

20 TELETYPEWRITER

DESCRIPTION

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requirements must be determined for each individual service.

1.05 In teletypesetter service, items of copy are reproduced as perforated tape by means of a teletypesetter perforator. The material represented by this perforated tape can then be sent over the circuit to the newspaper offices by a transmitter-distributor. An associated teletypewriter at the sending station may be used to provide home copy. The material coming into the newspaper office will be received by a reperforator which duplicates the original tape, and sometimes by an associated page teletypewriter. Then a tape, perforated with such of the material as is desired, is fed into an operating unit attached to the linecasting machine where it will be set automatically in type. The perforated tape is prepared so that the lines of this cast type will be fully justified. The operating units attached to the linecasting machines are owned by the customer.

1.06 The combinations of 20 teletypewriter apparatus with the standard teletypesetter perforator in bureau or newspaper offices are determined by the customer's requirements from the following list:

- 20 Teletypesetter Perforator
- 20 Sending and Receiving (KSR) or Receiving Only (RO) Teletypewriter
- 20 Transmitter-Distributor (XD)
- 20 Reperforator (RPE)

1.07 Teletypesetter Corporation bulletins applicable to the perforator are as follows:

- (1) Bulletin No. 3: Description of the Keyboard Tape Perforator
- (2) Bulletin No. 5: Adjustments of Keyboard Tape Perforator
- (3) Bulletin No. 50: Parts - Keyboard Tape Perforator

1. GENERAL

1.01 This section gives the description for the six-unit code 20 teletypewriter apparatus used with teletypesetter service for the press associations.

1.02 This section is reissued to revise 2.01 (d), and to include the information for the 20 transmitter-distributor all-steel internal expansion clutch.

1.03 The sixth element added to the five-unit code is designated zero. It is transmitted after the other five, just before the stop element. It actuates the zero sword and the number six vane on the typing unit.

1.04 The apparatus listed herein is for 53- and 66-speed teletypesetter service for press associations. For magazine publishing work, because of the complexity of the services, the

## 2. DESCRIPTION

## 2.01 20 Receiving Only (RO) Teletypewriter

## (a) Operating Features:

(1) The typing unit uses 6-inch paper centrally located on the platen. It feeds 6.7 lines per inch, prints 11.7 characters per inch, and has a printing line of 56 characters (with the 57th partly overlapping the 56th). Where it is desired to print 10 characters per inch with a printing line of 48 characters (with the 49th partly overlapping the 48th) the parts listed in 2.07 will be required.

(2) The typing unit is provided with a magnet-operated ribbon shift to provide printing in two colors: red or black.

(3) The typing unit has a pulling-magnet selector.

(4) The typing unit has six associated pressure-rollers and the standard paper chute. Where a single pressure-roller is desired, see the set of parts listed in 2.07.

## (b) Component Parts:

Base BB32

Cover BPC200AD

Cover Front Plate TP115704AD

Rectifier KS-5663-L7

Relay 255A

Typing Unit BP172/347

Typing Unit BP176/347 (With contacts to control an associated reperforator. This typing unit is furnished only when specified.)

See 2.07 for auxiliary features and 2.06 for pallets.

## (c) Mounting:

(1) Table: XRT200AD

(2) Table Accessories: Electrical Service Unit TP117852 or TP126287 (The TP-126287 is the same as the TP117852 except

that the power components are not wired) and Panel TP106974AD

## (d) Power, Motors, and Gears:

Power (120 Volts)	Motor Unit	Gear Set No.	
		53-speed	66-speed
ac regulated	15D or 15M	TP87370	TP114462
ac nonregulated	15A or 15C	TP123719	TP121979
dc	15B	TP123719	TP121979

## (e) Cords:

M2DG cord 2-1/2 feet long E/W Hubbell 7092 Cap

M4K cord 2-1/2 feet long

M2CN cord 3 feet long E/W 347A plug

M2CN cord 3 feet long E/W 347B plug when the teletypewriter is used with a transmitter-distributor.

D3AY cord 5-1/2 feet long

KS-7993 power cord 10 feet long or KS-15143-18-GA3-conductor 10-foot cord E/W 9750 Hubbell Cap when a protective ground is required.

(f) Wiring Arrangement: See the section covering 20 teletypewriter wiring diagrams.

