# BELL SYSTEM PRACTICES Teletypewriter Stations

SECTION P10.329
Issue 13, September, 1954
AT&T Co Standard

# CHECKING LIST DIVISION P9

### TELETYPEWRITER STATION INSTALLATION DRAWINGS CHANGE NOTICES

Section No.	Issue No.	Subject
Station As	sembly	
P90.011	3	26A Table for TWP and Local Attended TWX Stations.
P90.012	3	26B Table for Attended TWX Stations Using TLX.
P90.013	2	Assembly of 26A or 26B TTY Table Door on Table.
P90.014	2	14B Table—128B2 Set.
P90.015	4	15N Table—128B2 Set.
P90.016	2 4 2 1 5 1	15N Table—15B Table Door.
P90.017	1	19A Table—128B2 Set.
P90.018	5	128B2 Set-Wall Mounting.
P90.019	1	15P or 26P Table—15C Table Door.
P90.020	1	15P or 26P Table.
*P90.021	3	15P, 26A, 26B and 26P Tables—Location of Fustat Mounting.
P90.022	1	Attended TWX Service—Station Assembly— XRT200 or XRT201 TTY Table.
P90.023	2	Attended TWX Service—Station Assembly— XRT205 or XRT206 TTY Table.
P90.024	1	15 and 15N Table.
*P90.025	3	19 and 19A Table.
P90.026	1	XT201 Table Details.
*P90.027	3 1 1 1	130B1 Set—Private Line Service.
P90.028		15 and 15N Table-130B1 Sub. Set.
*P90.031	1	128B2 or 130B1 TTY Sub. Set in 28A TTY Cabinet.

<sup>\*</sup>Indicates change from previous issue.

Section	Issue
No.	No.

### Subject

# Installation Connections

### TTY-No. 14 TTY

*P90.311	7	128B2 Set - Single Loop Operation - With
*P90.312	6-D	Emergency TTY—115V A-C. 128B2 Set — Two-Loop Operation — Without
P90.313	1	Emergency TTY.  130B1 Set — Private Line Service — 14B or
*P90.315	1	XRT200 Table. Nos. 14 and 20 Trans. Dist.—XRT200 Table.

### TTY-No. 15 TTY

P90.511	5	128B2 Set—Two-Loop Operation.
*P90.512	5 5	128B2 Set-Single Loop Operation.
P90.513	1	Attended TWX Service—XRT200 or XRT-
		201 Table—Over a Local Line, or an Open Loop and a Multi-Station Line to TTY Swbds. No. 1, 1A, 3A, 3C or 5 or to TTY Line Concentrating Unit No. 101A, 101B or 102A—120V. A-C or D-C.
P90.514	1	Attended TWX Service Over a Local Line to
	771	TTY Swbds. No. 1, 1A, 3A, 3C, 5 or Open
		Line TLT Bd. or to TTY Line Conc. Units
20		No. 101A, 101B or 102A or Over Multi-
		Section Line Terminating in a Loop 15 TTY
		on XRT200 or XRT201 TTY Table 102V.
		A-C or D-C.
P90.515	1	128C3 Set-Attended TWX Service.
*P90.516	3	128C3 Set—Unattended TWX Service.
P90.517	3 1 1	130B1 Set—Attended TWX Service.
P90.518	î	130B1 Set—Unattended TWX Service.
P90.519	î	130B1 Set—Private Line Service—15 TTY and 15N, XRT200 or XRT201 TTY Table.
		and 1011, AR 1200 of AR 1201 11 Y Table.

<sup>\*</sup> Indicates change from previous issue.

Section No.	Issue No.	Subject
		TTY-No. 19 TTY
*P90.711	7	128B2 Set-Single Loop Operation.
P90.713	1	128C3 Set-Attended TWX Service.
P90.714	7 1 1 2	128C3 Set-Unattended TWX Service.
*P90.715	2	130B1 Sub. Set—Attended TWX Service— 19 TTY Set on 19A, XRT205 or XRT206 Table.
*P90.716	2	130B1 Sub. Set-Unattended TWX Service.
*P90.717	2	130B1 Sub. Set-Private Line Service.
*P90.718	2 2 1	Attended TWX Service—XRT205, or XRT206 Table Over a Local Line, or an Open Loop and Multi-Section Line to TTY. Swbds. No. 1, 1A, 3A, 3C, or 5 or to 101A, 101B, or 120A TTY Line.
*P90.720	3	81C1 and 81D1 Switching System—Outlying Stations Control by Station Control Circuit Application Schematic.

#### TTY-No. 20 TTY

P90.801 2 Arrangement for Automatic Transmission—
6 Unit Perforator and No. 20 Trans.-Dist.
on XT201 Table and No. 20 KSR TTY on
XRT200 Table—Break Control of Trans.Dist. Optional.

#### TTY-No. 26 TTY

P91.016 5 2-Wire Line or Line to Ground-Without Line Relay-Switch Control-26A Table.

<sup>\*</sup> Indicates change from previous issue.

Section No.	Issue No.	Subject
P91.017	5	2-Wire Line or Line to Ground-With Line Relay-Switch Control-26A Table.
P91.018	3	Line to Power at TTY—Without Line Re- lay—Switch Control—26A Table.
P91.019	3	Line to Power at TTY—With Line Relay— Switch Control—26A Table.
P91.020	5	One-Way Polar-Switch Control-26A Table.
P91.023	5 1	2-Wire Line or Line to Ground—Without Line Relay—Switch Control—26P Table.
P91.024	1	2-Wire Line or Line to Ground—With Line Relay—Switch Control—26P Table.
P91.025	1	Line to Power at TTY—Without Line Re- lay—Switch Control—26P Table.
P91.026	1	Line to Power at TTY—With Line Relay— Switch Control—26P Table.
P91.027	1	One-Way Polar—Switch Control—26P Table.
P91.035	1 2	Line to Teleg. Serv. Bd. No. 1—2-Wire Line or Neg. Line to Ground—Without Line Relay—Switch Control.
P91.036	2	One-Way Polar-With 255A Relay.
P91.039	2 4	26A Table — No Line Relay — Remote Control—2-Wire Line or Line to Grd. at TTY 115V A-C or D-C.
P91.040	3	26A Table—No Line Relay—Remote Control Line to Power at TTY 115V D-C.
P91.041	4	26A Table—Line Relay—Remote Control 2- Wire Line or Line to Grd. at TTY 115V A-C or D-C.
P91.042	3	26A Table — Line Relay — Remote Control Line to Power at TTY 115V D-C.

