration.
- ◆ The GPP address.
- ◆ A description to identify the configuration.

Here is the NEC GPP System screen with the Edit GPP menu:



NEC GPP SYSTEM DEFINITION

Below are the instructions for entering a password, a GPP address, and a description of the system configuration.

EDIT PASSWORD

This option lets you create or change a password to access the configuration.

To create or change a password:

1. Highlight *Edit Password*.
2. Press Enter.
3. Type in up to eight characters.
4. Press Enter.
5. Retype the password. This is a safety feature to insure that you typed the password correctly the first time.
6. Press Enter.

EDIT ADDRESS

This is the GPP address. The default address is 1.

To change the address:

1. Highlight *Edit Address*.
2. Press Enter.
3. Type in the address. Acceptable values are 1-8.
4. Press Enter.

EDIT DESCRIPTORS

Entering text in this field is optional. You can enter text to name the GPP and remind yourself about the purpose or function of the GPP configuration.

To create or change descriptors:

1. Highlight *Edit Descriptors*.
2. Press Enter.
3. Type in a GPP name. Do not exceed 40 characters.
4. Press Enter.
5. Type in a GPP description. Do not exceed 40 characters.
6. Press Enter.
7. Procedure complete.

NEC GPP SYSTEM DEFINITION

POLLING AND POINTS

This option lets you configure GPP polling list entries and their alarm points. Below is the NEC Polling List screen:

The screenshot shows the NEC Editor interface. At the top, it says 'NEC Editor'. Below that, there are fields for 'GPP Selection', 'System Name : DANTEL', 'Polling Type : NEC Level 2A', and 'Password'. Below these fields, it says 'Gpp Polling: NEC Polling List'. There is a table with columns 'Entry', 'TME', 'Sid', and 'Poll Count: 9'. The table contains four rows of data:

Entry	TME	Sid	Poll Count: 9
1	1.	222222	
2	2	255106	
3	3	255107	
4	4	255108	

Below the table, there is a field 'Enter TME Address (1-16)'. At the bottom, there is a footer with the text 'F2=TRE Disp, F3=Blank, F5=Compress, F8=Save & Exit' and 'DANTEL'.

To configure a polling list:

1. In the *TME* field, type in the TME address. Acceptable values are 1-16.

Here are brief descriptions of the command keys that you can use while the cursor is in the *TME* field:

F2 - TRE Disp - Sets TRE definitions and alarm points. Refer to **TRE Display and Alarm Point Configuration** on the next page.

F3 - Blank - Deletes the current entry.

F5 - Compress - Removes all unreferenced entries from SID, AID and COND tables.

NOTE: *Compression time depends on the number of defined points in your database.*

2. Press Enter.
3. In the *SID* field, type in the source identification number. Do not exceed 20 characters.

Here are brief descriptions of the command keys that you can use while the cursor is in the *SID* field:

Alt-F9 - Show Table - Lists all defined SIDs.

Up Arrow - Previous Field - Returns to entry TME field.

CONTINUED . . .

NEC GPP SYSTEM DEFINITION

F10/Esc - Returns to entry TME field.

NOTE: *When you press F10/Esc, the polling list configuration is not saved. Press F8 to save the information.*

4. Press Enter.
5. The following question appears at the bottom left corner of the screen:

Entry not found. Add it? (Y/N)

Type **Y** to add the address. If you type **N**, the screen prompts you for another address.

6. Repeat steps 1-5 to configure additional GPP entries.
7. When you finish, press F8 to save the information.

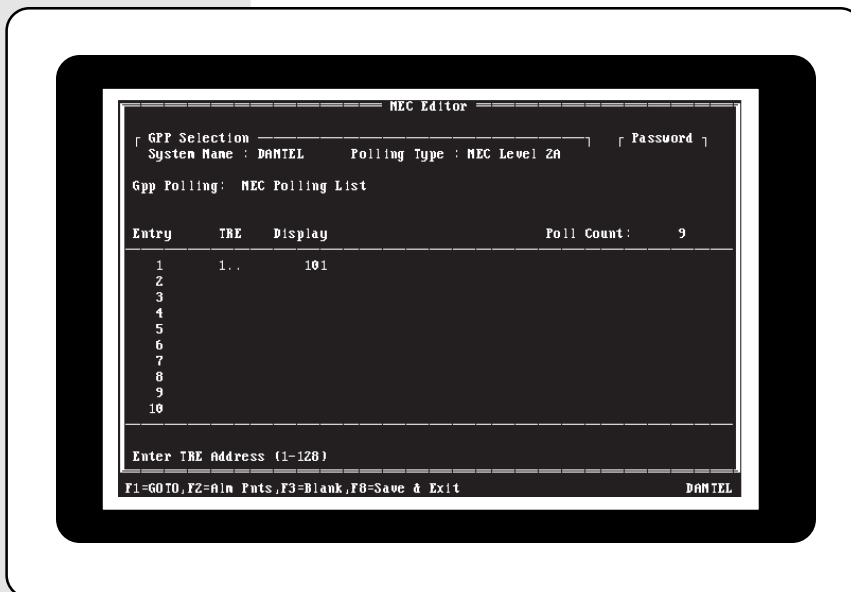
TRE DISPLAY AND ALARM POINT CONFIGURATION

To edit TRE displays:

1. In the Polling List, select a completed TME entry.

NOTE: *If you do not type in the TRE address and SID number for an entry, you cannot edit TRE displays.*

2. Press F2. The TRE Display window pops up:



3. In the TRE field, type in the TRE address. Acceptable values are 1-128.

CONTINUED . . .

NEC GPP SYSTEM DEFINITION

Here are brief descriptions of the command keys that you can use while the cursor is in the *TRE* field.

F1 - GOTO - Goes directly to any TRE entry.

F2 - Alm Pnts - Sets alarm points for each entry. Refer to **To edit alarm points** on the next page.

F3 - Blank - Deletes the current entry.

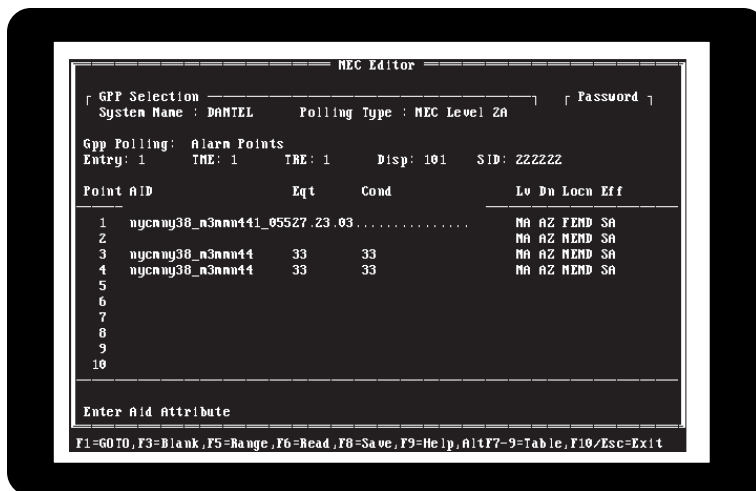
4. In the *Display* field, type in the TRE address display number. Acceptable values are 1-128.
5. Repeat steps 1-4 to configure additional TRE displays.
6. When you finish, press F8 to save the information.

To edit alarm points:

1. In the *TRE Display* field, select a TRE display number.

NOTE: *If you do not type in the TRE and display numbers for an entry, you cannot edit alarm points.*

2. Press F2. The Alarm Points screen pops up:



3. In the AID field, type in the AID attribute. Do not exceed 44 characters.

NOTE: *The AID field is truncated in the Alarm Points listing. When you select the AID field, you see the entire AID field.*

Refer to the **AID and EQT Field Command Keys** for alarm point editing.

4. Press Enter.

CONTINUED . . .

