# WEStation Support Utilities for Classic Drops

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# Section 1. Introduction

This document describes the WEStation Support Utilities for Classic Drops (also known as Standard Drops). These utilities provide an environment in which to configure and maintain Classic Drops from a WEStation Engineer Station.

## 1-1. Overview

The Engineer WEStation Support Utilities consist of new WEStation UNIX utilities and existing WDPF DOS utilities running in a DOS emulator window (SoftWindows) on the Engineer WEStation.

The following are described in this document:

- Installation and Configuration (Section 2)

- Mass Memory Interface (Section 3)

  REMOTE MBR

- File Transfer Utilities (Section 3)

  DPFCOPY
  VCOPY
  DOWNLOAD
  SETDLD
  AutoGRAPH (Reference U0-2460)

- MMI Configuration (Section 3)

  MMICONF

- Running WDPF DOS Utilities in SoftWindows DOS emulator (Section 4)

# 1-2. Reference Documents

The following documents may be helpful when using the Support Utilities for Classic Drops.

**Table 1-1. Reference Document**

| Document Number | Title | Description |
|---|---|---|
| | Insignia Solutions Inc. Installation Manual | Describes the installation procedures for installing SoftWindows. |
| U0-2415 | PCH General Utilities User's Guide | Describes the general utilities available for use on a PCH (Personal Computer on the High-way). |
| U0-0485 | HSR User's Guide | Describes the general utilities available for use on a WEStation HSR (Historical Storage and Retrieval). |
| U0-1280 | Operator Station User's Guide | Describes the general utilities available for use on a WEStation Operator Station. |
| U0-0286 | WDPF Graphics Reference Manual | Describes the WDPF Graphics utilities. |
| U0-2465 | PCH Graphics Utilities User's Guide | Describes the PCH Graphics Utilities |
| U0-2460 | AutoGRAPH Graphics Builder User's Guide | Describes how to produce diagrams and shape libraries. |

# Section 2. Installation and Configuration

## 2-1. Section Overview

This section describes the installation, and the configuration required to install and configure SoftWindows and the WDPF DOS Utilities at the WEStation Engineer Station.

## 2-2. Installing SoftWindows

**Note**

SoftWindows must be installed before the WDPF DOS Utilities are installed.

Refer to the installation procedures from Insignia Solutions Inc. for installing SoftWindows.

Use the following guidelines:

1. Select the default options when installing Soft options.
2. Install SoftWindows in the directory **/usr/lib**
3. When enabling the floppy drives (A: or B:)

   Using the ARTECON floppy disk drive:
   1. High Density Disks:
      The device is **/dev/rafd0** for high density disks
   2. Double Density Disks:
      The device is **/dev/rafdl0** for low density disks

   Using the Internal Floppy Drive:
   1. The device is **/dev/rdiskette**

# 2-3. Installing WDPF DOS Utilities

The WDPF DOS Utilities are installed through SoftWindows.

## 2-3.1. Accessing SoftWindows

SoftWindows can be accessed through the SDS Level IV menu.

1. Open the SDS Level IV icon and select the **Drop Functions** button.
2. From the Drop Functions menu, select the **Standard Eng** button.
3. From the Standard Engineering menu, select the **Softwindows** button.

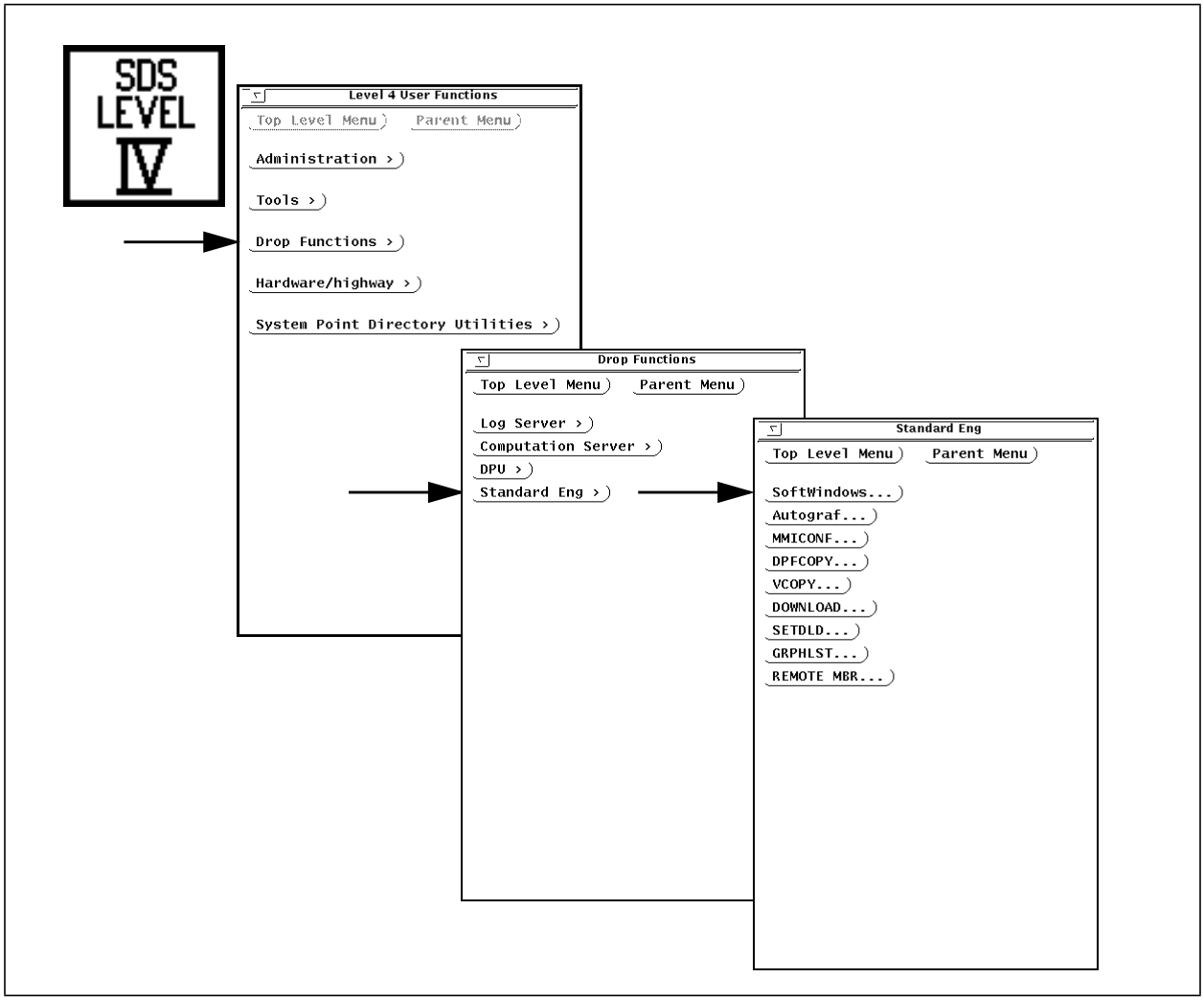



**Figure 2-1. Menus for Accessing SoftWindows**

Upon selecting the SoftWindows button, a window will be displayed as shown in Figure 2-2.

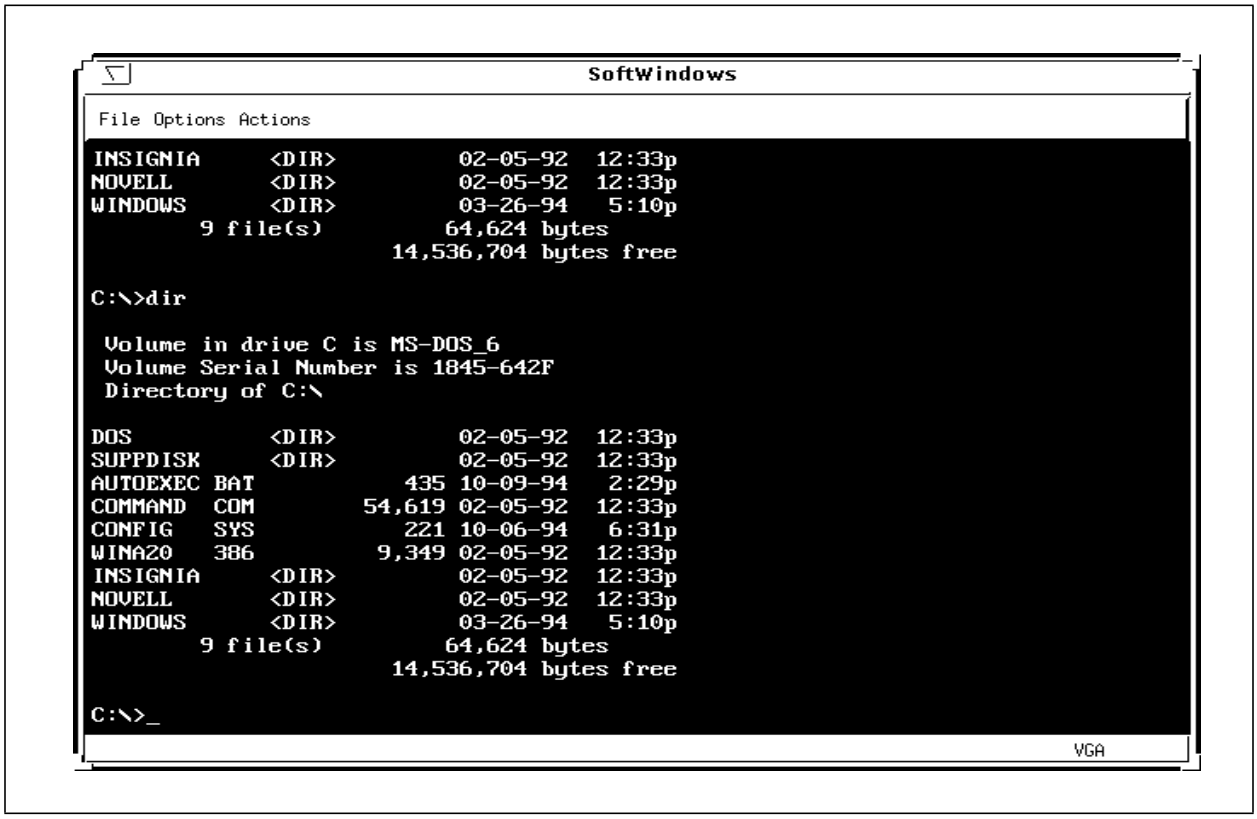



**Figure 2-2. SoftWindows Window**

SoftWindows allows access to the UNIX filesystem and the floppy drives (internal or Artecon). The C: drive of SoftWindows is seen as a single file in the UNIX filesystem. This file (the C: drive) contains the MS-DOS and Windows software which is installed automatically (if selected during installation). The WEStation UNIX Utilities do not use the C: drive.

Since files on the C: drive cannot be accessed through the UNIX filesystem, it is recommended that users do not add new files to the C: drive through SoftWindows. Instead, additional drives should be added using the DOS “net use” command in SoftWindows. The “net use” command will configure a drive to point to a directory in the UNIX filesystem. The WEStation environment requires that drives J: and K: be configured to point to specific directories in the UNIX filesystem.

## 2-3.2. Installing WDPF DOS Utilities in SoftWindows

1. Using a text editor EDIT, add the following lines to the C:\AUTOEXEC.BAT file:

   - net use j: **/usr/wdpf/std_eng/dosdir**
   - net use k: **/wdpf/rel/data/std_eng/data**

     The J: drive is where the WDPF DOS utilities will reside. Other DOS programs may be added here also. The K: drive is for data files such as diagrams and the point directory. New sub-directories may be added to the K: drive. Also, the UNIX Source Code Control System (SCCS) may be utilized on the WEStation by creating an SCCS sub-directory on the K: drive.

2. Obtain the following WDPF PC disks:

   - PMM set of disks (Total of 8 disks)

     This set of disks contains the entire set of WDPF DOS utilities.

     Refer to Section 4 for information on the supported DOS utilities.

     Please note the following exceptions.

     **Note**

     PMM3 and PMM6 - Should not be loaded.
     PMM8 - Partial (PROM212 should not be loaded).

   - PGS1 disk

     This disk contains GSHOW.

   - OGU1 disk

     This disk contains HWYERR.EXE.

   - OGU2 disk

     This disk contains NULCHK.EXE.

3. Insert the first PMM disk into the internal floppy drive.

4. Move the cursor into the SoftWindows window and type the following:

   **A:HARDDISK A: J:**

   This copies the entire disk to the J: drive.

5. Repeat Steps 3 and 4 for each PMM disk needed.

6. Insert the PGS1 disk into the internal floppy drive.

7. Move the cursor into the SoftWindows window and type the following:

   A:HARDDISK A: J:

   This copies the entire disk to the J: drive.

8. Insert the OGU1 disk into the internal floppy drive.

9. Move the cursor into the SoftWindows window and type the following:

   **MD J:WDPF**
   **MD J:WDPF\UTILS**
   **COPY A:HWYERR.EXE J:WDPF\UTILS**

   This copies the HWYERR.EXE file to the J: drive.

10. Insert the OGU2 disk into the internal floppy drive.

11. Move the cursor into the SoftWindows window and type the following:

    **MD J:WDPF**
    **MD J:WDPF\UTILS**
    **COPY A:NULCHK.EXE J:WDPF\UTILS**

    This copies the NULCHK.EXE file to the J: drive.

# Section 3. WEStation UNIX Utilities

## 3-1. Overview

The following support utilities are described in this section:

| | |
|---|---|
| REMOTE MBR (Section 3-3) | This utility can save and restore the memory of a remote Classic Drop display the contents of a remote Classic Drops' memory, and extract a diagram from previously saved memory. |
| DPFCOPY (Section 3-4) | This utility transfers files to and from a WEStation Engineer and a remote Classic Drop. |
| VCOPY (Section 3-5) | This utility processes file transfer requests (upload and download) from the dpfcopy utility.VCOPY is run on the remote machine with which the dpfcopy is communicating. |
| DOWNLOAD (Section 3-6 | This utility transfers files from an Engineer WEStation to the memory of a remote Classic Drop. |
| SETDLD (Section 3-7) | This utility is used to place a remote Classic Drop in download mode. |
| MMICONF (Section 3-8) | This utility is used to configure a remote Classic Drop. |
| GRPHLST (Section 3-9) | This utility is used to create batch and data files for use by The GRAPH program in the DOS emulator. |
| AutoGRAPH (Reference AutoGRAPH Graphics Builder User's Guide U0-2460) | This utility is used to produce diagrams and shape libraries for the Classic Drop, but not for a WEStation. |

# 3-2. Accessing WEStation Unix Utilities

The WEStation support utilities can be accessed through the SDS Level IV menu.

1. Open the SDS Level IV icon and select the **Drop Functions** button.
2. From the Drop Functions Menu, select the **Standard Eng** button.

   This will display the Standard Engineering menu as shown in Figure 3-1.

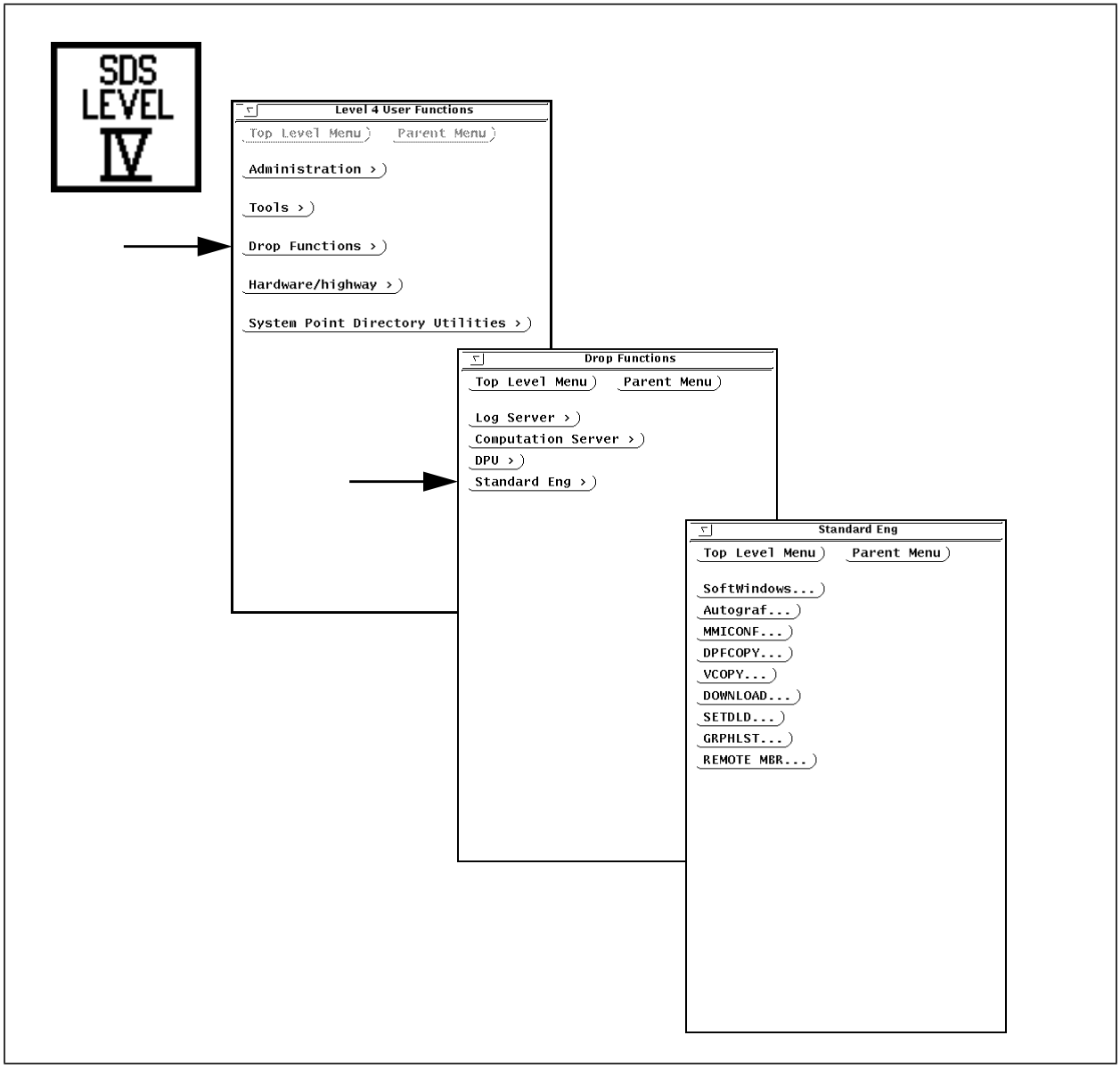



**Figure 3-1. Menus for Accessing WDPF Unix Utilities**

# 3-3. REMOTE MBR

## 3-3.1. Overview

REMOTE MBR is a program that will perform various functions on the memory of a remote Classic Drop.

The functions are as follows:

| | |
|---|---|
| Save | Save the MBR memory of a remote Classic Drop. |
| Restore | Restore the MBR memory of a remote Classic Drop. |
| Diagram | Display a directory of the contents of MBR memory of a Classic Drop. Save the directory listing to a local file. |
| Display | Display a directory of the contents of previously saved MBR memory files. Extract a diagram from previously saved MBR memory files. |

## 3-3.2. Setup

1. Prior to running REMOTE MBR, put the remote Classic Drop in the REMOTE MRB Mode.
2. This can be accomplished by selecting, from the Master Menu on the Classic Engineer Station, Engineers Menu, then REMMBR Mode.

**Notes**

1. The remote Classic Station does not have to be in REMOTE MBR mode for the Save MBR Diagram function.
2. The Classic Station may need to exit and then re-enter REMOTE MBR mode for the Display MBR Directory function to function properly.
3. If a Query is performed for the Save MBR Memory function, and an actual Save is not performed, the remote Classic Station must exit and re-enter REMOTE MBR mode in order to continue REMOTE MBR functions.
4. If a Query is performed for the Restore MBR Memory function, but an actual Save is not subsequently performed, the remote Classic Station, must exit and re-enter REMOTE MBR mode in order to continue REMOTE MBR functions.

## 3-3.3. Accessing REMOTE MBR

1. Select the **REMOTE MBR** button from the Standard Engineers' Menu as shown in Figure 3-1.The initial window is displayed as shown in Figure 3-2.

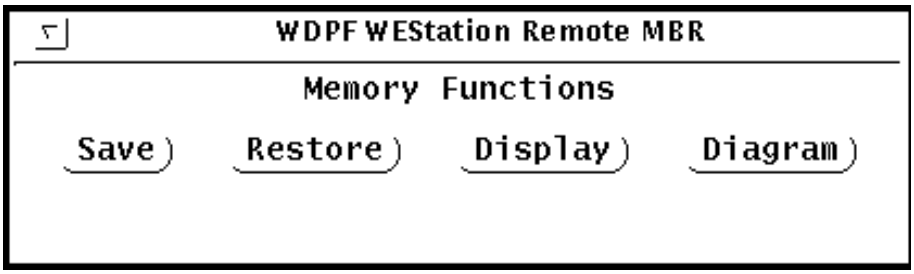



**Figure 3-2. REMOTE MBR Memory Functions Window**

## 3-3.4. Remote MBR Memory Functions

### Saving MBR Memory

1. Select the **Save** button on the initial window (shown in Figure 3-2). The Save MBR Memory window is displayed as shown in Figure 3-3, except that the MBR data will not be displayed.

2. Enter the drop number of the remote drop in the drop number entry field.

3. Enter the local directory in which the remote MBR memory files will be saved in the directory entry field.

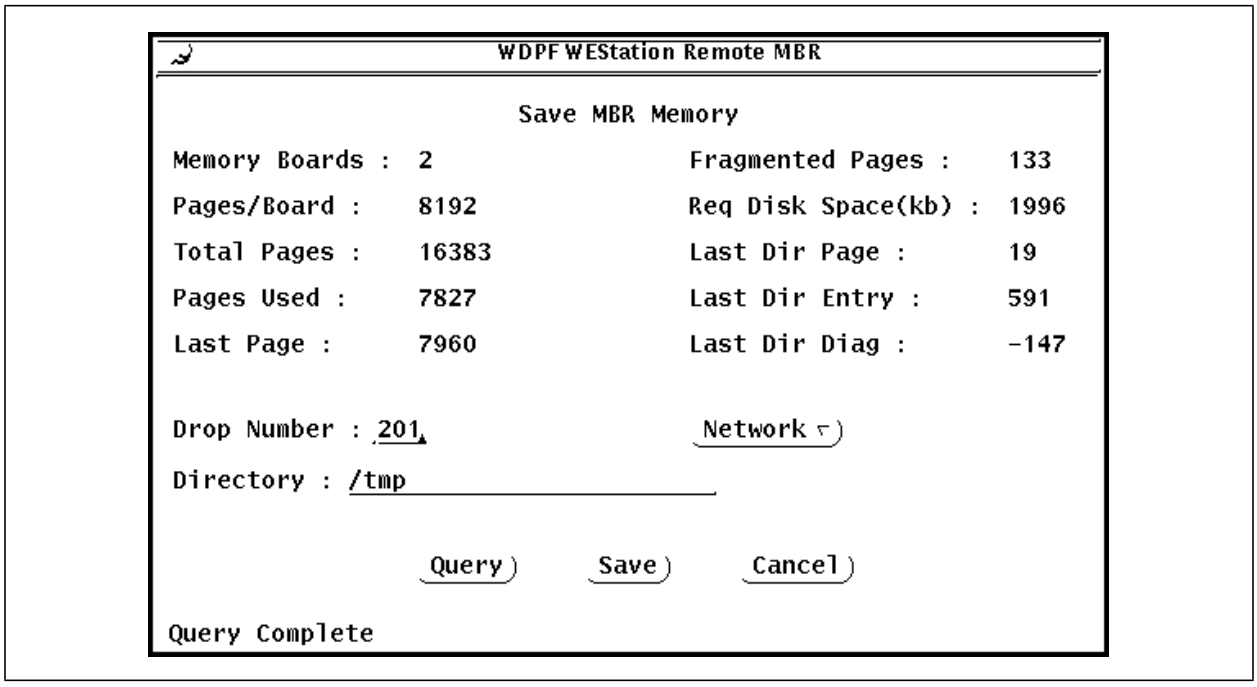



**Figure 3-3. Save MBR Memory Window**

4. Click on the **Network** button to select a network on which to communicate with the remote drop.The first network in the pull-down menu list is used as the default

5. Click on the **Query** button to query the remote drop for configuration data. This must be done prior to saving REMOTE MBR memory. MBR data will now be displayed.

