

BELL SYSTEM PRACTICES
Teletypewriter and Data Stations

ADDENDUM P34.301
Issue 1, October, 1963
AT&TCo Standard

28-TYPE TELETYPEWRITER

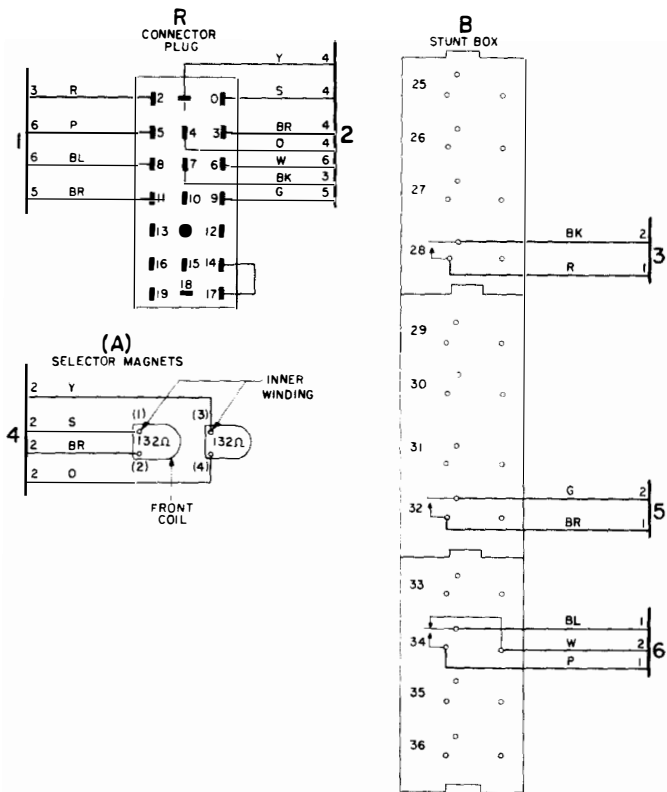
TYPING UNIT, MOTOR UNIT AND BASE

WIRING DIAGRAM

1. GENERAL

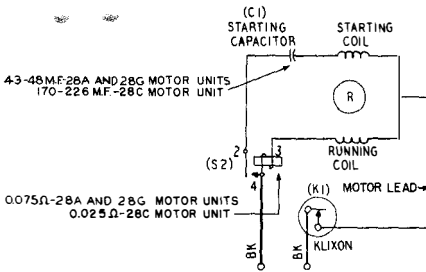
1.001 This addendum supplements Section P34.301, Issue 8.

1.002 This addendum is issued to add the wiring for the
(a) 28AG and 28AH typing units, (b) 28G motor unit
and (c) 28K and 28L bases. The 28K base is for use in the wall-
mounted sets and the 28L base is for 28RO teletypewriters.

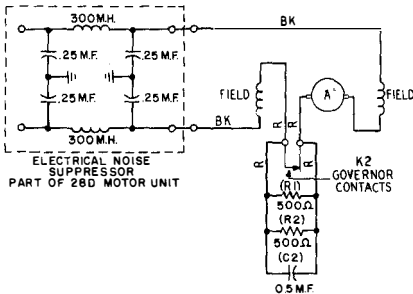


NOTES:
 1. LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

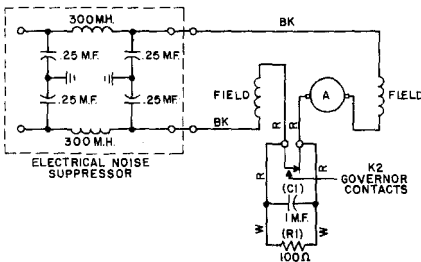
28AB, 28AD, 28AG and 28AH Typing Units



28A, 28C AND 28G MOTOR UNITS



28B AND 28D MOTOR UNITS

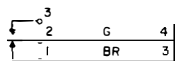


28E MOTOR UNIT

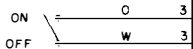
NOTES:

1. A TP91228 GROUND STRAP IS CONNECTED BETWEEN THE MOTOR FRAME AND A MOTOR MOUNTING SCREW
2. THE 28E MOTOR UNIT OPERATES ON 48V DC.

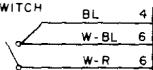
SIGNAL LINE
BREAK SWITCH



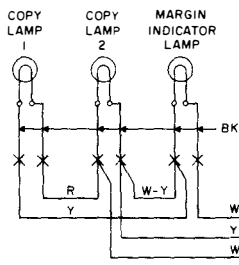
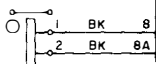
POWER SWITCH



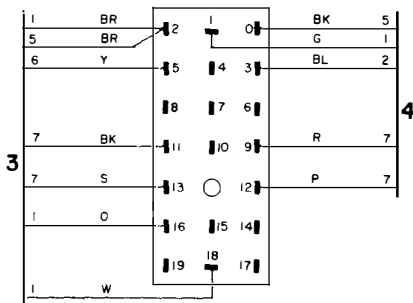
MARGIN INDICATOR
SWITCH



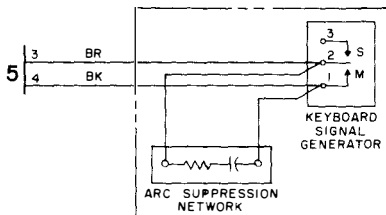
SIGNAL BELL



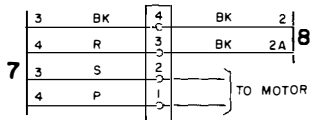
KEYBOARD CONNECTOR
(MALE)



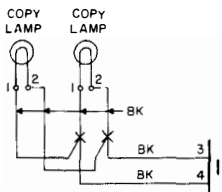
CONTACT BOX ASSEMBLY



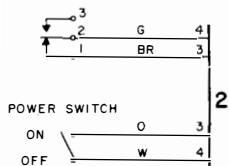
MOTOR
TERMINAL BLOCK



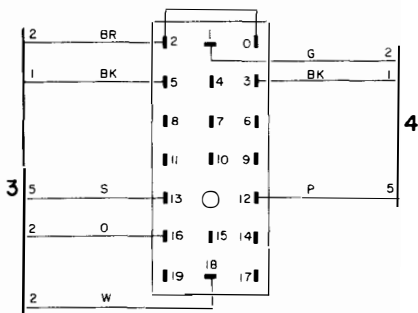
28K Teletypewriter Base



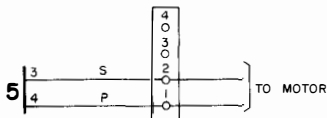
SIGNAL LINE
BREAK SWITCH



KEYBOARD CONNECTOR
(MALE)



