

# ACT-IV

MICRO-TERM INC.



The Editing Terminal

The ACT-IV by MICRO-TERM INC. has been designed to be an exceptionally cost effective video terminal with an unmatched selection of performance, features, and flexibility.

**PERFORMANCE:** The ACT-IV has a full screen display of 24 lines by 80 characters. The character set includes all 96 ASCII upper and lower case characters and a special set of 32 additional characters which can, upon command, be displayed in place of the control characters.

The ACT-IV operates in FULL or HALF Duplex mode at any of six switch selectable data rates to 19,200 baud. The full ASCII keyboard has 2 key rollover and quadruply redundant contact keyswitches to offer the ultimate in dependability and mechanical life. The keyboard is designed for the convenience of the operator so that all keys including the cursor controls are immediately accessible from the touch position. The 'space,' 'period,' and cursor control keys are auto repeating at a 15 character per second rate after an initial half second delay. As a safeguard, all other keys are not repeating by themselves; depression of the space bar while holding another key will cause repetitive transmission. A convenient 'CAPS LOCK' key puts the ACT-IV into an ASR-33 mode in which all alphabetic characters are transmitted as uppercase yet the numbers remain unshifted until a shift key is simultaneously depressed.

The ACT-IV can operate in either of two modes as selected on the front panel by the user. In the CHARACTER/REMOTE mode, each keystroke initiates the transmission of the appropriate ASCII code. In the PAGE/LOCAL mode all keystrokes are acted upon and displayed locally but no transmission occurs until the 'SEND' key is depressed. This mode allows the screen to be completely edited to the operator's satisfaction before transmission to the computer. In addition to the cursor controls and codes for erase from cursor to end of line and cursor to end of screen, key codes exist for insertion and deletion of lines on the page or characters on any line. The ACT-IV editor rearranges the display to accommodate the user's commands. Depression of the 'send' key causes the edited contents of the screen to be intelligently transmitted to the main computer. Transmission begins at the upper left hand corner of the screen and continues across each line in succession down the screen. Each line is terminated with the transmission of a carriage return and line feed after the last displayable character in that line. The cursor moves along the display indicating the character currently being transmitted.

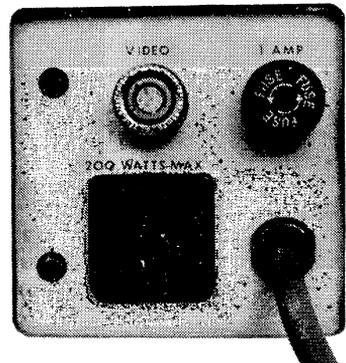
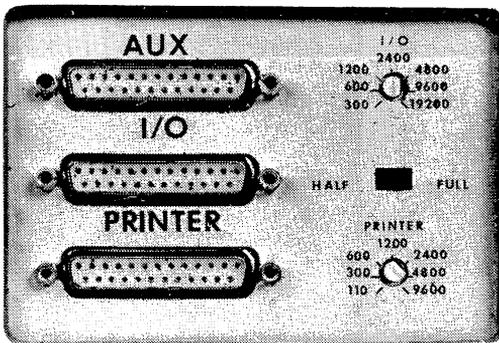
**FEATURES:** The following control functions are standard and can be generated remotely or in 'LOCAL/PAGE' mode.

Relative cursor movement: up, down, left and right. Absolute cursor positioning. Request cursor position. Send screen contents. Half/Full intensity. Erase to end of line. Erase to end of screen. Clear screen (Form Feed). New line. Home up. Bell. Print screen (optional printer port).

The following editing functions are standard and available in 'LOCAL/PAGE' mode only:

Insert a character in the line. Delete a character from the line. Insert a line. Delete a line. TAB.

An optional printer port allows the user to send the contents of the screen directly to a printer at data rates of 110 to 9600 baud, independent of the I/O port. When the print sequence is initiated, the screen contents are intelligently transmitted so that no extraneous, trailing spaces, are wastefully printed.



The rear cabinet view reveals the RS232 connectors for normal I/O, an auxiliary connector for parallel daisy-chaining to another RS232 device and the printer connector. The printer connector also contains a 'busy' pin which may be used with compatibly equipped printers to maximize through-put at higher data rates than could otherwise be continuously maintained. Data rate switches are readily accessible and independently selectable for the normal I/O channel and the optional printer port. The FULL/HALF Duplex switch provides true cooperative hand shaking on the Request to Send and Clear to Send lines in the Half Duplex position and completely separate transmission and reception capability in the (normal) Full Duplex position. The video out connector provides a standard low impedance, composite video signal for driving external monitors. A convenience AC outlet is also provided.

