Worldwide Response Center

HP 3000 APPLICATION NOTE #63

Configuring Telesupport Modems

For

MPE V/E Systems

HEWLETT PACKARD

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RESPONSE CENTER APPLICATION NOTES

HP 3000 APPLICATION NOTES *are published by the Worldwide Response Center and are distributed with the Software Status Bulletin. These notes address topics where the volume of calls received at the Center indicates a need for addition to or consolidation of information available through HP support services.*

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Configuring Telesupport Modems For MPE V/E Systems

Introduction

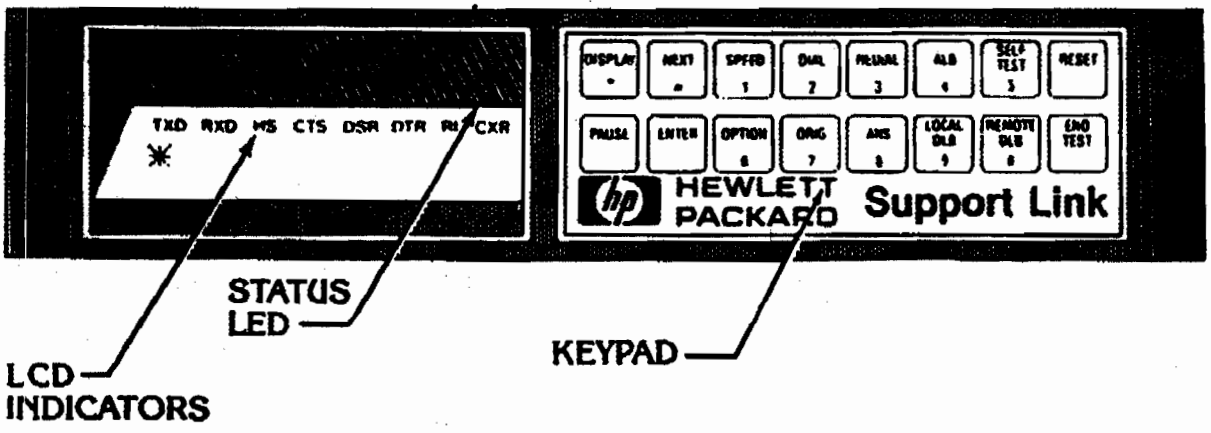
This Application Note discusses the recommended configuration for the supported modems on ATP and ADCC ports. Included is information on the I/O configuration of the port and how to configure each of the supported modems:

- SUPPORT LINK
- SUPPORT LINK II
- HP37212B
- HAYES SMARTMODEM 1200

The HP37212A, RACAL VADIC VA3450 and VA3451 are also supported in some cases, but are not discussed in this Application Note. Also, not addressed in this Application Note is the HP50759A, which is the newest telesupport modem from Hewlett-Packard. Contact the Response Center for more details about any of these modems.

Diagrams of the four modems are included for your reference:

SUPPORT LINK



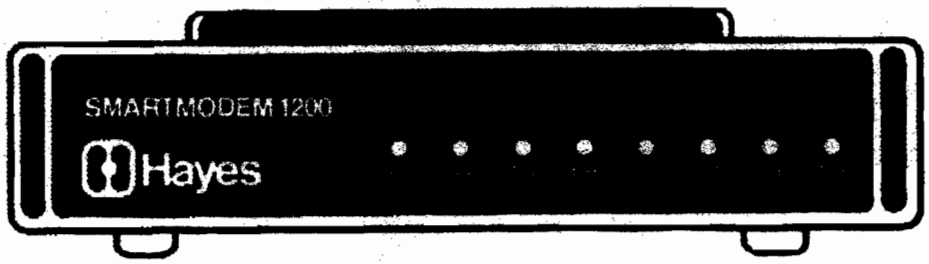
Support Link Front Panel

SUPPORT LINK II

HP 37212B Front Panel

LED INDICATOR LIGHTS

The front panel of the Smartmodem 1200 contains eight indicator lights that permit a visual check of the modem's status



From right to left, the indicator lights are:

MR = Modem Ready
TR = Terminal Ready
SD = Send Data
RD = Receive Data
OH = Off Hook
CD = Carrier Detect
AA = Auto-Answer Mode
HS = High Speed (1200 bps)

CONFIGURING THE SYSTEM

The system should be configured as follows:

(If you have a Series 64, 68, or 70, refer to the section of this Application Note entitled CONFIGURING THE SERIES 64, 68 OR 70.)

	LOG DEV #	DRT #	CHAN	TYPE	SUB TYPE	TERMINAL TYPE	SPEED	REC WIDTH	OUTPUT DEV	MODE	DRIVER NAME	DEVICE CLASSES
ATP:	XXX	ZZZ	0	16	1	10	120	40	XXX	JAID	HIOTERM1	YYYYYY
ADCC:	XXX	ZZZ	0	16	1	10	120	40	XXX	JAID	HIOTERM2	YYYYYY

where: XXX is the logical device number
YYYYYY is any device class name, such as MODEM
ZZZ is the Device Reference Table number

This configuration should also be used even if HPTrend or Predictive Support are not installed on the system.

CONFIGURING THE MODEM

AUTODIAL CONFIGURATION:

(TYPE 2 CONFIGURATION for HPTrend or Predictive Support)

To configure your modem to enable HPTrend or Predictive Support to dial out automatically, use the following procedure. If HPTrend or Predictive Support is *not* installed, refer to the MANUAL DIAL CONFIGURATION section of this Application Note.

SUPPORT LINK

1. Put the modem in an IDLE state by pressing the RESET button on the front panel. The LCD (liquid crystal display) should display IDLE.
2. Press OPTION. — The LCD will display OPTION.
3. Press 1, then press ENTER. — The LCD will display 1*n (where n is the current setting of Option 1).
4. Press 3, then press ENTER. — The LCD will display OPTION again. This action will set Option 1 to a setting of 3, standard settings.
5. Press RESET. — The LCD will display IDLE.
6. Press OPTION. — The LCD will display OPTION.

7. Press 1, then press ENTER.	The LCD will display 1*n.
8. Press 2, then press ENTER.	The LCD will display OPTION. Option 1 is now set to a 2 to allow nonstandard settings.
9. Press 8, then press ENTER.	The LCD will display 8*n.
10. Press 2, then press ENTER.	The LCD will display OPTION. Option 8 is now set to a 2 to put DTR under port control.
11. Press 15, then press ENTER.	The LCD will display 15*n.
12. Press 3, then press ENTER.	The LCD will display OPTION. Option 15 is now set to a 3 to force DSR on.
13. Press 24, then press ENTER.	The LCD will display 24*n.
14. Press 2, then press ENTER.	The LCD will display OPTION. Option 24 is now set to a 2 to monitor CD.
15. If your telephone system only uses PULSE (ROTARY) dialing:	
Press 22, then press ENTER.	The LCD will display 22*n.
Press 1, then press ENTER.	The LCD will display OPTION. Option 22 is now set to a 1 for Pulse dial.
16. If your telephone system uses TONE (Touchtone) dialing:	
Press 22, then press ENTER.	The LCD will display 22*n.
Press 2, then press ENTER.	The LCD will display OPTION. Option 22 is now set to a 2 for Tone dial.
17. Press Reset.	The LCD will display IDLE.

