4100

CATALOG

TELETYPE

TELETYPE® 4100 PAPER TAPE EQUIPMENT

DECEMBER, 1972 EDITION

CONTENTS

INTRODUCTION

If you're looking for a faster way of transmitting punched tapes prepared on your Teletype ASR terminal or other tape input-output device, Teletype Corporation has the tape punches and readers that can do it. Or, if you're looking for a fast data logging device that produces machine readable punched tape, or conversly for a fast data entry device that accepts punched tape, Teletype has the punches and readers that can do these jobs too.

Teletype Corporation has the 4100 line of paper tape equipment. Equipment for transmitting data from here to there, whether here to there is across the country over common carrier channels or across your plant over your own wires. The 4100 line has fast and reliable paper tape punches and readers available for synchronous or asynchronous operation at speeds up to 360 characters per second; packaged in table, floor and rack mountable models, with a variety of interfaces to meet a variety of applications.

When you select a 4100 punch or reader you will be selecting from a line of proven products. Past and present users will recognize the 4100 line as a compilation of the familiar BRPE and DRPE tape punches and CX and DX tape readers—noted for their ruggedness and reliability in the newspaper publishing and data communications worlds.

Whether you're a new or present customer, you'll find in this catalog a wide selection of paper tape punches and readers, together with the features and technical facts that will help you to decide between them.

DESCRIPTION

4100 punched tape readers and paper tape punches are used for sending data that has been punched into tape and for receiving and punching data into tape. The 4100 line consists of four main series: the 4110 series of synchronous readers, the 4120 series of synchronous punches, the 4130 series of asynchronous readers, and the 4140 series of asynchronous punches.


4110 READER (CX)
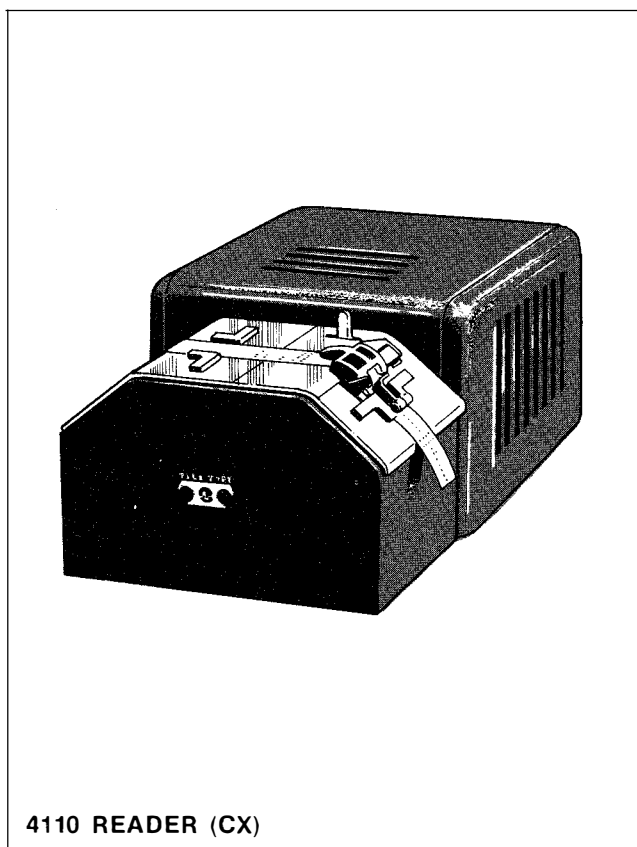
The 4110 series of synchronous readers (also known as CX readers) operate at 107 char/sec and are available in two fixed-level versions, one for reading 8-level punched tape, the other for reading 6-level advanced feed hole punched tape. They are also available in an adjustable-level version for reading 5, 6, 7, or 8-level punched tape. They can read fully punched or chadless tape. Regardless of version, all 4110 readers are packaged for table top use and have a parallel signal interface which is wired directly to the reader tape sensing contacts.

4120 PUNCH (BRPE)
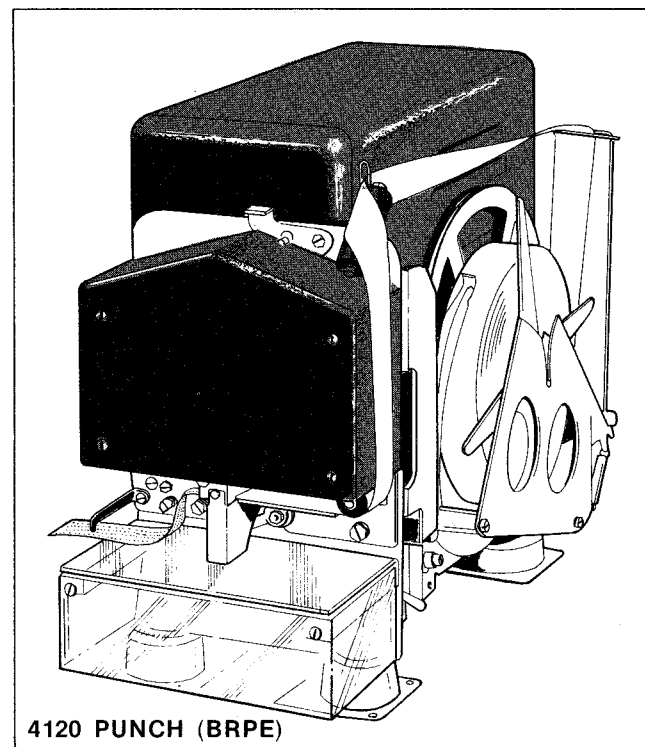
The 4120 series of synchronous punches (also known as BRPE punches) operate at 110 char/sec and are available in a fixed-level version for punching 6-level advanced feed hole tape; and in two adjustable-level versions, one for punching 5 or 8-level tape, the other for punching 6, 7, or 8-level tape. Regardless of version, all 4120 punches are packaged for table top use and have a parallel signal interface which is wired directly to the punch electromagnetic coils.
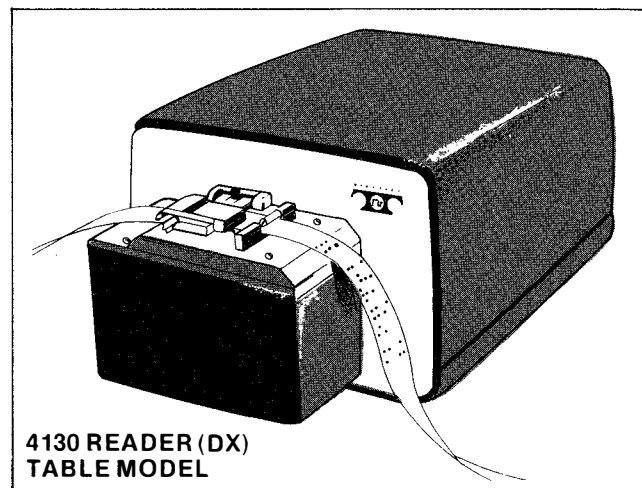

**4130 READER (DX)
TABLE MODEL**
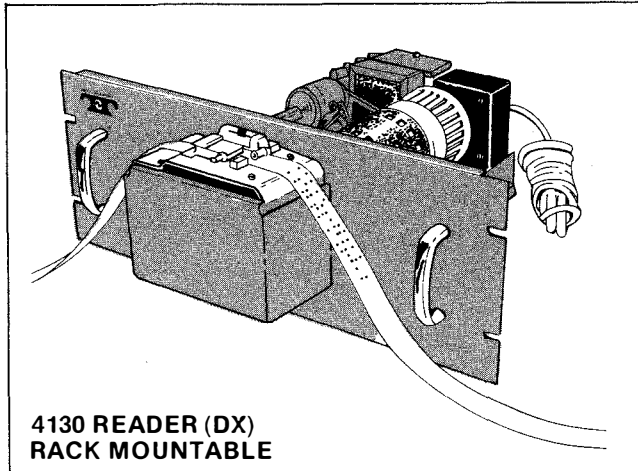
**4130 READER (DX)
RACK MOUNTABLE**

The 4130 series of asynchronous readers (also known as DX readers) can operate at any speed up to 360 char/sec and are all of the adjustable-level type, for reading 5, 6, 7, or 8-level punched tape. They can read fully punched or chadless, and in-line or advanced feed hole tape. They are available with a serial interface and a choice of parallel signal interfaces, all of which include solid-state control logic and provide logic level inputs and outputs. They are available in table top and rack mountable models, with an optional verifier data output for use by an external verifier logic to guarantee the accuracy of each character read.
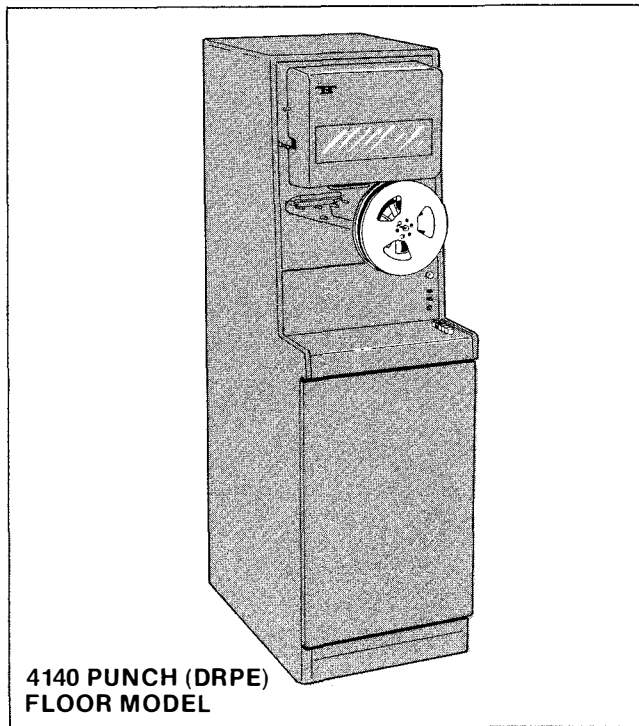
**4140 PUNCH (DRPE)
FLOOR MODEL**
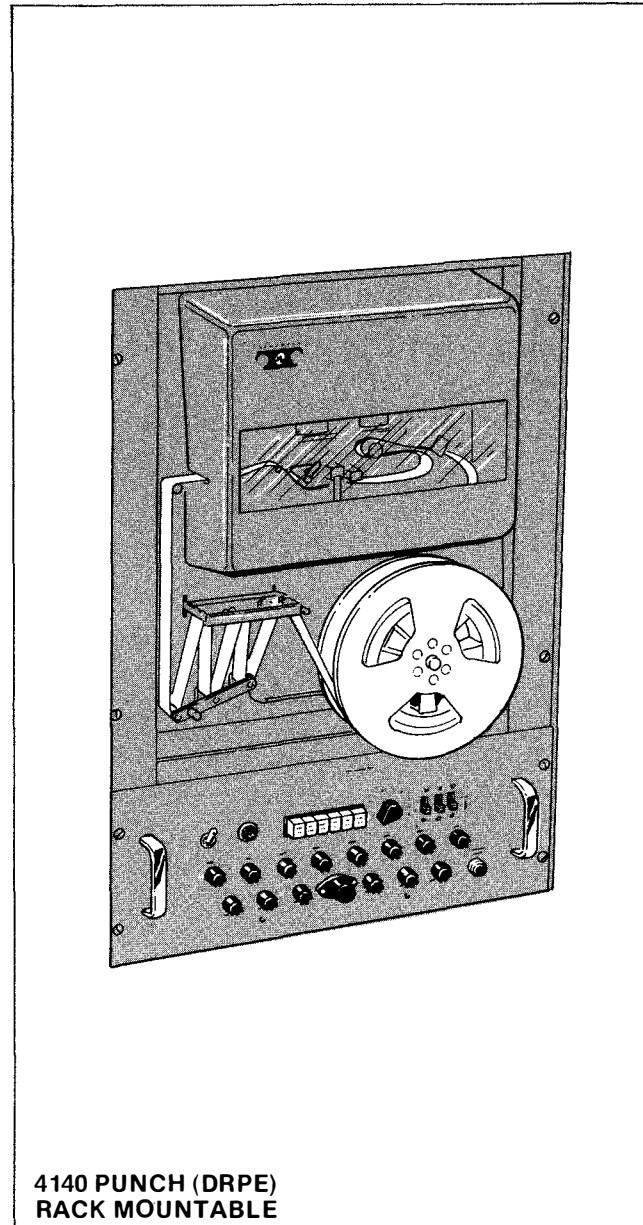
**4140 PUNCH (DRPE)
RACK MOUNTABLE**

