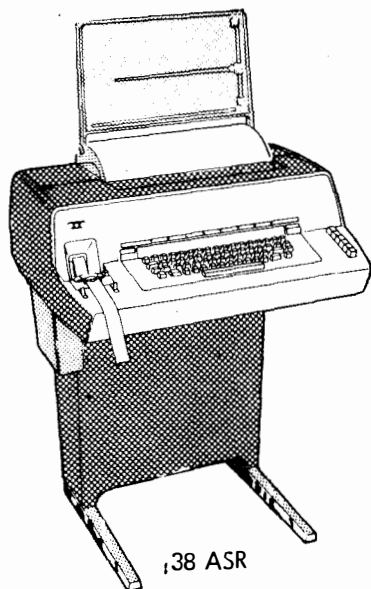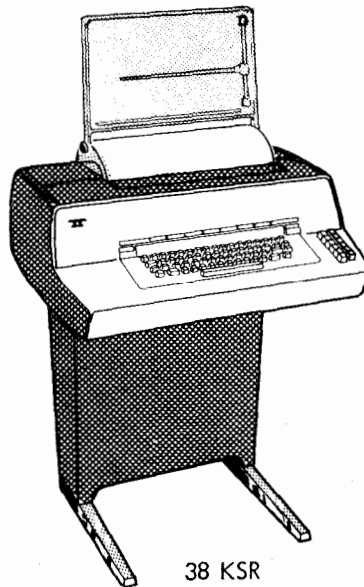# CATALOG SUPPLEMENT

TELETYPE

TELETYPE® MODEL 38

. . . With APL Features

,38 ASR

38 KSR

Model 33 Economy and More

Teletype Corporation's model 38 terminals continue the economical design concepts of its popular model 33 with added features. Features such as 132-character lines printed on pin-fed, wide(14-7/8") paper as used for computer print-outs. A four-row keyboard that generates all 128 codes of the American National Standard Code for Information Interchange (ASCII). Printing of 94 different graphics, including the upper and lower case alphabet, in two colors which can be selected by on-line control codes. And modern furniture styling with reduced machine noise.

Now with A Programming Language (APL)

Now Teletype offers this new low-cost terminal with APL features. It is available in three different keytop and character set arrangements to meet varying system requirements. These arrangements are shown on Pages 2, 3, and 4.

The terminal has a new on-line backspace feature which permits it to print the APL overstrike characters, and you can order an accessory which permits the terminal to accommodate both pin-fed, wide paper and friction-fed 8-1/2 inch paper.

Refer to the catalog for technical facts and detailed description of Model 38 terminals.

TECHNICAL FACTS

Code
8 level start-stop with 11 unit code pattern (1 start, 7 information, 1 parity bit and 2 stop bits).

Speed
10 characters/second, 110 Baud, 100 words/minute.

Printing
Pin feed platen for 14-7/8 inch wide single or mutliple ply paper.

    Character spacing—10 characters per inch.

    Line length—132 characters with end-of-line space suppression or automatic carriage return/line feed.

    Vertical line spacing—6 lines or 3 lines per inch, operator selectable.

    Impact printing with six row typewheel having 94 printing positions.

    Two color printing in response to "ESCAPE" sequence.

Answer-Back
A customer programmable answer-back drum provides up to 20 character sequence.

Keyboard
4 row keyboard with APL keytop arrangement and compatible typewheel.

Paper Tape Facilities
Paper tape punch and reader using 8 level fully perforated 1 inch wide tape.

Interfaces
DC neutral current, EIA voltage or modem interface.

Power
117 VAC at 60 Hz, single phase for synchronous motor.

Maintenance
Once every 6 months or 750 hours whichever occurs first.