SUPPORT LINK II

1. Attach the modem to an HP terminal with a straight through RS-232 cable such as the 13242N or the 40242M cable.

2. Set the terminal to 1200 BAUD.

3. Press the VOICE/DISC button to put the modem in IDLE mode. The LEDs that should be on are DTR, HS and TST.

4. On the terminal, hold down CONTROL and type E.

5. Press RETURN. The terminal will display:
   HELLO I AM READY
   *

6. Type O (the letter O) and press RETURN. The terminal will display:
   *OPTION NUMBER (CR=QUIT, M=MENU)-->

7. Type 1 and press RETURN. The terminal displays:
   1. STD OPTIONS (Y=1, N=2)

8. Type 2 and press RETURN. This sets Option 1 to a 2 (allows nonstandard settings). The terminal displays:
   *OPTION NUMBER (CR=QUIT, M=MENU)-->

9. Type 8 and press RETURN. The terminal displays:
   8. DTR FORCE ON (Y=1,N=2)

10. Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT,M=MENU)-->
    This sets Option 8 to a 2 to put DTR under port control.

11. Type 15 and press RETURN. The terminal displays:
    15. DSR CONTROL OPT (1-3)

12. Type 3 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->
    This sets Option 15 to a 3 to force DSR on.

13. If your telephone system only uses Pulse (Rotary) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 3 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

14. If your telephone system uses Tone (Touchtone) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

15. Press RETURN to exit the configuration menu.

16. Type I and press RETURN to put the modem in idle mode.

HP37212B

The HP37212B is supported for autodial with Predictive Support version A.02.03 or greater. For version A.01.00, the modem is supported if you have PMNXFRDP. HP05093A and PUTXFRDM.HP05093A with versions of A.02.A2. Your Customer Engineer can provide these versions.

The HP37212B is *not* supported for HPTrend unless you have installed patch BV10 which is available from the Response Center.

1. The DIP switches on the rear of the modem must be set as follows:
   Switch 3 is closed (Closed is UP or 1). HP computer mode.
   Switch 12 is closed. DTR behaves to RS-232 definition.
   All other switches are open. (Open is DOWN or 0).

2. Push in the Auto Answer button on the front panel.

3. Push in the SPEED button on the front to select 2400 BAUD if you desire.

4. The LOOPBACK button should not be pushed in.

5. When the modem is powered up and connected to the port, the following LEDs should be lit:

   ON
   DTR
   2400 (if the SPEED button has been toggled)

HAYES SMARTMODEM 1200

The Hayes 1200 Smartmodem is supported for autodial with Predictive Support, version A.02.03 or greater. It is *not* supported with HPTrend.

1. Power off the modem and unplug it.

2. Pull off the front cover of the modem with a screwdriver.

3. Set the DIP switches as follows:

SWITCH	SETTING	PURPOSE
1	up	DTR lead is supported
2	up	Result Code is in words
3	up	No result codes are sent
4	up	Commands are echoed
5	up	Auto Answer is on
6	down	CD is forced on
7	up	Single Line
8	down	Command Recognition is Enabled
9	up	BELL standard protocol
10	down	Reset when DTR makes an ON to OFF transition

4. Plug the modem in and power it up.

5. When the modem is plugged into the port, the following LEDs should be on:

   HS
   AA
   TR
   MR

MANUAL DIAL CONFIGURATION:

(TYPE 1 CONFIGURATION for HPTrend or Predictive Support)

To configure the modems for manual dial for HPTrend or Predictive Support, use the following procedure. This configuration should also be used even if HPTrend or Predictive Support are *not* installed on the system.

SUPPORT LINK

1.	Put the modem in an IDLE state by pressing the RESET button on the front panel. The LCD (liquid crystal display) should display IDLE.	
2.	Press OPTION.	The LCD will display OPTION.
3.	Press 1, then press ENTER.	The LCD will display 1 * n (where n is the current setting of Option 1).
4.	Press 3, then press ENTER.	The LCD will display OPTION again. This action will set Option 1 to a setting of 3, standard settings.
5.	Press RESET.	The LCD will display IDLE.
6.	Press OPTION.	The LCD will display OPTION.
7.	Press 1, then press ENTER.	The LCD will display 1*n.
8.	Press 2, then press ENTER.	The LCD will display OPTION. Option 1 is now set to a 2 to allow nonstandard settings.
9.	Press 8, then press ENTER.	The LCD will display 8*n.
10.	Press 2, then press ENTER.	The LCD will display OPTION. Option 8 is now set to a 2 to put DTR under port control.
11.	Press 15, then press ENTER.	The LCD will display 15*n.
12.	Press 2, then press ENTER.	The LCD will display OPTION. Option 15 is now set to a 2 to set DSR off in test mode.
13.	Press 24, then press ENTER.	The LCD will display 24*n.
14.	Press 2, then press ENTER.	The LCD will display OPTION. Option 24 is now set to a 2 to monitor CD.
15.	If your telephone system only uses Pulse (Rotary) dialing: Press 22, then press ENTER.	The LCD will display 22*n.

	Press 1, then press ENTER.	The LCD will display OPTION. Option 22 is now set to a 1 for Pulse dial.
16.	If your telephone system uses Tone (Touchtone) dialing:	
	Press 22, then press ENTER.	The LCD will display 22*n.
	Press 2, then press ENTER.	The LCD will display OPTION. Option 22 is now set to a 2 for Tone dial.
17.	Press RESET.	The LCD will display IDLE.

SUPPORT LINK II

1. Attach the modem to an HP terminal with a straight through RS-232 cable such as the 13242N or the 40242M cable.

2. Set the terminal to 1200 BAUD.

3. Press the VOICE/DISC button to put the modem in IDLE mode. The LEDs that should be on are DTR, HS, and TST.

4. On the Terminal, hold down CONTROL and type E.

5. Press RETURN. The terminal will display:
   HELLO I AM READY
   *

6. Type O (the letter O) and press RETURN. The terminal will display:
   *OPTION NUMBER (CR=QUIT, M=MENU)-->

7. Type 1 and press RETURN. The terminal displays:
   1. STD OPTIONS (Y=1, N=2)

8. Type 2 and press RETURN. This sets Option 1 to a 2 (allows nonstandard settings). The terminal displays:
   *OPTION NUMBER (CR=QUIT, M=MENU)-->

9. Type 8 and press RETURN. The terminal displays:
   8. DTR FORCE ON (Y=1, N=2)

10. Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->
    Option 8 is now set to a 2 to put DTR under port control.

11. Type 15 and press RETURN. The terminal displays:
    15. DSR CONTROL OPT (1-3)

12. Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->
    Option 15 is now set to a 2 to set DSR off in test mode.

13. If your telephone system only uses Pulse (Rotary) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 3 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

14. If your telephone system uses Tone (Touchtone) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

15. Press RETURN to exit the configuration menu.

16. Type I and press RETURN to put the modem in IDLE mode.

HP37212B

1. The DIP switches on the rear of the modem must be set as follows:

   Switch 3 is closed (Closed means UP or 1). (HP computer mode)
   Switch 11 is closed. (DSR/CTS/CD behaves to RS-232 definition
   Switch 12 is closed. (DTR behaves to RS-232 definition)
   All other switches are open (Open means DOWN or 0).

2. Push in the Auto Answer button on the front panel.

3. Push in the SPEED button on the front to select 2400 BAUD if you desire. HPTrend can only use 1200 BAUD.

4. The LOOPBACK button should not be pushed in.

5. When the modem is powered up and connected to the port, the following LEDs should be lit:

   ON
   DTR
   2400 (if the SPEED button has been toggled)

6. For Predictive Support, insert the following line in the JCL for PredictA, PredictJ, Firstrun, and PMDCTEST if you desire to manually dial the modem at 2400 BAUD:

   !setjcw BAUD, 2400

HAYES SMARTMODEM 1200

The Hayes Smartmodem 1200 *cannot* be manually dialed. Configure the modem for autodial for Predictive Support.