The 4140 series of asynchronous punches (also known as DRPE punches) can operate at any speed up to 240 char/sec and are available in an adjustable-level version for punching 5, 6, 7, or 8-level tape; and in a fixed level version for punching 6-level advanced feed hole tape. They are available with serial and parallel interfaces which provide control logic and logic level input-output. Options include floor and rack mountable models and an optional verifier logic which reads each character immediately after it's punched, compares it to the character received, and provides an error output pulse if they do not agree.
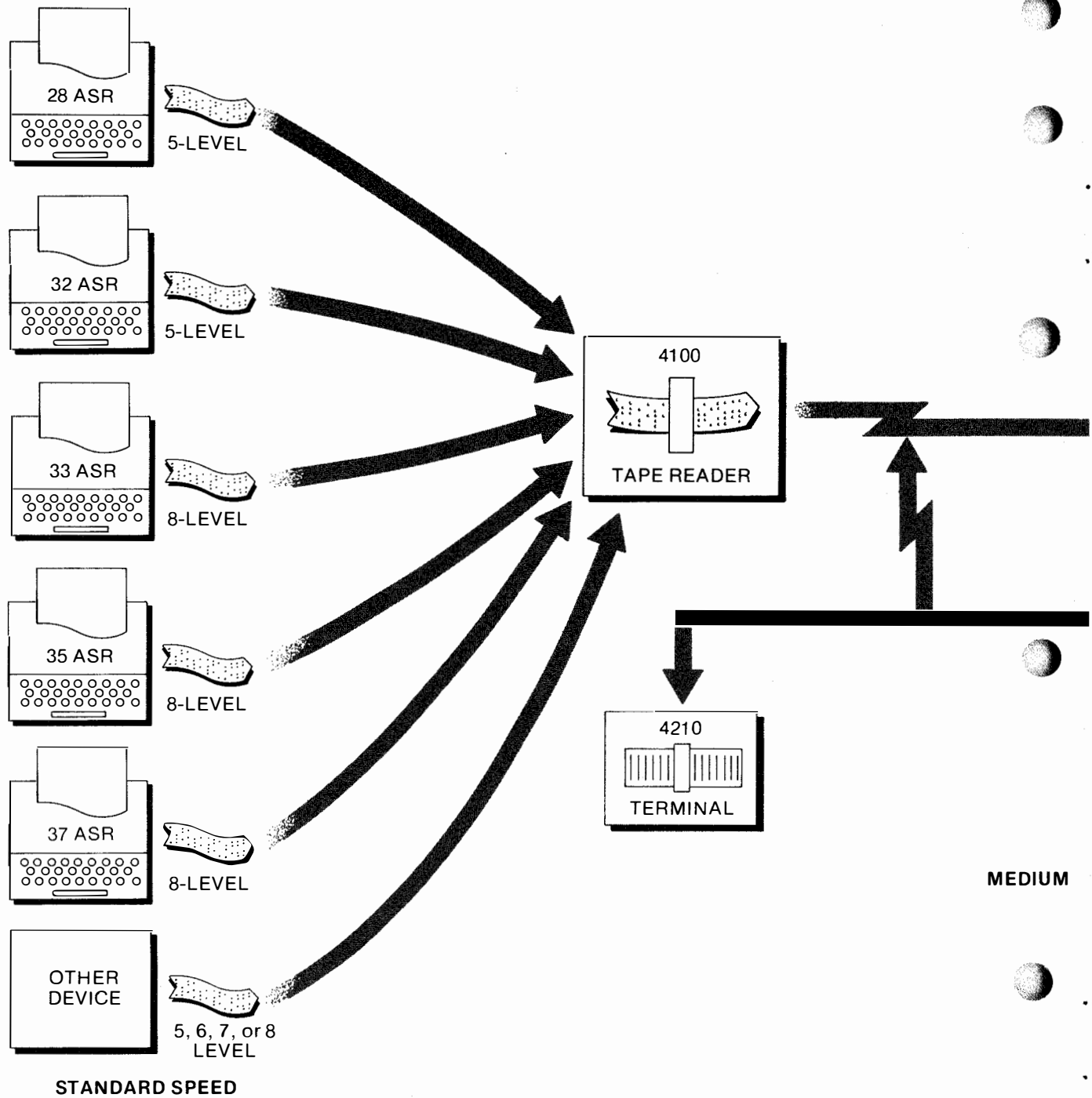
SYSTEM CONFIGURATIONS
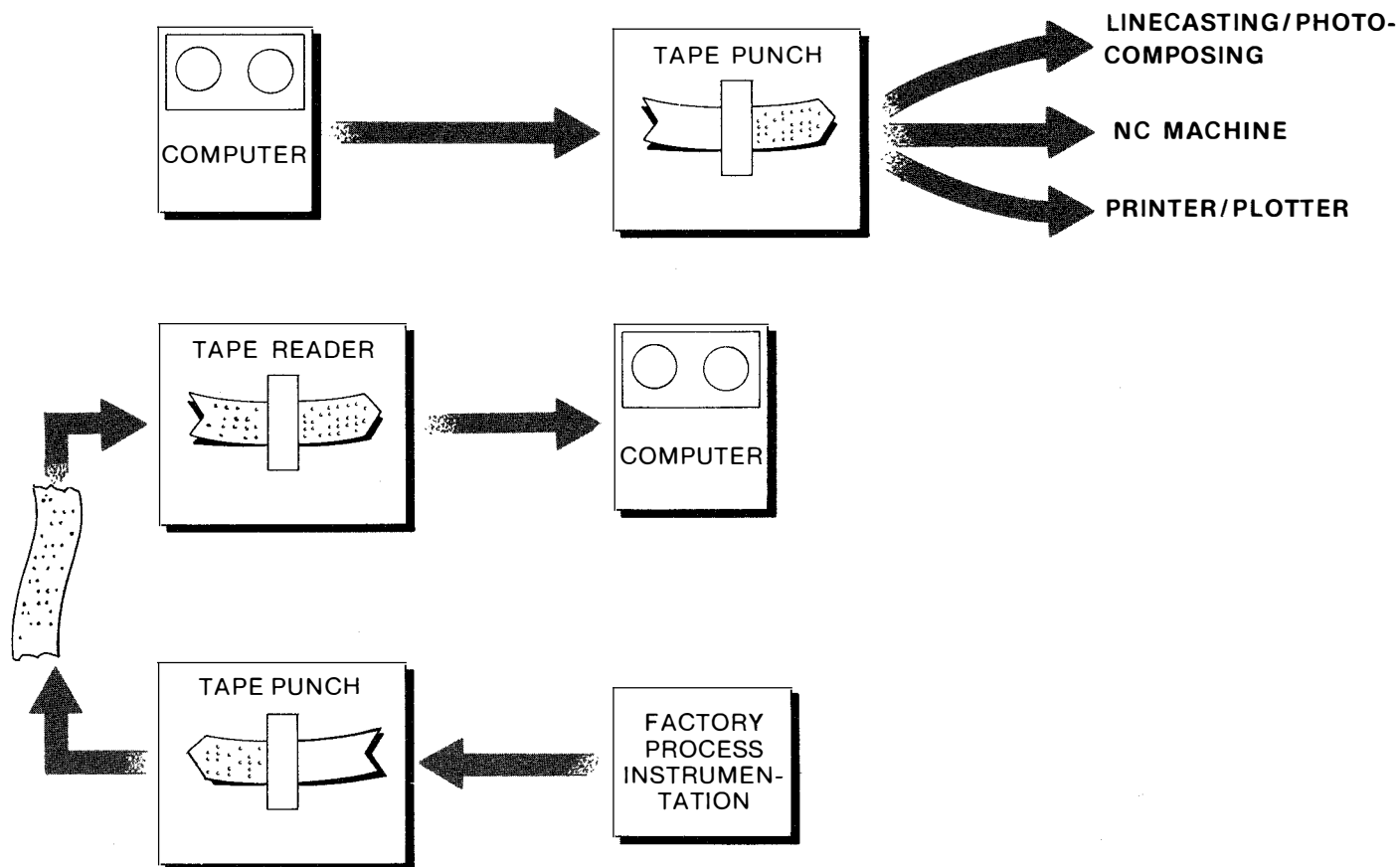
With 4100 tape punches and readers a great many system configurations are possible. In the newspaper industry, for example, 4100 punches serve as the go-between between the computer and the linecasting or photocomposing machines. News stories are entered into the computer by a 4100 tape reader where they are edited, assigned a priority and a typestyle, and automatically justified. Then, as the stories are released they are punched into tape by a 4100 punch, for entry into the typesetting machines. Some newspapers go one interesting step further. They have a different typesetter for each different typestyle, and program the computer to punch the beginning of each tape so that the holes spell out the name of the typestyle at the beginning of each story it

releases to the 4100 punch, in a manner analogous to the way a time-temperature sign works.

The machine tool industry, for another example, makes use of 4100 punches in much the same manner. They permit computer generated tooling programs to be punched into tape, for entry into numerically controlled machinery.

Many industries, too diverse to mention, use 4100 punches and readers simply as data logging and replay devices, to keep track of and compare plant processes. Here, punched tape is attractive because it is a simple and inexpensive recording technique, and lends itself to computer entry, print-out, and laboratory reproduction of plant process cycles.

28 ASR — 5-LEVEL

32 ASR — 5-LEVEL

33 ASR — 8-LEVEL

35 ASR — 8-LEVEL

37 ASR — 8-LEVEL

OTHER DEVICE — 5, 6, 7, or 8 LEVEL

STANDARD SPEED

4100 TAPE READER

4210 TERMINAL

MEDIUM

Probably the greatest usage of 4100 punches and readers has been in the data communications field. This is because they combine speed with insensitivity to data codes to provide a direct connection between a variety of data senders and receivers. With an adjustable-level reader and punch, for example, tapes prepared on 5-level Baudot Code and 8-level ASCII Code terminals, operating at a variety of speeds in the standard speed range, could be gathered and alternately sent over a single medium speed channel. At the receiving end, the transmissions could then be received and punched with the corresponding