MOTOR TERMINAL
BLOCK



28L Teletypewriter Base

BELL SYSTEM PRACTICES
Teletypewriter and Data Stations

SECTION P34.301
Issue 8, December, 1962
AT&TCo Standard

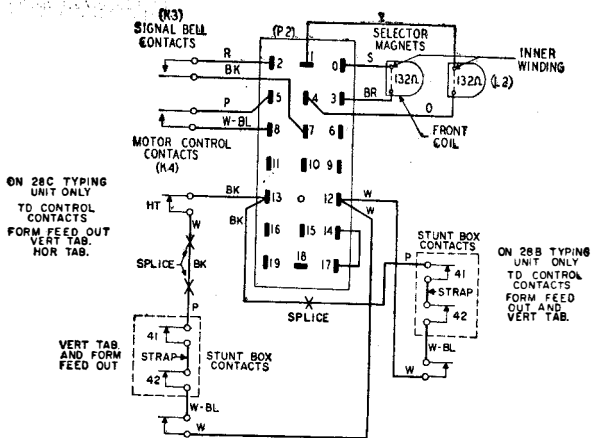
28-TYPE TELETYPEWRITER

TYPING UNIT, MOTOR UNIT AND BASE

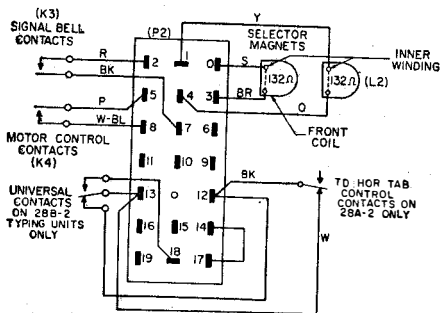
WIRING DIAGRAM

1. GENERAL

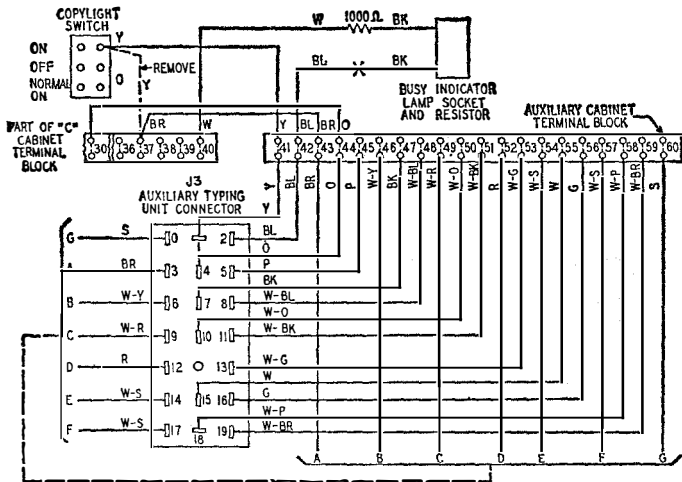
- 1.01 This section shows the wiring diagram of the 28-type typing units, motor units and teletypewriter bases.
- 1.02 This section is reissued to add the wiring of the 28J, 28J-1, 28U, 28W, 28AB, 28AC, 28LF typing units, and the 28H and 28H-1 teletypewriter bases. The drawing showing the wiring of the 28L, 28S and 28T typing units has been reissued to add horizontal tabulation contacts, vertical tabulation and form feed-out contacts. Note 2 has been added to the drawing showing the wiring of the 28LB, 28LC, 28LD, 28LE and 28LF typing units.



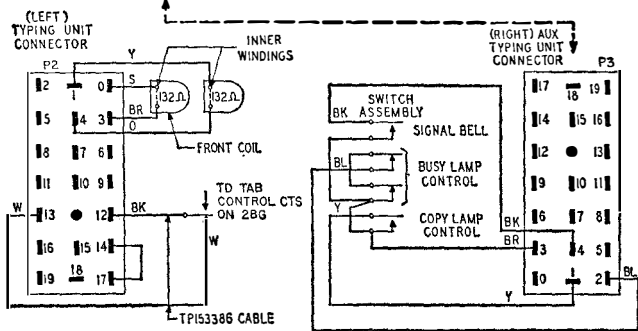
28A, 28A-1, 28B, 28C, 28D TYPING UNITS



28A-2 AND 28B-2 TYPING UNITS



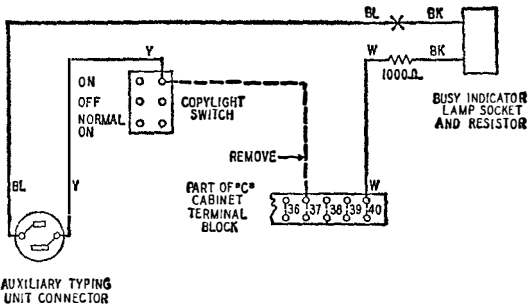
MODIFICATION OF WIRING OF 28B, C, D & E TTY CABINETS
USING PARTS FURNISHED WITH 28E, F, & G TYPING UNITS



