

V.3229/V.3229L Manual

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Chapter 3 Option Selection

GENERAL

Note: This chapter contains the options available by pushbutton in response to the LCD. Users of the L model are encouraged to consult the different sections of this chapter as appropriate for further information on modem operation and option selection.

Nine factory option sets provide complete setups for most data communication arrangements. The modem is shipped configured to factory option set #1. Appendix D lists the options for each set. Because of the number of possible applications, most modems require some option changes to fit the application.

Two user programmed option sets are also available. These allow the user to configure customized option sets and store them in memory for immediate recall or as the powerup configuration.

The AutoConfigure feature, explained later in this chapter, allows immediate use of any stored option set.

STRAP OPTION SELECTION

Modem configuration is controlled by front panel pushbuttons and the LCD, AT or V.25 bis commands, and hardware option straps located on the pc board. Normally straps do not have to be changed. If a change is required, remove the modem cover to access the option straps.

The strap diagrams on the following pages indicate the factory settings.

Removing Cover

Warning: Disconnect ac power before removing the cover. Although dangerous voltage levels are not exposed, disconnecting power ensures an electrical shock hazard is not present.

Place the unit on its side on a flat surface. To disengage the lock prong insert a medium size flat screwdriver blade in one of the bottom rear latch slots. DO NOT PUSH the screwdriver but lightly pry the handle away from the unit as illustrated in Figure 3-1. Assist removal by pushing the cover from the chassis with your fingers on the unit rear edges. Repeat this procedure with the remaining three latch slots.

To replace the cover align the lock clips, rear guide grooves, and front lock tabs. Press the cover in place until the lock clips engage the lock prongs.

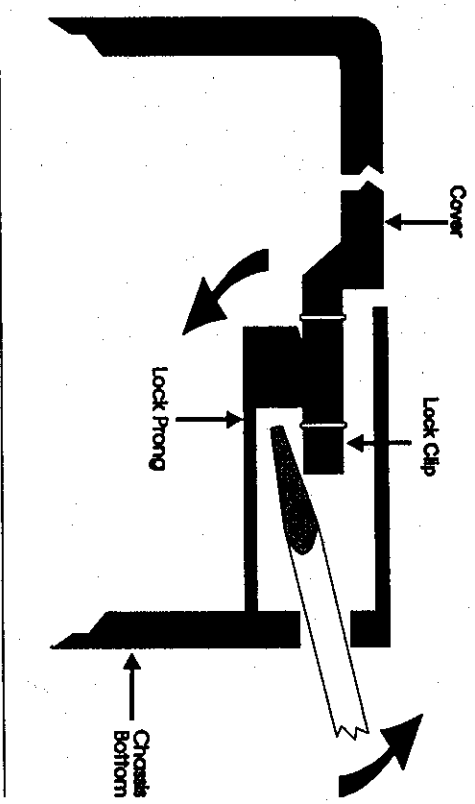


Figure 3-1
Cover Removal

Board Identification

Two different printed circuit boards exist for the V.3229. After removing the cover use Figures 3-2a and 3-2b to identify which board is in your modem and to locate hardware straps. The board represented in Figure 3-2b has a piggyback board.

