



**Kellogg**



## *Kellogg & Federal Equipment Diagrams*

Last updated: 22 August 2008

This is an ongoing work that will be added to as additional diagrams are located. Some drawings do not have a K- number and are listed with the type number items.

Federal Telephone & Radio products have been added to this project and are listed under "Other Manufacturers" in the bookmarks.

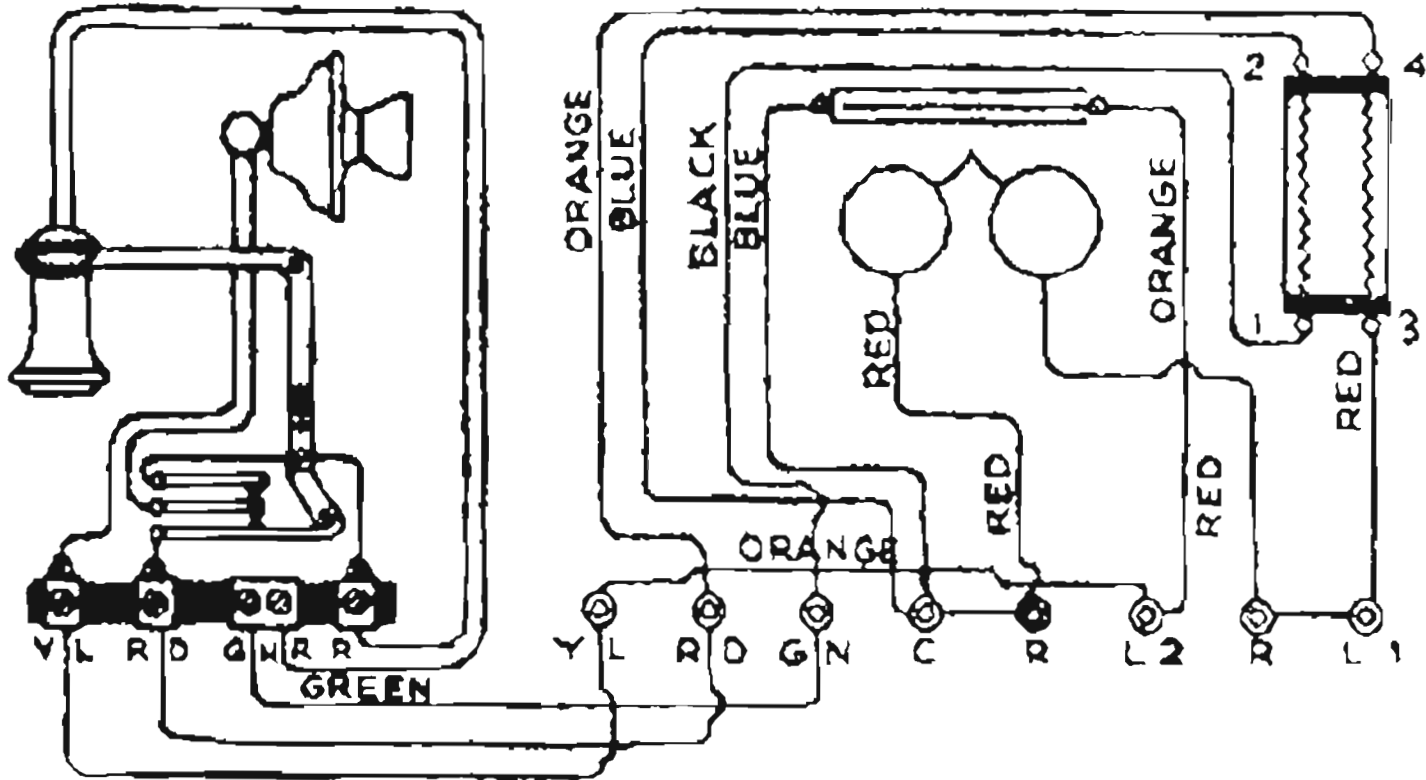
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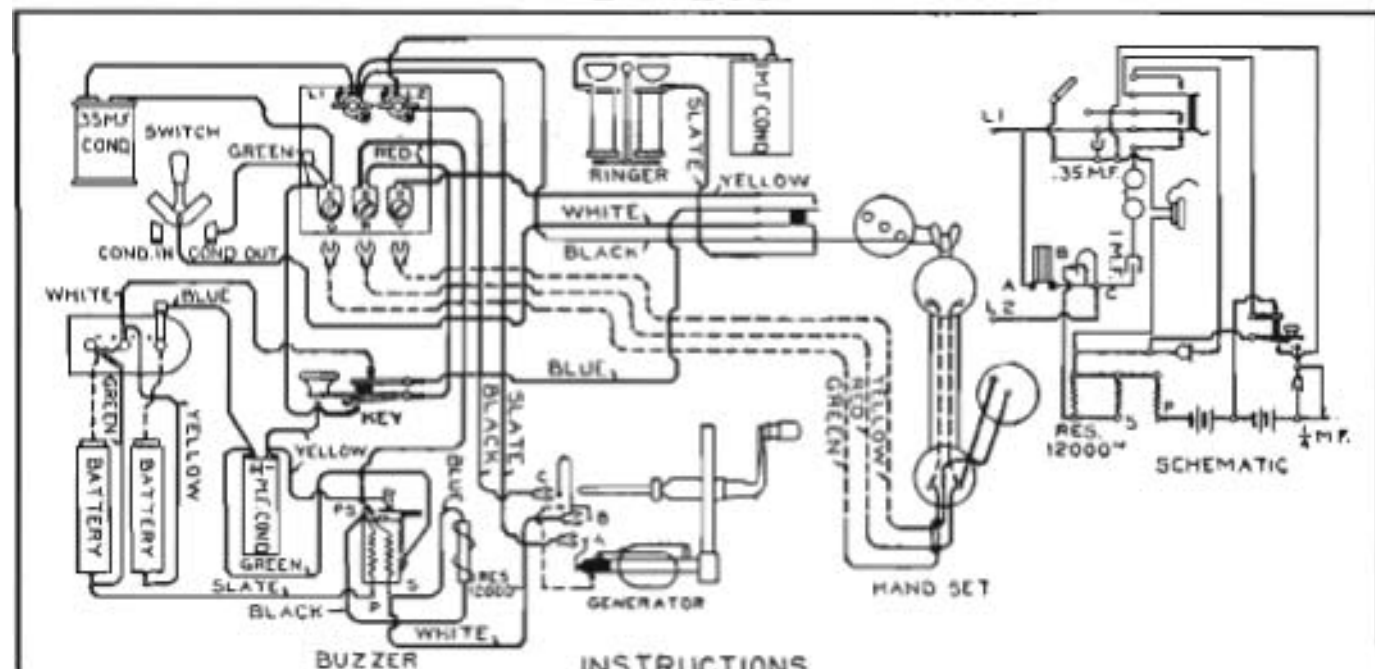
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For more information on these clubs click the logos below.



C. B. DESK SET  
THREE CONDUCTOR CORD  
IND. COIL IN D. S. BOX



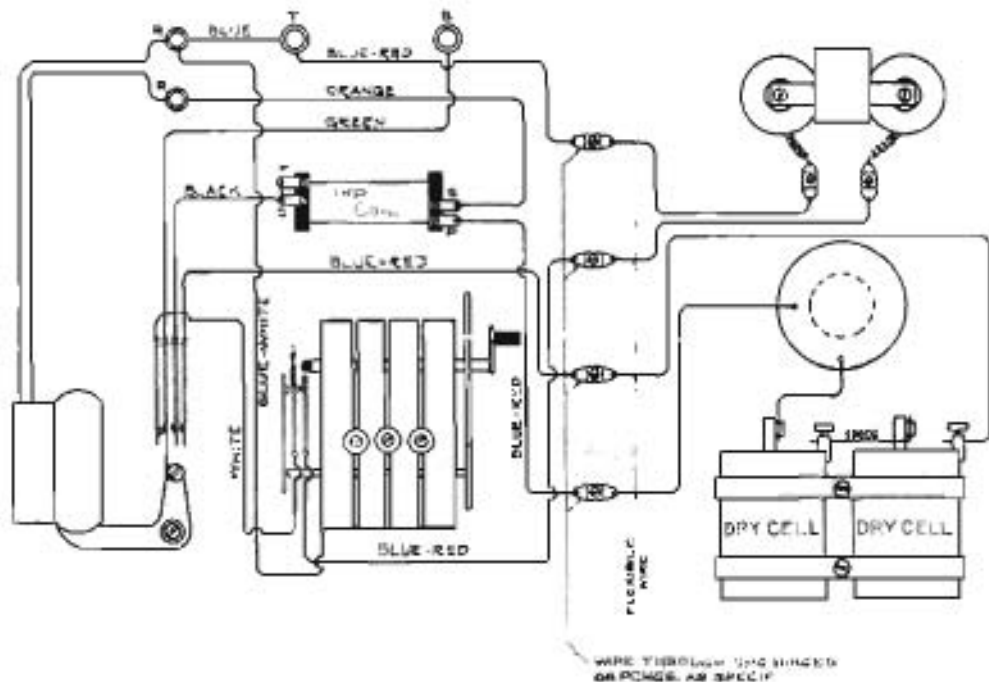
D-14205



THIS TELEPHONE IS INTENDED FOR UNIVERSAL USE IN CONNECTION WITH TELEPHONE, BOTH MAGNETO AND COMMON BATTERY, TELEGRAPH AND BUZZER LINES. THE SMALL KNIFE SWITCH SHOULD REMAIN CLOSED AT ALL TIMES EXCEPT WHEN TELEPHONE IS USED ON TELEGRAPH OR SIMILAR LINE WHERE IT IS UNDESIRABLE TO SHUNT THE LINE BATTERY CURRENT. TO USE AS A COMMON BATTERY TELEPHONE, REMOVE HAND SET FROM HOOK AND CALL SWITCHBOARD IN USUAL WAY, UNLESS KNIFE SWITCH IS CLOSED. SWITCHBOARD OPERATOR CAN BE HEARD BUT CANNOT BE CALLED.

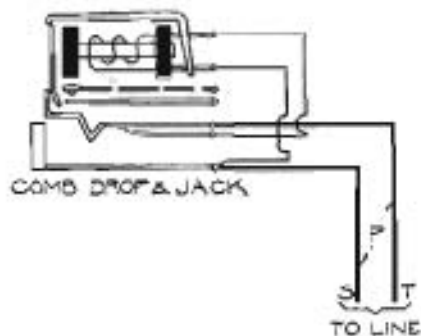
WHEN USED AS A MAGNETO TELEPHONE, SWITCHBOARD OR OTHER STATIONS MAY BE CALLED BY MEANS OF THE HAND GENERATOR. BUZZER CALLS MAY BE MADE OR BUZZER SIGNALS SENT OUT BY MEANS OF THE SENDING KEY ON TOP OF THE TELEPHONE. CARE SHOULD BE EXERCISED TO SEE THAT THIS KEY IS NOT DEPRESSED WHEN TALKING ON SHORT LOW RESISTANCE LINES ON ACCOUNT OF THE UNPLEASANT EFFECT AT THE OTHER STATION. THE BATTERIES IN THIS TELEPHONE ARE SMALL AND WILL REQUIRE REPLACEMENT AT SHORT INTERVALS, ESPECIALLY THE UNIT USED ON THE TRANS-MITTER. THE TELEPHONE SHOULD NEVER BE CARRIED OUT WITHOUT FIRST TESTING THE BATTERIES.

# WIRING OF LINEMAN'S TEST SET WITH TRANSMITTER BRIDGING





## Magneto Line Circuit Using Combined Drop and Jack



## Night Alarm Circuit on Switchboards Having Drop Supervision

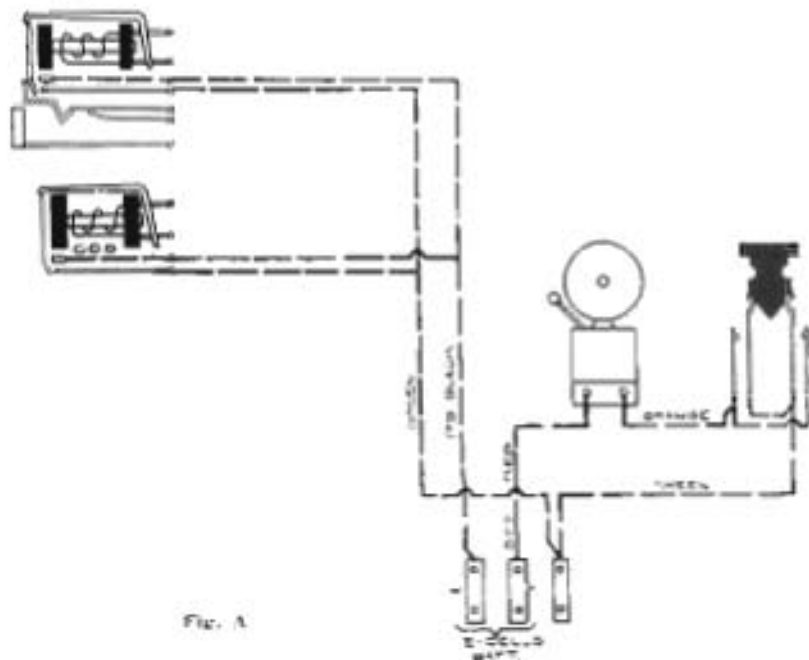


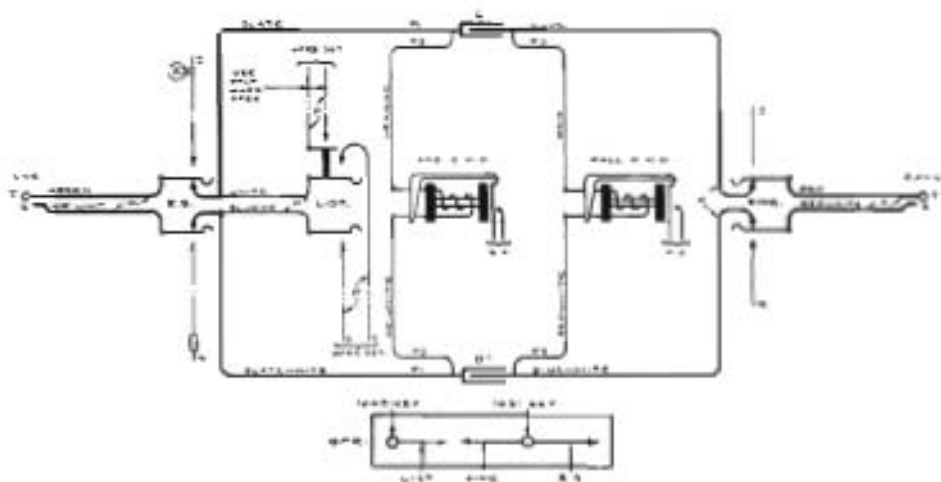
Fig. A



Fig. B

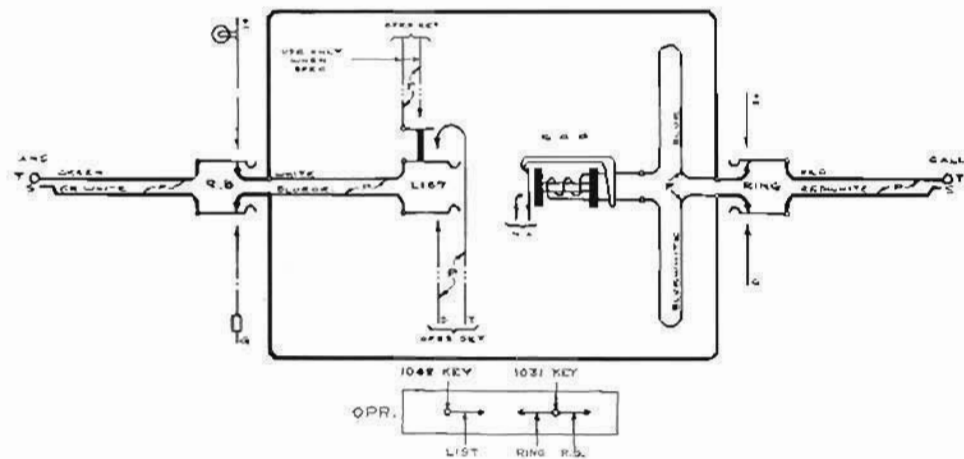
View of night alarm contact used with Kellogg combined drop and jacks.

# Magneto Cord Circuit With Double Drop Supervision With Condensers



# Magneto Cord Circuit With Single Drop Supervision

ckt. No. 19055-S



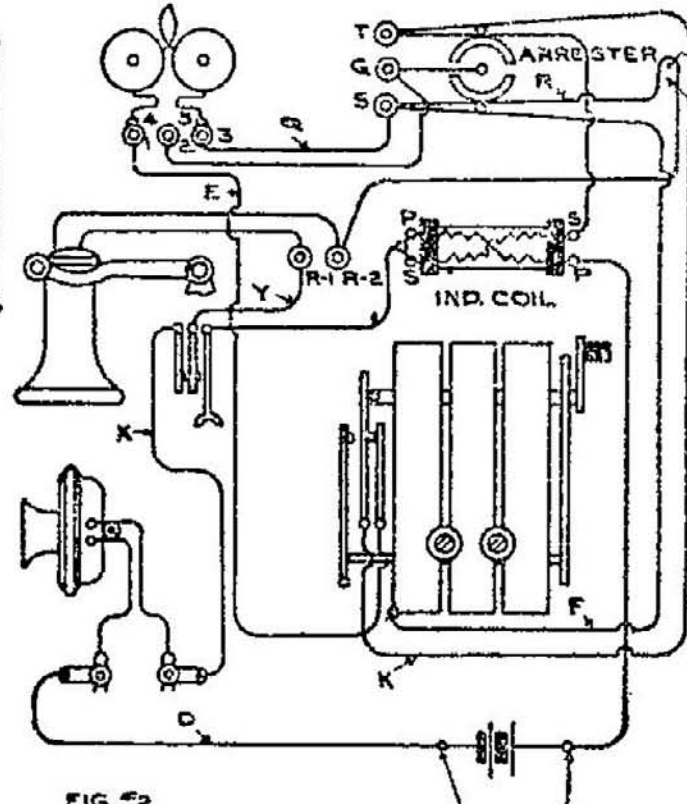
19055-S

FROM KELLOGG CATALOG 7, PAGE 126



# BRIDGING SUB. SET CIRCUIT A. C. GENERATOR CONVERTIBLE TO COMM. BATT.

FIG. #1



NOTE:  
IF COND. IS SPECIFIED  
CUT LOOP & INSERT HERE  
COND. LOOP

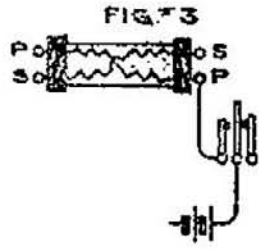
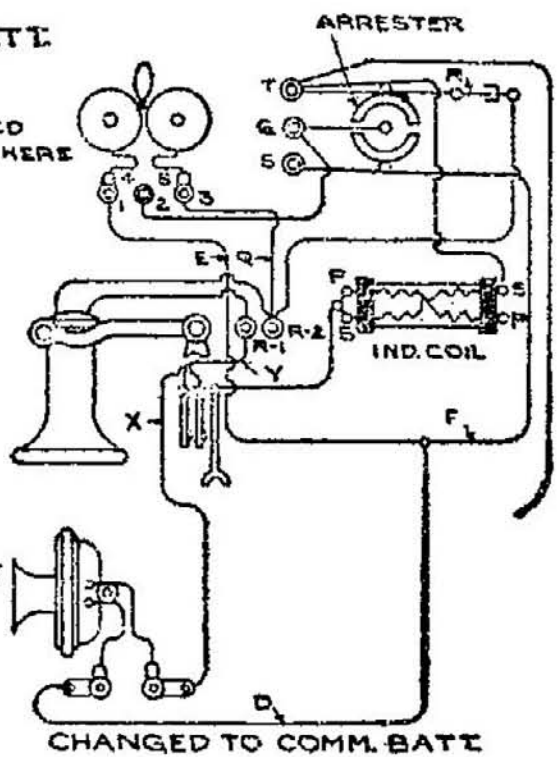


FIG. #4  
TO RING OWN BELL  
STRAP LEADS 'X' & 'K'  
TOGETHER AT GEN.  
SPRING.

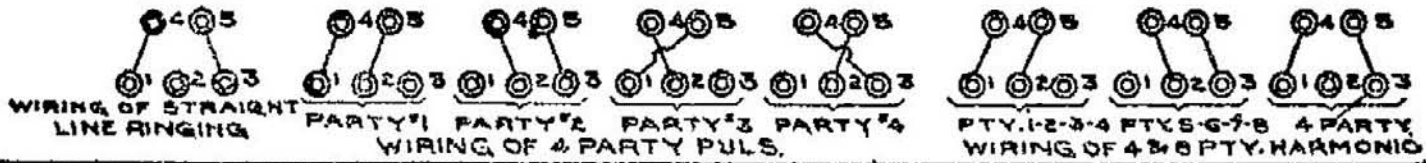


CHANGED TO COMM. BATT.

- NOTE: WHEN CHANGING TO COMMON BATT.
1. REMOVE GEN. & BATTERIES.
  2. IF COND. IS NOT ALREADY INSTALLED CUT A 1" M.F. COND. IN LOOP
  3. REMOVE 'R' FROM 'S' & SOLDER TO 'Y'
  4. REMOVE 'Q' FROM 'E' & SOLDER TO 'R-2' (IF NOT ALREADY DONE)
  5. CONNECT 'D', 'E' & 'F'
  6. TO AVOID 'BAT IN EAR' REVERSE 'X' & 'Y' AT SW. HOOK

FIG. #2  
IF COND. IN RINGER &  
SECONDARY CIRCUIT OR  
FIG. #2 IS SPECIFIED CONNECT  
'Q' TO 'R-2' INSTEAD OF 'S'

BATT. BLDG. POSTS NOT  
FURNISHED WHEN BATT.  
SPACE IS PROVIDED IN SET.



# BRIDGING SUB SET CIRCUIT P & A GENERATOR & PUSH BUTTON CONVERTIBLE TO COMM BATT

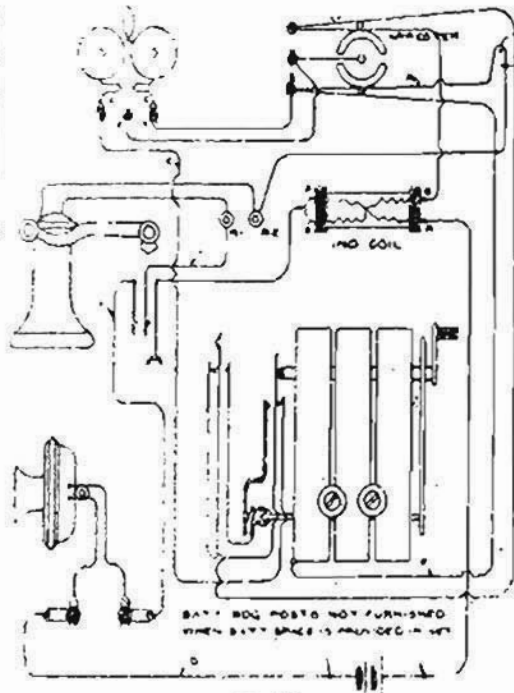


FIG. 2

\* CONDENSER IN KIT AND SECONDARY WINDING OF FIG. 2  
\* THE WIRE CONNECTED TO 'B' INSTEAD OF 'S'

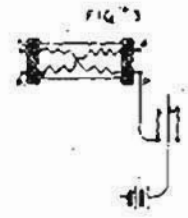
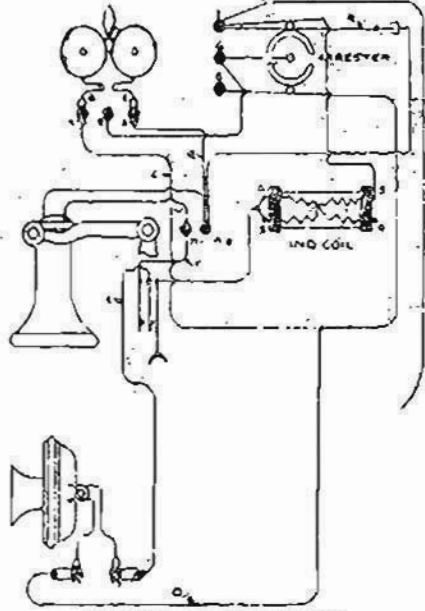


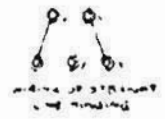
FIG. 3



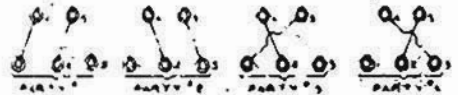
CHANGED TO COMM BATT

## NOTE WHEN CHANGING TO COMM. BATT

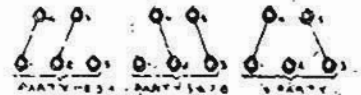
- 1 REMOVE BATT. & GENERATOR
- 2 IF CONDENSER IS NOT ALREADY INSTALLED CUT WIRE FROM COND. IN LOOP
- 3 REMOVE 'A' FROM 'S' AND SOLDER TO 'V'
- 4 REMOVE 'S' FROM 'S' AND SOLDER TO 'B' IF NOT ALREADY DONE
- 5 CONNECT 'D' TO 'D'
- 6 TO AVOID BATTERY LEAK, AVOID 'E' & 'V' AT THE HOOD
- 7 CUT ALL WIRES TO PUSH BUTTON



WIRING OF 4 PARTY STRAIGHT LINE RINGING



WIRING OF 4 PARTY PULS



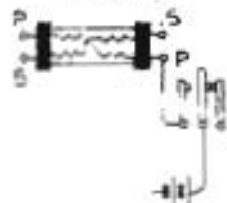
WIRING OF 4 PARTY HARMONIC

# BRIDGING SUB-SET CIRCUIT 20195

## A.C. GENERATOR & GRD. BUTTON - CONVERTIBLE TO COMM. BATT. RINGS OWN BELL METALLIC ONLY



FIG. 2



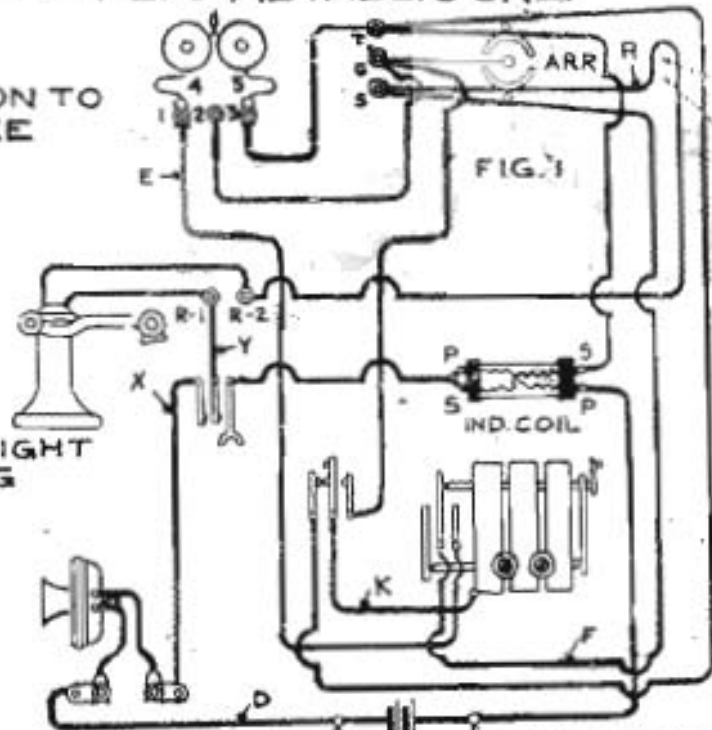
**NOTE:**  
FOR CONVERSION TO  
COMM. BATT. SEE  
DRG. 20227



WIRING OF STRAIGHT  
LINE RINGING

FIG. 3

FOR SILENT RINGER  
CUT STRAP WIRE AT GEN.  
PRINGS



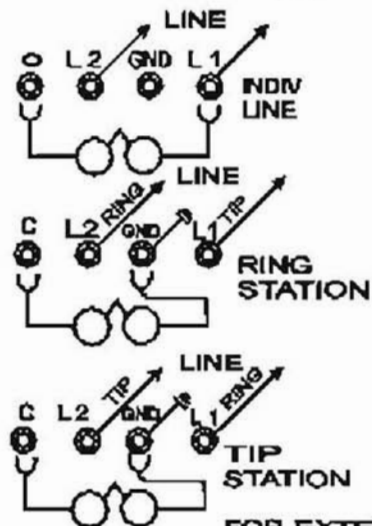
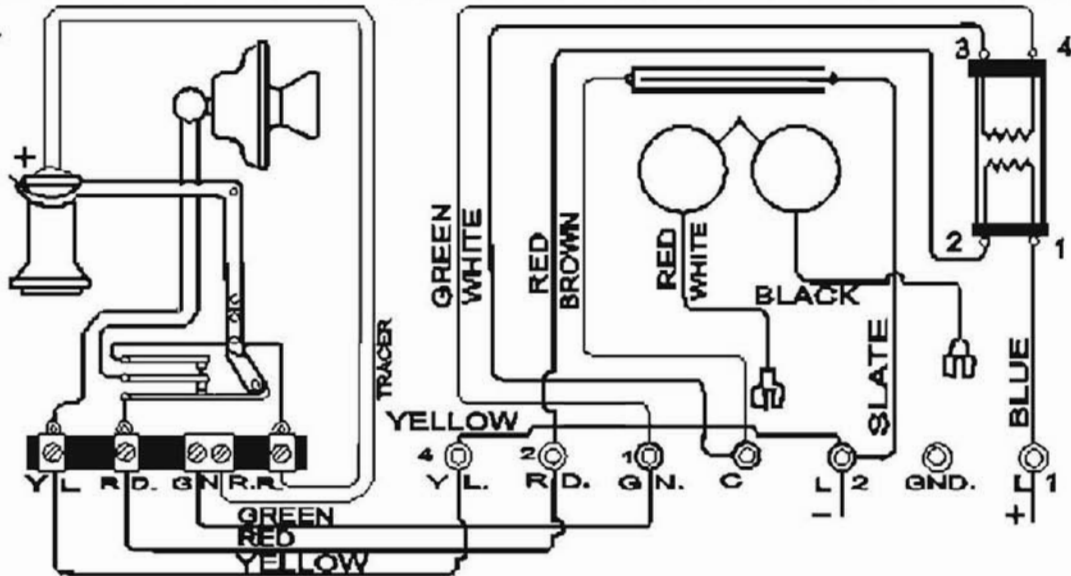
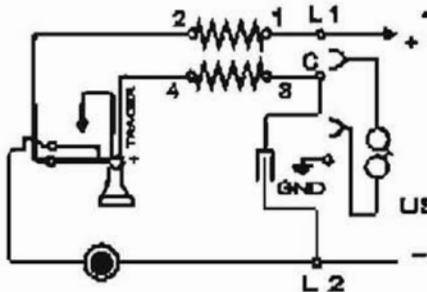
BATT. BDG. POSTS NOT FURNISHED  
WHEN BATT. SPACE IS PROVIDED INSET.

COND. LOOP  
IF COND. IS SPECIFIED IN  
SECONDARY INSERT HERE.