NEC GPP SYSTEM DEFINITION

5. The following question appears at the bottom left corner of the screen:
Entry not found. Add it? (Y/N)
Type **Y** to add the address. If you type **N**, the screen prompts you for another address.
6. In the EQT field, type in the EQT attribute. Do not exceed 8 characters.
7. Press Enter.
8. The following question appears at the bottom left corner of the screen:
Entry not found. Add it? (Y/N)
Type **Y** to add the address. If you type **N**, the screen prompts you for another address.
9. In the COND field, type in the COND attribute. Do not exceed 15 characters.
10. Press Enter.
11. The following question appears at the bottom left corner of the screen:
Entry not found. Add it? (Y/N)
Type **Y** to add the address. If you type **N**, the screen prompts you for another address.
12. Type in the LEV attribute. Press Alt-F9 for a list of attributes. You can type in the attribute or the forward slash key and the LEV code in the attribute list; for example, type **/1** for **MJ**. The default is **NA**.
13. Press Enter.
14. Type in the DIRN attribute. Press Alt-F9 for a list of attributes. You can type in the attribute or the forward slash key and the DIRN code in the attribute list; for example, type **/1** for **ZA**. The default is **AZ**.
15. Press Enter.
16. Type in the LOCN attribute. Press Alt-F9 for a list of attributes. You can type in the attribute or the forward slash key and the LOCN code in the attribute list; for example, type **/1** for **FEND**. The default is **NEND**.
17. Press Enter.
18. Type in the EFF attribute. Press Alt-F9 for a list of attributes. You can type in the attribute or the forward slash key and the EFF code in the attribute list; for example, type **/1** for **NSA**. The default is **SA**.
19. Press Enter.
20. Repeat steps 1-19 to configure other alarm points.
21. When you finish, press F8 to save the information. Procedure complete.

NEC GPP SYSTEM DEFINITION

AID AND EQT FIELD COMMAND KEYS

Here are brief descriptions of the command keys that you can use while the cursor is in the AID or Eqt fields.

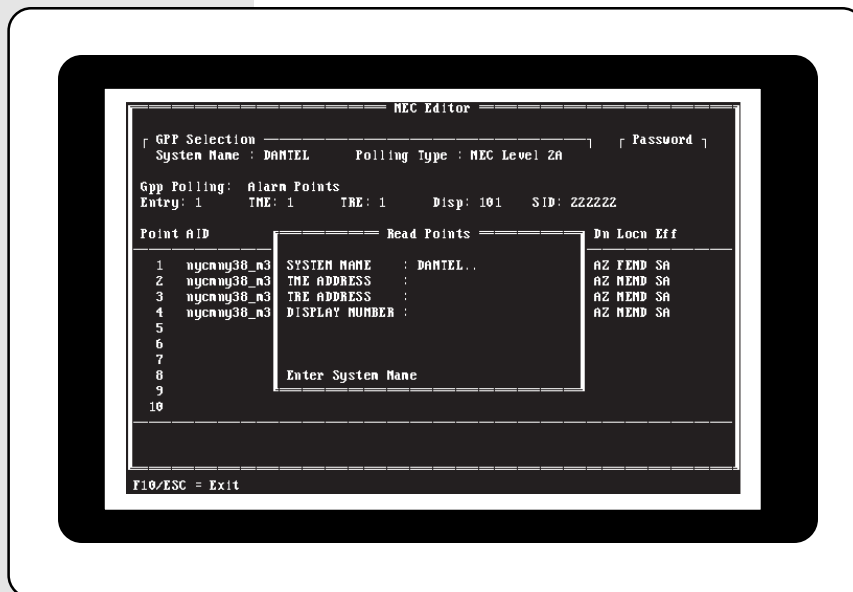
F1 - GOTO - Goes directly to an AID or Eqt entry.

F3 - Blank - Deletes the current point.

F5 - Range Functions - Lets you specify a range of points to:

- ◆ Edit specific attributes of points.
- ◆ Copy attributes of one point to a range of points.
- ◆ Delete one point or a range of points.

F6 - Read - Reads point definitions of one polling list and copies them into the current polling list. When you press F6, the Read Points window pops up:



To read point definitions:

1. Type in the name of the system you are reading from. The current system name is the default.
2. Press Enter.
3. Type in the TME address of the system you are reading from. Acceptable values are 1-128.
4. Press Enter.
5. Type in the TRE address of the system you are reading from. Acceptable values are 1-128.
6. Press Enter.
7. Type in the display number of the system you are reading from. Acceptable values are 1-64.

CONTINUED . . .

NEC GPP SYSTEM DEFINITION

8. Press Enter.

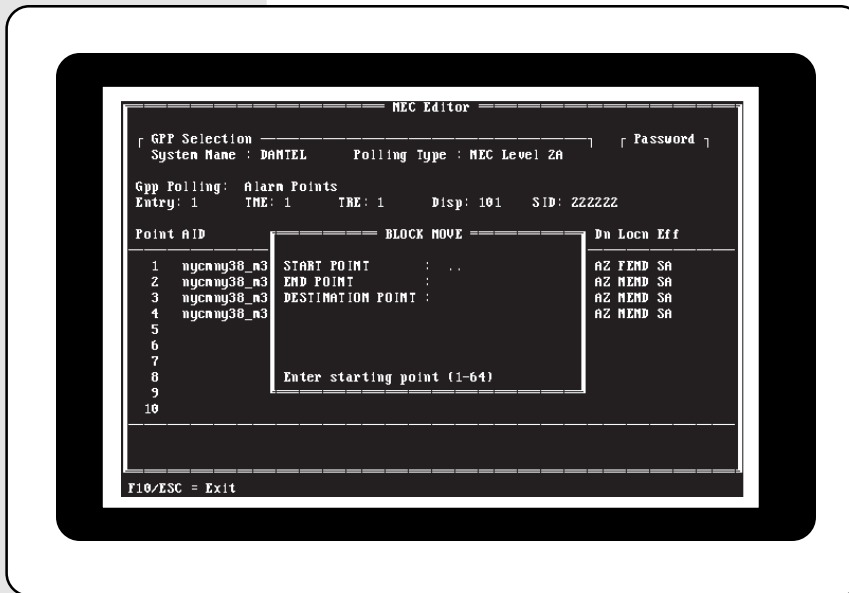
F8 - Save - Saves point definitions and returns to the polling list.

F9 - Help - Displays a help screen.

Alt-F3 - Delete Point - Deletes current point. All points below the deleted point move up one position.

Alt-F4 - Insert Point - Inserts one point above the current point.

Alt-F5 - Block Move - When you press Alt-F5, the Block Move window pops up:



To move a block:

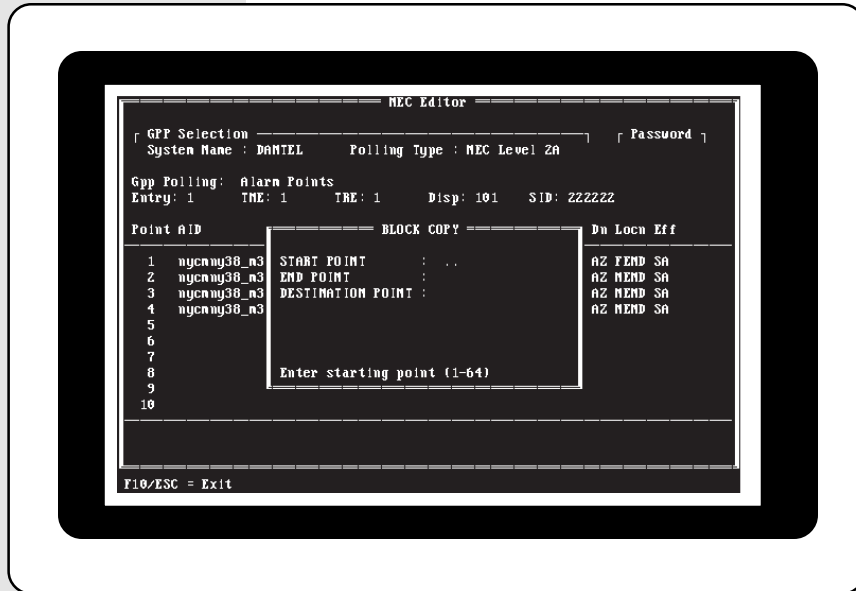
1. Type in the first point of the block. Acceptable values are 1-64.
2. Press Enter.
3. Type in the last point of the block. Acceptable values are 1-64.
4. Press Enter.
5. Enter the first point of the new block location. Acceptable values are 1-64.