CONFIGURING THE SERIES 64, 68 OR 70:

For an HP 3000 Series 64, 68 or 70 system, the modem may be connected to a standard modem port via a jumper cable at the Remote Diagnostic Interface. The Remote Diagnostic Interface is in the upper right corner of the rear of the machine. See the CABLES section for details.

If the Remote Diagnostic Interface is being used in this way, the modem and the system MAY need to be configured differently. The following questions will determine if a different configuration should be used:

1. Is the system a series 64, 68, or 70?

2. Is the modem jumpered through the Remote Diagnostic Interface?

3. Do you plan to use HPTrend or Predictive Support?

4. Do you prefer NOT to power off the modem prior to entering the "RM" command to enable remote console? (This procedure is taken when the Response Center must dial in and access the system console to perform certain maintenance or diagnostic functions).

If the answer to ANY of these questions is NO, then use the configuration discussed under CONFIGURING THE SYSTEM in this Application Note. If you do not plan to use HPTrend or Predictive Support, configure the system and the modem as recommended in the MANUAL DIAL CONFIGURATION section of this Application Note.

If the answer to ALL four questions is YES, then configure the system and modem as follows:

	LOG DEV #	DRT #	C H A N	T Y P E	SUB TYPE	TERMINAL TYPE	TERMINAL SPEED	REC WIDTH	OUTPUT DEV	MODE	DRIVER NAME	DEVICE CLASS
ATP:	XXX	ZZZ	0	16	0	10	120	40	XXX	JAID	HIOTERM1	YYYYYY
ADCC:	XXX	ZZZ	0	16	0	10	120	40	XXX	JAID	HIOTERM2	YYYYYY

where: XXX is the logical device number
YYYYYY is any device class name, such as MODEM
ZZZ is the Device Reference Table number

Note that the same security considerations apply to this configuration as discussed in the SYSTEM SECURITY section of this note.

CONFIGURING THE MODEM FOR THE SERIES 64, 68 OR 70

(TYPE 3 CONFIGURATION for HPTrend or Predictive Support)

SUPPORT LINK

1.	Put the modem in an IDLE state by pressing the RESET button on the front panel. The LCD (liquid crystal display) should display IDLE.	
2.	Press OPTION.	The LCD will display OPTION.
3.	Press 1, then press ENTER.	The LCD will display 1 * n (where n is the current setting of Option 1).
4.	Press 3, then press ENTER.	The LCD will display OPTION again. This action will set Option 1 to a setting of 3, standard settings.
5.	Press RESET.	The LCD will display IDLE.
6.	Press OPTION.	The LCD will display OPTION.
7.	Press 1, then press ENTER.	The LCD will display 1*n.
8.	Press 2, then press ENTER.	The LCD will display OPTION. Option 1 is now set to a 2 to allow nonstandard settings.
9.	Press 8, then press ENTER.	The LCD will display 8*n.
10.	Press 1, then press ENTER.	The LCD display OPTION. Option 8 is now set to a 1 to force DTR on.
11.	Press 15, then press ENTER.	The LCD will display 15*n.
12.	Press 2, then press ENTER.	The LCD will display OPTION. Option 15 is now set to a 2 to set DSR off in test mode.
13.	Press 24, then press ENTER.	The LCD will display 24*n.
14.	Press 2, then press ENTER.	The LCD will display OPTION. Option 24 is now set to a 2 to monitor CD.
15.	If your telephone system only uses Pulse (Rotary) dialing: Press 22, then press ENTER. Press 1, then press ENTER.	 The LCD will display 22*n. The LCD will display OPTION. Option 22 is now set to a 1 for Pulse dial.
16.	If your telephone system uses Tone (Touchtone) dialing: Press 22, then press ENTER. Press 2, then press ENTER.	 The LCD will display 22*n. The LCD will display OPTION. Option 22 is now set to a 2 for Tone dial.
17.	Press RESET.	The LCD will display IDLE.

SUPPORT LINK II

1. Attach the modem to an HP terminal with a straight through RS-232 cable such as the 13242N or the 40242M cable.

2. Set the terminal to 1200 BAUD.

3. Press the VOICE/DISC button to put the modem in IDLE mode. The LEDs that should be on are DTR, HS and TST.

4. On the terminal, hold down CONTROL and type E.

5. Press RETURN. The terminal will display:
   HELLO I AM READY
   *

6. Type O (the letter O) and press RETURN. The terminal will display:
   *O OPTION NUMBER (CR=QUIT, M=MENU)-->

7. Type 1 and press RETURN. The terminal displays:
   STD OPTIONS (Y=1, N=2)

8. Type 2 and press RETURN. This sets Option 1 to a 2 (allows nonstandard settings). The terminal displays:
   OPTION NUMBER (CR=QUIT, M=MENU)-->

9. Type 8 and press RETURN. The terminal displays:
   8. DTR FORCE ON (Y=1, N=2)

10. Type 1 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->
    This sets Option 8 to a 1 to force DTR on.

11. Type 15 and press RETURN. The terminal displays:
    15. DSR CONTROL OPT (1-3)

12. Type 2 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->
    This sets Option 15 to a 2 set DSR off in test mode.

13. If your telephone system only uses Pulse (Rotary) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 3 and press RETURN. The terminal displays:
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

14. If your telephone system uses Tone (Touchtone) dialing:
    Type 22 and press RETURN. The terminal displays:
    22. TONE/PULSE OPT (1-3)
    Type 2 and press RETURN. The terminal displays;
    *OPTION NUMBER (CR=QUIT, M=MENU)-->

15. Press RETURN to exit the configuration menu.

16. Type I and press RETURN to put the modem in IDLE mode.

HP37212B

The HP37212B is supported for autodial for Predictive Support version A.02.03 or greater. Version A.01.00 is supported with the modem if PMNXFRDP.HP05093A and PUTXFRDM.HP05093A is A.02.A2. Your Customer Engineer can provide these versions.

The HP37212B is not supported for autodial for HPTrend without the BV10 patch. This patch is available from the Response Center.

1. The DIP switches on the rear of the modem must be set as follows:
   Switch 3 is closed (Closed means UP or 1). (HP computer mode.)
   Switch 11 is closed. (DSR/CTS/CD behaves to RS-232 definition, DTR is forced on).
   All other switches are open. (Open means DOWN or 0).

2. Push in the AUTO ANSWER button on the front panel.

3. Push in the SPEED button on the front panel to select 2400 BAUD if you desire.

4. The LOOPBACK button should not be pushed in.

5. When the modem is powered up and connected to the port, the following LEDs should be lit:

   ON
   DTR
   2400 (if the SPEED button has been toggled)

HAYES SMARTMODEM 1200

The Hayes Smartmodem is supported for autodial with Predictive Support, version A.02.03 or greater. It is *not* supported with HPTrend.

1. Power off the modem and unplug it.

2. Pull off the front cover of the modem with a screwdriver.

3. Set the DIP switches as follows:

SWITCH	SETTING	PURPOSE
1	down	DTR is forced on
2	up	Result Code is in words
3	up	No result codes are sent
4	up	Commands are echoed
5	up	Auto Answer is on

6	up	CD is not forced on
7	up	Single line
8	down	Command recognition is Enabled
9	up	BELL standard protocol
10	down	Reset when DTR makes ON to OFF transition.