Section No.	No.	Subject
		TTY-Miscellaneous
*P91.811	6	128B2 TTY Sub. Set-Polar Relay Receiving.
P91.812	1	Telegraph Systems-128B2 Subscriber Set.
*P91.813	2	130B1 TTY Sub. Set—Private Line Service— Customer-owned TTY.

### TWX-No. 26 TTY-Attended Local Stations

P91.011	3	Line to Switchboard No. 1 or 1A—Without Line Relay.
P91.012	3	Line to Switchboard No. 3, 3A or 5—Without Line Relay.
P91.013	3	Line to 65B1 Switchboard — Without Line Relay.
P91.014	3	Line to Switchboard No. 1, 1A, 3, 3A, 5 or 67A2—With Line Relay.
P91.015	3	Line to 65B1 Switchboard-With Line Relay.
P91.021	3	Line to Close Line TLT Board — Without Line Relay.
P91.029	3	Line to Close Line TLT Board-With Line Relay.
P91.030	3	Line to Open Line TLT Board — Without Line Relay.
P91.031	3	Line to Open Line TLT Board-With Line Relay.
P91.034	2	128C2 TTY Sub Set-115V A-C.

<sup>\*</sup> Indicates change from previous issue.

Section No.	Issue No.	Subject
	TTY—I	No. 26 TTY—Attended TLX Stations
P91.022	3	Line Operated on Upset Duplex Basis, or With Neutral Transmission With Single Line Repeater at TWX Office.
P91.028	4	Stations Using 128C1 TTY Sub Set.
P91.032	3	Line to Concentrating Unit 101A or 102A—Without Line Relay.
P91.033	3	Line to Concentrating Unit 101A or 102A—With Line Relay.

### TTY-No. 28 TTY

*P91.050	2	Attended TWX Service Magnet Operation, No Line-Test Key TTY Swbd. No. 1, 1A, 3A, 3C or 5 or Line Conc. Unit No. 101B 120V A-C Power.
*P91.051	2	Attended TWX Service Magnet Operation, Line-Test Key TTY Swbd. No. 1, 1A, 3A, 3C or 5 or Line Conc. Unit No. 101B—120V A-C Power.
*P91.052	2	Attended TWX Service Relay Operation, No Line-Test Key TTY Swbd. No. 1, 1A, 3A, 3C or 5 or Line Conc. Unit No. 101B—120V A-C Power.
*P91.053	2	Attended TWX Service Relay Operation, Line-Test Key—TTY Swbd. No. 1, 1A or 3C or Line Conc. Unit No. 101B—120V A-C Power.
*P91.054	1	Attended TWX Service—Magnet Operation, No Line-Test Key—TTY Swbd. No. 1, 1A, 3A, 3C or 5 or Line Conc. Unit No. 101B— 120V D-C Power.

<sup>\*</sup> Indicates change from previous issue.

Section No.	Issue No.	Subject
*P91.055	1	Attended TWX Service—Magnet Operation, Line-Test Key—TTY Swbd. No. 1, 1A, 3A, 3C or 5 or Line Conc. Unit No. 101B—120V D-C Power.
*P91.056	1	Attended TWX Service—Relay Operation, No Line-Test Key—TTY Swbd. No. 1, 1A, 3C or 5 or Line Conc. Unit No. 101B—120V D-C Power.
*P91.057	1	Attended TWX Service—Relay Operation, Line-Test Key—TTY Swbd. No. 1, 1A, 3C or 5 or Line Conc. Unit No. 101B—120V D-C Power.
*P91.075	1	Private Line Service—Send-Receive or Receiving Only Magnet Operation, Switch Control 2-W Line or 1-W to Grd. at TTY—120V A-C Power.
*P91.076	1	Private Line Service—Send-Receive or Receiving Only Relay Operation Switch Control—One-Way Polar or Neutral 2-W Line or 1-W Line to Grd. at TTY—120V A-C Power.
*P91.077	2	Private Line Service—Send-Receive or Receiving Only Magnet Operation—Electrical Motor Control — 2-W Line or 1-W Line to Grd. at TTY—120V A-C Power.
*P91.078	1	Private Line Service—Send-Receive or Receiving Only Relay Operation—Electrical Motor Control—2-W Line or 1-W Line to Grd. at TTY—120V A-C Power.
*P91.079	1	Private Line Service—Receiving Only One- Way Polar Electrical Motor Control 120V A-C Power.
*P91.080	2	Private Line Service—Send-Receive or Receiving Only Magnet Operation Switch Control 2-W Line or 1-W to Grd. at TTY 120V D-C Power.
*P91.081	1	Private Line Service—Send-Receive or Receiving Only Relay Operation, Switch Control—One-Way Polar or Neutral—2-W Line or 1-W Line to Grd. at TTY—120V D-C Power.

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Section No.	Issue No.	Subject
*P91.082	2	Private Line Service—Send-Receive or Receiving Only—Magnet Operation—Electrical Motor Control—2-W Line or 1-W Line to Grd. at TTY—120V D-C Power.
*P91.083	1	Private Line Service—Send-Receive or Receiving Only—Relay Operation— Electrical Motor Control 2-W Line or 1-W Line to Grd. at TTY—120V D-C Power.
*P91.084	1	Private Line Service—Receiving Only—Relay Operation—Electrical Motor Control—One-Way Polar—2-W Line or 1-W Line to Grd. at TTY—D-C Power.