28 ASR
5-LEVEL

32 ASR
5-LEVEL

4100
TAPE PUNCH

33 ASR
8-LEVEL

35 ASR
8-LEVEL

COMPUTER

37 ASR
8-LEVEL

SPEED

OTHER DEVICE
5, 6, 7, or 8 LEVEL
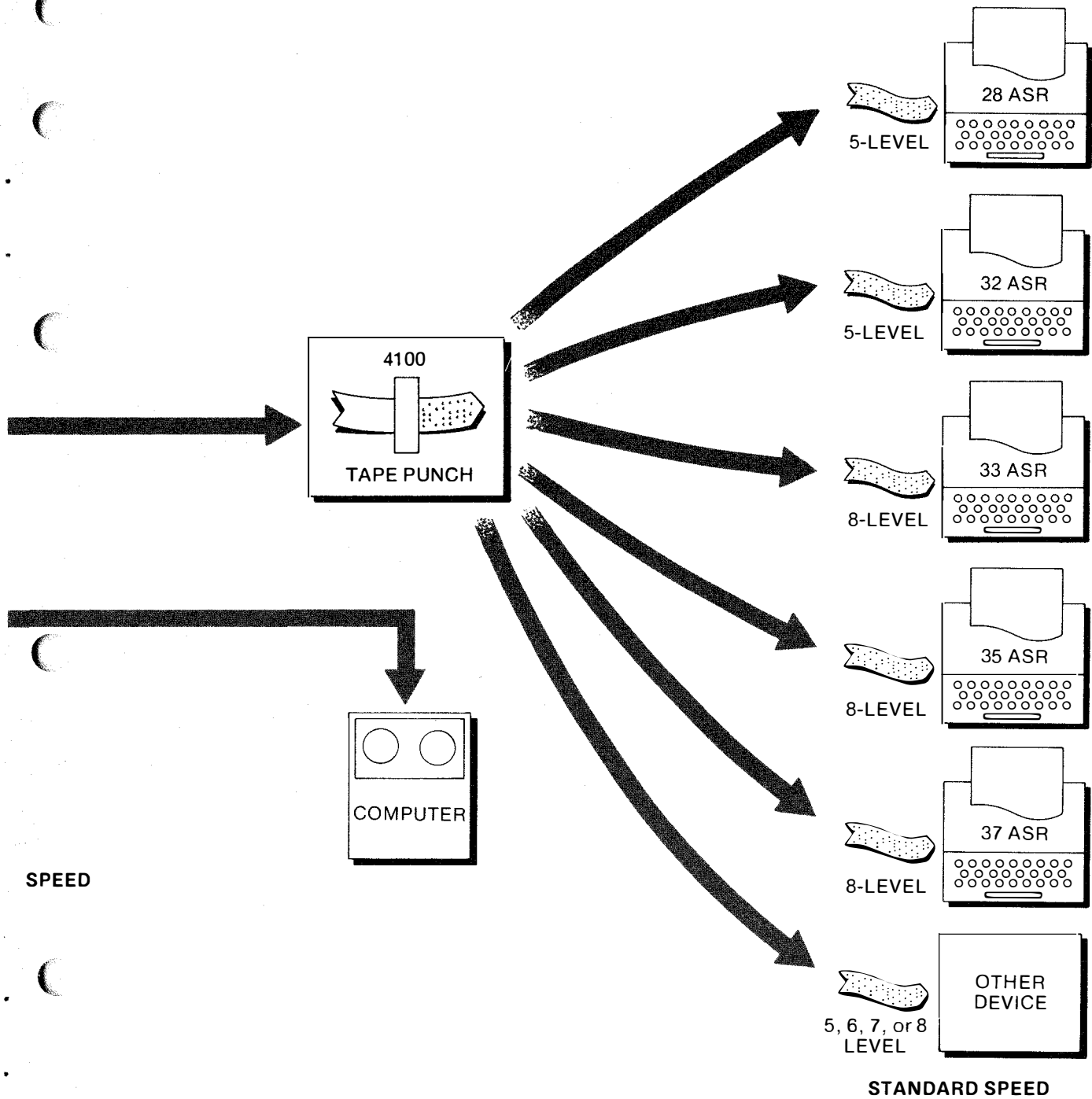
STANDARD SPEED

numbers of levels and distributed back to standard speed terminals, whose speeds need not match those of the originating standard speed terminals. The 4100 reader and punch would be serving as a vital link between terminals that ordinarily couldn't communicate with one another because of speed differences. And they would permit several terminals to share the cost of a single communications channel, even though they have different speeds and codes.

FEATURES

Inexpensive Recording Media

The advantages of 4100 tape punches and readers begin with the media itself. If you're communicating a great deal of data, punched tape is one of the most efficient media you'll find. That's because punched tape represents data that has probably been played back until it's error free, prior to transmission, without consuming valuable on-line transmission time for the correction process. Line time savings are also realized because tape is sent at maximum terminal speed rather than the slower keyboarding speed at which it was prepared.

If you're storing data, for later print-out, analysis, or processing, there's also the cost and the visual identification aspects. Punched paper tape costs less than 5¢ to record 10,000 characters of data. With the data punched into tape it can be easily separated into blocks for later identification, either by tearing the tape into separate lengths or by repetitively recording a given character, such as DEL, to visually indicate the end of one block of data and the beginning of the next.

Choice of Synchronous or Asynchronous Operation

4100 punches and readers are available for either synchronous or asynchronous operation. Synchronous punches and readers control the device they are receiving from or sending to. Asynchronous punches and readers are controlled by the device they are receiving from or sending to. Synchronous punches and readers generate periodic synchronizing pulses, informing the device they are communicating with of the times when they are able to receive or send a character. Asynchronous punches and readers, on the other hand, can receive or send a character at any time, up to the maximum character rate of the punch or reader.

4110 synchronous readers operate at 107 char/sec; 4120 synchronous punches operate at 110 char/sec. 4130 asynchronous readers can operate at any speed up to 360 char/sec; 4140 asynchronous punches can operate at any speed up to 240 char/sec.

Choice of Serial or Parallel Interfaces

4110 synchronous readers have a PCI (Parallel Contact Interface). The parallel signal output comes directly from the reader tape sensing contacts. 4120 synchronous punches have a PMI (Parallel Magnet Interface). The parallel signal input goes directly to the punch electromagnetic coils.

4130 asynchronous readers and 4140 asynchronous punches are available with an EIA (Electronic Industries Association) compatible serial signal interface, or with a PDI (Parallel Device Interface) or PTI (Parallel Terminal Interface) parallel signal interface. The EIA interface is suitable for on-line communications over common carrier facilities. The PDI and PTI interfaces are suitable for off-line or in-plant communications, where they save the cost of a signal serializer at the sending end and a signal deserializer at the receiving end. PDI is a voltage interface, suitable for cable lengths up to 10 feet. PTI is a current interface, suitable for cable lengths up to 1000 feet.

Choice of Fixed or Adjustable Levels

Fixed level 4100 readers and punches permit a specific tape width and number of code holes (levels) to be read or punched. The adjustable types permit several tape widths and levels to be handled by the same reader or punch.

The 4110 readers are available in two fixed-level versions, one for reading 8-level, 1-inch, punched tape, the other for reading 6-level advanced feed hole, 7/8-inch punched tape. They are also available in an adjustable-level version for reading 5, 6, 7, or 8-level, 11/16, 7/8 or 1-inch punched tape. Tape can be fully punched or chadless.

4120 punches are available in a fixed-level version for punching 6-level advanced feed hole, 7/8-inch tape; and in two adjustable-level versions, one for punching 5 or 8-level, 11/16 or 1-inch tape, the other for punching 6, 7, or 8-level, 7/8 or 1-inch tape.

4130 readers are all of the adjustable-level type, for reading 5, 6, 7, or 8-level, 11/16, 7/8 or 1-inch punched tape. Tape can be fully punched or chadless, in-line or advanced feed hole.

4140 punches are available in an adjustable-level version for punching 5, 6, 7 or 8-level, 11/16, 7/8 or 1-inch tape; and in a fixed-level version for punched 6-level advanced feed hole, 7/8-inch tape.

Typically 5-level readers and punches are used for communications using Baudot Code. 6-level advanced feed hole readers and punches are used in conjunction with typesetting equipment. 8-level readers and punches are used for communications using ASCII Code with vertical parity, and for punching and reading data processing codes or numerical control tapes. Punches and readers can be used for a variety of jobs because they are not sensitive to code. They can handle any code whose number of bits is equal to or less than the number of levels that can be handled by the punch or reader.

Optional Auxiliary Reader Output and Punch Verifier

4130 readers are available with a verifier data output. With this output in addition to the normal or primary output, each character is read by two separate sensing heads. As such, the verifier data output can be used to verify the accuracy of the primary output when suitable external logic is provided.

4140 punches are available with a verifier which includes logic to read each character immediately after it is punched, compare the character read to the character received, and output an error pulse if they do not agree.

Optional Long Life Punch

4100 punches are available with either a standard or a long life punch block. Using standard oiled paper tape, standard punch blocks have a minimum punching life of one million feet of tape, and long life punch blocks have a minimum life of ten million feet of tape. Dry and mylar tapes can be used but will shorten the life of both punch blocks. (Also such tapes can only be punched at speeds up to 180 characters per second.)

Table, Floor, and Rack Mounting

4110 readers and 4120 punches are packaged for table top use. 4130 readers are available either rack mountable or table top. 4140 punches are available in floor cabinets or rack mountable.
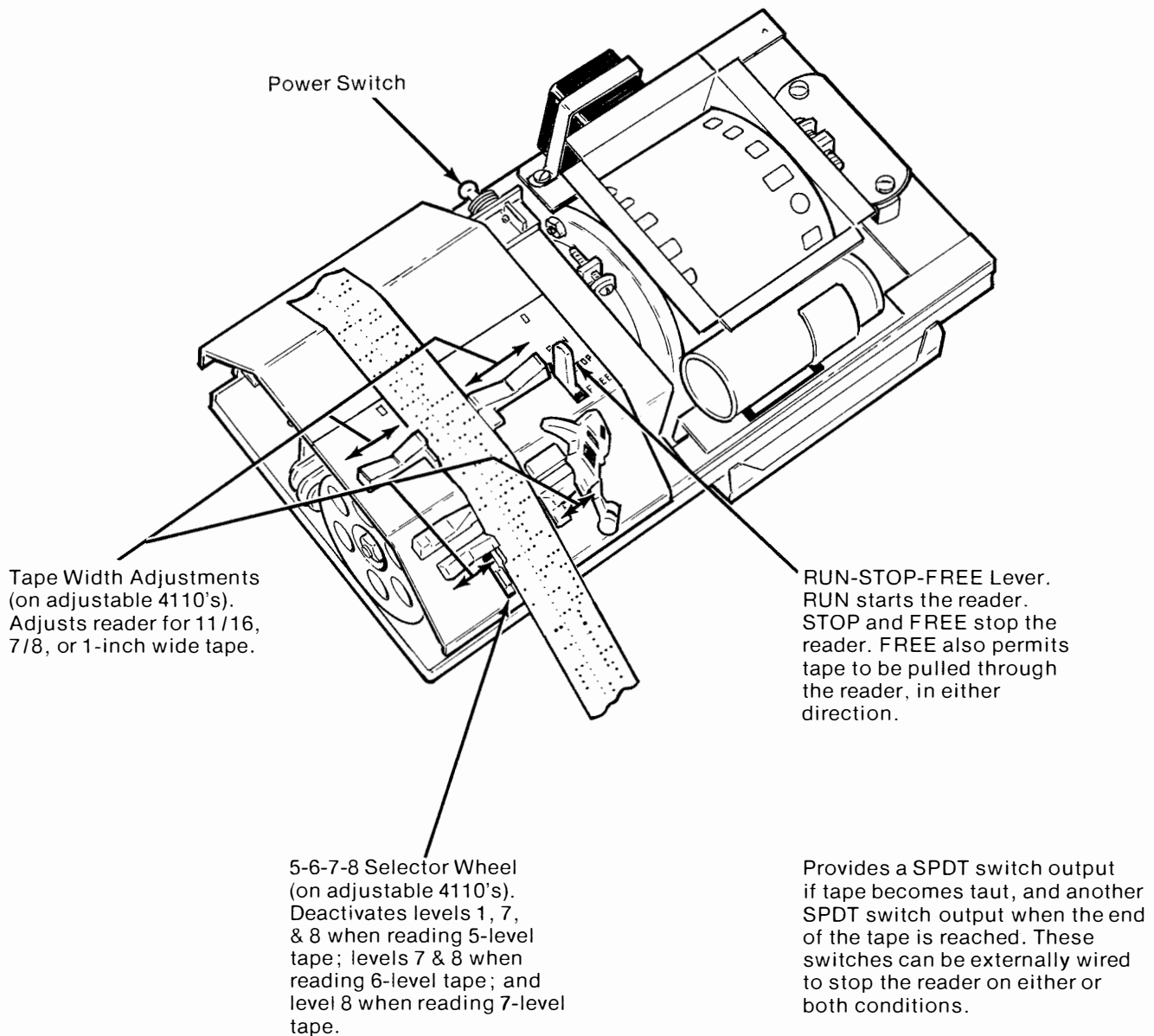
50 and 60 Hz