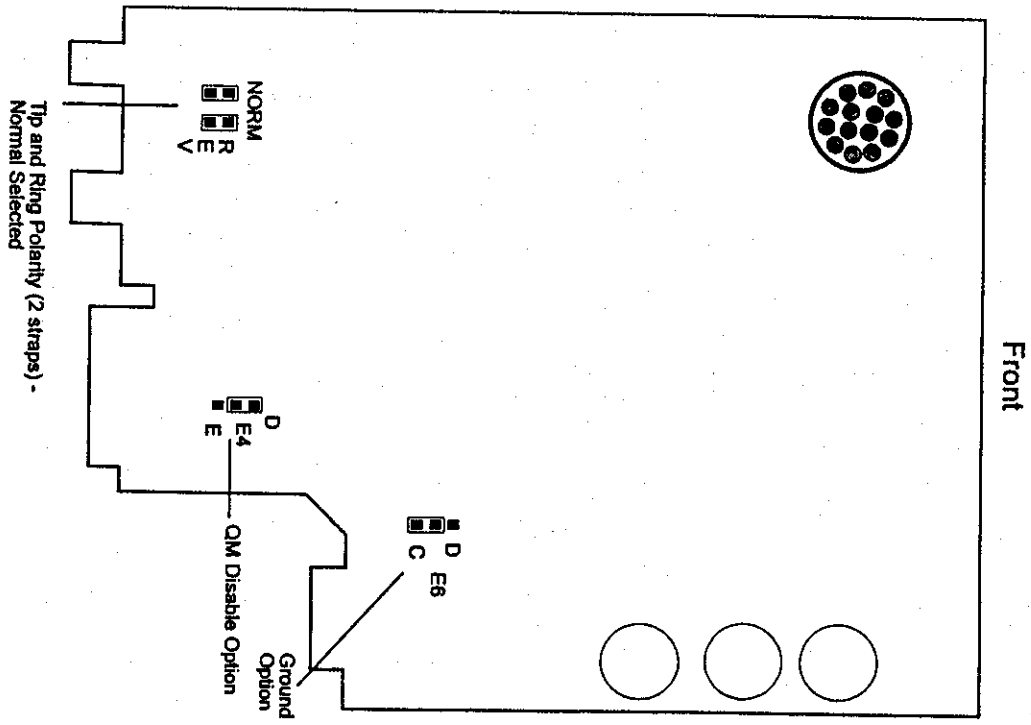


Figure 3-2a
Strap Locations

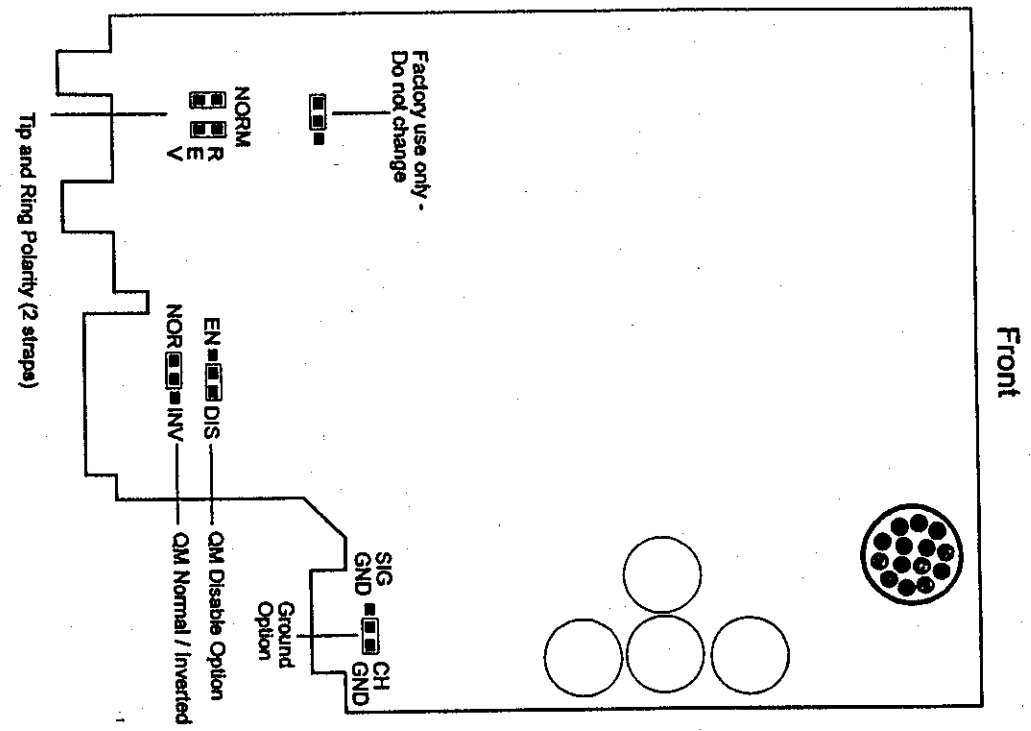


Figure 3-2b
Strap Locations on Alternative Board

Option Selection

Setting Straps

Figure 3-3 shows a typical strap application.

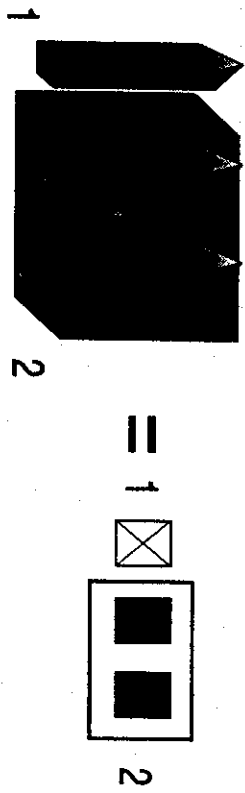


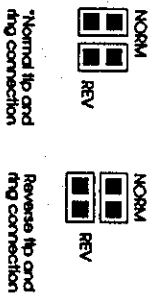
Figure 3-3
Typical Strap Application

HARDWARE STRAPS

Strap illustrations in this section match the board with the TR LED.