6. Click on the **Save** button to save the remote drops' MBR memory to a series of local memory files.(When a save process is aborted, incomplete memory files are removed.)

7. The **Cancel** button may be used at any time to abort a process.

## Memory Files

Memory files are saved with the following naming convention; MEMdrop.ext, where ‘drop’ is the remote drop number and ‘ext’ is A, B, C, etc.. For each MEMdrop.ext file, a corresponding CONFIG.ext file is created which contains information describing the MEMdrop.ext file.

**Note**

Warning: Use a separate directory for each remote drop’s files, in order to prevent the overwriting of the CONFIG ext. files.

Memory files are saved in the users home directory (for example /user/user4) with the previously mentioned naming convention unless the user specifies otherwise by entering a directory in the directory entry field, as shown in Figure 3-3).

Each memory file contains 2048 pages of memory, where 1 page = 256 bytes. Each 2 MB memory board contains 8192 pages of memory. Memory for one board consists of four memory files.

The queried information is described as follows:

| | |
|---|---|
| Memory Boards | - # of memory boards configured |
| Pages/Board | - # of pages per board |
| Total Pages | - Total # of pages available (# of memory boards times # of pages per board) |
| Pages Used | - Total # of pages actually used |
| Last Page | - Last page used |
| Fragmented Pages | - # of fragmented pages |
| Req Disk Space | - Amount of disk space (in kilobytes) needed to save memory |
| Last Dir Page | - # of directory pages (each directory page displays 32 diagram entries) |
| Last Dir Entry | - Last entry number |

Last Dir Diag - Last diagram number

## Restoring MBR Memory

1. Select the **Restore** button on the initial window (shown in Figure 3-2).The Restore MBR Memory window is displayed as shown in (Figure 3-4).
2. Enter the drop number of the remote drop in the drop number entry field.
3. Enter the local directory in which the remote MBR memory fields will be restored from in the directory entry field.

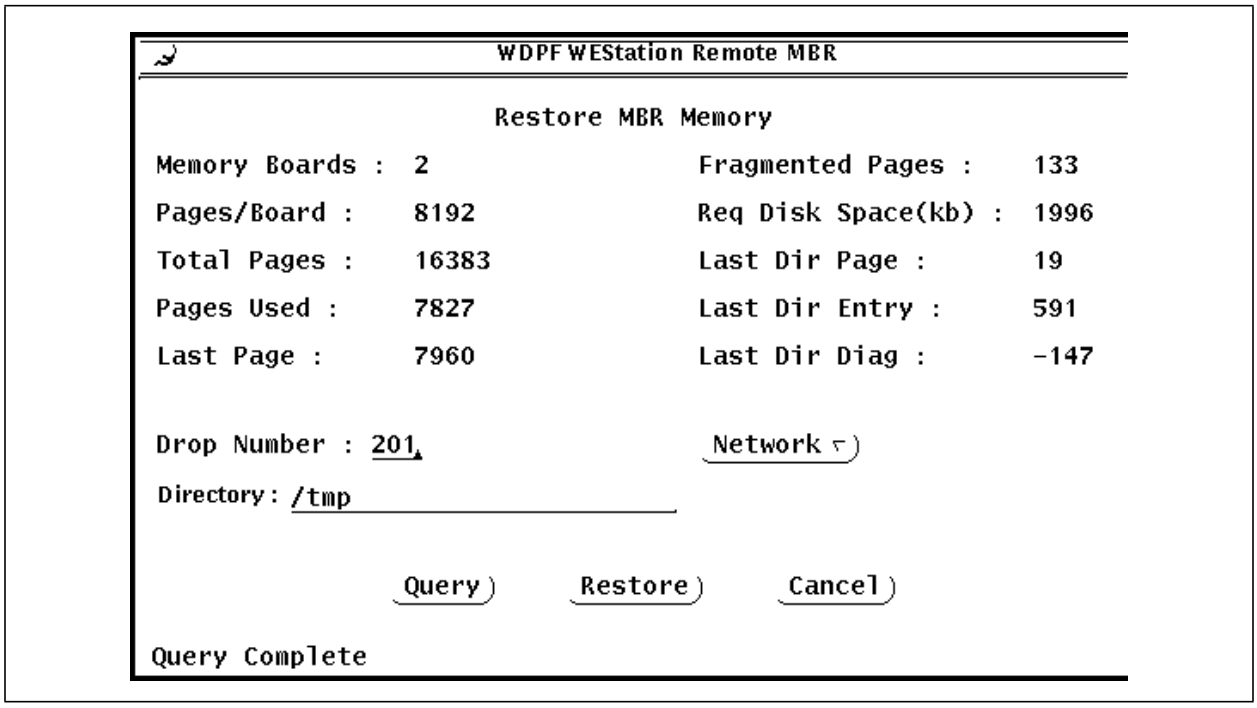



**Figure 3-4. Restore MBR Memory Window**

4. Click on the **Network** button to select a network on which to communicate with the remote drop. The first network in the pull-down menu list is used as the default.
5. Click on the **Query** button to query the remote drop for configuration data. This must be done prior to restoring the REMOTE MBR memory.
6. Click on the **Restore** button to restore the remote drops memory from the previously saved memory files.
7. The **Cancel** button may be used at any time to abort the restore process. Warning: Aborting in the middle of the restore process can leave the remote drop in an unusable state.

## Memory Files

The memory files residing in the users home directory are used to restore the remote drop, unless the user specifies otherwise by entering a directory in the directory entry field.

The queried information is described as follows:

| | |
|---|---|
| Memory Boards | - # of memory boards configured |
| Pages/Board | - # of pages per board |
| Total Pages | - Total # of pages available (# of memory boards x # of pages per board) |
| Pages Used | - Total # of pages actually used |
| Last Page | - Last page used |
| Fragmented Pages | - # of fragmented pages |
| Req Disk Space | - Amount of disk space (in kilobytes) needed to save memory |
| Last Dir Page | - # of directory pages (each directory page displays 32 diagram entries) |
| Last Dir Entry | - Last entry number |
| Last Dir Diag | - Last diagram number |

## Displaying MBR Directory

1. Select the **Display** button on the initial window, (shown in Figure 3-2). The Display MBR Directory window will display as shown in Figure 3-5.

2. Enter the drop number of the remote drop in the Drop Number entry field.

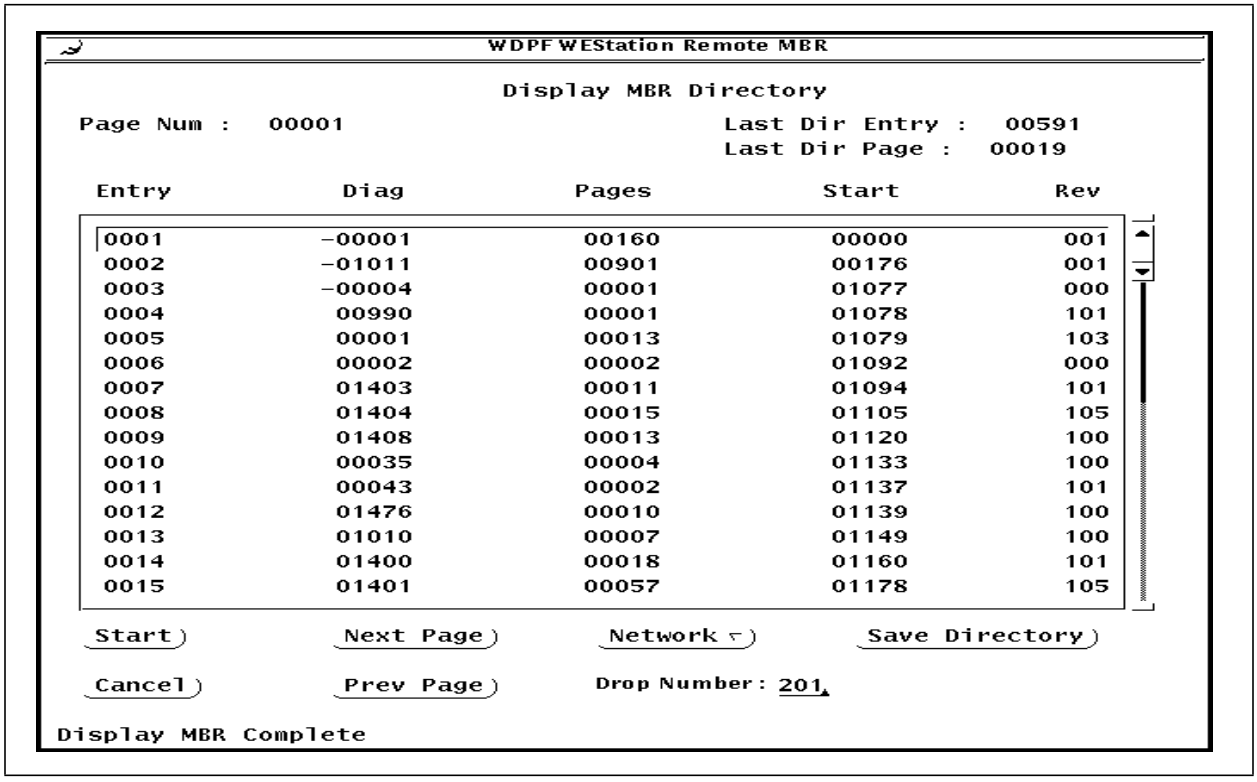



**Figure 3-5. Display MBR Directory WIndow**

3. Click on the **Network** button to select a network on which to communicate with the remote drop. The first network in the pull-down menu list is used as the default.

4. Click on the **Start** button to start the display of the directory. The directory is displayed 32 entries at a time.

5. Click on he **Next Page** and **Prev Page** buttons to display the next 32 entries and previous 32 entries.

6. Click on the **Start** button again to display the first 32 entries of the directory.

## Directory Information

The queried information is described as follows:

| | |
|---|---|
| Page Num | - Directory page number (each page displays up to 32 entries) |
| Last Dir Entry | - Last entry number |
| Last Dir Page | - Last directory page |

The entire directory listing may be saved to a local file by selecting the **Save Directory** button. When the **Save Directory** button is selected, a rename window will be displayed as shown in Figure 3-6.

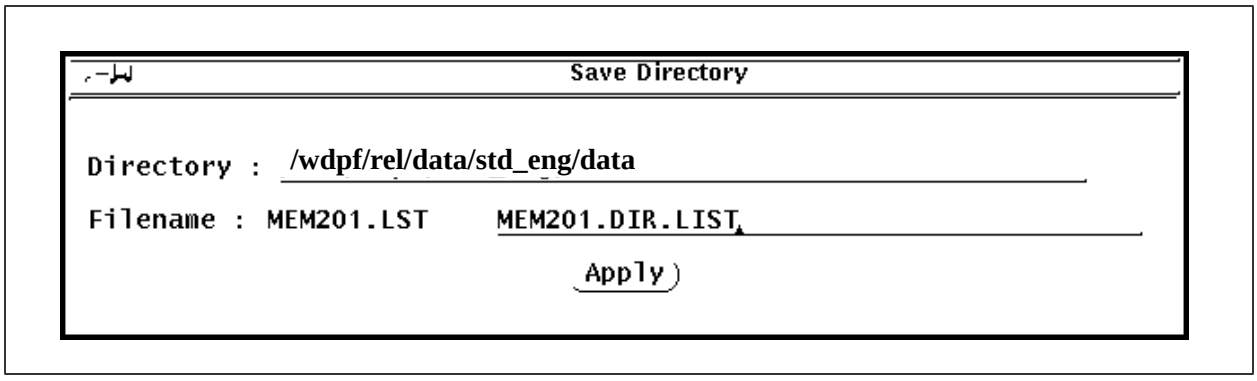



**Figure 3-6. Save Directory Windows**

If a directory is not entered, the users home directory is used as the default. If a filename is not entered, MEMdrop.LST is used as the default, where ‘drop’ is the remote drop number. Select the **Apply** button to save the directory listing to the local file.

The **Cancel** button may be used to abort the display or the save directory process. If the save directory process is aborted, the local file will be removed.

## Saving MBR Diagram

1. Select the **Diagram** button from the initial window (as shown in Figure 3-2). The Save MBR Diagram window will be displayed as shown in Figure 3-7.

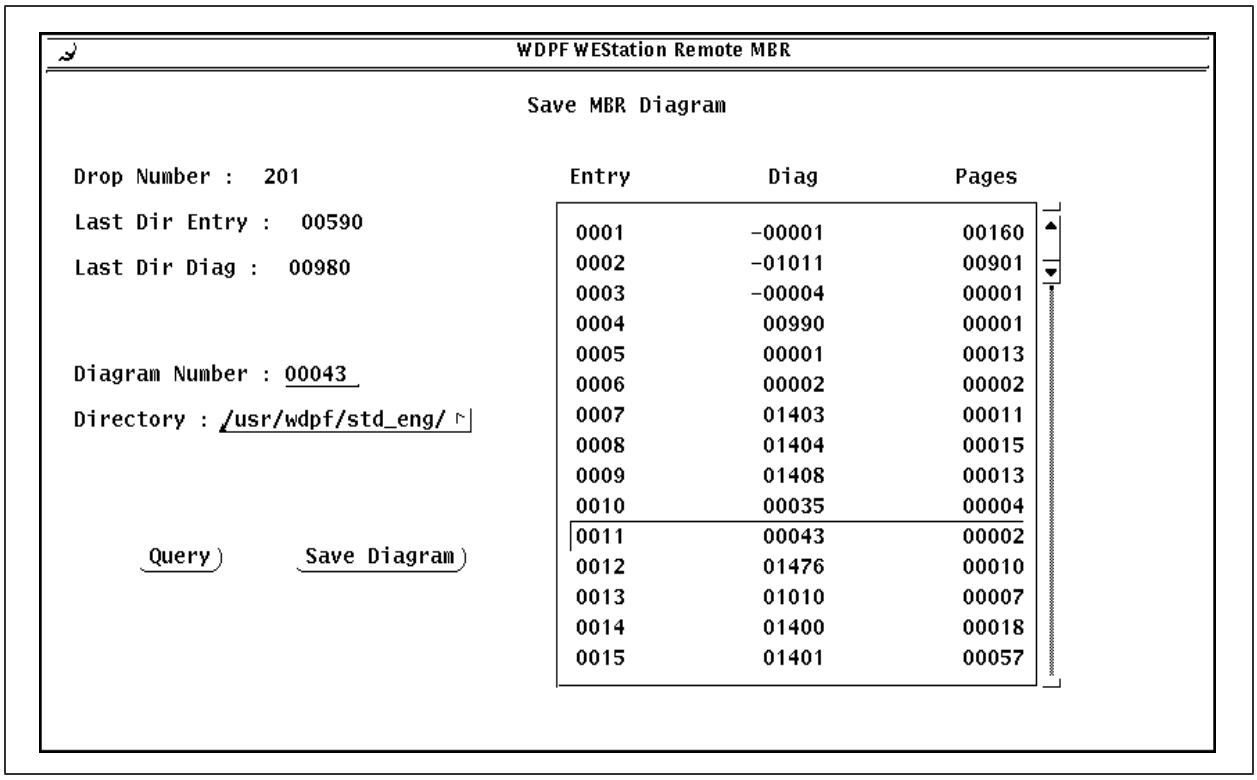



**Figure 3-7. Save MBR Diagram Window**

2. Click on the **Query** button to view a listing of the contents of the previously saved memory files. The memory files residing in the current directory are used unless the user specifies otherwise by entering a directory in the directory entry field. It is not necessary to query the contents of the memory files in order to select and save a diagram.

3. Select a diagram from the scrolling list or manually enter the diagram number in the diagram entry field. Selecting a diagram from the scrolling list automatically enters the diagram number in the diagram entry field.

## Diagram Information

The queried information is described as follows:

Drop Number - The remote drop number

Last Dir Entry - Last entry number

Last Dir Diag - Last diagram number

1. Select the **Save Diagram** button to extract and save a diagram from the previously saved memory files. When the user selects the **Save Diagram** button, a rename window will be displayed as shown in Figure 3-8.

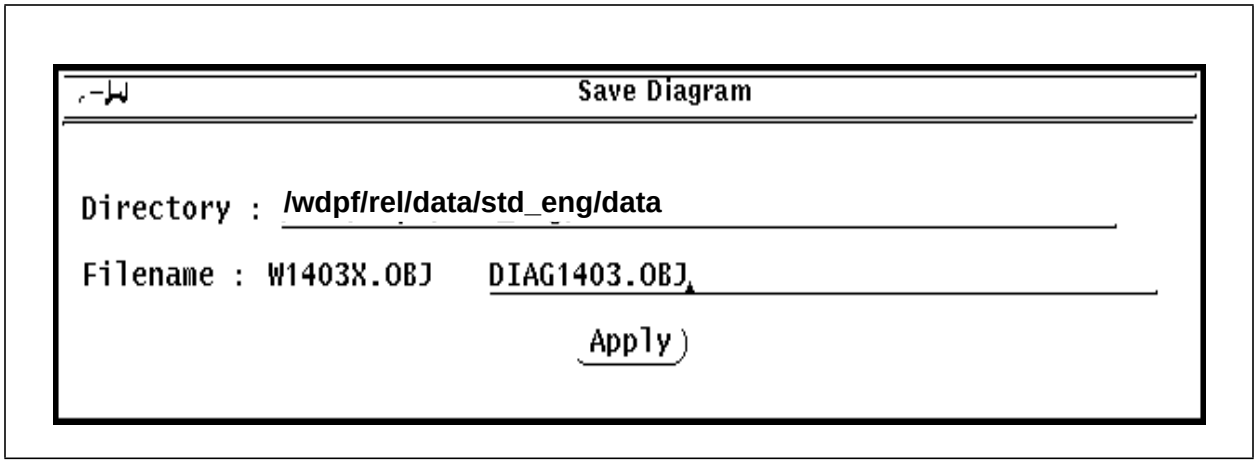



**Figure 3-8. Save Diagram Window**

2. If a directory is not entered, the users home directory is used as the default. If a filename is not entered for the diagram, a default will be used. The default naming convention is as follows:

   Diagram No. -2“KEY..LIB”

   Diagram No. -3“SHAPE.LIB”

   Diagram No. -6“TREND.OBJ”

   Diagram No. 5000-6999“G####.LIB”

   (#### = the group number)

   All others “W####X.OBJ”

   (#### = the diagram number)

3. Select the **Apply** button to extract the diagram from the previously saved memory files and save it in the local file.