4. Plug the modem in and power it up.

5. When the modem is plugged into the port, the following LEDs should be on:

   HS
   AA
   TR
   MR

SYSTEM SECURITY

If you configure the modems for Autodial, this will affect the system's security. If the phone connection is broken before "BYE" is typed, the session may remain active and the next person who dials in could be connected to the same session. To maintain system security you could:

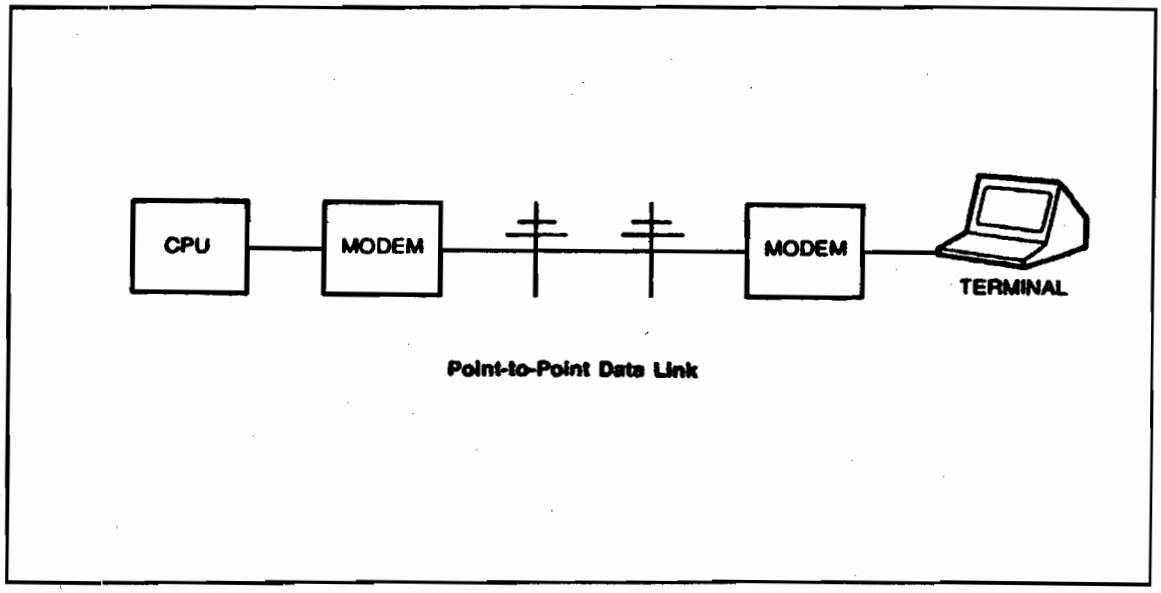
- Disconnect or turn off the modem before and after a session.
- Use the REFUSE and ACCEPT commands to control access to the modem port. Enter the REFUSE command at the end of each session and the ACCEPT command before the start of a new session.

HPTrend and Predictive Support are the only supported applications that can autodial a modem on the HP 3000. Other applications involving programmatic autodial are unsupported due to the security considerations discussed above.

CABLES

Modem to System Cable:

All HP modems are shipped with a 30062B modem cable. This cable is a nonsymmetrical cable. One end of the cable is labeled DATASET and must be connected to the modem. The other end of the cable is labeled COMPUTER and must be connected to the computer system.



Point-to-Point Data Link

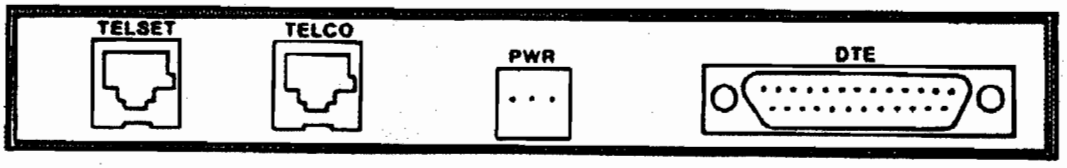
Phone Jack to Modem Cable:

The phone cable (RJ-11 cable) is connected to the phone jack on one end and to the modem on the other end. Use this chart to determine where the phone cable should be connected on the modem.

MODEM	MODEM PHONELINE CONNECTOR
Support Link	TELCO
Support Link II	TELLINE
HP37212B	US TELCO
HAYES 1200	TO LINE

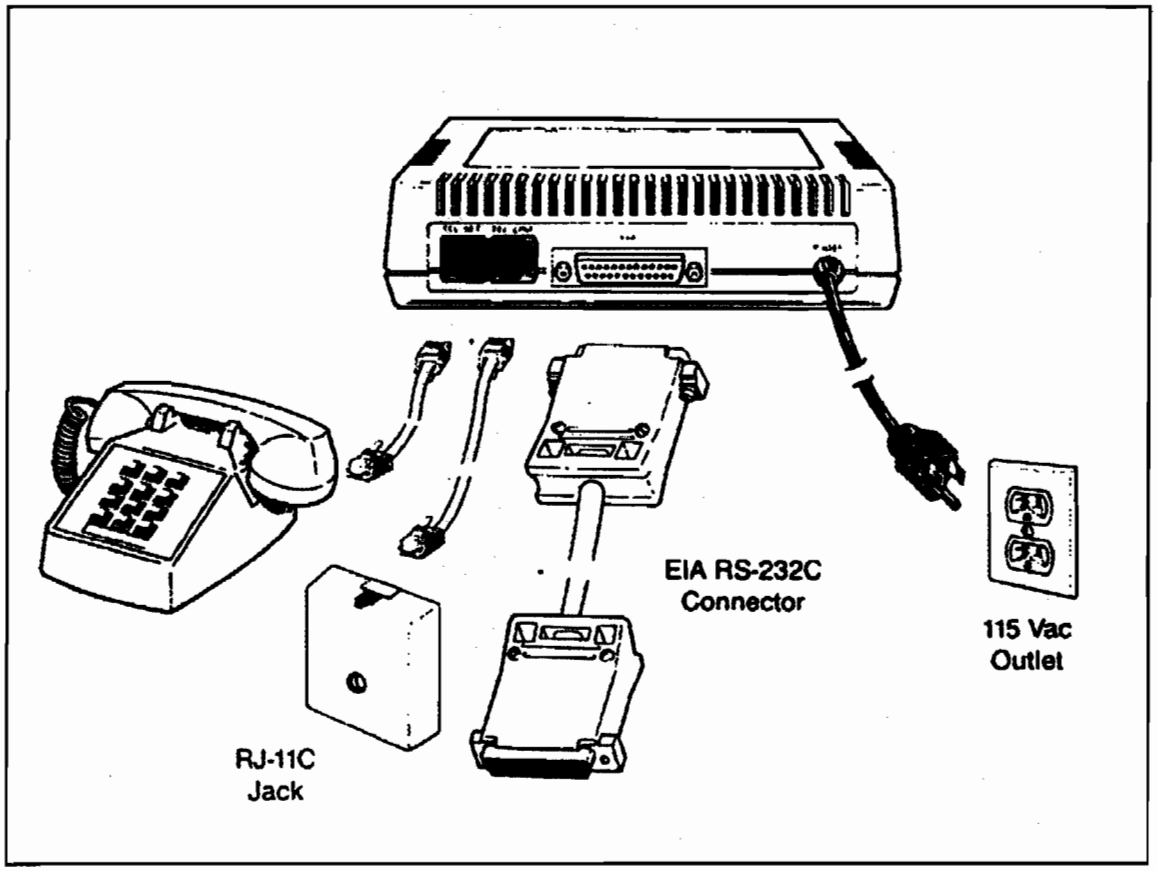
An optional connector is available on each modem where a telephone handset can be attached using RJ-11 phone cable. This can be useful for manual dialing or troubleshooting.