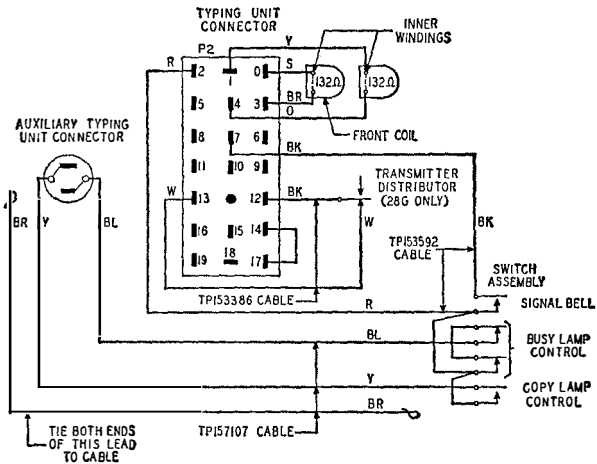
28E, F & G TYPING UNITS

28-TYPE TELETYPEWRITER
TYPING UNIT,
MOTOR UNIT
AND BASE
WIRING
DIAGRAM

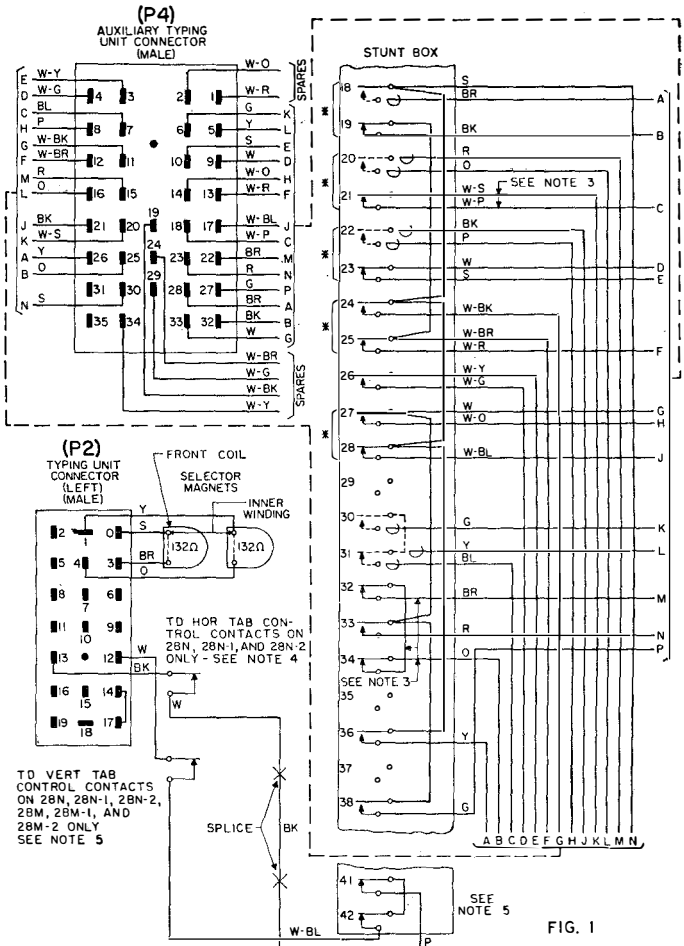
P34.301



**MODIFICATION OF WIRING OF 28 TTY CABINET
USING PARTS FURNISHED WITH 28E, F & G TYPING UNITS
AUGUST 1955 PRODUCTION**



**28E, F & G TYPING UNITS
WIRING FOR UNITS AUGUST 1955 PRODUCTION**



28H, 28H-1, 28H-2, 28M, 28M-1, 28M-2, 28N, 28N-1, 28N-2 Typing Units

**28-TYPE TELETYPEWRITER
TYPING UNIT,
MOTOR UNIT
AND BASE
P34.301 WIRING
DIAGRAM**

Page 5

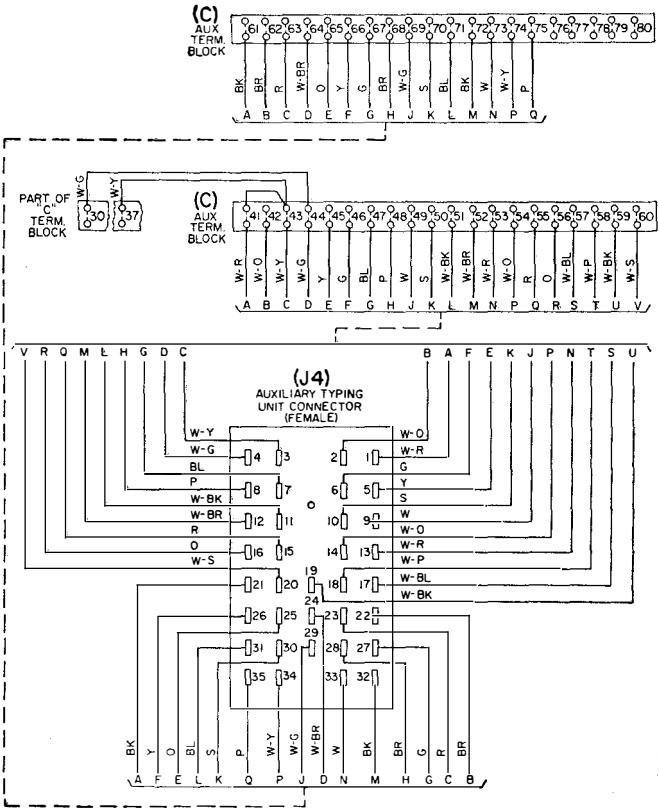


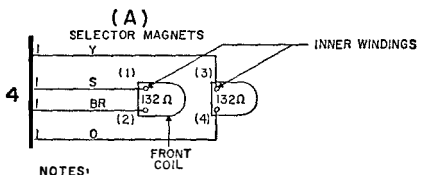
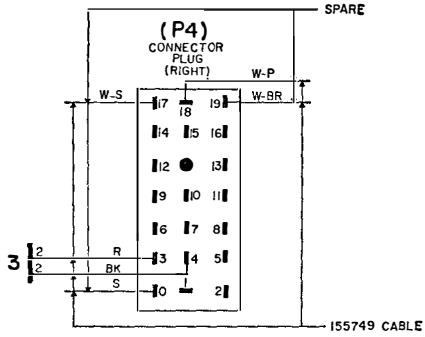
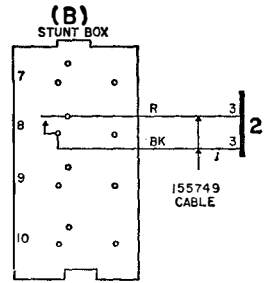
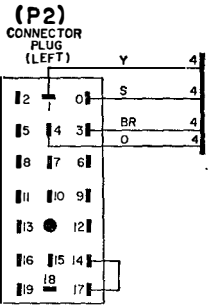
FIG. 2

28H, 28H-1, 28H-2, 28M, 28M-1, 28M-2, 28N, 28N-1, 28N-2
Typing Units

NOTES•

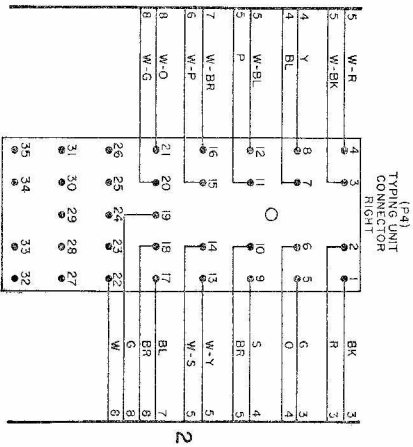
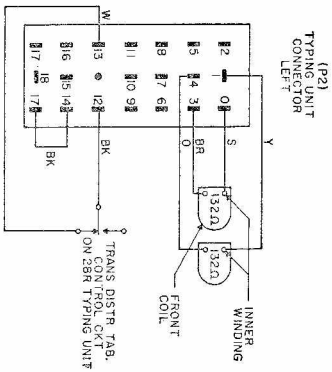
1. * BOTH CONTACTS OF A PAIR OPERATE FROM THE FUNCTION LEVER IN THE HIGHER NUMBER SLOT.
2. DOTTED CONTACTS ARE OPTIONAL AND ARE PROVIDED WHEN SPECIFIED. WIRING IS RUN FOR ALL OPTIONAL FEATURES.
3. THESE LEADS NOT REQUIRED ON 28N-1 OR 28N-2 TYPING UNITS. THEY ARE TO BE TAPED AND TIED BACK TO CABLE. OMIT STRAP BETWEEN CONTACTS 32 AND 34.
4. TD HORIZONTAL TABULATION CONTROL CONTACTS ARE PART OF 28N, 28N-1, AND 28N-2 TYPING UNITS ONLY. ON 28M, 28M-1, AND 28M-2 THE WHITE WIRE CONNECTED TO ONE SIDE OF THESE CONTACTS IS CONNECTED TO TERMINAL 13 ON THE (P2) CONNECTOR.
5. TD VERTICAL TABULATION CONTROL CONTACTS AND FORM FEED OUT CONTACTS WITH ASSOCIATED WIRING ON STUNT BOX (41 AND 42) ARE PART OF 28M, 28M-1, 28M-2, 28N, 28N-1, AND 28N-2 TYPING UNITS ONLY.