NOTE: The selected destination block must accommodate the entire source block. For example, a block from points 1-10 cannot be moved to a block starting at point 60, because the maximum block is 64.

6. Press Enter.
7. Procedure complete.

NEC GPP SYSTEM DEFINITION

Alt-F6 - Block Copy - When you press Alt-F6, the Block Copy window pops up:



To copy a block:

1. Type in the first point of the block. Acceptable values are 1-64.
2. Press Enter.
3. Type in the last point of the block. Acceptable values are 1-64.
4. Press Enter.
5. Enter the first point of the new block location. Acceptable values are 1-64.

NOTE: The selected destination block must accommodate the entire source block. For example, a block from points 1-10 cannot be moved to a block starting at point 60, because the maximum block is 64.

6. Press Enter.

Alt-F7 - Previous Entry - Goes to previous entry in the selected field.

Alt-F8 - Next Entry - Goes to next entry in the selected field.

Alt-F9 - Show - Displays a list of all entries you made in the selected field.

F10/Esc - Exit - Returns to the TRE Display screen.

NOTE: When you press F10/Esc, the alarm point configuration is not saved. Press F8 to save the information.

7. Procedure complete.

NEC GPP SYSTEM DEFINITION

TRANSFER

The Transfer option lets you do the following:

- ◆ Download the configuration to a GPP database.
- ◆ Upload a configuration from a GPP database.
- ◆ Download a GPP configuration to 46062 GPP memory.
- ◆ Request a GPP database to identify itself.

Here is the NEC Editor screen with the Transfer window:



Before beginning the transfer process:

1. Press Alt-F9 to check the communications parameters. Refer to the chapter on Parameters for descriptions of the parameters.
2. Check the GPP Configuration address. The address is shown in the NEC Editor screen. Press F10 to exit the Transfer window and display the full NEC Editor screen. The address must be the same as the default address of the GPP.

To transfer files over a modem:

1. Press F1. A Hayes-compatible modem is required. The dial type (pulse or tone) is selected from the System Parameters option of the Master Menu.
2. Enter the telephone number.
3. Press Enter.
4. After the other end answers, you may upload or download a configuration. See instructions below.
5. When you finish uploading or downloading the configuration files, press F2 to hang up the modem.
6. Procedure complete.

NEC GPP SYSTEM DEFINITION

DOWNLOADING THE GPP CONFIGURATION

To download the configuration:

1. At the *Option* field, type **D**.
2. Press Enter.
3. Type in your password and press Enter. If there is no password, just press Enter.

NOTE: Press *Esc* to abort a download in progress. Aborted downloads partially configure the GPP and disable polling.

UPLOADING A GPP CONFIGURATION

NOTE: The GPP configuration will be uploaded into the configuration in your computer and will replace any data in the configuration in your computer.

To upload a configuration:

1. At the *Option* field, type **U**.
2. Press Enter.
3. A warning appears advising you that the data you are about to upload will overwrite any data in the configuration in the computer. Type **Y** and press Enter to continue or press Enter to discontinue the operation. If you are about to overwrite a configuration that you want to keep, exit the Transfer window, choose Select GPP from the NEC GPP System Menu, and create a new configuration.
4. Press Enter.
5. Type in your password and press Enter. If there is no password, just press Enter.

NOTE: Press *Esc* to abort an upload in progress.

DOWNLOADING TO GPP CARD MEMORY

1. At the *Option* field, type **S**.
2. Press Enter.
3. Type in the file name. Do not exceed 8 characters. Press Enter.

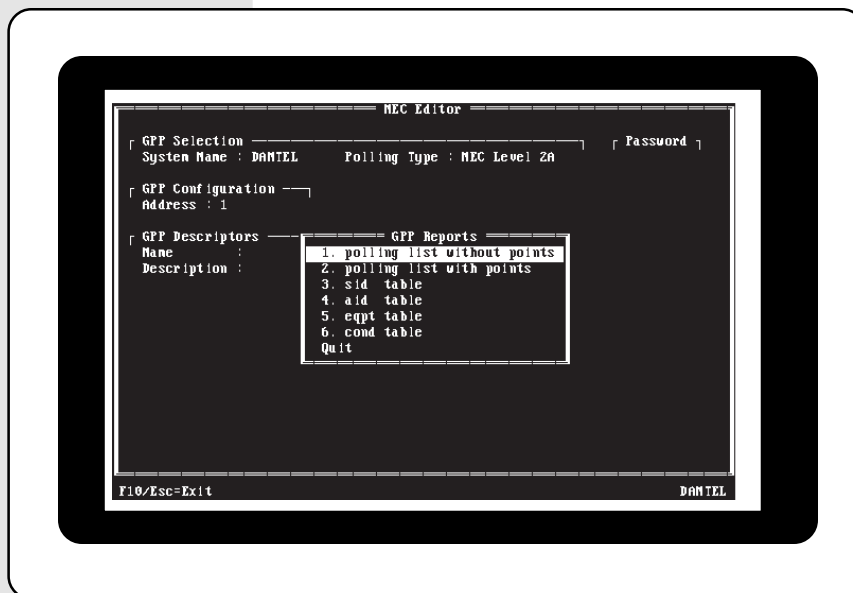
NOTE: The file must have an *.ABS* extension and must be in the designated data path. Refer to **NEC Data Path** section to view or change the data path.

NEC GPP SYSTEM DEFINITION

REPORTS

The Reports option lets you generate reports on the GPP database. Most of the reports can be sent to either the screen, a file or a printer.

Here is the NEC Editor screen with the GPP Reports menu:



To select an option:

1. Highlight an option. A brief description of each option appears below.
2. Press Enter.
3. Go to the subsection that explains the option you selected.

Polling List Without Points - Contains an output of all defined polling list entries.

Polling List With Points - Contains an output of all defined polling list entries and their points.

SID Table - Shows SIDs defined in the selected data path.

AID Table - Shows AIDs defined in the selected data path.

Eqpt Table - Shows all defined equipment table entries.

Cond Table - Shows CONDs defined in the selected data path.

4. Procedure complete.

NEC GPP SYSTEM DEFINITION

POLLING LIST WITHOUT POINTS

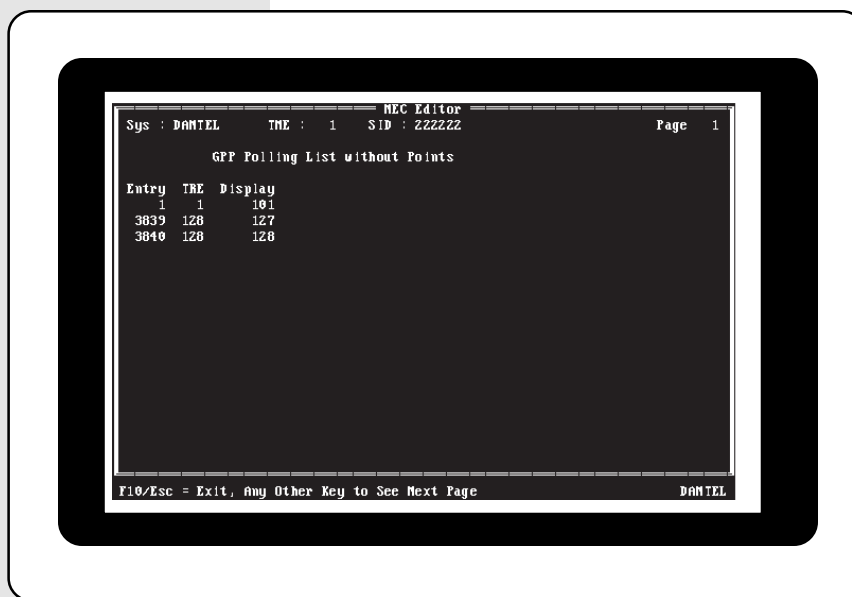
To generate a report:

1. In the *Output to* field, type **F** for file, **P** for printer, or **S** for screen.
2. Press Enter.

CAUTION: *When a printer is the destination, an error message will appear if there is no printer connected to your computer or if the printer is not turned on. If the error message appears, you must press any key to continue. The computer exits the program and returns to the Master Menu.*

When a file is selected as the destination of a report, you are prompted for a DOS file name. If no file name extension is entered, the extension .LST is automatically appended. The file will be sent to the destination specified in the Rpt Path of the Parameters option. Refer to the **Parameters** chapter.