### Theory Schematic

	P95.001	1	Telegraph System 128B2 TTY Subscriber Set.
+	P95.002.00	2	81D1 TTY Switching System.
	P95.002.01	2	Incoming Line or Incoming Trunk Circuit.
	P95.002.02	2	81D1 TTY Switching Unit—Incoming Line or Incoming Trunk Circuit.
†	P95.002.03	2	81D1 TTY Switching Unit—Originating Station Circuit.
+	P95.002.04	2	81D1 TTY Switching Unit-Director Unit.
	P95.002.05		81D1 TTY Switching Unit-Sequence Circuit.
	P95.002.06		81D1 TTY Switching Unit—Outgoing Line or Single Outgoing Trunk Circuit.
†	P95.002.07	2	Telegraph Systems — 81D1 TTY Switching Unit—Transmitter Start Circuit.
†	P95.002.08	2	Telegraph Systems — 81D1 TTY Switching Unit—Willful and Miscellaneous Intercept Circuits.
†	P95.002.09	2	Telegraph Systems — 81D1 TTY Switching Unit—Local Outlet Circuit

<sup>†</sup> Rated Provisional—Given Limited Distribution. \* Indicates change from previous issue.

	Section No.	No.	Subject
†	P95.002.10	2	Telegraph Systems — 81D1 TTY Switching Unit—Group Code Circuit.
†	P95.002.11	2	Telegraph Systems — 81D1 TTY Switching Unit—Multiple Address Circuit.
†	P95.002.12	2 2	Telegraph Systems — 81D1 TTY Switching Unit—Multiple Address—Intercept Circuit.
†	P95.002.13	3 2	Telegraph Systems — 81D1 TTY Switching Unit—Station Control Circuit.
†	P95.002.14	1 2	Telegraph Systems — 81D1 TTY Switching Unit—Automatic Address Circuit.
†	P95.002.15	5 2	Telegraph Systems — 81D1 TTY Switching Unit—Director Fan Circuits.
†	P95.002.16	5 2	Telegraph Systems — 81D1 TTY Switching Unit—48-Volt Power Circuit.
†	P95.002.17	7 2	Telegraph Systems — 81D1 TTY Switching Unit—130-Volt Power Circuit.
+	P95.002.18	3 1	Outgoing Multi-Channel Trunk Circuit.
+	P95.002.19		Supplementary Multiple Address Circuit.
†	P95.002.20		Incoming Line or Incoming Trunk Circuit— (with Tape Changing Reperforator- Transmitter).
	*P95.010	1	131B2 TTY Sub. Set—Repeater Unit—Single Polar Operation.
	*P95.011	1	131B2 TTY Sub. Set—Repeater Unit—Single Neutral Operation.
	*P95.014	1	131B2 TTY Sub. Set-Mixing Relay Unit.

### Special Services

P96.001	1	Army 19 Type Set.
P96.002	2	Army 19 Type Set-128B2 Sub Set.
P96.003	1	Switching a Trans-Dist-19 TTY Set.
P96.010	2	Switching a Trans-Dist-19 TTY Set-128C2
P96.011	1	Sub. Set. Switching a Trans-Dist—102A Table.
P96.012	1	XRT115 Table—15 TTY.
P96.013	1	XRT116 Table—19 TTY Set.

<sup>†</sup> Rated Provisional—Given Limited Distribution. \* Indicates change from previous issue.

Section No.	No.	Subject
		Customer Provided Table
P96.014	2	Power Loop Panel.
P96.015	2 3 2	Arrangement and Wiring.
P96.016	2	14 TTY and 14 Typing Reperf—A-C and D-C Power.
P96.017	2	15 TTY-A-C and D-C Power.
P96.018	2	14 TTY-14 Typing Reperf-A-C Power.
P96.019	2	15 TTY—A-C Power.
P96.020	2 2 2 2 2 2 2 1	14 Trans-Dist-A-C or D-C Power.
P96.021	2	14 TTY-14 Typing Reperf-D-C Power.
P96.022	2	15 TTY—D-C Power.
P96.023	2	14 Perf—A-C or D-C Power.
P96.024	1	TP117852 Electrical Service Assembly.
P96.025	3	19 TTY—19A Table—TWX Service—120C1 TTY Sub. Set—Local Line—Unattended— TTY Line Conc. Unit 101A or 102A—115V. A-C or D-C.

### Special Services

P96.026	2	Typical Circuit—Power Off and Paper Out
P96.030	1	Signal Controls—15P Table—15RO TTY. XRT115-1 Table—15 TTY—128A2 Sub. Set—
P96.031	1	Swbds With Flashing Recall. XRT115-1 Table—15 TTY—126A2 Sub. Set—
P96.032	1	101A or 102A Line Concentrating Unit. XRT115-1 Table—15 TTY—Installation Con-
P96.033	1	nections—KS Relay. XRT115-1 Table—15 TTY—KS Relay—101A
P96.034	2	or 102A Line Concentrating Unit. 81C1 System—19A Table—Addition of Power
P96.035	2	Relay. 81C1 TTY Switching System—Sotus Lever
P96.036	2	Arrangement and Assembly. TTY Switching Arrangements—Sotus Lever
		Arrangement and Assembly for Service Order Network.

Section No.	Issue No.	Subject
P96.037	2	XRT116-1 Table No. 19 TTY Set Installation Con. TWX Ser. — Local Line Attended Station.
P96.038	2	14F and 14G Reperf-Trans—Wiring Diagram.
P96.041	2	81C1 System — 19A Table — Connection of
1 70.011	•	Power Relay.
P96.042	2	81C1 System—Station Control Cabinet Modi- fication.
P96.043	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.044	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch,
P96.045	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.046	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.047	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.048	2	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.049	1	81C1 System—Station Control Circuit Modi- fied to Extend Manual Cut-on Key and Sotus Motor Control Switch.
P96.050	1	Sequence Chart for DS 3C TTY Sequential Selectors (SOTUS).
P96.051	1	Timing Graph Reperforator Transmitter Re- ceiving Side.
P96.052	1	Timing Graph Reperforator Transmitter Sending Side.
P96.053	3	Sensing Cam Sleeve and Distributor Cam Sleeve (Assembly) — #14 Reperforator Transmitter.
*P96.059	2	Service Order Network — Teletypewriter Switching Arrangement Using Sotus.