## 3-3.5. Diagnostics

The following error messages may appear in the footer of the REMOTE MBR window:

**Table 3-1. REMOTE MBR Error Messages**

| Error Message | Description |
|---|---|
| Unable to abort! | An error occurred sending a SIGUSR1 signal to the child process. See the General Message window for more information. |
| Unable to query MBR. | See the General Message window for more information. |
| Drop does not exist. | The drop number entered in the drop entry field does not exist or is not recognized by the highway. |
| Error displaying queried data. | See the General Message window for more information. |
| Query aborted. | The query for configuration data has been aborted. |
| Error saving MBR memory. | See the General Message window for more information. |
| Save MBR aborted. | The Save MBR Memory function has been aborted. |
| Restore MBR aborted. | The Restore MBR Memory function has been aborted. |
| Error restoring MBR memory. | See the General Message window for more information. |
| Remote drop not in REMOTE MBR mode. | The remote drop must be in REMOTE MBR mode for a Save MBR Memory, Restore MBR Memory and Display MBR Directory functions. |
| Error displaying MBR memory. | See the General Message window for more information. |

**Table 3-1. REMOTE MBR Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error displaying MBR data. | See the General Message window for more information. |
| Display MBR aborted. | The Display MBR Directory function has been aborted. |
| Unable to exceed last page. | Unable to display past the last page of the directory. |
| Unable to precede first page. | Unable to display preceding the first page of the directory. |
| Error saving MBR directory. | See the General Message window for more information. |
| Unable to read MBR files. | An error occurred trying to read the previously saved MBR memory files or config files. They may not exist in the directory entered in the directory entry field. (No directory entered implies the current directory.) See the General Message window for more information. |
| Diagram number not entered. | A diagram number has not been entered in the diagram number entry field. |
| No CONFIG.x files found. | There are either no config files in the given directory or they are empty. Double check the directory entered in the directory entry field. (No directory entered implies the current directory.) |
| Save diagram aborted. | The Save MBR Diagram function has been aborted by an external source. If this error consistently repeats itself contact your System Administrator or Westinghouse Representative. |
| Error saving diagram. | See the General Message window for more information. |
| Invalid diagram number to save. | The diagram number must be a -2 (key diagram), -3 (shape diagram) or -6 (trend diagram), or it must be between 1 and 8999. |
| Remote drop not responding. | The remote drop may need to exit and re-enter REMOTE MBR mode or the remote drop may need to be reset. |

**Table 3-1. REMOTE MBR Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Save MBR Directory aborted. | The Save MBR Directory function has been aborted. |
| Bad MBR Boards (#,#,#,#) | The memories of the indicated boards are corrupt. |
| Abort in process... Please wait! | It can take approximately 1 minute to abort a process. |

The following error messages may appear in the General Message window:

**Table 3-2. General Message Error Messages**

| Error Message | Description |
|---|---|
| Error getting WDPF_HOME env variable. | The environment variable WDPF_HOME may not be set. |
| fopen() of 'filename' failed; (errno=#) | If this or the following error messages occur; 'filename' may not exist or permissions may be incorrect. See your System Administrator or Westinghouse Representative |
| fread() of 'filename' failed; (errno=#) | See your System Administrator or Westinghouse Representative. |
| open() of'filename' failed; (errno=#) | See your System Administrator or Westinghouse Representative. |
| chmod() of 'filename' failed; (errno=#) | See your System Administrator or Westinghouse Representative. |
| write() of 'filename' failed; (errno=#) | See your System Administrator or Westinghouse Representative. |
| read() of 'filename' failed; (errno=#) | See your System Administrator or Westinghouse Representative. |
| REMMBR: fork() failed | See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: Error registering prod; (err=#) | SHC_register_prod() failed. Unable to register a prod number with GPM. The error code is in parenthesis.<br><br>(-7) - The valid commands are REGISTER or UNREGISTER.<br>(-2) - Unable to get the message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-4) - Unable to send a message to the SHC. (msgsnd(SHC_request_queue_id) failed)<br>(-6) - No SHC available.<br><br>See your System Administrator or Westinghouse Representative. |
| REMMBR: Error unregistering prod; (err=#) | SHC_register_prod() failed. Unable to unregister a prod number with GPM. The error code is in parenthesis.<br><br>(-7) - The valid commands are REGISTER and UNREGISTER.<br>(-2) - Unable to get the message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-4) - Unable to send a message to the SHC. (msgsnd(SHC_request_queue_id) failed)<br>(-6) - No SHC available.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: SHC_send_gen_msg() failed; (err=#) | Unable to send an unsolicited message to GPM. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue. (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: Error opening SHC_memory; (err=#) | SHC_open_memory() failed. Unable to open SHC shared memory. The error code is in parenthesis.<br><br>(16) - The shared memory segment cannot be attached.<br>(20) - Could not open /dev/vme32 device file.<br>(21) - Could not memory map the SHC memory.<br>(39) - Error installing signals for SHC.<br>(33) - SHC_open_memory was previously called.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: SHC_send_prode_msg() failed; (err=#) | Unable to send a prod message to GPM. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR:<br>SHC_get_block_data_via_prode() failed;<br>(err=#)(op_status=#) | Unable to request block data with a prod message. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |
| REMMBR: No networks available. | There are no networks defined for the SPD. See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: SPD_get_networks() failed; (err=#) | Unable to get the list of networks defined for a given SPD. The error code is in parenthesis.<br><br>(-4) - The program failed when trying to seek to a location in the file.<br>(-5) - The program failed when trying to read from the file.<br>(-3) - Invalid SPD.<br><br>See your System Administrator or Westinghouse Representative. |
| REMMBR: SPD_open_file() failed; (err=#) | Unable to open the System Point Directory File. The error code is in parenthesis.<br><br>(-1) - This indicates the user passed in a bad value for the access_type.<br>(-2) - The program was unable to open the file.<br>(-3) - This indicates the SPD failed the verify test.<br>(-4) - The program failed when trying to seek to a location in the file.<br>(-5) - The program failed when trying to read from the file.<br>(-6) - The user attempted to open for write an SPD that is not signed out for update.<br><br>See your System Administrator or Westinghouse Representative. |
| REMMBR: SHC_get_highway_mode() failed; (err=#) | Unable to get the highway mode. The error code is in parenthesis.<br><br>(1) - No open SHCs exist in the host or SHC_open_memory() not called.<br>(16) - The SHC process shared memory segment could not be attached.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: SHC_get_drop_list() failed; (err=#) | Unable to get the list of available drops. The error code is in parenthesis.<br><br>(1) - No open SHCs exist in the host or SHC_open_memory() not called.<br>(16) - The SHC process shared memory segment could not be attached.<br>(32) - An invalid shc_id value was specified.<br><br>See your System Administrator or Westinghouse Representative. |
| REMMBR: child terminated due to signal; # | The error message displays the returned status code from the child process. See your System Administrator or Westinghouse Representative. |
| REMMBR: End of file found; 'filename' | This error indicates there was nothing to read in the file 'filename'. See your System Administrator or Westinghouse Representative. |
| REMMBR: Drop has no good MBR boards. | The MBR boards in the remote drop are corrupt. (The first MBR board is corrupt. Others may be corrupt also.) See your System Administrator or Westinghouse Representative. |
| REMMBR: execv() failed; 'filename' | See your System Administrator or Westinghouse Representative. |
| REMMBR: Error sending signal; (errno=#) | The parent process was unable to send a SIGUSR1 signal to the child. A SIGUSR1 signal is sent to the child when the user wants to abort the process. See your System Administrator or Westinghouse Representative. |
| REMMBR: unlink failed; 'filename'; (errno=#) | Unable to delete'filename'.'filename' may not exist or permissions are incorrect. See your System Administrator or Westinghouse Representative. |
| REMMBR: Error writing block data to MBR file. | See additional General Message window error messages for more information. See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: Invalid network id. | Valid network id is 0-15. |
| REMMBR: No highway installed. | The corresponding SHC does not exist or was not successfully initialized. See your System Administrator or Westinghouse Representative. |
| REMMBR: Network id must be given. | If there is more than one network the network id must be given. |
| REMMBR: Invalid prod number (0-256) | The given prod number must be between 0 and 256. |
| REMMBR: Error getting default network id. | See additional General Message window error messages for more information. See your System Administrator or Westinghouse Representative. |
| REMMBR: Drop does not exist; # | The given drop number does not exist or is not recognized by the highway. |
| REMMBR: Target drop must be given. | |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: SHC_xfer_block_data() failed; (err=#)(op_status=#) | Unable to transfer block data. The error codes are in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: Timed out waiting for prod message. | A prod message was not received from the remote drop. The remote drop may need to exit and re-enter REMMBR mode or the remote drop may need to be reset. |
| REMMBR: Prod message indicates error. | Remote drop may need to exit and re-enter REMMBR mode or remote drop may need to be reset. |
| REMMBR: No matching diagram number found. | The user entered diagram number does not exist in the MBR memory files. |
| REMMBR: Invalid list string. | The selected list string does not contain the necessary data. |
| REMMBR: CONFIG.x file doesn't exist;' filename' | Double check the directory entered in the directory entry field. (No directory entered implies the current directory.) |
| REMMBR: MEMxxx.x file doesn't exist; 'filename' | Double check the directory entered in the directory entry field. (No directory entered implies the current directory.) |
| REMMBR: accept() save MBR sock msg failed. | System call accept(3n) failed. See your System Administrator or Westinghouse Representative. |
| REMMBR: sysinfo() failed | System call sysinfo(2) failed. See your System Administrator or Westinghouse Representative. |
| REMMBR: open server socket failed; (err=#) | open_inet_srv_sock_con() failed. See your System Administrator or Westinghouse Representative. |
| REMMBR: open client socket failed; (err=#) | open_inet_clnt_sock_con() failed. See your System Administrator or Westinghouse Representative. |
| REMMBR: send socket message failed. | System call send(3n) failed. See your System Administrator or Westinghouse Representative. |
| REMMBR receive socket message failed. | System call recv(3n) failed. See your System Administrator or Westinghouse Representative. |

**Table 3-2. General Message Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| REMMBR: Warning! Bad MBR Boards (#,#,#,#) | The memories of the indicated boards are corrupt but, they are not needed for a save or restore of the remote MBR memory. This is just a warning. |

# 3-4. DPFCOPY

## 3-4.1. Overview

DPFCOPY transfers files between a WEStation Engineer Station and a remote Classic, a PCH (PC on the Highway) or a QLC (Q-Line Serial Link Controller) card. It does not convert text files between UNIX and MS-DOS or RMX.

## 3-4.2. Setup

### Classic Engineers Station/PCH

Prior to running DPFCOPY, the remote Classic or PCH must run VCOPY. VCOPY is a program that runs on the receiving end of the file transfer. The VCOPY program is not necessary when transferring files to and from a QLC card.

To run VCOPY on a Classic Station:

1. Turn the key to Config mode.
2. Type VCOPY at the prompt.
3. To exit VCOPY, use Ctrl-C.

**Note**

For more information refer to "Engineer Station Support Utilities" (U0-0281)

To run VCOPY on a PCH:

1. Open the PCH Applications folder.
2. Select the VCOPY32 icon.

   OR

   From an OS/2 command line, type the following:

   C: CD \WDPF\HIGHWAY

   C: VCOPY32

3. To exit VCOPY32, use Ctrl-C.

**Note**

For more information, refer to "Introduction to PCH User's Guide" (U0-2400).

## QLC Card

The QLC card (Q-Line Serial Link Controller) is a single-board computer which interfaces to the WDPF DPU (Distributed Processing Unit). The QLC resides in the Q-Line I/O chassis (Q-Crate) and communicates with the DPU processor through the DIOB (Distributed I/O Bus).Reference U0-1110 for more information.

The QLC processor is similar to an IBM-compatible personal computer, and uses a modified IBM-PC BIOS (Basic Input Output System) and the DOS operating system. Because the QLC's architecture and operating system are compatible with an IBM-compatible personal computer, the QLC can execute programs written using commercially available compilers.

The QLC card has a 360 Kbyte RAM disk on which to store and retrieve files transferred between itself and a WEStation Engineer Station.

When transferring files between a WEStation Engineer Station and a QLC, card the XFER program must be running on the QLC. The XFER program allows the QLC to talk to the DPU.

The XFER program should be run automatically upon boot-up for the QLC card. However, if the XFER program is not running, the following steps may be taken to interface with the QLC card from an IBM-PC in order to start the XFER program:

1. Connect the QLC cable from the COM1 port of an external IBM-PC to the serial port of the QLC mother board (not the daughter board).

2. Run the EXTPC program:

   ```
   C:\QLC\EXTPC
   ```

   The EXTPC program allows the external IBM-PC to talk to the QLC over a serial port.

3. Reset the QLC card by pressing the reset button on the QLC card.

   The QLC will display diagnostic information on the IBM-PC screen. It will then boot itself and execute the commands in the AUTOEXEC.BAT file. This takes about 10 seconds.

4. At this point, interfacing with the QLC card is being done through the IBM-PC. A: is the QLC disk. Use the DIR command to view the contents of the QLC disk as the contents of any disk would be viewed on an IBM-PC running MS-DOS.

   **A:DIR**

   Use the DELETE command to delete files from the QLC disk as you would on any IBM-PC running MS-DOS.

   **A:DELETE filename.ext**

   If a file is deleted from the QLC disk, run BAKFLASH to backup the QLCs' RAM disk to flash (non-volatile) memory. Also, backup the QLCs' RAM disk prior to resetting the card, rebooting, or recycling power. Otherwise, all data will be lost and the QLC must be re-initialized.

   To run BAKFLASH, type the following:

   **A:BAKFLASH**

5. To view the contents of the QLC disk, type the following:

   **A: DIR**

   The following files should be present on the QLC disk:

   - COMMAND.COM
   - CLR_DIOB.EXE
   - BAKFLASH.EXE
   - XFER.EXE
   - AUTOEXEC.BAT

   If any of these files do not exist on the QLC disk, copy them from the IBM-PC to the QLC disk, using the following command:

   **A: COPY C:\QLC\<filename.ext>**

   After copying files to the QLC disk, use the BAKFLASH command to backup RAM disk to flash memory:

   **A:BAKFLASH**

6. Start the XFER program on the QLC:

   **A:XFER**

   The XFER program allows the QLC to talk to the DPU. It will run until the QLC card is reset or rebooted.

   a. To reboot the QLC, return to Step 3.

   b. To free the IBM-PC for other use, type <**CONTROL**>.<**SHIFT**><**BREAK**>. This halts the EXTPC program. The QLC application (XFER) is NOT interrupted.

   If it becomes necessary to interface with the QLC after Steps a. or b., return to Step 1.

## 3-4.3. Accessing DPFCOPY

1. Select the **DPFCOPY** button from the Standard Engineers' Menu as shown in Figure 3-1. A Command Prompter window will display as shown in Figure 3-9.

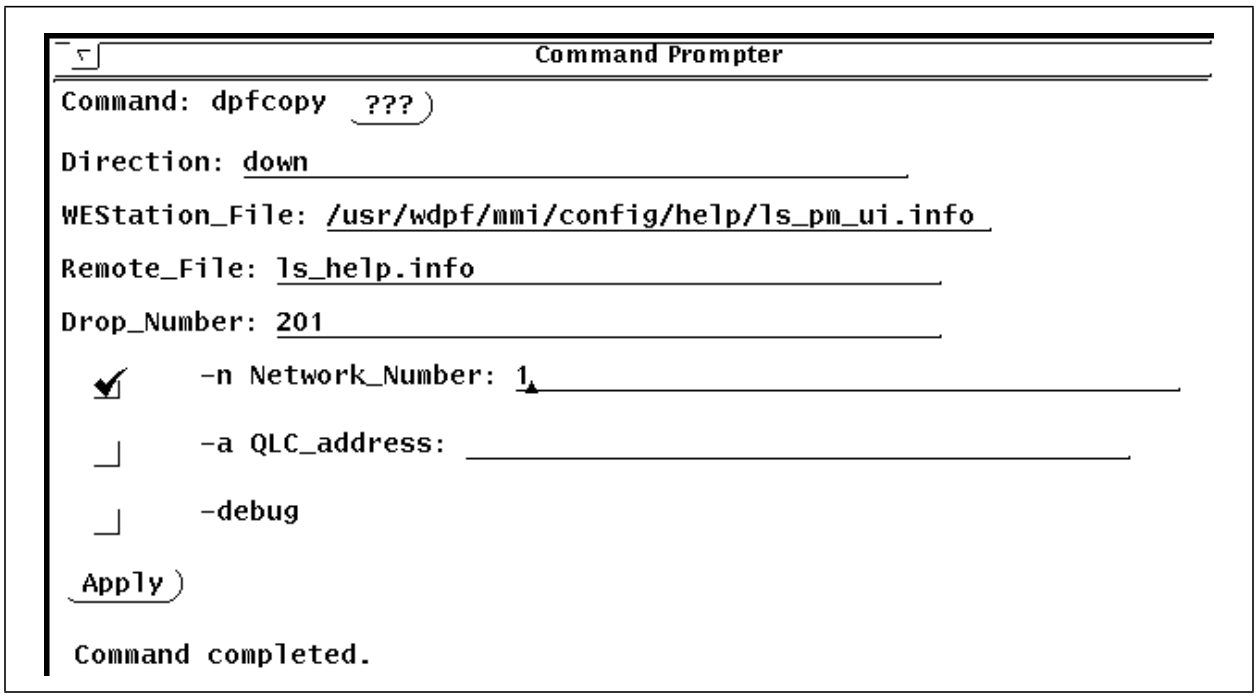



**Figure 3-9. Command Prompter Window**

2. Enter the following data in the Command Prompter window:

| | |
|---|---|
| Direction: | **Up** (copy to WEStation) **down** (copy from WEstation) |
| WEStation_File: | The name of the file on the WEStation. The path **/wdpf/rel/data/std_eng/data** appears in this field by default. This is because most files should be placed in this directory for ease of use with SoftWindows.However, files may be placed in any directory. |
| Remote_File: | The name of the file on the remote drop (Classic, PCH or QLCcard) |
| Drop_Number: | The remote drop number. |

Network_Number: The network number on which to communicate with the remote drop. If the WEStation is connected to only one WDPF network, this field is optional. Otherwise the network number must be specified.

If the network number be entered in the entry field, the check box to the left of the -n Network_Number must also be selected.

QLC address: When transferring files to and from a QLC card the QLC hardware byte offset address must be specified. The QLC address may be specified as decimal or hexadecimal. If hexadecimal, the address must be immediately followed by the letter ‘H’[‘h’]. The valid range for the QLC address is from 2 1022(decimal) or 2H-3FEH (hexadecimal).

If the QLC address be entered in the entry field, but the check box to the left of the -a QLC address must also be selected.

debug: The debug option may be used to view debug messages.

**Note**

Select the **???** button to display a manual page with help information on using the DPFCOPY utility.

3. Select the **Apply** button to initiate the file transfer. A window will then be displayed containing the output of the dpfcopy utility as shown in Figure 3-10.

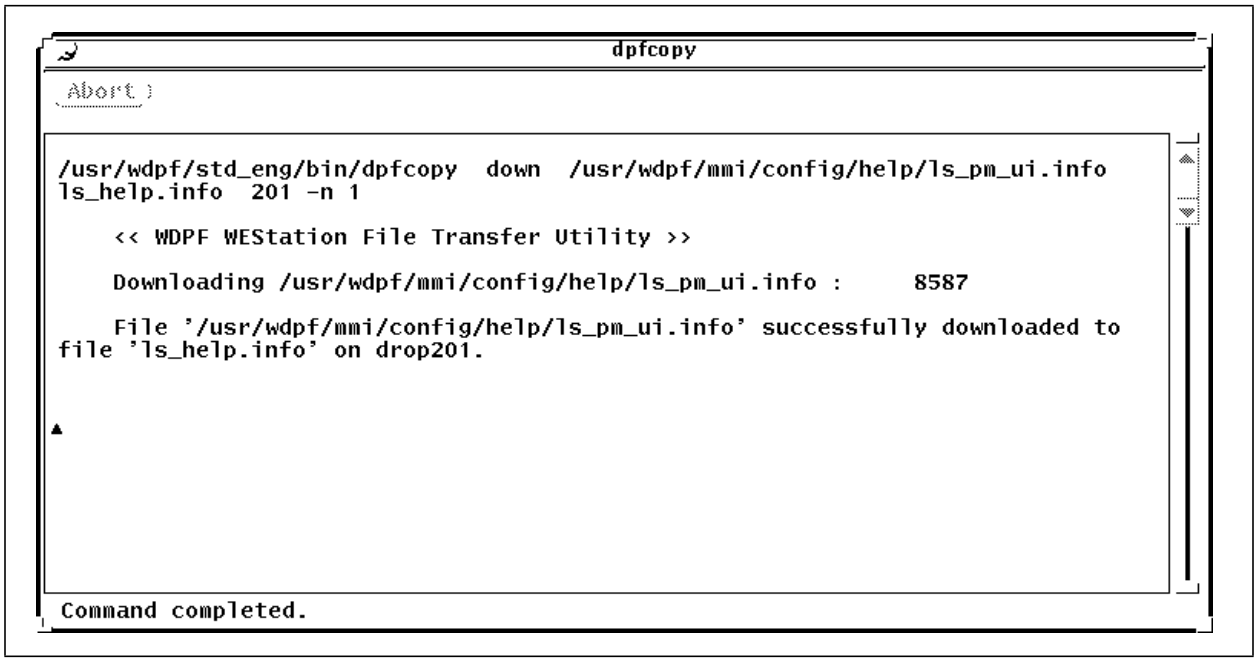



**Figure 3-10. dpfcopy Output**

The number to the right of the filename indicates the number of bytes transferred thus far. This number is updated for each 10K of data transferred.

Error messages will be displayed in the window shown in Figure 3-10 and in the General Message window.

## 3-4.4. Determining the QLC Hardware Address

To determine the address of the QLC card:

1. Look at the settings on the DIP switch marked SW1 on the QLC card.

**Table 3-3. QLC Card DIP Switch Settings**

| bit | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|---|---|---|---|---|---|---|---|---|
| setting | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| value | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |

2. The value must be multiplied by 2 (or the bits shifted left by one) to get the real QLC byte offset address.

3. If the settings were as shown above,10000000, the value would be 128 * 2. Therefore the QLC byte offset address would be 256 dec (100 hex).

## 3-4.5. Diagnostics

**Table 3-4. DPFCOPY Error Messages**

| Error Message | Description |
|---|---|
| Invalid direction (up or down) | The valid directions are up, down, UP or DOWN. |
| Master file does not exist. | The filename entered in the WEStation File entry field does not exist on the local WEStation. |
| Invalid slave drop number. | The valid range of drop numbers is 1-254. |
| SHC_register_prode() failed; (err=#) | Unable to register prod number with GPM. The error code is in parenthesis.<br>(-7) - The valid commands are REGISTER or UNREGISTER.<br>(-2) - Unable to get the message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-4) - Unable to send a message to the SHC. (msgsnd(SHC_request_queue_id) failed)<br>(-6) - No SHC available.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| SHC_send_gen_msg() failed; (err=#) | Unable to send an unsolicited message to GPM. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue. (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |
| system error; system_call() failed | The specified system_call failed. See your System Administrator or Westinghouse Representative. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| SHC_open_memory() failed; (err=#) | Unable to open SHC shared memory. The error code is in parenthesis.<br><br>(16) - The shared memory segment cannot be attached.<br>(20) - Could not open /dev/vme32 device file.<br>(21) - Could not memory map the SHC memory.<br>(39) - Error installing signals for SHC.<br>(33) - SHC_open_memory was previously called.<br><br>See your System Administrator or Westinghouse Representative. |
| Initialization error. | Run with the -debug option for more information. |
| Error receiving prod message. | Timed out while waiting for a prod message from the remote drop. This message may indicate one of the following error conditions:<br>1) VCOPY is not running on the remote drop<br>2) The messaging is out of sequence. To correct either VCOPY or the QLC card needs to be reset. |
| Download failed. | Run with the -debug option for more information. |
| Upload failed. | Run with the -debug option for more information. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| SHC_send_prode_msg() failed; (err=#) | Unable to send a prod message to GPM. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error creating master file; (err=#) | Unable to create the filename entered in the WEStation File entry field. The error code is in parenthesis.<br>(-4) - Unable to open the master file. (fopen() failed)<br>(-5) - Unable to change permissions on the master file (chmod() failed). |
| Slave file does not exist. | The filename entered in the Remote_File entry field does not exist on the Classic Engineer Station, PCH or QLC card. |
| Error writing block data to master file; (err=#) | Unable to write the uploaded block data to the master file. The error code is in parenthesis.<br>(-1) - Unable to open the temporary data file which contains the block data. (fopen('/tmp/dc_data_file') failed)<br>(-2) - Unable to read the temporary data file which contains the block data. (fread('/tmp/dc_data_file') failed)<br>(-3) - Unable to write the block data to the master file. (fwrite() failed)<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| SHC_get_block_data_via_prode() failed; (err=#)(op_status =#) | Unable to request block data with a prod message. The error code is in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |
| Invalid qlc card address | The valid qlc card addresses are: 2-1022 decimal (2H-3FEH hexadecimal) |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| get_default_netid() failed; (err=#) | Unable to get the default network id. The error code is in parenthesis.<br><br>(-9) - Because there is more than one network available, the user must specify a network.<br>(-10) - Unable to get highway information (SHC_get_highway_mode() failed)<br><br>See your System Administrator or Westinghouse Representative. |
| SHC_get_highway_mode() failed; (err=#) | Unable to get highway information. The error code is in parenthesis.<br><br>(16) - Don't have the address to the SHC shared memory.<br>(1) - No SHCs found.<br><br>See your System Administrator or Westinghouse Representative. |
| Network id must be specified. | There is either more than one network available or there are no network configured. Therefore, a network must be specified by the user. |
| Invalid network number specified. | The valid network numbers are 0-15. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| SHC_xfer_block_data() failed: (err=#)(op_status=#) | Unable to transfer block data. The error codes are in parenthesis.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC_timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |
| Unable to register prod. | Unable to register the prod number with GPM. Run with the -debug option for more information. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Slave not receiving unsolicited messages. | VCOPY may not be running on the Classic Engineer Station or PCH, or the messaging may be out of sequence. It may be necessary to reset VCOPY or the QLC card. Run with the -debug option for more information. |
| Error sending prod message. | VCOPY may not be running on the Classic Engineer Station or PCH, or the messaging may be out of sequence. It may be necessary to reset vcopy or the QLC card. Run with the -debug option for more information. |
| Unable to unregister prode. | Unable to unregister the prod number with GPM. Run with the -debug option for more information. |
| Error removing temporary data file. | Unable to remove the temporary file which holds the data being transferred. Run with the -debug option for more information. |
| QLC error of unknown type; (err=#) | An unknown error was returned from the QLC card. The error code is in parenthesis.<br><br>See your System Administrator or Westinghouse Representative. |
| Insufficient memory available. | The specified Remote_File cannot be opened for writing to the QLC disk.<br><br>See your System Administrator or Westinghouse Representative. |
| No space left on disk. | The size of the Remote_File exceeds the remaining QLC disk space. The QLC disk has 360K of memory available.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-4. DPFCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| I/O error | The read of the specified Remote_File failed with a 'bad file' error at the QLC.<br><br>See your System Administrator or Westinghouse Representative. |
| Device is already attached. | The DPU is currently processing a previous file transfer or the flag indicating a current file transfer hasn't been cleared.<br><br>See your System Administrator or Westinghouse Representative. |
| Device specified is not ready. | This QLC error message may indicate one of the following error conditions:<br><br>1) The DPU is not in online mode.<br>2) The QLC address is not valid with the number of MBUs.<br>3) The QLC is currently processing a GPM.<br>4) The QLC is not responding to the request. (The registers may need to be cleared out.)<br><br>See your System Administrator or Westinghouse Representative. |

# 3-5. VCOPY

## 3-5.1. Overview

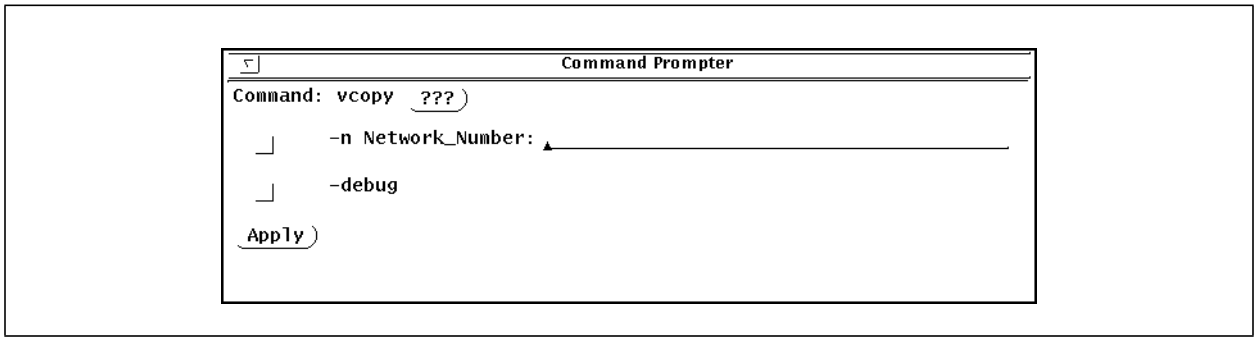
Vcopy processes file transfer requests (upload and download) from the dpfcopy utility. VCOPY is run on the remote machine with which dpfcopy is communicating. Refer to manuals "Introduction to PCH User's Guide" (U0-2400)and "Engineer Station Support Utilities" (U0-0281) for more information.

