

SECTION III

OPERATION

3.1 GENERAL

This section contains an explanation of the controls and display indicator elements used in the operation of the Model 1280A FSK MODEM. It also describes the location and function of each element, control input and status output in the operation of the Model 1280A from a remote control device, and operating procedures for the Model 1280A.

3.2 CONTROLS AND DISPLAY INDICATOR ELEMENTS

The Model 1280A can be controlled by the front panel keypad. The keypad numeric and function keys are used to set up specific operating parameters. Some keys are dual function keys. For example, numeric "5" key also selects "+.5 Hz." To select the latter function, the "2nd" key has to be pressed before the 5/+.5 key is pressed. Specific keys contain LEDs that indicate the state of the Model 1280A.

The front panel indicator element displays the state of the controlled channel(s) via bargraph displays, descriptor lights, and digital read-outs of frequency, baud rate, and channel selected.

Functional descriptions of the display element, keypad, and power switch are given in Table 3-1. Figure 3-1 is a front panel view of the controls and indicators by item number.

Table 3-1. Controls and Indicators

ITEM	INDICATOR/CONTROL	DESCRIPTION
1	<u>Display Elements</u>	
	MARK Bar Graph	Indicates Mark tone input/filter output signal strength in dBm.
	SPACE Bar Graph	Indicates Space tone input/filter output signal strength in dBm.
	SYNCH Descriptor	Indicates channel in Synchronous mode when illuminated or Asynchronous mode when extinguished.
	MOD Descriptor	Indicates channel is a Modulator.
	DEMODO Descriptor	Indicates channel is a Demodulator.
	MK ONLY Descriptor	Indicates channel is in Mark Only mode.
	AMH Descriptor	Indicates AMH selected.
	SP ONLY Descriptor	Indicates channel is in Space Only mode.
	HOLD Descriptor	Indicates channel is in Hold (standby) condition.
	REV Descriptor	Indicates channel output is in Reverse polarity.
	+ .5 Hz Descriptor	Indicates channel frequencies selected in .05 Hz increments.
	BAUD Rate	Indicates selected baud rate.
	CH	Indicates selected Channel is 1 or 2.
	SPACE	Four-digit display indicating Space tone frequency.
	MARK	Four-digit display indicating Mark tone frequency.
	FSK	Indicates FSK function selected.
	REGEN	Indicates regenerated data mode selected.

Table 3-1. Controls and Indicators (cont.)

ITEM	INDICATOR/CONTROL	DESCRIPTION
2	<u>Keypad Controls</u>	
	CHAN X	Enables channel selection and control where X is numerical key 1 or 2.
	AMH/HOLD	AMH - Selects or removes AMH function (Demod only). 2nd-HOLD - Selects or removes Hold (STAND-BY) function.
	DIV	Selects or removes diversity of controlled channel with adjacent channel (Dual Demod configuration only).
	FSK	Selects or removes FSK Function of frequency shifts 200 Hz and below for modulator.
		N O T E
		Anytime a shift above 200 Hz is selected, the unit defaults to FEK mode.
	BAUD RATE XXXX	Enables selection of baud rate where XXXX are the four numerical keys.
	NORM/REV	Selects Normal or Reverse output polarity.
	MUTE	Selects or removes modulator Mute function; when selected, mute descriptor illuminates (Mod only).

Table 3-1. Controls and Indicators (cont.)

ITEM	INDICATOR/CONTROL	DESCRIPTION
2	<u>Key Pad Controls</u> (cont.)	
	MARK/ONLY	MARK XXXX - Enables selection of mark tone frequency for selected channel where XXXX are the four numerical keys specifying frequency in hertz.
		2nd Mark Only - Places selected channel in the Mark Only mode (Demod only).
	CLEAR	Clears operating parameters prior to pressing 'ENTER' Key.
	SYNCH/REGEN	Selects or removes selected channel in the synchronous regenerated data mode (Demod only).
	REMOTE	Enables or disables modem for remote control function; when selected descriptor illuminates, it is enabled.
	SPACE/ONLY	Space XXXX - Enables selection of Space tone frequency of selected channel where XXXX are the four numerical keys specifying frequency in hertz.
		2nd Space Only - Places selected channel in the Space Only mode (Demod only).
	2ND	Enables selection of 2nd functions for selected channel.
	1	Selects numeric 1.
	2	Selects numeric 2.
	3	Selects numeric 3.
	4	Selects numeric 4.

Table 3-1. Controls and Indicators (cont.)

ITEM	INDICATOR/CONTROL	DESCRIPTION
2	<u>Key Pad Controls</u> (cont.)	
	5/+5	5 - Selects numeric 5. 2nd +5 - Selects 0.5 Hz increment for Mark and/or Space frequencies.
	6	Selects numeric 6.
	7	Selects numeric 7.
	8	Selects numeric 8.
	9	Selects numeric 9.
	0	Selects numeric 0.
	ENTER	Enters selected parameters to initiate control of the selected channel. Descriptor illuminates whenever a channel function is selected and extinguishes when parameters are entered.
3	POWER	ON/OFF switch to provide unit power.
4	OUTPUT LEVEL ADJUSTMENT	Allows adjustment of modulator output level from front panel.