Here is an example of the report on the screen:



The top line in the report lists the system name, the TME address, and the SID number.

NEC GPP SYSTEM DEFINITION

POLLING LIST WITH POINTS

To generate a report:

1. In the *Output to* field, type **F** for file, **P** for printer, or **S** for screen.
2. Press Enter.

CAUTION: When a printer is the destination, an error message will appear if there is no printer connected to your computer or if the printer is not turned on. If the error message appears, you must press any key to continue. The computer exits the program and returns to the Master Menu.

When you print the report to your printer, you are prompted with a question asking:

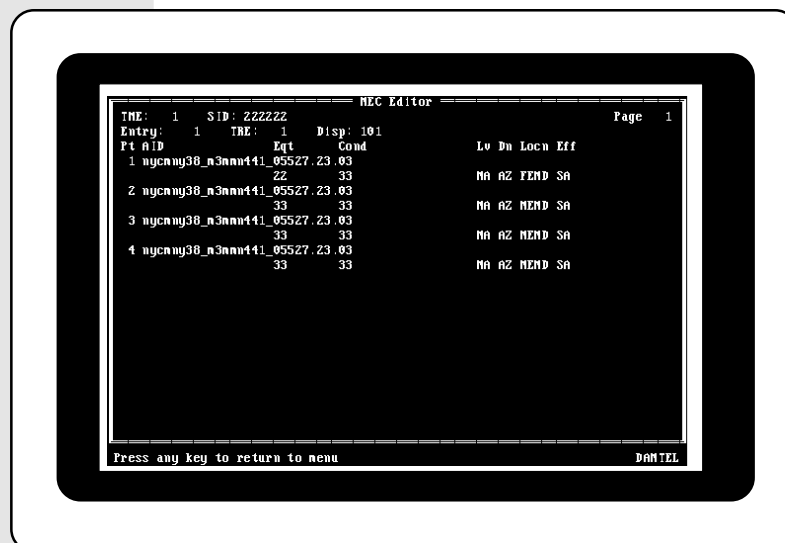
Do a form feed after the points of each polling list entry (Y/N)

If you press **Y** (Yes), then press Enter, points for each polling list print on separate pages. **N** (No) is the default; when you press Enter points print in a continuous stream with a two-line break between polling list entries.

NOTE: Before printing form feeds, ensure the first line of print is at the very top of the page. Reports print on all 66 lines of a standard 8 1/2 by 11 inch page.

When a file is selected as the destination of a report, you are prompted for a DOS file name. If no file name extension is entered, the extension .LST is automatically appended. The file will be sent to the destination specified in the Rpt Path of the Parameters option. Refer to the **Parameters** chapter.

Here is an example of the report on the screen:

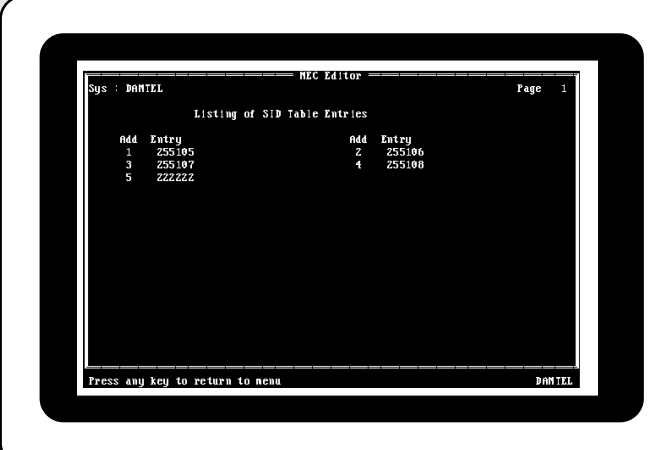


NEC GPP SYSTEM DEFINITION

The top lines in the report list the system name, the TRE address, display, TME address, and the SID number. The report lists all attributes of defined points.

SID TABLE

Here is an example of a report of SID table entries that appears on the screen:



The screenshot shows a terminal window titled "NEC Editor" with "Sys : DANTEL" and "Page 1". The main content is "Listing of SID Table Entries". It displays a table with two columns: "Add" and "Entry". The data is as follows:

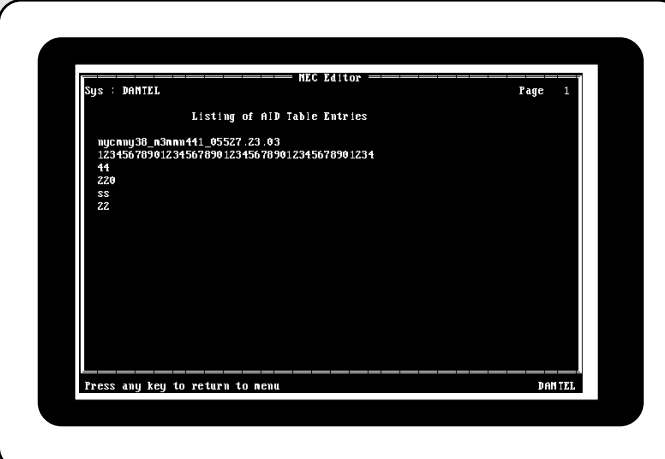
Add	Entry
1	255105
3	255197
5	222222

At the bottom of the terminal window, it says "Press any key to return to menu" and "DANTEL".

The SID Table reports all SIDs defined in the selected data path.

AID TABLE

Here is an example of a report of AID table entries that appears on the screen:



The screenshot shows a terminal window titled "NEC Editor" with "Sys : DANTEL" and "Page 1". The main content is "Listing of AID Table Entries". It displays a table with two columns: "Add" and "Entry". The data is as follows:

Add	Entry
1	255105
3	255197
5	222222

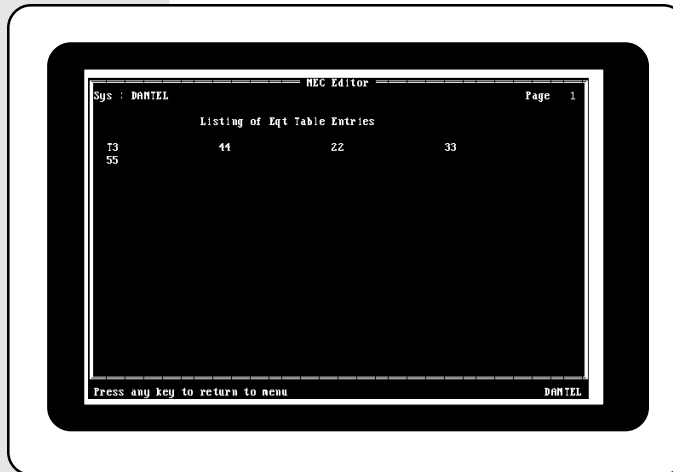
At the bottom of the terminal window, it says "Press any key to return to menu" and "DANTEL".

The AID Table reports all AIDs defined in the selected data path.

NEC GPP SYSTEM DEFINITION

EQPT TABLE

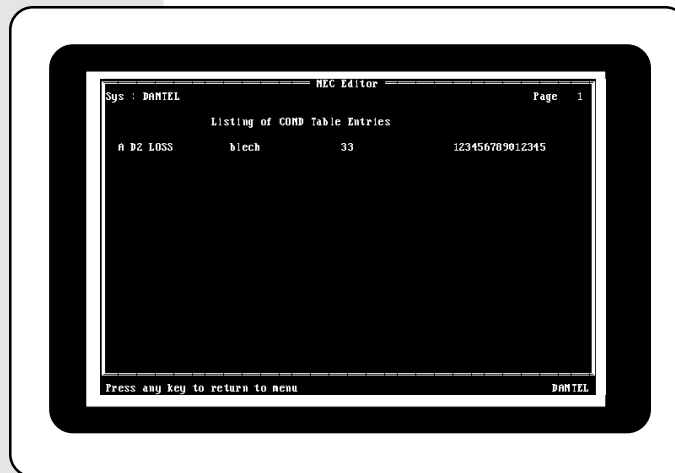
Here is an example of a report of EQPT table entries that appears on the screen:



The EQPT Table reports all EQTs defined in the selected data path.