## 3-5.2. Setup

/WDPF_HOME/std_eng/bin/vcopy[-n network id] [-debug] [help]

## 3-5.3. Accessing VCOPY

1. Select the VCOPY button from the Standard Engineer's Menu as shown in Figure 3-1. A command Prompter window will display as shown below.




2. Enter the following data in the Command Prompter window:

| | |
|---|---|
| -n network_id | If there is more than one network the network id must be specified. If a network id is not specified a default will be used, provided there is only one network available. The valid range of network ids is from 0-15. |
| -debug | In case of failure, the debug option may be used to display debug messages. |

**Note**

Select the **???** button to display a manual page with help information on using the DPFCOPY utility.

## 3-5.4. Diagnostics

**Table 3-5. VCOPY Error Messages**

| Error Message | Description |
|---|---|
| Unable to register unsolicited messages | Error registering to receive unsolicited messages. Run with the -debug option for more information. |
| Unable to unregister unsolicited messages | Error registering to receive unsolicited messages. Run with the -debug option for more information. |
| Error receiving unsolicited messages | An error occurred receiving unsolicited messages. Run with the -debug option for more information. |
| Invalid network number given | The valid network numbers are: 0-15 |
| Initialization error | An error occurred during initialization of Vcopy. Run with the -debug option for more information. |
| System err; routine () failed | The specified C library routine failed. |
| Error opening the SHC memory | An error occurred opening the SHC shared memory. Run with the -debug option for more information. |
| Unable to register prod number. | An error occurred registering to receive a prod number. Run with the -debug option for more information. |
| Slave file does not exist; x | The specified slave file does not exist. |
| Error creating slave file; x | An error occurred creating the specified slave file. Run with the -debug option for more information. |
| Error sending a prod message. | An error occurred sending a prod message. Run with the -debug option for more information. |
| Error receiving prod message. | VCOPY timed out while waiting for a prod message from the remote drop. This message may indicate one of the following error conditions:<br>1) dpfcopy is not running.<br>2) the message is out of sequence, vcopy and /or dpfcopy must be reset. |

**Table 3-5. VCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error writing block data. | Unable to write the download block data.<br>The error code is in parenthesis.<br>(-3) - Unable to open the temporary data file which contains the block data(/tmp/vc_blk_data). (fopen() failed)<br>(-4) - Unable to read the temporary data file which contains the block data.(/tmp/vc_blk_data). (fread() failed)<br>(-5) - Unable to write the block data to the slave file.(fwrite failed) |
| The following error messages are displayed only when the -Debug option in the Command Prompter is selected. | |
| (-D) SHC_register_unslic() failed; (err=#) | VVCOPY was unable to register the prod number. The error code is in parenthesis.<br>(-7) - The valid commands are REGISTER or UNREGISTER.<br>(-2) - Unable to get the message queue id. (msgget(UNSLIC_MSG_Q_KEY) failed)<br>(4) Unable to send a message to the shc. (msgnd(SHC_request_queue_id) failed)<br>(-6) - No SHC available.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) SHC_open_memory() failed; (err=#) | VCOPY was unable to open SHC shared memory. The error code is in parenthesis.<br>(16) - The shared memory segment cannot be attached.<br>(20) - Could not open /dev/vme32 device file.<br>(21) - Could not memory map the SHC memory.<br>(39) - Error installing signals for SHC.<br>(33) - SHC_open_memory was previously called. WDPF_PDIR.<br>(35) - Invalid VME select DIP switch value detected.<br>(43) - Could not open /dev/sbs device file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-5. VCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) msgrcv failed; (err= #) | The C library routine msgrcv() failed. The errno is in parenthesis.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) SHC_register _prode() failed: (err=#) | VCOPY was unable to register a prod number. The error code is in parenthesis.<br>(-7) - The valid commands are REGISTER or UNREGISTER.<br>(-2) - Unable to get the message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-4) Unable to send a message to the shc. (msgsnd(shC_request_queue_id) failed)<br>(-6) - No SHC available.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-5. VCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_send_prod_msg()failed; (err=#)(op_status=# | VCOPY was unable to send a prod message. The error code is in parenthesis.<br>(-6) - No SHC available<br>(-2) - Unable to get response message queue id.(msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size<br>(valid size <= 118)<br>(1) - The SHC timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-5. VCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_get_block_data_via_prode() failed;(err=#)(op_status=#) | VCOPY was unable to request block data with a prod message. The error code is in parenthesis.<br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id.(msgget(RESP_MSG_Q_KEY) failed) or Unable to get request message queue id.(msgget(RESP_MSG_Q_KEY) failed)<br>(8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size<br>(valid size<= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request _queue_id)failed)<br>(1) - The SHC timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-5. VCOPY Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_xfer_block_data() failed; (err=#)(op_stastus=#) | VCOPY was unable to transfer block data. The error codes are in parenthesis.<br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id.(msgget(REQ_MSG_Q_KEY) failed)<br>(-1) - Invalid message size <= 118<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue id) failed)<br>(1) - The SHC timed out waiting for a response GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC writ to temporary data filed failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |

**Note**

When a file is downloaded to the slave (the machine which is running vcopy) the file is downloaded to the current working directory unless otherwise specified.

# 3-6. DOWNLOAD

## 3-6.1. Overview

The DOWNLOAD utility is used to download an object file or set of the object files from a WEStation Engineer Station on the WDPF Highway, to the memory or mass storage target drop.

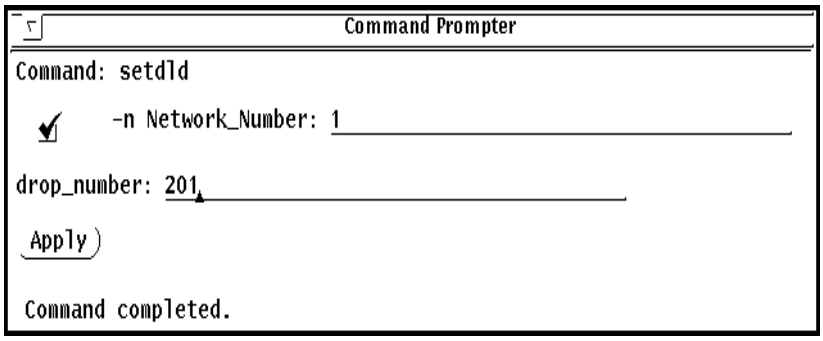
**Note**

Refer to each drop's user manual for specific downloading procedures. Refer to "PCH General Utilities User's Guide" (U0-2415)for information on DOWNLOAD and SETDLD.

## 3-6.2. Setup

Prior to downloading, put the remote Classic Drop into download mode. This may be accomplished one of two ways.

1. Manually select the **DOWNLOAD** key from the keypad of the remote Classic Drop.
   OR
   Select the **SETDLD** button from the Standard Engineers' Menu as shown in Figure 3-1. A command prompter window will be displayed as shown below,



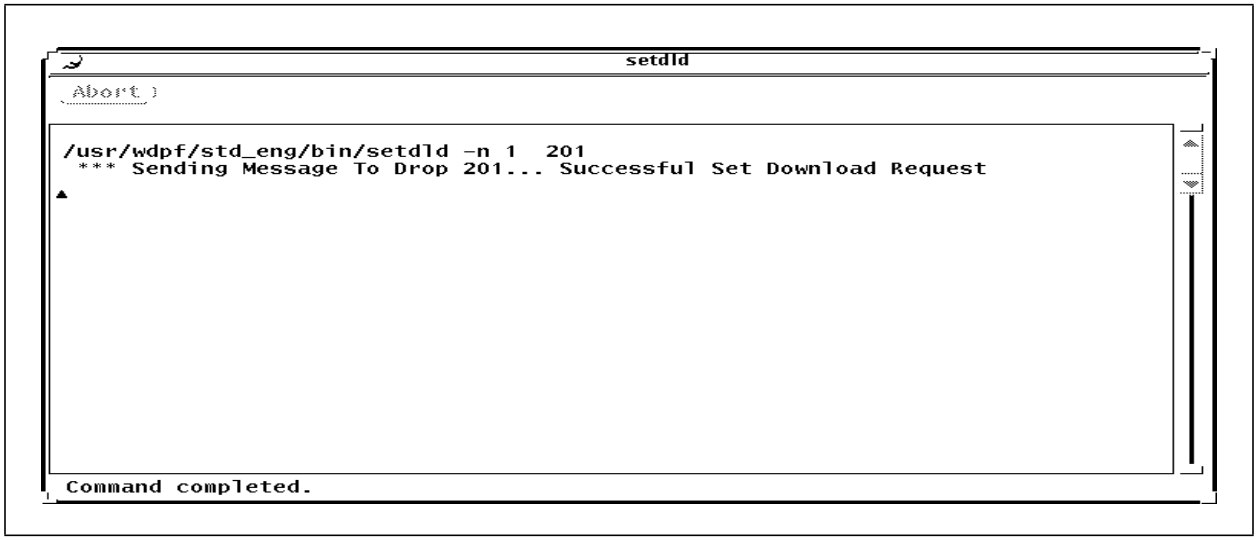
2. Enter the following data:

   Network_NumberThe network number on which to communicate with the remote drop. If the WEStation is connected to only one WDPF network, this field is optional. Otherwise the network number must be specified.

   Not only must the network number be entered in the entry field, but the check box to the left of the -n Network_Number must also be selected.

   Drop_Number The remote drop number.

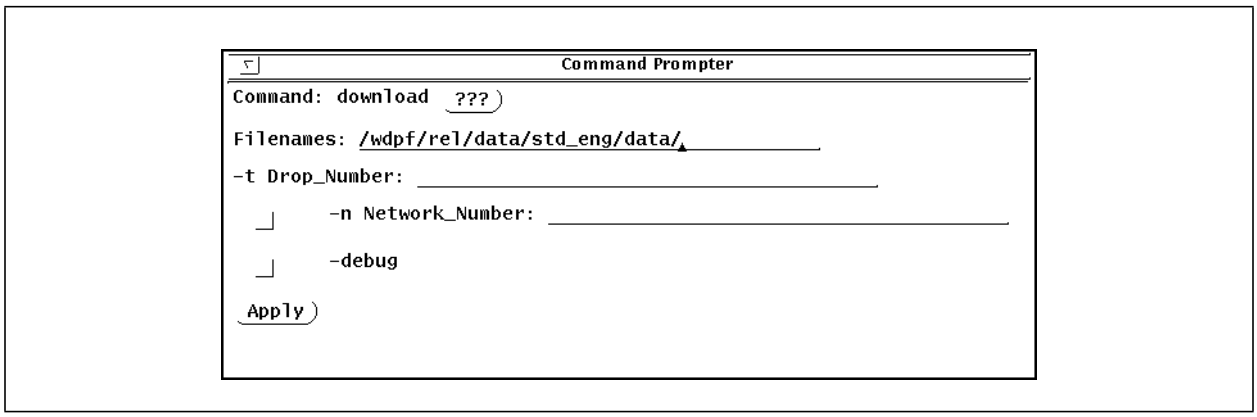
3. Select the **Apply** button to initiate the set download process. A window will then display as shown below.




This window will display the output of the “set download” process. This output includes possible error messages and a completion message. After successful completion of the “set download process”, the remote drop is now ready to receive downloaded files.

## 3-6.3. Accessing DOWNLOAD

1. Select the **DOWNLOAD** button from the Standard Engineers' Menu as displayed in Figure 3-1. A command prompter window will be displayed as shown below.




Enter the following data:

Filenames — The file(s) to be downloaded to memory. Each filename must be separated by a space.

**Note**

Standard Unix wildcards (*,?) can be used to specify files (for example, W*.obj)

Drop_Number — The remote drop number.

Network_Number — The network number on which to communicate with the remote drop. If the WEStation is connected to only one WDPF network, this field is optional. Otherwise, the network number must be specified.

If the network number is entered in the entry field, the check box to the left of the -n Network_Number must be selected.

debug — The debug option may be used to display debug messages.

**Note**

Select the **???** button to display a manual page with help information on using the download utility.

2. Select the **Apply** button to initiate the download. A window will then be displayed containing the output of the download utility as shown in Figure 3-11.

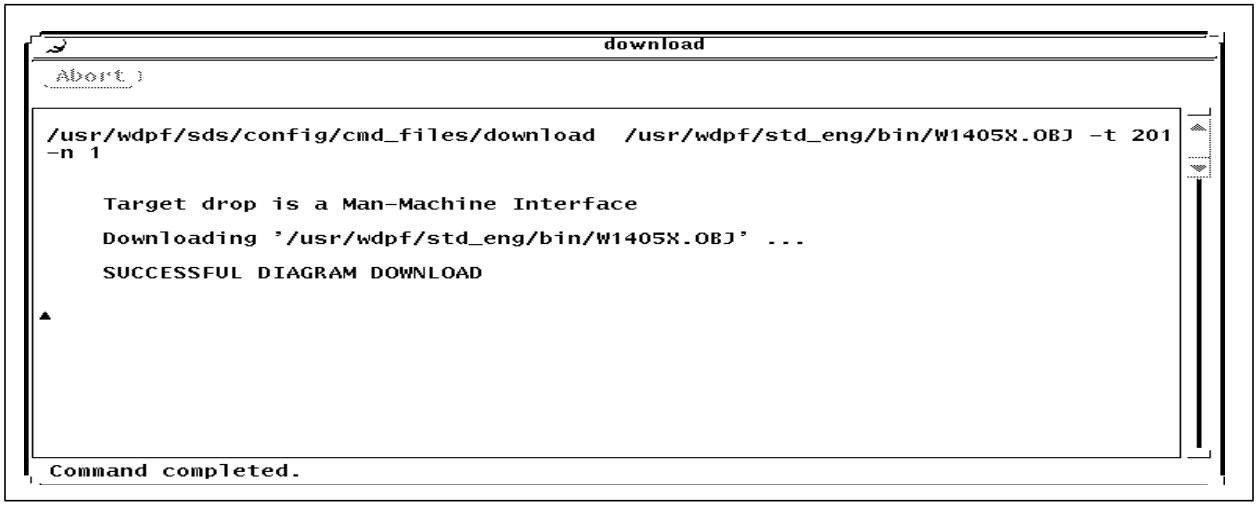



**Figure 3-11. Download Output**

## 3-6.4. Diagnostics

**Table 3-6. DOWNLOAD Error Messages**

| Error Message | Description |
|---|---|
| Error getting drop number. | There was an error getting the drop number for the given target drop name. Run with the -debug option for more information. |
| Error getting local drop number. | There was an error getting the drop number for the local drop. Run with the -debug option for more information. |
| Initialization Error. | Run with the -debug option for more information. |
| File does not exist; filename | |
| Error getting the file status. | There was a system error in determining the status of the file to download. Run with the -debug option for more information. |
| Target drop must not match local drop. | The remote target drop number cannot be the same as the local WEStation drop number. |
| Invalid drop type; (#) | The remote target drop is an invalid download drop. The drop type is in parenthesis. Valid drop types are between 1 and 18. |
| Error opening file filename. | See your System Administrator or Westinghouse Representative. |
| Error reading file filename. | See your System Administrator or Westinghouse Representative. |
| Invalid network id. | Valid network ids are from 0 to 15. |
| Network id must be specified. | There is either more than one network available or there are no networks configured. Therefore a network number must be specified by the user. |
| Missing parameters. | Necessary input parameters are missing. |
| Error getting highway mode. | Run with the -debug option for more information. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error clearing download fifo. | Run with the -debug option for more information. |
| Fifo full. | The output fifo is full. Try download later. |
| Error writing to fifo | There was an error writing to the output fifo. Run with the -debug option for more information. |
| Error reading fifo. | There was an error reading the download fifo. Run with the -debug option for more information. |
| No fifo message. | There was no message to read from the download fifo. The remote drop may need to exit and re-enter download mode. Try download again. |
| Drop does not exist; (#) | The remote target drop does not exist. The target drop number is in parenthesis. Run with the -debug option for more information. |
| Error reading drop type. | Run with the -debug option for more information. |
| Invalid drop number; (#) | The remote target drop number is invalid. Valid range is 1-254. The remote drop number is in parenthesis. |
| Invalid record type. | The locate file to download is not a valid record type for downloading. Valid record types are Physical Enumerated, Physical Iterated and Module End. See Intel manual for more information on the above mentioned record types. |
| Error reading record length. | There was an error reading the record length field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error reading module type field. | There was an error reading the module type field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading lo byte of frame #. | There was an error reading the low byte of the frame number field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading hi byte of frame #. | There was an error reading the high byte of the frame number field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading lo byte of offset. | There was an error reading the low byte of the offset field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading lo byte of load address. | There was an error reading the low byte of the load address field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading hi byte of load address. | There was an error reading the high byte of the load address offset from the download file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error reading lo byte of load address offset. | There was an error reading the high byte of the load address field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading lo byte of repeat count. | There was an error reading the low byte of the repeat count field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading hi byte of repeat count. | There was an error reading the high byte of the repeat count field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading lo byte of block count. | There was an error reading the low byte of the block count field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading hi byte of block count. | There was an error reading the high byte of the block count field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |
| Error reading byte count. | There was an error reading the byte count field from the download file.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| Error reading record data. | There was an error reading the data from the data field of the download file.<br><br>See your System Administrator Westinghouse Representative. |
| Error allocating memory. | Run with the -debug option for more information. |
| Bad checksum. | The integrity of the record data is bad. |
| Network id doesn't exist. | The given network id is not configured. |
| The following error messages are displayed only when the -Debug option in the Command Prompter is selected. | |
| (-D) Error building block list; (err=#) | There was an error building the Physical Iterated Data block list. The error code is in parenthesis.<br>(-41) - Error reading data from the download file.<br>(-43) - Error allocating memory.<br>(-47) - Error from recursive call.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) system err; routine() | The specified C library routine failed.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_get_byte_field() failed; (err=#) | Unable to get the "TY" field from the drop status record. The error code is in parenthesis.<br>(6) - Field name is not a byte type field.<br>(2) - Bad SHC address.<br>(1) - There is no SHC open.<br>(5) - No SHC available. No network configured.<br>(4) - The field length is not within the defined record size.<br>(3) - No template found for record type.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) SHC_write_fifo() failed; (err=#) | Unable to write to the output fifo. The error code is in parenthesis.<br>(2) - The network id is greater than 15.<br>(1) - There is no SHC open.<br>(10) - Unable to attach to output fifo message queue or unable to send message to output fifo.<br>(11) - The fifo message is too large to ever fit in the output fifo.<br>(9) - The fifo message is too large to fit in the output fifo at this time. The fifo is currently full.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) SHC_get_highway_mode() failed; (err=#) | Unable to get highway mode. The error code is in parenthesis.<br>(16) - The shared memory segment cannot be attached.<br>(1) - There is no open SHC.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_open_memory() failed; (err=#) | Unable to open SHC shared memory. The error code is in parenthesis.<br>(16) - The shared memory segment cannot be attached.<br>(20) - Could not open /dev/vme32 device file.<br>(21) - Could not memory map the SHC memory.<br>(39) - Error installing signals for SHC.<br>(33) - SHC_open_memory was already called.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) get_netwk_id() failed; (err=#) | Unable to get a default network id. The error code is in parenthesis.<br>(-6) - Unable to get highway mode.<br>(-16) - The network id must be specified by the user because there is more than one network available.<br><br>If error code -6, see your System Administrator or Westinghouse Representative. |
| (-D) SHC_get_drop_number failed; (err=#) | Unable to get the local drop number. The error code is in parenthesis.<br>(16) - There is no address for the SHC shared memory.<br>(1) - There is no open SHC.<br>(19) - Invalid hostname.<br><br>See your System Administrator or Westinghouse Representative. |

**Table 3-6. DOWNLOAD Error Messages (Cont'd)**

| Error Message | Description |
|---|---|
| (-D) SHC_read_fifo() failed; (err=#) | Unable to read from the download fifo. The error code is in parenthesis.<br>(-1) - The SHC routine was unable to read the download fifo.<br><br>See your System Administrator or Westinghouse Representative. |
| (-D) SHC_get_dropnum_from_host() failed; (err=#) | Unable to get the drop number from the given drop name. The error code is in parenthesis.<br>(40) - Invalid hostname.<br><br>See your System Administrator or Westinghouse Representative. |

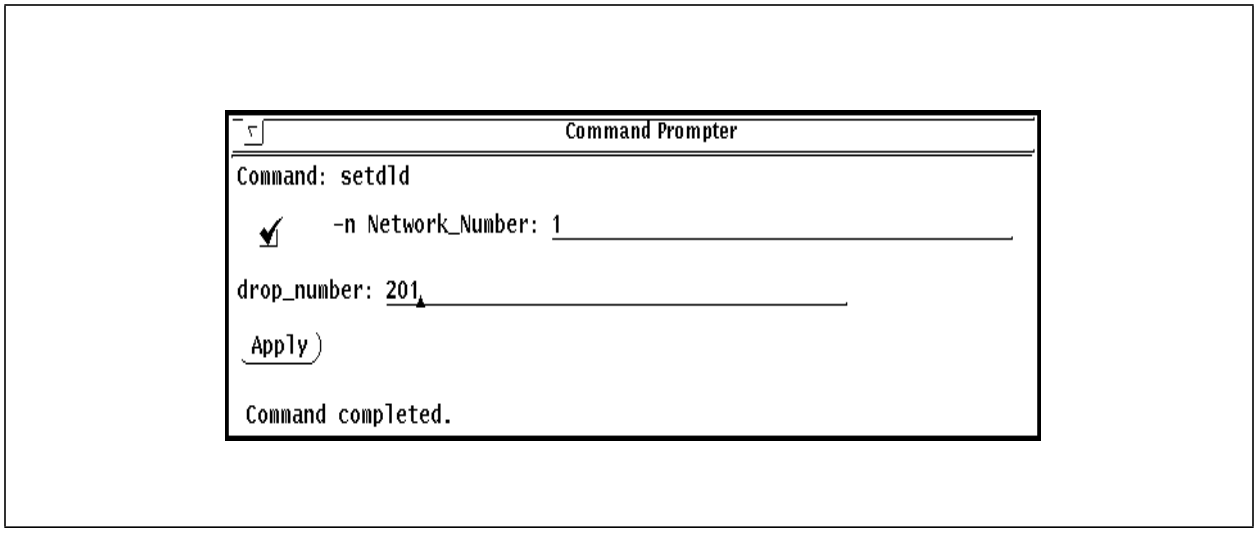
# 3-7. SETDLD

## 3-7.1. Overview

This utility is used to place a remote Classic Drop in download mode. A Classic Drop is typically placed in download mode prior to downloading files to the memory of the Classic Drop.