<sup>\*</sup> Indicates change from previous issue.

*P96.061 3 81D1 TTY Switching System—Sotus Leve Arrangement and Assembly — BS6 Sequential Selector.  P96.062 1 TTY—Station Space Requirements.  *P96.064 1 Switching Arrangements—Circuit to Permit Switching Transmitter — Distributor it Series with A-19 Type Set or A-15 of Metal Tables.  *P96.065 1 81 Type System—Sequential Selector Unit BS6L Mechanical Time and Function.	Section No.	Issue No.	Subject
Arrangement and Assembly — BS6. Sequential Selector.  *P96.062 1 TTY—Station Space Requirements.  *Switching Arrangements—Circuit to Permi Switching Transmitter — Distributor i Series with A-19 Type Set or A-15 o Metal Tables.  *P96.065 1 81 Type System—Sequential Selector Unit BS6L Mechanical Time and Function.	P96.060	1	Maintenance Switching Arrangement Ex- ternal "Break" Circuit Slow Release
*P96.062 1 TTY—Station Space Requirements.  *P96.064 1 Switching Arrangements—Circuit to Permit Switching Transmitter — Distributor is Series with A-19 Type Set or A-15 of Metal Tables.  *P96.065 1 81 Type System—Sequential Selector Unit BS6L Mechanical Time and Function.	*P96.061	3	81D1 TTY Switching System—Sotus Lever Arrangement and Assembly — BS6L Sequential Selector.
*P96.064 1 Switching Arrangements—Circuit to Permis Switching Transmitter — Distributor is Series with A-19 Type Set or A-15 of Metal Tables.  *P96.065 1 81 Type System—Sequential Selector Unit BS6L Mechanical Time and Function.	P96.062	1	
*P96.065 1 81 Type System—Sequential Selector Uni BS6L Mechanical Time and Function.	*P96.064	1	Switching Arrangements—Circuit to Permit Switching Transmitter — Distributor in Series with A-19 Type Set or A-15 on
P96.101 1 Remote Bell and Lamp Signals for 14 an	*P96.065	1	81 Type System-Sequential Selector Unit
15 Teletypewriters.	P96.101	1	Remote Bell and Lamp Signals for 14 and

# Teletypewriter Change Notices

P98.001	1	TP8097 Cam Sleeve.
P98.002	1	TP70361 Resistance Unit.
P98.003	1	TP97447 Contact Pin and TP101481 Set of
P98.004	1	Tape-Out Mechanism Parts. TP6689 Separator Plate—Adjustment.
P98.005	1	14 Type Typing Reperforator Covers.
P98.006	1	TP99896 Retaining Disc Tool.
P98.007	1	TP91096 Spring.
P98.008	1	TP72576, TP86171, TP102045 Main Shafts and TP90008, TP111685 Cam Shafts.
P98.009	1	Simplification of Punch Blocks for Perforat- ing Tape.
P98.010	1	TP70796 Ribbon Spool Cup.
P98.011	1	TP112577 Roller (Used on TP77049 Operating Lever).
P98.012	1	Pull Bar Stripper Mounting Screws.
P98.013	1 3	TP6909 Stop Lever (Used in Selector Mechanism).
P98.014	2	TP114501 Gear Assembly and TP114499 Stop Cam.

<sup>\*</sup> Indicates change from previous issue.

Section No.	Issue No.	Subject
P98.015	1	TP98222 Clutch Shaft and TP98209 Pinion.
P98.016	1	TP91120 Spring (for Keyboard Typing Reperforator Bases).
P98.017	1	TP95438 Nut (for TP74399 Vertical Lever Pivot Screw).
P98.018	1	TP89097 Spacing Pawl Arm.
P98.019	1	TP3626 Rubber Foot (for 14 TTY Bases).
P98.020	1	TP97641 and TP102890 Armatures.
P98.021	1	TP3154 Shaft (Pull Bar Bail Operating Lever Shaft).
P98.022	1	Rubber Channels for Trans-Dist Covers.
P98.023	1	TP92108 and TP92109 Dust Shields.
P98.024	1	TP97306 Lock Washer.
P98.025	1	TP106942 Set of Parts (Mechanical and Elec- trical Word Counters for 15 Teletypewriters —Yield Arrangements).
P98.026	1	TP6987 Spacer Washers (for Code Bars of All Receiving Selector Mechanisms).
P98.027	2	TP106959 Set of Parts (to Correct for Gain of Fifth Pulse).
P98.028	1	TP117387 Retainer (for Main Shaft of 14 Type Receiving Units).
P98.029	1	TP74749 Stop Plate (Modification to Permit Stop Plate of 15 Keyboards To Be Used on 14 Typing Reperf—Send-Rec Bases).
P98.030	1	TP114069 Base Plate (Laminated Plate to Reduce Noise).
P98.031	1	TP117781 Set of Gauges (for TP81093 Set of Tools).
P98.032	1	TP116965 Function Lever (for TP96807 Set of Parts).
P98.033	1	Paper Spindles for 15 Typing Unit.
P98.034	ī	TP113413 Base.
P98.035	ì	TP119895 Resistor (for Operator's TTY on 130 Volt d-c).