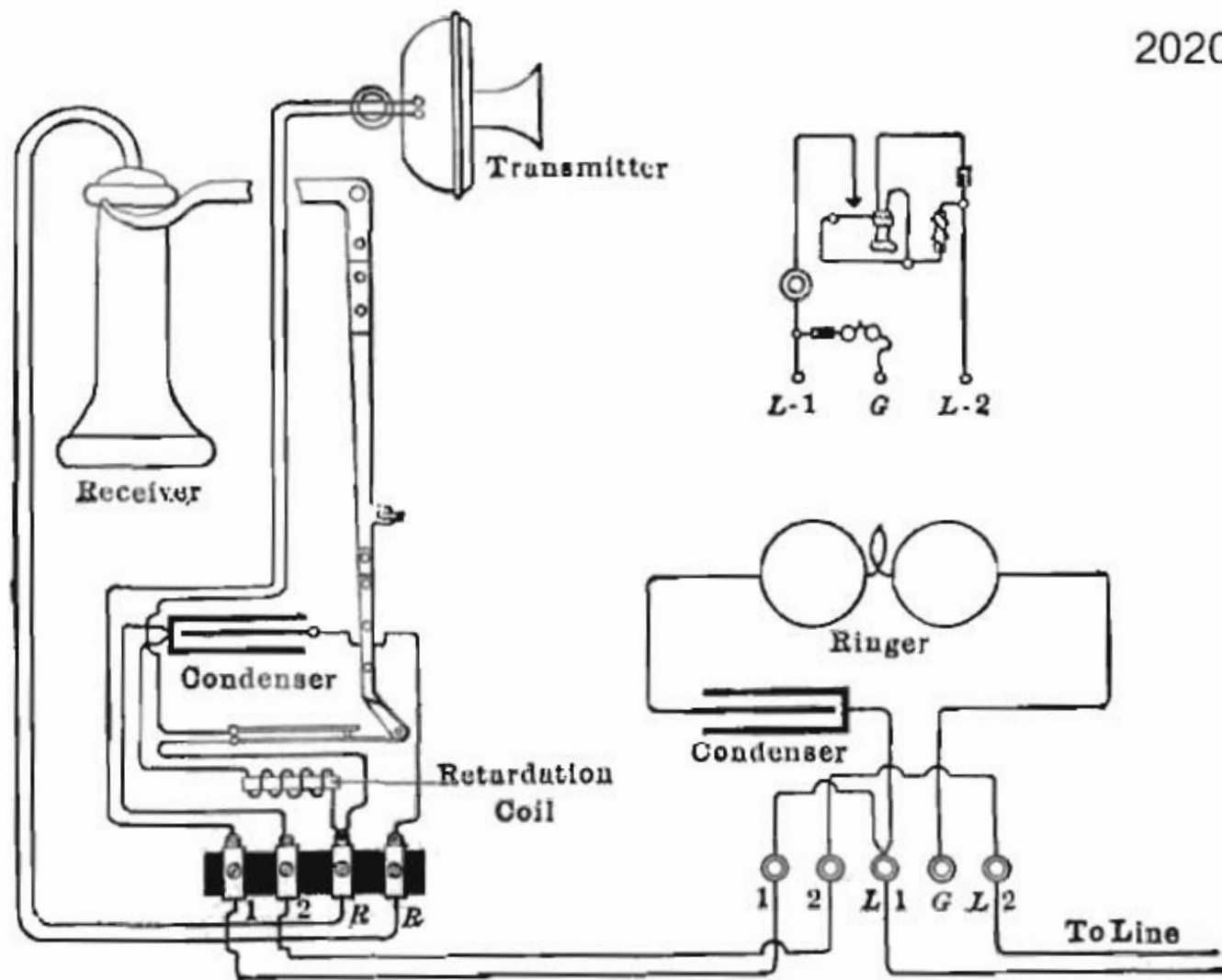


### THREE CONDUCTOR CORD IND. COIL IN D. S. BOX

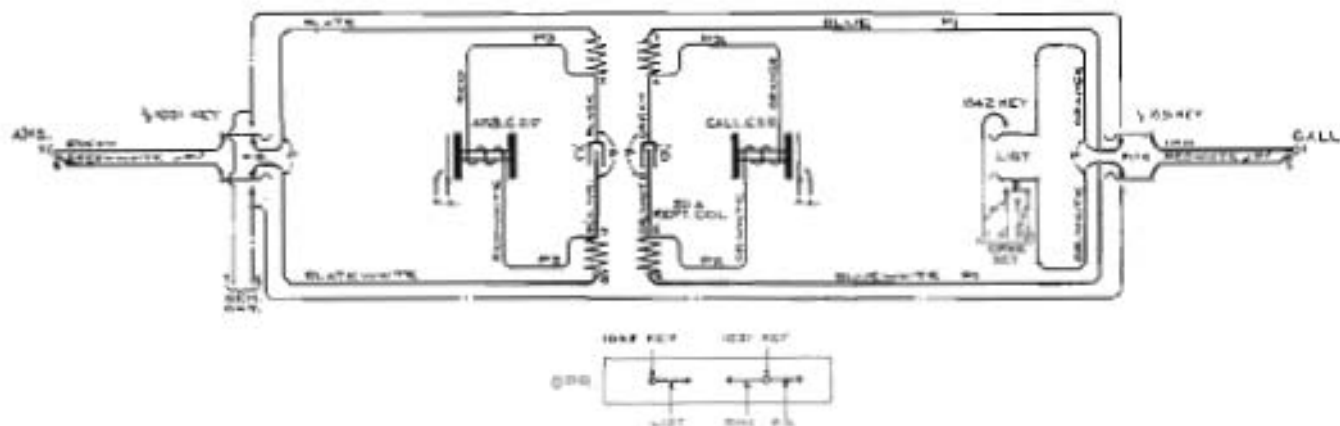
SIDE TONE REDUCTION FOR (NON-TOLL USERS ONLY) REVERSE YELLOW AND RED CORD TIPS AT BOX END ON MAIN SETS OR AT RACK END ON EXT. SETS (DISREGARD THIS NOTE WHEN D.S. BOX IS USED WITH AUTO DESK STANDS AND FOLLOW NOTE ON AUTO DESK STAND CKT.)



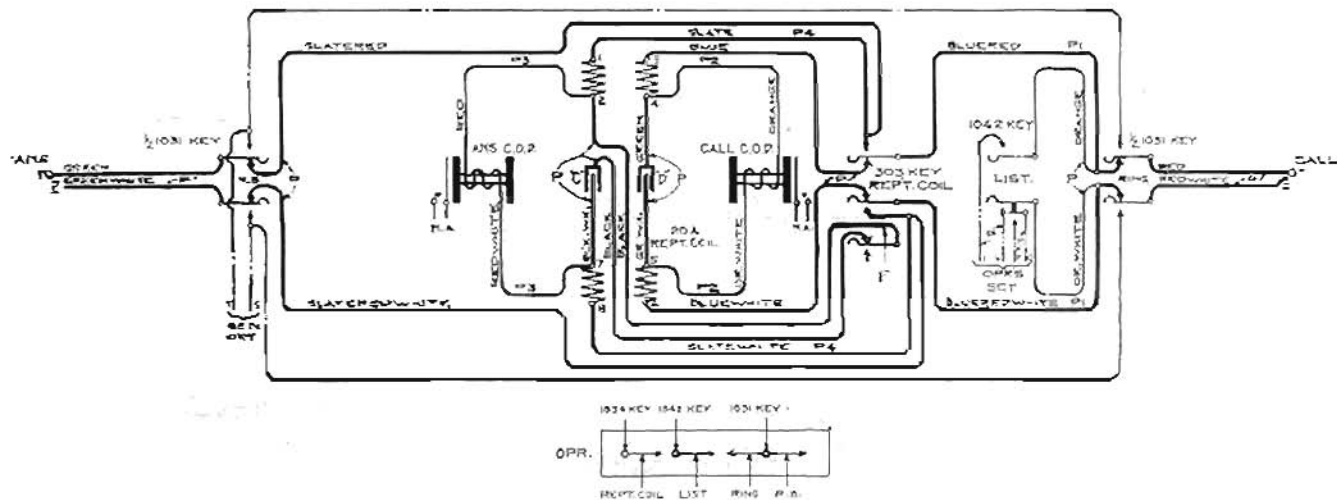
FOR EXTENSION TALKING SETS USE STANDS AND CONNECTING RACKS ONLY AND WIRE TO YELLOW, RED AND GREEN TERMINALS IN DESK SET BOX



# Magneto Cord Circuit With Double Drop Supervision and Repeating Coil



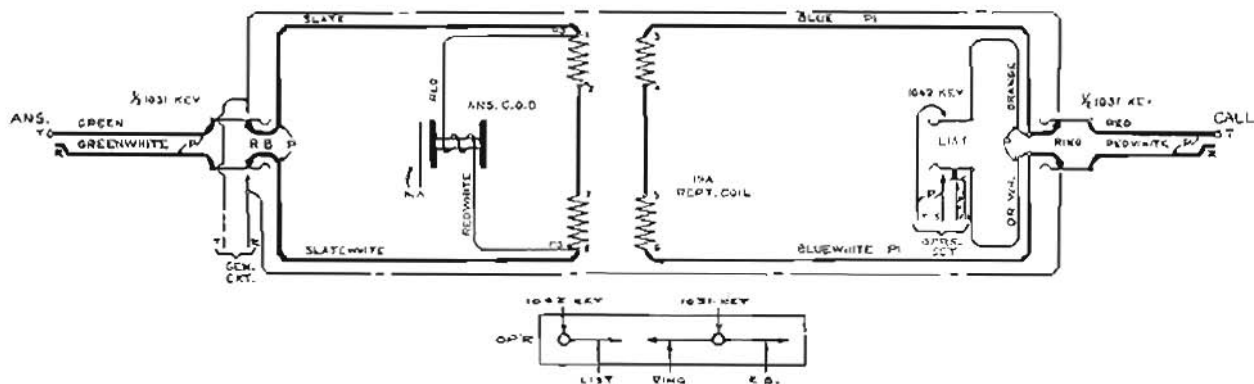
# Magneto Cord Circuit With Double Drop Supervision, Repeating Coil, and Repeating Coil Cutout Key



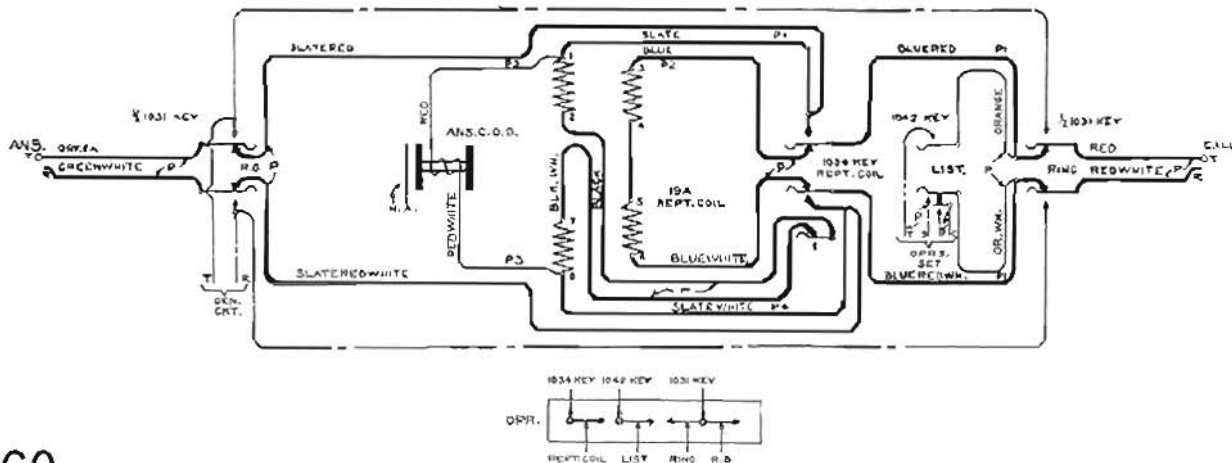
20237-B

FROM CATALOG 7, PAGE 121

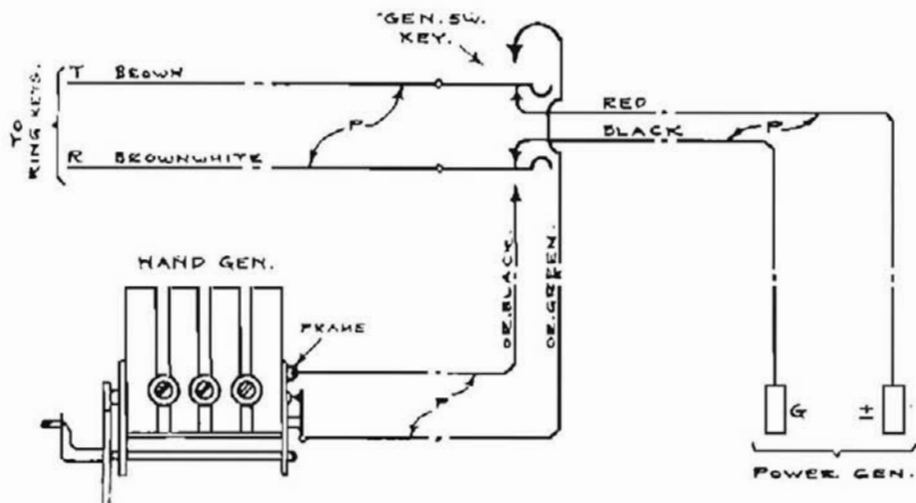
## Magneto Cord Circuit With Single Drop Supervision and Repeating Coil



## Magneto Cord Circuit With Single Drop Supervision, Repeating Coil, and Repeating Coil Cut Out Key



## Standard Generator or Ringing Circuit for Kellogg Magneto Switchboards

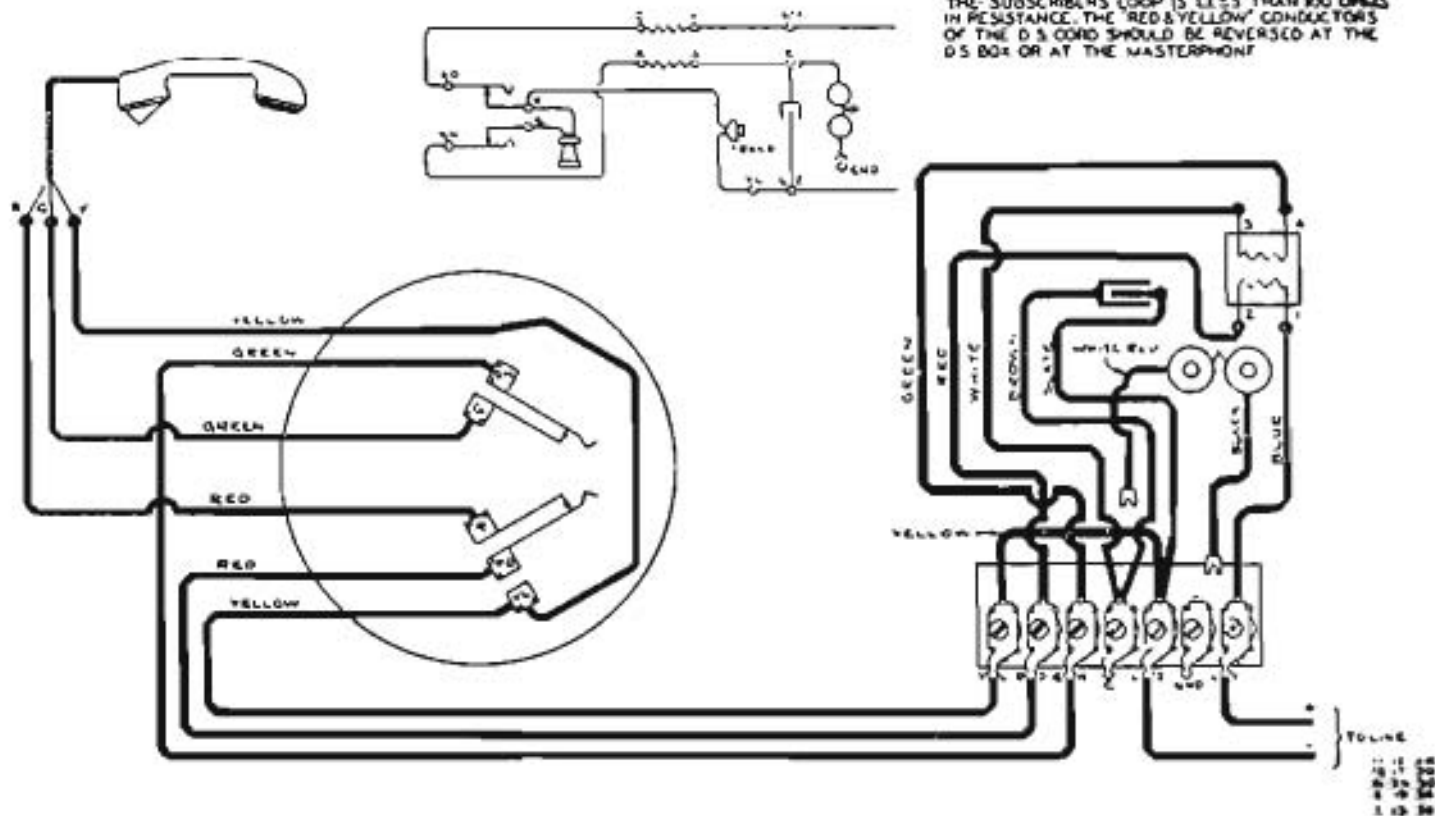


C.B. MASTERPHONE CKT.  
WITH HANDSET

21042

NOTE<sup>1</sup>

WHERE SIDE TONE IS OBJECTED TO OR WHERE THE SUBSCRIBER'S LOOP IS LESS THAN 100 OHMS IN RESISTANCE, THE RED & YELLOW CONDUCTORS OF THE D S CORD SHOULD BE REVERSED AT THE D S BOX OR AT THE MASTERPHONE



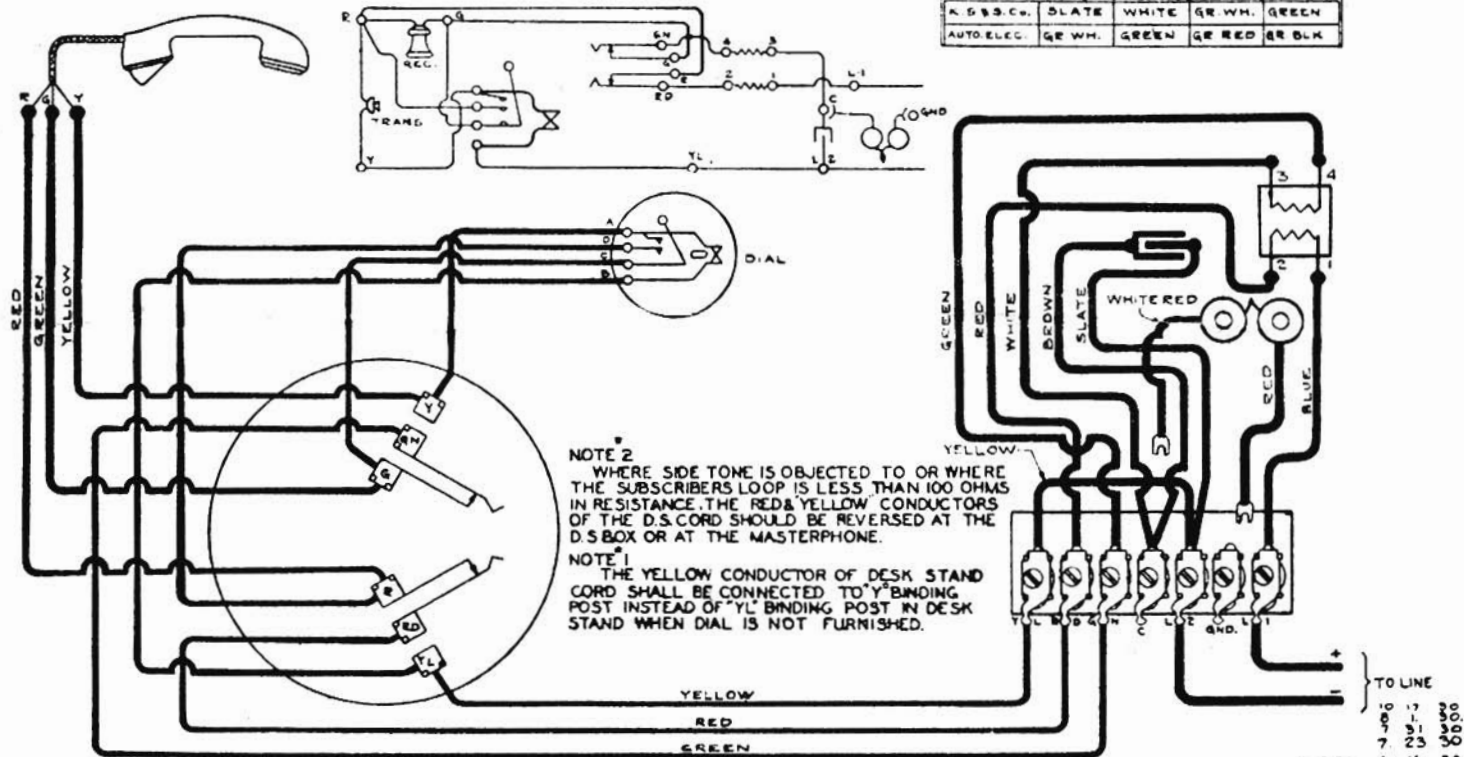
21042

900, 700 SETS

# MASTERPHONE CKT. WITH AUTO. DIAL & HAND-SET.

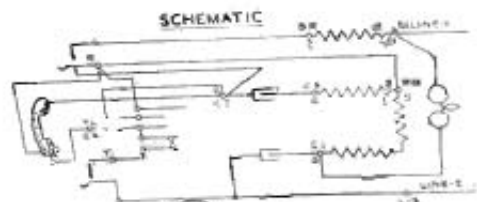
21043

COLOR CODE FOR DIAL LEADS				
	A	B	C	D
K. S. S. Co.	SLATE	WHITE	GR WH.	GREEN
AUTO. ELEC.	GR WH.	GREEN	GR RED	GR BLK.



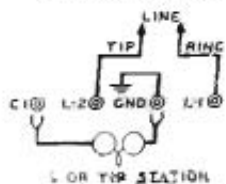
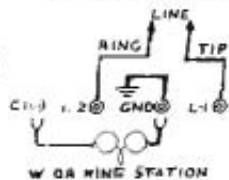
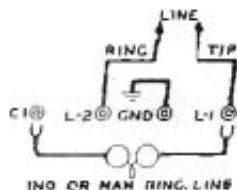
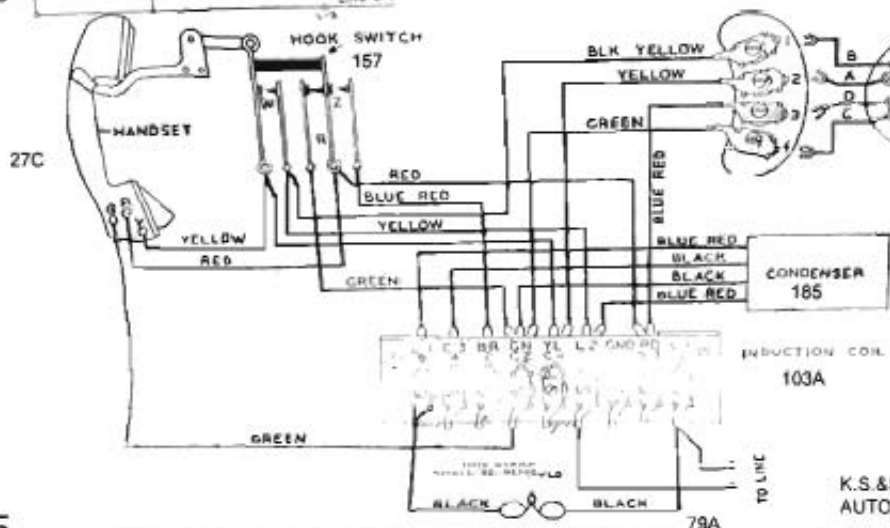
21043





NOTE 1 STRAP "X" SHALL BE USED WHEN DIAL IS NOT FURNISHED STRAP "X" SHALL BE REMOVED WHEN DIAL IS FURNISHED.

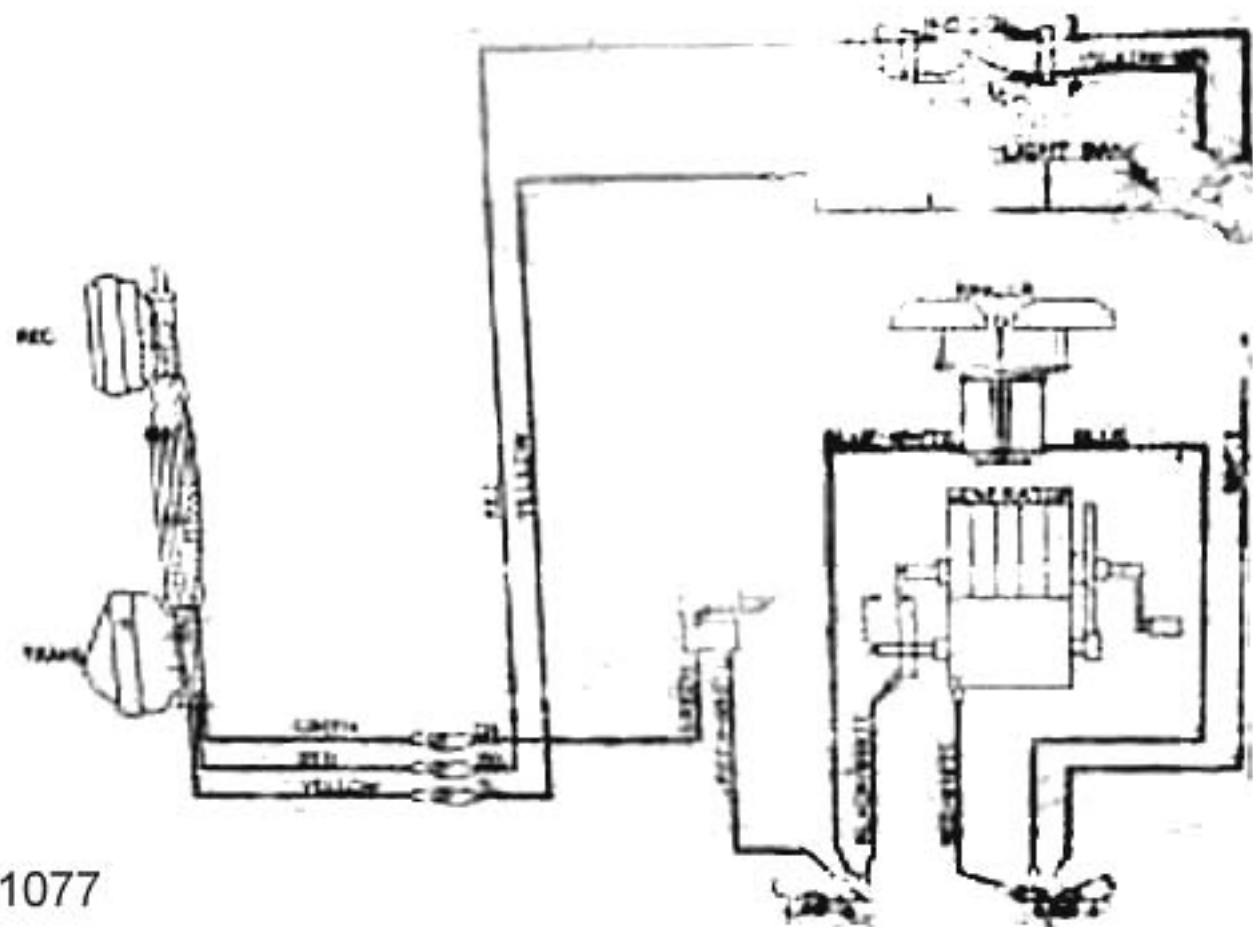
NOTE 2 CONTACTS "W" TO BREAK BEFORE "Z" WHEN HANDSET IS HUNG ON HOOK.



COLOR CODE FOR DIAL LEADS

	A	B	C	D
K.S.&S. CO	SLATE	WHITE	GR-WH.	GREEN
AUTO ELEC CO	GR-WH	GREEN	GR-RED	GR-BLK

## PORTABLE TEL CRT



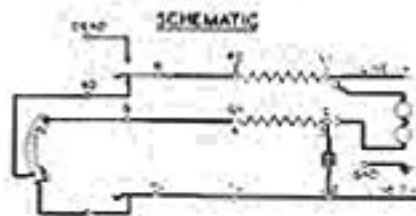
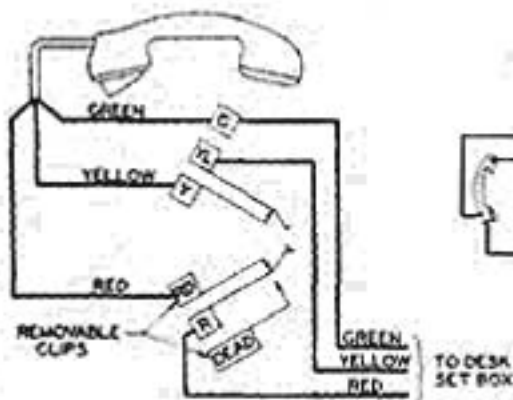


## MASTERPHONE CKT.

21084

CONVERTIBLE FROM BOOSTER CKT TO TRIAD CKT

FIG. 1 BOOSTER CKT.



NOTE 1 - WHERE SIDE TONE IS OBJECTED TO OR IN EXTREME CASES ONLY, THE RED AND YELLOW CONDUCTORS OF THE D.S. CORD SHOULD BE REVERSED AT THE D.S. BOX OR MASTERPHONE

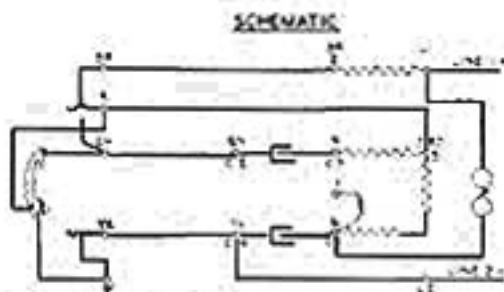
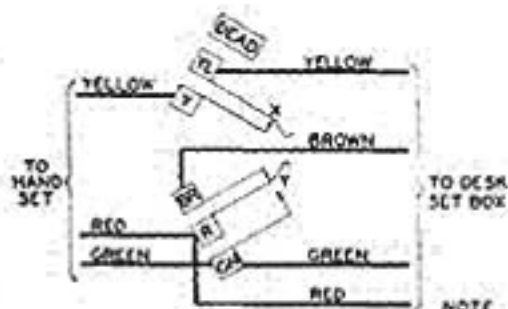
NOTE 2 - THE DESIGNATION CLIPS "RD" AND "DEAD" ARE REMOVABLE

NOTE 3 - TO MODIFY FIG. 1 BOOSTER CKT TO AGREE WITH FIG. 2 TRIAD CKT.

1 - REMOVE DESIGNATION CLIP "RD" FROM BINDING POST "R"  
2 - TRANSFER DESIGNATION CLIP "DEAD" FROM BINDING POST "G" TO BINDING POST "G"

3 - REPLACE 3 CONDUCTOR CORD WITH A 4 CONDUCTOR CORD IF 885-D OR EQUAL AND CONNECT PER FIG. 2 TRIAD CKT.

FIG. 2 TRIAD CKT.