## 3-7.2. Accessing SETDLD

1. Select the **SETDLD** button from the Standard Engineers' Menu as shown in Figure 3-1. A Command Prompter window will display as shown below.




2. Enter the following data:

| | |
|---|---|
| Network_Number | The network number on which to communicate with the remote drop. If the WEStation is connected to only one WDPF network this, field is optional. Otherwise, the network number must be specified.<br><br>If the network number is entered in the entry field, the check box to the left of the -n Network_Number must be selected. |
| Drop_Number | The remote drop number. |

3. Select the **Apply** button to initiate the set download process. A window will then display as shown in Figure 3-12.

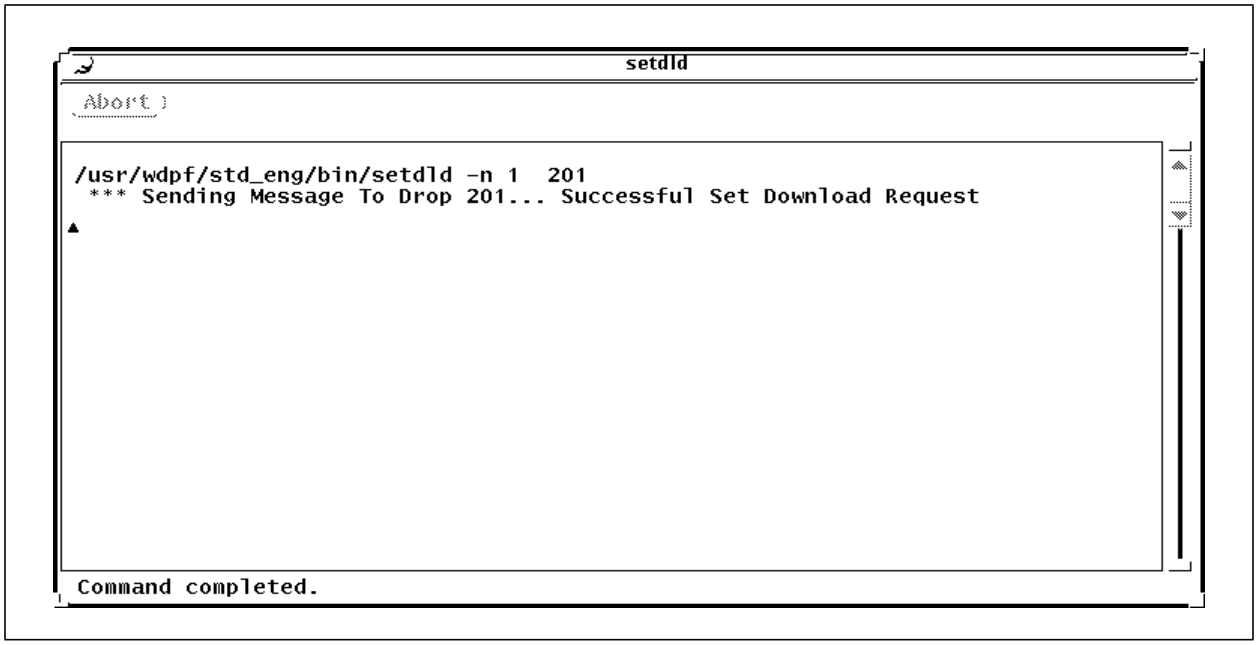



**Figure 3-12. Setdld Output**

This window will display the output of the set download process including possible error messages. After successful completion of the set download process, the remote drop is now ready to receive downloaded files.

## 3-7.3. Diagnostics

**Table 3-7. SETDLD Error Message**

| Error Message | Description |
|---|---|
| Timeout Occurred - No Response From Target Drop | The target drop may need to be reset. |
| Message Timed Out | SHC _send_gen_msg() failed with an error -8. Timed out waiting for a response from GPM. The message queues on the WEStation may need to be cleared out, or the target drop may need to be reset.<br><br>See your System Administrator or Westinghouse Representative. |
| Message Too Long | SHC_send_gen_msg() failed with an error -1. Invalid message size (<= 118).<br><br>See your System Administrator or Westinghouse Representative. |
| MCB Not Available. | SHC_send_gen_msg() failed with an error 3. The GPM on the WEStation may need to be restarted.<br><br>See your System Administrator or Westinghouse Representative. |
| Message Failed - Bad Target Drop | The target drop number is invalid. |

**Table 3-7. SETDLD Error Message (Cont'd)**

| Error Message | Description |
|---|---|
| Message Failed with status #. | SHC_send_gen_msg() failed. The error codes are described below.<br><br>(-6) - No SHC available.<br>(-2) - Unable to get response message queue id. (msgget(RESP_MSG_Q_KEY) failed) or unable to get request message queue id. (msgget(REQ_MSG_Q_KEY) failed)<br>(-8) - Timed out waiting for a response from GPM.<br>(-1) - Invalid message size (valid size <= 118)<br>(-3) - Invalid message type (valid = 0-15)<br>(-4) - Unable to send message to request queue. (msgsnd(SHC_request_queue_id) failed)<br>(1) - The SHC timed out waiting for a response from GPM. The slave drop is not responding.<br>(3) - There are no mcbs available. GPM may need to be reset.<br>(4) - Open file failed. SHC was unable to open the temporary data file.<br>(6) - SHC was unable to send a general message. The slave drop is not responding.<br>(7) - Close file failed. SHC was unable to close the temporary data file.<br>(8) - Seek file failed. SHC seek of temporary data file failed.<br>(9) - Write file failed. SHC write to temporary data file failed.<br>(10) - Bad file offset. Offset in block data message is bad.<br>(11) - Bad block data message.<br>(12) - Output fifo full. Drop may be offline.<br>(13) - Read file failed. SHC was unable to read the temporary data file.<br><br>See your System Administrator or Westinghouse Representative. |
| Setdld: Target Drop is not an MMI. | Only a Standard MMI can be put into download mode. |

**Table 3-7. SETDLD Error Message (Cont'd)**

| Error Message | Description |
|---|---|
| SETDLD: Could not talk to target drop - error # returned. | SHC_get_byte_field() failed. The error codes are as follows:<br><br>(6) - Field name is not a byte type field.<br>(2) - Bad SHC address.<br>(1) - There is no SHC open.<br>(5) - No SHC available. No network configured.<br>(4) - The field length is not within the defined record size.<br>(3) - No template found for record type.<br><br>See your System Administrator or Westinghouse Representative. |
| SETDLD: Could not open SHC. | SHC_open_memory() failed. The error codes are as follows:<br><br>(16) - The shared memory segment cannot be attached.<br>(20) - Could not open /dev/vme32 device file.<br>(21) - Could not memory map the SHC memory.<br>(39) - Error installing signals for SHC.<br>(33) - SHC_open_memory was already called.<br><br>See your System Administrator or Westinghouse Representative. |
| SETDLD: Invalid Network Number (0-15). | The network number must be between 0 and 15. |
| SETDLD: Error getting Highway Mode. | SHC_get_highway_mode() failed.<br><br>See your System Administrator or Westinghouse Representative. |
| SETDLD: Drop not connected to Network Number #. | The remote Classic Drop is not connected to the given network. |
| SETDLD: Invalid Drop Number (1-254). | |

**Table 3-7. SETDLD Error Message (Cont'd)**

| Error Message | Description |
|---|---|
| SETDLD: Must specify Network Number. | There is more than network available. Therefore, a network number must be specified by the user. |
| SETDLD: Internal Error - could not attach to prode message queue. | See your System Administrator or Westinghouse Representative. |

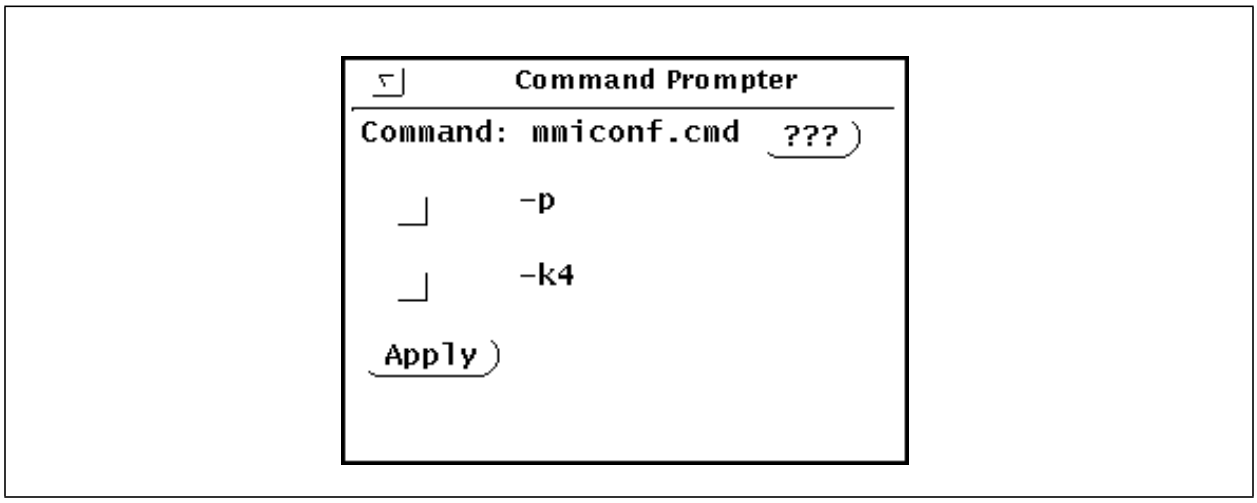
# 3-8. MMICONF

## 3-8.1. Overview

This utility provides the ability to configure a remote Classic Drop. Once the configuration is complete, the new configuration files must be downloaded to the remote Classic Drop. See Section 3-6 “DOWNLOAD” for more information on downloading files to a remote Classic Drop.

## 3-8.2. Accessing MMICONF

1. Select the MMICONF button from the Standard Engineers’ Menu as shown in Figure 3-1. A Command Prompter window will be displayed as shown in below.




The following options are available:

-p If this option is selected, the password option is disabled. If the password option is disabled, the following configuration screens are available: CRT, Printer, Application Programs. If the password option is enabled, CRT, Printer, Application Programs, Operator Keys and Password screens are available.

-k4 If this option is selected, the 4 position keyswitch is assumed (The default is a 3 position keyswitch.)

**Note**

Select the **???** button to display a manual page with help information on using the MMICONF utility.

2. Select the **Apply** button to start the MMICONF program.

## 3-8.3. CRT Configuration

The CRT configuration screen is used to configure a Classic Drop CRT.

1. Select the CRT option from the Configuration Category menu to display the CRT configuration window as shown in Figure 3-13.

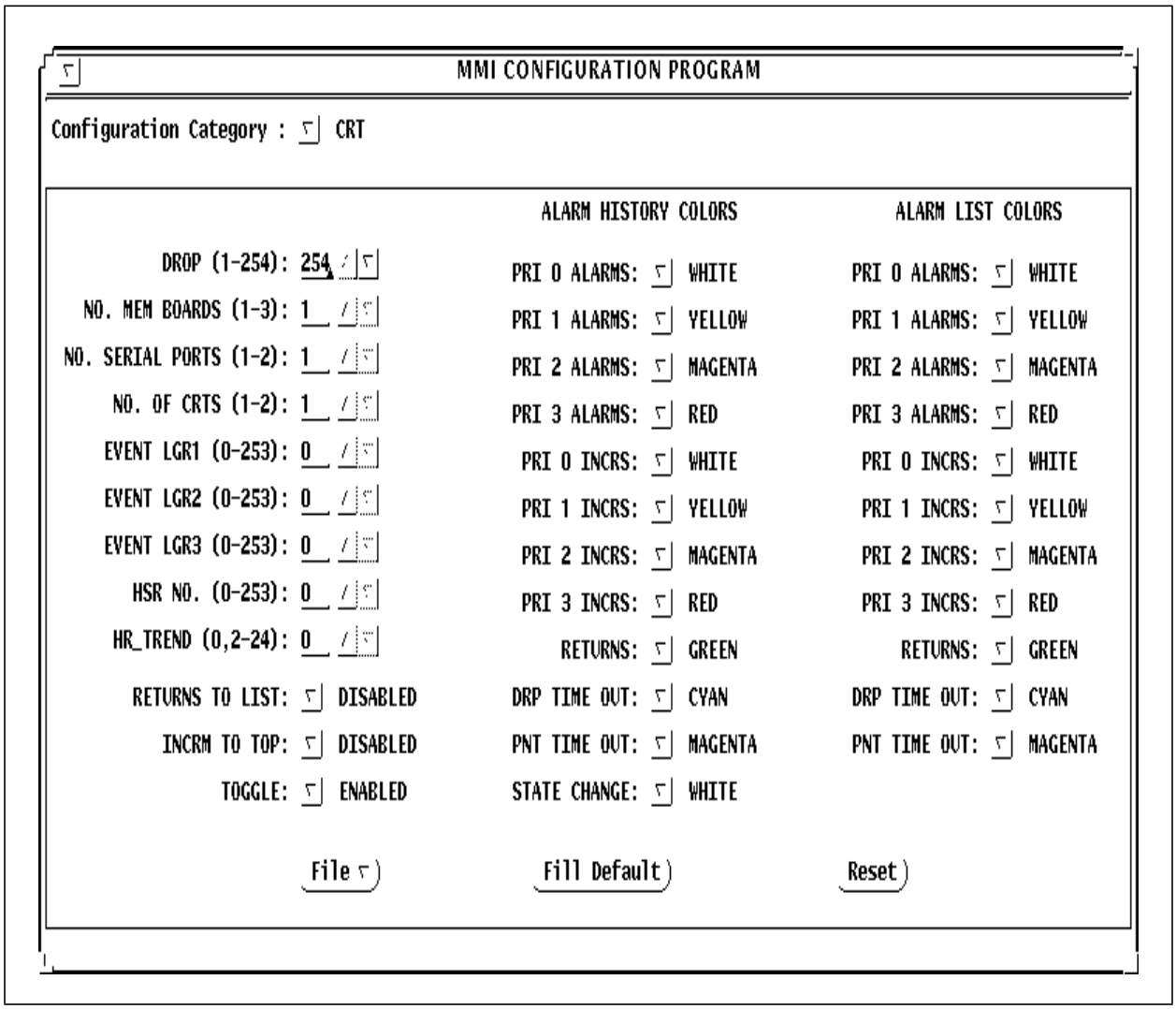



**Figure 3-13. CRT Configuration Window**

The Configuration Category is a pulldown menu on the configuration screen which lists the available configuration screens; CRT, Printer, Application Programs, Operator Keys and Password.

**Note**

Operator Keys and Password configuration screens are not available for update if the -p option was selected at startup.

2. Update values by entering the new value in the entry field (if one exists) by selecting the up/down arrows or by selecting an item from a menu.

See Table 3-8 for a description of the CRT configuration screen entry fields.

3. Select the **Fill Default** button to set the configuration parameters to default values.

4. Select the **Reset** button to set the configuration parameters to the last applied values. The configuration values are considered to be applied when the new values are saved during the current session.

5. The **File** button is a pulldown menu which gives the ability to LOAD and SAVE a configuration file.
   Select the **Load** button from the **File** pulldown menu to display the window as shown in Figure 3-14.

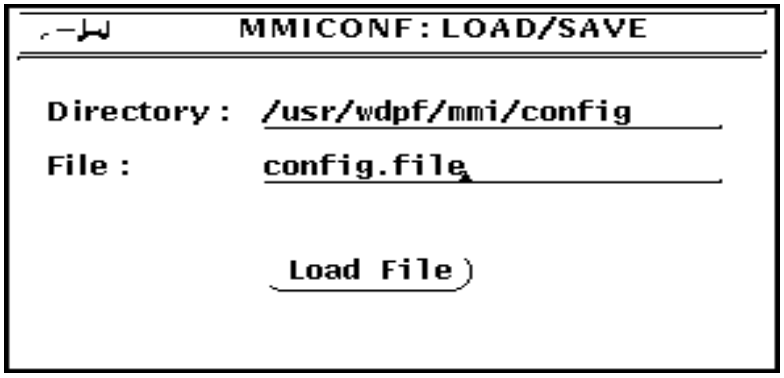



**Figure 3-14. LOAD Window**

6. Specify the directory in which the configuration file resides and the name of the configuration file to load.

7. Select the **Load File** button to load the configuration file into the configuration screen.

8. Select the **Save** button from the **File** pulldown menu (shown in Figure 3-13)to display the window as shown in Figure 3-15.

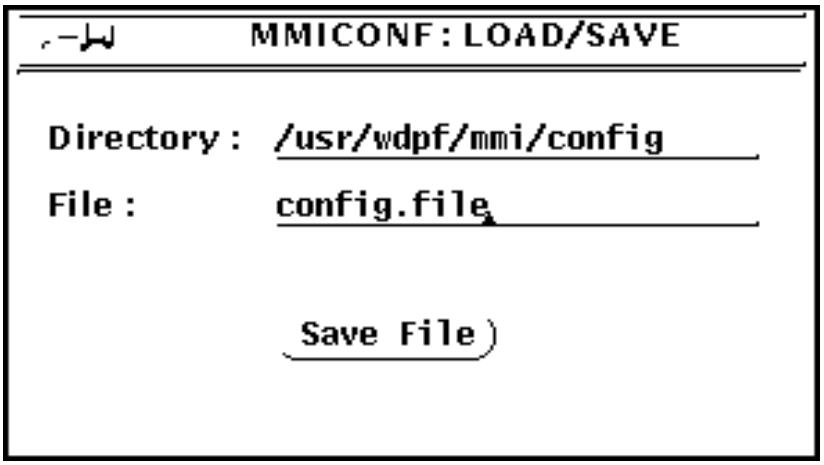



**Figure 3-15. SAVE Window**

9. Specify the directory in which the configuration file is to be saved and the name of the configuration file to save.

10. Select the **Save File** button to save the values from the configuration screen in the specified configuration file.