Section No.	Issue No.	Subject
P98.036	1	14F and 14G Reperf-Trans.
P98.037		No. 1 Type Sotus Unit.
P98.038	2	14F and 14G Reperforator-Transmitters.
P98.039	1	TP113651 Set of Clutch Parts.
	2 2 1 1	
P98.040		TP113652 Set of Parts (Stripper Bail and Other Parts for No. 1 Type Sotus Units).
P98.041	1	TP115939 Journal, TP3599 Nut and TP3640 Lock Washer.
P98.042	1	TP117370 Handles.
P98.043	1 2	TP6686, TP74133, TP74134, TP74135, TP74136, TP74137 and TP84091 "T" Levers.
P98.044	1	TP111629 Bracket, TP93507 Screw, TP1026 Screw and TP34-8 Nut.
P98.045	2	TP95477 Platen Block and TP95474 Platen Shaft.
P98.046	2	TP74876, TP74922, TP80455, TP88020, TP-91111 and TP91832 Paper Spindles.
P98.047	1	TP105617 Cover Pad.
P98.048	1	TP138-33 Wrench.
P98.049		TP110974 Spring.
P98.050	3 1	TP114592 Insulator of the TP91550 and TP- 102895 Contact Operating Lever Assemblies.
P98.051	1	Sotus-TP115240 and TP115242 Latches.
P98.052	ī	TP120682 Magnet Release Spring.
P98.053	ĩ	TP121334 Tape Twisters.
P98.054	î	TP121332 and TP121333 Tape Arms.
P98.055	î	TP106994 and TP106995 Sets of Parts—(For
1 70.000		TP89974 Cam Pulsing Contact Assembly).
P98.056	1	TP115207, TP115208, TP115209, TP115210 and TP115211 Transfer Levers.
P98.057	1	TP74048 and TP74908 Bearing Caps, TP74410 Left Side Frame, TP74909 Right Side Frame, TP74125 and TP74254 Rear Cross- bar, TP74124 Spacing Crossbar Assembly,
P98.058	1	TP74031 Right Platen Bracket, TP74435 Left Platen Bracket, TP74339 Platen Cross- bar, TP74855 Platen Crossbar and TP49345 Platen Balance Spring. TP120960 Tape Chute, TP120961 Tape Operat- ing Bail, TP121922 Tape Deflector, TP- 121923 Spring, TP78872 Bracket.

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Section No.	Issue No.	Subject
P98.059	1	TP8507, TP86158, TP90010, TP91020, TP91029, TP91265 and TP92754 Cam Sleeve Assemblies.
P98.060	1	TP119884 Clamp.
P98.061	1	TP2525, TP71449 and TP83302 Key Lever
0.000	128	Guides.
P98.062	1	TP107487 and TP107488 Ribbon Spool Guards.
P98.063	1	TP90520 Armature Lever Assembly.
P98.064	1	TP118905 Spring.
P98.065	1	TP1026 Screw.
P98.066	1	TP1160 Screw.
P98.067	1	TP99230 LID Plate.
P98.068	1 1 1	TP3339 Nut.
P98.069	1	TP74702 Spring, TP98236 Stop Lever and TP114499 Stop Cam.
P98.070	1	Grease Guns.
P98.071	1	TP97506 Shaft.
P98.072	ī	TP204370 Contact Backstop.
P98.073	î	TP117900 Spring.
P98.074	ī	TP83921 and TP98841 Perforator Brackets.
P98.075	1	TP80581 Spring.
P98.076	1	TD02572 Dibbon Const Desciot
P98.077	1	TP82572 Ribbon Spool Bracket.
		TP7339, TP8097, TP84433, TP92689, TP97511, TP101766, TP102102, TP102103, TP105136, TP110701, TP111731, TP112536, TP112658 and TP112676—Cam Sleeve Assemblies.
P98.078	1	TP113920 Gear Holder.
P98.079	1	TP82401 and TP82403 Cover Pads—TP120498 Retainer for Holding Instruction Cards.
P98.080	1	TP119922 Shoulder Nut, TP117508 Front Plate and TP114316 Spring.
P98.081	1	TP122244 Strip.
P98.082	1	TP84584 Release Pull Bar Assembly—TP- 83969 Set of Parts for Positive Shift.
P98.083	1	TP93167 and TP93168 Ribbon Reverse Levers.
P98.084	1 2	TP119540 Keyed Nut and TP119541 Capstan
		Nut.
P98.085	2	TP71696, TP83546, TP86154, TP90086, and TP90775 Range Scales.
P98.086	1	TP122058 Glass Panel.
P98.087	1	TP91832 and TP117313 Paper Spindles.
P98.088	î	TP115114 and TP115116 Brackets, TP115122
1 20.000	•	Felt Washer.

Section No.	Issue No.	Subject
P98.089	1	TP115408 Contact Plunger.
P98.090	1	TP122276 Blocking Lever Assembly.
P98.091	1	Adjusting Requirements for TP7377 Lock Loop.
P98.092	2	TP117406 and TP117407 Contact Springs.
P98.093	1	TP116761 Shift Stop Post.
P98.094	1	TP1176 Screw.
P98.095	1	TP104867 Clamp.
P98.096	2 1 1 1 2	TP83423, TP86854, TP91214, TP101869 and TP104934 Perforator Cover Assemblies.
P98.097	1	TP91045, TP91050, TP91055 and TP91065 Type Pallets.
P98.098	2	TP122382 Type Bar Guide.
P98.099	2 1 1	TP92108 and TP92109 Dust Shields.
P98.100	1	ing Shaft Bearing and TP74102 Spacing Shaft Bearing and TP74141 Vane
P98.101	1	Frame. TP115740** Glare Shield Assembly, TP120593 Blade, TP110983 Clamp and TP111253 Nylon Cord.
P98.102	1	
P98.103	î	TP107137 Dust Shield.
P98.104	î	TP83423, TP91214 and TP101869 Cover Lids.
P98.105	î	TP90043 Armature Bracket.
P98.106	î	TP120870 Lubricator—Felt.
P98.107	i	TP114069 Base Plate Assembly. TP111784 Bushing.
P98.108	î	TP122475 Pilot Screw and TP119647 Re-
P98.109	1	TP115171 Comb.
P98.110	ī	TP102587 Contact Lever.
P98.111	î	TP113683 Set of Parts.
P98.112	î	TP118852 Cover.
P98.113	î	TP84025 and TP07060 Care C.D.
P98.114	î	TP84925 and TP87860 Sets of Parts. TP122547 Felt Button.
P98.115	î	TP4465 Line Feed Lever.
P98.116	î	TP60278PM and TP60270PA
P98.117	î	TP74086 Saraman TP74732 Wing.
P98.118	1 1 1	TP74986 Screw and TP74722 Washer. TP118253 Bracket and TP115593 Screw.