Tip and Ring Polarity

Some telephones are tip and ring polarity sensitive. If a dial tone is detected after dialing, reverse these two straps.



Option Selection

Ground Strap

Signal ground is normally connected to chassis ground. If interference exists, isolate signal ground from chassis ground.



*Signal ground connected to chassis ground selected

QM Disabled

When enabled, the Quality Monitor (QM) output is connected to the EIA-232 (pin 11) interface. Disabling it disconnects the QM output. Refer to Chapter 4 and Table 2-1 for more information.



*QM output not connected to EIA-232 interface

QM Normal / Inverted

This strap only applies to the board shown in Figure 3-2b. Select normal or inverted QM output.



*QM output is normal (QM signal going HIGH indicates poor signal quality)

*factory setting

factory setting

LCD OPTION SELECTION

Modern options can be checked or changed with the front panel LCD and pushbuttons.

Note: Options are also controlled by AT or V.25 bis operating commands discussed in Chapter 5 and 7.

MAIN MENU

Six main menus support modem operations:

- MODEM STATUS
- DIAL STORED NUMBER
- DISPLAY STATUS
- SELECT TEST
- MODIFY CONFIGURATION
- CHANGE PHONE NUMBERS

Each main menu contains submenus, items, and options (Table 3-1). The two right columns in the table show associated AT commands and S-registers.

Menu Sequence

The user can step through the menu by pressing the YES, NO, and TALK/DATA pushbuttons. Main Menus allow access to Submenus. Each Submenu has a Submenu Item column; if an option setting is selected or if all options have been scrolled through, the menu returns to the Submenu header.

If the NO pushbutton is pressed and held, the modem scrolls through the menu.

Note: The displays in Main Menu 1 show the current operating mode or status. These displays are not option selections. In most cases, while operating in the option menu, pressing NO scrolls down the columns in Table 3-1 and pressing YES advances across the rows.

Table 3-1
Menu Options

MAIN MENU		LCD MESSAGES			
MAIN MENU	SUBMENU	SUBMENU ITEM	ITEM OPTION	AT COMMAND	S REG
M A I N 1	V.32b 14400 TALK V.32b 14400 TRAINING V.32b 14400 ONLINE V.32b 14400 RINGING V.32b 14400 IN TEST		(Press NO to advance to MAIN 2)		
M A I N 2		DIAL #1-9	YES, NO	DS# (0-1-9)	
M A I N 3	DTE SIGNALS	DM ON/OFF DSR ON/OFF RI ON/OFF	DISPLAY STATUS		
	PROTOCOL	NONE NEGOTIATING V.42 LAPM OR V.42 MNP 2/3/4/5	DISPLAY STATUS		
	COMPRESSOR*	NONE MNP 5 V.42 8b	DISPLAY STATUS		
	CARRIER DESCRIPTIONS*	RECEIVE LEVEL NEAR END ECHO LEVEL FAR END ECHO LEVEL ESTIMATED DELAY FREQUENCY TRANSLATION	DISPLAY STATUS		
M A I N 4	(Online test only)	LONG ANALOG LOOP	INITIATE EXIT	4T1	S16
	(4-wire only)	LAL WITH TP	INITIATE EXIT	4T8	S16
		REKOTE ANALOG LOOP**	INITIATE EXIT	4T2	S16
		RAL WITH TP**	INITIATE EXIT	4T9	S16
	(Online test)	LOCAL DIGITAL LOOP**	INITIATE EXIT	4T3	S16
		REKOTE DIGITAL LOOP**	INITIATE EXIT	4T6	S16
		RDL WITH TP**	INITIATE EXIT	4T7	S16
		TEST PATTERN**	INITIATE EXIT	%T	

* Modern must be online for results
** Modern must be online with protocols disabled