SUPPORT LINK

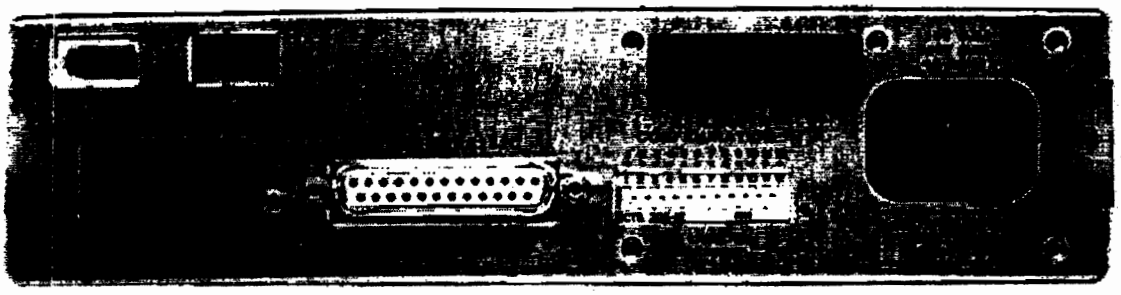


Support Link Rear Panel

SUPPORT LINK II



HP37212B

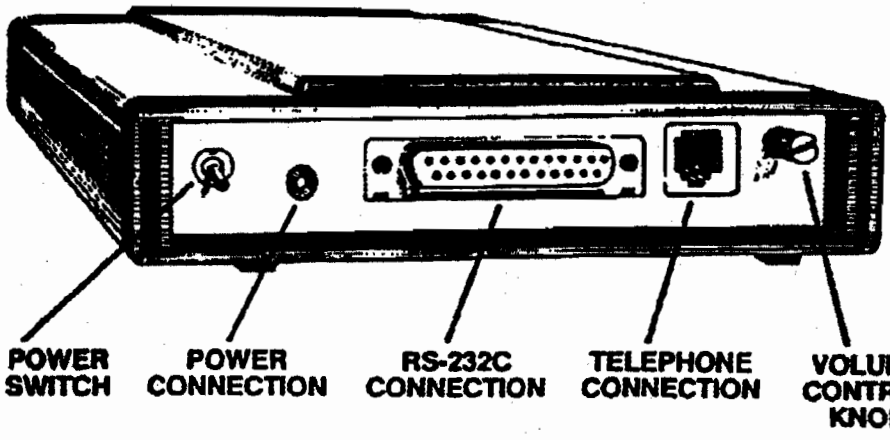


HP 37212B Rear Panel

HAYES SMARTMODEM 1200

POWER SWITCH

Examine the back panel of the Smartmodem 1200 unit for identification of the connectors, power switch, and volume control.

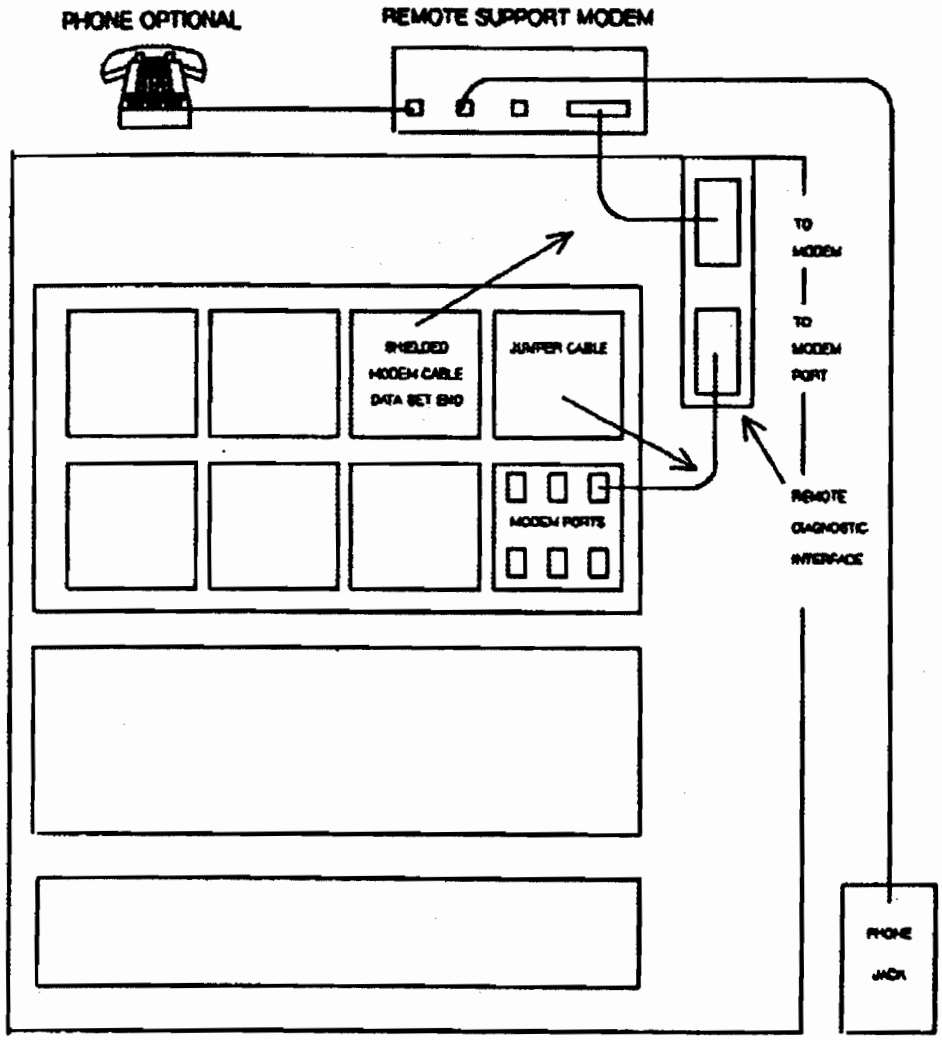


Modem to Terminal Cable:

Use a 40242M, 13242N or similar cable while configuring the Support Link II modem with a terminal. This cable is a straight through, 25-pin cable.

Remote Diagnostic Interface Cables (Series 64, 68 and 70 computers):

There are two ports on the Remote Diagnostic Interface. One is labeled TO MODEM and the other is labeled TO MODEM PORT. Your modem will be connected to the port labeled TO MODEM with the 30062B cable. A jumper cable connects the standard modem port (ldev 21) to the port labeled TO MODEM PORT. Both of these cables are shipped with the HP modem. The use of the Remote Diagnostic Interface is for parallel console which allows the Response Center to access the system console.



Connection of the Remote Support Modem through the Remote Diagnostic Interface

PHONE NUMBERS:

HPTrend:

To configure the Response Center Dialup number in the CUSTINFO program, use the following format in response to the RC DIALUP # prompt:

MODEM	PHONE FORMAT
SUPPORT LINK	9K14159687452
SUPPORT LINK II	9K14159687452
HP37212B	T9%14159687452
HAYES 1200	T9,14159687452

where:

"9" is a typical character used for phone systems that require an access code to place an outgoing call.

"K" and "%" and "," are delay characters (typically used to wait for dialtone).

"T" is for tone (use "P" for pulse).

"1" is for phone systems that require a 1 to make a long distance call.