Temperature and Humidity
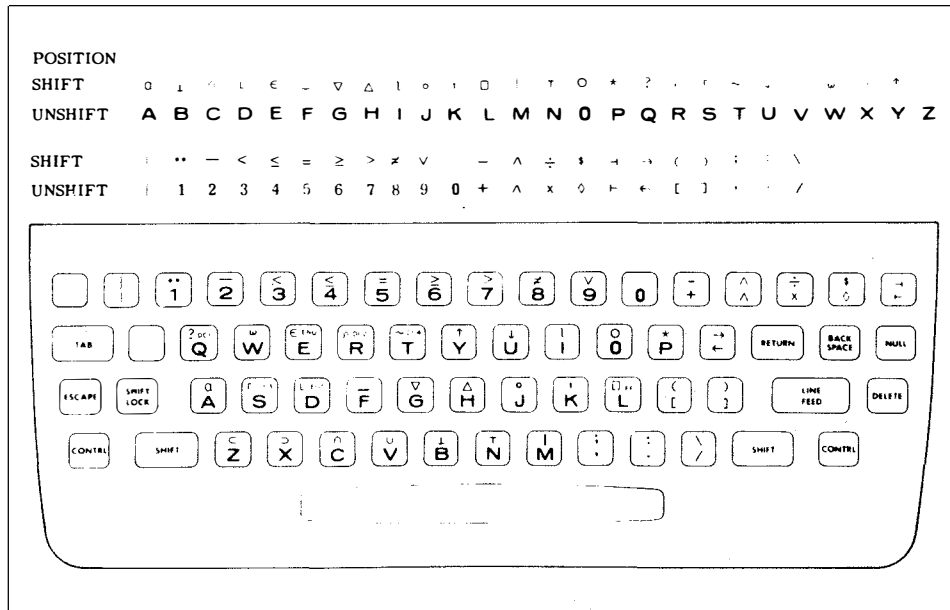40 to 110 degrees Fahrenheit, 95 percent maximum humidity.

ARRANGEMENT 1

Users will recognize the familiar APL keytop arrangement. Codes generated for all controls, letters A thru Z, numerals Zero thru Nine and punctuation marks Comma, Period, Slash and Open Brace are consistent with the 1968 ASCII code assignments. Thus, when not being applied to APL, it may be used for other purposes such as time sharing and administrative traffic in a system intermixing model 33's and 35's.

APL CHARACTER ASSIGNMENT #1

b4 b3 b2 b1	ROW COLUMN	0	1	2	3	4	5	6	7
0 0 0 0	0	NUL	DLE	SP	0	←	P	→	★
0 0 0 1	1	SOH	DC1	••	1	A	Q	α	?
0 0 1 0	2	STX	DC2	⎺	2	B	R	⊥	ρ
0 0 1 1	3	ETX	DC3	<	3	C	S	∩	Γ
0 1 0 0	4	EOT	DC4	≤	4	D	T	⌊	~
0 1 0 1	5	ENQ	NAK	=	5	E	U	ε	↓
0 1 1 0	6	ACK	SYN	≥	6	F	V	_	∪
0 1 1 1	7	BEL	ETB	>	7	G	W	∇	ω
1 0 0 0	8	BS	CAN	≠	8	H	X	Δ	⊃
1 0 0 1	9	HT	EM	∨	9	I	Y	⍳	↑
1 0 1 0	10	LF	SUB	)	]	J	Z	∘	⊂
1 0 1 1	11	VT	ESC	(	[	K	{	'	}
1 1 0 0	12	FF	FS	,	;	L	⊢	▯	⊣
1 1 0 1	13	CR	GS	+	−	M	X	|	÷
1 1 1 0	14	SO	RS	.	:	N	◊	⊤	$
1 1 1 1	15	SI	US	/	\	O	∧	○	DEL

Characters Enclosed by Bold Lines Conform to 1968 ASCII

	INTERFACE	
MODEL 38 DATA TERMINALS — 60 Hz **With APL Features**	20/60 Ma. D.C. Neutral Sig. Line or E.I.A. Interface (RS-232-C)	Modem W/Manual Orig. and Manual or Automatic Answer
	Catalog Number	**Catalog Number**
Keyboard Send-Receive (KSR): Keyboard and page printer.	3841/4EA	3841/4EG
Automatic Send-Receive (ASR): Keyboard, page printer and paper tape punch and reader.	3851/6JA	3851/6JG

ARRANGEMENT 2

This configuration also features the familiar APL Keytop arrangement, and the character set is consistent with many systems now in use. Although some character assignments conform to ASCII — (controls, numerals, and punctuation marks, Comma, Period, and Slash), this terminal is not ordinarily used in systems that require communications capability.