COND TABLE

Here is an example of a report of COND table entries that appears on the screen:



The COND Table reports all CONDS defined in the selected data path.

NEC GPP SYSTEM DEFINITION

UTILITIES

The Utilities option lets you copy the files associated with the configuration for the following purposes:

- ◆ To backup the files.
- ◆ To transfer the files to another computer.
- ◆ To rebuild damaged system index files.
- ◆ To erase the configuration from the computer.

KEY FILES REBUILD

Key Files Rebuild rebuilds damaged index files that are out of synchronization with the data file. The rebuilding process uses the data file to create a new index file.

When you select Key Files Rebuild and press Enter, the 46517 NEC-to-GPP Editor rebuilds the index file automatically.

COPY GPP FILES

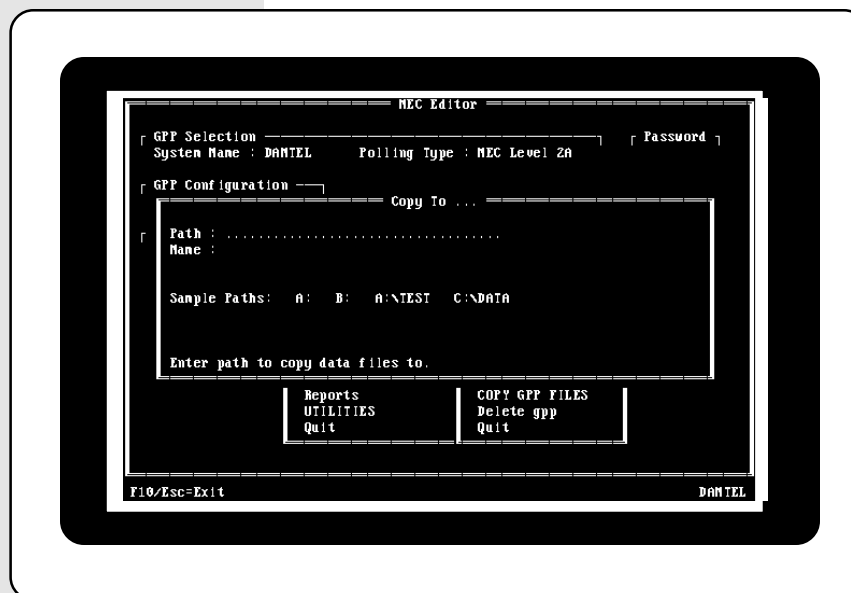
1. In the Utilities menu, highlight *Copy GPP Files*.
2. Press Enter.

COPY To

To copy a file to another location:

1. Highlight *Copy From Data Path To ...*
2. Press Enter.

Here is the Copy To ... window:



CONTINUED . . .

NEC GPP SYSTEM DEFINITION

3. In the Path field, enter the destination drive and path where the configuration is to be copied.
4. Press Enter.
5. The Name field defaults to the current name. To change the name, type a new one.

NOTE: *When copying a configuration from one location to another, you do not have to rename the configuration. But if you copy a configuration from one location to the same location (such as to use a configuration as the basis for creating a new one), you must rename the configuration.*

6. Press Enter.
7. To start the copying process, press Enter.

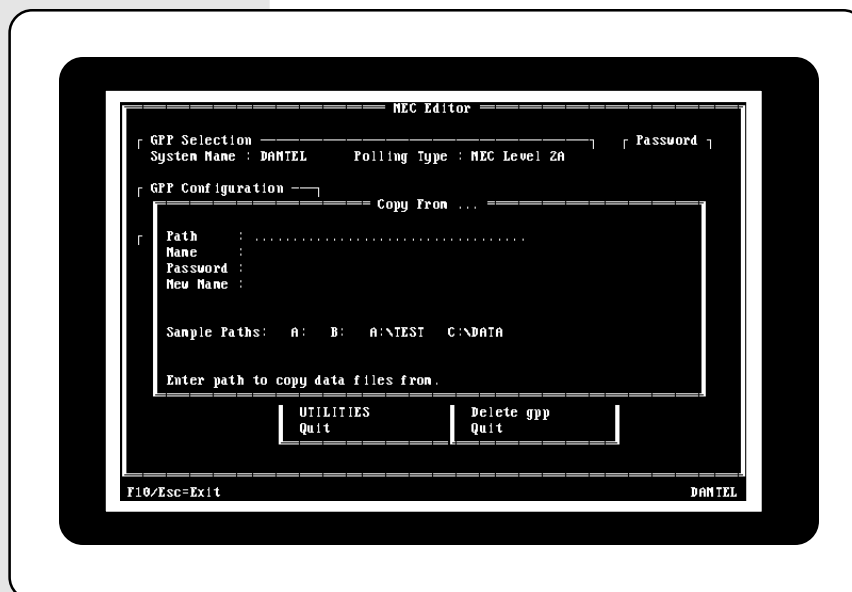
NOTE: *The configuration files are being copied, not moved; therefore, the files being copied are not being erased from their original location.*

COPY FROM

To copy a file from another location:

1. Highlight *Copy From ... To Data Path*.
2. Press Enter.

Here is the Copy From ... window:



CONTINUED . . .

NEC GPP SYSTEM DEFINITION

3. In the Path field, enter the drive and path from which you want to copy a configuration.
4. Press Enter.
5. In the Name field, enter the system name of the configuration to be copied.
6. Press Enter.
7. In the Password field, enter the system name's password if there is one.
8. Press Enter.
9. The New Name field defaults to the same name as shown in the Name field. To change the name, type a new one.

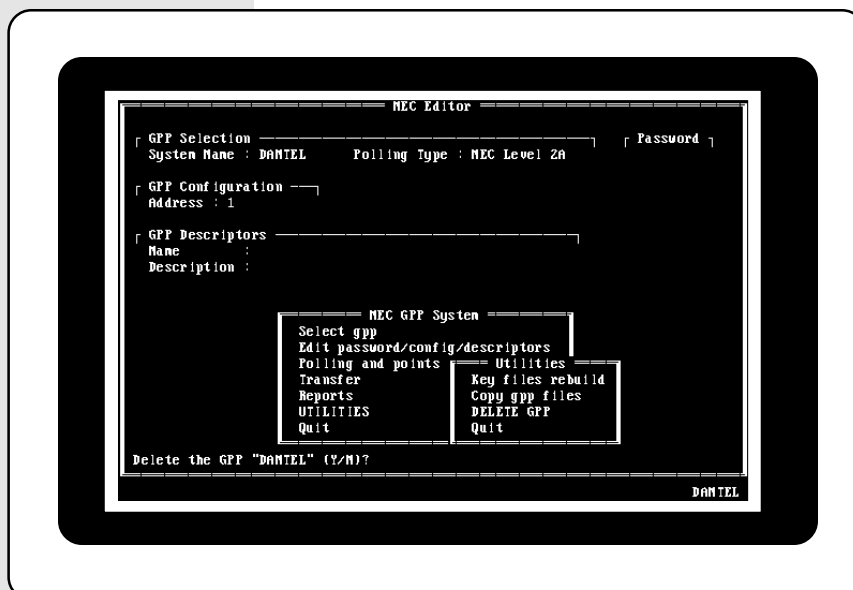
NOTE: When copying a configuration from one location to another, you do not have to rename the configuration. But if you copy a configuration from one location to the same location (such as to use a configuration as the basis for creating a new one), you must rename the configuration.

10. Press Enter.
11. To start the copying process, press Enter.

NOTE: The configuration files are being copied, not moved; therefore, the files being copied are not being erased from their original location.

DELETE GPP

Here is the screen:



NEC GPP SYSTEM DEFINITION

When initiating this command, a warning message appears at the bottom left corner of the screen. An example of the warning message is shown below.

