

37212B-04A

S E R V I C E N O T E

SUPERSEDES:37212B-04

HP 37212B Modem

Serial Numbers: 0000U00000 / 9999U99999
except HP 37212B Opt H02

Preferred replacement of A1U1 & A1U6

(Installation of ROM 37224-80024 and microprocessor 1820-4624)

To Be Performed By: Customer

Parts Required:

ROM 37224-80024; microprocessor 1820-4624

Situation

Replacement of failed firmware parts or the updating of firmware requires installation of a programmed ROM (37224-80024) and a microprocessor chip without on-board ROM (1820-4624). This arrangement differs from previous firmware arrangements which comprised a programmed ROM and a microcomputer chip with on-board ROM.

This Service Note shows how to install the new firmware parts and then how to restore the country personality of the HP 37212B (if required).

Note: Restoring the country personality after replacing a board assembly may require some hardware changes in addition to the personalisation process described in this Service Note. For this, see the Guide for Installing the Main Board Assembly, part no. 37212-90014; or the Manual Change (dated Aug 1991) for User Manual 37212-90010.

Continued

DATE: 30 August 1991

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR:

ENTITY:

ADDITIONAL INFORMATION:

MFK

1400

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ACTION**Installation of Parts**

Install the parts at a static-free work bench.

1. Disconnect the HP 37212B from the phone line and the power outlet.
2. Prise off the plastic trims. Unscrew and remove the top and end covers.
3. Remove the existing firmware parts in positions U1 and U6.
4. Lift off the board assembly from the bottom cover and, on the underside of the board assembly, solder a link between pins U1(1) and U1(5).
5. Install 37224-80024 in U6 and 1820-4624 in U1.
6. Set TL1 (just behind the front panel leds) to the SA position. On Rev A versions of 37224-60001 and 37224-69001 boards only, set TL1 to the N position (the SA / N legends are the wrong way round).
7. Replace the board assembly on the bottom cover and replace the end covers.
8. Run switch-selected self test 0 as described in para 11-4 of the HP 37212B User Manual. If successful, replace the covers and restore the country personality of the HP 37212B as described below.

Restoring The Country Personality**IMPORTANT**

In many countries, it is unlawful to connect a modem to the telephone network unless the local telephone authority has approved the type.

You may have to restore the HP 37212B's country personality (to make it comply with the approved type) before reconnecting it to the network.

You must restore the country personality if you are replacing a failed ROM with a ROM of a DIFFERENT part number or if you are replacing a board assembly and the target personality is any of options 006 to 013 inclusive (see also Note under the last para of "Situation").

The personalisation process will not work unless the personality registered in NVM is initially that of the standard model. This is taken care of automatically as follows:

- Updating/replacing firmware. The new ROM has a different date code which the HP 37212B senses on initial power up. This causes the HP 37212B to reset the personality registered in NVM to that of the standard model.
- Replacing a failed board assembly. New and exchange board assemblies come with the NVM set as for the standard model.

Personalisation process:

1. Disconnect the HP 37212B from both phone line and power outlet.
2. Connect the RS-232-C port of a terminal to the RS-232-C port of the HP 37212B. The minimum connections are pin 2 to pin 2, pin 3 to pin 3 and pin 7 to pin 7. Set all the switches on the rear panel of the HP 37212B down. This sets the modem for

asynchronous operation using a data word length of 8 bits. The modem senses parity automatically.

3. Set the terminal speed for 2400 bits/s operation.
4. Power up the terminal and the HP 37212B. Press RETURN and check that the following message comes up on the screen:

HP 37212B MODEM 2400 BPS

(This confirms that the modem has sensed the speed and parity of the terminal and is in command mode.)

5. Select the values for register 64 and 87 appropriate to your country option (see table below).

Enter the selected value into R64 from the terminal keyboard. For example, to enter the value 250, type R64=250 [RETURN]

Then using the same method, enter the selected value into register 87. To read the value entered into a register, type R#? [RETURN] where # is the register number.

6. Setting register 87 starts the personalisation process. If the process is successful, the modem returns the prompt "" to the terminal screen. If not, the personality remains unchanged (ie remains as a standard model) and no prompt character is returned.
7. To check that the personality is as desired, recycle power and type R0 [RETURN]. Check that the number returned matches the value for register 0 given in the table below.

Note: If power is not recycled, R0 returns the same value as was set in R64 during the personalisation process.

Register Values

Option (Country)	Register 64	Register 87	Register 0
Std (US, Canada, Venezuela)	255	58	1
Opt 010 (UK, Singapore, HK) & Opt 013 (France)	254	37	2
Opt 007 (Holland)	253	36	3
Opt 009 (Malaysia)	252	39	4
Opt 008 (unallocated)	-	-	-
Opt 006 (Finland)	250	33	6
Opt 012 (Sweden)	249	32	7
Opt 011 (Australia)	248	35	8

Note: Option 013 (France) is approved for leased line operation only. Also, registers 64 and 87 are set as for opt 010.