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Section No.	Issue No.	Subject
P98.119	1	TP120450, TP120451, TP120452, TP120453, TP120454 and TP120460 Code Designation Plates.
P98.120	1	TP120988 Cover Assembly, TP120977 Angle Strip, TP103539 Screws and TP115760 Set of Parts.
P98.121	1	TP93959 Key.
*P98.122	1 2 1	TP80358 Ball Bearing.
P98.123	ī	TD110539 Control C
	19576 49277	TP119538 Contact Guard, TP119539 Stud and TP82702 Screw.
*P98.124	2	Graphited Felt Washers and Wicks Selector Cam Sleeve Assemblies and Disc Assembly (Parts for Improved Lubrication).
P98.125	1	Projection Weld Nuts.
P98.126	1	TP102626 (Barcol Tape Belt Motor).
P98.127	1	TP95174 Transmitter Cover and TP102520 Rod.
P98.128	1	TP111603 Platen (Polyvinyl Alcohol Plastic) and TP123199 Platen Support.
P98.129	1	TP74720 Thumb Screw.
P98.130	1 1	TD122542 D1 : 1
Market and the second of the	1	TP123543 Plexiglass Cover and TP122961 Bracket.
P98.131	1	TP123582 Latches and TP86273 Spring.
P98.132	1	TP102469 Locating Channel.
P98.133	1	TP78533, TP82725 and TP119904 Springs.
P98.134	1	TP123683 Tape-out Operating Lever.
P98.135	1 1 1	TP113649 Set of Parts.
P98.136	î	
		TP115778 Set of Parts (Adjustable Detent Lever for Sensing and Distributing Shaft Clutches).
P98.137	2	TP98221 Bracket, TP98324 Bearing Bracket— TP102073 Tape Reel Assembly, TP121246 Cable Clamp,—TP123701 Guard, TP123702 Guard, TP123703 Guard,—TP123704 Outer Plate, TP123705 Inner Plate,—TP123706 Screw and TP113710 Set of Parts.
P98.138	1	TP123499 Support, TP123728 Angle Plate, TP123729 Guide, TP123730 Bar, TP123731 Post, TP123732 Plate, TP123733 Bracket, TP123734 Bracket, TP123736 Bracket, TP123736 Bracket, TP123736 Bracket, TP123737 Bar, TP123738 Bar, TP123739 Link and TP123740 Bail.

<sup>\*</sup>Indicates change from previous issue.

Section No.	Issue No.	Subject
P98.139	1	TP115775 Set of Parts (Additional Insulation for Governed Motors).
P98.140	1	TP102168 Post (For Mounting Sensing Contact Cover).
*P98.141	2	TP118130** (Cover Assembly and TP118488** Left Rear Cover (For Motor Compart- ment).
P98.142	1	TP102412 Clutch Release Rod.
P98.143	1 1 1	TP123581 Tape Knife.
	1	
P98.144	1540	TP113665 Set of Parts (For Ribbon Reverse Yield Feature).
P98.145	1	TP113693 Set of Parts (Oil Shield for Selector Magnet).
P98.146	1	TP84925 and TP87860 Sets of Parts (For Tabulator).
P98.147	1	TP82004 and TP103311 Two Speed Governors (Used with A.C. Series and D.C. Shunt Motors).
P98.148	1	TP122259 Set of Parts (Copyholder Brace for 15 Type Covers).
P98.149	1	TP120714 Paper Spindle Hub (For Metal TP91832 Paper Spindle).
P98.150	1	TP80119 Rod (For Repeat Space).
P98.151	î	
1 90.131	*	TP8097, TP72306, TP84433, TP97349, TP97511, TP101766 and TP111731 Cam Sleeve Assemblies.
P98.152	1	TP123945 Ribbon Guide.
P98.153	1 1 1	TP41177 Screw (for Platen Thumb Wheel).
P98.154	ī	TP83854 Insulating Cloth.
P98.155	1	
1 90.133	1	TP124187 Oil Shield and TP93758 Felt Wash-
D00 156	1	ers (For Distributor Contacts).
P98.156	1	TP124214 Storage Rack (For Holding Perforator Tape).
P98.157	1	TP107137 Dust Shield.
P98.158	1	TP6825 Spring Bracket, TP8330 Washer, TP-89905 Typebar Segment, TP105601 Base Plate Assem., TP124146 Left Bracket, TP-124147 Right Bracket, TP124148 Spacer Washer, TP124479 Gauge and TP151658 Screw.

<sup>\*</sup>Indicates change from previous issue.
\*\*Indicates color.

Section No.	Issue No.	Subject
P98.159	1	TP123167 Driving Clutch and TP123168
P98.160	3	Driven Clutch. TP115823, TP115824 and TP115842 Typebar
P98.161	1	Backstop Assemblies. TP2574 and TP70319 Upstops — (For Keylevers).
P98.162	1	
P98.163	1	TP124137 Spring—(For Feed Wheel Detent). TP124613 TAP-LOK (Insert for Restoring No. 6-40 Tapped Threads).
P98.164	1	TP113702, TP113703, TP123913 Terminal Block Assemblies—(For Use with Holding Magnet Selectors).
P98.165	1	TP6743 and TP98877 Operation Arms, TP-
P98.166	1	6986 Bearing Sleeve and TP124512 Washer. TP74613 Screw—(For Clamping Feed Pawl Arm).
P98.167	1	TP3094 Insulator.
P98.168	î	TP1256 Screw, TP8543 Screw, TP34432
		Washer, TP110495 Gear Guard, TP117432 Cable, TP112626 Nut, TP120553 Friction Disc, TP123698 Terminal, TP124223 Screw, TP124535 Typebar Backstop and TP124661 Spring.
*P98.169	2	TP124625 Front Space Pawl Assembly (For Use with Horizontal Tabulator).
P98.170	1	Type Arrangement "A"—(Number Sign on Upper Case H).
P98.171	1	TP125126 Screw—(For Mounting Tape Guide Spring).
P98.172	1	TP119235 Insulator, TP90791 Lock Washer, TP3624 Washer and TP3606 Lock Unit—(For Friction Feed Paper Out Alarm).
P98.173	1	TP115825 Set of Parts—(For Tape Reel).
P98.174	1	TP124975 Lever—(For Back Spacer).
P98.175	1	TP124980 Plug (With Handle).
P98.176	1	TP124195 Thimble Tape Cutter (Size No. 6).
P98.177	1	TP113715 Set of Parts—(For Repairing Tape Reels).
P98.179	1	TP74523 and TP85098 Spacer Bars.
*P98.180	1 2 1 1	TP122967 Cable Assembly.
*P98.181	1	TP121995 Tape Tension Lever.
*P98.182	1	TP55088 Platen Balance Spring.
*P98.183	2	TP82787 Spring, TP115220 Eccentric Stud.