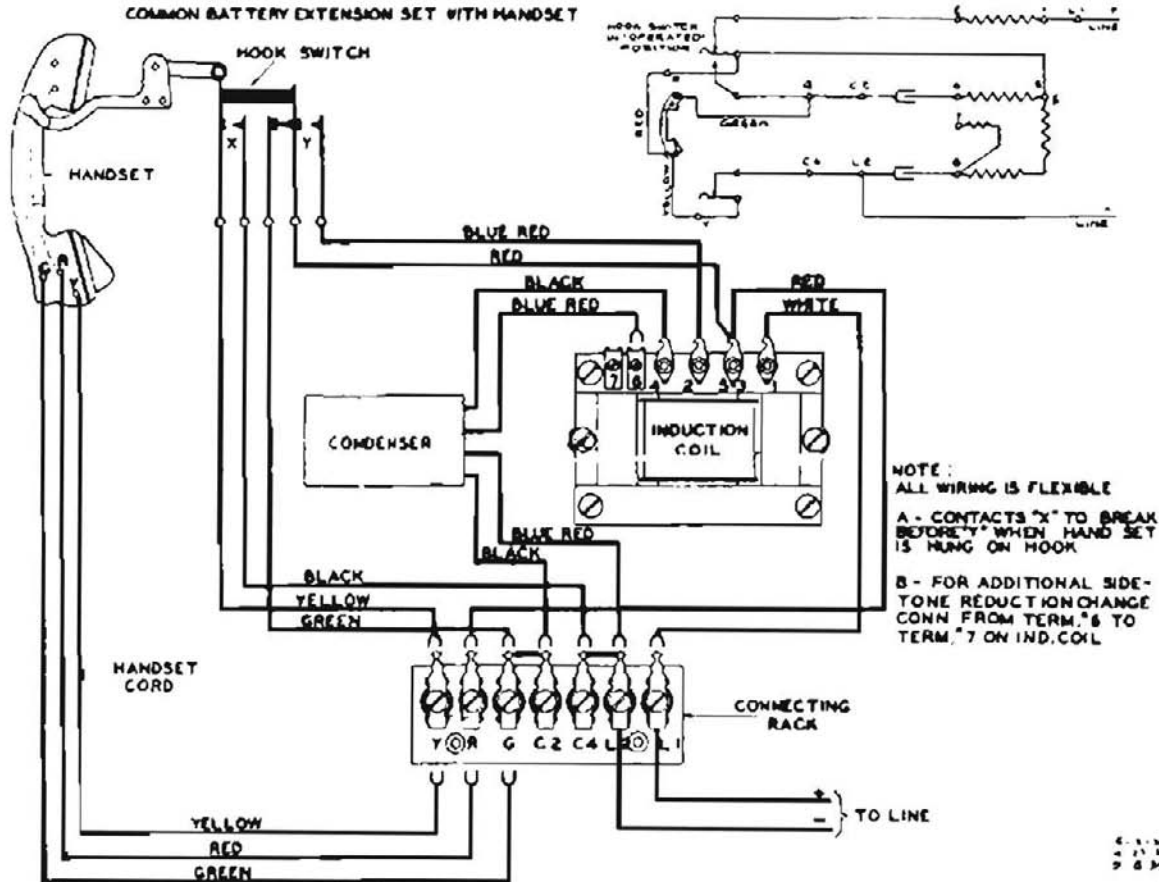
NOTE A - CONTACTS "X" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK

## TRIAD CIRCUIT

COMMON BATTERY EXTENSION SET WITH HANDSET

SCHEMATIC

21086



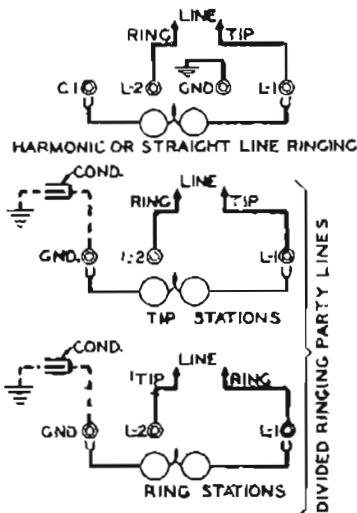
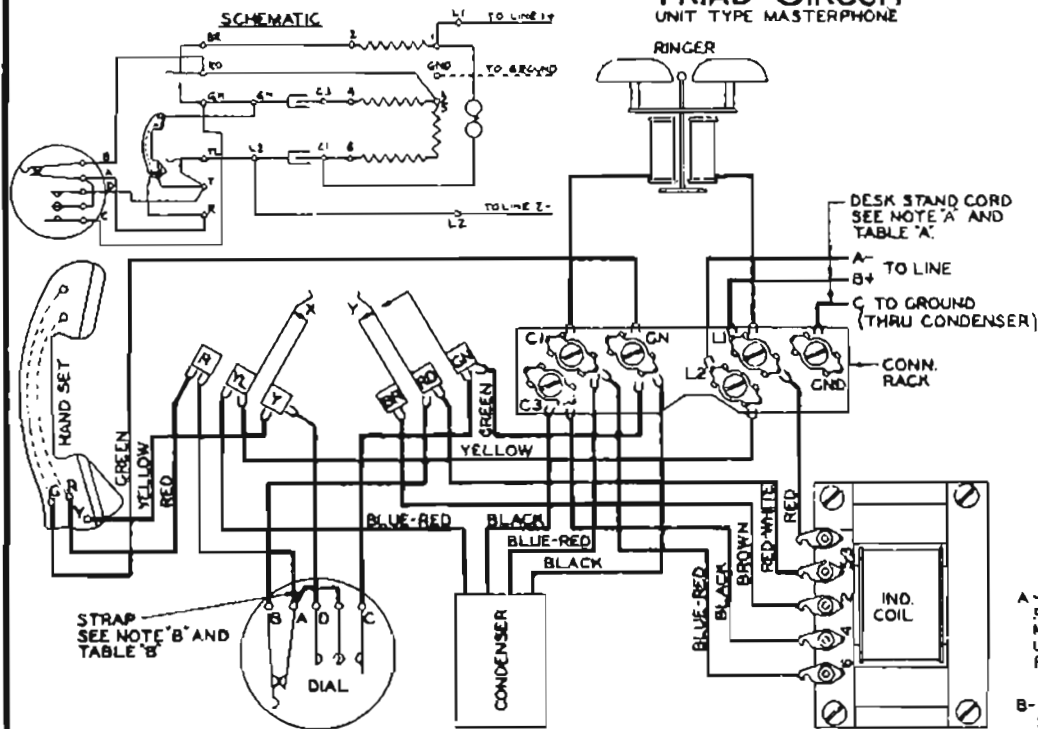
21086

9720 SERIES

# TRIAD CIRCUIT

UNIT TYPE MASTERPHONE

21087



### NOTES

A - A TWO CONDUCTOR CORD ONLY IS REQUIRED FOR STRAIGHT LINE OR METALLIC RINGING. A THREE CONDUCTOR CORD IS REQUIRED FOR GROUND RETURN RINGING.

B - WHEN 'S' TYPE DIAL IS USED CONNECT STRAP AS SHOWN. WHEN NO DIAL IS USED CONNECT "RED" CONDUCTOR OF HANDSET CORD TO BINDING POST "RD" INSTEAD OF "R".

C - CONTACTS "X" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK.

TABLE A  
TRACER COLORS OF D.S. CORD CONDUCTORS

	A	B	C
3 CONDUCTOR	YELLOW	RED	GREEN
2 CONDUCTOR	BLACK	BROWN	—

TABLE B  
COLOR CODE FOR DIAL LEADS

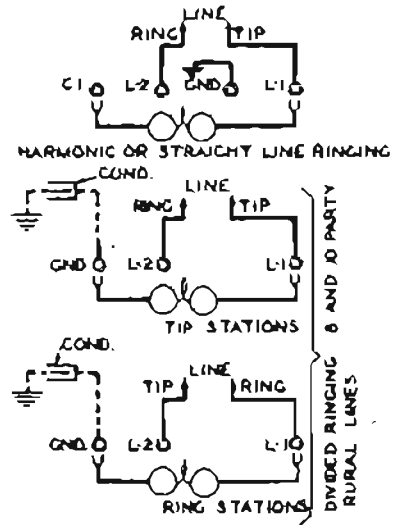
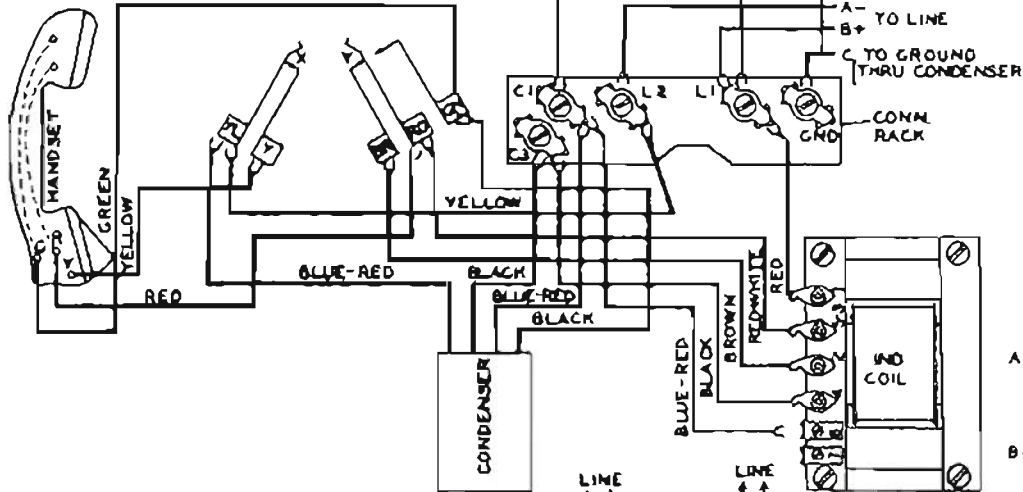
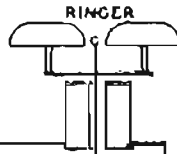
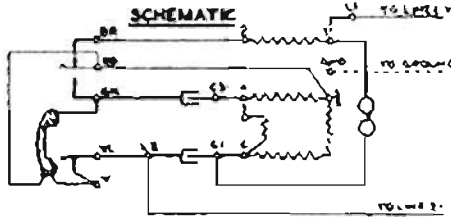
	A	B	C	D
K.S. & S. CO.	SLATE	WHITE	GR-WH.	GREEN
AUTO. ELEC. CO.	GR-WH.	GREEN	GR-RED	GR-BLK.

21087

# TRIAD CIRCUIT

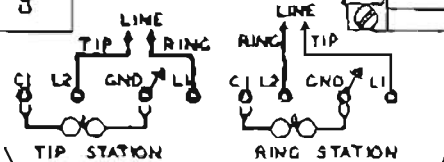
UNIT TYPE MASTERPHONE-MANUAL

21092



**TABLE A**  
**TRACER COLORS OF P.S. CORD CONDUCTORS**

	A	B	C
3 CONDUCTOR	YELLOW	RED	GREEN
2 CONDUCTOR	BLACK	BROWN	—



- NOTES**
- A - A TWO CONDUCTOR CORD ONLY IS REQUIRED FOR STRAIGHT LINE OR METALIC RINGING. A THREE CONDUCTOR CORD IS REQUIRED FOR GROUND RETURN RINGING.
  - B - CONTACTS 'X' TO BREAK BEFORE 'Y' WHEN HAND SET IS HUNG ON HOOK.
  - C - FOR ADDITIONAL SILENTONE REDUCTION CHANGE CONN FROM TERM. 6 TO TERM. 7 ON IND. COIL.

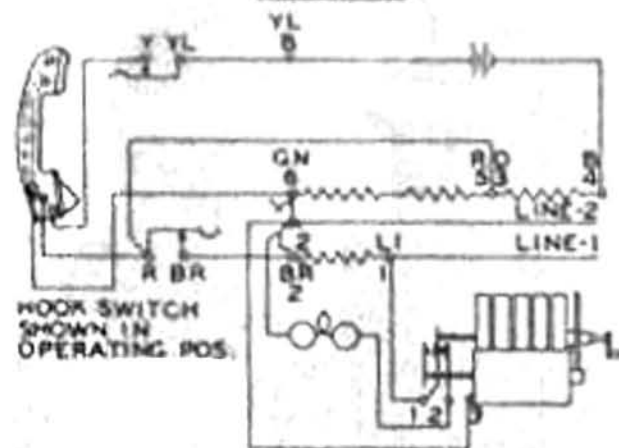
21092

DIVIDED RINGING  
2 AND 4 PARTY LOCAL LINES

8-24-1936 J.M.

8-24-36  
J.M.  
8-24-36  
8-24-36  
8-24-36

## SCHEMATIC



NOTE:  
ALL WIRING IS FLEXIBLE.

FIG. 2

WHEN COND. IS SPECIFIED IN THE LINE CKT. CONNECT COND. AS SHOWN REMOVE STRAP "X" AND CONNECT WIRE "Y" TO BINDING POST GN-6 INSTEAD OF L-2.

FIG. 4

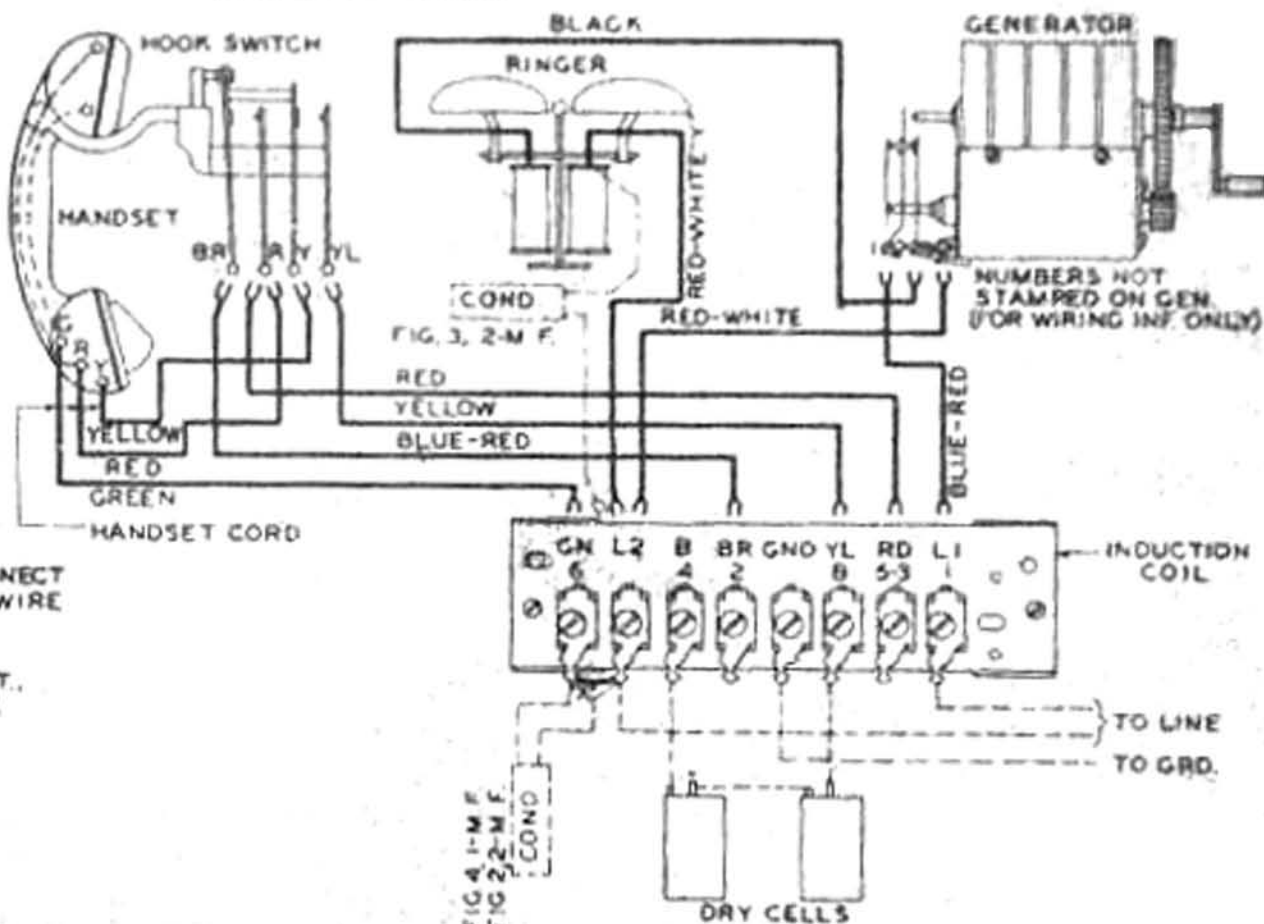
WHEN COND. IS SPECIFIED IN THE RECEIVER CKT., CONNECT COND. AS SHOWN AND REMOVE STRAP "X".

FIG. 3

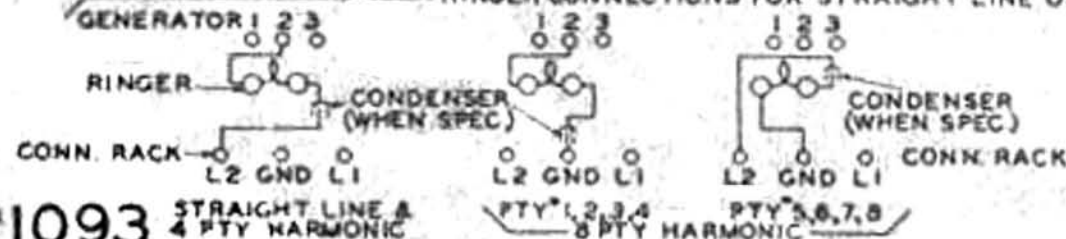
WHEN COND. IS SPECIFIED IN THE RINGER CKT., CONNECT COND. AS SHOWN AND OMIT WIRE "Y".

LOCAL BATT. TEL. TRIAD CKT.  
(SIMPLIFIED WIRING)

21093

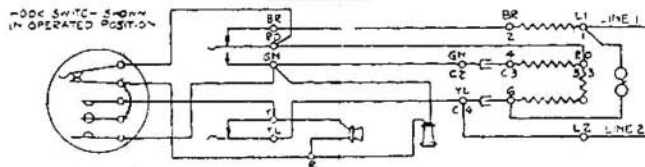
FIG. 1-M.F.  
FIG. 2-M.F.

## RINGER CONNECTIONS FOR STRAIGHT LINE OR PARTY LINE SERVICE

21093 STRAIGHT LINE &  
4 PTY HARMONICPTY\* 1,2,3,4  
8 PTY HARMONIC



## SCHEMATIC



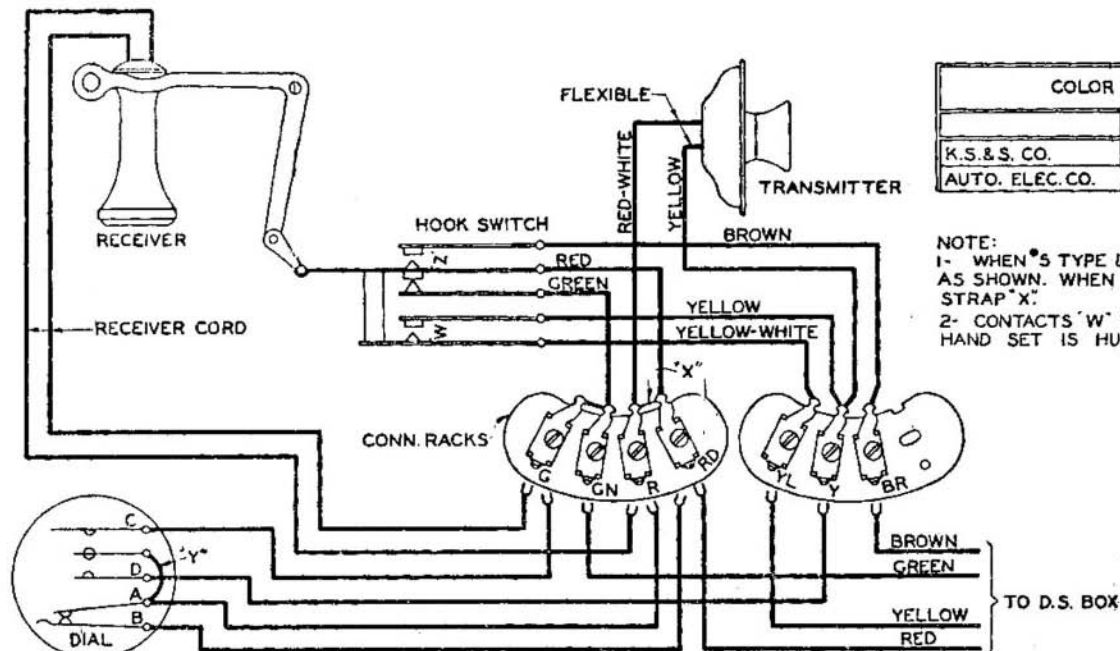
## COLOR CODE FOR DIAL LEADS

	A	B	C	D
K.S.&S. CO.	SLATE	WHITE	GR-WH.	GREEN
AUTO. ELEC. CO.	GR-WH.	GREEN	GR-RED	GR-BLK.

## NOTE:

1- WHEN \*5 TYPE DIAL IS USED CONNECT STRAP \*Y\* AS SHOWN. WHEN DIAL IS NOT USED CONNECT STRAP \*X\*.

2- CONTACTS \*W\* TO BREAK BEFORE \*Z\* WHEN HAND SET IS HUNG ON HOOK.

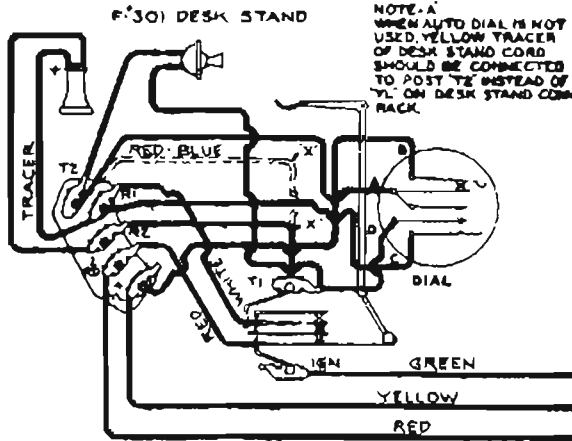
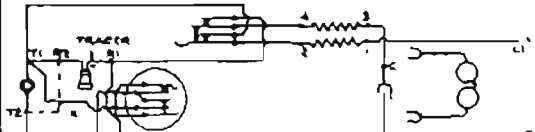


# AUTO. C.B. DESK SET.

INDUCTION COIL BOOSTER CKT.

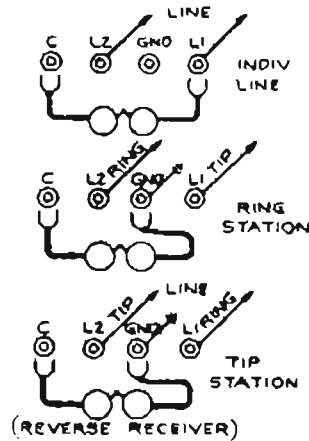
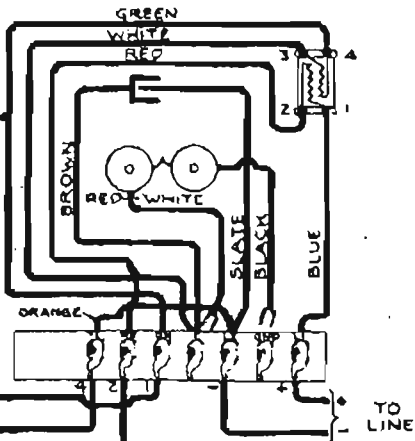
21176

ON DIVIDED RINGING PARTY LINES THE REC TERM. MUST BE REVERSED AT THE BINDING POSTS AT STATIONS WHERE THE TIP SIDE OF THE LINE IS CONNECTED TO THE L2 BINDING POST OF THE TEL.



NOTE-A  
WHEN AUTO DIAL IS NOT USED, YELLOW TRACER OF DESK STAND CORD SHOULD BE CONNECTED TO POST T2 INSTEAD OF T1 ON DESK STAND CORD RACK.

NOTE  
FOR SIDE TONE REDUCTION MOVE FLEXIBLE LEAD X FROM T1 TO T2



COLOR CODE FOR DIAL LEADS				
	A	B	C	D
K S & S CO	SLATE	WHITE	GR WHT	GREEN
AUTOELECT	GR WHT	GREEN	GR RED	GR BLU

21176

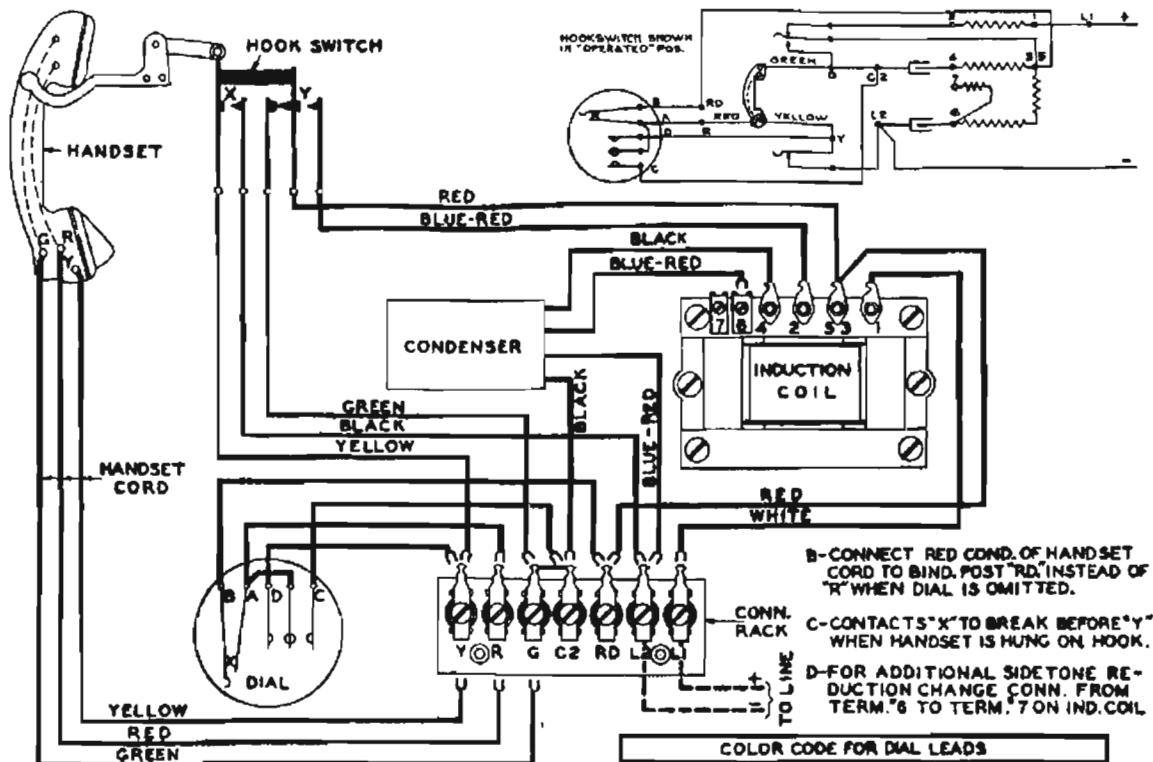
3 5 57  
6 17 28

F301

# TRIAD CIRCUIT

AUTO. COMMON BATTERY EXTENSION SET WITH HANDSET

21187



NOTE:  
 A-ALL WIRING IS FLEXIBLE

**COLOR CODE FOR DIAL LEADS**

	A	B	C	D
K. S. & S. CO.	SLATE WHITE	GR-WH.	GREEN	
AUTO. ELEC. CO.	GR-WH.	GREEN	GR-RED	GR-BLK.

F. 4-36.  
 17. 6-36.  
 4-3-36

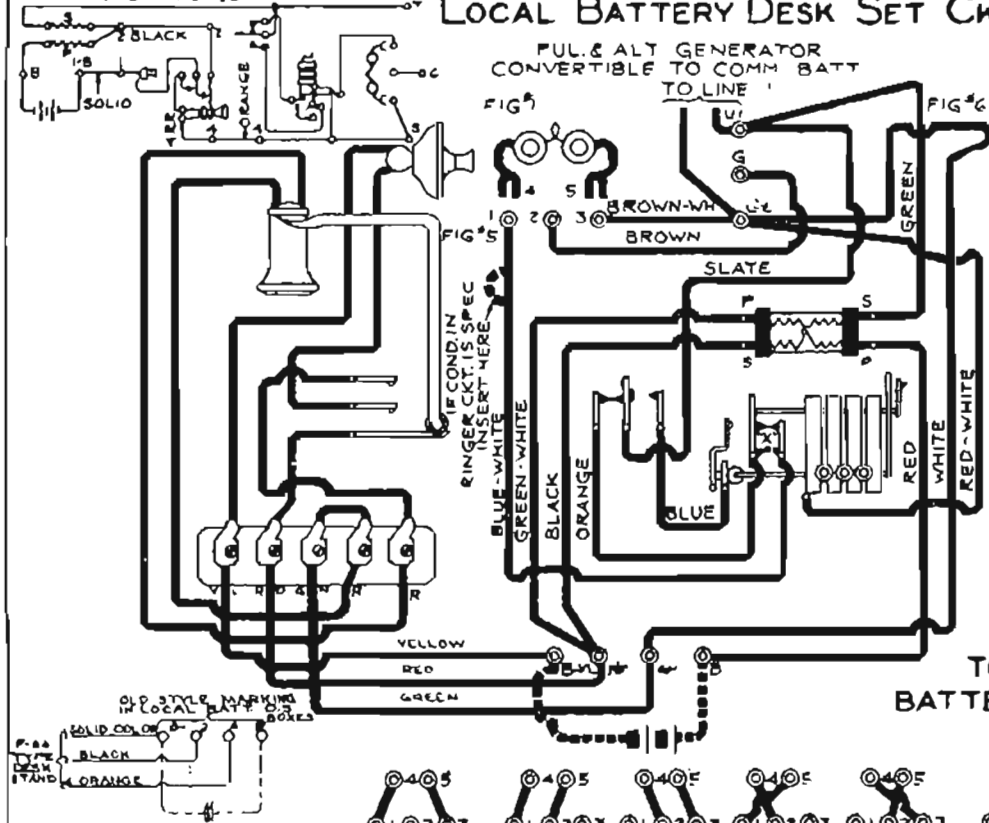
R. 5.

21187



## LOCAL BATTERY DESK SET CKT

21190-A



IF COND IN RECEIVER  
CIRCUIT IS SPECIFIED CUT  
LOOP & INSERT HERE.