**28H, 28H-1, 28H-2, 28M, 28M-1, 28M-2, 28N, 28N-1, 28N-2
Typing Units**

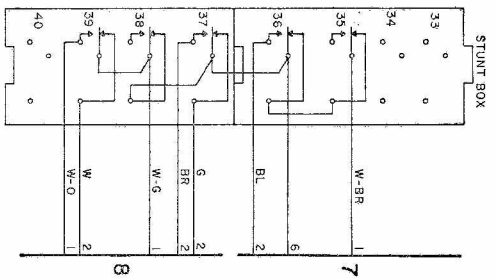
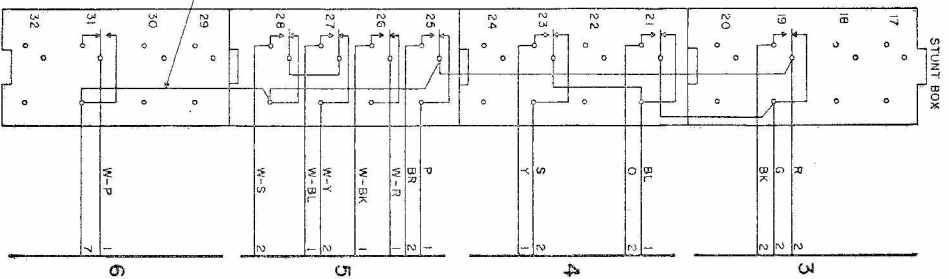


NOTES:
LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

28J and 28J-1 Typing Units



28K, 28P, 28R, Typing Units



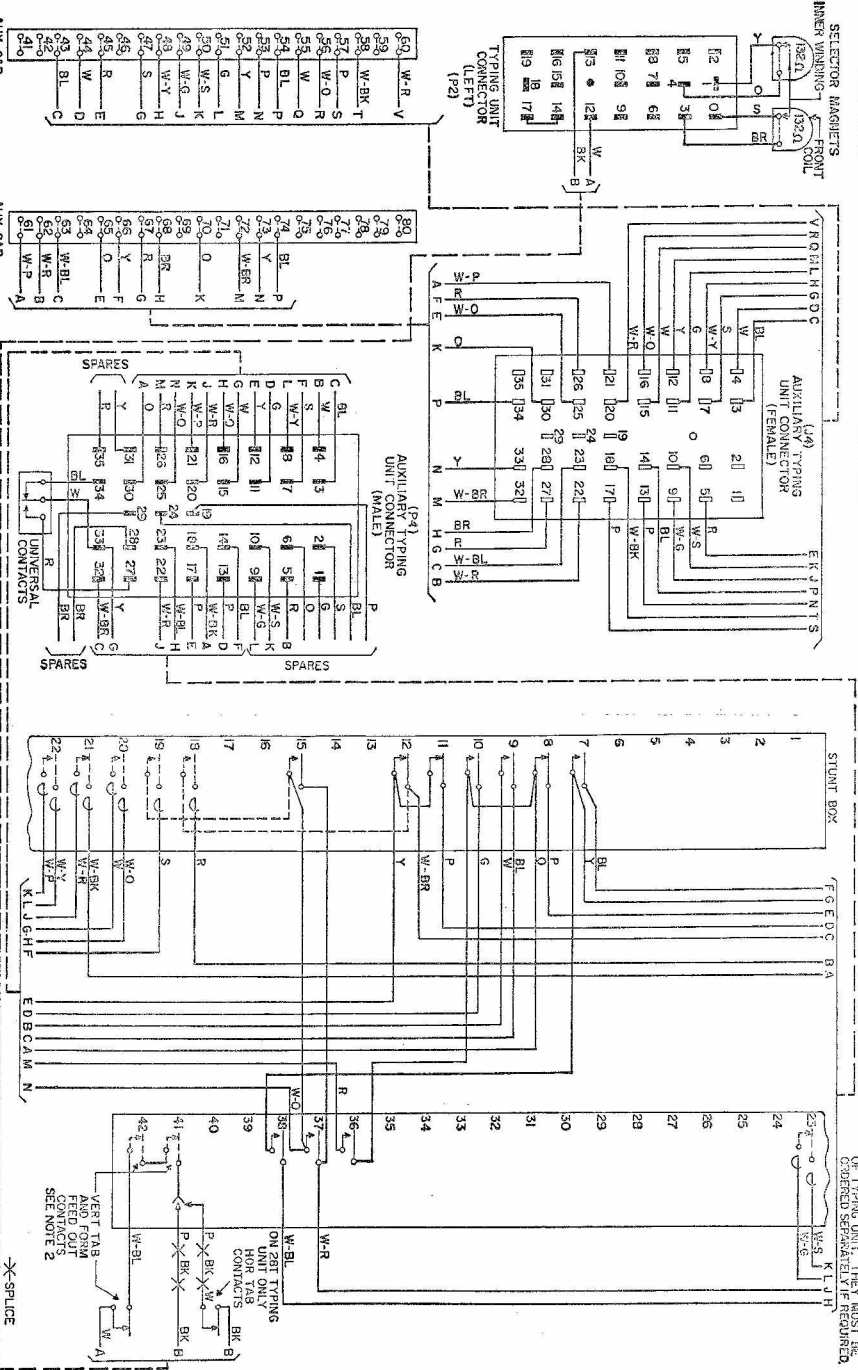
- NOTES:
 1. LEADS NOT IDENTIFIED ARE RM STRAPPING WIRE, RM TUBING.
 2. CONTACT ARM LIFTED BY FUNCTION LEVER
 3. CONTACT ARM LOWERED BY FUNCTION LEVER
 4. "FRONT" AND "REAR" REFER TO DIRECTIONS AS SEEN FROM THE KEYBOARD OR THE CORNER-POUND-ARM OF THE REAR CONTACT ARM. FOLLOW THE SAME FRONT AND REAR CONVENTIONS FOR SINGLE (NON-TRANSFER) CONTACTS.