Delete the System "DANTEL" (Y/N)?

Type **Y** (Yes) to delete the configuration. Type **N** (No) if you do not want to delete the configuration.

WARNING: *Do not use this command unless you are positive that you will never need the configuration again. This command erases all references to the configuration.*

NEC DATA PATH

The NEC Data Path option of the NEC Edit Module menu lets you specify the drive and directory path where the T/Shell database configuration files will be stored. This is particularly useful for running the program on a dual diskette system. Such a setup might use Drive A for the program disk and Drive B for the disk that holds the configuration files. This type of setup allows you to access different configurations easily by simply swapping disks.

Here is the NEC Edit screen with the Edit NEC Data Path windows:



NEC DATA PATH

The current data path is shown in the upper window. The lower window displays any database configurations that are stored at the current path.

To change the data path:

1. Type the new path.

Sample path specifications are shown below:

B:

C:\TSHELL\NEC\DATA

C:\TSHELL\NEC\TEST

NOTE: If you specify a drive without a path (for example A: or C:), the current path of that drive is loaded into the Data Path parameter.

2. Press Enter.
3. Press F8 to save the new path.

NEC PARAMETERS

The NEC Editor Parameters option of the NEC Edit Module menu allows you to select the communications parameters for uploading and downloading GPP database configurations. You also can specify where to store reports on database configurations on your computer.

Here is the NEC Editor Parameters window:



NEC PARAMETERS

To change the parameters:

1. Enter the desired value.
2. Press Enter.

If you do not want to change a value at a particular field, press Enter to advance to the next field.

If you have changed some fields and all the remaining fields are acceptable, press F8 to save the changes and return to the NEC Editor Module menu.

At the last field (Rpt Path), if you change the value, press Enter to save all changes to the system parameters. If you do not change the value of the report path, press Enter or F8 to save any other changes to the system parameters. The NEC Editor Module menu appears.

Here are descriptions of each parameter:

Com Port - Specifies which communications port to use when uploading or downloading database configurations. Acceptable entries are 1-4. This field defaults to 1.

WARNING: *If you specify a communications port that your computer does not have, the T/Shell program locks up when the computer tries to use that port and you must reboot your computer.*

Baud - Sets the baud rate for the communications port. Acceptable baud rates are 110, 150, 300, 600, 1200, 2400, 4800, 9600, 19 (19,200) and 38 (38,400). This field defaults to 9600.

Parity - Sets the parity for the communications port. Acceptable values are E)ven, O)dd, N)one. This field defaults to N)one.

Stop Bits - Sets the number of stop bits for the communications port. Acceptable values are 1 or 2. This field defaults to 1.

Timeout - Sets the amount of time in milliseconds that the computer waits for the device at the other end of the communications line to acknowledge that it is ready to receive data. Acceptable values are 50 - 9999 milliseconds. This field defaults to 2000 milliseconds (2 seconds).

Resend Max - Specifies the number of resends that the computer attempts before declaring a "Com Port Error" when trying to upload or download data. Acceptable values are 1 - 100. This field defaults to 20.

CONTINUED . . .

NEC PARAMETERS

DCPF Mode - Specifies the type of communications protocol for uploading and downloading files. Acceptable values are Y (to use DCPF protocol) and N (to use DCP protocol). This field defaults to Y.

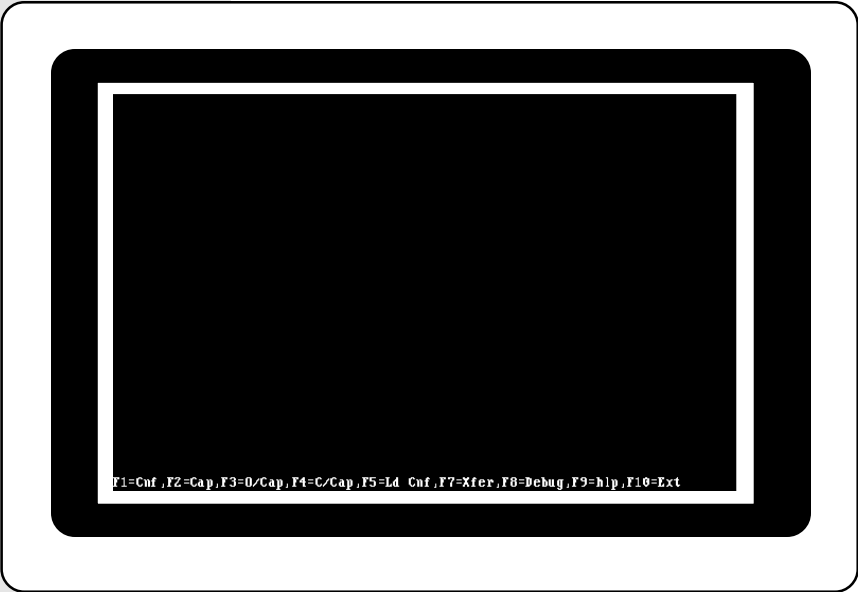
The NEC responder port does not have to be configured for DCP or DCPF protocol. This is done automatically by the NEC and the T/Shell software.

Rpt Path - Specifies the drive and directory that the computer is to use to store any reports that are sent to a file. For more information, see the **Reports** section of the *NEC GPP System Definition* chapter. This field defaults to the current directory.

TERMINAL EMULATOR

The Terminal option of the NEC Edit Module menu activates the terminal emulator that imitates a dumb terminal's monitor. The purpose of this mode is to allow direct communications with another device.

The terminal emulator screen is blank except for the bottom line, which displays the available command keys. Here is the screen:



F1=Cnf, F2=Cap, F3=O/Cap, F4=C/Cap, F5=Ld Cnf, F7=Xfer, F8=Debug, F9=hlp, F10=Ext

TERMINAL EMULATOR

Below is a brief description of the function of each command key. More detailed information is provided in other sections of this chapter.

F1 - Edit Terminal Configuration (Cnf) - Configures how the terminal emulator communicates with another device. Also programs function keys to playback a lengthy string of characters that may constitute a command, an often used phrase, etc.

F2 - Toggle Capture File (Cap) - Starts and stops the capturing of data received by the terminal. The data then can be reviewed at a later time.

F3 - Open Capture File (O/Cap) - Opens a capture file.

F4 - Close Capture File (C/Cap) - Closes a capture file.

F5 - Load Configuration File (Ld Cnf) - Changes the current terminal configuration to a new configuration.

F7 - Download File Transmission (Xfer) - Transfers (downloads) a DOS file from your computer to another device.

F8 - Toggle Protocol Analyzer/Debug (Debug) - Activates and deactivates a protocol analyzer for troubleshooting problems of the device connected to the terminal emulator.

F9 - Help Message (hlp) - Displays on-line help.

F10 - Exit Terminal Emulator (Ext) - Exits the terminal mode and returns to the TL1 GPP Module menu.

TERMINAL EMULATOR

EDIT TERMINAL CONFIGURATION

Press F1 from the main terminal emulator screen to select the terminal configuration option. The Edit Configuration window appears:



Options include:

- ◆ Change the terminal's configuration for communicating with another device. See ***Terminal Attributes*** in this section.
- ◆ Program the function keys. See ***Shift Fxx***, ***Ctrl Fxx***, and ***Alt Fxx*** in this section.
- ◆ Create a file to save the changes made in the two items above. See ***Finish*** in this section.

TERMINAL EMULATOR

TERMINAL ATTRIBUTES

To change the terminal configuration:

1. Type **T**. The terminal configuration window appears:



2. Enter the desired value.
3. Press Enter.

If no change is required to a value at a particular field, press Enter to advance to the next field.

If some fields have been changed and all the remaining fields are acceptable, press F8 to return to the Edit Configuration window.

At the last field (Prot base), press Enter after making a change to the terminal attributes. If you do not change the value of the protocol base, press Enter or F8 to make any other changes to the system parameters.

If you change the default settings, the changes remain in effect until you change them again or you exit the program to the Master Menu. When you return to the Master Menu, the computer automatically restores the default settings.

To save these changes, refer to section **Finish**.