FIG #2

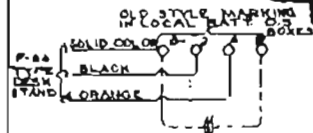
IF COND. IN RINGER &  
RECEIVER CIRCUIT OR  
FIG. 2 IS SPECIFIED CONNECT  
"BR. WH. WIRE TO GN. INSTEAD  
OF "L. 2"

FIG. 3



TO RING OWN BELL  
USE STRAP "X" AT  
GEN SPRING

TO CONVERT TO COMMON  
BATTERY SEE CIRCUIT 21190-C



21190-A



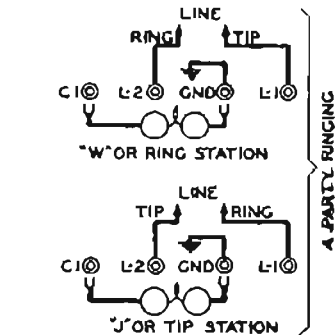
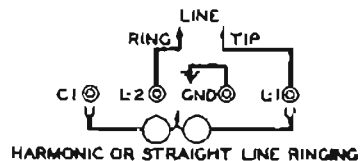
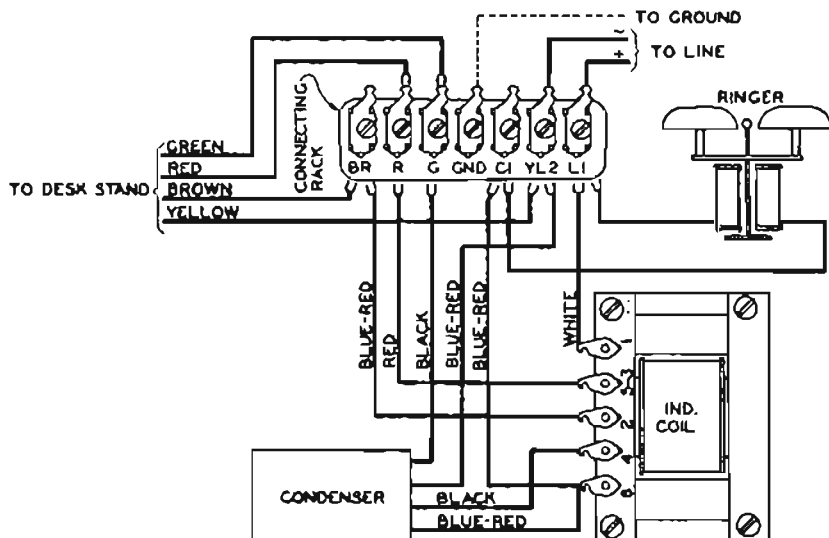
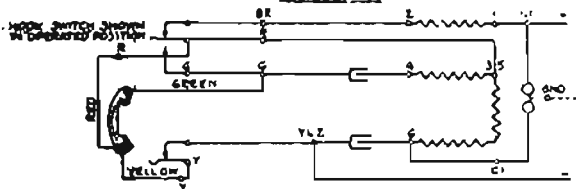
10 10 75  
7 9 25  
5 8 25  
5 8 25

# TRIAD CIRCUIT

COMMON BATTERY D. S. BOX

21098

**SCHEMATIC**



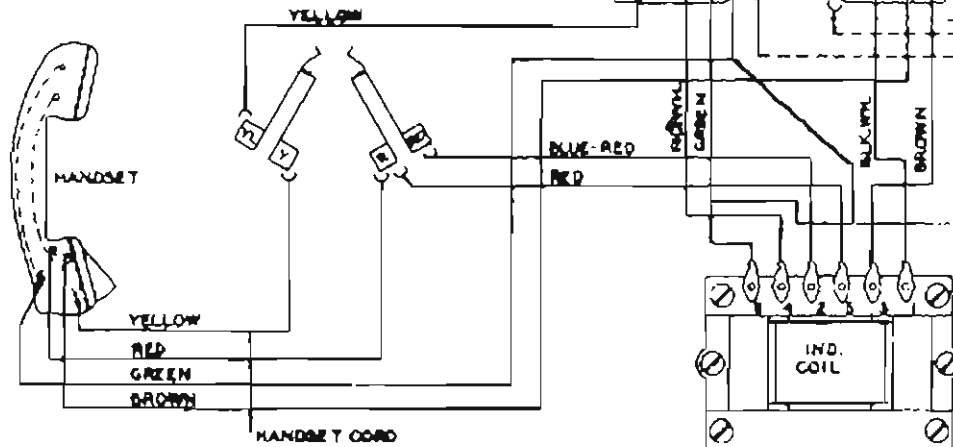
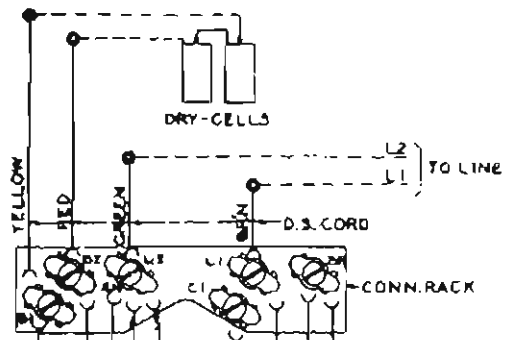
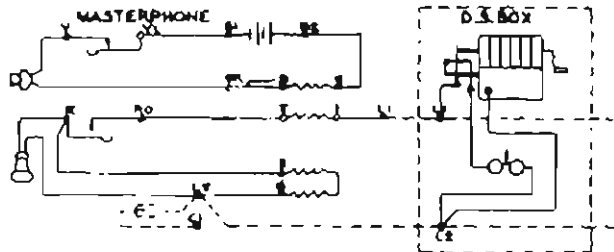
21098

# TRIAD CIRCUIT

21229

LOCAL BATT.—UNIT TYPE MASTERPHONE  
4-COND HANDSET—INSULATE PRI & SEC.

**SCHMATIC**



**NOTES.**  
ALL WIRING IS FLEXIBLE.  
WHEN COND. IS SPECIFIED  
IN RECEIVER CRT. CONNECT  
THESE GREEN CONDUCTORS  
TO 'C-1' INSTEAD OF 'C-2'.

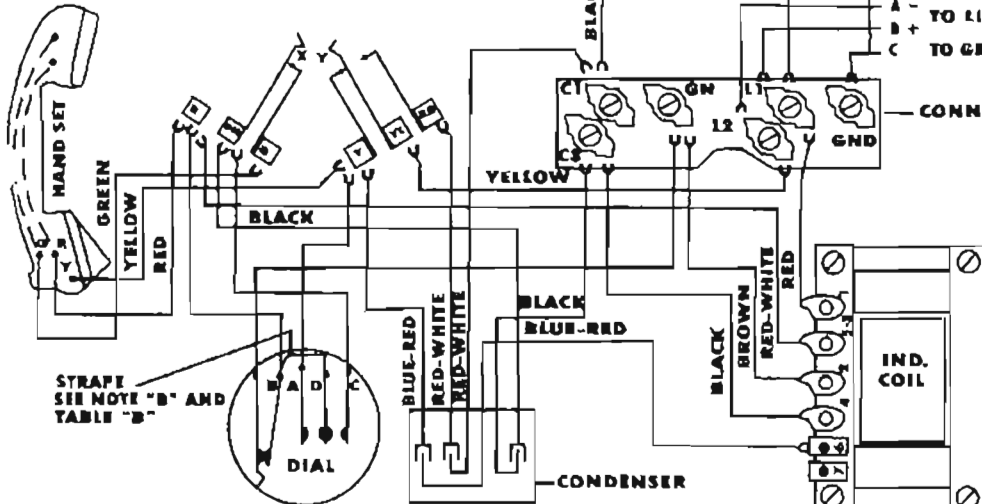
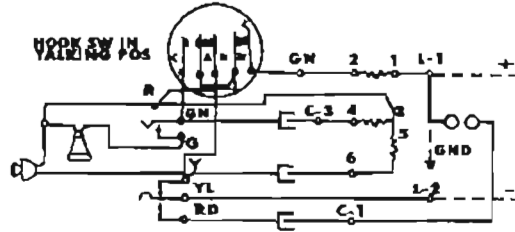
21229

951CLR

6-5-1939

K.S. & S.C. CHICAGO

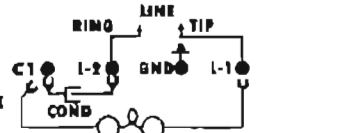
**SCHEMATIC**



**TRIAD CIRCUIT**

DIVIDED RINGING  
AUTO COMM BATT UNIT TYPE MASTERPHONE

WHERE BELL TAPPING OCCURS AT AN EXTENSION STATION WHILE DIALING FROM THE MAIN STATION. REVERSE THE LINE CONNECTIONS "L-1 & L-2" ON "STRAIGHT LINES" ONLY.

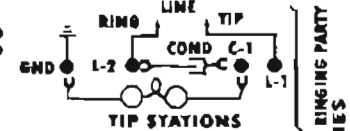


HARMONIC OR STRAIGHT LINE RINGING

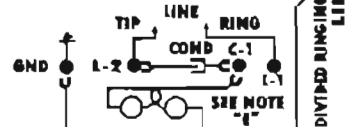
DESK STAND CORD  
SEE NOTE "A" AND  
TABLE "A"

A - TO LINE  
B + TO GROUND  
C - TO GROUND

CONN. RACK



TIP STATIONS



RING STATIONS

A - A TWO CONDUCTOR CORD ONLY IS REQUIRED FOR STRAIGHT LINE OR METALLIC RINGING A THREE CONDUCTOR CORD IS REQUIRED FOR GROUND RETURN RINGING

B - WHEN DIAL IS USED CONNECT STRAP AS SHOWN. WHEN NO DIAL IS USED CONNECT "RED" CONDUCTOR OF HANDSET CORD AND "RED-WHITE" WIRE TO BINDING POST "GN" ON CONNECTING BACK INSTEAD OF "A" ON HOOK SWITCH

C - CONTACT "X" TO BREAK BEFORE "Y" WHEN HANDSET IS HUNG ON HOOK

D - FOR ADDITIONAL SIDETONE REDUCTION CHANGE CONN FROM TERM. 6 TO TERM. 7 ON IND. COIL.

E - REVERSE RINGER LEADS AS SHOWN ON BIASED RINGER ONLY.

F - USE .5MF CONDENSER IN SERIES WITH HARMONIC RINGERS IN FREQ OF 42,54,66,16 FOR ALL OTHER RINGERS USE 1. MF CONDENSER.

**TABLE A**  
TRACER COLORS OF D.S. CORD CONDUCTORS

	A	B	C
3 CONDUCTOR	YELLOW	RED	GREEN
2 CONDUCTOR	BLACK	BROWN	—

**TABLE B**  
COLOR CODE FOR DIAL LEADS

	A	B	C	D
K.S. & S.CO.	SLATE	WHITE	GR-WH	GREEN
AUTO. ELIC. CO.	GR-WH	GREEN	OR-RED	OR-BLK

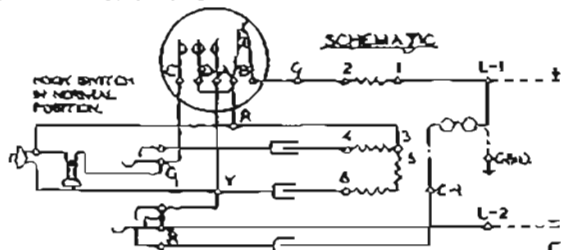
**21236-A**



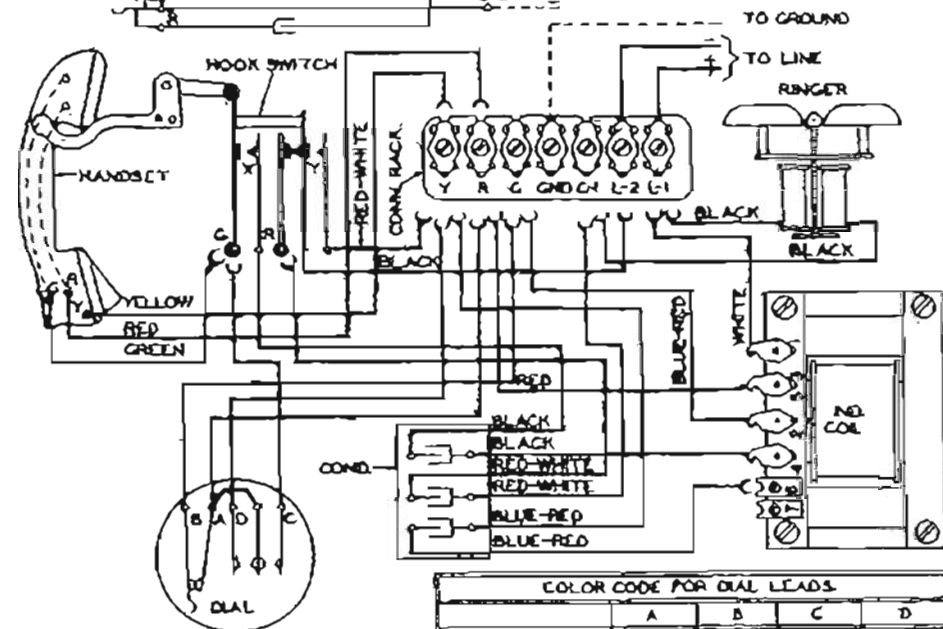
# TRIAD CIRCUIT

DIVIDED RINGING AUTO. CONN.  
BATTERY WALL TELEPHONE.

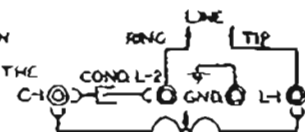
21238-A



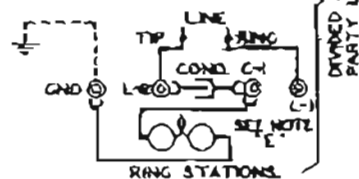
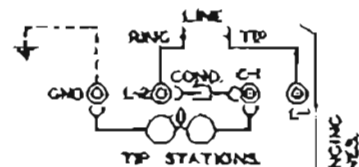
F- WHERE BELL TAPPING OCCURS AT AN EXTENSION STATION WHILE DIALING FROM THE MAIN STATION, REVERSE THE LINE CONNECTIONS "L-1" & "L-2" ON STRAIGHT LINES ONLY.



COLOR CODE FOR DIAL LEADS				
	A	B	C	D
K. S. & S. CO.	SLATE	WHITE	GR. WH.	GREEN
AUTO. ELEC. CO.	GR. WH.	GREEN	GR. RED	GR. BLK.



HARMONIC OR STRAIGHT LINE RINGING



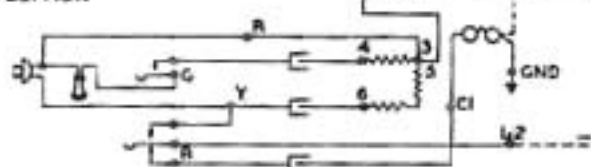
- A-CONNECT "BLUE-RED" WIRE TO BIND POST "A" INSTEAD OF "E" WHEN DIAL IS NOT USED.
- B-CONTACTS "X" TO BREAK BEFORE "Y" WHEN HANDSET IS HUNG ON HOOK.
- C- FOR ADDITIONAL SIDE TONE REDUCTION CHANGE CONNECTION FROM TERM. "B" TO "7" ON RING COIL.
- D- USE 1/2 M.F. CONDENSER IN SERIES WITH HARMONIC RINGERS IN FIELD OF 42 BK, BK BK & BK 2 1/2". FOR ALL OTHER RINGERS USE 1 M.F. CONDENSER.
- E- REVERSE RINGER LEADS AS SHOWN ON BIASED RINGERS ONLY.

21238-A

9917 WALL PHONE

2-6-41  
E.L.B. 40  
K.V.L.

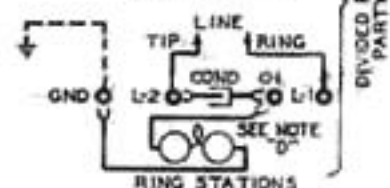
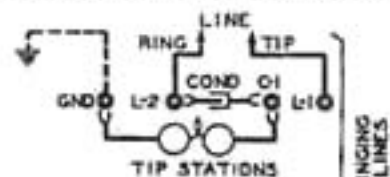
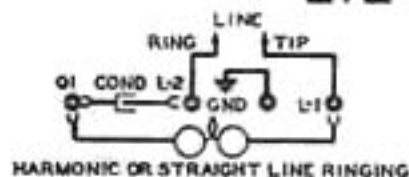
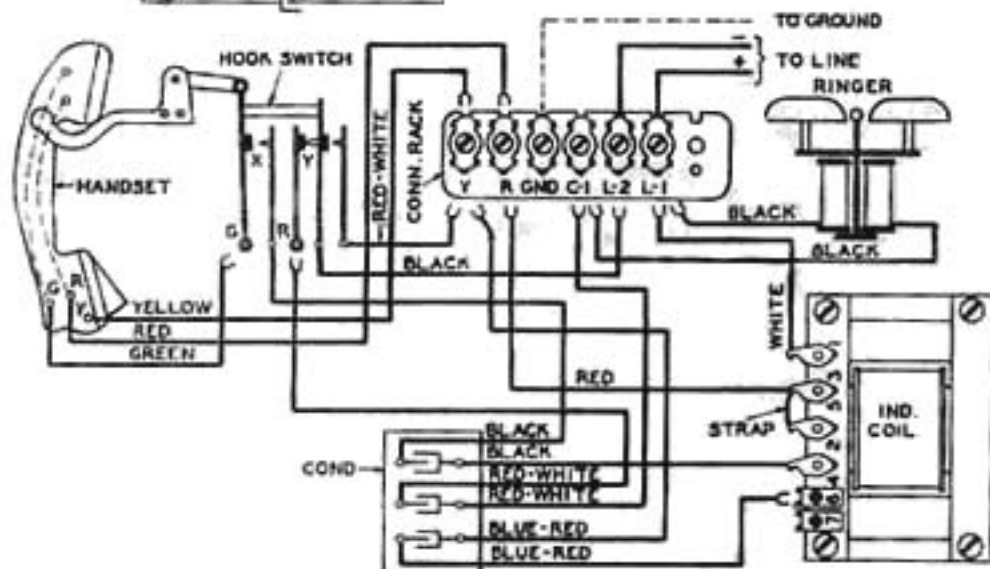
2-26-1941

HOOK SWITCH  
IN NORMAL  
POSITION

# TRIAD CIRCUIT

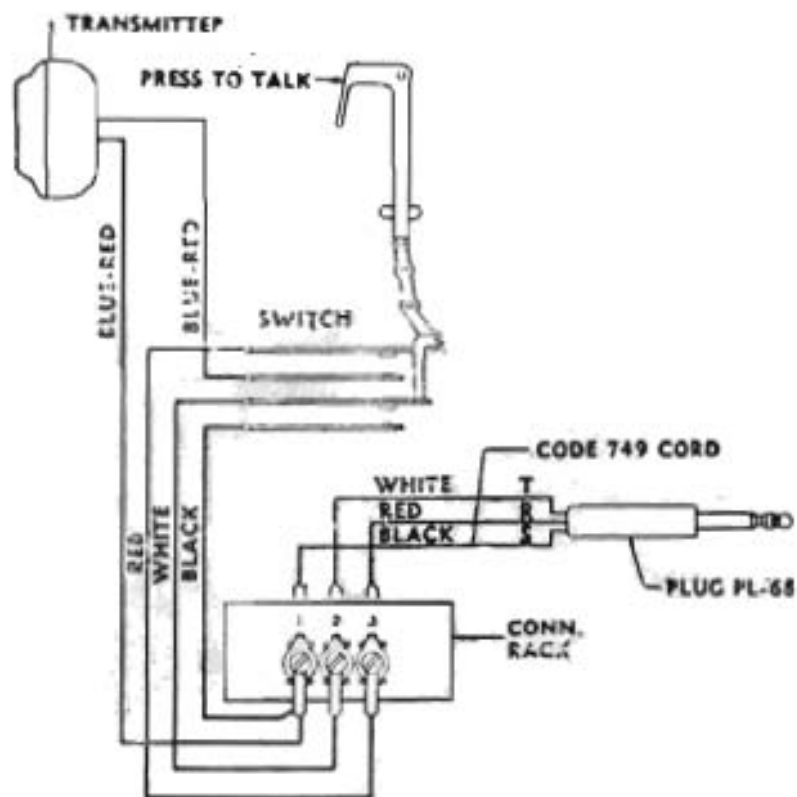
DIVIDED RINGING  
COMM. BATTERY WALL TELEPHONE

21240

DIVIDED RINGING  
PARTY LINES

- A- CONTACTS "X" TO BREAK BEFORE "Y" WHEN HANDSET IS HUNG ON HOOK.
- B- FOR ADDITIONAL SIDE TONE REDUCTION CHANGE CONNECTION FROM TERM. "6" TO "7" ON IND. COIL.
- C- USE  $\frac{1}{2}$  M.F. CONDENSER IN SERIES WITH HARMONIC RINGERS IN FREQ. OF 42, 54, 60, 66 & 66 $\frac{2}{3}$ . FOR ALL OTHER RINGERS USE 1-M.F. CONDENSER.
- D- REVERSE RINGER LEADS AS SHOWN ON BIASED RINGERS ONLY.

## CIRCUIT FOR T-32 MICROPHONE



KELLOGG 1000 SERIES UNIVERSAL CIRCUIT TELEPHONES

FIG 1  
COMMON BATTERY (CB)

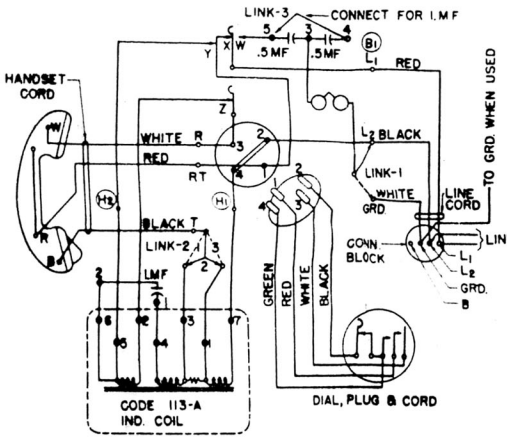


FIG 2  
LOCAL BATTERY (LB OR MAGNETO)

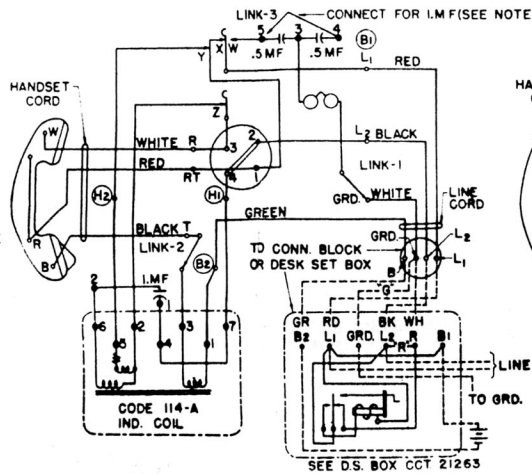
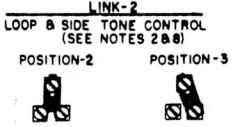
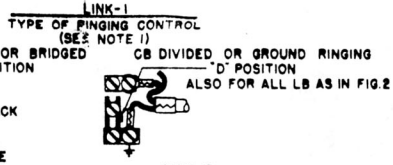
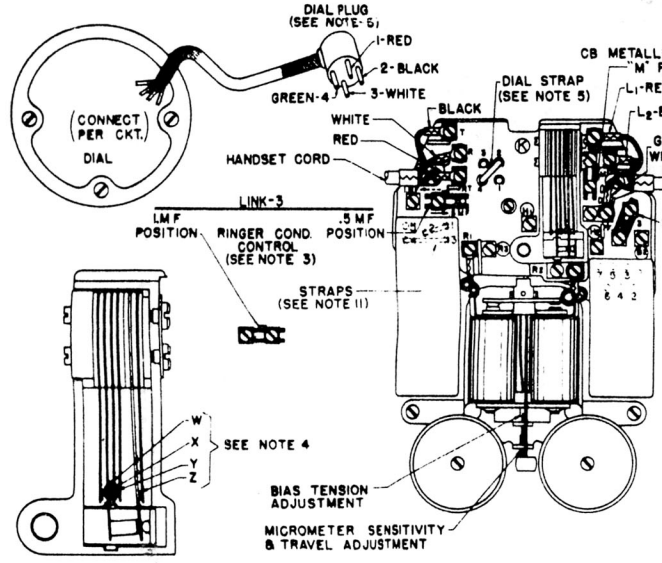
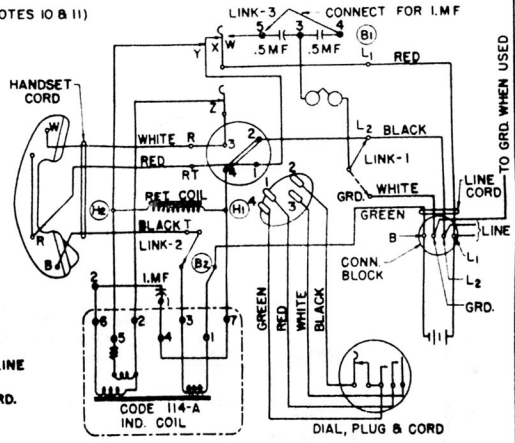


FIG 3  
CB SIGNALLING - LB TALKING



NOTES:

1. TO CHANGE FROM "METALLIC" TO "DIVIDED RINGING" WHEN A GROUND LEAD IS CONNECTED TO \*, MOVE LINK-1 FROM L<sub>1</sub>(M) TO †(D). FOR LB (FIG 2) USE "D" POSITION ONLY.
2. POSITION-1 FOR ALL L.B. CIRCUITS AND SHORT LOOPS ON CB. POSITION-2 OR 3 FOR LONGER CB. LOOPS, WHICHEVER POSITION GIVES DESIRED SIDE-TONE REDUCTION.
3. LINK-3 PROVIDES RINGER WITH .5MF OR 1MF CONDENSER. SELECT CAPACITY SPECIFIED FOR RINGER. (SEE NOTE 10)
4. CRADLE SWITCH IS SHOWN IN TALKING POSITION IN ALL CIRCUITS, REPLACING HANDBREAK CONTACTS "Z" BEFORE "Y" AND "Y" BEFORE "X". CONTACTS "W" MAKE AFTER BREAK AT "X".
5. WHEN DIAL IS NOT USED, DIAL SOCKET TERMINALS 2 & 4 MUST BE CONNECTED TOGETHER TO COMPLETE CIRCUIT (USE DIAL STRAP). REMOVAL OF DIAL STRAP OR DIAL PLUG PERMITS SERVICING WITHOUT REMOVING TELEPHONE FROM LINE.
6. TO PREVENT BIASED RINGER BELL TAPPING WHEN DIALING, REVERSE RINGER LEADS AT RING STATIONS ON METALLIC LINES WHERE BELL TAPPING OCCURS AT AN EXTENSION WHILE DIALING, REVERSE LINE LEADS L<sub>1</sub> & L<sub>2</sub> AT THE EXTENSION.

TABLE OF RINGERS										
FREQUENCY SELECTIVE (HARMONIC) TYPES						POLARITY SELECTIVE TYPES		NON-SELECTIVE TYPES		
PTY.	CY.					BIASED	IMP.	ST. LINE		
1	33/3	HA1	30	HB1	20	HC1	BC	LOW	SC	
2	50	HA2	42	HB2	60	HC2	BB	MED.	SB	
3	66 2/3	HA3	54	HB3			BA	HIGH	SA	
4	162/3	HA4	66	HB4						
5	25	HA5	16	HB5						

10. USE .5MF CONDENSER IN HARMONIC RINGER CIRCUIT ON 25 CYCLES OR HIGHER. USE 1MF FOR ALL OTHER RINGERS EXCEPT BA & SA WHICH USE 5MF OR 1MF AS REQUIRED.