- 1. CONTACT ARM LIFTED BY FUNCTION LEVER OPERATION**
 ○ FRONT-MAKE
 ○ CONTACT ARM
 ○ REAR-BREAK
- 2. CONTACT ARM LOWERED BY FUNCTION LEVER OPERATION**
 ○ FRONT-BREAK
 ○ CONTACT ARM
 ○ REAR-MAKE

LEGEND

"FRONT" AND "REAR" REFER TO DIRECTIONS AS SEEN FROM THE KEYBOARD ON THE CORRESPONDING FACE OF THE SEQUENCE SELECTOR. I.E. THE REAR CONTACT IS AT THE RESILATOR END CONVENTIONS FOR SINGLE (WIDTANGSSEN) CONTACTS.

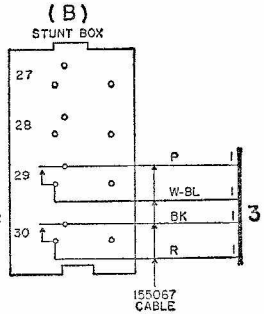
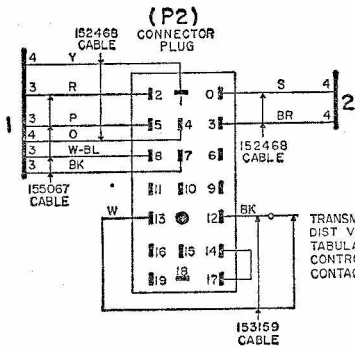
NOTES:
 1. DOTTED CONTACTS ARE OPTIONAL AND ARE PROVIDED WHEN SPECIFIED FEATURES ARE ORDERED.
 2. STUNT BOX CONTACTS SHOWN IN SLOTS 41 AND 42 ARE NOT PART OF THE STANDARD UNIT IF REQUIRED.
 CARRIED SEPARATELY IF REQUIRED.



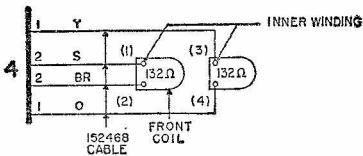
AUX. CAB. TERM. BLOCK (C)

AUX. CAB. TERM. BLOCK (C)

281, 285 and 28T Typing Units



(A)

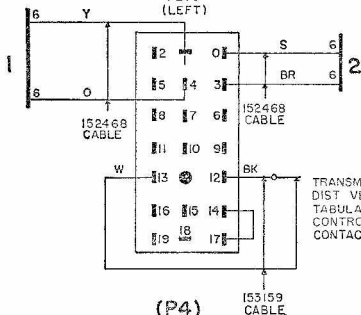


NOTES:

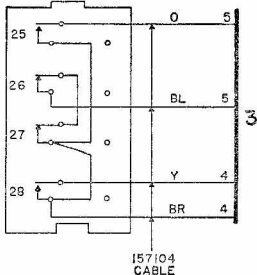
1. LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

28U Typing Unit

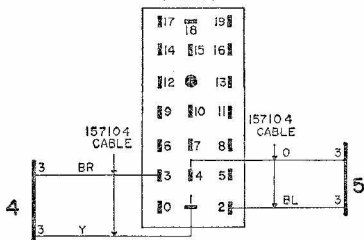
(P2)
CONNECTOR
PLUG
(LEFT)



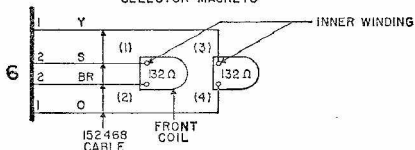
(B)
STUNT BOX



(P4)
CONNECTOR
PLUG
(RIGHT)



(A)
SELECTOR MAGNETS



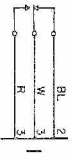
NOTES:

1. LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

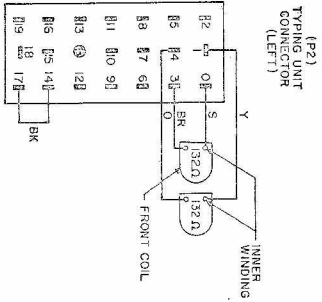
28-TYPE TELETYPEWRITER
TYPING UNIT,
MOTOR UNIT
AND BASE
WIRING
DIAGRAM

28-Typing Units

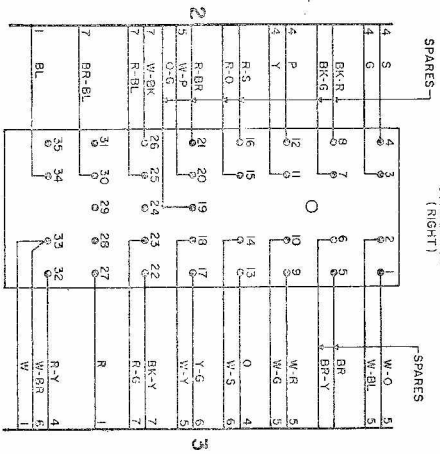
- NOTES:
1. WIRES NOT IDENTIFIED ARE 3895S RANSTRAPPING WIRES, 60019 RM, TUBING.
2. CONTACT ARM ASSEMBLY PLUGS REMOVE FROM CONTACT ASSEMBLY AND PLACED IN MUSH IN BAG.
3. OPTIONAL STRAP, INSTALLED BY CUSTOMER.
4. CONTACT ARM LIFTED BY FUNCTION LEVER.
5. CONTACT ARM LOWERED BY FUNCTION LEVER



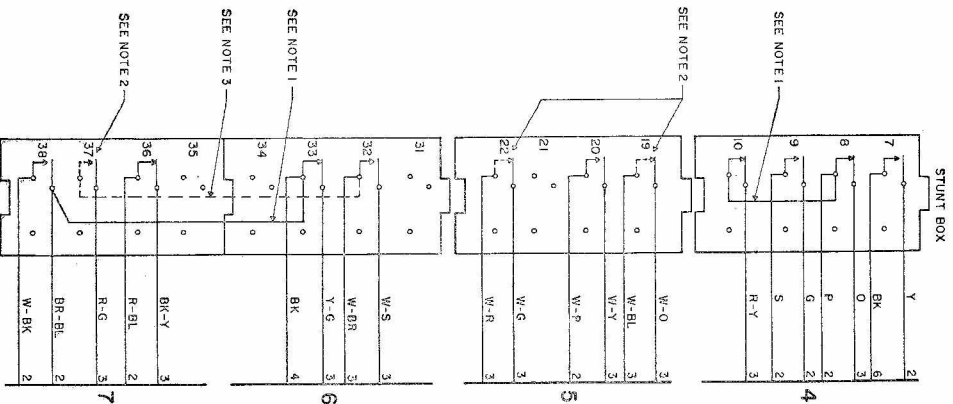
UNIVERSAL CONTACTS



(P2)
TYPING UNIT
CONNECTOR
(LEFT)