Table 3-1 Cont.
Menu Options

MAIN MENU	SUBMENU	SUBMENU ITEM	ITEM OPTION	AT COMMAND	\$-REG
M 1 N 5 MODIFY CONFIGURATION TON?	CHANGE MODEM OPTIONS?	CHANGE DCE RATE	DTE SPEED 14400 TRELLIS 12000 TRELLIS 7200 TRELLIS 9600 UNCODED 4800 UNCODED 2400 V.22 B&E 1200 V.22 B&E 300 BELL 103	%B %B8 %B8 %B7 %B6 %B5 %B4 %B3 %B2 %B1	S88
		FORCED ANSWER OR NORMAL ORIGINATE	NORM ORIGIN FORCED ANSWER	*OR *OR1	S14
		V.22 FAST TRAIN	ENABLE DISABLE	*FT1 *FT	S28
		AUTO RETRAIN	ENABLE DISABLE	*E1 *E	S60
		AUTO RATE RENEGOTIATION	DIS, low BER, med, high BER	*R, *R1, *R2, *R3	S53
		TRANSMIT CLOCK	INT, EXT, RX	*X, *X1, *X2	S27
		LINE TYPE	LEASE DIAL	*L1, *L2, *L	S27
		DIAL LINE TRANSMIT LEVEL	-9 to -21 dbm	*TDn (*n=0-21)	S51
		JACK TYPE	PER - RJ11 PROG - RJ45	*Z *Z1	-
		LINE CURRENT DISCONNECT	OFF, 8 MS, 80 MS	*C, *C1, *C2	S32
		LONG SPACE DISCONNECT	ENABLE DISABLE	*Y *Y1	S21
		V.22 GUARD TONE	DNS, 550, 1800 HZ	*G, *G1, *G2	S23
		2-WIRE/4-WIRE	2-WIRE/4-WIRE	*L1, *L2	S32
		DIAL BACKUP	MANUAL, AUTO	*DB, *DB1	S32
		LOOKBACK TIMER	OFF, 15, 30, 45, 60 MIN	-	S28
LL TRANSMIT LEVEL	0 to -21 dbm	*TLn	S52		
LAPM PROTOCOL	ENABLE DISABLE	*M, *M5 *M, *M7 *M, *M1 *M2, *M3	S70		
MNP PROTOCOL	ENABLE DISABLE	*M2, *M3 *M6, *M7 *M, *M1 *M4, *M5	S70		
PROTOCOL FALLBACK	ENABLE DISABLE	*M3, *M5 *M6, *M7 *M, *M1 *M2, *M4	S70		
DATA COMPRESSION	DISABLE NORM TX RX	*%C *%C1 *%C2 *%C3	S56		

Table 3-1 Cont.
Menu Options

MAIN MENU	SUBMENU	SUBMENU ITEM	ITEM OPTION	AT COMMAND	\$-REG
M 1 N 5 MODIFY CONFIGURATION TON?	CHANGE PROTOCOL OPTIONS?	BUFFER MODE	NORMAL DIRECT	*V *V1	-
		DTE SPEED	DTE-DCE CONSTANT DTE	*V *V1	-
		DTE FLOW CONTROL	DISABLE XON/XOFF CTS RTS/CTS	*V *V1 *V2 *V3	S54
		DCE FLOW CONTROL	DISABLE XON/XOFF CTS	*V4 *V5 *V6, *V7	S54
		XON/XOFF PASS THROUGH	ENABLE DISABLE	*VX1 *VX	-
		INACTIVITY TIMER	OFF, 15, 30, 45, 60, 75, 90 MIN	-	S56
		BREAK CONTROL	0, 1, 2, 3, 4, 5	*K, *K1, *K2, *K3, *K4, *K5	S58
		V.42 FAST DETECT	ENABLE DISABLE	*W1 *W	S70
		OPERATION	SYNC ASYNC	*AM1, 2, 3, 4, 5 *AM	S27 S27 S30
		DTE RATE (asyn)	57600, 38400, 19200, 14400, 12000, 9600, 7200, 4800, 2400, 1200, 300	-	S90
		CHAR SIZE (asyn)	7 BIT 8 BIT	-	S61
		PARITY (asyn)	NO, EVEN, ODD	-	S61
		DIAL METHOD (syn)	ASYNC, DTR, MANUAL, V.23 BSYNC, V.25 SDLC	*AM1, *AM2 *AM3 *AM4 *AM5	S27, S30
		AT COMMAND SET	ENABLE DISABLE	*NT1 *NT	S29
		CHARACTER TYPE (V.25 only)	ASCII, EBCDIC	-	-
SDLC DATA FORMAT	NRZ, NRZ1	-	-		
DTR RESPONSE	IGNORE RECALL CMD DISCONNECT RESET	*AD *AD1 *AD2 *AD3	S21		
DSR STATE	NORMAL FORCED HIGH ON 8 SEC ON DISCONNECT FOLLOWS ON	*AS1 *AS *AS2 *AS3	S21		