Predictive Support:

To configure the Response Center Dialup number in the PSCONFIG program, use the following format in response to the RESPONSE CENTER DIALUP # prompt:

MODEM	PHONE FORMAT
SUPPORT LINK	9K18002588884
SUPPORT LINK II	9K18002588884
HP37212B	T9%18002588884
HAYES 1200	T9,18002588884

where:

"9" is a typical character used for phone systems that require an access code to place an outgoing call.

"K" and "%" and "," are delay characters (typically used to wait for dialtone).

"T" is for tone (use "P" for pulse).

"1" is for phone systems that require a 1 to make a long distance call.

(If your area is unable to use the toll-free 800 number, use 1-415-968-3902.)

CONCLUSION

The configurations recommended in this Application Note apply to MPE V/E systems only. Contact your Customer Engineer or the Response Center for recommended configurations for MPE XL systems.

NOTES

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BACK ISSUE INFORMATION

Following is a list of the Application Notes published to date. If you would like to order single copies of back issues please use the *Reader Comment Sheet* attached and indicate the number(s) of the note(s) you need.

Note #	Published	Topic
1	2/21/85	*Printer Configuration Guide (superseded by note #4)*
2	10/15/85	*Terminal types for HP 3000 HPIB Computers (superseded by note #13)*
3	4/01/86	*Plotter Configuration Guide*
4	4/15/86	*Printer Configuration Guide - Revised*
5	5/01/86	*MPE System Logfile Record Formats*
6	5/15/86	*Stack Operation*
7	6/01/86	*COBOL II/3000 Programs: Tracing Illegal Data*
8	6/15/86	*KSAM Topics: COBOL's Index I/O; File Data Integrity*
9	7/01/86	*Port Failures, Terminal Hangs, TERMDSM*
10	7/15/86	*Serial Printers - Configuration, Cabling, Muxes*
11	8/01/86	*System Configuration or System Table Related Errors*
12	8/15/86	*Pascal/3000 - Using Dynamic Variables*
13	9/01/86	*Terminal Types for HP 3000 HPIB Computers - Revised*
14	9/15/86	*Laser Printers - A Software and Hardware Overview*
15	10/01/86	*FORTRAN Language Considerations - A Guide to Common Problems*
16	10/15/86	*IMAGE: Updating to TurboIMAGE & Improving Data Base Loads*
17	11/01/86	*Optimizing VPLUS Utilization*
18	11/15/86	*The Case of the Suspect Track for 792X Disc Drives*
19	12/01/86	*Stack Overflows: Causes & Cures for COBOL II Programs*
20	1/01/87	*Output Spooling*
21	1/15/87	*COBOLII and MPE Intrinsics*
22	2/15/87	*Asynchronous Modems*
23	3/01/87	*VFC Files*
24	3/15/87	*Private Volumes*
25	4/01/87	*TurboIMAGE: Transaction Logging*
26	4/15/87	*HP 2680A, 2688A Error Trailers*
27	5/01/87	*HPTrend: An Installation and Problem Solving Guide*
28	5/15/87	*The Startup State Configurator*
29	6/01/87	*A Programmer's Guide to VPLUS/3000*
30	6/15/87	*Disc Cache*
31	7/01/87	*Calling the CREATEPROCESS Intrinsic*
32	7/15/87	*Configuring Terminal Buffers*
33	8/15/87	*Printer Configuration Guide*
34	9/01/87	*RIN Management (Using COBOLII Examples) (A)*
34	10/01/87	*Process Handling (Using COBOLII Examples) (B)*
35	10/15/87	*HPDESK IV (Script files, FSC, and Installation Considerations)*
34	11/01/87	*Extra Data Segments (Using COBOLII Examples) (C)*
36	12/01/87	*Tips for the DESK IV Administrators*
37	12/15/87	*AUTOINST: Trouble-free Updates*
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39	1/15/88	*MRJE Emulates a HASP Workstation*
40	2/01/88	*HP 250 / 260 to HP 3000 Communications Guidelines*
41	4/01/88	*MPE File Label Revealed - Revised 6/15/88*
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43	7/15/88	*Run Time Aborts*
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45	8/15/88	*Vplus & Multiplexers*
46	8/15/88	*Setting Up An HPDesk/HPTelex For The First Time*

47	9/15/88	*Customizing Database Data Items & Changing Passwords in JCL Files*
48	11/15/88	*Printer Configuration (Revision #4)*
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63	1/15/90	*Configuring Telesupport Modems For MPE V/E Systems*

READER COMMENT SHEET

Worldwide Response Center Support
HP 3000 Application Note 63: Configuring Telesupport Modems For MPE V/E Systems
(January 01, 1990)

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FOLD FOLD

HEWLETT PACKARD RESPONSE CENTER QUESTIONS & ANSWERS

HP 3000 Questions Commonly Received by the Response Centers

Q. What does it mean, when the RPG compiler sends the error message "06 T ENTRY OR HEADER SPACE OVERFLOW IN USL FILE" in RPG Version A.08.00?

A. This error may be produced due to large tables/arrays in your program.

In previous versions the compiler may not have checked correctly as to whether there was enough space for the data in the USL file. As a consequence, the PREP aborted due to the errors contained in the USL file.

To eliminate error 06, a larger USL file must be used (refer to the RPG Reference Manual, part number 32104-90001, Appendix 3, page 4. If this does not help you must reduce your tables/arrays.

* *

Q. When using the FORM command in Query, the ITEMS/SETS that were entered in the data base using DBCHANGE are not displayed. What is the reason for this?

A. After having entered ITEMS/SETS in the data base using DBCHANGE, you must set the ITEM/SET SECURITY for these ITEMS/SETS in the SECURITY SCREEN. Otherwise, the system will create an empty list for the read and write capabilities ("(/)") by default. In this case, only the CREATOR of the data base has access capabilities.

* *

Q. What could cause an error message that appears to have nothing to do with the MPE command just entered?

A. You must be certain that you *did not* enable a UDC command that has the same name as the above-mentioned MPE command.

* *

Q. Is it possible to create labeled tapes with the MPE/XL STORE command?

While trying to access labeled tapes with the usual MPE/V STORE on XL the following error message: UNSUPPORTED DEVICE ACCESS STORE/RESTORE ERROR 496 was received.

A. To create labeled tapes add to the XL STORE command the option ;TRANSPORT

****

Q. How can a self-written TERMTYPE FILE be connected to the list file of a special application ?

A. Before running the application the following file equations must be entered:

```
(TTXY.PUB.SYS is the new TERMTYPE FILE)

FILE ENVFILE=TTXY.PUB.SYS;LOCK
FILE listfile;DEV=list device ldev#;ENV=*ENVFILE.
```

****

Q. Is there a way to find out, which forms are allocated to which program (program = subsystem, e.g. ENGINEERING-DATA in MM, SC in PM or MNTPIC in MNT)? This may be relevant, when you want to know how many pooled processes must be defined for the individual subsystems and which subsystem contains the forms that are most frequently used.

A. The dataset COMMAND-MAP in the data base TIPDB of the Tools Account provides information on what form is allocated to what subsystem. The field COMMAND contains the form name and the field SUBSYS the corresponding subsystem name. Use QUERY to create special reports on that subject.