APL CHARACTER ASSIGNMENT #2

$b_4 b_3 b_2 b_1$	COLUMN ROW	0 000	0 001	0 010	0 011	1 100	1 101	1 110	1 111
0 0 0 0	0	NUL	DLE	SP	0	←	⋆	→	P
0 0 0 1	1	SOH	DC1	••	1	α	?	A	Q
0 0 1 0	2	STX	DC2	−	2	⊥	ρ	B	R
0 0 1 1	3	ETX	DC3	<	3	∩	Γ	C	S
0 1 0 0	4	EOT	DC4	≤	4	⌊	~	D	T
0 1 0 1	5	ENQ	NAK	=	5	∈	↓	E	U
0 1 1 0	6	ACK	SYN	≥	6	_	∪	F	V
0 1 1 1	7	BEL	ETB	>	7	∇	ω	G	W
1 0 0 0	8	BS	CAN	≠	8	Δ	⊃	H	X
1 0 0 1	9	HT	EM	∨	9	⍳	↑	I	Y
1 0 1 0	10	LF	SUB	)	]	∘	⊂	J	Z
1 0 1 1	11	VT	ESC	(	[	'	⊢	K	⊣
1 1 0 0	12	FF	FS	,	;	□	◊	L	$
1 1 0 1	13	CR	GS	+	−	|	}	M	{
1 1 1 0	14	SO	RS	.	:	T	×	N	÷
1 1 1 1	15	SI	US	/	\	○	∧	O	DEL

POSITION

SHIFT   α ⊥ · ⌊ ∈ _ ∇ Δ ⍳ ∘ ' □ ' T O ⋆ ? · Γ ~ ↓ ∪ ω ⊃ ↑

UNSHIFT   A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

SHIFT   · •• − < ≤ = ≥ > ≠ ∨   − ∧ ÷ $ ⊣ → ( ) ; : \

UNSHIFT   . 1 2 3 4 5 6 7 8 9 0 + ∧ × ○ ⊢ ← [ ] ' · /

MODEL 38 DATA TERMINALS — 60 Hz With APL Features	INTERFACE
	20/60 Ma. D.C. Neutral Sig. Line or E.I.A. Interface (RS-232-C)
	Catalog Number
Keyboard Send-Receive (KSR): Keyboard and page printer.	3841/4EC
Automatic Send-Receive (ASR): Keyboard, page printer and paper tape punch and reader.	3851/6JC

ARRANGEMENT 3

This terminal provides APL features with maximum ASCII capabilities. Codes generated by this terminal are the same as the model 33 except for the APL character set, Exclamation Point, and Circumflex. Thus, when not being applied to APL, this terminal is especially useful for other purposes such as time sharing and administrative traffic in systems using model 33's and/or 35's.

APL CHARACTER ASSIGNMENT #3

b4	b3	b2	b1	COLUMN / ROW	0	1	2	3	4	5	6	7
0	0	0	0	0	NUL	DLE	SP	0	·@	P	→	X
0	0	0	1	1	SOH	DC1	••	1	A	Q	α	≠
0	0	1	0	2	STX	DC2	ʼʼ	2	B	R	⊥	ρ
0	0	1	1	3	ETX	DC3	#	3	C	S	∩	Γ
0	1	0	0	4	EOT	DC4	$	4	D	T	⌊	—
0	1	0	1	5	ENQ	NAK	%	5	E	U	∈	↓
0	1	1	0	6	ACK	SYN	&	6	F	V	∨	∪
0	1	1	1	7	BEL	ETB	ʼ	7	G	W	∇	ω
1	0	0	0	8	BS	CAN	(	8	H	X	Δ	⊃
1	0	0	1	9	HT	EM	)	9	I	Y	ι	↑
1	0	1	0	10	LF	SUB	*	:	J	Z	∘	⊂
1	0	1	1	11	VT	ESC	+	;	K	[	∧	≤
1	1	0	0	12	FF	FS	,	<	L	\	▯	│
1	1	0	1	13	CR	GS	⁔	=	M	]	←	≥
1	1	1	0	14	SO	RS	.	>	N	÷	⊤	~
1	1	1	1	15	SI	US	/	?	O	_	○	DEL

Characters Enclosed by Bold Lines Do Not Conform to 1968 ASCII

	INTERFACE
MODEL 38 DATA TERMINALS — 60 Hz With APL Features	20/60 Ma. D.C. Neutral Sig. Line or E.I.A. Interface (RS-232-C)
	Catalog Number
Keyboard Send-Receive (KSR): Keyboard and page printer.	3841/4ED
Automatic Send-Receive (ASR): Keyboard, page printer and paper tape punch and reader.	3851/6JD