## LEGEND FORMAT

ESC	!	"	#	\$	%	&	'	(	)	ø	=	~		-	BREAK
TAB	Q	W	E	R	T	Y	U	I	O	P	@	RETURN	LINE FEED		
CTRL	CAPS LOCK	A	S	D	F	BELL G	H	J	VT K	FF L	+	*	{	}	↑↓
	SHIFT	Z	X	C	V	B	N	M	<	>	? /	SHIFT	RUB OUT	←	

## OUTPUT

1B	31	32	33	34	35	36	37	38	39	3A	2D	5E	5C	5F	Break
1B	21	22	23	24	25	26	27	28	29	2A	3D	7E	7C	7F	
	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9	ø9
	71	77	65	72	74	79	75	69	6F	70	40	øD	øA	øA	
	51	57	45	52	54	59	55	49	4F	50	60	øD	øA	øA	
	11	17	05	12	14	19	15	09	0F	10	00	øD	øA	øA	
Ctrl	Caps Lock	61	73	64	66	67	68	6A	6B	6C	3B	3A	5B	5D	
		41	44	44	46	47	48	4A	4B	4C	2B	2A	7B	7D	
		01	13	04	06	07	08	0A	0B	0C	00	00	1B	1D	
	Shift	7A	78	63	76	62	6E	6D	2C	2E	2F	Shift	7F	7F	
		5A	58	43	56	42	4E	4D	3C	30	3F		7F	7F	
		1A	18	03	16	02	0E	0D	00	00	00				

20—Unshifted  
20—Shifted  
20—Control

The printer port is a particularly powerful feature which allows the ACT-IV to supplement, rather than replace hard copy terminals in applications where the greater speed, intelligence and reliability of the ACT-IV take precedence over the occasional hard copy requirements. Additionally, the ACT-IV can be remotely commanded to print the screen when hard copy must be generated without operator assistance. This feature effectively allows the ACT-IV and a hard copy device to be operated from a single processor I/O port.

**FLEXIBILITY:** With the exception of the codes for 'back space,' 'carriage return,' and 'line feed,' there is no universally accepted standard code, even among terminal manufacturers, for the 'smart' terminal functions. The ACT-IV remains adaptable to preexisting software by allowing custom assignment of any of the 32 ASCII control codes to any of the 'smart' functions. The standard ACT-IV comes with the most popular coding assignment, but as an option, the ACT-IV can be custom reconfigured to operate in existing software environments which normally require specialized terminals to execute unusually coded 'smart' features.

### GENERAL:

**Circuitry:** The ACT-IV contains the very latest in hybrid integrated circuit design to minimize parts count and power consumption without sacrifice to overall terminal speed. With efficient circuit design and internal microprocessor control, the ACT-IV performs more 'smart' functions with a 20% decrease in the number of integrated circuits, a proportional increase in reliability, and significantly lower cost than competitive terminals.

**Cabinetry:** The ACT-IV comes in two configurations: the ACT-IVa is compact, briefcase compatible unit, which produces a standard video signal to be used with an external monitor. The ACT-IVb includes a built-in high resolution 12" data display monitor and numeric keypad for permanent installations.

## STANDARD ACT-IV CONTROL CODE SET

Function	ASCII*		
Request Cursor Position . . .	05	Display Control Chars . . . .	11
Bell . . . . .	07	Position Cursor Abs. . . . .	14
Backspace . . . . .	08	Cursor Forward . . . . .	18
Linefeed . . . . .	0A	Cursor Up . . . . .	1A
Cursor Down . . . . .	0B	Home Up . . . . .	1D
Formfeed . . . . .	0C	Erase to End of Line . . . .	1E
Return . . . . .	0D	Erase to End of Screen . . .	1F
Change Intensity . . . . .	0E	New Line . . . . .	—
Print Screen* . . . . .	10	Send Screen . . . . .	—

### SPECIFICATIONS:

Power requirements: 110/220 vac 60/50 hz.

ACT-IVA: 35 watts  
 ACT-IVB: 100 watts

Recommended operating environment:

Temperature 15-35°C  
 Relative humidity 20-80% non condensing

Size: ACT-IVa 7.5 x 36 x 28 cm; 5 Kg.  
 ACT-IVb 40 x 48 x 54 cm; 15 Kg.

video out: composite RS170 low impedance emitter follower output

Horizontal frequental: 15750 hz  
 Vertical frequency: 50 or 60 hz

Cursor: underline, constant

Character matrix size: Actual—5x9 Effective—6x10

Character set: 96 upper/lower ASCII and 32 special display characters

Serial I/O format: RS232, 1 start bit, 7 ASCII data bits, 1 or 2 stop bits. Parity—even, odd, none, 8th data bit—high, low, none.

Data rate: 300 to 19200 baud

Price: ACT-IVA (without monitor) \$550  
 ACT-IVB (includes 12" monitor and numeric keypad) \$800

\*Options: Printer port circuitry: \$50  
 custom control code assignments: \$50

Warranty: 90 days all parts and labor

# ACT-IV

BULK RATE  
U.S. POSTAGE PAID  
ST. LOUIS, MO.  
PERMIT NO. 4596

**MICRO-TERM INC.**

P.O. BOX 9387 ST. LOUIS, MO. 63117  
(314) 645-3656