****

Q. How can data records be written from a COBOL program without transferring a "CARRIAGE RETURN"?

A. To write data records from a COBOL program to a file without transferring the CR of each write, the intrinsics FOPEN and FWRITE must be used in connection with the following actions:

1. The carriage control directive must be enabled by setting the 7th bit in the FOPTIONS of the intrinsic FOPEN to 1

2. The CONTROL parameter of the intrinsic FWRITE must be set to %320 (octal).

****

Q. When creating RDIC files using RDIC3000.PUB.SYS the RDIC file does not contain all PARENT elements, although it was indicated that all elements shall be included. What is the reason for this?

A. This is the case, when the DICTIONARY contains the following relationship:

```
PARENT
<1> CHILD1
<-2-> CHILD12
<1> CHILD2
<-2-> CHILD21
<-2-> CHILD22
```

RDIC3000 only includes the elements of the highest and the lowest levels (in our example: PARENT, CHILD12, CHILD21, CHILD22).

****

Q. How can the MPE/XL console messages saved in the system log files be reviewed ?

A. To view these files perform the following:

```
:SYSDIAG
DUI> RUN LOGTOOL
LOGTOOL> STATUS     (displays the system log files,
                    e.g...LOG0006,LOG0007,LOG0008,...)
LOGTOOL> TYPES      (displays the different types of
                    loggings, e.g. 115 for console
                    logging)
LOGTOOL> LIST   LOG=6/7                  TYPE=115
                     |                       |
          (system log files          (console messages)
          LOG0006/LOG0007 are
             investigated)
```

****

Q. When starting COBOL applications after an MPE release update, the error message UNRESOLVED PROG EXTERNALS SL BINDING ERR may appear. What is the reason for it?

A. In the MPE V release Vdelta4 and MPE XL release A.20.00 or later the COBOL 68 procedures are obsolete; they are no longer resident in the SL.PUB.SYS. However, in order to give access to these procedures to programs using them, the obsolete software was put into the USL file COB68LIB.PUB.SYS.

If one of your COBOL applications aborts with the error described above you should proceed as follows:

1) Create an SL in the group of your application (if a SL does not yet exist)

2) Add the USL file COB68LIB.PUB.SYS to this SL via the SEGMENTER

3) Run the application with ...;LIB=G.

****

Q. When using V-Delta-4, V-Delta-5 and MPE/XL 1.2, the SL.PUB.SYS does not contain any COBOL68 segments. What effect does this have on MPD products?

A. If you use the MPD applications MM3000, PM3000 or MNT3000 with one of the above-mentioned operating system versions, you will encounter problems due to missing COBOL68 segments in the SL of the Tools Account.

The MRP in MM3000 may for example abort with the following error message:

```
PEC   752
LIEC   16
LFSEC   0          FAILURE TO START SUCCESSIVE PROCESS.
```

A request for Customizer reports will lead to the message 'UNRESOLVED EXTERNAL REFERENCES'.

Therefore, the following procedure must be carried through, in order to add the missing segments:

1. All users must be logged off, so that no user has access to the Tools Account.

2. Log on to the Tools Account and continue as follows:

```
:HELLO MGR.<TOOLSACCT>,PUB
:SEGMENTER
-USL COB68LIB.PUB.SYS
-SL SL
-ADDSL COBLIB14
-EXIT
```

You may also contact the Response Center as they can supply you with an installation job for this problem.

After this the MRP and the Customizer reports may be started without any problems.

****

Q. What does the IMAGE DBOPEN condition code -204 mean?

A. The return of this undocumented condition code is caused by a STACK OVERFLOW. Since the MPE release UBMIT, the DBOPEN procedure in special situations, especially during the recovery after system failures, requires at least an extra of 1488 words to expand the stack. The CC is set to -204 in the case where stack space is lacking.

To avoid this abort of an application, you should run it with the options ;MAXDATA or/and ;NOCB.

* *

Q. How can the current software version of your application be determined?

A. When working on problems and questions in connection with your application, we often ask you to give us the current version of your application. The following shows how to determine current versions:

1. Application version

To determine the current Application Version log on as MGR in the application account and display the file VERSNID in the editor. The commands are as follows:

```
:HELLO MGR.MM3000
:RUN EDITOR.PUB.SYS
/T VERSNID
/L ALL
     1  HP32260A.09.07     PUB        HP32265
     2                HP MATERIALS MANAGEMENT
```

The first line shows the product number HP32260 followed by the current MM3000 version A.09.07.

2. Tools version

The Tools Account version may be determined by starting the program VERSIONP with the following command:

```
:HELLO MGR.MM3000
:RUN VERSIONP.SYSPGM.<TOOLSACCOUNT>;LIB=G
   HP32265A.03.06
```

Your screen now displays the product number for Tools (HP32265) together with the current version A.03.06.

3. MPE/V version

The current version of the operating system may be determined using the SHOWME command:

```
:SHOWME
 USER:      #1373,MGR.MM3000
 SYSTEM:    HP3203G.A3.01
```

Behind the colon of the second output line you see the product number of the operating system followed by the current version A3.01.

****

Q. How can the CHANGE FILES created by DBCHANGE be purged? (They have the data base name followed by the Appendix CF and the file code PRIV.)

A. To purge these files enter the DBUTIL subsystem and type

```
>>PURGE <databasename>CF
```

****

Q. How can profile changes carried through in the NMMGR subsystem (e.g. in order to connect a new printer to a DTC) be enabled on a 3000/XL system?

A. After creating the new profile, perform the following actions:

1) Run VALIDATE in the NMMGR

2) Enter SYSGEN, then SYSFILE and type RDCC (hold, keep, exit)

3) START NORECOVERY

4) DOWNLOAD of the DTC (turn off and on)

****

Q. As far as XL systems are concerned, what is the meaning of files having a data base name followed by the Appendix GB (<data base name>GB)?

A. On MPE/V the data base control blocks are always put into extra data segments. Since MPE/XL does not know extra data segments, the control blocks are written into MPE files. One of these files is <data

base name>GB containing the DBG control block. It is created during the first DBOPEN on the data base and purged after the last DBCLOSE. Therefore, the -GB file can only be seen, when the data base is in use.

****

Q. How can the MPE/V System Library SL.PUB.SYS be expanded?

A. To expand the system library perform the following actions:

```
1.  Log on as MANAGER.SYS

2.  SEGMENTER
    -SL SL
    -COPYSL (value of expansion in %),NEWSL

3.  FILE SL.PUP.SYS=NEWSL
    FILE T;DEV=TAPE

4.  SYSDUMP *T
     ANY CHANGES? YES
     ...                          (CR until ..)
     SYSTEM SL CHANGES? YES
     ...                          (CR until end)

5.  UPDATE with the tape created by SYSDUMP
```

****

Q. How can BRW Reports be transmitted from an MPE/V to an MPE/XL system (compatibility mode)?

A. Save the following files on the MPE/V system and transmit them to the MPE/XL system:

1. All data files
2. All Report Execution files (code REXEC)
3. All Report Specification files (code RSPEC)
4. All Report Job files (RJOB files)
5. All configuration files (RCONF files)

Refer to the BRW/XL Manual, part number 35360-60002 Appendix F, page 4.

****

Q: When adding up two arrays, only the first two elements are taken into account. What is the reason for this?

A. This happens, whenever result indicators are used during addition. The addition will be performed correctly, if these result indicators are not used.

Until Version 08.03 of RPG it was possible to use result indicators during arithmetic operations, although this was not provided by the manual. Starting with Version 08.03 the use of result indicators is suppressed by the RPG compiler. If result indicators are used in a program during arithmetic operations, the following message appears:

```
633  Indicators in Col. 54/59 not allowed for this
     operation. Assume blank.
```

****

Q. How can BRW reports be transferred from an MPE/V to an MPE/XL system (Native Mode)?

A. BRW reports may be transferred by using the following procedure:

1. Save all data (files used/data bases, dictionaries, specification files, report job files (RJOB), configuration files) on the MPE/V system and transfer it to the MPE/XL system.