## 2.02 20 Send and Receive (KSR) Teletypewriter

(a) Operating Features: The same as the 20 RO teletypewriter. See 2.01 (a).

(b) Component Parts: In addition to those components furnished with the 20 RO teletypewriter, 2.01 (b), the 20 KSR teletypewriter is furnished with the following:

BK5PA Keyboard (See 2.06 and Figure 1 for keytops and pallets)

Copyholder TP115700AD

Cover Front Plate TP115706AD instead of Cover Front Plate TP115704AD

(c) Mounting: The table and its accessories are the same as those provided for the 20 RO teletypewriter, 2.01 (c), except for the

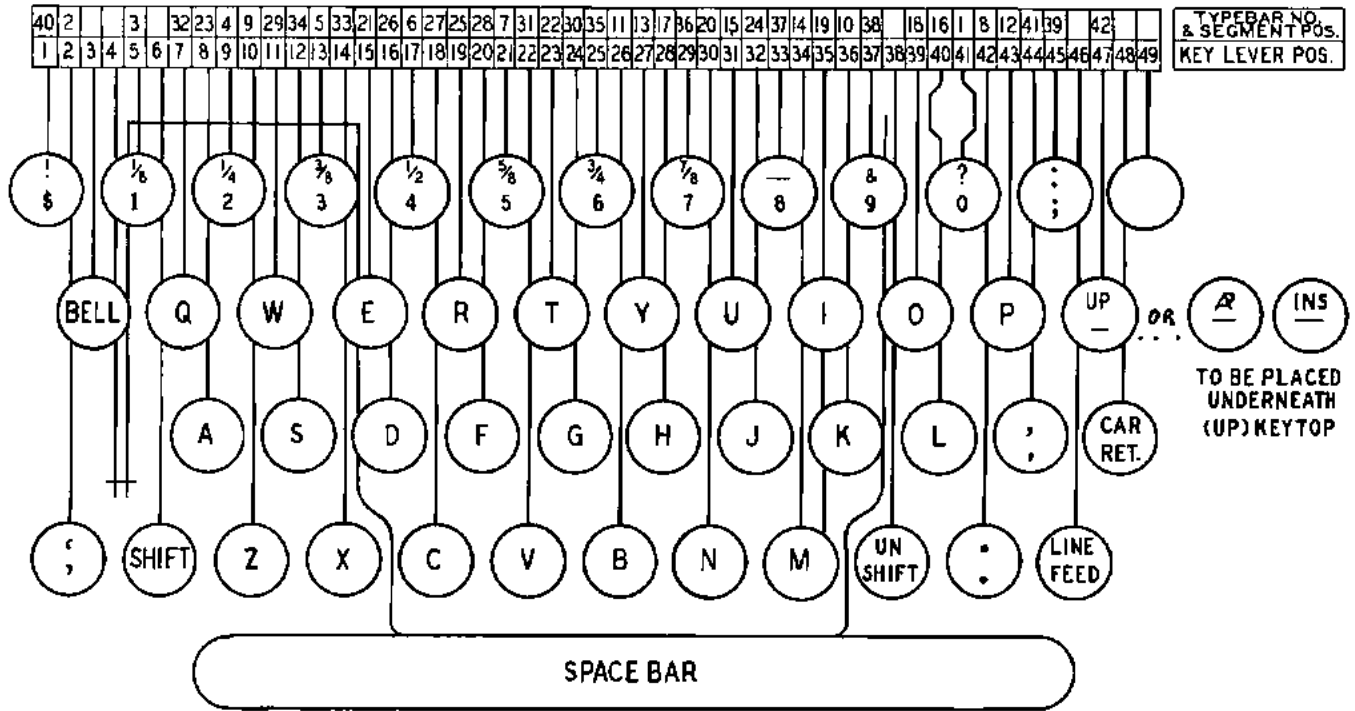


Figure 1 - 20 Teletypewriter Keyboard for Press Association Teletypesetter Service Keytop Arrangement PA

following: Baffle Plate TP106977AD instead of Panel TP106974AD.

- (d) Power, Motors, and Gears: The same as the 20 RO teletypewriter. See 2.01 (d).
- (e) Cords: The same as the 20 RO teletypewriter. See 2.01 (e).
- (f) Wiring Arrangement: See the section covering 20 teletypewriter wiring diagrams.