Table 3-1 Cont
Menu Options

MAIN MENU	SUBMENU	SUBMENU ITEM	ITEM OPTION	AT COMMAND	REG		
M A I N M E N U (cont.)	CHANGE DTE OPTIONS? (cont.)	DOD STATE	NORMAL FORCED HIGH OFF 3 SEC ON DISCONNECT FOLLOWS REMOTE RTS	AC1 AC AC2 AC3	S21		
		CTS STATE	NORMAL FORCED HIGH CTS FOLLOWS DOD CTS-RTS	AR AR1 AR2 AR9	S21 S72		
		RTSCTS DELAY	0 to 150 ms (10 ms increments)	—	S26		
		DTE COMMANDED FALBACK	ENABLE DISABLE	*FB1 *FB	S33		
		OPTIONS RESRETNO AT DISC	RESTORED RETAINED	*RO1 *RO	S28		
		CHANGE TEST OPTIONS?	BILATERAL ANALOG LOOP	ENABLE DISABLE	*ANI *AN	S34	
			BILATERAL DIGITAL LOOP	ENABLE DISABLE	*DG1 *DG	S34	
			DTE LOCAL TEST	ENABLE DISABLE	*LA1 *LA	S34	
			DTE REMOTE TEST	ENABLE DISABLE	*RD1 *RD	S34	
			REMOTE COMMANDED TEST TIMEOUT	ENABLE DISABLE	*AT4 *AT6	S23	
		CHANGE DIAL OPTIONS?	DIAL TYPE	PULSE TONE	P, T	S14	
				AUTODIAL #	OFF, 1-9 *Aln (n=1-9)	—	
				DIAL TONE	BLIND DIAL WAIT FOR DIAL TONE	X, X1, X3 X2, X4	S22
				WAIT DELAY (blind dial)	1, 2, 4, 8, 16, 32 SEC	—	S8
				PAUSE DELAY	1, 2, 4, 8, 16, 32 SEC	—	S8
CALL TIMEOUT	15, 30, 45, 60, 75, 90, 105, 120 SEC			—	—		
ANSWER RING #X	1, 2, 4, 8, 16, manual			—	S0		
801 V.32 TIMEOUT	LONG, SHORT			—	S33		
AUTOCALLBACK	ENABLE, DIS			—	S72		

Table 3-1 Cont
Menu Options

MAIN MENU	SUBMENU	SUBMENU ITEM	ITEM OPTION	AT COMMAND	REG	
M A I N M E N U (cont.)	CHANGE SPEAKER OPERATION?	LOAD/STORE OPTION SET?	LOAD FACTORY OPTION	NO, 1-9	ALn (n=1-9)	—
			LOAD USER OPTION SET	1	Z	—
			STORE PRESENT OPTIONS	1	AW AW1	—
		PHONE NUMBER	USER OPTION AT RESET	1	AY	—
			2	AY1	—	
			NINE 31-CHAR NUMBERS	8Zn (n=option # and dial numbers) *CnX (n=option # and phone #)	—	
		SPEAKER CONTROL	ON LINE	ON LINE	M1	S22
			CARRIER DETECT	ALWAYS ON OFF WHILE DIALING	M2	—
			ALWAYS OFF	ALWAYS OFF	M3	—
		VOLUME CONTROL	LOW	LOW	L1	S22
			MEDIUM	MEDIUM	L2	—
			HIGH	HIGH	L3	—

**SELECTING
OPTIONS**

Select options by pressing the YES or NO pushbutton in response to the LCD prompt. When first turned on, a main menu 1 message is displayed. Table 3-1 lists these messages. Pressing NO scrolls through main menus 2 through 6. To return to main menu 1 press the TALK/DATA pushbutton.

NO

NO
DIAL STORED
PHONE #?

NO

NO
DISPLAY
STATUS

NO...

Option Selection

CHANGE PHONE #?

Note: While operating in the option menu, pressing NO scrolls down the columns in Table 3-1 and pressing YES advances across the columns.

Main Menu

When any Main Menu is on display, pressing YES advances to the first Submenu in that Main Menu group.

MODIFY CONFIGURATION?

YES

CHANGE MODEM OPTIONS?

Submenu

When in a Submenu column, pressing NO scrolls down the Submenu; when the end is reached it returns to the Main Menu for that group of submenus.

CHANGE MODEM OPTIONS?

NO...

LOAD/STORE OPTION SET?

NO

MODIFY CONFIGURATION

In a Submenu column, pressing YES advances to the Submenu Item column.

CHANGE MODEM OPTIONS?

Option Selection

DCE RATE

YES

Submenu Item

To scroll through the Submenu Item column, press NO. At the end, pressing NO returns you to the Submenu header for that item group.

DCE RATE

NO

ORIG/FORCE ANSWER

NO...

V.22 GUARD TONE DISABLED*

NO

CHANGE MODEM OPTIONS?

When in a Submenu Items column, pressing YES advances through the options for that Submenu Item. The first option that appears is the currently selected option.

NORMAL ORIG. FORCED ANSWER?

YES

FORCE ANSWER NORMAL ORIG.?

* This is the last submenu item for modem options.