<sup>\*</sup>Indicates change from previous issue.

Section No.	Issue No.	Subject
*P98.184	1	5C Distributor Brush.
*P98.185	ī	TP115147 Drive Arm Assembly.
*P98.186	ī	TP115836 Set of Parts.
*P98.187	ī	TP76863 Screw.
*P98.188	ī	TP110455 Spring—(For Tape Lid).
*P98.189	ĩ	TP126966 Sending Contact Bracket Assembly.
*P98.190	ī	Universal Contact Adjustment — TP115498 Universal Contact Lever.
*P98.191	1	TP123740 Main Bail-Height Adjustment.
*P98.192	ī	TP6909 Stop Pawl, TP6830 Trip Latch, TP90088 Trip Latch, TP110871 Trip Latch, TP129671 Trip Latch, TP110872 Trip Latch Spring.
*P98.193	1	TP122059 Clutch Spring.
*P98.194	1	TP3606 Nut and TP92260 Lock Washer.
*P98.195	ī	TP111342 Armature Spring.
*P98.196	1	TP113748 Set of Parts for TP110790 Top
	<del>5</del> 73	Plate Height Adjustment, TP129463 Tape Out Contact Lever Upstop.
*P98.197	1	TP129691 Filter Assembly.
*P98.198	1	TP106977** Baffle Plate.
*P98.199	1	TP129697 Set of Parts (Glass Panel and Mounting Details).
*P98.200	1	TP135011 Transfer Selector Lever.
*P98.201	1	TP122742 Felt Washer.
*P98.202	1	TP84575 Back-Space Lever Spring.
*P98.203	1	TP78469 Rubber Bumpers, TP104828 Screws and TP125011 Washers.
*P98.204	1	TP55669 Spring.
*P98.205	1	TP123928 Oil Shield Cover and TP123929 Felt Oil Stop of TP113693 Selector Magnet Oil Shield Set of Parts.
*P98.206	1	TP152450 Selector CAM-TP150028, TP150032, and TP150033 Clutch Discs.
*P98.207	1	TP6033 Lock Washers.
*P98.208	1	TP150054 Print Hammer Bail, TP151709 Op-
*P98.209	1	erating Arm. TP150014 Clutch Adjusting Disc, TP151736 Release Lever Spring.
*P98.210	1	TP150832 CAM Disc Key.

<sup>\*</sup> Indicates change from previous issue.
\*\* Indicates color.

Section No.	Issue No.	Subject
*P98.211	1	TP153170 Spacer, TP153171 Rivet, TP153172 Spring, TP153173, TP153178, and TP153179 Plate, TP153174, TP153175, TP153176, TP153177, TP153180 and TP153181 Link Assembly.
*P98.212	1	TP152653 Function Pawl.
*P98.213	1	TP151161 Intermediate Lever Shaft.
*P98.214	1	TP151190 Oscillating Lever.
*P98.215	1	TP151008 Latch Lever.

<sup>\*</sup> Indicates change from previous issue.

### APPARATUS AFFECTED

Section No.	No. 14 Type	No. 15 Type	No. 15 Perf. Trans.	Sotus	Tape Winder	Multi. Trans.	Misc.	100 Type Cabinets	Reperf. Trans.	Common to All
P98.001										X
P98.002	$\mathbf{x}$									24
P98.003	$\mathbf{X}$									
P98.004										$\mathbf{x}$
P98.005	$\mathbf{x}$									
P98.006							$\mathbf{x}$			
P98.007			$\mathbf{x}$				75			
P98.008	$\mathbf{x}$						X			
P98.009	X X X X		$\mathbf{x}$	1.77			0.77.03			
P98.010	$\mathbf{X}$	$\mathbf{x}$								
P98.011	$\mathbf{x}$									
P98.012		$\mathbf{X}$								
P98.013										X
P98.014					$\mathbf{x}$					
P98.015					$\mathbf{x}$					
P98.016	$\mathbf{X}$									
P98.017	$\mathbf{x}$									
P98.018		$\mathbf{x}$								
P98.019	$\mathbf{X}$									
P98.020			X							
P98.021	$\mathbf{X}$									
P98.022	$\mathbf{x}$									
P98.023		$\mathbf{x}$								
P98.024		$\mathbf{X}$								
P98.025		X X X X								
P98.026	$\mathbf{x}$	$\mathbf{X}$								
P98.027		$\mathbf{X}$								
P98.028	$\mathbf{X}$									
P98.029	$\mathbf{X}$	$\mathbf{X}$								
P98.030		X								
P98.031										
P98.032		$\mathbf{X} \\ \mathbf{X} \\ \mathbf{X}$								
P98.033		$\mathbf{X}$								
P98.034		$\mathbf{x}$								
P98.035	$\mathbf{X}$									
P98.036									$\mathbf{x}$	
P98.037				$\mathbf{x}$						
P98.038									$\mathbf{x}$	
P98.039				$\mathbf{x}$						
P98.040				$\mathbf{x}$						
P98.041			$\mathbf{X}$	133						
P98.042		$\mathbf{x}$								
P98.043	$\mathbf{x}$	$\mathbf{x}$								
1 70.040	41									