2.03 20 teletypesetter Perforator (TPE200) and 20 Transmitter-Distributor (XD207 and XD222) on XT201AD Table

(a) Operating Features:

- (1) The perforator has an advanced tape-feed-hole punch pin.
- (2) The perforator uses 7/8-inch-wide tape.
- (3) The transmitter-distributor has a tight-tape stop switch.

(b) Component Parts: The perforator is provided with a motor cord for connection to the table outlet. A rectifier is not required.

(c) Mounting:

(1) Table: XT201AD (The circuit label for this table is Teletype Corporation Drawing WD-1863). This table is equipped with the necessary fuse mountings and other electrical fittings, a transmitter-distributor mounting plate, and a removable rear cover.

(2) Table Accessories:

- Shelf TP115759AD
- Tape Winder TP115739AD
- Unwind Reel TP91819

(d) Power, Motors, and Gears:

(1) Teletypesetter Perforator:

Power (120 volts)	Code
60 cycle ac	TPE200ADBL/NB8R
dc	TPE200ADBG/NB8R

Note: The coded units include motors and gears.

(2) 20 Transmitter-Distributor:

Power (120 volts)	Code	
	53-speed	66-speed
ac regulated	XD207AD/BB	XD207AD/JS
ac nonregulated	XD207AD/KV	XD207AD/KP
dc	XD207AD/KX	XD207AD/KW

The transmitter-distributor equipped with the rubout deleting feature (see 2.07) is coded XD222AD/ instead of XD207AD/. Add suffix letters as for the XD207AD/ to indicate the speed and power supply desired.

**Note:** The coded units include motors and gears.

(e) Cords: M3AY cord 2-1/2 feet long E/W Hubbell 7055 Cap KS-7993 power cord 10 feet long or KS-15143-18-GA3-conductor 10-foot cord E/W 9750 Hubbell Cap when a protective ground is required.

(f) Wiring Arrangement: See the section covering 20 teletypewriter wiring diagrams.

2.04 20 Transmitter-Distributor (XD207 and XD222) alone on XRT200AD Table:

(a) Operating Features: The same as those indicated for the transmitter-distributor in 2.03 (a).

(b) Component Parts: The coded units include the components.

(c) Mounting:

(1) Table: XRT200AD

(2) Table Accessories: (Electrical Service Unit TP117852 or TP126287) The TP126287 is the same as the TP117852 except that the power components are not wired.

14C Mounting Plate

Panel TP106974AD

Unwind Reel TP91819

(d) Power, Motors, and Gears: The same as those indicated for the transmitter-distributor in 2.03 (d) (2).

(e) Cords: KS-7993 power cord 10 feet long or KS-15143-18-GA3-conductor 10-foot cord E/W 9750 Hubbell Cap when a protective ground is required.

(f) Wiring Arrangement: See the section covering 20 teletypewriter wiring diagrams.