4110 readers are available for 50 or 60 Hz input. 4120 punches are available for 50, 60, or 50/60 input. 4130 readers are available for 50/60 Hz input. 4140 punches are available for 50 or 60 Hz.
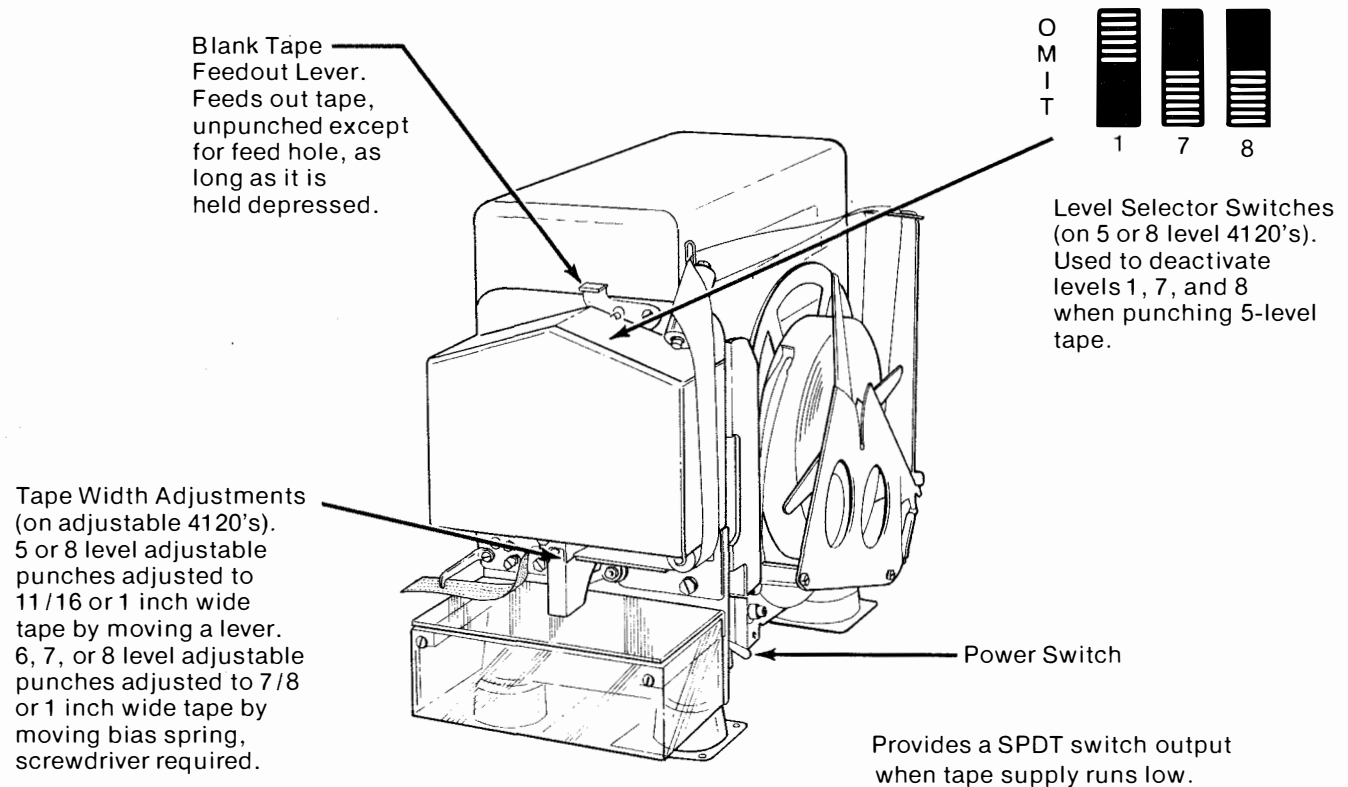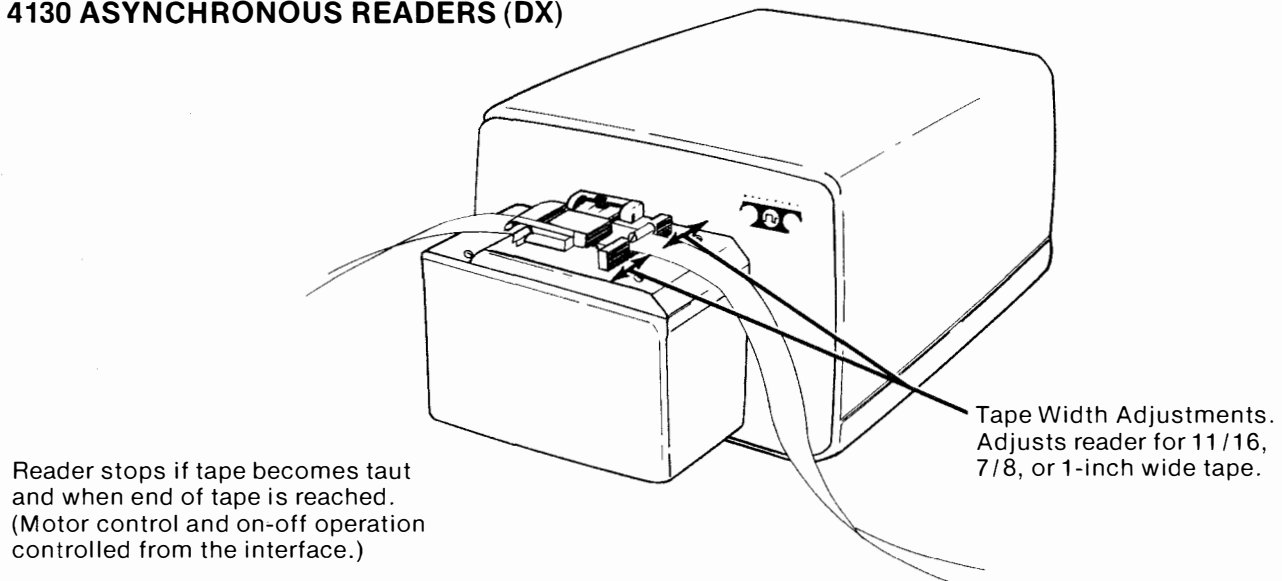
Simple Controls and Indicators

4110 SYNCHRONOUS READERS (CX)

Power Switch

Tape Width Adjustments
(on adjustable 4110's).
Adjusts reader for 11/16,
7/8, or 1-inch wide tape.

RUN-STOP-FREE Lever.
RUN starts the reader.
STOP and FREE stop the
reader. FREE also permits
tape to be pulled through
the reader, in either
direction.

5-6-7-8 Selector Wheel
(on adjustable 4110's).
Deactivates levels 1, 7,
& 8 when reading 5-level
tape; levels 7 & 8 when
reading 6-level tape; and
level 8 when reading 7-level
tape.

Provides a SPDT switch output
if tape becomes taut, and another
SPDT switch output when the end
of the tape is reached. These
switches can be externally wired
to stop the reader on either or
both conditions.

4120 SYNCHRONOUS PUNCHES (BRPE)

Blank Tape Feedout Lever. Feeds out tape, unpunched except for feed hole, as long as it is held depressed.

O M I T

1 7 8

Level Selector Switches (on 5 or 8 level 4120's). Used to deactivate levels 1, 7, and 8 when punching 5-level tape.

Tape Width Adjustments (on adjustable 4120's). 5 or 8 level adjustable punches adjusted to 11/16 or 1 inch wide tape by moving a lever. 6, 7, or 8 level adjustable punches adjusted to 7/8 or 1 inch wide tape by moving bias spring, screwdriver required.

Power Switch

Provides a SPDT switch output when tape supply runs low.

4130 ASYNCHRONOUS READERS (DX)

Tape Width Adjustments. Adjusts reader for 11/16, 7/8, or 1-inch wide tape.

Reader stops if tape becomes taut and when end of tape is reached. (Motor control and on-off operation controlled from the interface.)

4100 PAPER TAPE EQUIPMENT

4140 ASYNCHRONOUS PUNCHES (DRPE)
FLOOR MODEL

Tape Width Adjustment Lever
(behind cover).
Adjusts punch for 11/16,
7/8, or 1-inch wide tape.

POWER

Power On
Indicator

1 — Used to deactivate
levels 1, 7, & 8
when punching
5-level tape;
7 — levels 7 & 8
when punching
6-level tape;
level 8 when
punching
8 — 7-level tape.

OMIT ——→

PUNCH LEVEL
SELECTION

Punch stops when
end of tape is
reached.

OUT OF SERVICE	Depression turns on Out Of Service lead at interface.
AUTO DISCON-NECT	Depression provides strappable 6-30 sec delay on turn off of Data Terminal Ready lead.
TAPE OUT	Illumination indicates no tape in punch.
LOW TAPE	Illumination indicates low tape supply.
BLANK FEED	Depression feeds out tape, unpunched except for feed hole.
ALL FEED	Depression feeds out tape, punched in all levels.

TEST SWITCH

4   5
3   6
2   7
1   8

(on electronics behind door)
Used to test level 1, 2, 3, 4,
5, 6, 7, or 8 when BLANK is
depressed.

12

4140 ASYNCHRONOUS PUNCHES (DRPE)
RACK MOUNTABLE MODEL
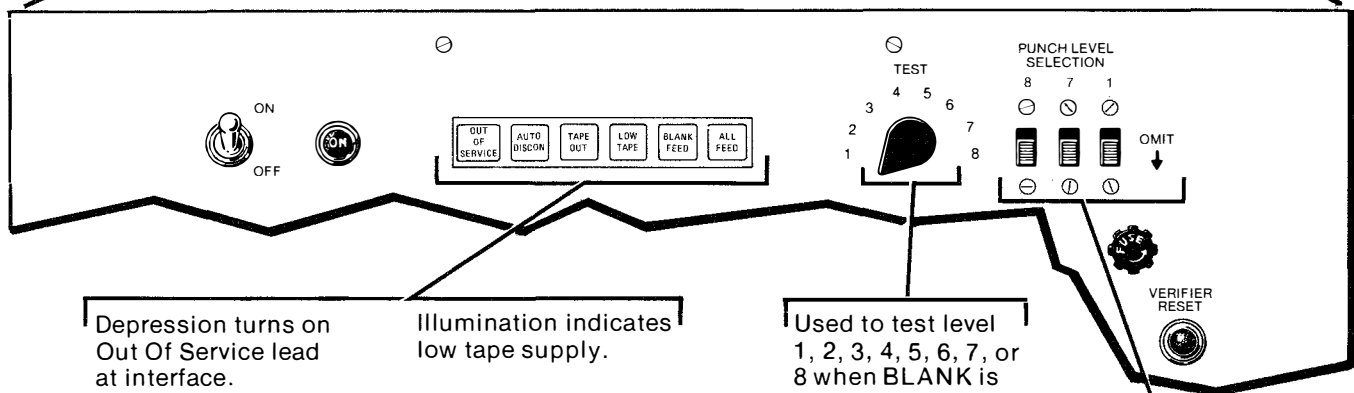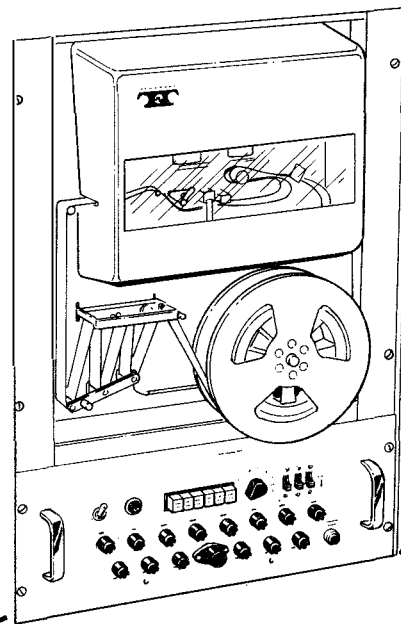
Depression turns on
Out Of Service lead
at interface.