2. Create a BRWDIC file using the program BRWD3000.PUB.SYS, BRWAPPD.PUB.SYS or BRWSD.PUB.SYS. If MPE or KSAM files contain real numbers, this must be indicated in the appropriate dictionary before the BRWDIC file is created. (Dictionary/V --> adding the LONGNAME !REAL-HP3000; System Dictionary --> adding the ELEMENT-SUBTYPES HP3000)

3. Rename the report job files (RJOB) so that they correspond to the file names used in BRW/XL.

4. Rename the RJOB files to BRWJOB.

5. Rename the RCONF files to BRWCONF.

6. Compile the BRW/V reports using BRWXL or BRWCOMP.PUB.SYS.

Refer to the BRW/XL Reference Manual, part number 35360-60002 Appendix F, page 3.

****

Q. How can BRW reports be transferred from an MPE/XL (Native Mode) to an MPE/V system?

A. BRW reports may be transferred by using the following procedure:

1. Save all files (files/data bases, BRWJOB files, BRWCONF files) on the MPE/XL system and transfer them to the MPE/V system.

2. Rename the BRWJOB files so that they correspond to the file names used in BRW/V. Rename the BRWJOB files to RJOB.

3. Rename the BRWCONF files to RCONF.

4. Create the RDIC file (Dictionary --> RDIC3000.PUB.SYS; System Dictionary --> RSYSDIC.PUB.SYS; Application Dictionary --> RAPPDIC.PUB.SYS).

5. Compile the specification files on the MPE/XL system using BRW or RCOMP.PUB.SYS.

6. Save the Report Execution Files on the MPE/XL system and transfer them to the MPE/V system.

Refer to the BRW/XL Reference Manual, part number 35360-60002 Appendix F, page 5.

****

Q. What must be done to update the fields UNIT-RUN-LBR-STD and SETUP-LBR-STD?

A. These fields are standard fields and are updated by the program PMS-COST-ROLLOVER. There is no write access through a screen. The fields are only used for documentation and accounting purposes and not for scheduling.

****

Q. How does the program PUR.COMMITMENT calculate the value of the field REM-COMMITMENT?

A. The program PUR.COMMITMENT creates a list of all orders left to receive together with the dates, at which the orders will become due. The program creates the file IOS1600 that contains records from the datasets PURCH-ORDER-DTL and ITEM-DATA. The calculation of the field REM-COMMITMENT depends on whether the value of the field PRICE-PO is zero or greater than zero.

If the value of the purchase price is greater than zero, the following calculation will be carried through:

REM-COMMITMENT = PRICE-PO x QTY-LEFT-TO-REC

If the value of the purchase price is equal to zero, the calculation is carried through on the basis of the ITEM-DATA records and would then look like this:

REM-COMMITMENT = STD-UNIT-COST x QTY-LEFT-TO-REC

Please note that the value of the field STD-UNIT-COST is the sum of the field values STD-MATL-COST, STD-LBR-EXP-RATE, STD- TL-OVH-COST, STD-LL-LBR-COST and STD-LL-OVH-COST.

****

Q. When scheduling orders, which of the two queue times (operation or workstation queue time) shall be taken into account?

A. The scheduling of orders is based on the queue time from the WORK-STATION dataset. The operation queue time (OPERATION-MSTR) is used as a field containing helpful information for the person in charge of the order scheduling, as this queue time may make up for the biggest share in the total order turn- around time.

****

Q. How may an SAI terminal be restarted after abortion?

A. If a pooled SAI terminal aborts and the message

"Desired function not available now TIPERR 1239"

appears, the terminal may be restarted using the START-UDC. If START is entered after the MPE prompt, the START-UDC is activated and the following message is displayed:

"Please enter the name of the terminal to be started"

This message must be answered by indicating the appropriate terminal name, that is SAI terminal). Enter // to close your message. Please note that you must be logged on to the appropriate application account.

Your terminal is defined as a pool terminal, if it is allocated the logical device number 1. The device number is contained in the Customizer. However, it can also be checked using the CHGTERM-UDC.

****

Q. What consequences has a !COMMENT $DEBUG in case of a job abortion?

A. If a program aborts without a precise error message and the abortion message on the SAI terminal is not sufficient to tackle the problem, the Response Center Engineers often recommend to include a !COMMENT $DEBUG in the first line of the appropriate JCL. $DEBUG is a special monitor command that instructs the monitor to print the appropriate JCL in its whole length. The printout shows at what step the program aborts. In addition, a supplementary error message is displayed. The

!COMMENT $DEBUG entry should be withdrawn from the JCL afterwards. Otherwise, a job listing is created on every program run that calls the corresponding JCL.

****

Q. VINIT >COND does not always provide larger fragments of free disc space. What is the reason for this?

A. VINIT >COND scans the used disc fragments in ascending address order and tries to place each of these fragments onto a fragment of free disc space having a LOWER address.

```
Example 1 :

-----> ascending disc address

|     |-------|       |----|  |--------------|  |---|
 Free 1        Free 2      Free 3             Free 4
       Used 1          Used 2    Used 3           Used 4

       RUNNING  VINIT >COND

1) Used 1 cannot be moved.

2) |----||-------|               |--------------|  |---|
       Free 1        Free 2                      Free 4
   Used 2  Used 1                   Used 3           Used 4

3) |----||-------|--------------|                    |---|
       Free 1                        Free 4
   Used 2  Used 1    Used 3                          Used 4

4) |----||-------|--------------|---|                    |
       Free 1                             Free 4
   Used 2  Used 1    Used 3     Used 4


Example 2 (no larger fragments of free disc space are
created):


|    |-----|   |-----|          |-------------|  |-------------|
Free 1     Free 2       Free 3                Free 4
     Used 1     Used 2             Used 3             Used 4

    RUNNING VINIT >COND
```

It is obvious that none of the used areas can be moved onto a free fragment having a LOWER address. Therefore, no changes are made.

****

Q. How can STDIN and STDLIST of a program started in a job be directed to a terminal?

A: To direct it to a terminal you should create the following job:

```
!JOB DEMOJOB,user.account
!FILE X,NEW;DEV=ldev #;SHR;MULTI;ACC=INOUT
!FILE Y;DEV=ldev #;SHR;MULTI
!RUN DEMOPROG.group.account;STDIN=*X;STDLIST=*Y
!EOJ
```

NOTE

Make certain that the terminal to be used as STDIN and STDLIST is not occupied by a session.

****

Q. As far as MM, PM, MNT, HPFA, HPFB and HPPO are concerned, what groups are contained in the Tools Account and what are they used for?

A. The following groups must always be present:

- PUB
- SYSPGM

Depending on the application used, the following product- specific groups must be available:

```
MM
==
- HP32260      MM programs

PM
==
- HP32270      PM programs

MNT
===
- HP32276      MNT programs
```

HPFA
====
- HP32304 general moduls
- HP32305 general ledger
- HP32307 allocator
- HP32308 accounts payable
- HP32309 accounts receivable
- HP32310 report facility
- HP32311 interface facility
- HP35300A max programs
- HP35350A financial budget files

HPFB
====
- HP32310 report facility
- HP32311 interface facility
- HP35300A max programs
- HP35350A financial budget files

HPPO
====
- HP34006 HPPO programs