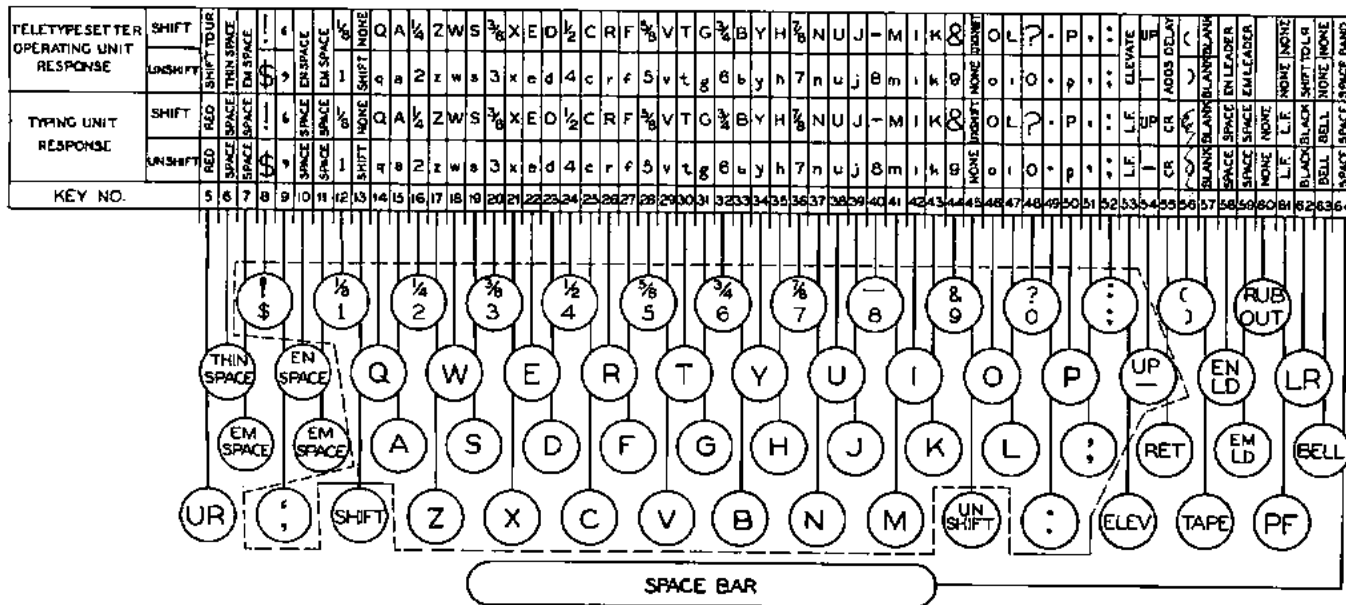


Figure 2 - Perforator Keyboard for Press Association Teletypesetter Service Keytop Arrangement NB

UR = UPPER RAIL, LR = LOWER RAIL  
 UP = KEYTOP SYMBOLS ALSO PROVIDED FOR AP AND INS SERVICES. THERE IS A TYPEBAR ON THE TYPING UNIT FOR EACH KEYTOP INCLUDED WITHIN THE DOTTED LINE.

## 2.05 20 Reperforator

## (a) Operating Features:

- (1) The reperforator has an advanced tape-feed-hole punch pin.
- (2) The reperforator has a pulling-magnet selector.
- (3) The reperforator uses 7/8-inch-wide tape.

## (b) Component Parts:

KS-5663 List 7 Rectifier (As Required)

Relay 255A

RPE21 Reperforator Unit

RPEC200AD Cover

## (c) Mounting:

- (1) Table: XRT200AD
- (2) Table Accessories: Electrical Service Unit TP117852 or TP126287 (The TP-126287 is the same as the TP117852 except that the power components are not wired.)

Panel TP106974AD

Shelf TP115817AD

Tape Winder TP115739AD

## (d) Power, Motors, and Gears:

Power (120 volts)	Motor Unit	Gear Set No.	
		53-speed	66-speed
ac regulated	15D or 15M	TP88031	TP106955
ac nonregulated	15A or 15C	TP123713	TP123500
dc	15B	TP123713	TP123500

## (e) Cords:

M2DG cord 2-1/2 feet long E/W Hubbell 7092 Cap  
 M4K cord 2-1/2 feet long  
 M2CN cord 3 feet long E/W 347A plug  
 D3AY 5-1/2 feet long  
 KS-7993 power cord 10 feet long or KS-15143-18-GA3-conductor 10-foot cord E/W 9750 Hubbell Cap when a protective ground is required.

## (f) Wiring Arrangement: See the section covering 20 teletypewriter wiring diagrams.

## 2.06 Keytops and Pallets

- (1) The keyboard arrangements provided for the press association services are as follows:

	Key-board	Fig.	No. of Keys	Type	Note
Perforator	NB	1	60	Fraction	1
Teletypewriter	PA	2	49	Fraction	2

**Note 1:** A bag which is tied to the keyboard contains a bezel, two celluloid discs, and an AP over hyphen character disc. This keytop character disc is for use when required instead of the UP over hyphen keytop provided on keylever 54.

**Note 2:** An AP character disc is provided under the UP character disc on the keytop for keylever 47.

- (2) Pallets: Type arrangement 347 is associated with the PA keyboard on the 20 teletypewriter. Installed on the typebar operated by key 47 is a pallet with UP over hyphen. In an attached bag, an AP over hyphen pallet is provided. Care must be taken to provide the proper keytop and pallet for the service involved.