Depression provides
strappable 6-30 sec
delay on turn off of
Data Terminal Ready
lead.

Illumination indicates
no tape in punch.

Illumination indicates
low tape supply.

Depression feeds
out tape, unpunched
except for feed hole.

Depression feeds
out tape, punched
in all levels.

Used to test level
1, 2, 3, 4, 5, 6, 7, or
8 when BLANK is
depressed.

Punch stops when
end of tape is
reached.

Used to deactivate levels
1, 7, & 8 when punching
5-level tape levels 7 & 8
when punching 6-level
tape; level 8 when
punching 7-level tape.

TECHNICAL INFORMATION

Interface

4110 SYNCHRONOUS READER (CX)
PARALLEL CONTACT INTERFACE (PCI)
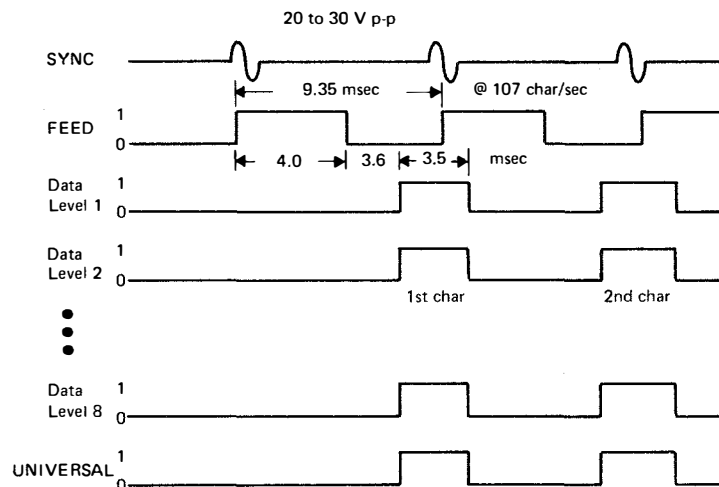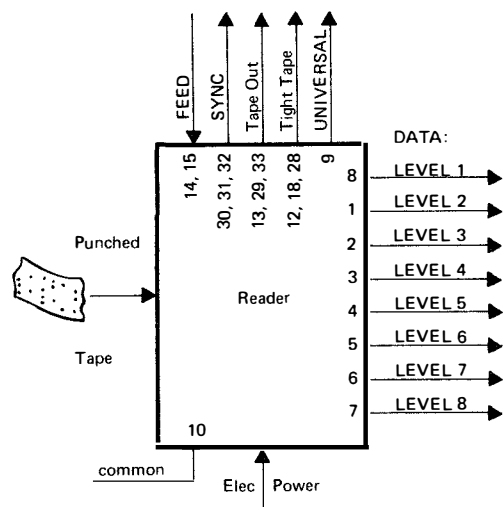
SYNC (Synchronizing Pulse) — Generated by magnetic pickup for as long as the reader motor is on. Pulse indicates when reader is ready to read out a character. Can be adjusted to anywhere during reader contact closure to suit timing requirements of external equipment. Output pins come from pickup coil and shielding.

FEED — Causes reader to read out next character when pulsed for 4.0 msec, starting when the SYNC pulse appears. Can be pulsed, as shown, or left on (state 1) continuously and the reader will automatically read out characters at character rate of reader. Input pins go to coil.

UNIVERSAL — Goes on each time there is a character output on Levels 1 through 8.
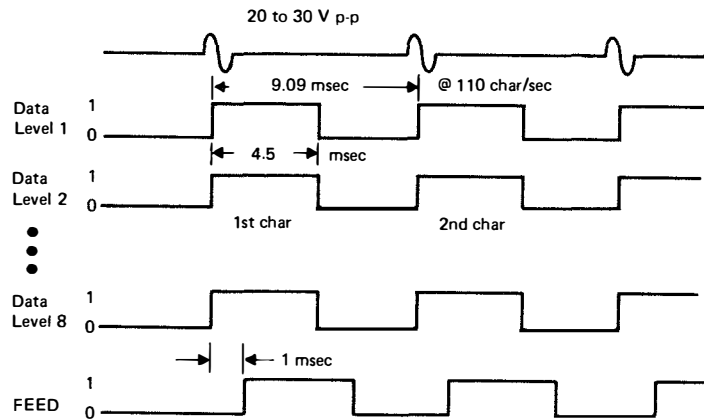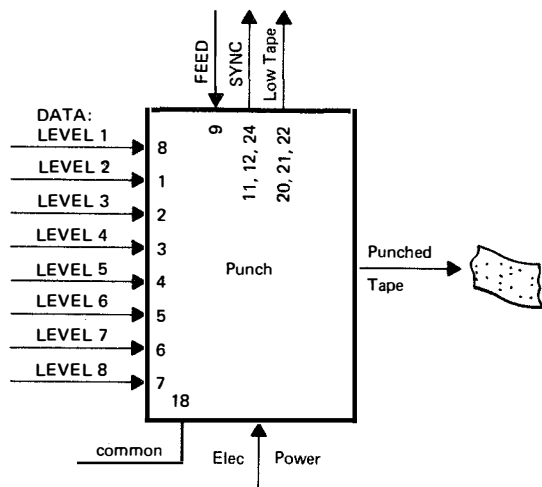
For interface connector information, see page 24.

SYNC: 20 to 30 V peak-to-peak.

FEED: State $1 = 2$ ampDC; State $0 = 0$ amp, if pulsed. If held on State $1 = 1$ ampDC. Applied voltage should be 28 VDC. Requires external current limiting resistor. FEED coil 2.5 ohms.

Levels 1-8 and UNIVERSAL: State 1 (mark) = contacts closed. State 0 (space) = contacts open. Applied power should be between 28 and 130 VDC at between 0.2 and 100 ma. Requires external current limiting resistor. 5 VDC can be used with 4111-2AA, 2CA, 2AC and 2CC readers; if they are not first used at higher voltage.

Tape Out and Tight Tape: Each is a separate SPDT switch. Applied power should be between 28 and 130 VDC at between 0.2 and 100 ma. Operates when no tape in reader and when tape becomes taut.

4120 SYNCHRONOUS PUNCH (BRPE)
PARALLEL MAGNET INTERFACE (PMI)

SYNC (Synchronizing Pulse) — Generated by magnetic pickup, as long as punch motor is on. Indicates when the punch is ready to receive and punch a character. Can be adjusted to anywhere in the punch cycle to suit timing requirements of external equipment. Output pins come from coil and shielding.

FEED — Puts feed hole in tape and advances tape to next punching position.

For interface connector information, see page 24.

SYNC: 20 to 30 V peak-to-peak.

Levels 1-8 and FEED: State 1 (mark) = 1 ampDC. State 0 (space) = 0 ma. Applied voltage should be –28 VDC. 25 ohm current limiting resistor and inductive transient suppressor diode provided for each input electromagnet.

Low Tape: Is a SPDT switch which operates when tape supply needs refilling. Applied power should be between 48 and 120 VDC at 500 ma max.

4130 ASYNCHRONOUS READER (DX)
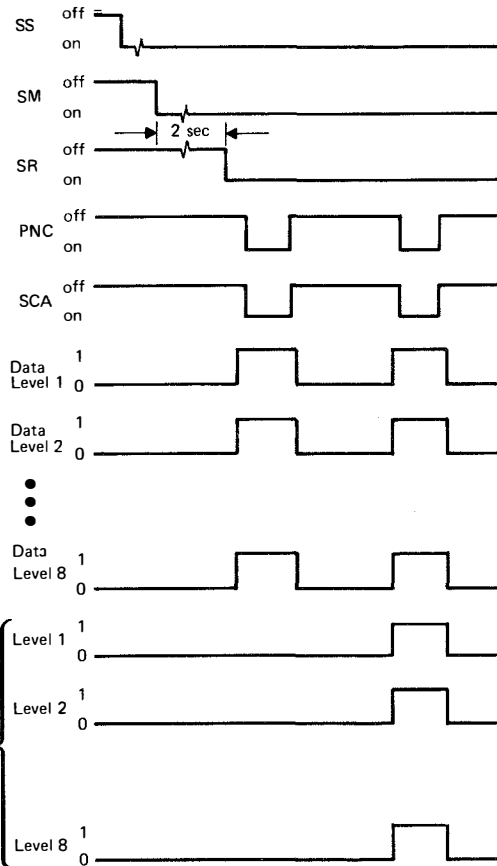## PARALLEL DEVICE INTERFACE (PDI)*
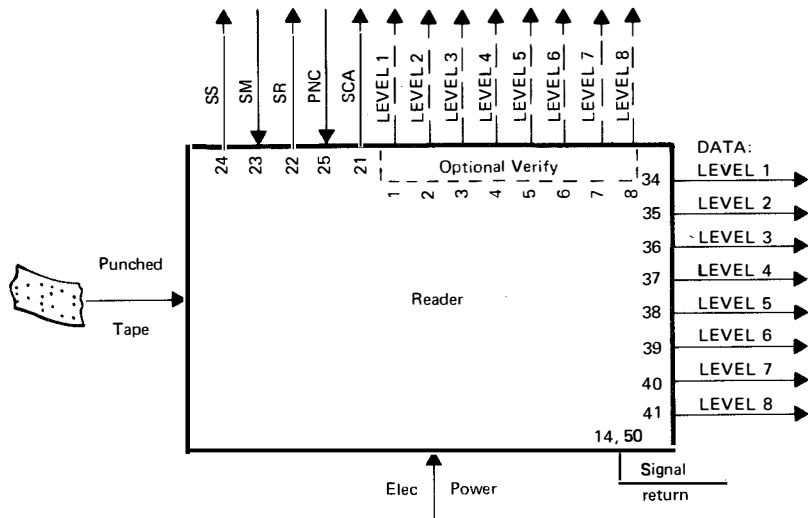
SS (Sender Selectable) — On when there is tape in the reader.

SM (Send Message) — Turns on reader motor and causes reader to read character in tape into its storage buffer.

SR (Sender Ready) — On when actions associated with SM have been performed and there are no tape alarms. Goes off if either SM or SS go off, or if reader fails to step to next character.

PNC (Present Next Character) — Causes character in reader storage buffer to appear at output, levels 1 to 8, and reader to step to next character.

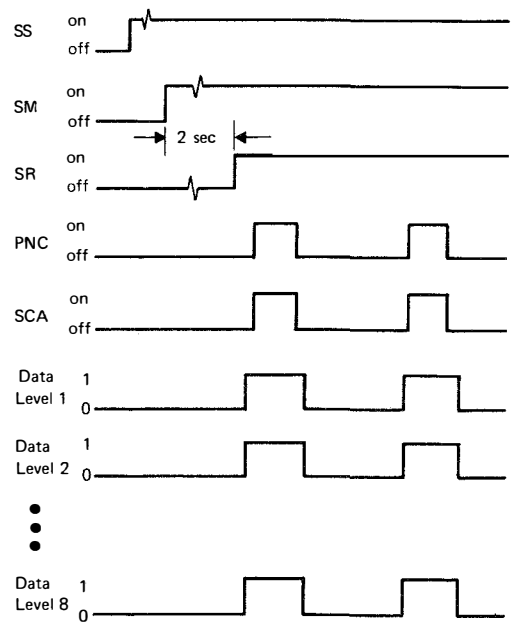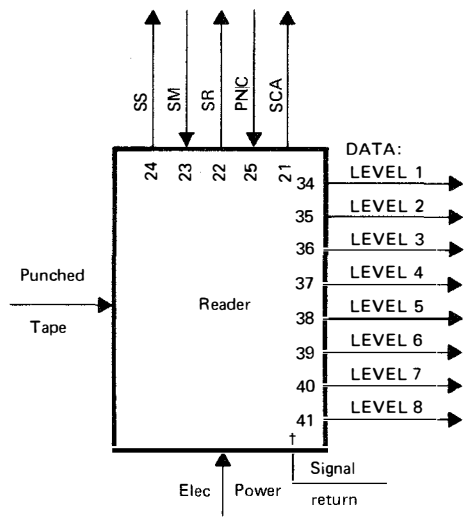SCA (Send Character Available) — On when PNC is on and when output appears at levels 1 to 8.