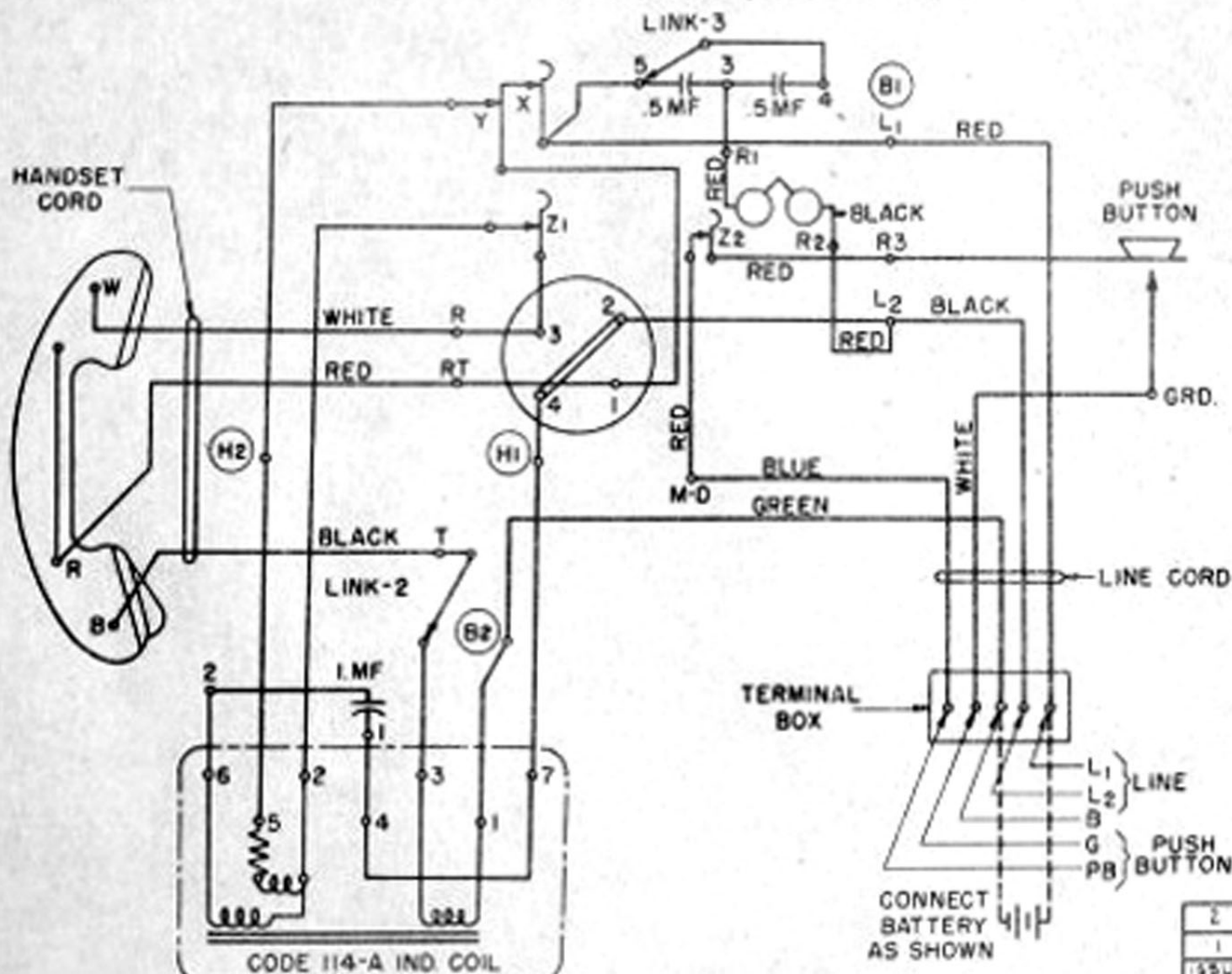
11. WHEN CONDENSER IS OMITTED IN FIG 2, ADD STRAP BETWEEN CONDENSER JACKS 3 & 4 AND 1 & 2, MOVE SLIDE PLATE OF LINK-3 TO 1MF POSITION

# DESK SET TELEPHONE

1040 SERIES WITH PUSH BUTTON

ES-4171

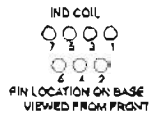
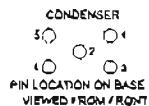
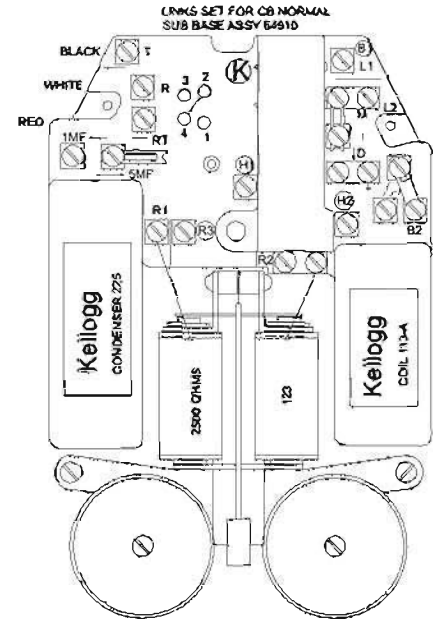
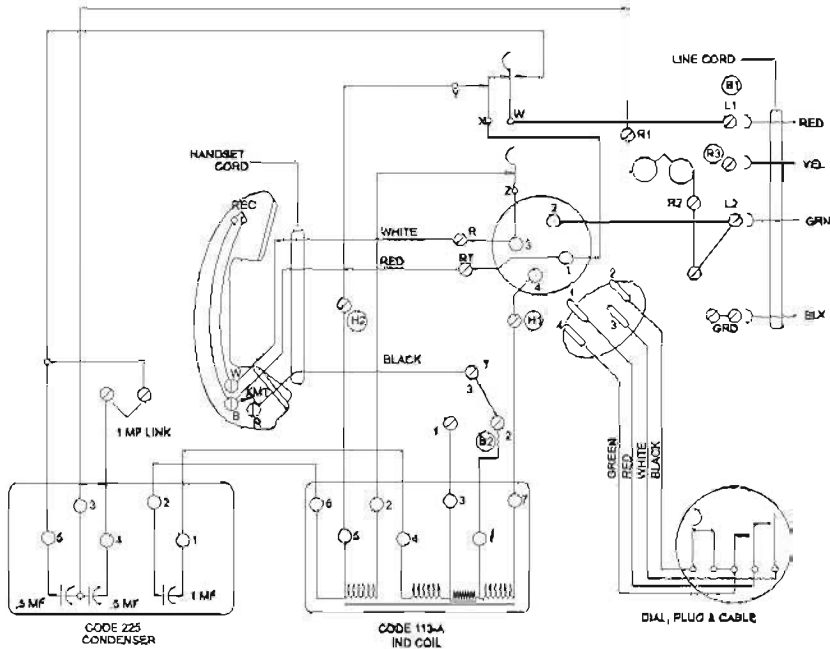
REPLACES FIG. 2, CIRCUIT 21258



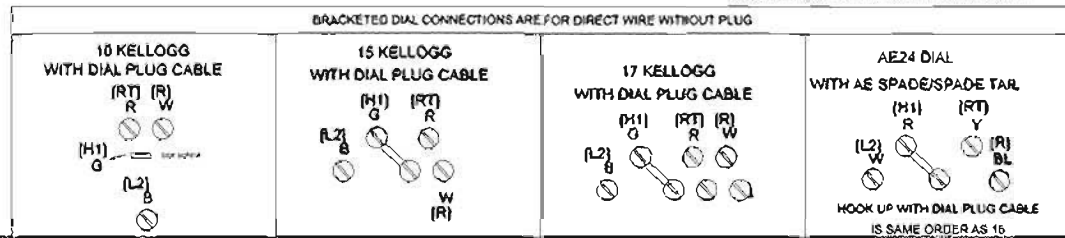
2
1
ISSUE NO

**KELLOGG 1000 SERIES UNIVERSAL CIRCUIT TELEPHONES**  
**COMMON BATTERY (CB)**  
 COMPILED FROM KELLOGG DRAWING 21258 AND FIELD NOTES  
 MODEL NUMBER FOR THIS CONFIGURATION IS D-1000-SB, WALL VERSION D-1100-SB  
 FOR KOILED KORD ADD K TO MODEL NUMBER: D-1000-SB-K

**KM-21258(A)**



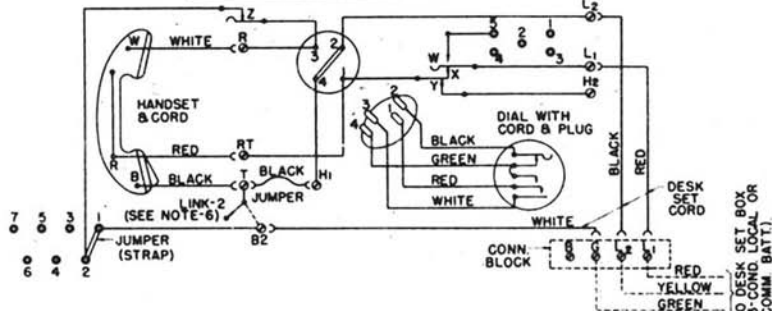
2/25/06 CORRECTED 15 & 17 DIAL CONN



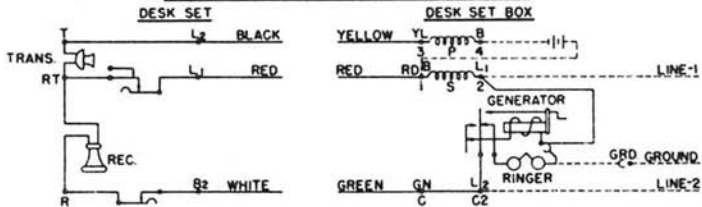
NOTE: "STRIPPED" SET FOR USE WITH OLD STYLE D.S. BOXES

FIG. 1

LOCAL OR COMMON BATTERY (3 CONDUCTOR)



3-CONDUCTOR LOCAL BATTERY BOOSTER CIRCUIT



3-CONDUCTOR COMMON BATTERY BOOSTER CIRCUIT

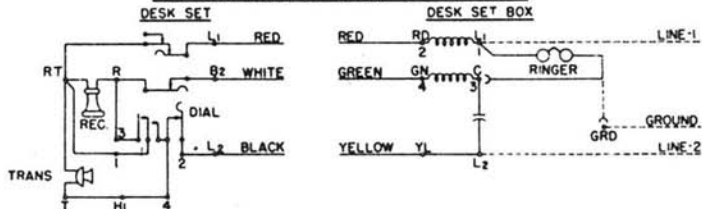
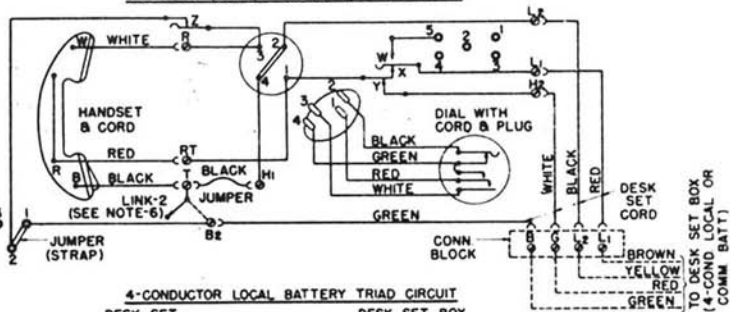
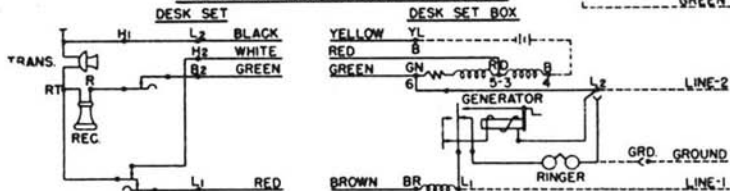


FIG. 2

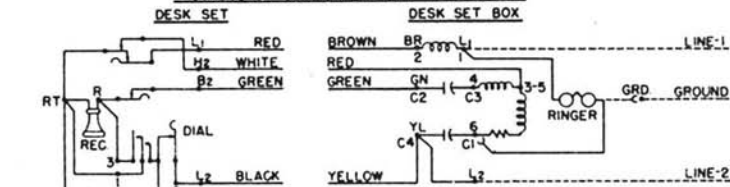
LOCAL OR COMMON BATTERY (4-CONDUCTOR)



4-CONDUCTOR LOCAL BATTERY TRIAD CIRCUIT



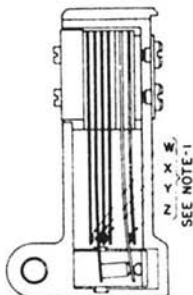
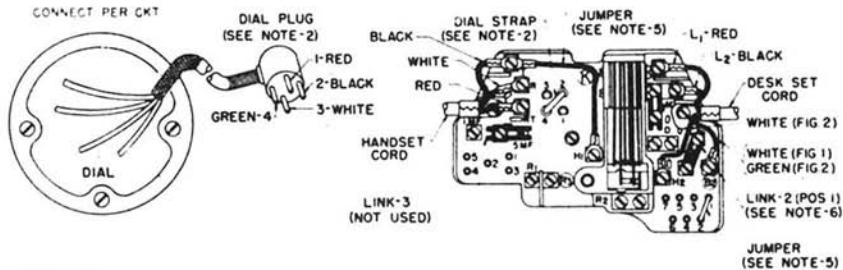
4-CONDUCTOR COMMON BATTERY TRIAD CIRCUIT



NOTES

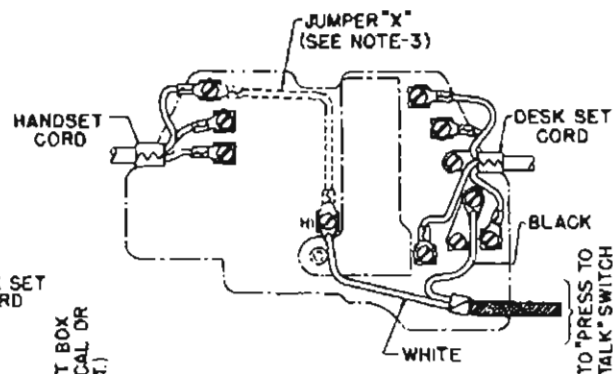
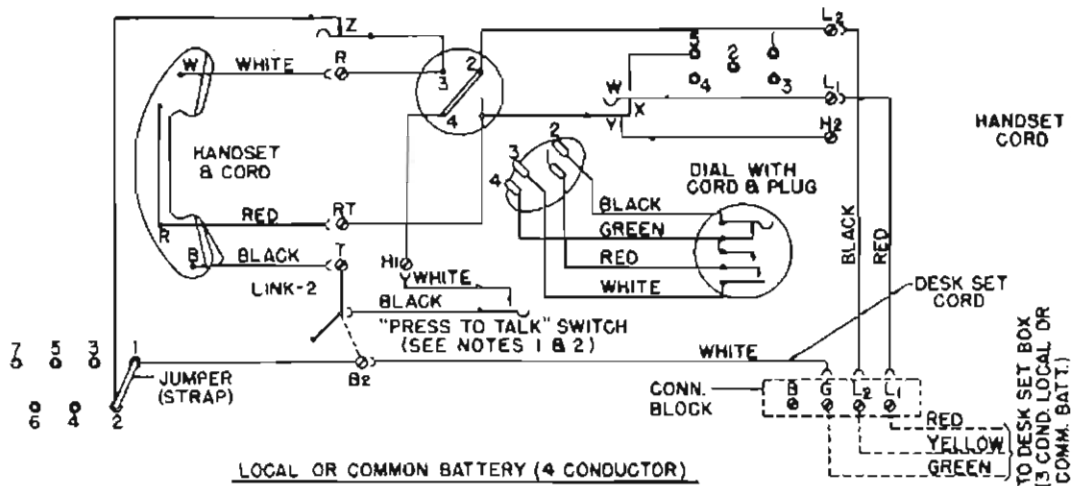
1. CRADLE SWITCH IS SHOWN IN TALKING POSITION IN ALL CIRCUITS REPLACING HANDSET BREAKS CONTACTS "Z" BEFORE "Y" AND "Y" BEFORE "X". CONTACTS "W" MAKE AT OR SLIGHTLY AFTER BREAK AT "X".
2. WHEN DIAL IS NOT USED, DIAL SOCKET TERMINALS 2 & 4 MUST BE CONNECTED TOGETHER TO COMPLETE CIRCUIT (USE DIAL STRAP). REMOVAL OF DIAL STRAP OR DIAL PLUG PERMITS SERVICING WITHOUT REMOVING TELEPHONE FROM LINE.
3. TO PREVENT BIASED RINGER BELL TAPPING WHEN DIALING, REVERSE RINGER LEADS AT RING STATIONS ON METALLIC LINES WHERE BELL TAPPING OCCURS AT AN EXTENSION WHILE DIALING. REVERSE LINE LEADS L<sub>1</sub> & L<sub>2</sub> AT THE EXTENSION.
4. WHEN MAXIMUM TRANSMISSION IS NOT ESSENTIAL C-TRANSMITTERS MAY BE USED IN L.B. TALKING CIRCUIT.
5. IF THE TELEPHONE IS CONVERTED TO FULLY EQUIPPED UNIT SET, THE TWO JUMPERS MUST BE REMOVED.
6. LINK-2 MUST ALWAYS BE IN POS. 1 (AS SHOWN).

CONNECT PER CKT



NOTE: "STRIPPED" SET FOR USE WITH OLD STYLE D.S. BOXES  
 SUPPLEMENT TO CIRCUIT 21260 SHOWING "PRESS TO TALK" SWITCH

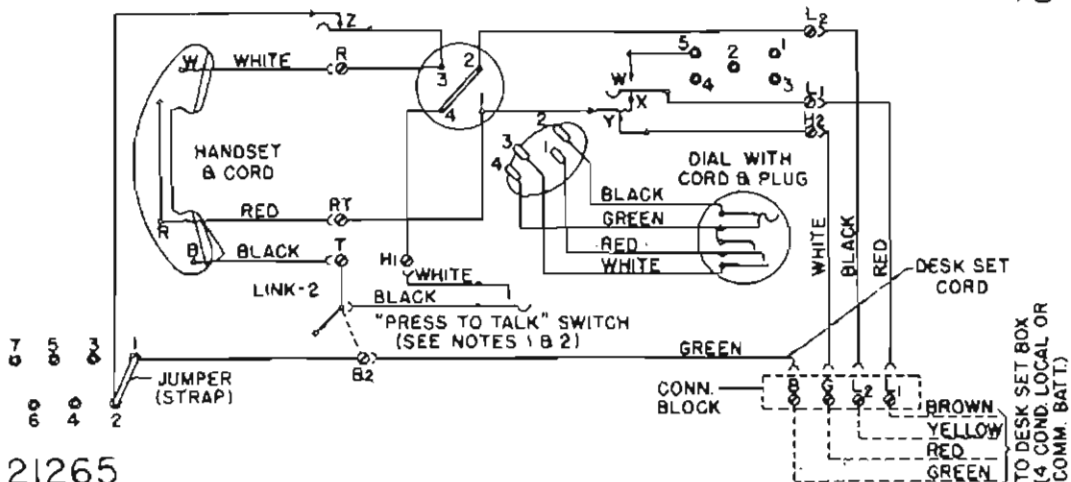
LOCAL OR COMMON BATTERY (3 CONDUCTOR)



NOTES:

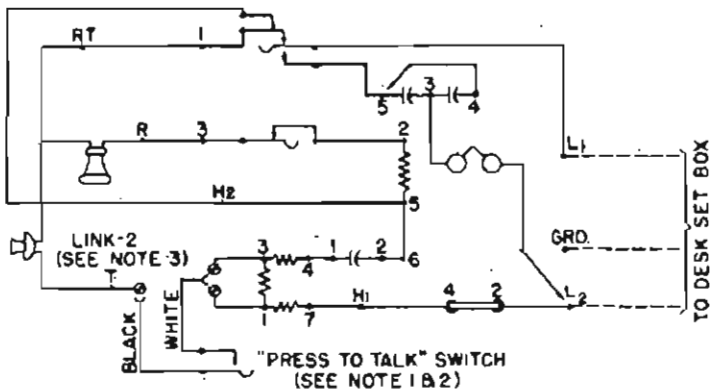
1. THIS CIRCUIT SUPPLEMENTS CIRCUIT 21260 TO SHOW THE CONNECTIONS FOR THE "PRESS TO TALK" SWITCH ONLY.
2. TO "FLASH" THE OPERATOR MOVE THE "PRESS TO TALK" SWITCH LEVER SLOWLY UP AND DOWN.
3. WHEN "PRESS TO TALK" SWITCH IS USED OMIT JUMPER "X".

LOCAL OR COMMON BATTERY (4 CONDUCTOR)

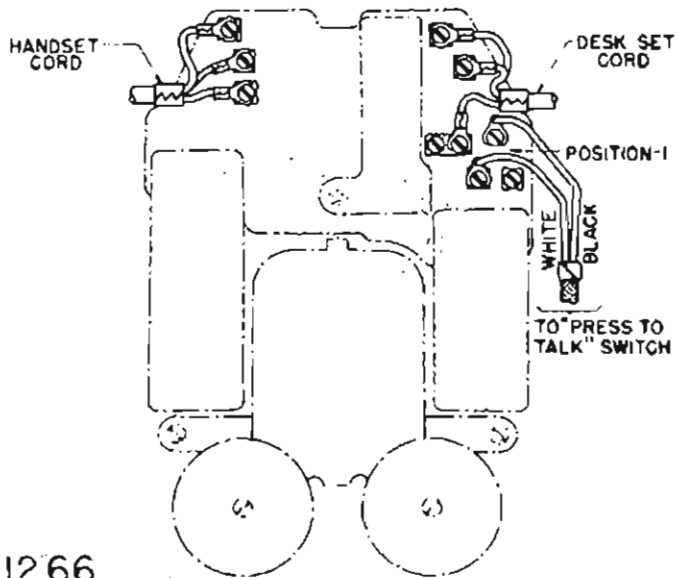
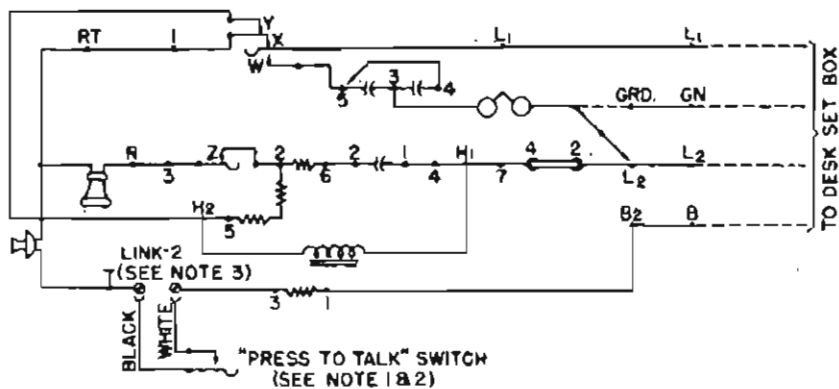




COMMON BATTERY



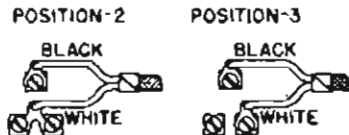
LOCAL BATTERY (MAGNETO) OR COM. BAT. SIGNALLING, LOCAL BATT. TALKING



NOTES:

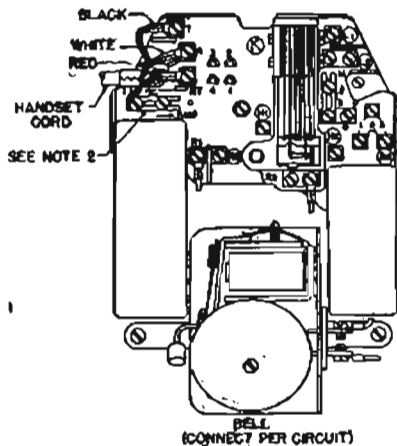
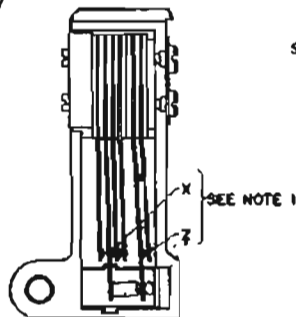
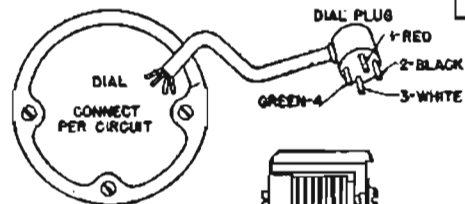
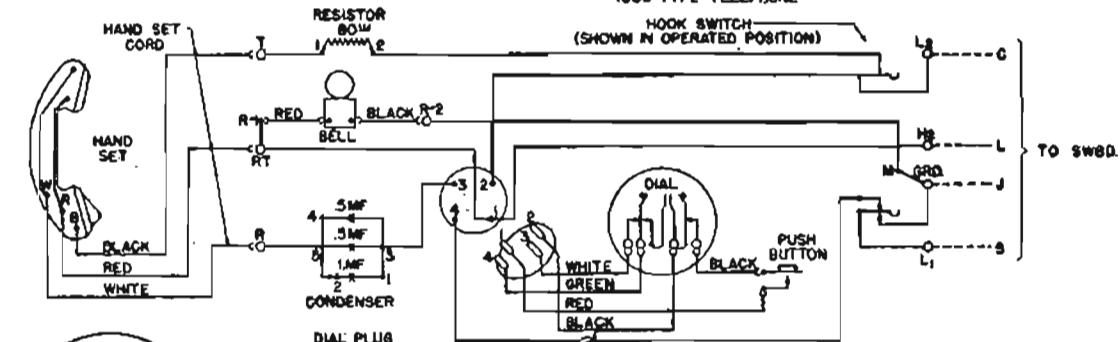
1. THIS CIRCUIT SUPPLEMENTS CIRCUIT 21258 TO SHOW THE CONNECTIONS FOR THE "PRESS TO TALK" SWITCH ONLY.
2. TO "FLASH" THE OPERATOR MOVE THE "PRESS TO TALK" SWITCH LEVER SLOWLY UP AND DOWN.
3. WHEN "PRESS TO TALK" SWITCH IS USED REMOVE LINK PLATE (CONTACT STRAP) FROM LINK-2.

LINK-2  
LOOP & SIDE TONE CONTROL  
(SEE NOTE 3)



# SELECT-O-PHONE CIRCUIT

## 1000 TYPE TELEPHONE



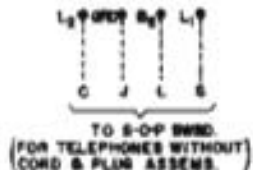
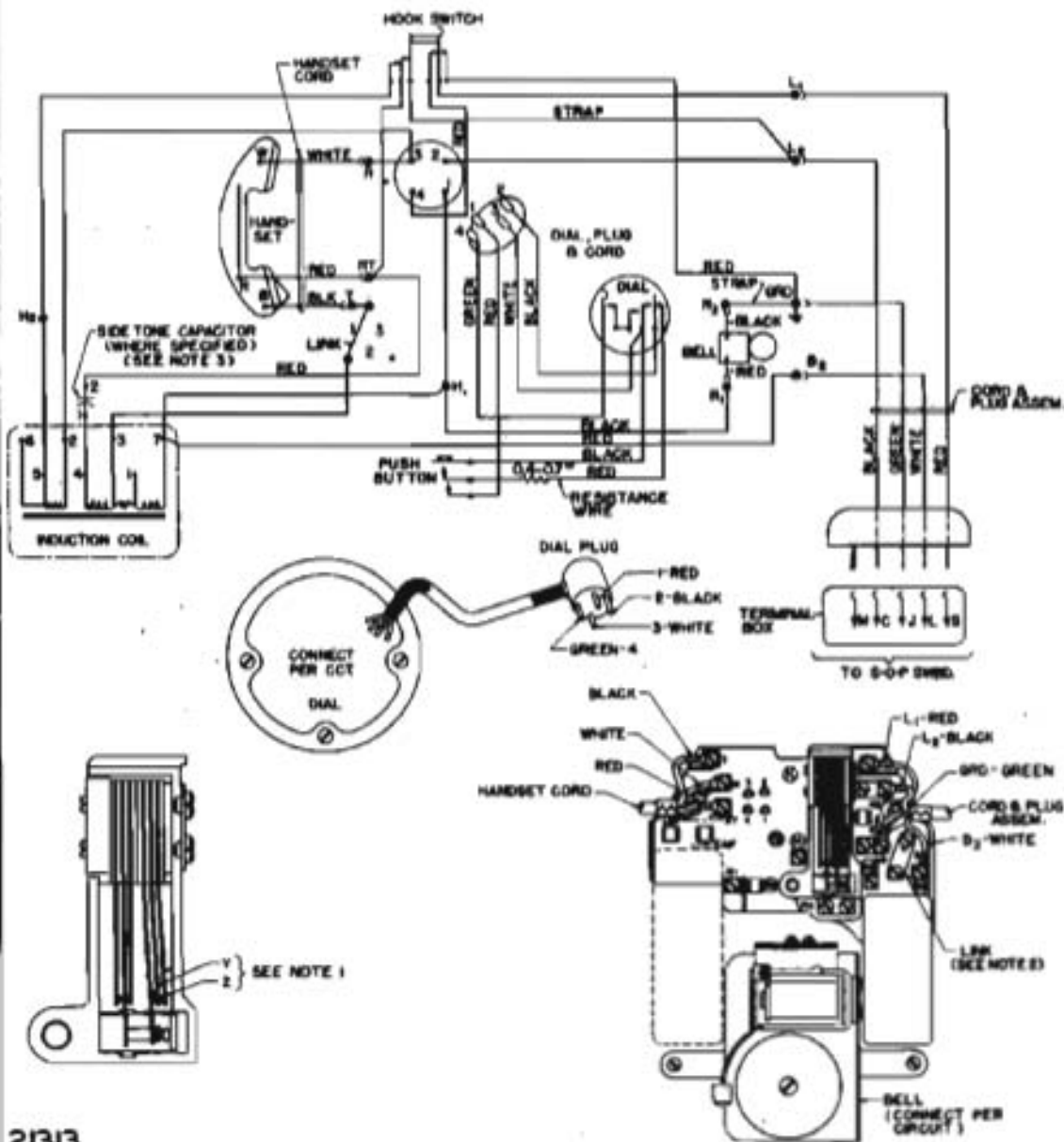
## NOTE:

1- HOOK SWITCH IS SHOWN IN TALKING POSITION IN ALL CIRCUITS. REPLACING HANDSET BREAKS CONTACTS "X" BEFORE "Z"

2- LINK MUST ALWAYS BE IN POSITION AS SHOWN.



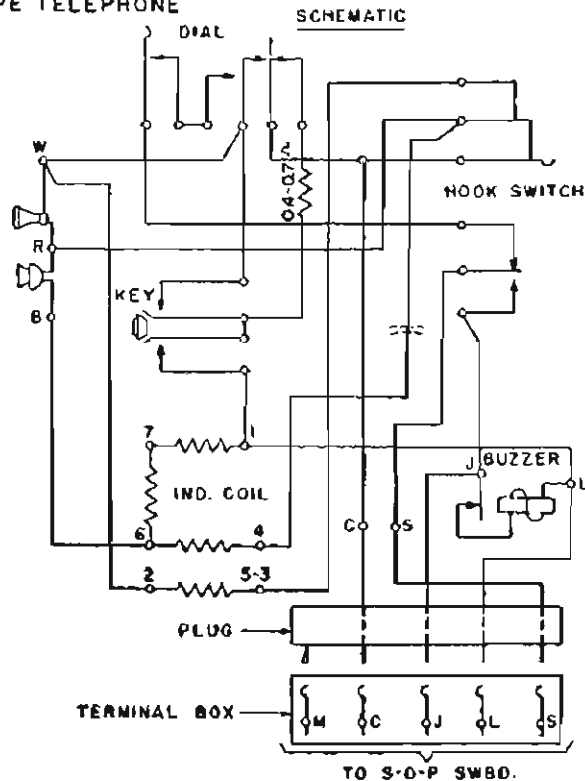
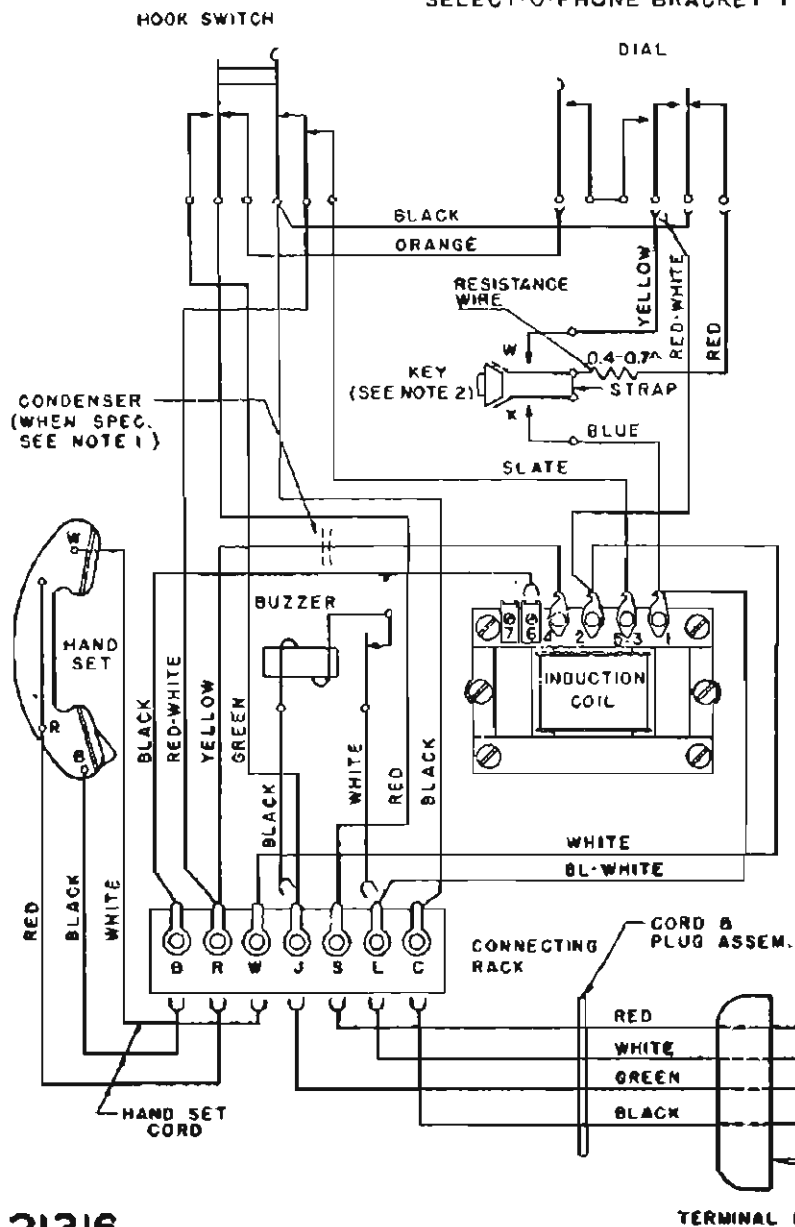
SELECT-O-PHONE CIRCUIT  
1000 TYPE TELEPHONE



NOTES:

- 1- HOOK SWITCH IS SHOWN IN TALKING POSITION. REPLACING HANDSET BREAKS CONTACTS "2" BEFORE "1". OTHER ORDER OF CONTACTING IS NOT CRITICAL.
- 2- LINK MUST ALWAYS BE IN POSITION AS SHOWN.
- 3- CONNECTION BETWEEN TERMINALS 1 AND 2 IS REMOVED WHEN CAPACITOR IS SPECIFIED.