Section No.	No. 14 Type	No. 15 Type	No. 15 Perf. Trans.	Sotus	Tape Winder	Multi. Trans.	Misc.	100 Type Cabinets	Reperf.	Common to All
P98.044	$\mathbf{X}$									
P98.045	$\mathbf{X}$									
P98.046		$\mathbf{x}$								
P98.047	$\mathbf{X}$									
P98.048							$\mathbf{x}$			
P98.049		X					21			
P98.050		X								
P98.051		2000		$\mathbf{X}$						
P98.052									$\mathbf{X}$	
P98.053								$\mathbf{x}$	A	
P98.054					$\mathbf{x}$			Λ		
P98.055			X							
P98.056				$\mathbf{X}$						
P98.057		$\mathbf{x}$								
P98.058									$\mathbf{x}$	
P98.059									21	$\mathbf{x}$
P98.060							$\mathbf{x}$			Λ
P98.061	$\mathbf{x}$	$\mathbf{x}$	$\mathbf{X}$				22			
P98.062	42500		0.0000000000000000000000000000000000000				$\mathbf{X}$			v
P98.063							21			$\mathbf{x}$
P98.064			$\mathbf{x}$							21
P98.065			X X X							
P98.066			X							
P98.067	$\mathbf{x}$									
P98.068							$\mathbf{x}$			
P98.069					$\mathbf{x}$					
P98.070					200		$\mathbf{x}$			
P98.071						X				
P98.072					0.60	X				
P98.073							$\mathbf{X}$			
P98.074			$\mathbf{x}$							
P98.075	$\mathbf{X}$									
P98.076	$\mathbf{X}$									
P98.077										$\mathbf{X}$
P98.078					6			$\mathbf{x}$		12176
P98.079	$\mathbf{X}$	X						877		
P98.080				$\mathbf{x}$						
P98.081	0.20000						X			
P98.082	$\mathbf{x}$	855-615					2700	8		
P98.083		$\mathbf{x}$								
P98.084										$\mathbf{X}$
P98.085										$\mathbf{X}$
P98.086								$\mathbf{x}$		
P98.087		$\mathbf{X}$								
P98.088				X						

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Section No.	No. 14 Type	No. 15 Type	No. 15 Perf. Trans.	Sotus	Tape Winder	Multi. Trans.	Misc.	100 Type Cabinets	Reperf.	Common to All
P98.089				x						
P98.090				$\mathbf{X}$						
P98.091	$\mathbf{x}$									
P98.092	57		$\mathbf{x}$							
P98.093							$\mathbf{x}$			
P98.094		X					**			
P98.095		X								
P98.096		7.7	$\mathbf{x}$							
P98.097			877.77.0				X			
P98.098							$\mathbf{x}$			
P98.099		X								
P98.100		X								
P98.101		X								
P98.102		X X X X								
P98.103		$\mathbf{x}$								
P98.104										$\mathbf{X}$
P98.105										$\mathbf{X}$
P98.106		$\mathbf{x}$								
P98.107						$\mathbf{x}$				
P98.108						X				
P98.109				$\mathbf{x}$						
P98.110								$\mathbf{x}$		
P98.111				$\mathbf{X}$						
P98.112								$\mathbf{x}$		
P98.113		$\mathbf{x}$								
P98.114		37							$\mathbf{x}$	
P98.115		$\mathbf{x}$								
P98.116		v								$\mathbf{X}$
P98.117		$\mathbf{X}$						**		
P98.118 P98.119								$\mathbf{x}$		77
P98.120								37		$\mathbf{X}$
P98.121		$\mathbf{X}$	85					$\mathbf{X}$		
P98.122		Λ								v
P98.123				$\mathbf{x}$						$\mathbf{X}$
P98.124	$\mathbf{X}$	x		Λ						
P98.125	21	X								
P98.126		21						X		
P98.127	$\mathbf{x}$							Λ		
P98.128									$\mathbf{x}$	
P98.129		X							Λ	
P98.130		77.7						X		
P98.131								X		
P98.132								X X X		
P98.133						$\mathbf{x}$				

No.         Type         Type         Type         Trans. Sotus Winder Trans. Misc. Cabinet           P98.134         X           P98.135         X           P98.136         X           P98.137         X	Reperf.	Common to All
P98.135 P98.136 P98.137 X	77	
P98.135 P98.136 P98.137 X	37	
P98.136 P98.137 X	37	
- 1 전 1 전 1 전 1 전 1 전 1 전 1 전 1 전 1 전 1	X	
P98.138 X		
P98.139 X X		
P98.140	X	
P98.141 X		
P98.142	$\mathbf{X}$	
P98.143 X	0.00	
P98.144 X		
P98.145	$\mathbf{X}$	
P98.146 X		
P98.146 X P98.147 X X P98.148 X P98.149 X		
P98.148 X		
P98.149 X		
P98.150 X		
P98.151		X
P98.152	X	21
P98.153 X	21	
P98.154 X		
P98.155	$\mathbf{X}$	
P98.156	21	
P98.157 X		
P98.158 X		
P98.159 X		
P98.160 X		
P98.161		$\mathbf{x}$
P98.162 X		
P98.163 X	$\mathbf{x}$	
1 20.107	21	$\mathbf{x}$
P98.165 X	X	
P98.166 X	21	
P98.167 X		
P98.168	$\mathbf{X}$	
P98.169 X	21	
P98.170		$\mathbf{X}$
P98.171 X		21
P98.172 X		
P98.173 X		
P98.174 X		
P98.175 X		
P98.176 X		
P98.177		
P98.179 X		
P98.180 X		

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Section No.	No. 14 Type	No. 15 Type	No. 20   Type	No. 15 Perf. Trans.	No. 28   Type	Sotus	Tape   Winder	Multi.	Misc.	100 Type Cabinets	Reperf.	Common to All
P98.181 P98.182 P98.183 P98.184		x	X			x			x			X
P98.185 P98.186 P98.187 P98.188 P98.189	x					X		x			x	
P98.190 P98.191 P98.192 P98.193						X			X			X
P98.194 P98.195 P98.196 P98.197 P98.198	х							X X X	x			
P98.199 P98.200 P98.201 P98.202		X							Λ	X	x	x
P98.203 P98.204 P98.205 P98.206 P98.207	x	Х			x x						x	
P98.208 P98.209 P98.210 P98.211 P98.212	16.55,53				X X X X X X							
P98.213 P98.214 P98.215					X X X			53	28			