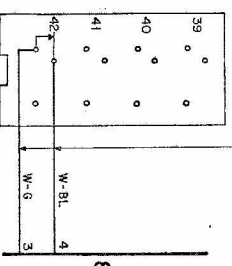
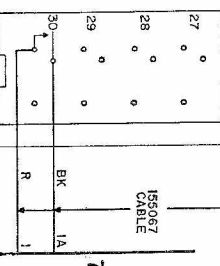
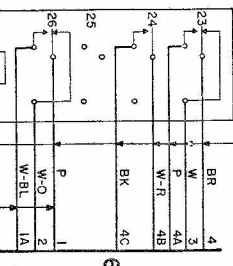
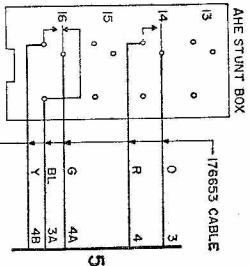
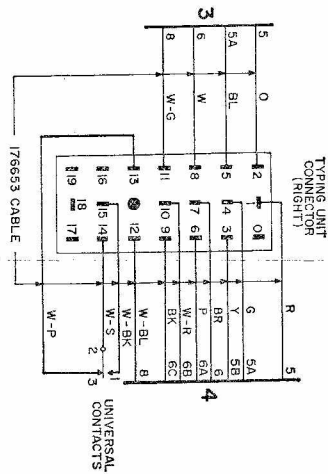
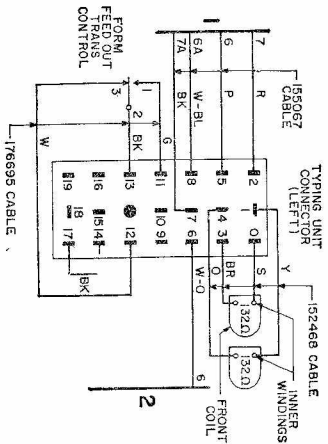


(P4)
TYPING UNIT
CONNECTOR
(RIGHT)

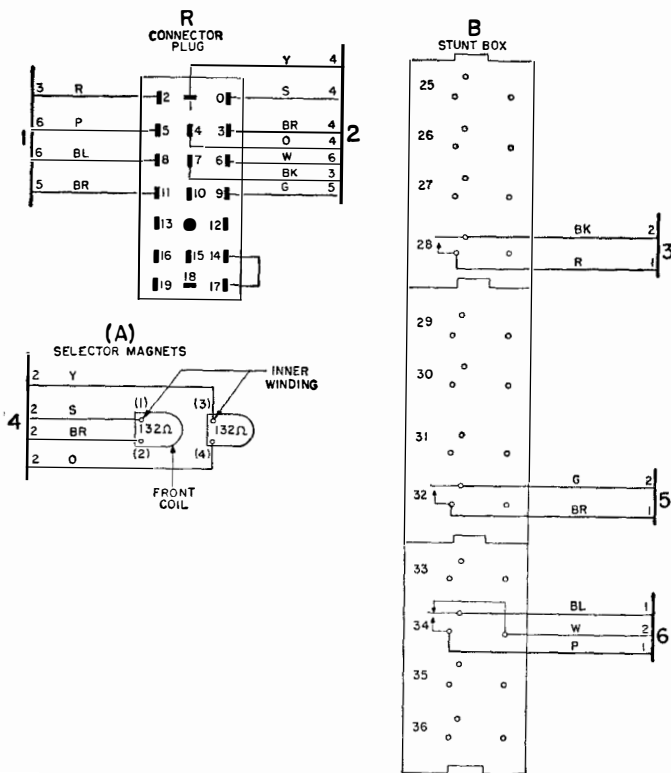


STUNT BOX

- SEE NOTE 1
- SEE NOTE 2
- SEE NOTE 3



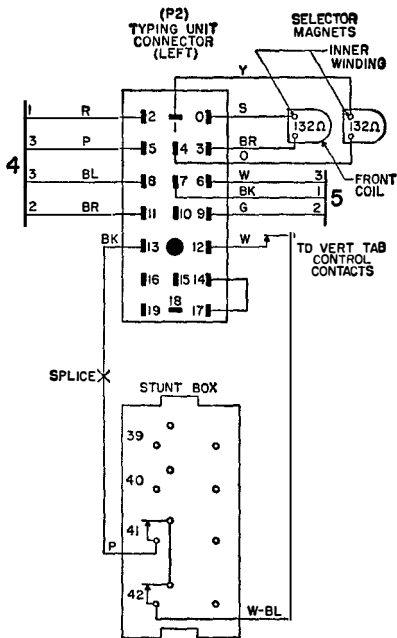
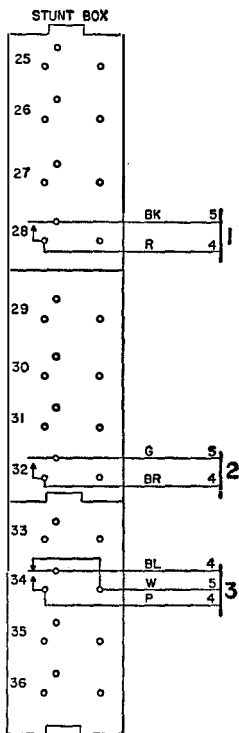
28AA Typing Unit



NOTES:
 L LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

28AB and 28AD Typing Units

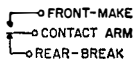
28-TYPE TELETYPEWRITER
 TYPING UNIT,
 MOTOR UNIT
 AND BASE
P34.301 WIRING
 Page 15 DIAGRAM



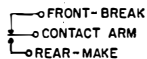
NOTES:

1. LEADS NOT IDENTIFIED ARE RM STRAPPING WIRE, RM TUBING.

2. CONTACT ARM LIFTED BY FUNCTION LEVER



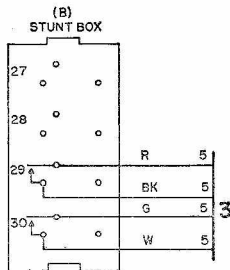
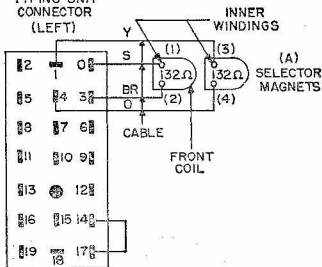
3. CONTACT ARM LOWERED BY FUNCTION LEVER



4. "FRONT" AND "REAR" REFER TO DIRECTIONS AS SEEN FROM THE KEYBOARD; I.E., THE REAR CONTROL IS AT THE INSULATOR END OF THE CONTACT ARM. FOLLOW THE SAME FRONT AND REAR CONVENTIONS FOR SINGLE (NON-TRANSFER) CONTACTS.