# TRIAD CIRCUIT SELECT-O-PHONE BRACKET TYPE TELEPHONE



**NOTES:**

- 1-REPLACE WIRE FROM "R" TO "4" WITH CONDENSER, WHEN SPECIFIED.
- 2-WHEN KEY IS OPERATED, CONTACTS "W" MAKE BEFORE CONTACTS "X".

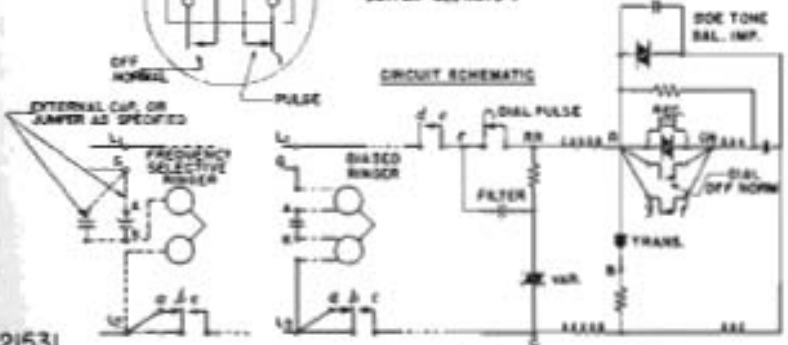
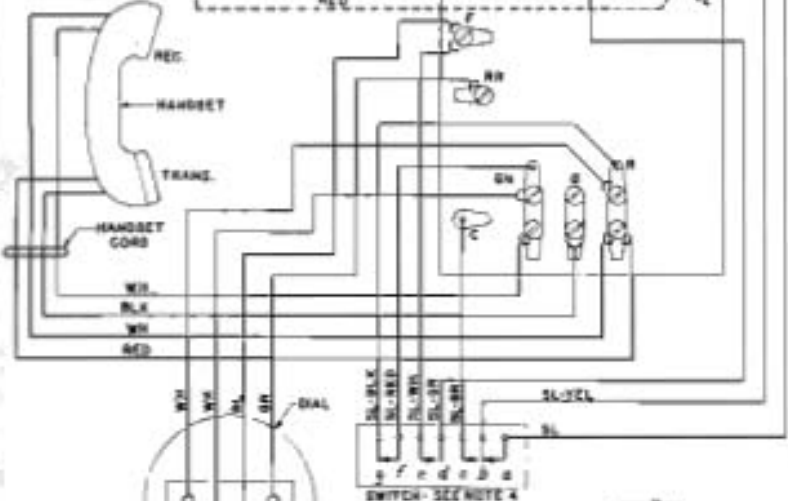
21316

## WIRING DIAGRAM

## K-500 TYPE TELEPHONE CIRCUIT

BASED TYPE RINGER CONNECTIONS (INNER USED)

FREQ. SELECTIVE RINGER CONNECTIONS (SEE INSERT TABLE)



CLASS OF SERVICE	TABLE OF CONNECTIONS (BASED RINGERS) (SEE NOTES 1 TO 4)												
	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE		MTG. CORD		MTG. CORD		RINGER LEADS						
	RING	TIP	GR.	YEL.	RED	GR.	YEL.	RED	BLK	GR.	BLK	GR.	BLK
BRIDGED Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K	A
RING PARTY Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K	A
TIP PARTY Δ	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	K	G	B	B
TIP PARTY DIAL MESSAGE RATE *	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	K	G	B	B
AUTOMATIC TICKETING *	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	D	B	K	G

Δ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR PLAT AND MESSAGE RATE SERVICE.

\* TRANSFER SLATE SWITCH LEAD FROM (L<sub>2</sub>) TO (A) TERMINAL ON NETWORK.

## NOTES:

- FOR MANUAL SERVICE: REPLACE DIAL WITH DUMMY PLUS ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
- TO PERMANENTLY SILENCE RINGER: FOR BRIDGED, RING PARTY AND TIP PARTY EXCEPT DIAL MESSAGE RATE SERVICES, TRANSFER BLACK RINGER LEAD TO (A) TERMINAL ON NETWORK. FOR TIP PARTY DIAL MESSAGE RATE SERVICE, TRANSFER SLATE-RED RINGER LEAD TO THE (K) TERMINAL, BLACK LEAD TO (B) AND SLATE LEAD TO (I) MUST REMAIN CONNECTED FOR PARTY IDENTIFICATION. FOR AUTOMATIC TICKETING, TRANSFER BLACK RINGER LEAD TO THE (K) TERMINAL.
- RINGER CUT-OFF CONTROL BY CUSTOMER: SEND STOP NEXT TO OXYGEN ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- WHEN THE HANDSET IS REMOVED CONTACT *y* BREAKS LAST.

## TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	EXTENSIBLE CAPACITOR			CONNECTIONS IN SET.
	OF	OFF	OFF	
RA 1	33/3	1	35	SEE NOTE 3
RA 2	50	2	1	3
RA 3	64/20	3	1	5
RA 4	16/2	4	1	6
RA 5	25	4	1	6
RA 6	30	1	1	0
RA 7	42	2	2	0
RA 8	54	3	1	5
RA 9	66	4	1	5
RA 10	78	5	1	6
RA 11	90	1	1	0
RA 12	102	2	1	5
RA 13	120	3	1	6
RA 14	140	4	2	5
RA 15	160	5	1	5

## NOTES:

- AMOUNT THE CONDENSER FURNISHED ON THE "H" TERMINAL OF THE NETWORK. CONNECT THE LOOSE CONDENSER LEAD TO THE "S" TERMINAL.
- CONNECT JUMPER FROM "W" TO "S" ON THE NETWORK.

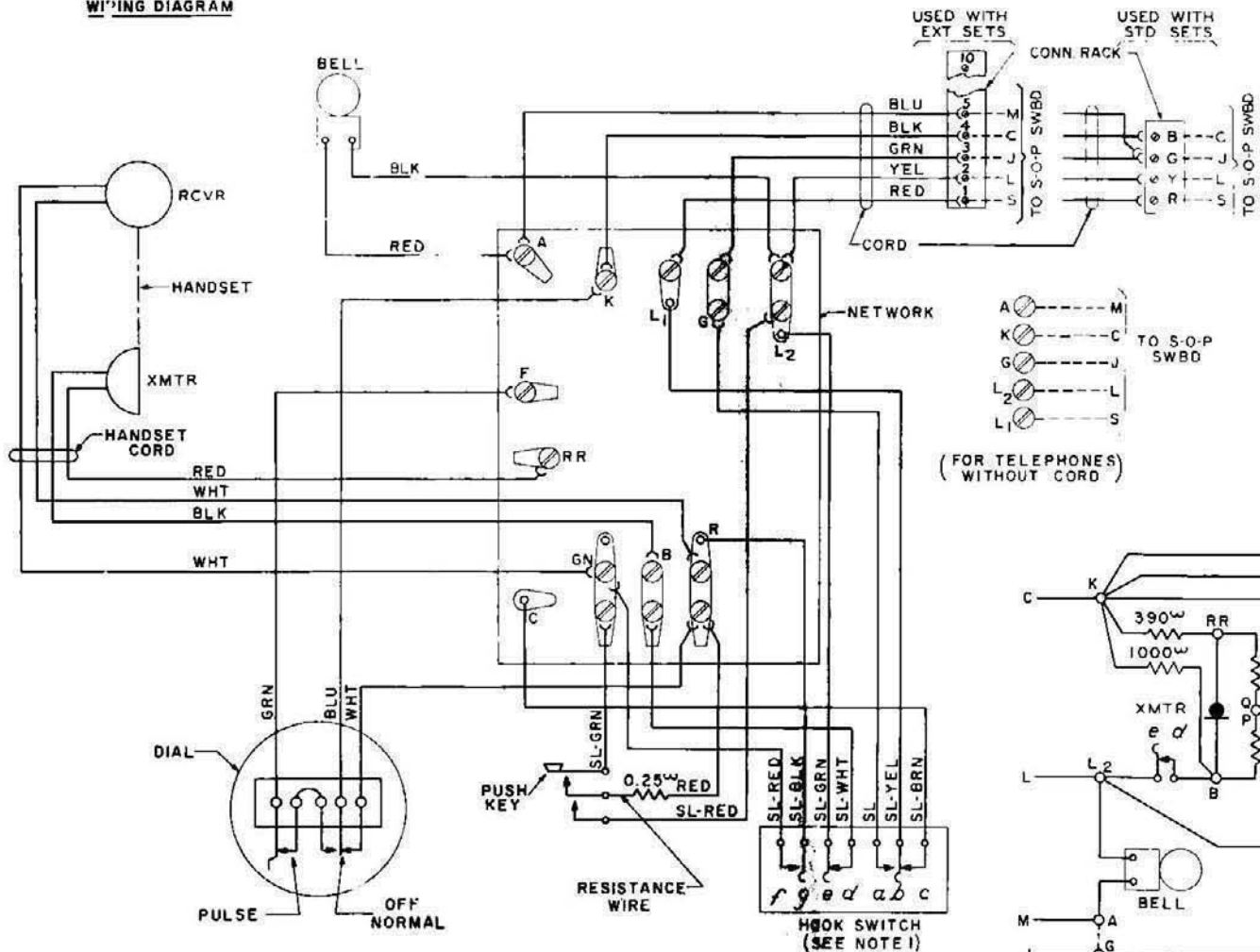
## CONNECTIONS FOR FREQUENCY SELECTIVE RINGING

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK						DOWN IN SET (ALSO SEE DIAL OF RINGERS)	
	LINE	MTG. CORD	MTG. CORD	MTG. CORD	RED	BLACK		
BRIDGED	R	G	Y	R	G	Y	L <sub>2</sub>	K
RING PARTY	R	G	Y	R	G	Y	L <sub>2</sub>	K
TIP PARTY	R	G	Y	G	R	Y	L <sub>2</sub>	K

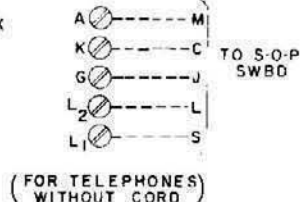
\* IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

K-500 TYPE TELEPHONE CIRCUIT

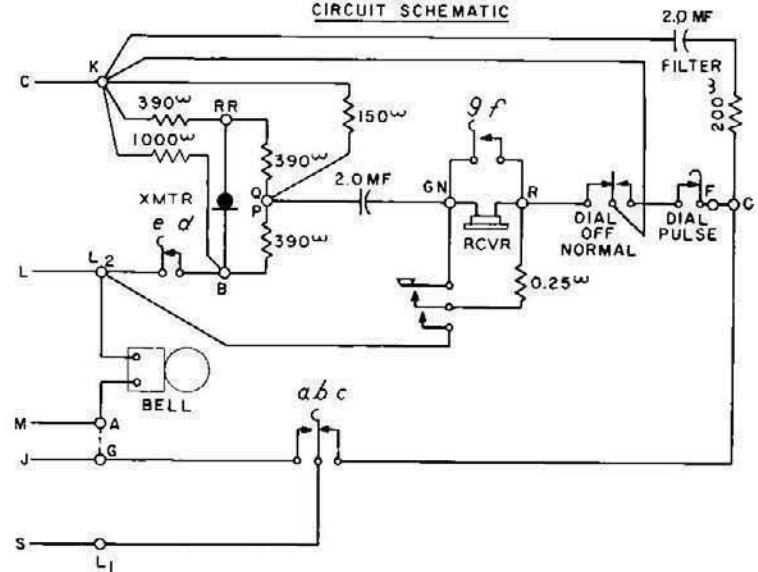
WIPIING DIAGRAM



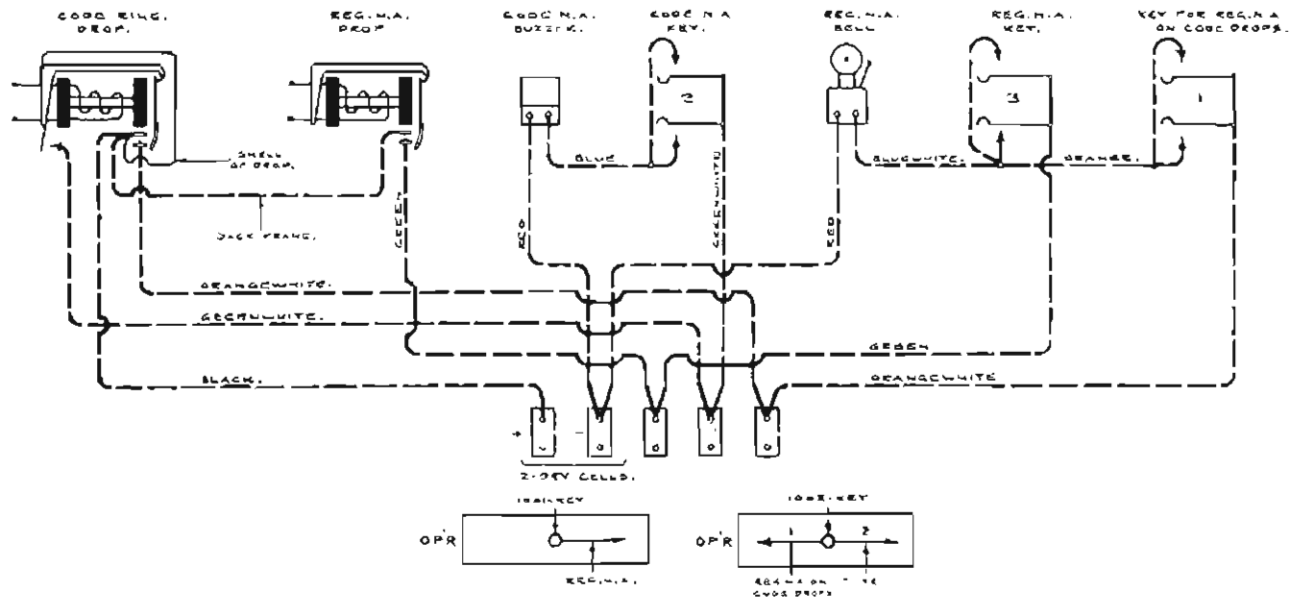
NOTES:  
 1- HOOK SWITCH IS SHOWN IN TALKING POSITION WHEN THE HANDSET IS REPLACED CONTACT 9f MAKES FIRST. OTHER ORDER OF CONTACTING IS NOT CRITICAL



CIRCUIT SCHEMATIC

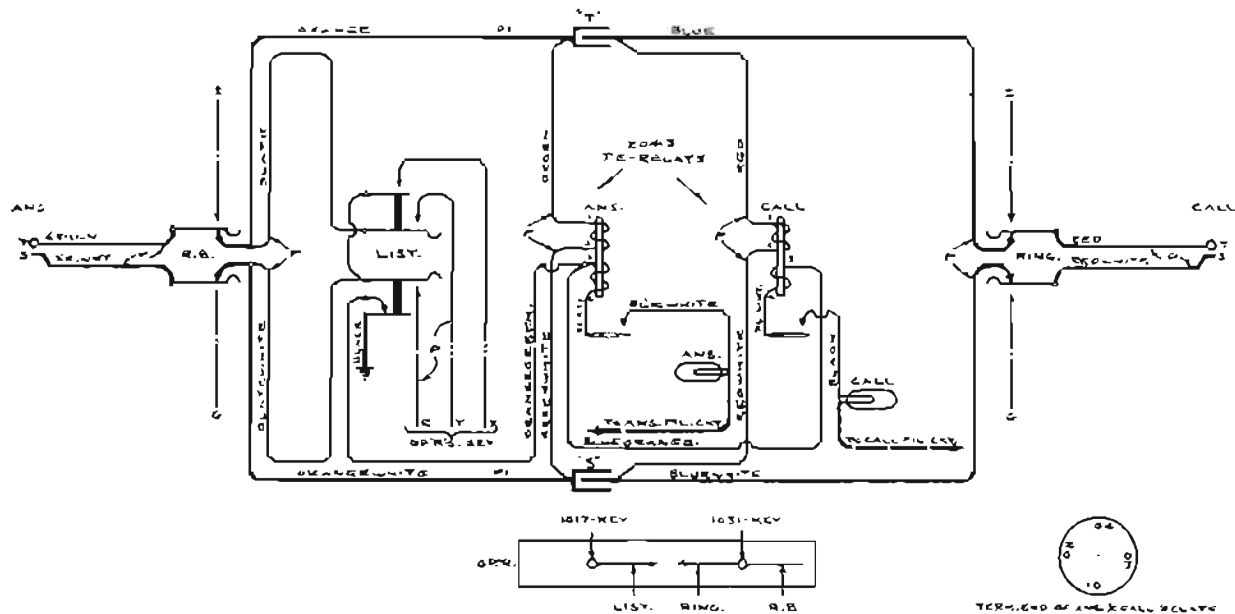


## Code and Regular Night Alarm Circuit Used on Switchboards Having Drop Supervision

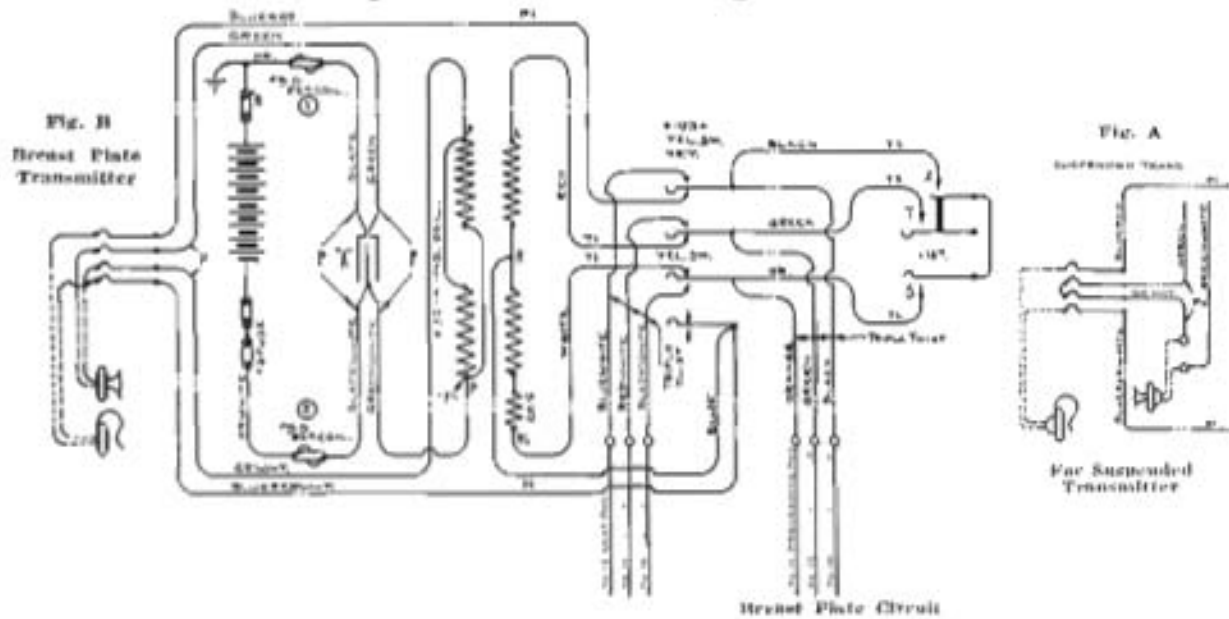




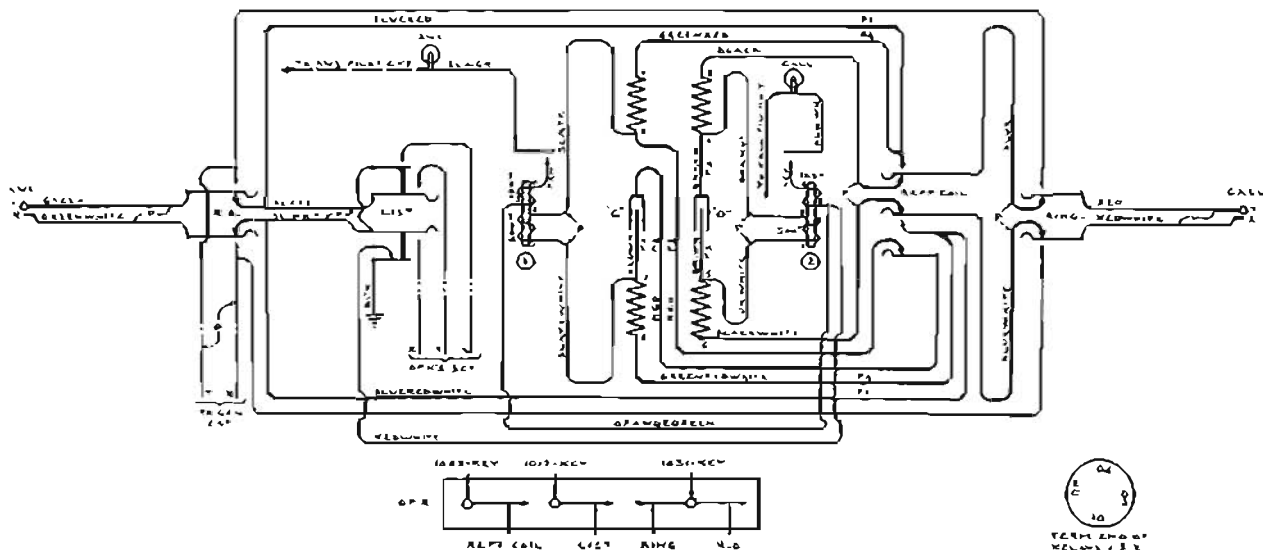
# Magneto Cord Circuit With Double Lamp Supervision With Condensers



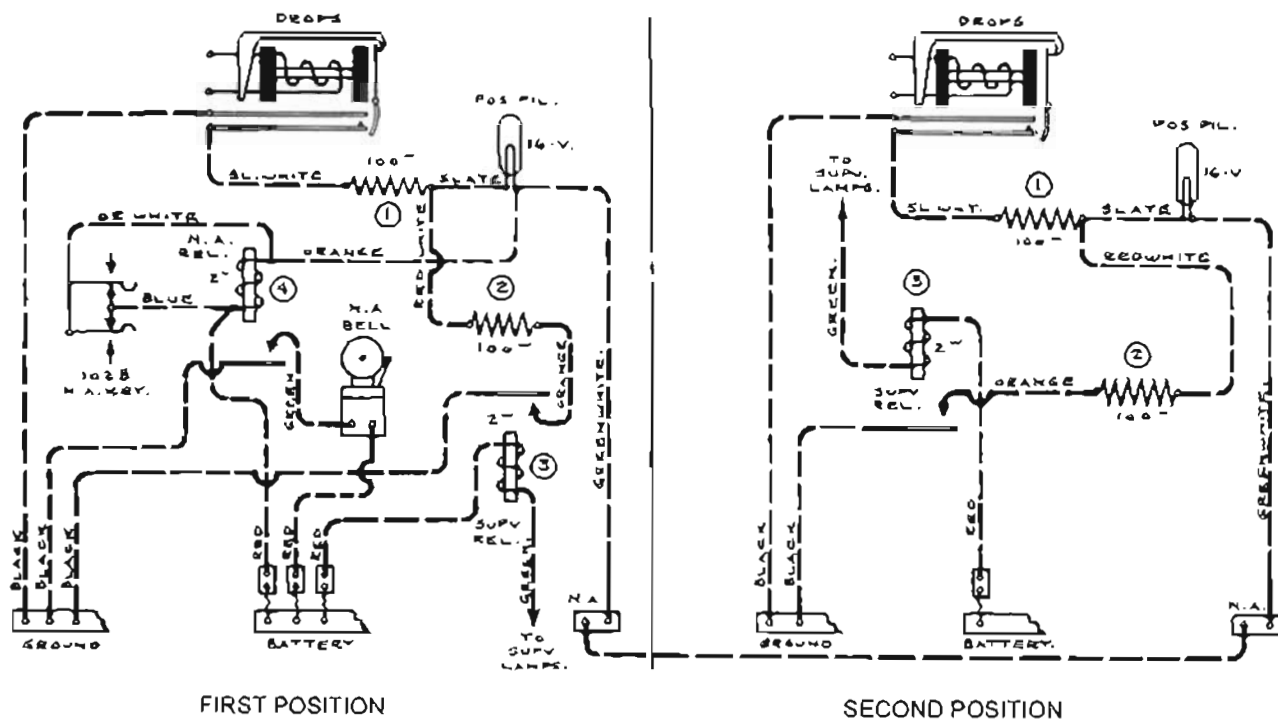
Magneto Operator's Telephone Circuit With Either Suspended (Fig. A) or Breast Plate Type Transmitter (Fig. B). Circuit Operated From Storage Batteries.



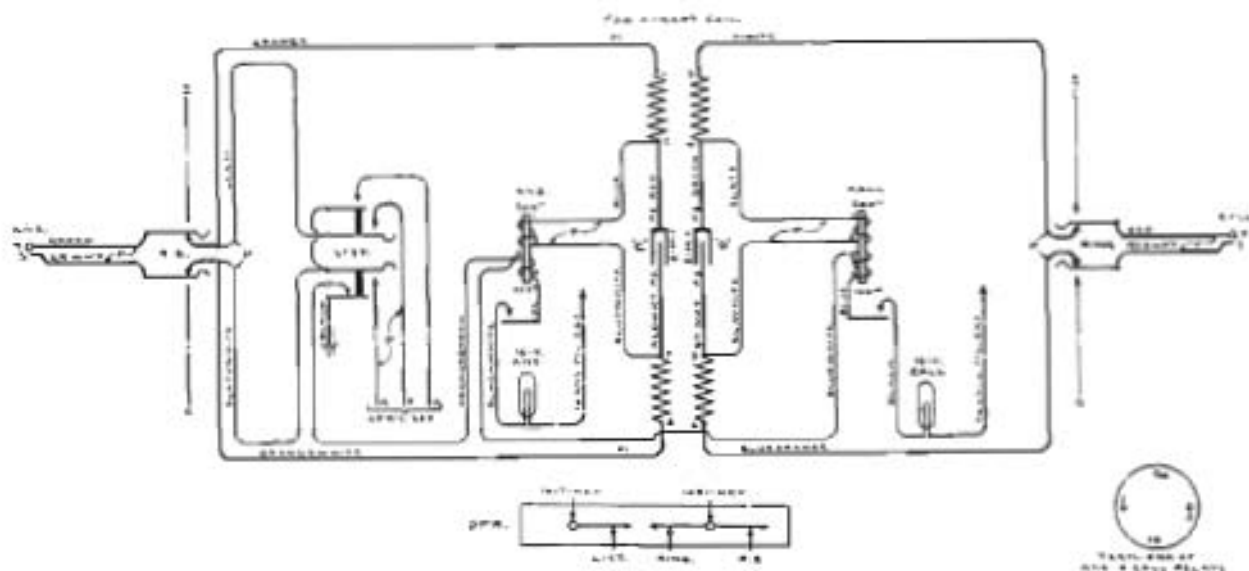
# Magneto Cord Circuit With Double Lamp Supervision, Repeating Coil and Repeating Coil Cutout Key



# Pilot Lamp Circuit and Night Alarm Used on Switchboards Having Lamp Supervision

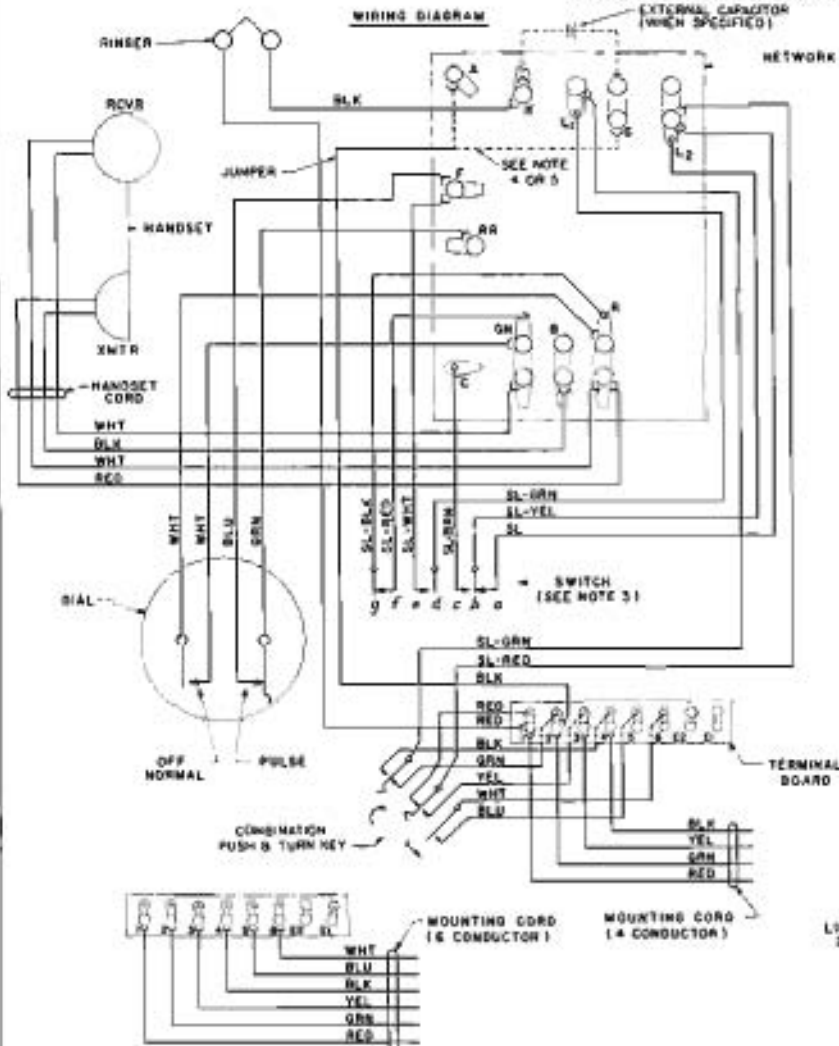


# Magneto Cord Circuit With Double Lamp Supervision and Repeating Coil



# K-510 TYPE TELEPHONE CIRCUIT

## WIRING DIAGRAM



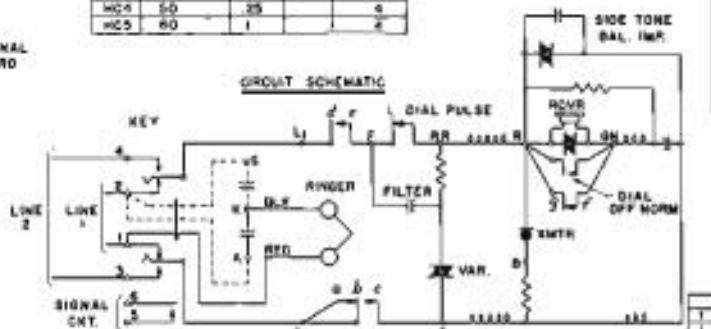
## NOTES:

- 1-FOR MANUAL SERVICE: REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE/WHITE SWITCH LEAD TO GRN TERMINAL ON NETWORK.
- 2-TO PERMANENTLY SILENCE RINGER: TRANSFER RED RINGER LEAD TO (K) TERMINAL ON NETWORK.
- 3-WHEN THE HANDSET IS REMOVED FROM CRADLE CONTACT *gf* BREAKS LAST.
- 4-MOUNT THE CONDENSER FURNISHED ON THE "H" TERMINAL OF THE NETWORK. CONNECT THE LEAD CONDENSER LEAD TO THE "G" TERMINAL, AND CONNECT JUMPER FROM "B" TERMINAL ON THE NETWORK TO # 2 ON THE TERMINAL BOARD.
- 5-CONNECT JUMPER FROM "A" TERMINAL ON THE NETWORK TO # 2 ON THE TERMINAL BOARD.