*Off/State 1 (mark) = +5VDC (capable of Supplying 0.5 ma)
On/State 0 (space) = OVDC (capable of sinking 10 ma)

For interface connector information, see page 24.

4130 ASYNCHRONOUS READER (DX)
PARALLEL TERMINAL INTERFACE (PTI)∗

SS (Sender Selectable) — On when there is tape in the reader.

SM (Send Message) — Turns on reader motor and causes reader to read character in tape into its storage buffer.

SR (Sender Ready) — On when actions associated with SM have been performed and there are no tape alarms. Goes off if either SM or SS go off or if reader fails to step to next character.

PNC (Present Next Character) — Causes character in reader storage buffer to appear at output, levels 1 to 8, and reader to step to next char.

SCA (Send Character Available) — On when PNC is on and when output appears at levels 1 to 8.

† *multiple returns*

∗On/State 0 (space) = 25 maDC
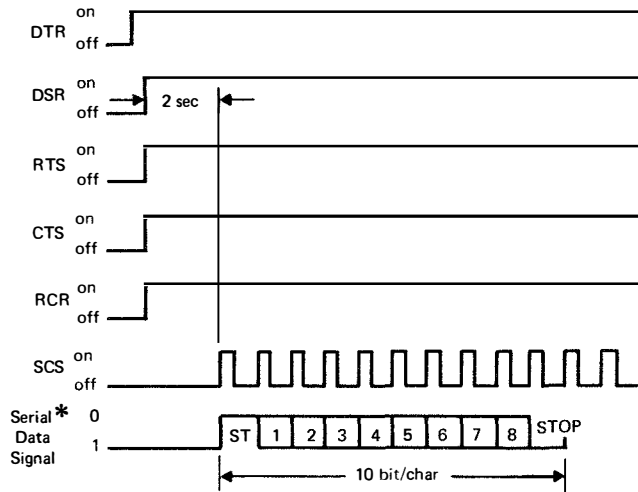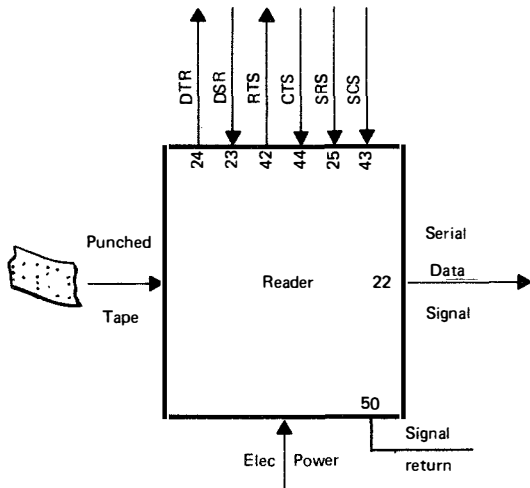Off/State 1 (mark) = 0 ma

Order 322969 circuit card to convert PTI (current) interface to PDI (voltage) interface at receiver.

For interface connector information, see page 24.

4130 ASYNCHRONOUS READER (DX)
EIA COMPATIBLE INTERFACE

(Compatible with Electronic Industry Association RS-232-C)

DTR (Data Terminal Ready) — On whenever reader power is on.

DSR (Data Set Ready) — On permits RTS to be on.

RTS (Request To Send) — On when there is tape in the reader and no alarm condition.

CTS (Clear To Send) — On when reader permitted to send.

SRS (Secondary Request to Send) — Optional. Used with certain 202 data sets or equivalent.

SCS (Serial Clock Send) — Used only when externally supplied timing is used (e.g. 201 data set). Otherwise timing supplied internally.

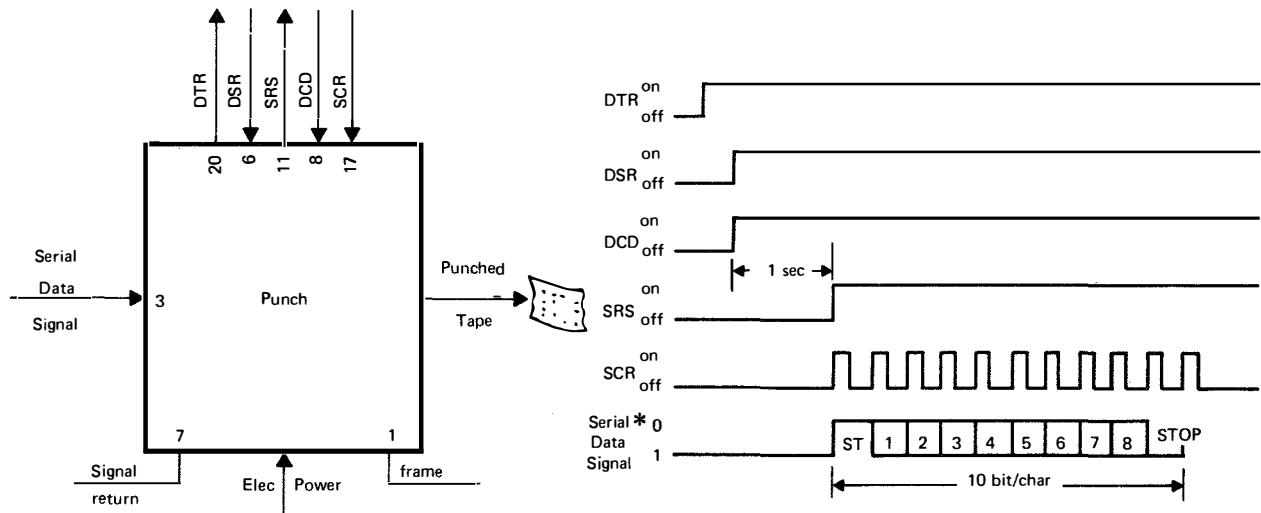*For interface connector information, see page 24.*

Inputs: On = +3 to +25 VDC
Off = −3 to −25 VDC

Outputs: On/State 0 (space) = +5 VDC
Off/State 1 (mark) = −5 VDC

*Strap options are provided for 7.0, 7.5, 10 and 11 bit/char.

4140 ASYNCHRONOUS PUNCH (DRPE)
EIA COMPATIBLE INTERFACE

(Compatible with Electronic Industries Association RS-232-C)

DTR (Data Terminal Ready) — On whenever punch power is on, and if no alarm conditions.

DSR (Data Set Ready) — On in response to DTR.

DCD (Data Carrier Detect) — On when channel carrier on. Permits SRS to go on.

SRS (Secondary Request to Send) — On when DCD goes on. (Used as reverse channel e.g. with certain 202 data sets.)

SCR (Serial Clock Receive) — Used only when externally supplied timing is used (e.g. 201A3 data set). Otherwise supplied internally.

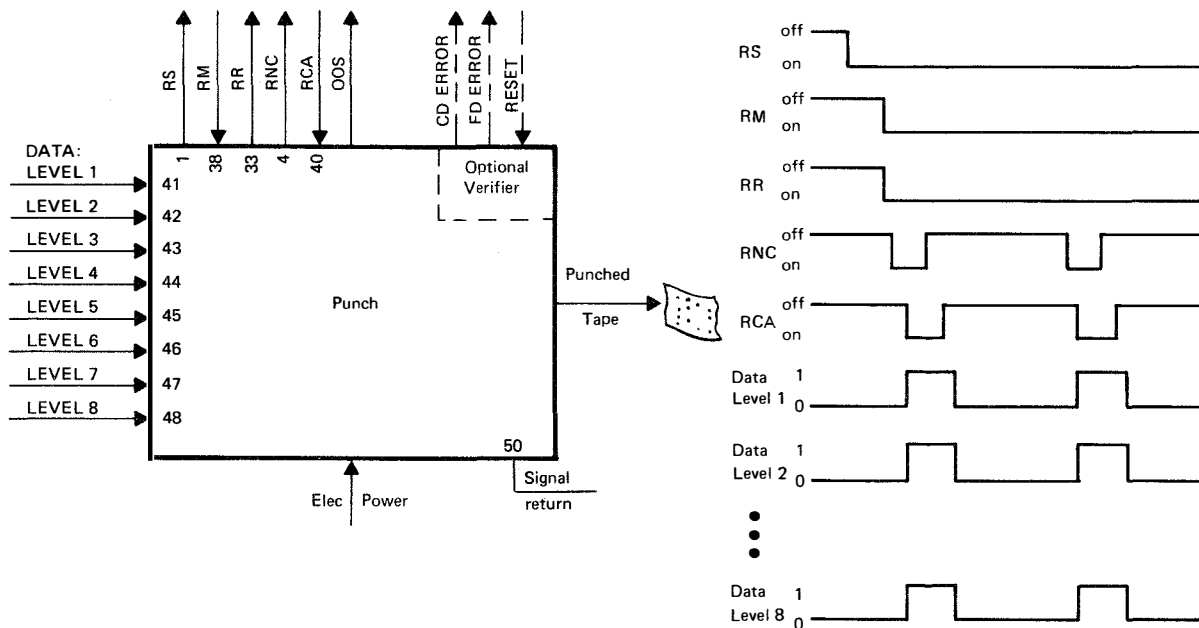*For interface connector information, see page 25.*

Inputs: On/State 0 (space) = +3 to +25 VDC
Off/State 1 (mark) = −3 to −25 VDC

Outputs: On = +6 VDC
Off = −6 VDC

*Strap options are provided for 7.0, 7.5, 10 and 11 bit/char.

4100 PAPER TAPE EQUIPMENT

4140 ASYNCHRONOUS PUNCH (DRPE)
PARALLEL DEVICE INTERFACE (PDI)*

RS (Receiver Selectable) — On when punch power on, tape supply not low, test switch off, out of service pushbutton not depressed, tape feed-out pushbutton not depressed, and tape in punch.

RM (Receive Message) — On when sending device desires to send to the punch.

RR (Receiver Ready) — On in response to RM if tape in punch, test switch off, and out of service pushbutton not depressed.

RNC (Request Next Character) — On when punch ready to receive next character.

RCA (Receive Character Available) — Causes next character to be punched according to the inputs at levels 1 to 8.

OOS (Out Of Service) — DPDT switch, 5 amp 250 VAC max.; 3 amp 30 VDC max.

*Off/State 1 (mark) = +5 VDC (capable of supplying 1.5 ma)
On/State 0 (space) = 0 VDC (capable of sinking 1.5 ma)

Code Error — Optional, if punch equipped with verifier. On when character read from tape just punched does not agree with character received for that punching.
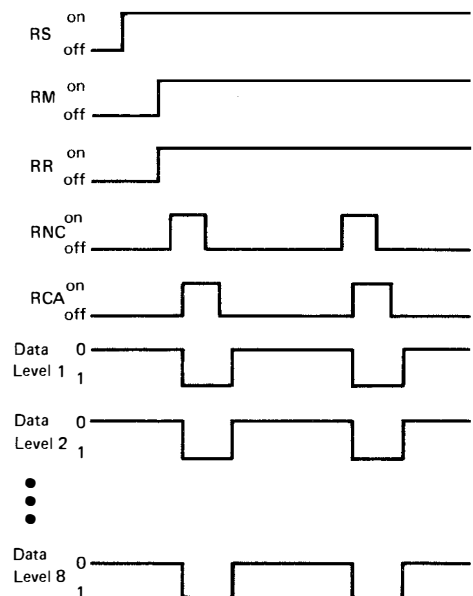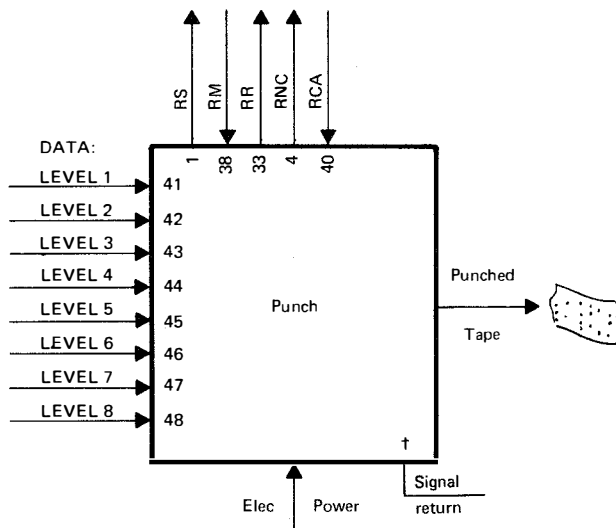
Feed Error — Optional, if punch equipped with verifier. On when tape fails to feed to next character position.