28AC Typing Unit

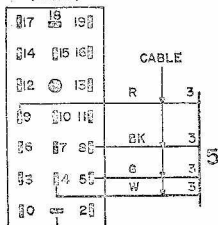
P2
 TYPING UNIT
 CONNECTOR
 (LEFT)



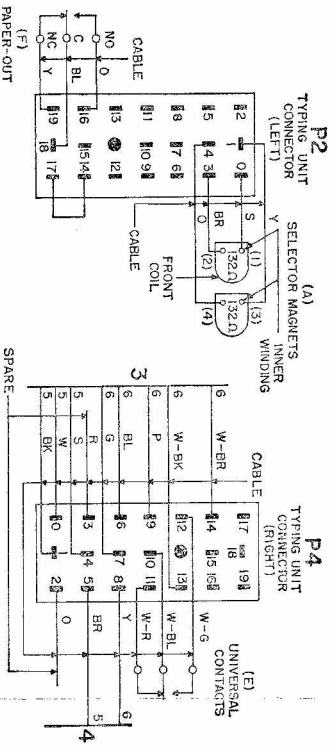
NOTES:

- LEADS NOT IDENTIFIED ARE RM STRAPPING WIRES, RM TUBING.

P4
 TYPING UNIT
 CONNECTOR
 (RIGHT)



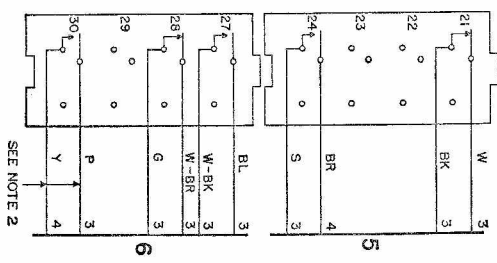
28LA Typing Unit



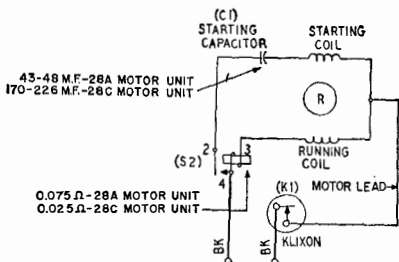
- NOTES:
- LEADS NOT IDENTIFIED ARE RM STRAPPING WIRE, RM TUBING.
 - ON 28LF TYPING UNIT, THE YELLOW AND PURPLE WIRES ARE TAPED AND TIED BACK.

PAPER-OUT CONTACT (PART OF 28LB A 28LC TYPING UNIT)

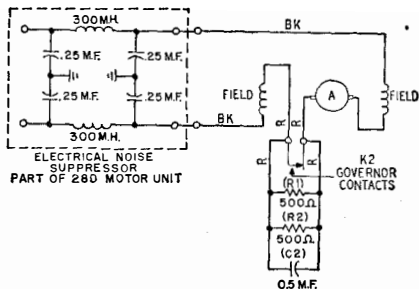
(B) STUENT BOX CONTACT



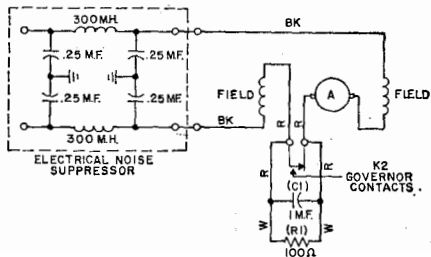
28LB, 28LC, 28LD, 28LE and 28LF Typing Units



28A AND 28C MOTOR UNITS



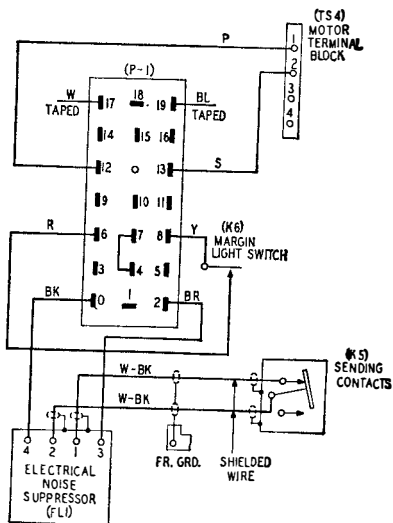
28B AND 28D MOTOR UNITS



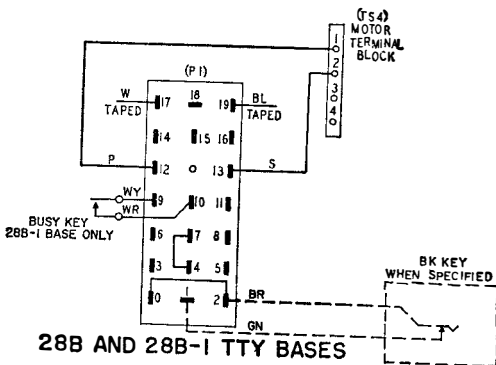
28E MOTOR UNIT

NOTES:

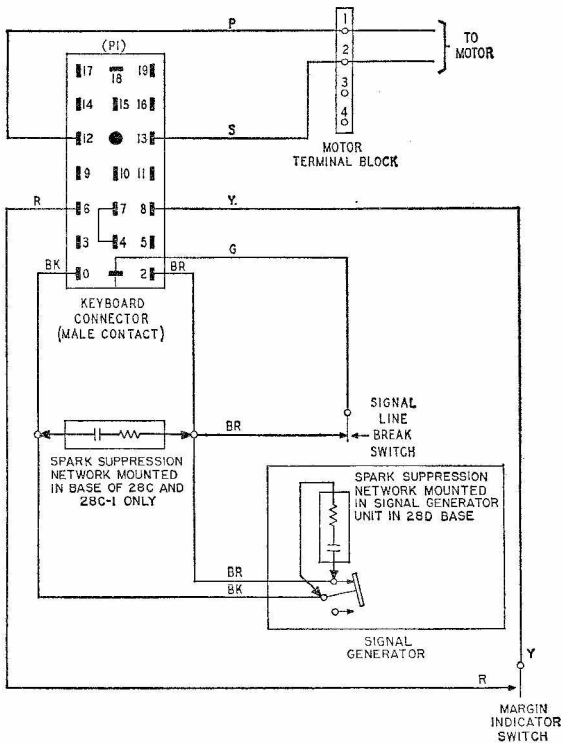
1. A TP91228 GROUND STRAP IS CONNECTED BETWEEN THE MOTOR FRAME AND A MOTOR MOUNTING SCREW
2. THE 28E MOTOR UNIT OPERATES ON 48V DC.