**Table 3-8. CRT Configuration Screen Entry Fields**

| Entry Field | Description | Valid Entries |
|---|---|---|
| Drop | Standard drop number. | Range: 1 - 254 |
| No. Mem Boards | Number of memory boards in Standard drop. | Range: 1 -4<br>Default = 1 |
| No. Serial Ports | Number of serial ports for cursor movement devices. This field must be set to 1 if either the RTC, mouse/ trackball or touchscreen is used, and 2 if both ports are used. For additional information on serial ports, refer to the "Cabinet Installation Manual" (M0-0052). | 1 = 1 serial port<br>2 = 2 serial ports<br>Default = 1 |
| No. of CRTS | Number of CRTs. (that is single or dual configuration) | 1 = 1 CRT<br>2 = 2 CRTs<br>Default = 1 |
| Event Lgr1 | Number which identifies which drop (Operator Station or HSR) is to be used as the first Event Logger. | Range: 0 - 253<br>0 = no entry<br>Default = 0 |
| Event Lgr2 | Number which identifies which drop (Operator Station or HSR) is to be used as the second Event Logger. | Range: 0 - 253<br>0 = no entry<br>Default = 0 |
| Event Lgr3 | Number which identifies which drop (Operator Station or HSR) is to be used as the third Event Logger. | Range: 0 - 253<br>0 = no entry<br>Default = 0 |

**Table 3-8. CRT Configuration Screen Entry Fields (Cont'd)**

| Entry Field | Description | Valid Entries |
|---|---|---|
| | **Note**<br><br>1. It is recommended that the Classic Engineer Station not be initialized as an Event Logger. The event messages are not processed when the Station is in CONFIG mode.<br><br>2. The Event Logger will be disabled if all EVENT LGR entry fields are zero.<br><br>3. Do not specify the same drop number more than once.<br><br>4. For the Classic Operator Station to function as an Event Logger, the following conditions must be met:<br>• The Station must have a printer connected and be on-line.<br>• The Station must be identified as an Event Logger in its' own configuration file, as well as in the configuration file of any other Station which may generate Event messages.<br>• The ALARM ENABLE field in the Stations' Printer Configuration Screen must be set to 1 (enabled).<br><br>5. For the Classic HSR to function as an Event Logger, it must include the optional magnetic tape drive and must be configured with the TEXT option. For additional information on HSR configuration, refer to the "HSR User's Guide" (U0-0485) | |

**Table 3-8. CRT Configuration Screen Entry Fields (Cont'd)**

| Entry Field | Description | Valid Entries |
|---|---|---|
| HSR No. | Number which identifies the HSR drop which will receive device alarms (record type VC). These alarms are filtered based on the Main Screen priority/destination values entered in the Alarm Initialization Diagram (refer to the "Operator Station Users's Guide" (U0-1280) for more information). Device logging will be disabled if the HSR entry field number is 0 (device alarms will be available at Operator Stations only). | Range: 0-253<br>0 = disabled<br>Default = 0 |
| Hr_Trend | Length (in hours) of the available variable-length trend display. | Range: 2-24<br>0 = no entry<br>Default = 0 |
| Returns To List | Flag that indicates whether or not unacknowledged alarm returns will be displayed on the Alarm List. | Choice of "Enabled" or "Disabled" from pulldown menu. |
| Incrm To Top | Flag that indicates how incremental alarms will be displayed. If disabled, when a point in alarm crosses an incremental alarm boundary, the current entry in the Alarm List Diagram will be updated to reflect the change in alarm status. If enabled, when a point in alarm crosses an incremental alarm boundary, the existing Alarm List entry will be purged and a new entry (with the current alarm status) will appear at the top of the Alarm List. | Disabled = update current Alarm List entry for incremental change<br><br>Enabled = new entry at top of Alarm List for incremental change |

**Table 3-8. CRT Configuration Screen Entry Fields (Cont'd)**

| Entry Field | Description | Valid Entries |
|---|---|---|
| Toggle | Activates areas of touchscreen so user can toggle between dual CRTs by touching screen areas. | Enabled= Entire screen is enabled as a toggle between dual CRTs.<br>Partial = Lower right area of screen is enabled as a toggle between dual CRTs.<br>Disabled = Screen is disabled as a toggle between dual CRTs. |
| (Alarm History Colors)<br>Pri 0 Alarms<br>Pri 1 Alarms<br>Pri 2 Alarms<br>Pri 3 Alarms | Screen color of each alarm priority level for Alarm History. | Any choice from corresponding pulldown color menu. |
| (Alarm History Colors)<br>Pri 0 Incrs<br>Pri 1 Incrs<br>Pri 2 Incrs<br>Pri 3 Incrs | Screen color of each incremental alarm priority level for Alarm History. | Any choice from corresponding pulldown color menu. |
| Returns (Alarm History Colors) | Screen color in which Alarm History alarm returns will be displayed. | Any choice from pulldown color menu. |
| Drp Time Out (Alarm History Colors) | Screen color in which timed out drop alarms will be displayed for Alarm History. | Any choice from pulldown color menu. |
| Pnt Time Out (Alarm History Colors) | Screen color in which timed out point alarms will be displayed for Alarm History. | Any choice from pulldown color menu. |
| State Change | Screen color in which state change alarms will be displayed for Alarm History. | Any choice from pulldown color menu. |
| (Alarm List Colors)<br>Pri 0 Alarms<br>Pri 1 Alarms<br>Pri 2 Alarms<br>Pri 3 Alarms | Screen color of each alarm priority level for Alarm List. | Any choice from corresponding pulldown color menu. |

**Table 3-8. CRT Configuration Screen Entry Fields (Cont'd)**

| Entry Field | Description | Valid Entries |
|---|---|---|
| (Alarm List Colors)<br>Pri 0 Incrs<br>Pri 1 Incrs<br>Pri 2 Incrs<br>Pri 3 Incrs | Screen color of each incremental alarm priority level for Alarm List. | Any choice from corresponding pulldown color menu. |
| Returns (Alarm List Colors) | Screen color in which Alarm List alarm returns will be displayed. | Any choice from pulldown color menu. |
| Drp Time Out (Alarm List Colors) | Screen color in which timed out drop alarms will be displayed for Alarm List. | Any choice from pulldown color menu. |
| Pnt Time Out (Alarm List Colors) | Screen color in which timed out point alarms will be displayed for Alarm List. | Any choice from pulldown color menu. |

## 3-8.4. Printer Configuration

The Printer Configuration screen is used to configure a Classic Drops' printer.

1. Select the PRINTER option from the Configuration Category to display the Printer configuration window as shown in Figure 3-16.

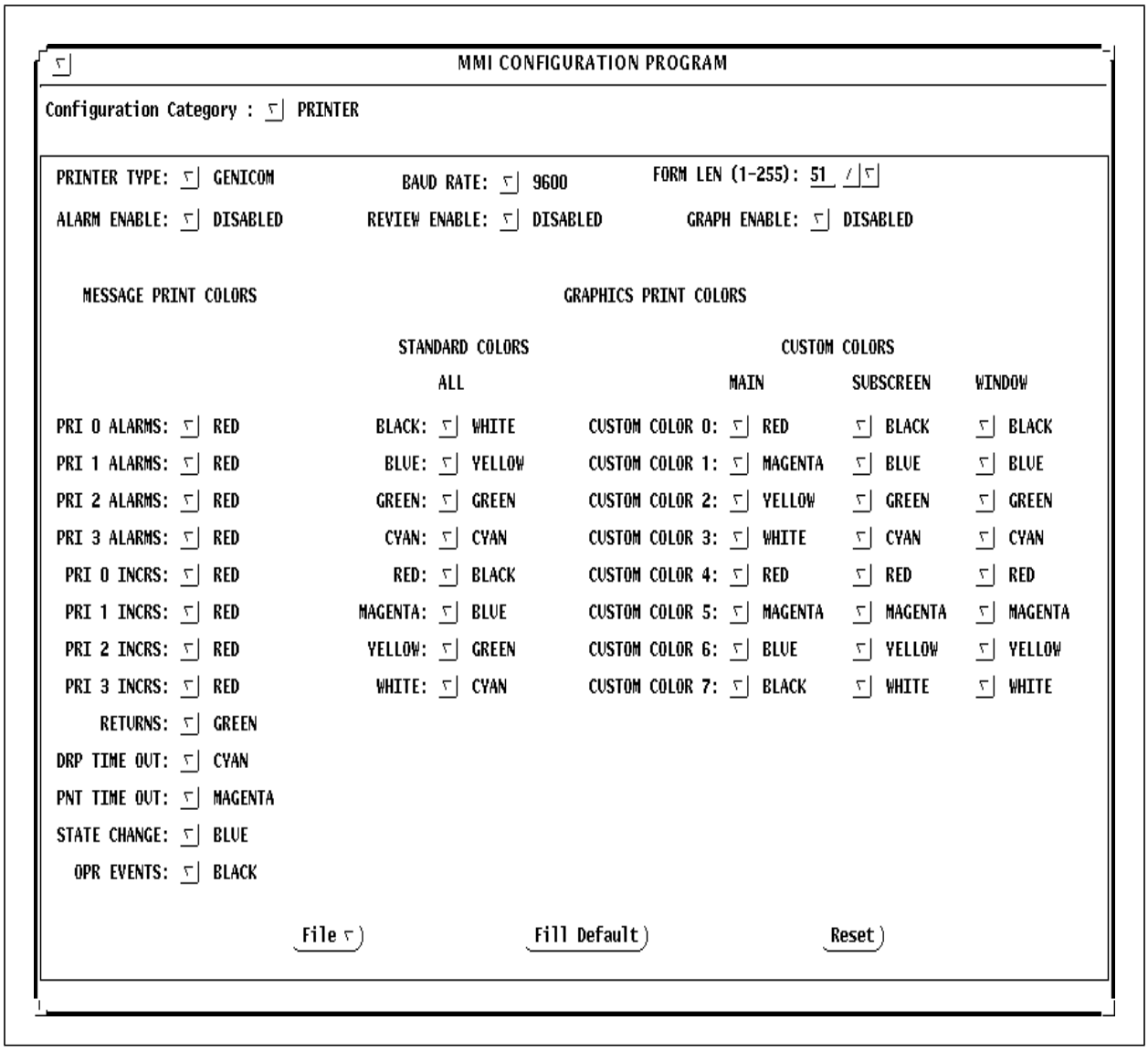



**Figure 3-16. Printer Configuration Window**

The Configuration Category is a pulldown menu on the configuration screen which lists the available configuration screens; CRT, Printer, Application Programs, Operator Keys and Password.

**Note**

Operator Keys and Password configuration screens are not available for update if the -p option was selected at startup.

2. Update Values by use of the pulldown menus associated with the configuration parameters, by entering values in the entry fields (if one exists) or by use of the up/down arrows.

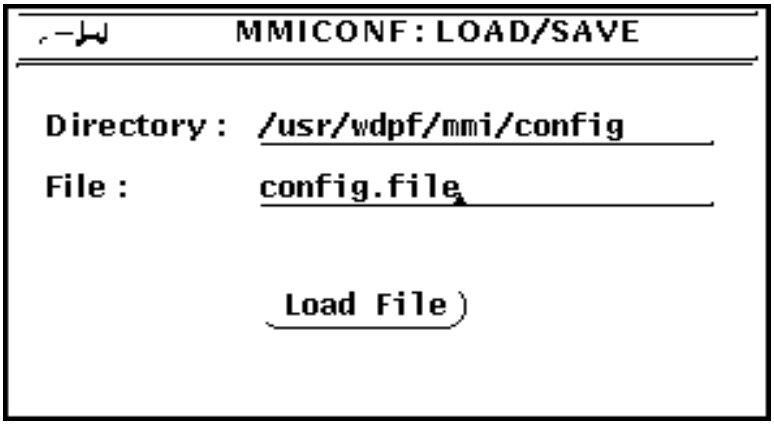
   See Table 3-9 for a description of the Printer configuration screen entry fields.

3. Select the **Fill Default** button to set the configuration parameters to default values.

4. Select the **Reset** button to set the configuration parameters to the last applied values. The configuration values are considered to be applied when the new values are saved during the current session.

5. The **File** button is a pulldown menu which gives the ability to LOAD and SAVE a configuration file.

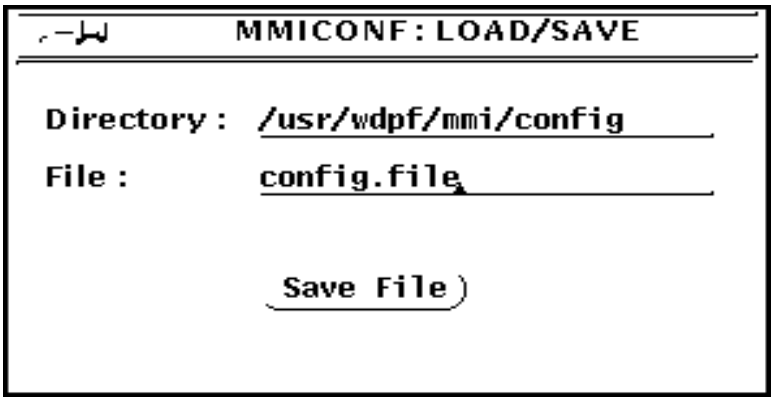
6. Select the **Load** button from the **File** pulldown menu (shown in Figure 3-16) to display the window as shown below.




7. Specify the directory in which the configuration file resides and the name of the configuration file to load.

8. Select the **Load File** button to load the configuration file into the configuration screen.

9. Select the **Save** button from the **File** pulldown menu (shown in Figure 3-16)to display the window as shown below.




10. Specify the directory in which the configuration file is to be saved and the name of the configuration file to save.

11. Select the **Save File** button to save the values from the configuration screen in the specified configuration file.

**Table 3-9. Printer Configuration Screen Entry Fields**

| Entry Field | Description | Valid Entries |
|---|---|---|
| Printer Type | Type of printer used. | Any choice from pulldown menu. |
| Baud Rate | Baud rate of communication between the console and the printer. | Any choice from pulldown menu. |
| Form Len | Number of lines to be printed on each page.(typical 6 lines per inch) | Range: 1-255<br>Default = 51 |
| Alarm Enable | Flag that indicates whether or not alarms will be printed. | Enabled or Disabled |
| Review Enable | Flag that indicates whether or not point review will be printed. | Enabled or Disabled |

**Table 3-9. Printer Configuration Screen Entry Fields (Cont'd)**

| Entry Field | Description | Valid Entries |
|---|---|---|
| Graph Enable | Flag that indicates whether or not graphic displays will be printed. | Enabled or Disabled |
| Message Print Colors | Colors in which screen text messages will be printed (for example, alarms, point review, operator events, and so forth.)<br><br>Note: For a TI printer, all entry fields must be set to black. | Any choice from pulldown color menu. |
| Graphics Print Colors | Colors in which a graphic copy of the screen will be printed. | Any choice from pulldown color menu. |

## 3-8.5. Application Programs Configuration

The APPLICATION PROGRAMS configuration screen is used to configure which application programs will run on the Classic Drop for each available keyswitch position and for each user level. This provides a way to restrict access to specific functions, if desired.

1. Select the APPLICATION PGMS option from the Configuration Category to display the Application Programs configuration window shown in Figure 3-17.

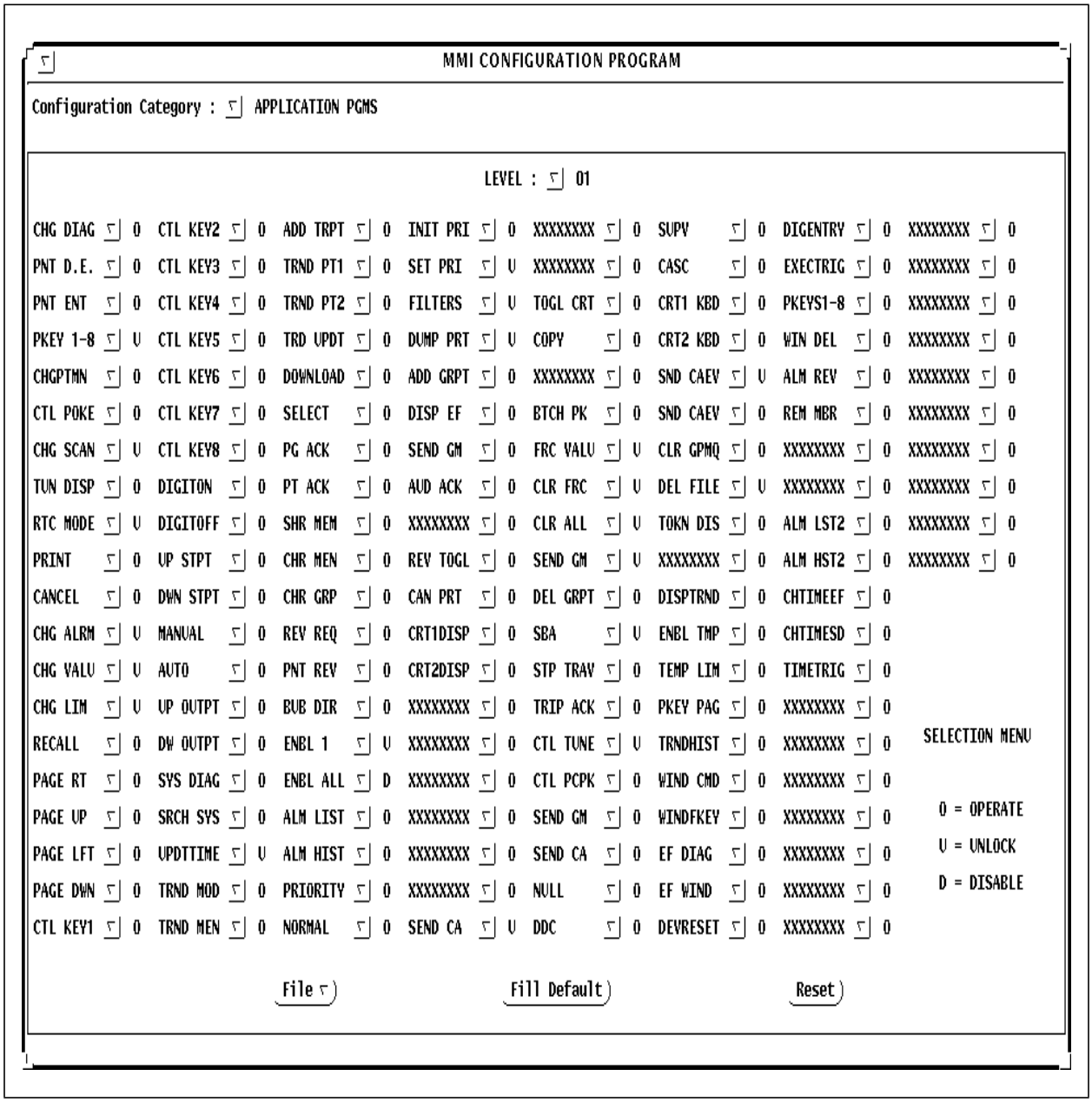



**Figure 3-17. Application Programs Copy Window(3-position keyswitch)**

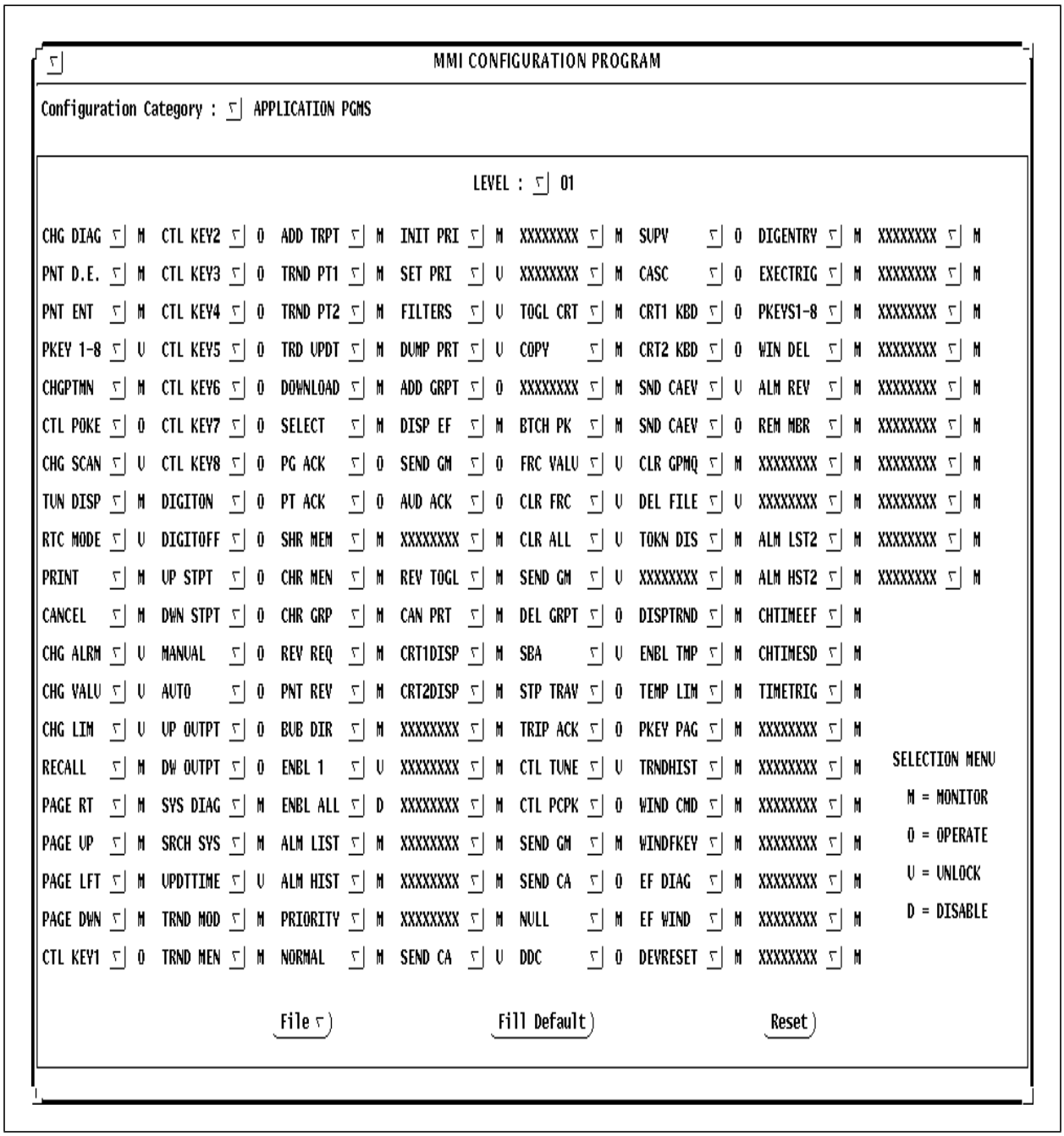



**Figure 3-18. Application Programs Copy Window(4-position keyswitch**

Some of the Application program names are shown in a modified form on the APPLICATION PGMS configuration screen. This is either because of space constraints or to make them more recognizable to the user. Refer toTable 3-10 for a listing and brief definition of the application programs.

The Configuration Category is a pulldown menu on the configuration screen which lists the available configuration screens; CRT, Printer, Application Programs, Operator Keys and Password.

**Note**

Operator Keys and Password configuration screens are not available for update if the -p option was selected at startup.

The following is a description of the Selection Menu:

O - OPERATE: Accessible in OPERATE and UNLOCK keyswitch modes.

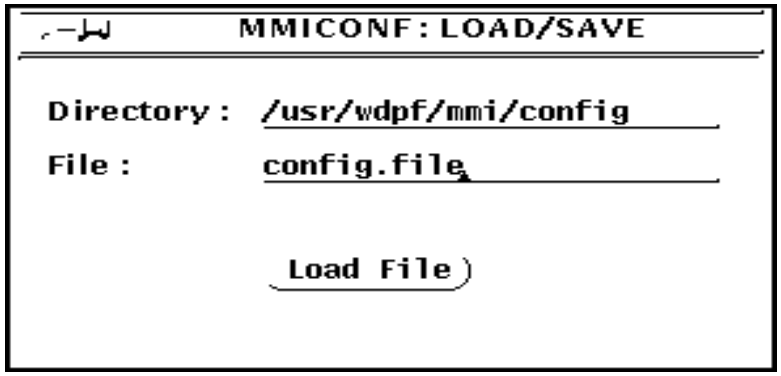
U - UNLOCK: Accessible only in UNLOCK keyswitch mode.

D - DISABLE: Not accessible at this Station

M -MONITOR: Accessible in all keyswitch modes. (Note: Only available with a four position keyswitch.)

2. Update values by use of the pulldown menus associated with the configuration parameters.
3. Update Application Programs for each password level. If they are not updated, default values will be used.
4. Select the **Fill Default** button to set the configuration parameters to default values.
5. Select the **Reset** button to set the configuration parameters to the last applied values. The configuration values are considered to be applied when the new values are saved during the current session.
6. The **File** button is a pulldown menu which gives the ability to LOAD and SAVE a configuration file.

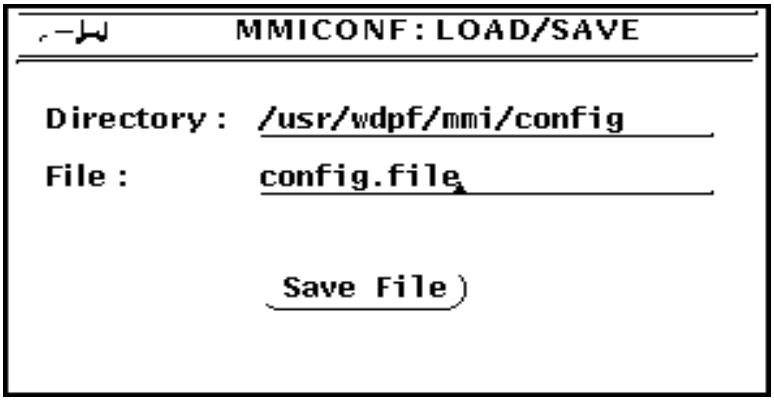
   Select the **Load** button from the **File** pulldown menu to display the window as shown below.