TERMINAL EMULATOR

Here is a description of each parameter:

Com Port - Specifies which communications port to use. Acceptable entries are 1 - 4. This field defaults to 1.

NOTE: *The terminal emulator can use the same communications port that the T/Shell software uses for its external communications.*

Baud - Specifies the baud rate for the communications port. Acceptable baud rates are 110, 150, 300, 600, 1200, 2400, 4800, 9600, 19 (19,200), 38 (38,400), and 115 (115,200). This field defaults to 1200.

Word - Specifies the number of word bits for the communications port. Acceptable values are 7 and 8. This field defaults to 8.

Stop - Specifies the number of stop bits for the communications port. Acceptable values are 1 and 2. This field defaults to 1.

Parity - Specifies the parity for the communications port. Acceptable values are E)ven, O)dd, N)one. This field defaults to None.

Echo - Specifies how the terminal emulator communicates. Acceptable values are Y)es, echo (results in half duplex operation) and N)o, don't echo (results in full duplex operation). This field defaults to N.

Append LF - Tells the computer whether to add a linefeed when it receives an Enter (CR or carriage return) command. Acceptable values are Y)es, append a linefeed character after Enter and N)o, don't append a linefeed after Enter. This field defaults to N.

Term Emul - Selects the specific type of terminal the computer emulates. Partial emulation of ADDS Viewpoint functions is available by selecting A. The available ADDS Viewpoint functions are clear screen, clear to the end of line, and cursor positioning. Select N (none) for no terminal emulation. This field defaults to None.

Prot Base - Specifies the number base that the Debug Mode uses to display data. Acceptable values are D (decimal) and H (hexadecimal). This field defaults to D.

Capture File - Displays the name and status of a capture file if one is open.

NOTE: *Capture File parameters cannot be changed while editing the terminal configuration.*

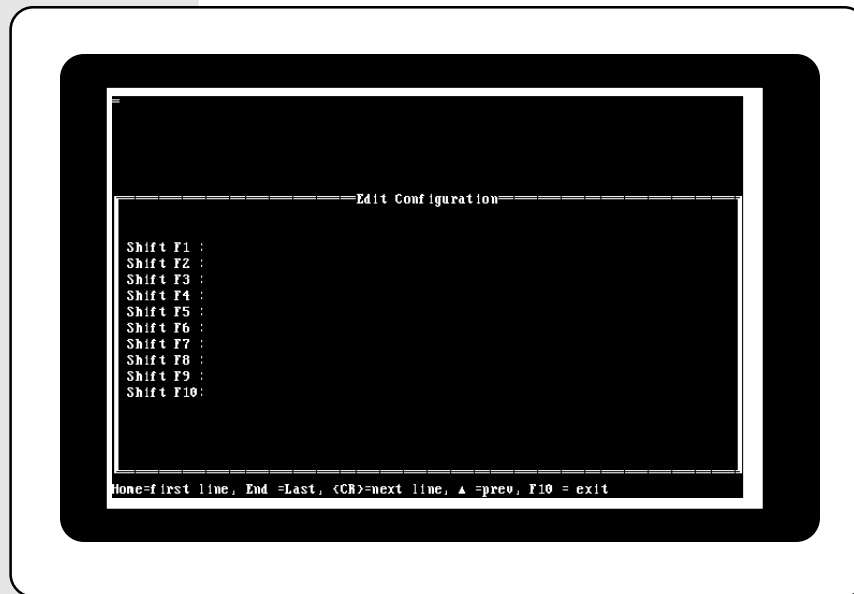
TERMINAL EMULATOR

SHIFT FXX

Use the S)hift Fxx option to define text strings that can be played back when you press the Shift key and one of the function keys simultaneously.

To program the Shift and function keys:

1. Type **S**. This screen appears:



2. Enter a string of characters, up to a maximum of 56 characters. An Enter can be included as part of the string by entering Ctrl-M.
3. Press Enter.

Press Enter to skip one function key and move to the next field.

Press F10 to skip all function keys and return to the Edit Configuration window.

At the last field (Shift F10), the Edit Configuration window appears when you press Enter.

To save these changes, refer to section **Finish**.

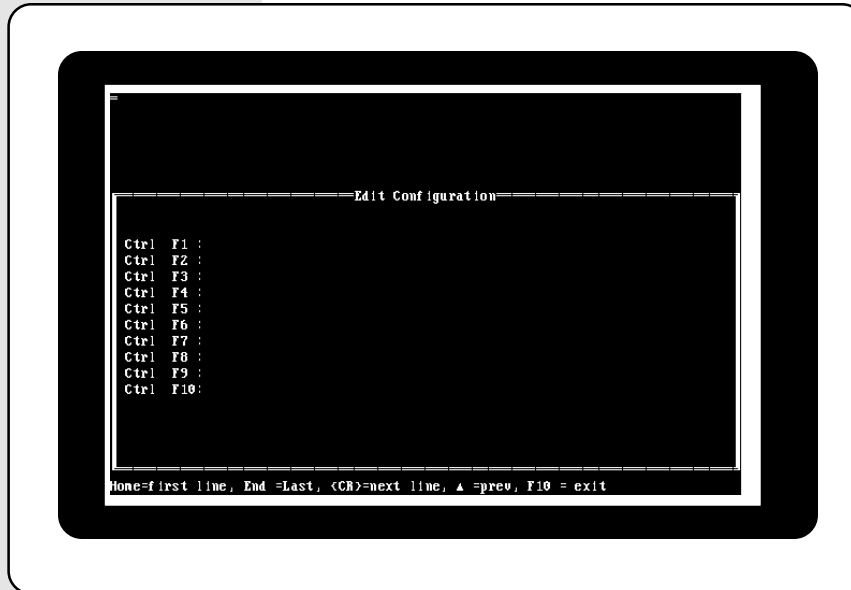
TERMINAL EMULATOR

CTRL Fxx

Use the Ctrl Fxx option to define text strings that can play back when the Ctrl key and one of the function keys are pressed simultaneously.

To program the Ctrl and function keys:

1. Type **C**. This screen appears:



2. Enter a string of characters, up to a maximum of 56 characters. An Enter can be included as part of the string by entering Ctrl-M.
3. Press Enter.

Press Enter to skip one function key and move to the next field.

Press F10 to skip all function keys and return to the Edit Configuration window.

At the last field (Shift F10), the Edit Configuration window appears when you press Enter.

To save these changes, refer to section **Finish**.

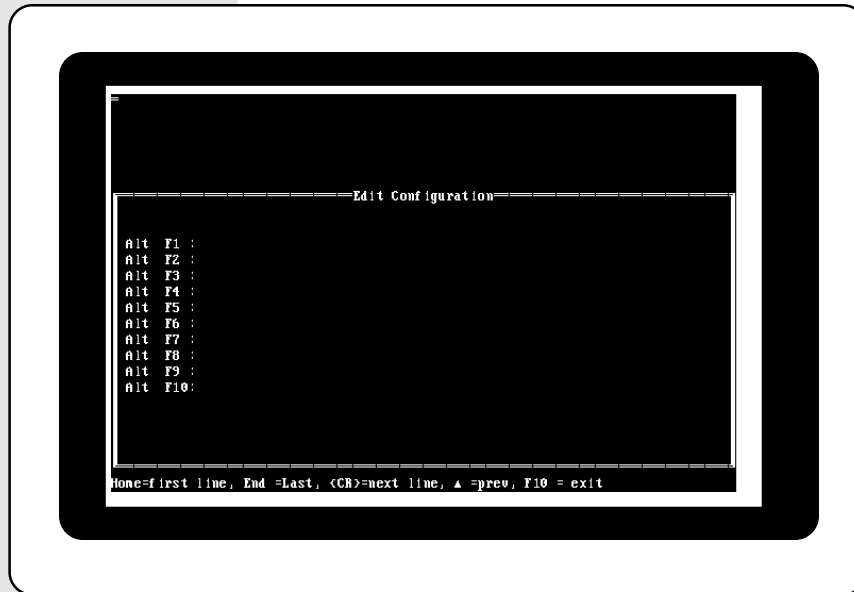
TERMINAL EMULATOR

ALT Fxx

Use the Alt Fxx option to define text strings that can play back when the Alt key and one of the function keys are pressed simultaneously.