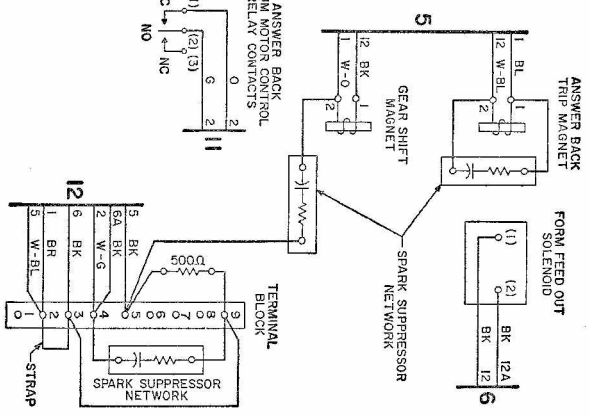
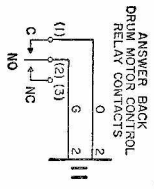
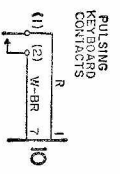
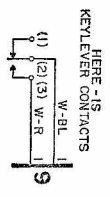
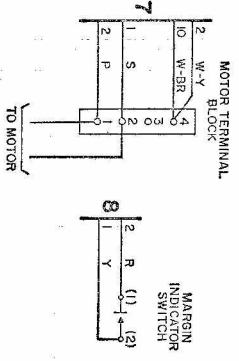
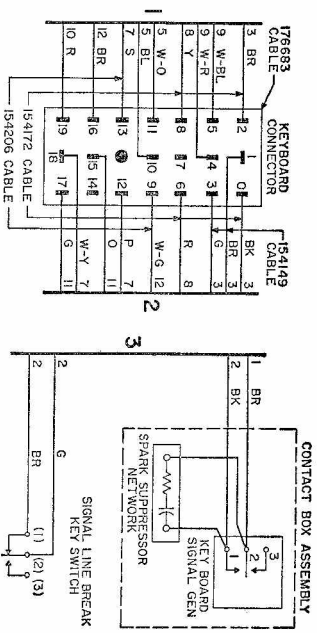
28A TTY BASE



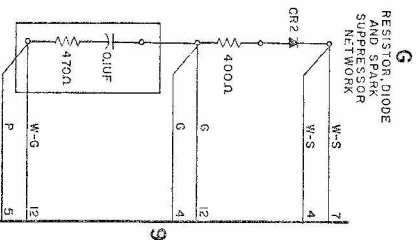
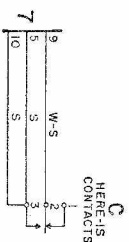
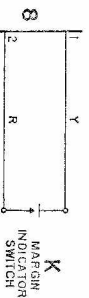
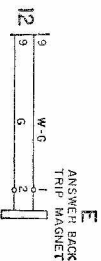
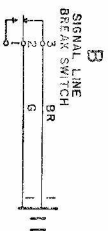
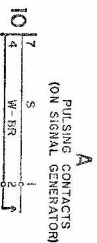
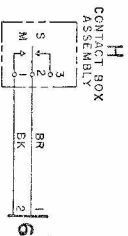
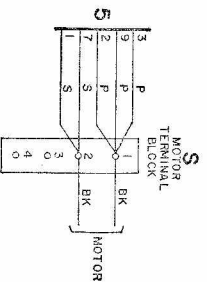
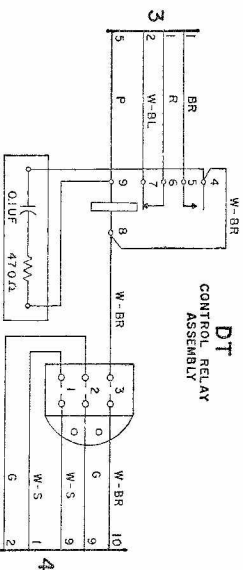
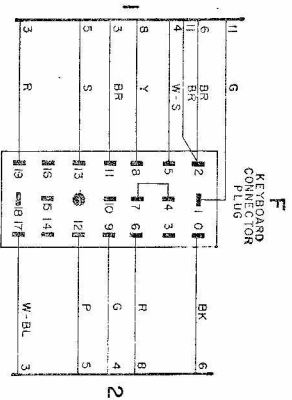
28B AND 28B-1 TTY BASES



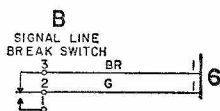
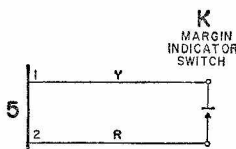
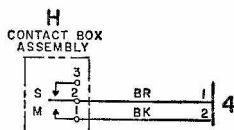
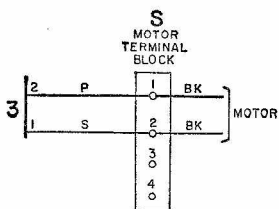
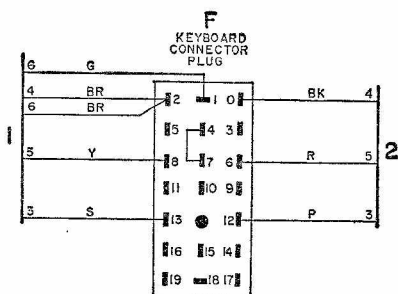
28C, 28C-1, 28D Teletypewriter Bases



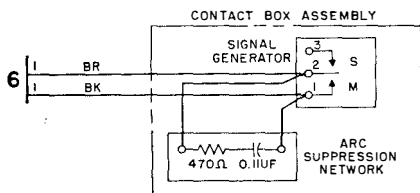
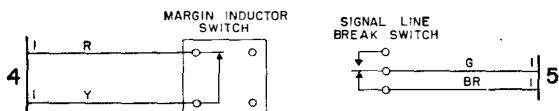
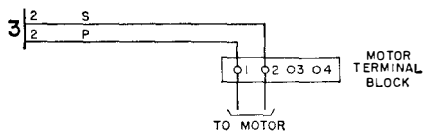
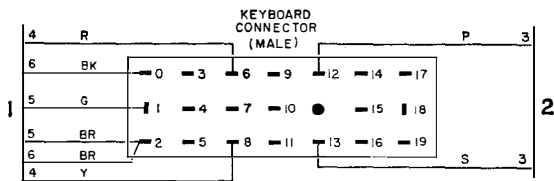
28G Teletypewriter Base



28H Teletypewriter Base



28H-1 Teletypewriter Base



28J Teletypewriter Base



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