7. Specify the directory in which the configuration file resides and the name of the configuration file to load.

8. Select the **Load File** button to load the configuration file into the configuration screen.

9. Select the **Save** button from the **File** pulldown menu to display the window as shown below.




10. Specify the directory in which the configuration file is to be saved and the name of the configuration file to save.

11. Select the **Save File** button to save the values from the configuration screen in the specified configuration file.

**Table 3-10. Application Program Names and Definitions**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| CHG DIAG / (CHGDIAG) | Change Diagram | O |
| PNT D.E. / (PNTDET) | Point Data Entry Subscreen Display | O |
| PNT ENT / (PNTDESC) | Point Details | O |
| PKEY 1-8 / (CNTRLBITS) | Control Bits 0-7 | U |
| CHGPTMN / (CHGPTMN) | Change Point Data Entry Menu | O |
| CTL POKE / (CNTRL_POKE) | Control Poke | O |
| CHG SCAN / (SCHGSCAN) | Change Scan Status | U |
| TUN DISP / (TUNEDSPLY) | Tuning Display | O |
| RTC MODE / (RTC_BAUD) | Request RTC Baud Command | U |
| PRINT / (ENGAGEPRT) | Select Console Printer | O |
| CANCEL / (CANCEL) | Cancel Subscreen | O |
| CHG ALRM / (CHGALARM) | Change Alarm Status | U |
| CHG VALU / (CHGVALUE) | Change Value | U |
| CHG LIM / (CHGLIMITS) | Change Limits | U |
| RECALL / (RE_CALL) | Recall | O |
| PAGE RT / (PAGER) | Page Right | O |
| PAGE UP / (PAGEU) | Page Up | O |
| PAGE LFT / (PAGEL) | Page Left | O |
| PAGE DWN / (PAGED) | Page Down | O |
| CTL KEY1 / (SELECT1) | Select Control Key 1 | O |
| CTL KEY2 / (SELECT2) | Select Control Key 2 | O |
| CTL KEY3 / (SELECT3) | Select Control Key 3 | O |
| CTL KEY4 / (SELECT4) | Select Control Key 4 | O |
| CTL KEY5 / (SELECT5) | Select Control Key 5 | O |
| CTL KEY6 / (SELECT6) | Select Control Key 6 | O |

**Table 3-10. Application Program Names and Definitions (Cont'd)**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| CTL KEY7 / (SELECT7) | Select Control Key 7 | O |
| CTL KEY8 / (SELECT8) | Select Control Key 8 | O |
| DIGITON / (DIGITON) | Set Digital On | O |
| DIGITOFF / (DIGITOFF) | Set Digital Off | O |
| UP STPT / (UPSET) | Raise Set Point | O |
| DWN STPT / (DOWNSET) | Lower Set Point | O |
| MANUAL / (MANUAL) | Select Manual Mode | O |
| AUTO / (AUTO) | Select Automatic Mode | O |
| UP OUTPT / (RAISEOUT) | Raise Output | O |
| DW OUTPT / (LOWEROUT) | Lower Output | O |
| SYS DIAG / (SYS_DIAG_REQ) | System Status Display | O |
| SRCH SYS / (SRCH_SYS_DIAG) | System Status Display | O |
| UPDTTIME / (UPTIMDAT) | Update Time/Date | O |
| TRND MOD / (TRMODIFY) | Modify Trend | O |
| TRND MEN / (TRENDMENU) | Request Trend Menu | O |
| ADD TRPT / (ADDTRENDPT) | Add point to Trend Grouping | O |
| TRND PT1 / (TRPOINTS) | Define Trend Points | O |
| TRND PT2 / (MODIFY_TRDRTN) | Return from Modify Trend | O |
| TRD UPDT / (TRUPDATE) | Trend Update | O |
| DOWNLOAD / (DOWNLD) | Download | U |
| SELECT / (SELECT) | SELECT Key | O |
| PG ACK / (PAGE_ACK) | Alarm Page Acknowledge | O |
| PT ACK / (PT_ACK) | Alarm Point Acknowledge | O |
| SHR MEM / (SHARED_MEMORY_WRITE) | Shared Memory Display | O |
| CHR MEN / (CHAR_MENU) | Characteristics Menu | O |
| CHR GRP / (CHAR_GRP_MENU) | Characteristics Group Menu | O |

**Table 3-10. Application Program Names and Definitions (Cont'd)**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| REV REQ / (REVIEW_REQUEST) | Point Review Request | O |
| PNT REV / (PNT_REV_REQUEST) | Point Review Display | O |
| BUB DIR / (BUBBLE_DIR) | Bubble Directory Display | O |
| ENBL 1 / (ENABLE_1DROP) | Enable One Drop | U |
| ENBL ALL / (ENABLE_ALLDROPS) | Enable All Drops | U |
| ALM LIST / (ALRM_LIST_MAIN) | Alarm List Key | O |
| ALM HIST / (ALRM_HIST_MAIN) | Alarm Display Key | O |
| PRIORITY / (PRIORITY_KEY) | Priority Mode Key | O |
| NORMAL / (NORMAL_KEY) | Normal Mode Key | O |
| INIT PRI / (INIT_PRI_DEST) | Display Current Priority/Destination | O |
| SET PRI / (SET_PRI_DEST) | Set Current Priority Destination | O |
| FILTERS / (FILTER_DEFAULT) | Set Filters to Default | U |
| DUMP PRT / (DUMP_PRINT) | Skip Alarm Printing | U |
| ADD GRPT / (ADD_GRPT) | Add Point to Group | O |
| DISP EF / (DISP_EFDATE) | Display Entry Field Data | O |
| SEND GM / (SEND_GENMSG) | Send General Message-Standard Diagrams | O |
| AUD ACK / (AUDIBLE_ACK) | Audible Acknowledge | O |
| REV TOGL /(TOGGLE_CRT_PRT) | Review Print/CRT Toggle | O |
| CAN PRT / (CANCEL_PRT) | Cancel Printout | O |
| CRT1DISP / (CRT1_DISP_DIAG) | New Keyboard - Display Diagram CRT1 | O |
| CRT2DISP / (CRT2_DISP_DIAG) | New Keyboard - Display Diagram CRT2 | O |
| SEND CA / (SEND_CA) | Generic Send Change Attributes - Standard Diagrams | U |
| TOGL CRT / (TOGGLE_CRT) | Toggle Between Main/Aux. CRT | O |

**Table 3-10. Application Program Names and Definitions (Cont'd)**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| COPY / (GRAPHICS_PRINT) | Print Currently Displayed Screen | O |
| BTCH PK / (BATCH_POKE) | Set Up Poke for Batch Step Tracking | O |
| FRC VALU / (FORCE_VAL) | Force Ladder Contract Values | U |
| CLR FRC / (CLEAR_PORCE) | Clear Forced Values | U |
| CLR ALL/ (CLEAR_ALL) | Clear ALL Forced Values | U |
| SEND GM / (SEND_GENMSG) | See Program 67 - Custom Diagrams | |
| DEL GRPT / (DELETE_GRPPT) | Delete Point From a Group | U |
| SBA / (ENAB_DISAB_SBA) | Enable/Disable SBA Output | U |
| STP TRAV / (STOP_TRAVEL) | Stop Travel for VC Records | O |
| TRIP ACK / (TRIP_ACK) | Trip Acknowledge for VC Records | O |
| CTL TUNE / (CNTL_TUNE) | Tune From M/A Station | U |
| CTL PCPK / (CNTRL_PC_POKE) | Control PC Poke | O |
| SEND GM / (SEND_GENMSG) | Send General Message-Standard Diagrams | O |
| SEND CA | Generic Send Change Attributes - Standard Diagrams | U |
| NULL / (NULL_PRGM) | Not Used | O |
| DDC / (DDC_MODE) | Set DDC Mode | O |
| SUPV / (SUPV_MODE) | Set Supervisory Mode | O |
| CASC / (CASC_MODE) | Set Cascade Mode | O |
| CRT1 KBD / (CRT1_KEYBD) | New Keyboard - Activate CRT1 | O |
| CRT2 KBD / (CRT2_KEYBD) | New Keyboard - Activate CRT2 | O |
| SND CAEV / (SEND_CA_EV) | Generic Change Attributes with Event Message - Standard Diagrams | U |
| SND CAEV / (SEND_CA_EV) | Generic Change Attributes with Event Message-Custom Diagrams | O |
| CLR GPMQ / (CLEAR_GPM_QUEUES) | Clears Operator Station Internal Table | O |

**Table 3-10. Application Program Names and Definitions (Cont'd)**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| DEL FILE / (DELETE_BUBBLE_FILE) | Delete a file from Mass Memory | O |
| TOKN DIS / (TOKEN_DISPLAY) | Display Drop Number, Token Value and Status Message for Drop that Sent Data Highway Message. | O |
| DISPTRND / (DISP_TREND_LIMITS) | Fills in the temporary trend limits subscreen | O |
| ENBL TMP / (ENAB_DISAB_TEMP_LIMITS) | Enables/Disables temporary trend limits | O |
| TEMP LIM / (TEMP_TREND_LIMITS) | Stores temporary trend limits | O |
| PKEY PAG / (PKEY_PAGE_CMD) | Diagram/Group from Pkey | O |
| TRNDHIST / (DISPLAY_HIST_PAGE) | Display trend history page | O |
| WIND CMD / (WINDOW_CMD_PROC) | Process Window Key Commands | O |
| WINDFKEY / (WINDOW_FUNC_KEY) | Display window defined by FUNC_KEY | O |
| EF DIAG / (EF_DIAG_DISP) | Display diag/group from entry field | O |
| EF WIND / (DISP_EFDATA) | Display Entry Field Data | O |
| DEVRESET / (DEVICE_RESET_CMD) | Reset Alternative Station Devices | O |
| DIGENTRY / (XPID_DIGITAL) | Emulates DES/DEO Function | O |
| EXECTRIG / (EXEC_TRIGGER) | Calls Trigger from Poke or P-Key | O |
| PKEYS1-8 / (CNTRLBITS) | Sets control bits 0-7 from poke | O |
| WIN DEL / (WINDOW_DELETE) | Deletes a window from poke | O |
| ALM REV / (ALARM_PNT_REV) | Points in review from custom key | O |
| REM MBR / (REMMBR_CMD_PROC) | Remote MBR Mode | O |
| ALM LST2 / (ALRM_LIST_2) | Alarm List second page | O |

**Table 3-10. Application Program Names and Definitions (Cont'd)**

| Field Name/Actual Program Name | Description | Default |
|---|---|---|
| ALM_HST2 / (ALRM_LIST_2) | Alarm History second page | O |
| CHTIMEEF / (CHTIMEEF) | Update time with query | O |
| CHTIMESD / (CHTIMESD) | Update time with query | O |
| TIMETRIG / (TIMETRIG) | Update time with query | O |

## Locking Out Application Programs

When a program has been "locked-out" for a particular Classic Drop, one of the following messages will be displayed:

"Invalid Key Mode" or "Function Disabled"

### Caution

**The user must be certain not to lock-out an Application Program that might disrupt the operation of other Application Programs.**

**The following rules must be observed regarding disabling or locking-out Application Program:**

**1. Never disable the CHANGE DIAGRAM program. If this program is disabled, many standard menus and diagrams will not function and Mass Memory may have to be reformatted.**

**2. Never disable the DOWNLOAD program. If this program is disabled, you will be unable to load diagrams and execute other Station functions.**

**3. Only change the keyswitch modes of the programs listed in Table 3-11. Changing the keyswitch mode of other programs could cause the loss of Station functions and the ability to communicate with other WDPF drops.**

Table 3-11 lists those Application Programs which can safely be changed from the default mode selection. Refer to the "WDPF Graphics Reference Manual" (U0-0286) for detailed explanations on each Application Program.

**Table 3-11. Application Programs That May be Safely Locked Out.**

| Field Name | Description |
|---|---|
| PNT D.E. | Point data Entry Subscreen Display |
| CHG SCAN | Change Scan Status |
| TUN DISP | Tuning Display |
| CHG ALRM | Change Alarm Status |
| CHG VALU | Change Value |
| CHG LIM | Change Limits |
| DIGITON | Set Digital On |
| DIGITOFF | Set Digital Off |
| UPDTTIME | Update time and Date |
| ENBL 1 | Enable One Drop |
| ENBL ALL | Enable All Drops |
| DUMP PRT | Skip Alarm Printing |
| CRT1DISP | Display Diagram on CRT1 |
| CRT2DISP | Display Diagram on CRT2 |
| TOGL CRT | Toggle between Main and Auxiliary CRT |
| COPY | Print Currently Displayed Screen |
| FRC VALU | Force Ladder Contact Values |
| CLR FRC | Clear Forced Values |

**Table 3-11. Application Programs That May be Safely Locked Out. (Cont'd)**

| Field Name | Description |
|---|---|
| CLR ALL | Clear All Forced Values |
| CRT1 KBD | Activate CRT1 |
| CRT2 KBD | Activate CRT2 |
| CLR GPMQ | Clear Station Internal Table |
| DEL FILE | Delete a File from Mass Memory |
| TOKN DIS | Display Drop Number, Token Value and Status Message from Drop that send Data Highway Message. |
| ALM LST2 | Alarm List Second Page |
| ALM HST2 | Alarm History Second Page |

## 3-8.6. Operator Keys Configuration

The Operator Keys configuration screen is used to select the keys which are available to each password level.

The Operator Keys configuration screen is only used when configuring Classic Drops that use the Password option. The Password option is enabled by default. It may be disabled by selecting the **-p** option at startup.

1. Select the OPERATOR KEYS option from the Configuration Category to display the Operator Keys configuration window as shown in Figure 3-19.

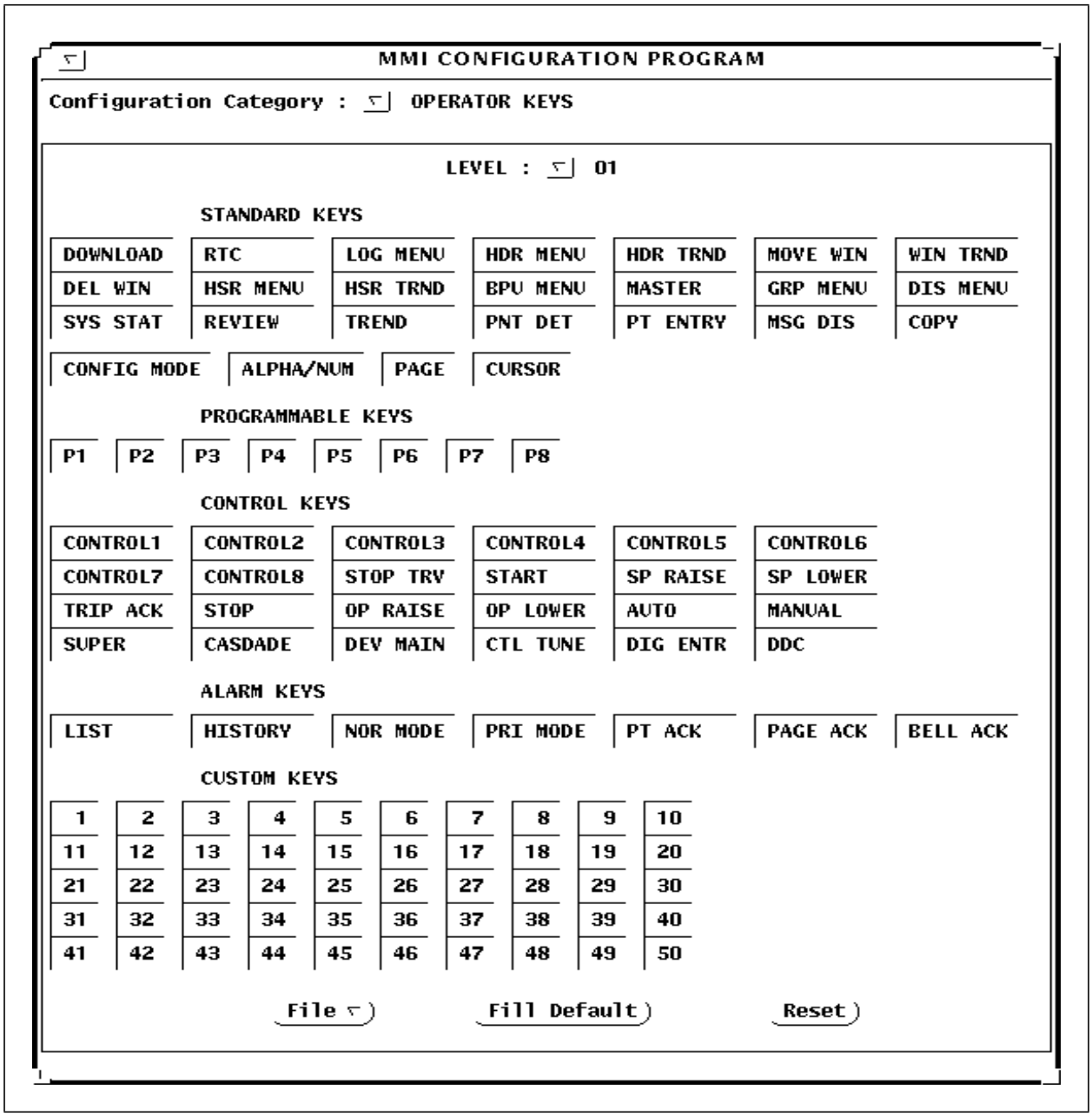



**Figure 3-19. Operator Keys Configuration Window**

The Configuration Category is a pulldown menu which lists the available configuration screens; CRT, Printer, Application Programs, Operator Keys and Password.

**Note**

Operator Keys and Password configuration screens are not available for update if the -p option was selected at startup.

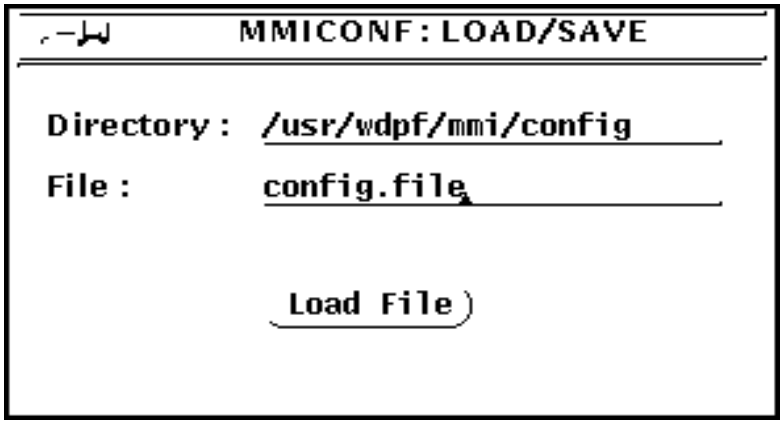
The Operator Keys may be set for each password level. A key is considered selected when it is “grayed out” or darkened.

2. Select the **Fill Default** button to set the default settings for the operator keys.

3. Select the **Reset** button to set the operator keys to the last applied settings. The settings are considered to be applied when they are saved with the **File** button during the current session.

4. The **File** button is a pulldown menu which gives the ability to LOAD and SAVE a configuration file.

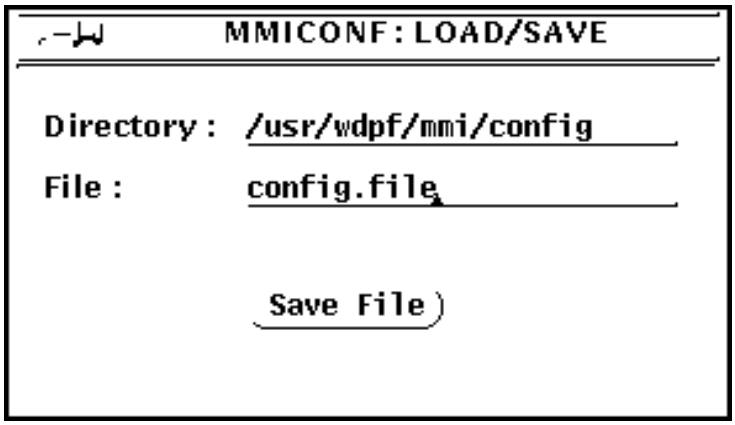
   Select the **Load** button from the **File** pulldown menu to display the window as shown below.




5. Specify the directory in which the configuration file resides and the name of the configuration file to load.

6. Select the **Load File** button to load the configuration file into the configuration screen.

7. Select the **Save** button from the **File** pulldown menu to display the window as shown below.




8. Specify the directory in which the configuration file is to be saved and the name of the configuration file to save.

9. Select the **Save File** button to save the values from the configuration screen in the specified configuration file.

## 3-8.7. Password Configuration

The PASSWORD configuration screen is used to configure passwords and password levels.

A password is defined as a set of characters (up to eight) which identify a specific user. As many as fifty different user passwords may be defined. The password level associated with each password defines the set of functions available to the user.

1. Select the PASSWORD option from the Configuration Category to display the PASSWORD configuration window as shown in Figure 3-20.