### TABLE OF RINGERS

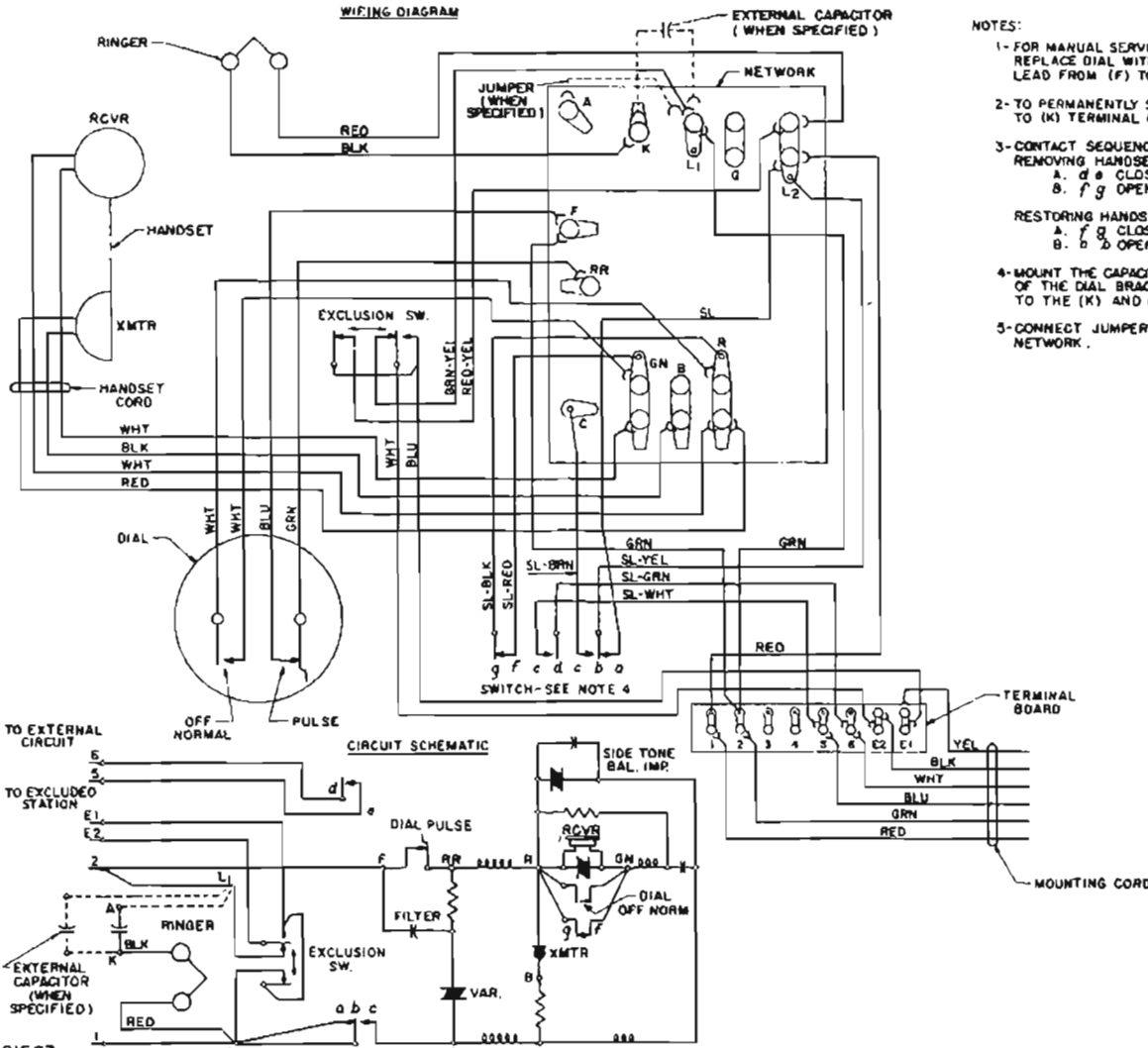
PTY.	CYCLES	MF	CONNECTIONS IN SET
RA1	33 1/2	.35	SEE NOTE 4
RA2	50	.1	4
RA3	66 2/3	.1	4
RA4	100 1/2	---	5
RA5	35	---	5
RB1	50	---	4
RB2	42	.25	4
RB3	54	.1	4
RB4	66	.1	4
RB5	16	---	5
RC1	20	---	5
RC2	30	.1	4
RC3	40	---	5
RC4	50	.25	4
RC5	60	.1	4

### CIRCUIT SCHEMATIC



# K-502 TYPE TELEPHONE CIRCUIT

## WIRING DIAGRAM



## NOTES:

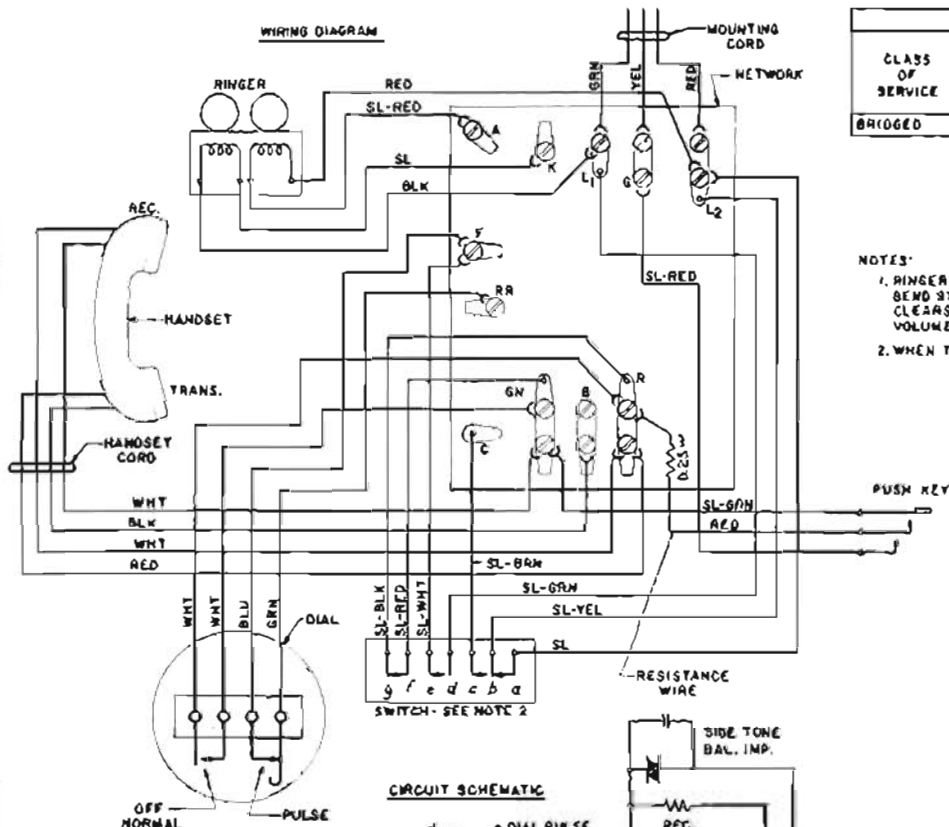
- 1- FOR MANUAL SERVICE:  
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER GREEN LEAD FROM (F) TO (RR) ON THE NETWORK.
- 2- TO PERMANENTLY SILENCE RINGER, TRANSFER RED RINGER LEAD TO (K) TERMINAL ON NETWORK.
- 3- CONTACT SEQUENCE:  
REMOVING HANDSET  
A. d e CLOSES BEFORE c d  
B. f g OPENS  
RESTORING HANDSET  
A. f g CLOSES  
B. d e OPENS BEFORE d e
- 4- MOUNT THE CAPACITOR FURNISHED WITH RINGER ON THE LEFT SIDE OF THE DIAL BRACKET. CONNECT THE LEADS OF THE CAPACITOR TO THE (K) AND (L1) TERMINALS ON THE NETWORK.
- 5- CONNECT JUMPER FROM (A) TO (L1) TERMINALS ON THE NETWORK.

TABLE OF RINGERS

PTY.	FREQUENCY SELECTIVE (HARMONIC) TYPES		CONNECTIONS IN SET
	CYCLES	VALUE OF EXTERNAL CAPACITOR U.F.	
HA1	33 1/3	.35	SEE NOTE 4
HA2	50	.1	4
HA3	66 2/3	.1	4
HA4	16 2/3	—	5
HA5	25	—	5
HB1	30	—	5
HB2	42	.25	4
HB3	54	.1	4
HB4	66	.1	4
HB5	16	—	5
HC1	20	—	5
HC2	30	.1	4
HC3	40	—	5
HC4	50	.25	4
HC5	60	.1	4

# K-500 TYPE TELEPHONE CIRCUIT

**WIRING DIAGRAM**



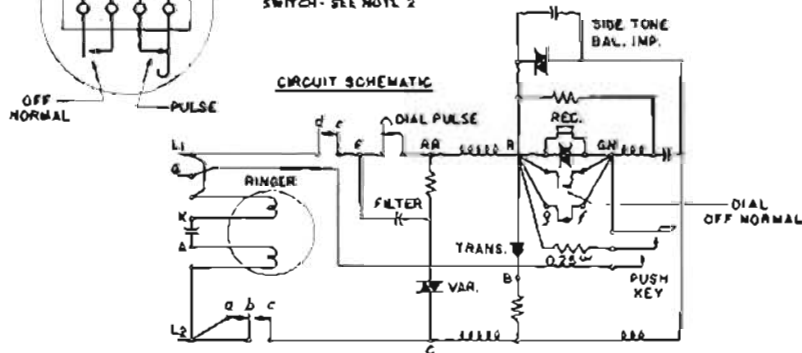
**TABLE OF CONNECTIONS**

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	1-14 REPEATER			MTG. CORD			MTG. CORD			RINGER LEADS			
	B	7	9	RED	GRN	YEL	RED	GRN	YEL	RED	BLK	SL	SL-RED
BRIDGED	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	L <sub>1</sub>	K	A

**NOTES:**

1. RINGER CUT-OFF CONTROL BY CUSTOMER: BEND STOP NUT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
2. WHEN THE HANDSET IS REMOVED CONTACT *g* BREAKS LAST.

**CIRCUIT SCHEMATIC**

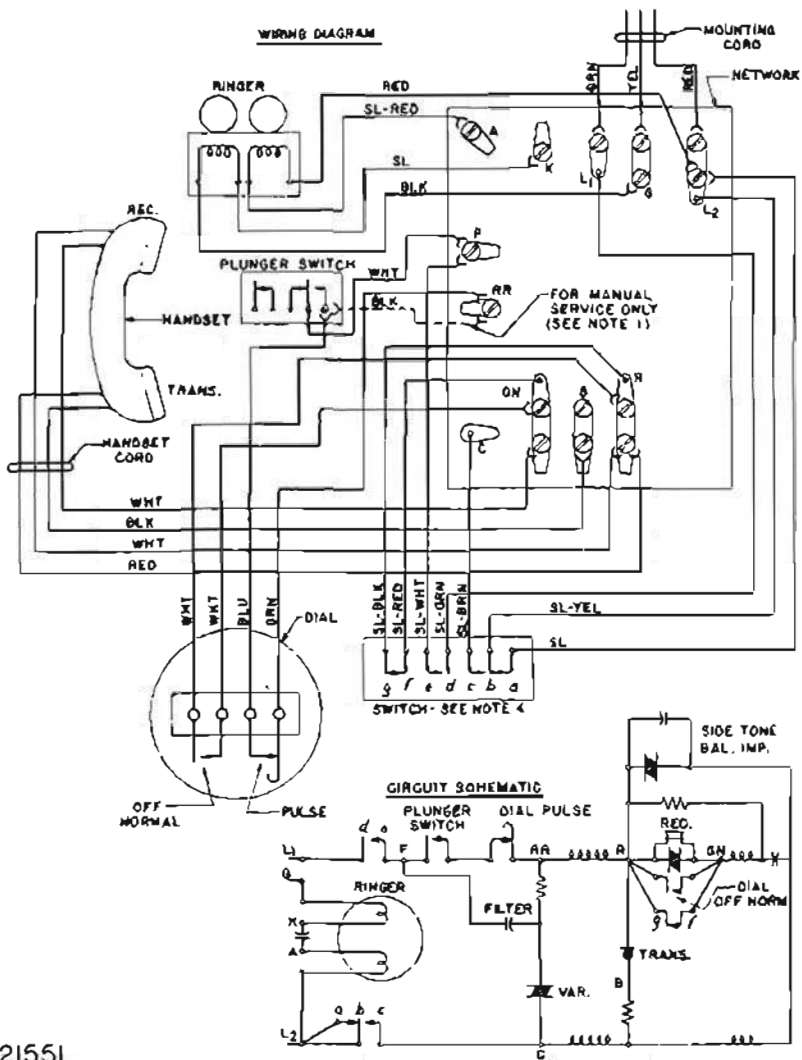






# K-500 TYPE TELEPHONE CIRCUIT

**WIRING DIAGRAM**



CLASS OF SERVICE	TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 4)														
	CONNECTIONS AT CONNECTING BLOCK					CONNECTIONS AT NETWORK									
	LINE	MTG CORD	RINGER LEADS		LINE	MTG CORD	RINGER LEADS								
RING PARTY	TIP	GRN	YEL	RED	GRN	YEL	RED	GRN	YEL	RED	GRN	YEL	RED	GRN	YEL
BRIDGED Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K	A		
RING PARTY Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K	A		
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	X	A		
TIP PARTY DIAL MESSAGE RATE	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	K	G	B	B		
AUTOMATIC TICKETING	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	B	B	X	Q		

Δ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR FLAT AND MESSAGE RATE SERVICE.

● TRANSFER SLATE SWITCH LEAD FROM (L<sub>2</sub>) TO (A) TERMINAL ON NETWORK.

**NOTES:**

**1. FOR MANUAL SERVICE:**

REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND CONNECT PLUNGER SWITCH TO (RR) TERMINAL ON NETWORK WITH BLK LEAD AS SHOWN.

**2. TO PERMANENTLY SILENCE RINGER:**

FOR BRIDGED, RING PARTY AND TIP PARTY EXCEPT DIAL MESSAGE RATE SERVICES, TRANSFER BLACK RINGER LEAD TO (A) TERMINAL ON NETWORK.

FOR TIP PARTY DIAL MESSAGE RATE SERVICE, TRANSFER SLATE-RED RINGER LEAD TO THE (K) TERMINAL, BLACK LEAD TO (B) AND SLATE LEAD TO (B) MUST REMAIN CONNECTED FOR PARTY IDENTIFICATION.

FOR AUTOMATIC TICKETING, TRANSFER BLACK RINGER LEAD TO THE (X) TERMINAL.

**3. RINGER CUT-OFF CONTROL BY CUSTOMER:**

BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME, THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.

4. WHEN THE HANDSET IS REMOVED CONTACT OF BREAKS LAST.

TABLE OF RINGERS				CONNECTIONS IN SET
FREQUENCY SELECTIVE (HARMONIC) TYPES	CY.	PTY.	MFD.	
RA1	33 1/3	1	33	SEE NOTE 5
RA2	30	2	1	3
RA3	27	3	1	5
RA4	18 2/3	4	1	6
RA5	28	5	1	6
RA6	30	1	1	6
MB1	42	2	25	5
MB2	54	3	1	5
MB3	54	4	1	5
MB4	86	4	1	5
MB5	16	5	1	6
HC1	20	1	1	6
HC2	60	2	1	3
HC3	30	3	1	6
HC4	40	4	25	3
HC5	30	5	1	3

**NOTES:**

5. MOUNT THE CAPACITOR FURNISHED WITH RINGER ON THE LEFT SIDE OF THE DIAL BRACKET. CONNECT THE LEADS OF CAPACITOR TO THE "K" AND "B" TERMINALS ON NETWORK.

6. CONNECT JUMPER FROM "A" TO "G" ON THE NETWORK.

**CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS**

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK										CONN. IN SET (ALSO SEE TABLE OF RINGERS)	
	LINE		MTG CORD		RINGER LEADS		RINGER LEADS		RINGER LEADS		RINGER LEADS	
	R	G	Y	R	G	Y	RED	GRN	YEL	RED	GRN	YEL
BRIDGED	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	X
RING PARTY	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	G	K
TIP PARTY	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	K	A

9. IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

WIRING DIAGRAM

K-500 TYPE TELEPHONE CIRCUIT

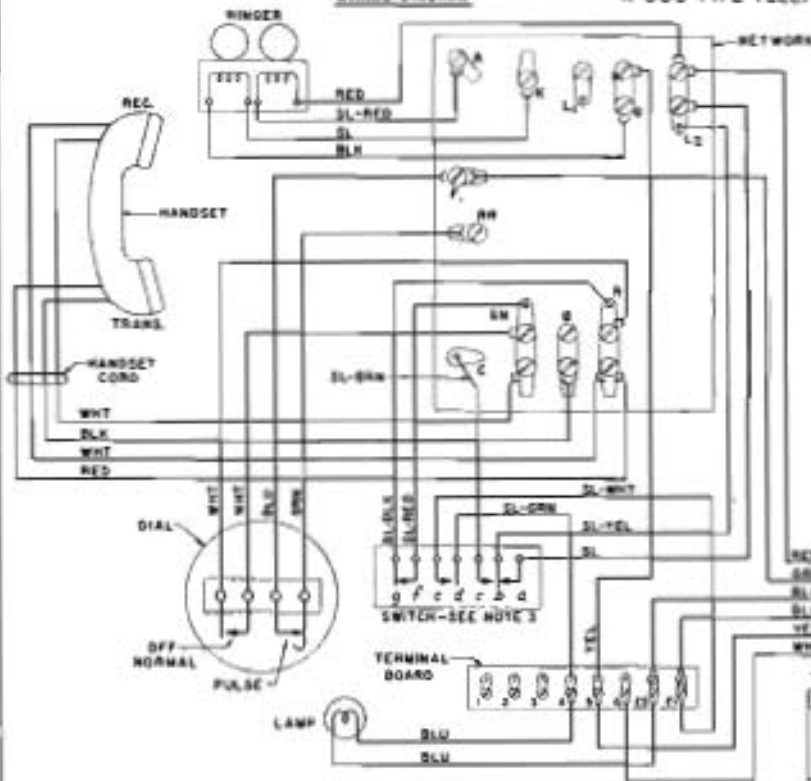


TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTE 1 TO 3)

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE	WTS. COORD.		WTS. COORD.		RINGER LEADS		RINGER LEADS		RINGER LEADS			
	RING	TIP	WTS.	COOR.	RED	GRN.	WTS.	COOR.	RED	BLK	SL	BLK	
BRIDGED	1	2	3	1	2	2	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	A
RING PARTY A	1	2	3	1	2	2	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	A
TIP PARTY	1	2	3	2	1	3	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	A
EXCEPT DIAL MESSAGE RATE	1	2	3	2	1	3	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	A
TIP PARTY DIAL MESSAGE RATE	1	2	3	2	1	3	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	A
AUTOMATIC TICKETING	1	2	3	2	1	3	L <sub>2</sub>	F	5	L <sub>2</sub>	6	X	C

- △ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR FLAT AND MESSAGE RATE SERVICE.
- \* TERMINAL 'S' IS ON TERMINAL BOARD.
- ◆ N TRANSFER SLATE SWITCH LEAD FROM (L<sub>2</sub>) TO (A) TERMINAL ON NETWORK.

- NOTES:
- 1- TO PERMANENTLY SILENCE RINGER: FOR BRIDGED, RING PARTY AND TIP PARTY EXCEPT DIAL MESSAGE RATE SERVICE, TRANSFER BLACK RINGER LEAD TO (H) TERMINAL ON NETWORK. (SEE NOTE 8)
  - 2- RINGER CUT-OFF CONTROL BY CUSTOMER: BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE ARM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
  - 3- WHEN THE HANDSET IS REMOVED CONTACT OF BREAKS LAST.
  - 4- MOUNT THE CONDENSER FURNISHED ON THE "H" TERMINAL OF THE NETWORK. CONNECT THE LOOSE CONDENSER LEAD TO THE "O" TERMINAL.
  - 5- CONNECT JUMPER FROM "2" TO "5" ON THE NETWORK.
  - 6- CONNECT 5 OR BY AC OR DC FOR DIAL LIGHT TO TERMINALS Y & 8 OR CONNECTING BLOCK.

7- CONNECT MOUNTING CORD WHT, BLU AND SLK TO TERMINALS 6, 7 & 8 ON CONNECTING BLOCK RESPECTIVELY.

8- TO PERMANENTLY SILENCE RINGER: FOR TIP PARTY DIAL MESSAGE RATE SERVICE, TRANSFER SLATE-RED RINGER LEAD TO THE (K) TERMINAL BLACK LEAD TO (6) AND SLATE LEAD TO (8) MUST REMAIN CONNECTED FOR PARTY IDENTIFICATION.  
FOR AUTOMATIC TICKETING, TRANSFER BLACK RINGER LEAD TO THE (K) TERMINAL.

CIRCUIT SCHEMATIC

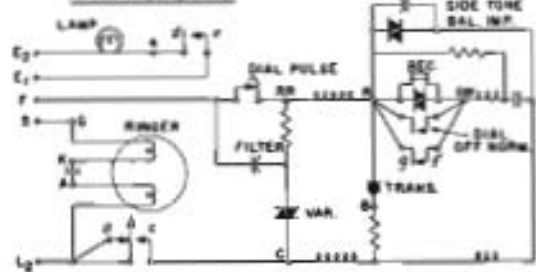


TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	CY.	PTY.	CONNECTIONS IN SET
RA 1	33 1/3	1	SEE NOTE 4
RA 2	50	2	4
RA 3	66 2/3	3	4
RA 4	83 1/3	4	5
RA 6	25	5	5
RA 1	30	1	5
RA 2	42	2	4
RA 3	54	3	4
RA 4	66	4	4
RA 5	78	5	5
RA 1	20	1	5
RA 2	30	2	4
RA 3	40	3	5
RA 4	50	4	4
RA 5	60	5	4

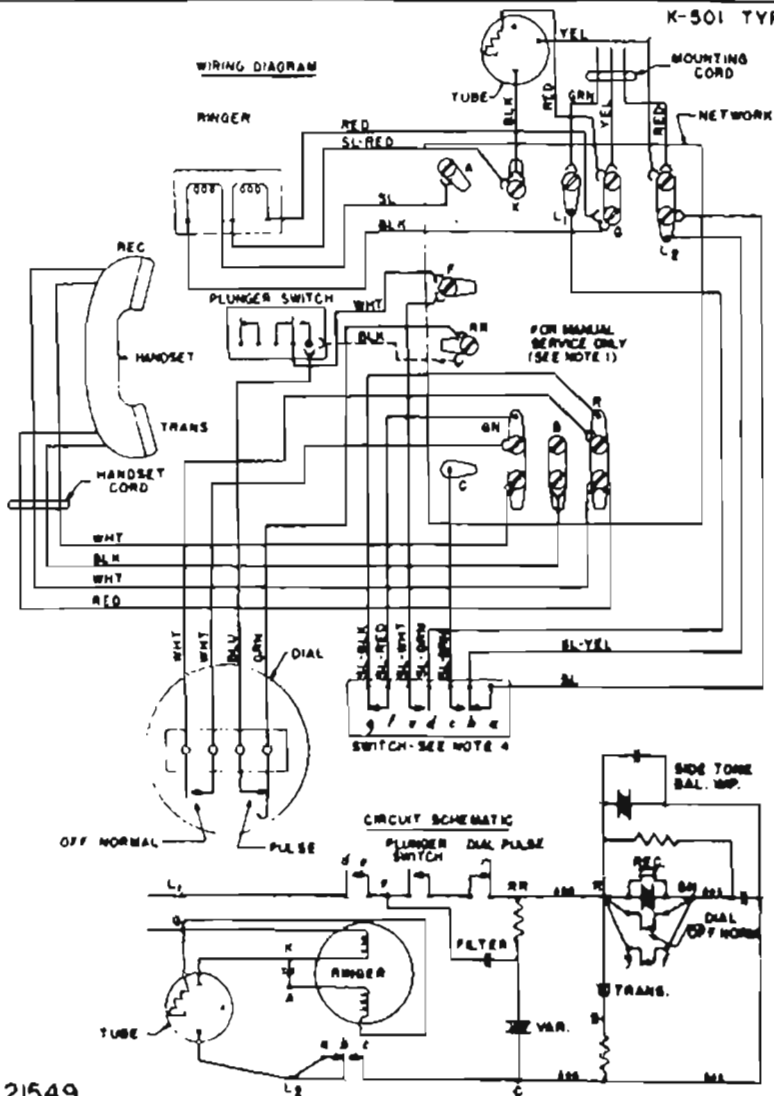
CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONN. IN SET (ALSO SEE TABLE OF RINGERS)	
	LINE	WTS. COORD.		WTS. COORD.		RED	BLACK	
	RING	TIP	WTS.	COOR.	RED	GRN.	BLACK	
BRIDGED	1	2	3	1	2	L <sub>2</sub>	X	
RING PARTY	1	2	3	1	2	L <sub>2</sub>	X	
TIP PARTY	1	2	3	2	1	L <sub>2</sub>	X	

1 IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

# K-501 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM



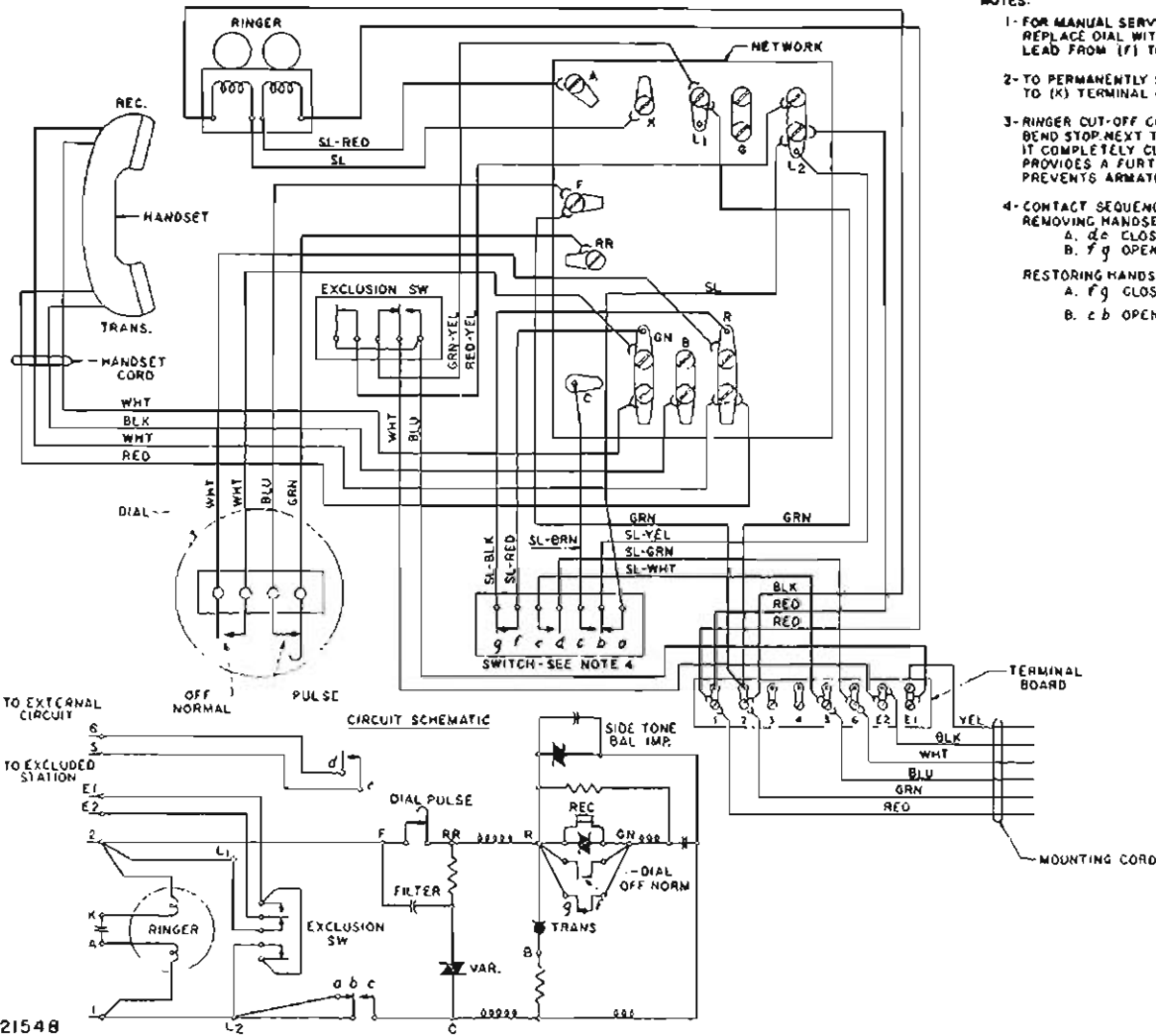
CLASS OF SERVICE	TABLE OF CONNECTIONS (POLARIZED RINGING)												
	CONNECTIONS AT CONNECTING BLOCK					CONNECTIONS AT NETWORK							
	LINE	TIP	GRD.	RED	MTG. CORD	TUBE LEADS	HYDRO LEADS						
(-) RING	R	G	Y	R	G	Y	L <sub>2</sub>	K	E	G	A	K	
(+) RING	R	G	Y	R	G	Y	L <sub>2</sub>	K	L <sub>2</sub>	L <sub>2</sub>	L <sub>2</sub>	A	K
(-) TIP	R	G	Y	G	R	Y	L <sub>2</sub>	K	E	G	A	K	
(+) TIP	R	G	Y	G	R	Y	L <sub>2</sub>	K	L <sub>2</sub>	L <sub>2</sub>	L <sub>2</sub>	A	K

NOTES:

- FOR MANUAL SERVICE, REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND CONNECT PLUNGER SWITCH TO (RR) TERMINAL ON NETWORK WITH BLK LEAD AS SHOWN.
- TO PERMANENTLY SILENCE RINGER: FOR RING PARTY, CONNECT THE YELLOW MOUNTING CORD CONDUCTOR TO THE (R) TERMINAL OF THE CONNECTING BLOCK. FOR TIP PARTY CONNECT THE YELLOW MOUNTING CORD CONDUCTOR TO THE (6) TERMINAL OF THE CONNECTING BLOCK.
- RINGER CUT-OFF CONTROL BY CUSTOMER: BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- WHEN THE HANDSET IS REMOVED CONTACT *g* BREAKS LAST.