## 2.07 Auxiliary Features and Test Tape

- (1) The following are the auxiliary features used with the 20-type apparatus:

Parts	Description	Reference
Upper spacing gear TP74192 Spacing rack TP74366 Lockwasher TP4852	Parts required to make the teletypewriter print 10 characters per inch, with 48 characters per line (49th overlaps 48th).	Teletype Corp bulletin 1037B.
TP113695	Set of parts to provide contacts on a 20 teletypewriter to cut on an auxiliary reperforator on a BLANK signal and cut it off on a BELL signal.	Teletype Corp specification 5685S.
TP113717	Set of parts to modify a 20 transmitter-distributor to prevent the transmission of signals from rubout selections in the tape.	Teletype Corp specification 5718S.
TP115790	Set of parts to convert a 15 or 20 teletypewriter to a single-pressure roller from the six associated pressure-roller type.	Teletype Corp specification 5692S.

The sets of parts numbers and associated information for the new, all-steel internal ex-

pansion clutch are contained in the following table:

20-Type Transmitter-Distributor

Set of Parts Number	Transmitter Speed (OPM)	Motor	New Gear Furnished	Old Gear Replaced	Motor* Pinion
TP113768	396	60 c sync	TP135065	TP116766	TP116767
TP113769	396	Gov	TP135066	TP123712	TP123711
TP113774	317	60 c sync	TP135062	TP87372	TP87371
TP113775	317	Gov	TP135069	TP123718	TP123717

\*Motor pinion is not included in sets of parts and must be ordered separately.

## (2) Test Tape

<u>Part</u>	<u>Description</u>
TP126791	A tape containing a test sentence and other signal patterns for testing the operation of 20 typing units and reperforators.

**CAUTION:** TAPES PRODUCED BY A REPERFORATOR BEING TESTED WITH THE TEST TAPE MUST NOT BE INTRODUCED INTO THE TELETYPESETTER OPERATING UNITS, SINCE, IF CERTAIN ERRORS HAVE BEEN PUNCHED IN THE TAPE, A LINE SHORTER THAN THE JUSTIFIED LINE LENGTH WILL BE CAST. THIS MAY CAUSE HOT LEAD TO BE SPRAYED FROM THE LINECASTING MACHINE ENDANGERING PERSONNEL IN THE AREA. THEREFORE, THESE REPERFORATED TEST TAPES SHOULD BE DESTROYED OR IMMEDIATELY REMOVED.

## 3. SPARE PARTS

3.01 Packages of spare parts are available for the 20-type units as outlined below. The component parts for the sets are itemized in the Teletype Corporation Check Lists.

<u>20-Type Apparatus</u>	<u>Spare Set of Parts</u>	<u>Check List Number</u>
Standard Teletypesetter Perforator	TP91678	91678
Transmitter-Distributor	TP81110	81110
Reperforator	TP81064	81064
Typing Unit	TP113627	113627
Teletypewriter Base	TP113503	113503
Teletypewriter Motor Unit	TP113556	113556

## 4. SYMBOLS USED IN EQUIPMENT CODES

4.01 The following are the symbols with their meanings as applied to teletypesetter service:

AD	Suffix, denoting dark-brown-wrinkle finish
BB	(1) Suffix, denoting synchronous motor and gears for 53-speed transmitter-distributor or (2) Code letters for 15 and 20 teletypewriter base
BG	Suffix, denoting dc motor unit for perforator
BK	Code letters for 15 and 20 keyboards
BL	Suffix, denoting 60-cycle synchronous motor for perforator
BP	Code letters for 15 and 20 typing units
BPC	Code letters for 15-teletypewriter cover
JS	Suffix, denoting synchronous motor and gears for 66-speed transmitter-distributor
KP	Suffix, denoting series motor and gears for 66-speed transmitter-distributor
KSR	Keyboard sending and receiving (for teletypewriter)
KV	Suffix, denoting series motor and gears for 53-speed transmitter-distributor
KW	Suffix, denoting dc motor and gears for 66-speed transmitter-distributor
KX	Suffix, denoting dc motor and gears for 53-speed transmitter-distributor
R	Suffix, which refers to selector-bar arrangement on the perforator
RO	Receiving-only (for teletypewriter)
RPE	Code letters for the reperforator
RPEC	Code letters for the reperforator-cover
TP	Prefix, denoting Teletype Corp part number
TTY	Teletypewriter
XD	Code letters for the transmitter-distributor
8	Refers to counting codelever arrangement on perforator