Normal and inverted outputs are provided for Code Error and Feed Error.

Reset — Can be used to reset verifier instead of Reset pushbutton.

For interface connector information, see page 25

4140 ASYNCHRONOUS PUNCH (DRPE)
PARALLEL TERMINAL INTERFACE (PTI)*

RS (Receiver Selectable) — On when punch power on, tape supply not low, test switch off, out of service pushbutton not depressed, tape feed-out pushbutton not depressed, and tape in punch.

RM (Receive Message) — On when sending device desires to send to the punch.

RR (Receiver Ready) — On in response to RM if tape in punch, test switch off, and out of service pushbutton not depressed.

RNC (Request Next Character) — On when punch ready to receive next character.

† multiple returns

*On/State 0 (space) = 25 maDC
Off/State 1 (mark) = 0 ma

Order 322976 circuit card to convert PDI (voltage) interface to PTI (current) interface at sender.
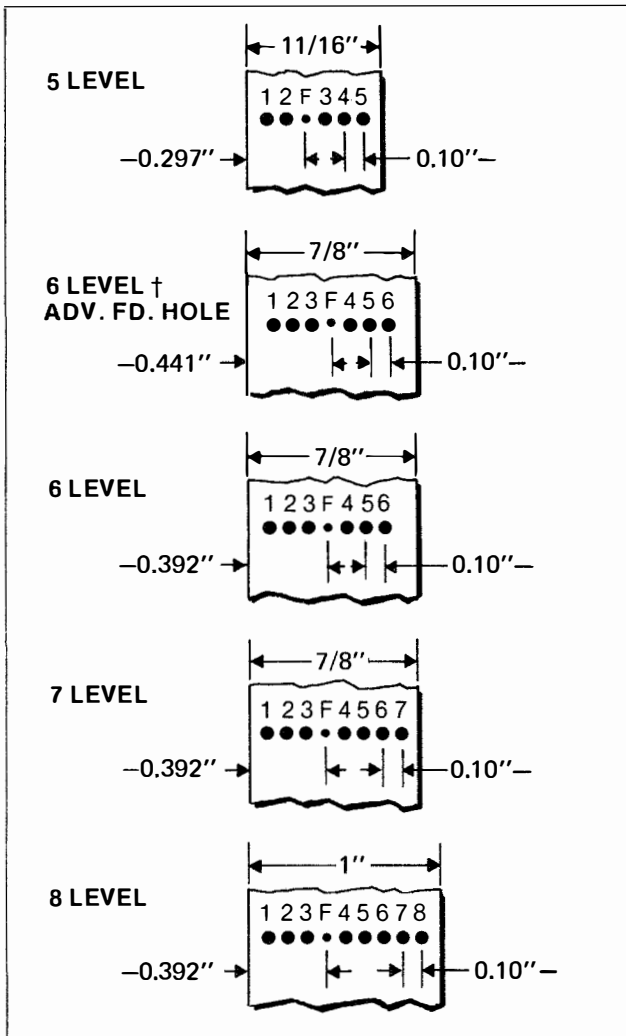
RCA (Receive Character Available) — Causes next character to be punched according to the inputs at levels 1 to 8.

OOS (Out Of Service) — DPDT switch. 5 amp 250 VAC max., 3 amp 30 VDC max.

For information on interface connector see page 25.

Punched Tape Dimensions

5 LEVEL
1 2 F 3 4 5
←11/16"→
−0.297" → |←→| |← −0.10"−

6 LEVEL †
ADV. FD. HOLE
1 2 3 F 4 5 6
←7/8"→
−0.441" → |←→| |← −0.10"−

6 LEVEL
1 2 3 F 4 5 6
←7/8"→
−0.392" → |←→| |← −0.10"−

7 LEVEL
1 2 3 F 4 5 6 7
←7/8"→
−0.392" → |← →| |← −0.10"−

8 LEVEL
1 2 3 F 4 5 6 7 8
←1"→
−0.392" → |← →| |← −0.10"−

Numbering indicates the sequence in which code bits are received and punched, and the sequence in which they are read and transmitted.
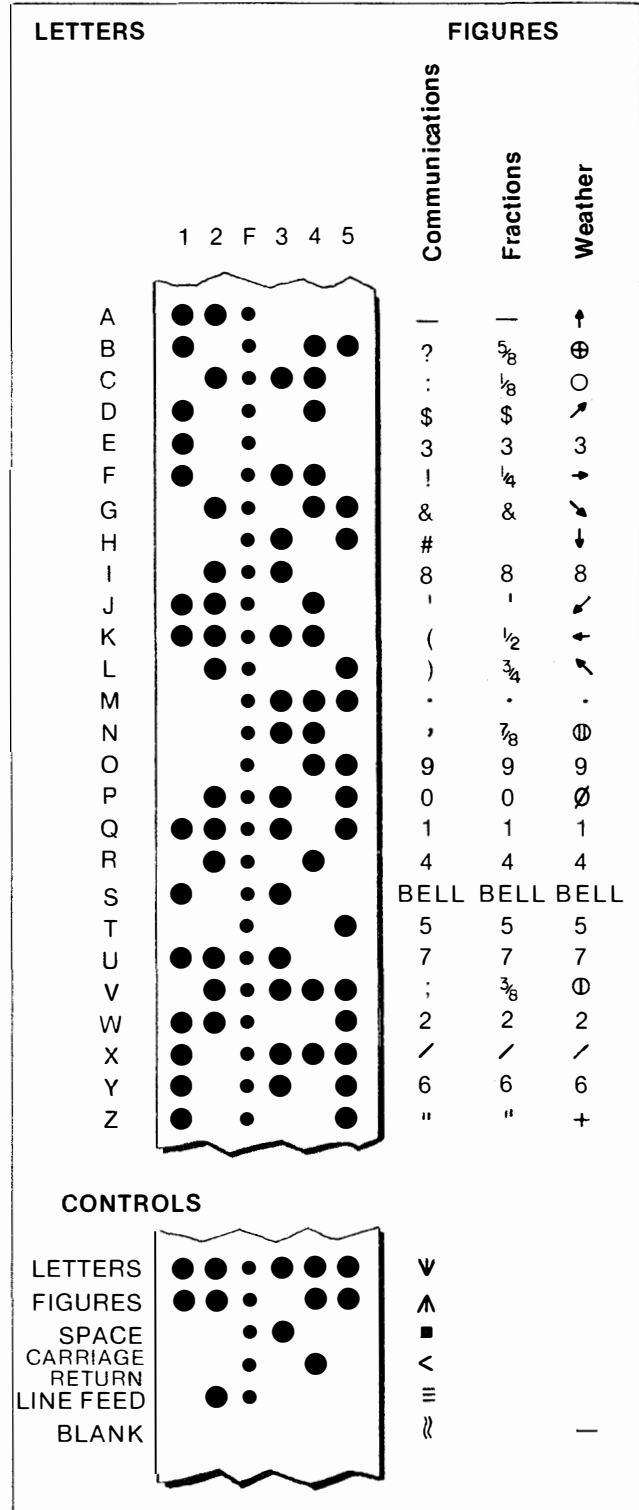
Code Holes (numbered) are 0.071 in. Dia. Feed Holes (labeled F) are 0.0465 in. Dia. Tape Thickness is 0.004 in.

Each punched hole represents a recorded state 1 (mark) bit, each unpunched a state 0 (space) bit.

Recording Density is 10 char/in.

†*Used in publishing industry for linecasting and photosetting. Center line of feed hole is 0.013″ ahead of code holes, such that the leading edge of the feed hole is in line with the leading edge of the code holes.*
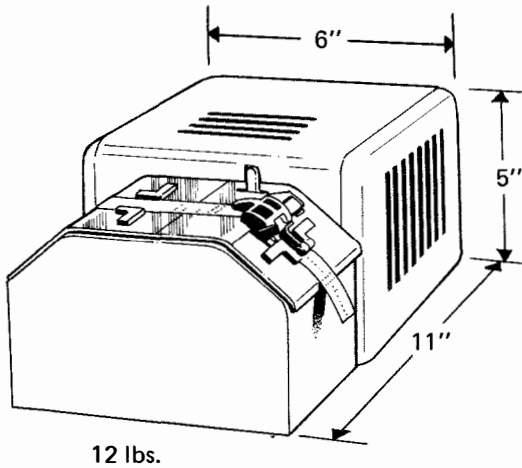
Tape Punched with Baudot Code

LETTERS — punch columns 1 2 F 3 4 5

LETTERS	Communications	Fractions	Weather
A	—	—	↑
B	?	5/8	⊕
C	:	1/8	○
D	$	$	↗
E	3	3	3
F	!	1/4	→
G	&	&	↘
H	#		↓
I	8	8	8
J	'	'	↙
K	(	1/2	←
L	)	3/4	↖
M	.	.	.
N	,	7/8	⊕
O	9	9	9
P	0	0	Ø
Q	1	1	1
R	4	4	4
S	BELL	BELL	BELL
T	5	5	5
U	7	7	7
V	;	3/8	⊕
W	2	2	2
X	/	/	/
Y	6	6	6
Z	"	"	+

CONTROLS

LETTERS	
LETTERS	⅄
FIGURES	⋀
SPACE	▪
CARRIAGE RETURN	<
LINE FEED	≡
BLANK	⸙ —

Tape Punched with ASCII
Code plus Parity

4100 PAPER TAPE EQUIPMENT
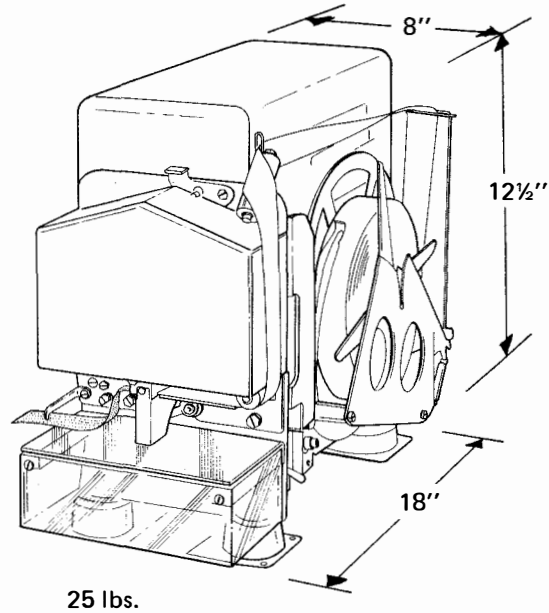
Physical

4110 (CX)

6"

5"

11"

12 lbs.

Interface is via 36-pin plug connector. Mates with 161239 (Amphenol 57-30360) receptacle connector, not provided.

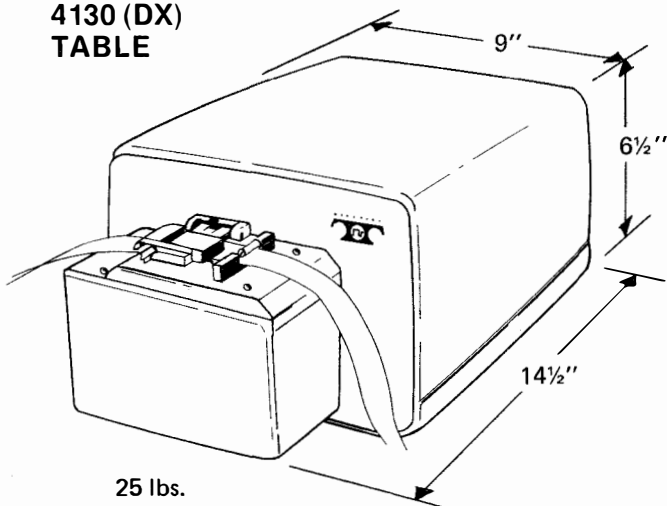Power cord provided.