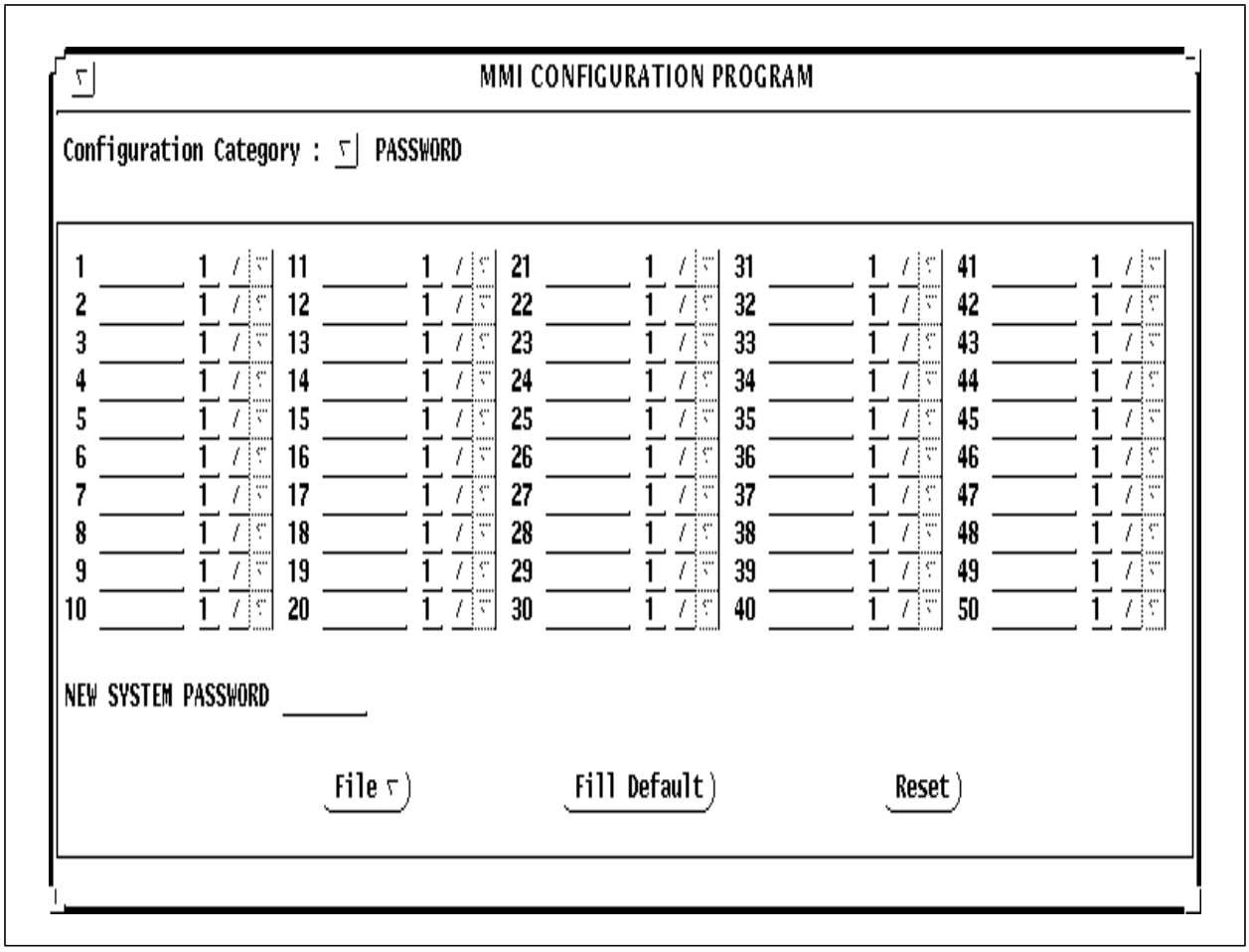



**Figure 3-20. Password Config Window**

2. Enter a password in each entry field and set the corresponding password level with the up/down arrows.

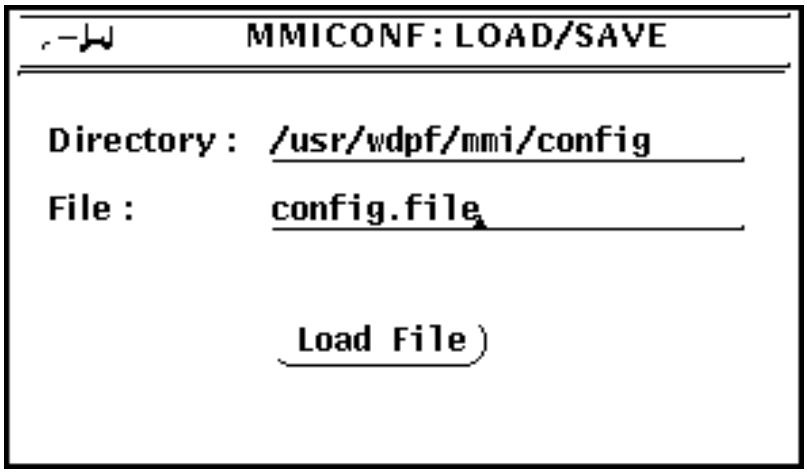
A system password may be entered in the NEW SYSTEM PASSWORD entry field which will have access to all functions. This password may be up to eight uppercase, alphabetic characters. The system password must include at least one non-blank character. When entering the system password an asterik (*) will appear for each character entered in order to hide the password.

3. Select the **Fill Default** button to clear the password entry fields.

4. Select the **Reset** button to set the password entry fields to the last applied values. The values are considered to be applied when they are saved with the **File** button during the current session.

5. The **File** button is a pulldown menu which gives the ability to LOAD and SAVE a configuration file.

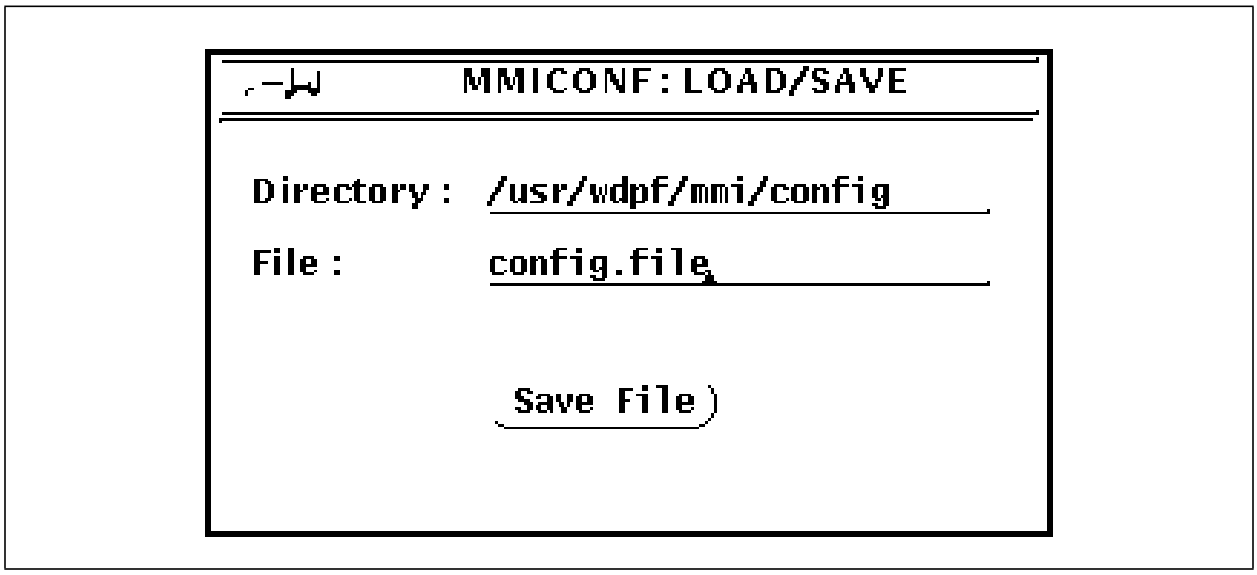
   Select the **Load** button from the **File** pulldown menu to display the window as shown below.




6. Specify the directory in which the configuration file resides and the name of the configuration file to load.

7. Select the **Load File** button will load the configuration file into the configuration screen.

8. Select the **Save** button from the **File** pulldown menu to display the window as shown below




9. Specify the directory in which the configuration file is to be saved and the name of the configuration file to save.

10. Select the **Save File** button to save the values from the configuration screen in the specified configuration file.

## 3-8.8. Diagnostics

**Table 3-12. MMICONF Error Messages**

| Error Message | Description |
|---|---|
| Invalid MMICONF file detected | The MMICONF file is incomplete or the header of the MMICONF file is incorrect. Try loading another configuration file. |
| Invalid MMICONF file detected<br>File has passwords enabled | The MMICONF file shows passwords are enabled and the MMICONF program is running with passwords disabled. |
| Invalid MMICONF file detected<br>File has passwords disabled | The MMICONF file shows passwords disabled and the MMICONF program is running with passwords enabled. |
| Couldn’t load file: ‘errno error msg’ | An error occurred opening or reading the MMICONF file for loading. ‘errno error msg’ is an additional error message based on the errno.<br><br>See your System Administrator or Westinghouse Representative. |
| Couldn’t save file: ‘errno error msg’ | An error occurred opening or writing to the MMICONF file for saving. ‘errno error msg’ is an additional error message based on the errno.<br><br>See your System Administrator or Westinghouse Representative. |
| Invalid value entered for ‘entry field name’ | An invalid value has been entered for the given entry field. |

# 3-9. GRPHLST

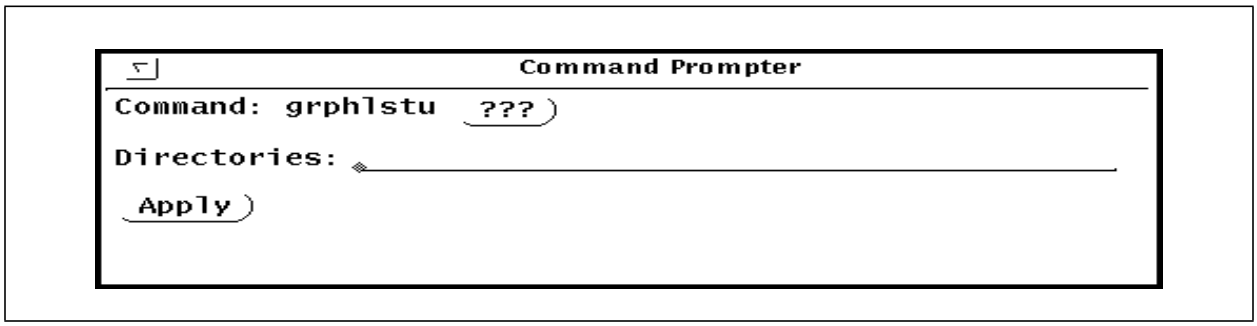
## 3-9.1. Overview

GRPHLST creates batch and data files for use by the GRAPH program in the DOS emulator.

The user enters the names of the directories to be searched. A top level batch file (**grphlstt.bat**) is created in the **/wdpf/rel/data/std_eng/data** directory. (Additional.bat and.dat files will be created in the entered subdirectories.)

## 3-9.2. Accessing GRPHLST

1. Select the **GRPHLST** button from the standard Engineers' Menu as shown in Figure 3-1. A Command Prompter window will be displayed as shown below: (the GRPHLST program is called **grphlstu** in this window)




2. Enter the directories to be searched in the Command Prompter window entry field.

**Note**

The directories entered must be relative to the directory
**/wdpf/rel/data/std_eng/data**

**For Example:**
If the user would enter the following in the Directories entry field:
**. stat diag**
This program would create a batch file to compile all diagrams in the following directories:
**/wdpf/rel/data/std_eng/data**
**/wdpf/rel/data/std_eng/data /stat**
**/wdpf/rel/data/std_eng/data /diag**

The following message and prompt will appear:

```
Enter the shape library name or <CR> for default:
```

3. Enter a shape library name or press <**Return**> for the default shape library name.

**Note**

- When prompted for input files such as the shape library, enter the files as seen from the SoftWindows emulator (example: K:color.lib).
- If defining a sub directory do not put a slash after the K: Use the forward slash '/' instead of the backslash '\'.
- The **grphlstu** program will convert from forward slashes to backslashes in the files that are created (for example K:libs/color.lib)

The following message and prompt will appear:

```
Enter the color library name or <CR> for default:
```

4. Enter a color library name or press <**Return**> for the default color library name:
   The following message and prompt will appear:

   ```
   Enter the point director name or <CR> for default:
   ```

5. Enter a point directory name or press <**Return**> for the default point directory name:
   The following message and prompt will appear:

   ```
   Create listing file (Y/N)? <CR> = No
   ```

6. If (Y) is entered, a list file will be generated containing the names, diagram numbers, and types (MAIN, SUBSCREEN, or WINDOW) of the graphics found in the specified directories.
   If (N) is entered, a list will not be generated.

7. After the user enters '**Y**' or '**N**', the following prompt will appear:

   ```
   Delete.LST files (Y/N)? <CR> = Yes
   ```

8. Answering (Y)to this question will save space on the disk. However, all.LST files will be deleted from the disk initially, regardless of the answer given. If ‘YES’ is entered (to the ‘delete.LST files’ prompt), the new.LST files generated (when the GRAPH submit file is submitted) will be deleted also.

   If (N) is entered the.LST files will be deleted. However, newly created.Lst files will not be deleted.

   If any errors occur during compilation of the graphics, and the.LST files are deleted, it will be necessary to recompile the files to obtain a listing of errors.

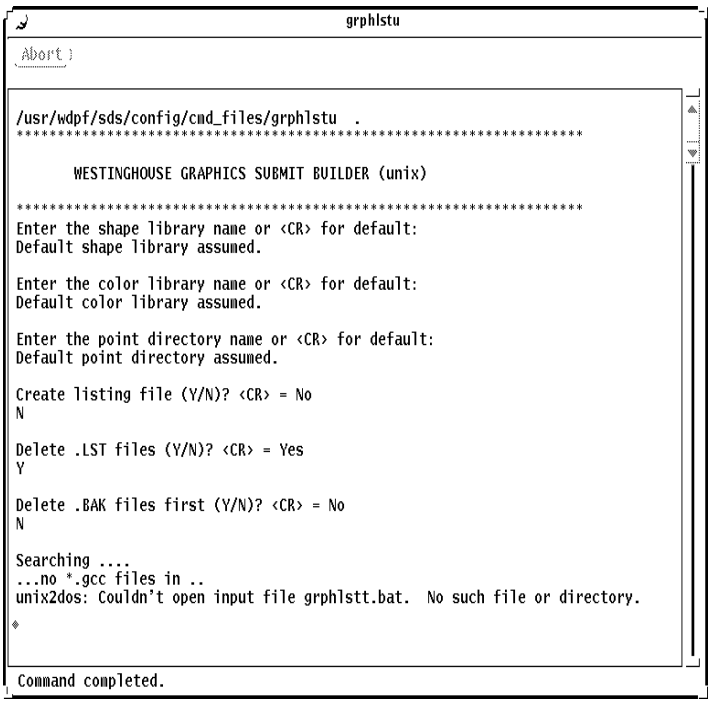
9. After the user enters ‘**Y**’ or ‘**N**’, the following prompt will appear:

   ```
   Delete.BAK files first (Y/N)? <CR> = No
   ```

10. Answering ‘Yes’ to this question will save space on the disk and the backup files will be deleted.

11. After the user enters ‘Y’ or ‘N’, the specified directories are searched for.GCC files (any other files present in the directories will be ignored). If no GCC files are found, no submit files are created.

12. Refer to the following display for an example of the **grphlstu** prompts.



13. Using the .bat file

To use the grphlstt.bat file created, perform the following steps.

- Access the SoftWindows program as described in Section 4.

- In the DOS window type:
  - cd J:\wdpf\graphics
  - K:\grphlstt.bat

# Section 4. WDPF DOS Utilities in SOFTWINDOWS

## 4-1. Accessing SoftWindows

1. Open the SDS Level IV icon and select the **Drop Functions** button.
2. From the Drop Functions Menu, select the **Standard Eng** button.
3. From the Standard Engineer Menu, select the **SoftWindows** button.

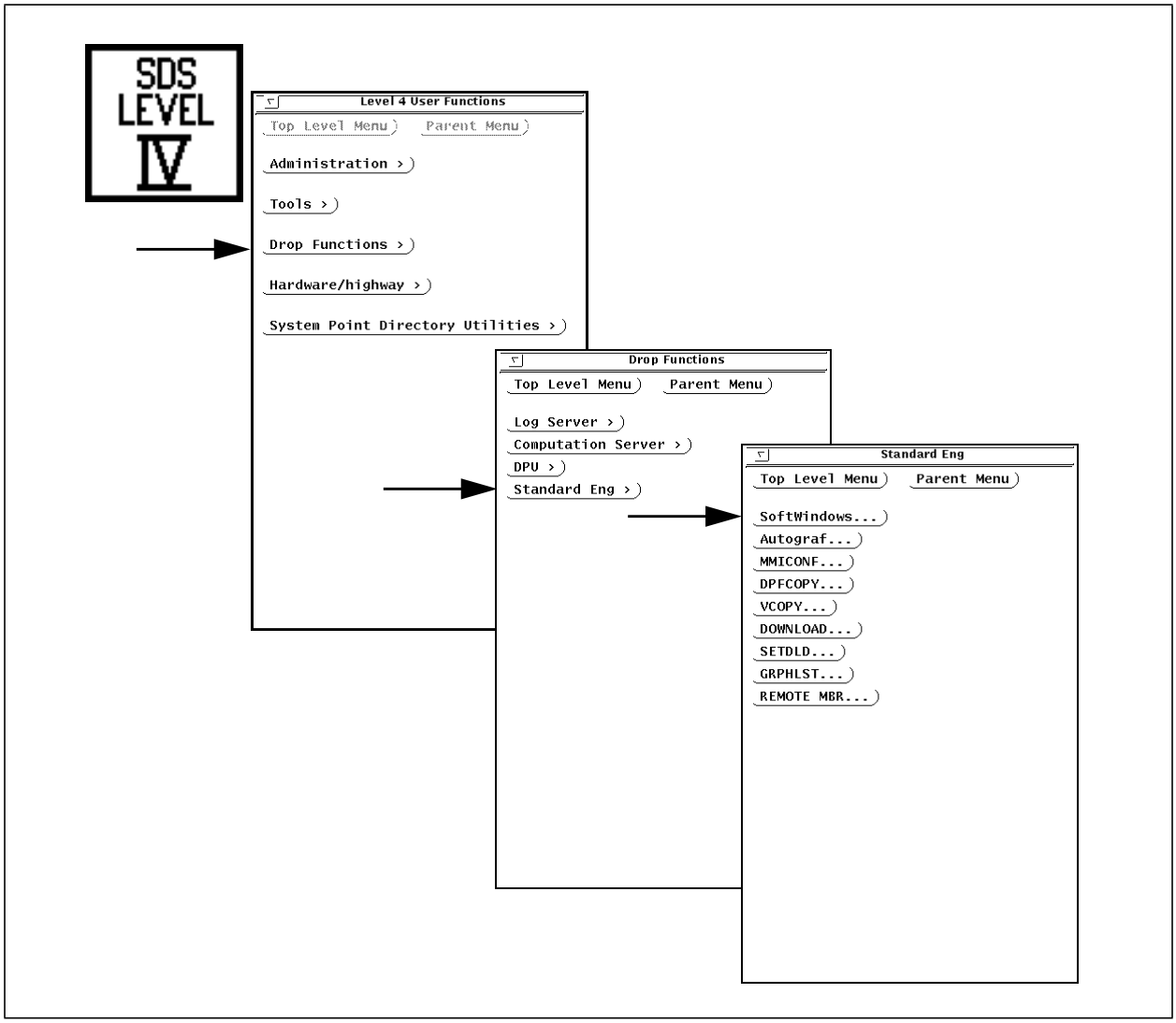
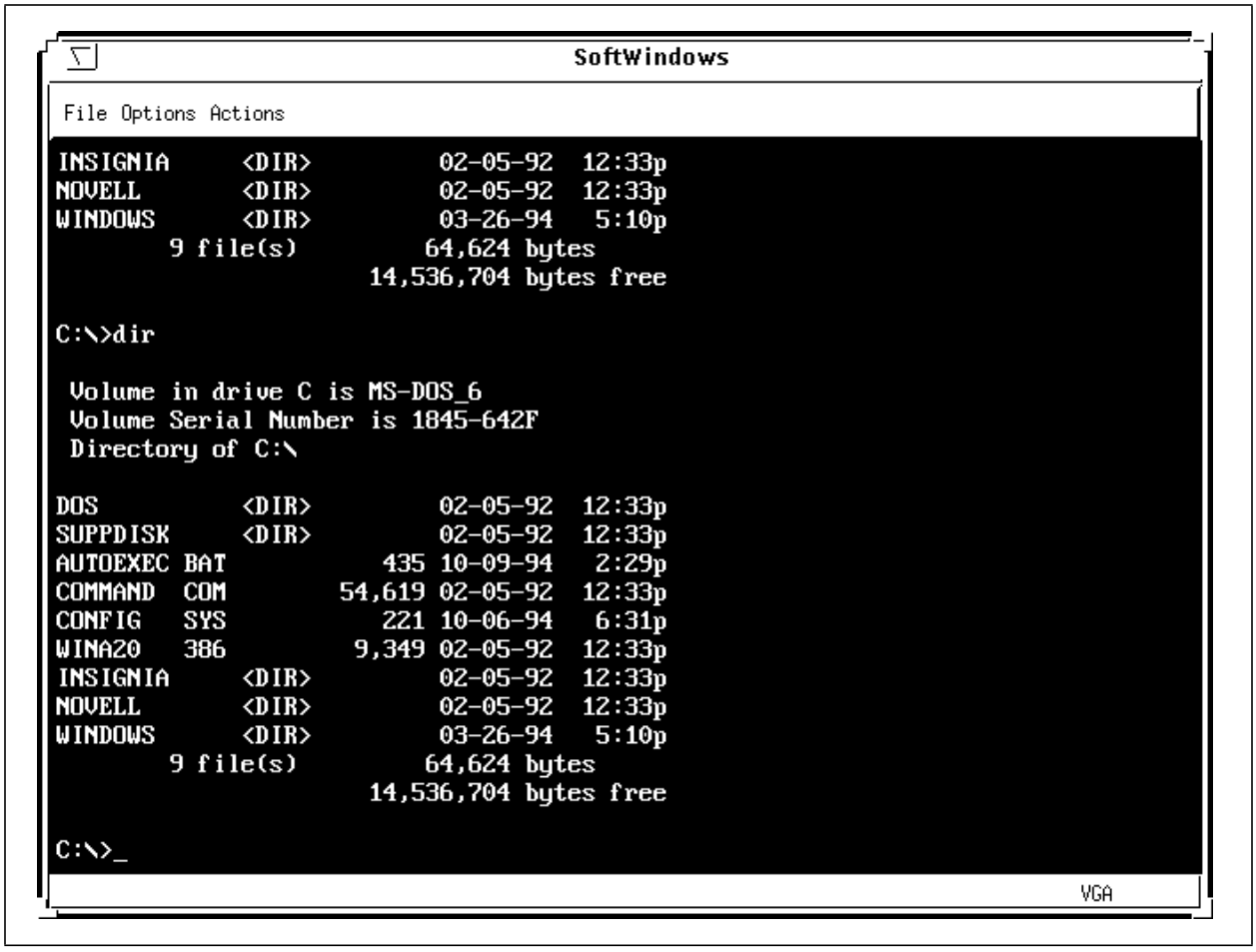



**Figure 4-1. Menus for Accessing SoftWindows**

A SoftWindows window will be displayed as shown below.




The SoftWindows window emulates an MS-DOS screen on an IBM-compatible Personal Computer. Any MS-DOS commands can be used in SoftWindows.

The following WDPF DOS utilities are supported by SoftWindows. Other WDPF DOS utilities are available but are not guaranteed to work in SoftWindows.

**Note**

1. Due to the differences in Operating systems, filenames being used across platforms may appear in upper or lower case letters.
2. DOS filenames will be truncated to eight characters.
3. When printing certain DOS Utilities the user should not select LPT1 for the Print Filename. Save to a file and print in UNIX. Example:

   **lpr -P printername filename**

- PNTDIR
- CHARMOD
- MMIDIR
- KEY
- GRAPH
- GTRANS
- GROUP
- SCOM
- TCOM
- TTRANS
- GSHOW
- HWYERR
- NULCHK

Refer to "PCH General Utilities User's Guide" (U0-2415) and "PCH Graphics Utilities User's Guide" (U0-2465) for information on using the WDPF DOS Utilities.