To program the Alt and function keys:

1. Type **A**. This screen appears:



2. Enter a string of characters, up to a maximum of 56 characters. An Enter can be included as part of the string by entering Ctrl-M.
3. Press Enter.
Press Enter to skip one function key and move to the next field.
Press F10 to skip all function keys and return to the Edit Configuration window.
At the last field (Shift F10), the Edit Configuration window appears when you press Enter.
To save these changes, refer to section **Finish**.

TERMINAL EMULATOR

FINISH

Use the Finish options to save changes to the terminal configuration. There are two options:

- ◆ A file can be created that replaces the default settings with new default settings. The default settings are those the computer uses for the terminal configuration whenever the Terminal Emulator is entered from the Master Menu. The initial default settings are listed under ***Terminal Attributes*** in this section.
- ◆ A file can be created that can be used later but does not change the default settings.

To create a file that *does* change the default settings:

1. Make the changes as described under ***Terminal Attributes*** in this section.
2. Make the changes as described under ***Shift Fxx***, ***Ctrl Fxx***, and ***Alt Fxx*** in this section.
3. Type **F** when you are in the Edit Configuration window.
4. Type the file name **TERM**.
5. Press Enter.

The new settings are now the defaults for the terminal configuration whenever the Terminal Emulator is entered from the Master Menu.

To create a file that *does not* change the default settings:

1. Make the changes as described under ***Terminal Attributes*** in this section.
2. Make the changes as described under ***Shift Fxx***, ***Ctrl Fxx***, and ***Alt Fxx*** in this section.
3. Type **F** when you are in the Edit Configuration window.
4. Type a valid DOS file name without an extension. The extension **.CNF** is automatically appended to the name.
5. Press Enter.

Whenever the Terminal Emulator is entered from the Master Menu, the initial default settings are still used for the terminal configuration. To change the default settings using the file that you just created:

1. Press F5 (Ld Cnf) from the main terminal emulator screen.
2. Enter the name of the file.
3. Press Enter.

The settings in the file are now the defaults. They remain active until you change the settings, load a different terminal configuration file, or exit the program to the Master Menu.

TERMINAL EMULATOR

CAPTURE FILE

The capture file stores data that is displayed on the computer screen. The F2 (Cap), F3 (O/Cap) and F4 (C/Cap) keys control the capture of displayed data into a capture file.

CAPTURING DATA

To capture data:

1. Press F3 (O/Cap) to open a file for storing captured data.
2. Enter a file name. This can be any valid DOS file name and can include the optional three character file extension. If no file extension is specified, the terminal emulator will append the .CAP extension automatically.
3. Press Enter.
4. The word "off" appears in the lower right corner of the screen. This indicates that a capture file is open but is not capturing data. To activate the capture file, press F2 (Cap). The capture status of the word "on" indicates that data is being captured.
5. To end the screen capture, save the data, and close the file press F4.

The maximum amount of data that can be stored in one capture file is 16 kilobytes. This is the contents of approximately eight screens. When the file is full, new data will overwrite old data. To capture more than 16 kilobytes of data, close the file after about eight screens of data have been captured and open another file.

If you want to temporarily suspend the capture operation, press F2 (Cap). The capture status in the lower right corner changes to "off." At this point, the capture file is still open but is inactive. Incoming data is still received, but it is not recorded. To reactivate the capture, press the F2 key again. The capture status changes to "on."

Viewing a Capture File

To review a captured file, the computer must be in DOS. The file may be reviewed by using any text editor that accepts files in standard ASCII format.

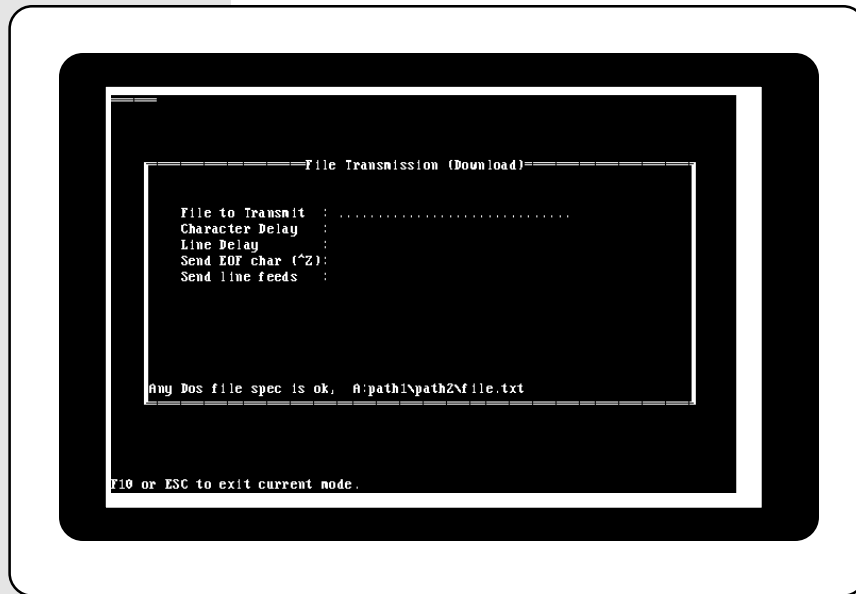
LOAD CONFIGURATION

For information about this option, see **Finish** in the **Edit Terminal Configuration** section.

TERMINAL EMULATOR

FILE DOWNLOAD

Press F7 from the main terminal emulator screen to select the file download option. Here is the File Transmission (Download) window:



To download a file:

1. Enter the values for each field.
2. Press Enter. File transmission will begin after pressing Enter at the *Send Line Feeds* prompt.

During transmission, the screen is blank except for a status line at the bottom of the screen. The message in the status line indicates the name of file being transferred and the number of bytes transferred so far.

To terminate the file transmission, press either Esc or F10. Control returns to the terminal emulator upon completion of the file transmission.

NOTE: Use the *Edit Configuration* screen to set the data transmission parameters. To access this screen, press the F1 key. Before you attempt a file download, verify that the terminal configuration parameters are compatible with those of device that will be receiving the data.

TERMINAL EMULATOR

Here are descriptions of the File Transmission fields:

File to Transmit - This is the disk drive, path, and filename designation of the DOS file that is to be transferred. For example, to transfer a file named MYFILE.DAT, stored on disk drive A: in directory NEWDIR, enter the following command:

A:\NEWDIR\MYFILE.DAT and press Enter (See your DOS manual for more information on directories and file names.)

Character Delay - This parameter is the amount of time, in milliseconds, that the computer waits between the characters it transmits. The acceptable range is 0-500 milliseconds (one-half second). This field defaults to 0 (zero).

Line Delay - This is the amount of time, in milliseconds, that the computer waits between the lines it transmits. The acceptable range is 0 (zero) to 999 milliseconds. This field defaults to 0 (zero).

Send EOF Char (^Z) - This parameter controls whether the computer transmits an end-of-file (Ctrl Z) character at the end of a DOS file. Acceptable responses are Y (yes) or N (no). The Send EOF Char defaults to N.

Send Line Feeds - This is the parameter that controls whether the computer transmits line feeds at the ends of lines. Acceptable responses are Y (yes) or N (no). The Send Line Feeds defaults to N.

DEBUG MODE (PROTOCOL ANALYZER)

To toggle the debug mode on and off, press F8 from the main terminal emulator screen. It is used for troubleshooting equipment connected to the terminal emulator. When the debug mode is on, data displays beginning at the current cursor position. The ASCII values of any bytes received display rather than the characters themselves. Data can be displayed in either decimal or hexadecimal format. The default display mode is decimal.

To change the display mode setting:

1. Press F1 (Cnf) from the main terminal emulator screen.
2. Type **T**.
3. Change the *Prot Base* parameter in the Terminal Configuration window.

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. Switch settings
2. Signal levels
3. Software configuration
4. Connections between Dantel's equipment and your equipment.

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL (1-800-432-6835)**.

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc. • 2991 North Argyle Avenue • Fresno, California 93727-1388