4120 (BRPE)

8"

12½"

18"

25 lbs.

Interface is via 24-pin plug connector. Mating receptacle connector provided.

Power cord not provided. Power interface is via 3-pin twist lock plug connector. Mating receptacle connector provided.
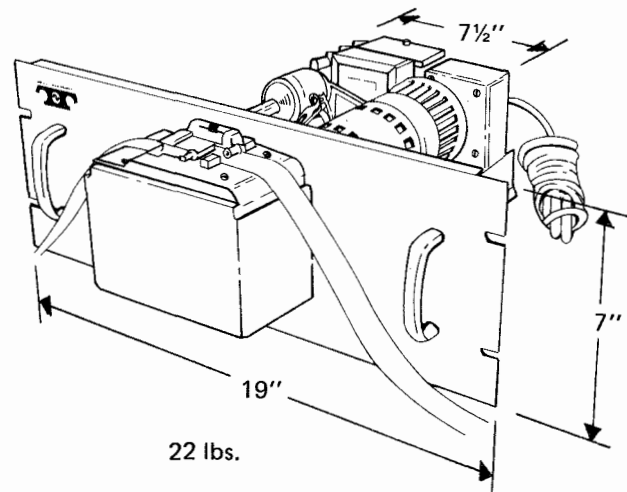
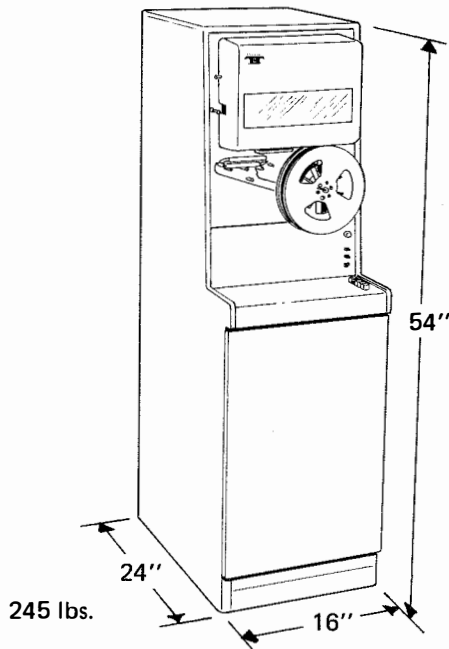Tape supply reel holds 1000 ft. of tape.

4130 (DX) TABLE

9"

6½"

14½"

25 lbs.

Interface is via 50-pin plug connector. Mating receptacle is provided.

4130 (DX) RACK

7½"

7"

19"

22 lbs.

4100 PAPER TAPE EQUIPMENT

SELECTION GUIDE

4110 Synchronous Readers (CX)

STANDARD FEATURES	OPTIONAL FEATURES						
	Input Power Frequency	Tape Levels and Width			Output via Form A (SPST n.o.) or Form C (SPDT) Data Contacts	With Cover (smooth light gray paint finish)	CATALOG NUMBER
		5, 6, 7, or 8 Level 11/16, 7/8, or 1 inch	8 Level 1 inch	6 Level Adv. Fd. Hole 7/8 inch			
Operates at 107 char/sec. Table Model. Reads chadless or fully punched tape. Parallel Contact Interface (PCI) — Provides parallel signal output directly from tape sensing contacts, magnetic pickup generated timing pulse output adjustable to anywhere during reader contact closure, a contact closure output when tape becomes taut, and a separate contact closure output when end of tape is reached. On-Off Power Switch and Run-Free-Stop Control. Taut tape and end of tape contact closures may be externally wired to stop reader on either or both conditions.	60 Hz	●			A		4111-2AA
		●			A	●	4111-2CA
			●		C		4111-2AB
			●		C	●	4111-2CB
				●	A		4111-2AC
				●	A	●	4111-2CC
	50 Hz	●			A		4111-2JA
		●			A	●	4111-2LA
			●		C		4111-2JB
			●		C	●	4111-2LB
				●	A		4111-2JC
				●	A	●	4111-2LC

4120 Synchronous Punches (BRPE)

STANDARD FEATURES

Operates at 110 char/sec.

Table Model.

Parallel Magnet Interface (PMI) — Provides parallel signal input directly to punch electromagnet coils, magnetic pickup generated timing pulse output adjustable to anywhere in punch cycle, and a contact closure output when tape supply runs low.

On-Off Power Switch and Tape Feed-Out Control.

Tape Supply Reel with Capacity for 1000 feet of Tape up to 1-inch wide.

OPTIONAL FEATURES

Input Power Frequency	6, 7, or 8 Levels 7/8 or 1 inch	5 or 8 Level 11/16 or 1 inch	6 Level Adv. Fd. Hole 7/8 inch	S—Standard or L-Long Life Punch Block	With Cover (smooth light gray paint finish)	CATALOG NUMBER
60 Hz	●			S		4121-5AA
	●			S	●	4121-5CA
	●			L		4121-5AB
	●			L	●	4121-5CB
		●		S		4121-5AC
		●		S	●	4121-5CC
			●	S		4121-5AD
			●	S	●	4121-5CD
50 Hz	●			S		4121-5JA
	●			S	●	4121-5LA
	●			L		4121-5JB
	●			L	●	4121-5LB
		●		S		4121-5JC
		●		S	●	4121-5LC
			●	S		4121-5JD
			●	S	●	4121-5LD
50/60 Hz	●			S		4121-5QA
	●			S	●	4121-5SA
	●			L		4121-5QB
	●			L	●	4121-5SB
		●		S		4121-5QC
		●		S	●	4121-5SC
			●	S		4121-5QD
			●	S	●	4121-5SD

4130 Asynchronous Readers (DX)

STANDARD FEATURES	Input Power Frequency	Model	Interface (see page 16)	Verifier Data Output	Paint Finish (see below)	CATALOG NUMBER
Can be operated at any speed up to 360 char/sec via external timing, except EIA. EIA readers will operate at 120 char/sec if built-in internal timing used and up to 314 char/sec if external timing used. Adjustable for reading 5, 6, 7 or 8 levels, standard or advanced feed-hole, chadless of fully punched tape 11/16, 7/8, or 1-inch wide. Interfaces are logic level type and include communications control logic. Stops if tape becomes taut and when end of tape reached. Table models include cover and front panel. Rack mountable include panel.	50/60 Hz	Table	EIA		①	4131-1QA
			EIA		②	4131-1QB
			PDI	●	①	4131-3QA
			PDI	●	②	4131-3QC
			PDI		①	4131-3QB
			PDI		②	4131-3QD
			PTI		①	4131-4QA
			PTI		②	4131-4QB
		Rack Mountable	EIA		③	4133-1QA
			EIA		④	4133-1QB
			PDI	●	③	4133-3QA
			PDI	●	④	4133-3QC
			PDI		③	4133-3QB
			PDI		④	4133-3QD
			PTI		③	4133-4QA
			PTI		④	4133-4QB

PAINT FINISH OPTIONS

Table Model Cover and Front Panel	①	Cover: Dark Colvert Gray Textured Panel: Smooth Light Gray (matches Telespeed terminal colors; also suitable for 32, 33, & 35 terminals)
	②	Cover: Charcoal Gray Textured Panel: Smooth Ivory (matches model 37 terminal colors)
Rack Mountable Panel and Cover	③	Smooth Light Gray (matches ①)
	④	Smooth Light Gray (matches 4143 punch colors)

4140 Asynchronous Punches (DRPE)

Standard Features

Can be operated at any speed up to 240 char/sec via external timing. EIA punches will operate at 240 char/sec if built-in internal timing used.

Adjustable for punching 5, 6, 7, or 8 levels in tape 11/16, 7/8, or 1-inch wide.

Interfaces are logic level type and include communications control logic.

Stops if tape supply runs out.

Paint finish is smooth light gray on rack mountable and cabinet mounted panels; textured dark gray on cabinet.

To order 4142-1AA or 1AD with mounting hardware plus panel with cutout for:	-1AA	-1AD
	Substitute the suffix:	
Bell 804 Data Auxiliary Set or equivalent	-1AB	-1AE
Bell 202C Data Set or equivalent	-1AC	-1AF

Optional Features table:

Input Power Frequency	Model	Interface (see page 19)	Punch Verifier with Logic	S—Standard or L—Long Life Punch Block	CATALOG NUMBER
60 Hz	Floor Cabinet	EIA		S	4142-1AA
		EIA		L	4142-1AD
		PDI		S	4142-3AA
		PDI	●	S	4142-3AD
		PDI	●	L	4142-3AG
		PDI		L	4142-3AK
		PTI		S	4142-4AA
		PTI		L	4142-4AD
	Rack Mountable	EIA		S	4143-1AA
		EIA		L	4143-1AB
		PDI	●	S	4143-3AA
		PDI		S	4143-3AB
		PDI	●	L	4143-3AC
		PDI		L	4143-3AD
		PTI		S	4143-4AA
		PTI		L	4143-4AB
50 Hz	Floor Cabinet	PDI	●	S	4142-3JA
		PDI		S	4142-3JB
		PDI	●	L	4142-3JC
		PDI		L	4142-3JD
		PTI		S	4142-4JA
		PTI		L	4142-4JB
	Rack Mountable	PDI	●	S	4143-3JA
		PDI		S	4143-3JB
		PDI	●	L	4143-3JC
		PDI		L	4143-3JD
		PTI		S	4143-4JA
		PTI		L	4143-4JB
60 Hz — Same as above except 6-level Advanced Feed Hole only.	Floor	PDI		S	4142-3AN
	Rack	PDI		S	4143-3AE

ACCESSORIES AND OPTIONS

Tape Handling Equipment

Write for Teletype Paper and Tape Handling Accessories Catalog. Contains information on available tape winders, unwinders, reels shelves, and splicers.

342074 6-Level Advanced Feed Hole Conversion Kit for 4140 (DRPE) Punches

Converts 4140 (DRPE) punches without verifier option to punch 6-level advanced feed hole tape. Comes with standard life punch block.

152044 RFI Shield for 4120 (BRPE) Punches with 50/60 Hz Motors

Shields governor contacts on motor to reduce electrical noise output.

344841 Kit to permit substitution of a 4140 (DRPE) for a 4120 (BRPE)

Converts 4140 (DRPE) punches with PDI interface to 4120 (BRPE) PMI interface to permit replacement of slower 4120 punch with the faster 4140 punch. Timing pulse of 10 volts peak-to-peak is furnished.

344842 Kit to permit substitution of a 4130 (DX) for a 4110 (CX)

Converts 4130 (DX) readers with PDI interface to 4110 (CX) PCI interface to permit replacement of the slower 4110 reader with the faster 4130 reader. Timing pulse of 10 volts peak-to-peak is furnished.

104986 Speed Indicator

For 4120 (BRPE) 50/60Hz punches, to set speed of motor.

For further information on any Teletype Corporation product lines, or for the location of your nearest sales or product service representative, please contact:

Sales headquarters—
5555 W. Touhy Ave.
Skokie, Illinois 60076

Product Service headquarters—
9930 Derby Lane
Westchester, Illinois 60153

or call TERMINAL CENTRAL—(312) 982-2500

TELETYPE CORPORATION

the computercations people

GENERAL OFFICES: 5555 Touhy Avenue, Skokie, Illinois 60076 Telephone: (312) 982-2000—TWX: 910-223-3611
and TELEX: 25-4051 (both have 24 hour automatic answering service)

4100CAT5K1272