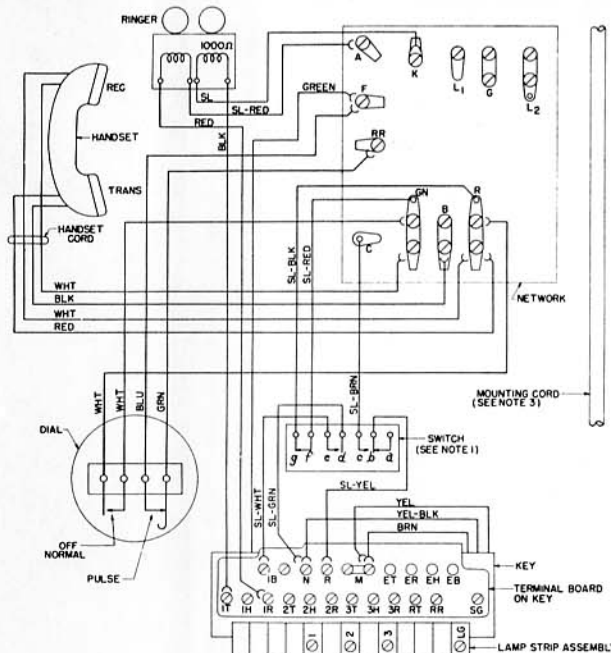


WIRING DIAGRAM



NOTES:

- 1- FOR MANUAL SERVICE:  
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER GREEN LEAD FROM (F) TO (RR) ON THE NETWORK.
- 2- TO PERMANENTLY SILENCE RINGER, TRANSFER BLACK RINGER LEAD TO (X) TERMINAL ON NETWORK.
- 3- RINGER CUT-OFF CONTROL BY CUSTOMER:  
BEND STOP-NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- 4- CONTACT SEQUENCE:  
REMOVING HANDSET  
A. d e CLOSES BEFORE c b  
B. f g OPENS  
RESTORING HANDSET  
A. f g CLOSES  
B. c b OPENS BEFORE d e



**NOTES**

- CONTACT SEQUENCE  
 REMOVING HANDSET  
 A-dc CLOSES BEFORE cd  
 B-fg OPENS  
 RESTORING HANDSET  
 A-fgc CLOSES  
 B-cd OPENS BEFORE de
- FOR MANUAL SERVICE, REPLACE DIAL WITH DUMMY PLUG ASSY AND TRANSFER GREEN KEY LEAD FROM (F) TERMINAL TO (RR) TERMINAL ON NETWORK
- SEE TABLE FOR CONNECTIONS
- RINGER CUT-OFF CONTROL BY CUSTOMER; BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RING FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT
- KEY FEATURE DESIGNATIONS  
 H-HOLD  
 P-PICK-UP  
 S-SIGNAL  
 P<sup>A</sup>- CONVERTIBLE, PICK-UP OR SIGNAL
- DDx CONDUCTORS ARE TAPED AND STORED IN TELEPHONE
- PROVIDE "M" WIRING WHEN BUZZER IS TO OPERATE ON 60 CYCLES AC, AND PROVIDE "N" WIRING WHEN THE BUZZER IS TO OPERATE ON DC

**TABLE A**

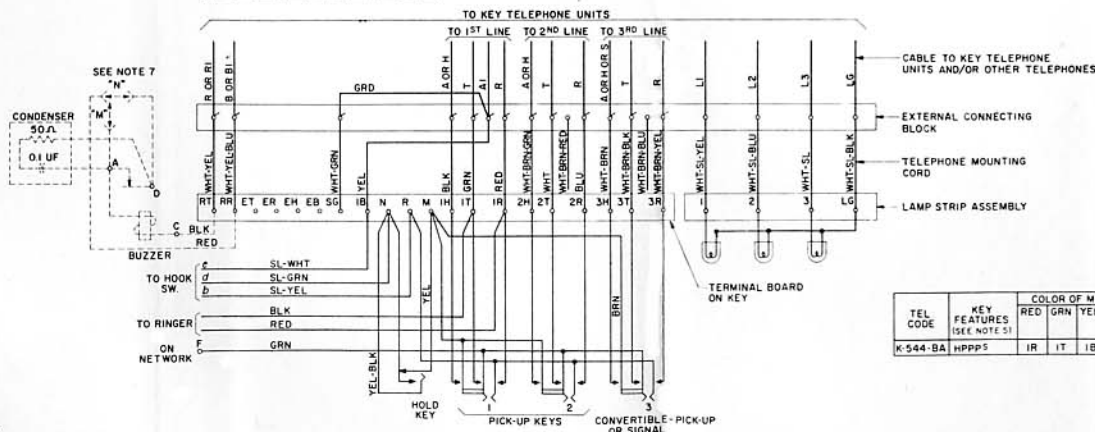
UNIVERSAL-KIAI SYSTEM CONVERSION-STATION BUSY SIGNAL CONNECTIONS CONNECTION OF HOLD KEY AND SWITCH LEADS						
KEY TEL SYS	HOLD KEY AND SWITCH LEADS					
	SL-WHT	SL-GRN	SL-YEL	YEL	YEL-BLK	
NO STATION BUSY LAMP	UNIV	IB	IB	N	R	M
	KIAI	IB	N	R	M	N

**TABLE B**

RINGER CONNECTIONS						
	WHEN USED AS BRIDGED RINGER ON ANY LINE	RINGER OR BUZZER LEAD				
		SL- RED	SL	BLK	RED	
SET RINGER OR BUZZER NOT TO BE CUT OFF IN SET	WHEN USED AS PRIVATE LINE, COMMON SIGNAL OR OTHER USE		A	K	T	R
		WITH COND.	A	K	RT	RR
	WITHOUT COND.	A	A			

**TABLE C**

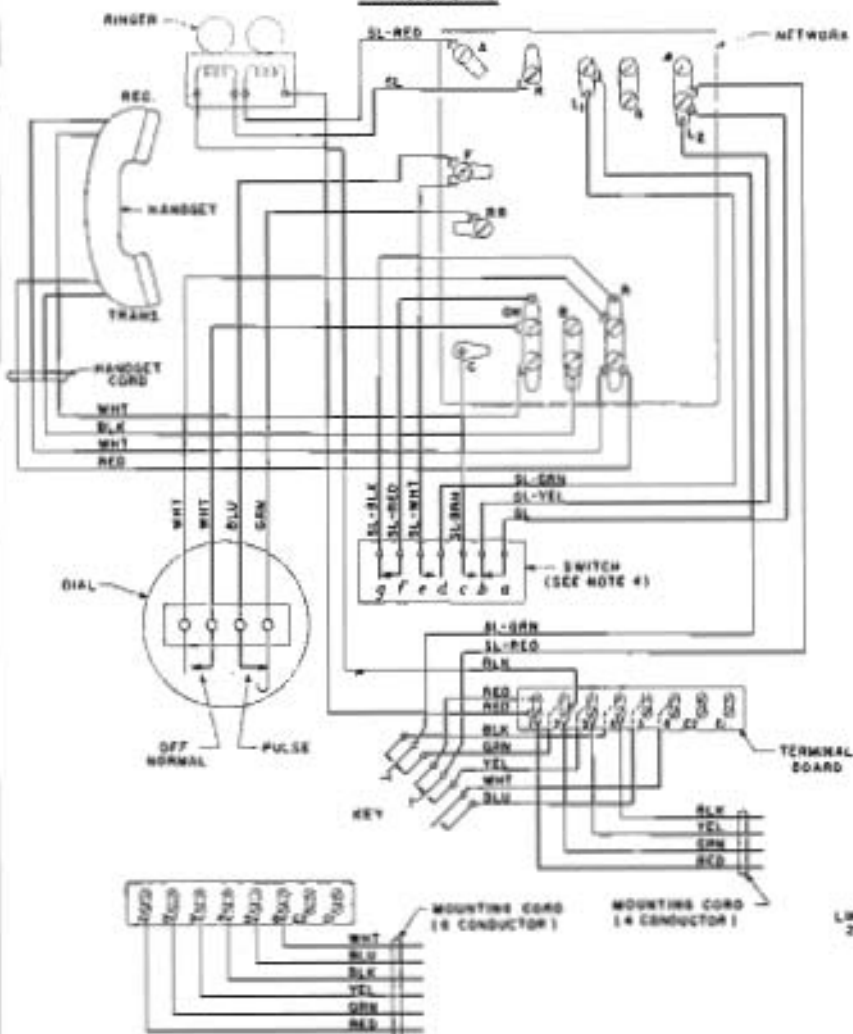
PICK-UP - SIGNALING CONVERSION CONVERT FROM LOCKING TO NON-LOCKING OR VICE-VERSA AND CHANGE LEADS AS FOLLOWS						
A BUTTON SETS	NO OF PICK-UP KEYS	NO OF SIG. KEYS CONVERTED FROM P.U. KEYS	NO OF PRIVATE AND INTERCOMMUNICATING LINES WITH COMMON SIG. KEY	KEY LEADS		
				YEL- BRN	BRN	SL- BRN
	3			M		
	2	1		SG		



TEL CODE	KEY FEATURES (SEE NOTE 5)	COLOR OF MOUNTING CORD CONDUCTORS TO TERMINALS ON KEY AND LAMP TERMINAL STRIP																		
		RED	GRN	YEL	BLK	BLU	WHT	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN	WHT- BRN		
K-544-BA	HPPP5	IR	IT	IB	IH	2R	2T	DDx	2H	3R	3T	DDx	3H	RR	RT	SG	LG	1	2	3

# K-510 TYPE TELEPHONE CIRCUIT

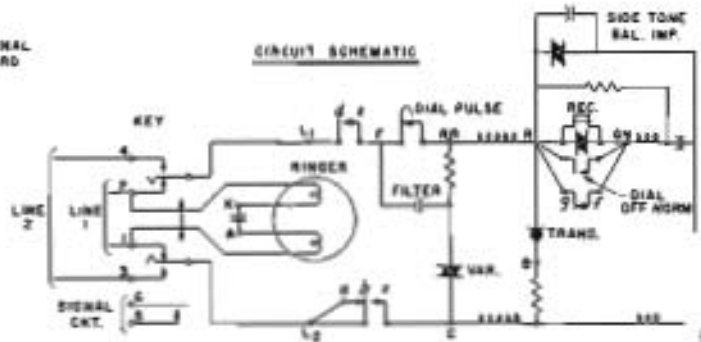
## WIRING DIAGRAM



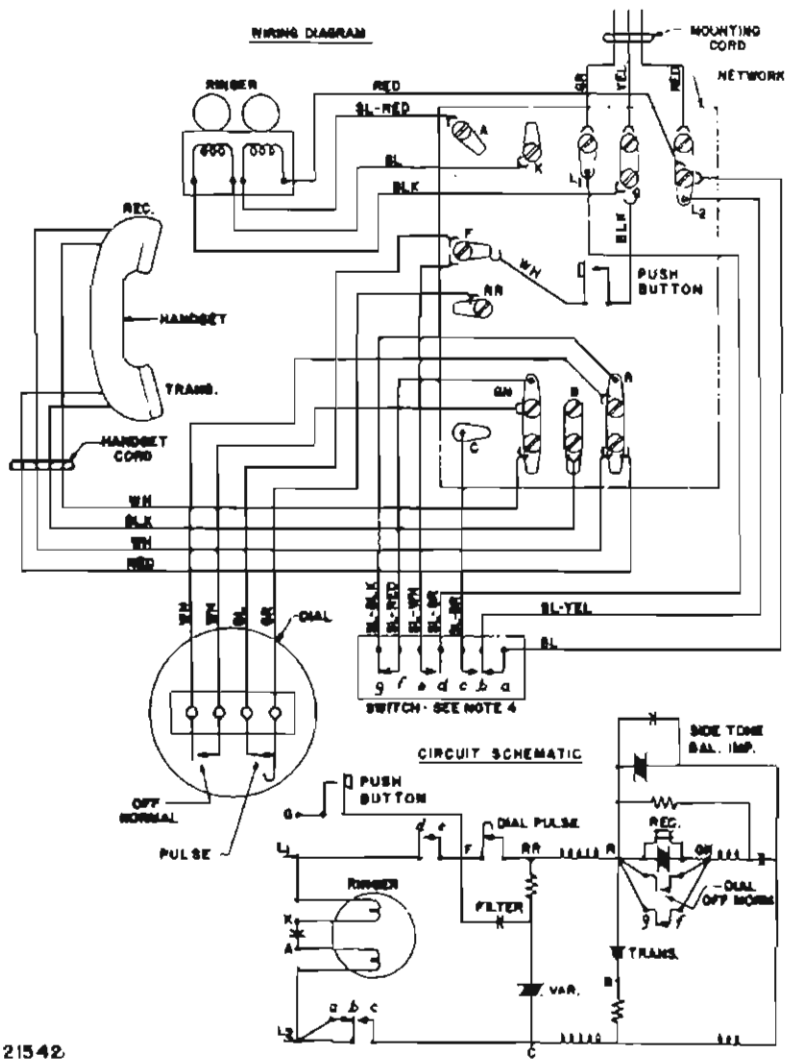
## NOTES-

1. FOR MANUAL SERVICE: REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE. WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
2. TO PERMANENTLY SILENCE RINGER, TRANSFER BLACK RINGER LEAD TO (X) TERMINAL ON NETWORK.
3. RINGER CUT-OFF CONTROL BY CUSTOMER. SEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
4. WHEN THE HANDSET IS REMOVED FROM CRADLE CONTACT, / BREAKS LAST.

## CIRCUIT SCHEMATIC



# PHONE CIRCUIT



**TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 4)**

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE			MTG. CORD			MTG. CORD			RINGER LEADS			
	RING	TIP	QMD.	RED	GR	YEL	RED	GR	YEL	RED	BLK	SL	BLK
BRIDGED Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	Ø	L <sub>2</sub>	L <sub>1</sub>	K	A
RING PARTY Δ	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	Ø	L <sub>2</sub>	L <sub>1</sub>	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	Ø	R	Y	L <sub>2</sub>	L <sub>1</sub>	Ø	L <sub>2</sub>	Ø	K	A
TIP PARTY DIAL MESSAGE RATE	R	Ø	Y	Ø	R	Y	L <sub>2</sub>	L <sub>1</sub>	Ø	X	Ø	Ø	Ø
AUTOMATIC TICKETING	R	Ø	Y	Ø	R	Y	L <sub>2</sub>	L <sub>1</sub>	Ø	Ø	Ø	K	Ø

▲ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR FLAT AND MESSAGE RATE SERVICE.

◆ TRANSFER SLATE SWITCH LEAD FROM (L<sub>2</sub>) TO (A) TERMINAL ON NETWORK.

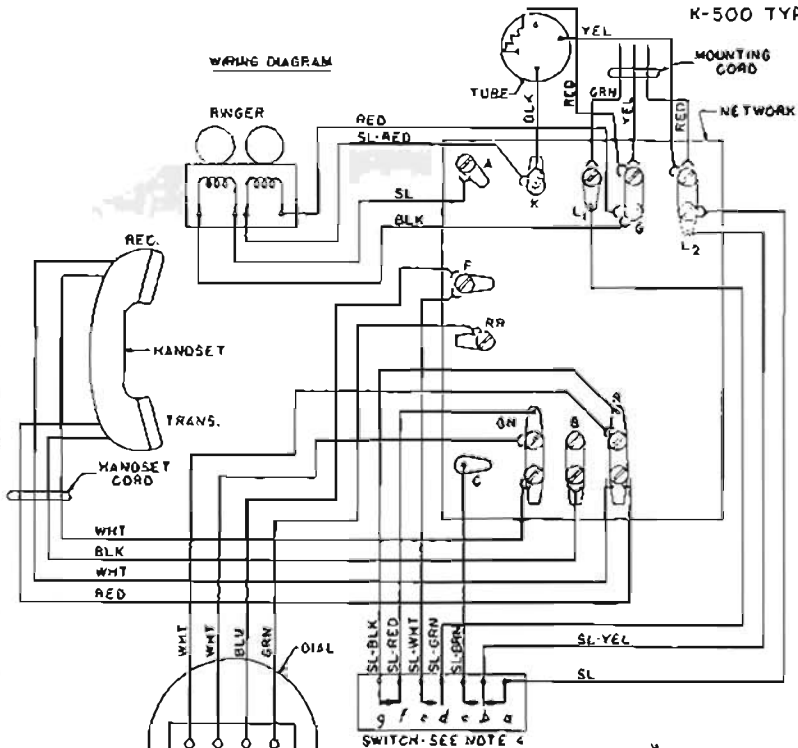
**NOTES:**

- FOR MANUAL SERVICE:  
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
- TO PERMANENTLY SILENCE RINGER:  
FOR BRIDGED, RING PARTY AND TIP PARTY EXCEPT DIAL MESSAGE SERVICES, TRANSFER BLACK RINGER LEAD TO (A) TERMINAL ON NETWORK.  
FOR TIP PARTY DIAL MESSAGE RATE SERVICE, TRANSFER SLATE-RED RINGER LEAD TO THE (K) TERMINAL. BLACK LEAD TO (G) AND SLATE LEAD TO (B) MUST REMAIN CONNECTED FOR PARTY IDENTIFICATION.  
FOR AUTOMATIC TICKETING, TRANSFER BLACK RINGER LEAD TO THE (K) TERMINAL.
- RINGER CUT-OFF CONTROL BY CUSTOMER:  
BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- WHEN THE HANDSET IS REMOVED CONTACT *g* BREAKS LAST.



# K-500 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM



SWITCH - SEE NOTE 4

CIRCUIT SCHEMATIC

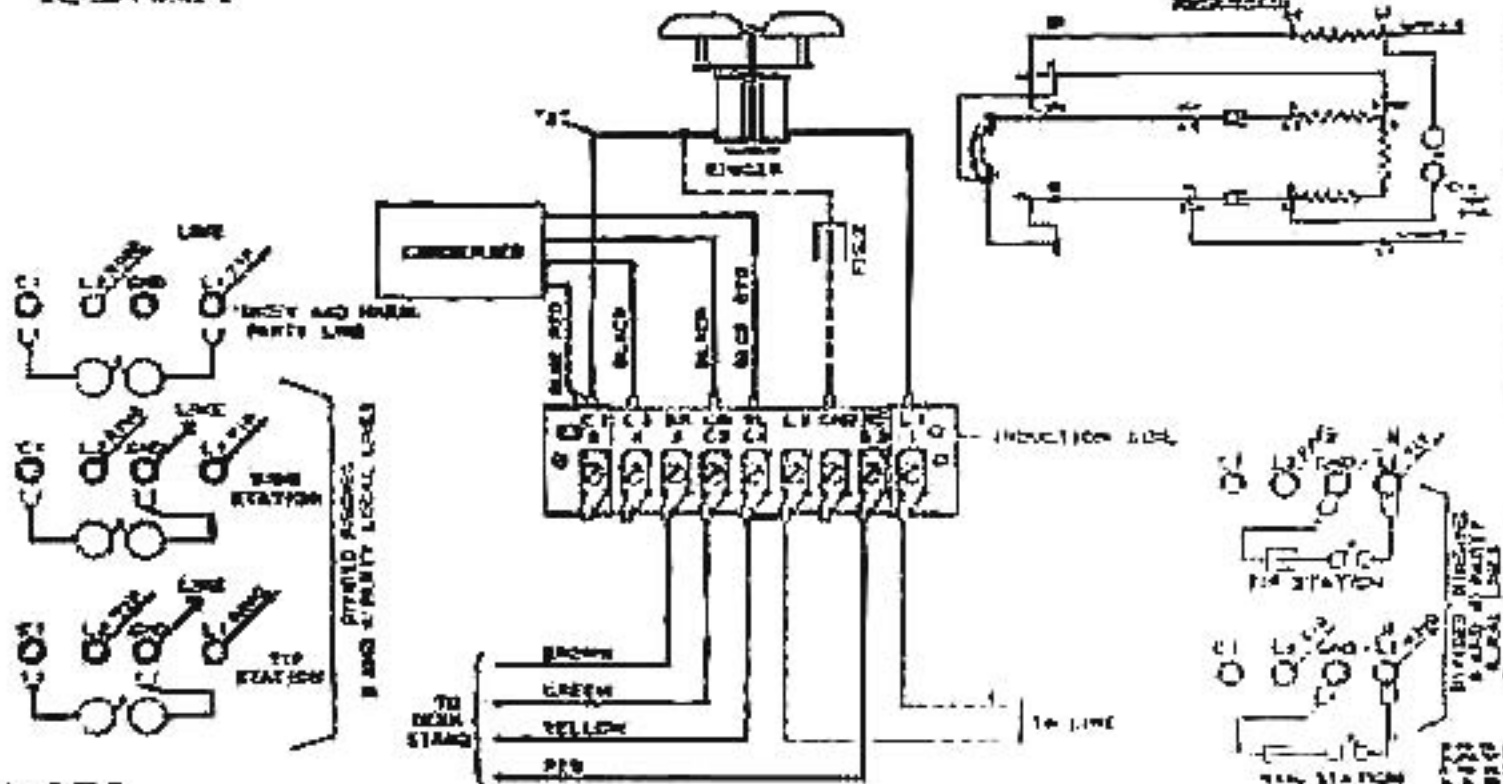
CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE		MTG. CORD				TUBE LEADS			RINGER LEADS			
	RING	TIP	GRD.	RED	GRN	YEL	YEL	BLK	RED	RED	BLK	SL	SL-RED
(-) RING	R	G	Y	R	G	Y	L2	K	G	G	G	A	X
(+) RING	R	G	Y	R	G	Y	L2	K	L2	L2	L2	A	X
(-) TIP	R	G	Y	G	R	Y	L2	K	G	G	G	A	X
(+) TIP	R	G	Y	G	R	Y	L2	K	L2	L2	L2	A	X

NOTES:

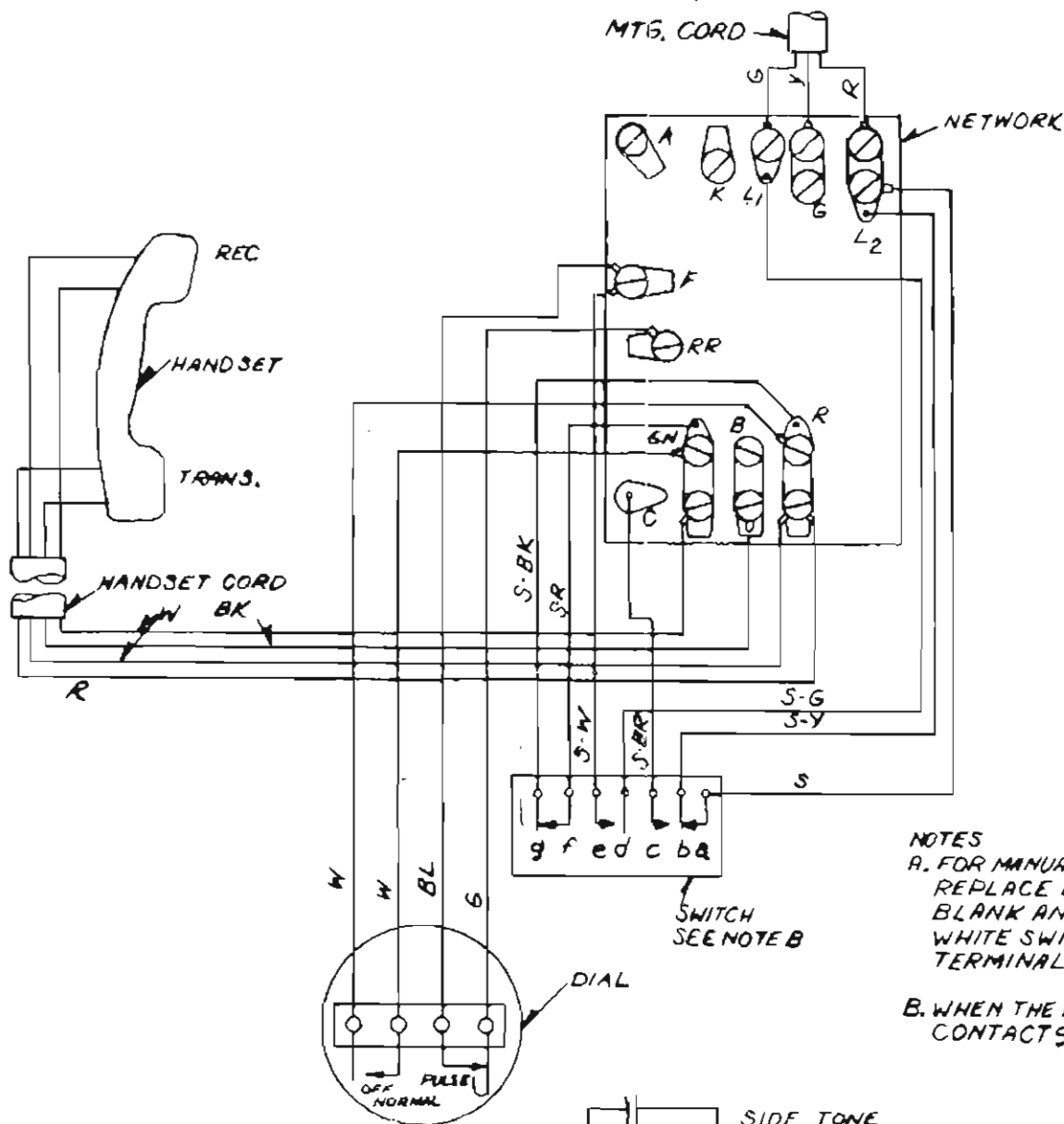
- FOR MANUAL SERVICE:  
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
- TO PERMANENTLY SILENCE RINGER:  
FOR RING PARTY, CONNECT THE YELLOW MOUNTING CORD CONDUCTOR TO THE (R) TERMINAL OF THE CONNECTING BLOCK; FOR TIP PARTY, CONNECT THE YELLOW MOUNTING CORD CONDUCTOR TO THE (G) TERMINAL OF THE CONNECTING BLOCK.
- RINGER CUT-OFF CONTROL BY CUSTOMER:  
BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE ARM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- WHEN THE HANDSET IS REMOVED CONTACT *g* BREAKS LAST.

# COMM. BATT. D.S. BOX CRT.

NOTE:  
 WIRE PANEL FOR POWER SOURCE PARTS  
 LISTED IN SPECIFICATIONS AND CONTROL PANEL  
 AND PART LISTING



WIRING DIAGRAM (591BW)

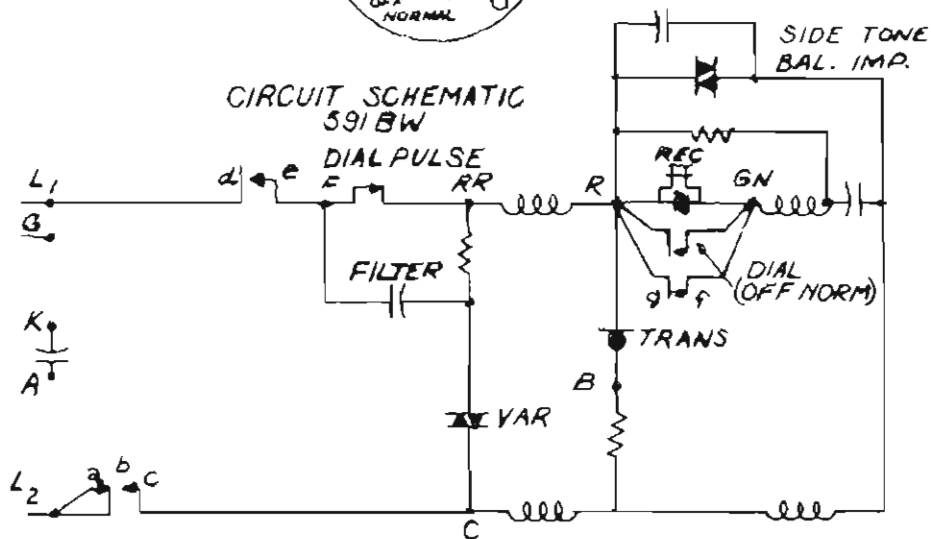


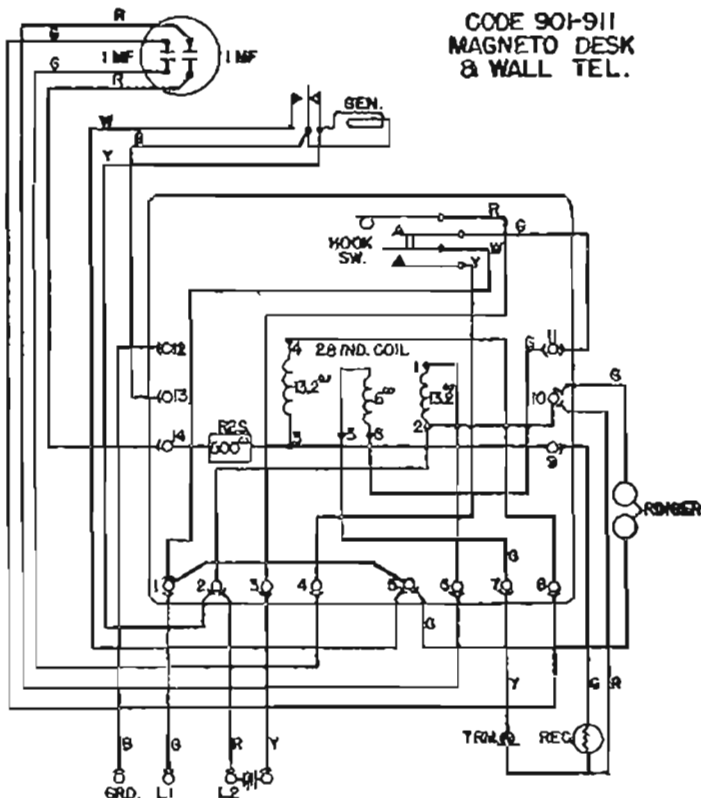
NOTES

A. FOR MANUAL SERVICE (591AW)  
 REPLACE DIAL WITH APPARATUS  
 BLANK AND TRANSFER SLATE.  
 WHITE SWITCH LEAD TO (RR)  
 TERMINAL ON NETWORK.

B. WHEN THE HANDSET IS REMOVED  
 CONTACT gf BREAKS LAST.

CIRCUIT SCHEMATIC  
 591BW



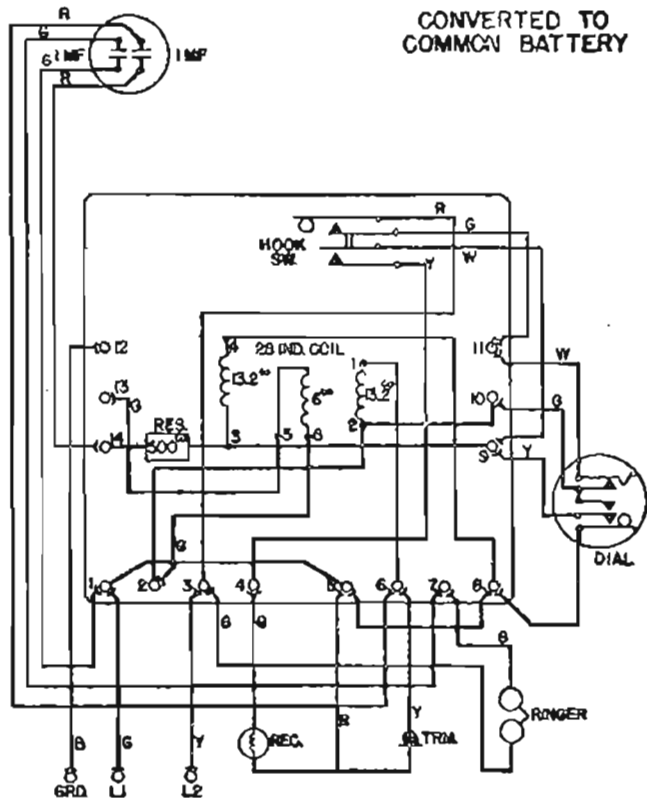


901 TELEPHONE

FOR METALLIC RINGING, CONNECT RINGER TO 6 AND 10.  
 FOR GROUNDED RINGING, CONNECT RINGER TO 6 AND 12.  
 FOR RINGING OUT WITH BELL SILENT, CONNECT RINGER TO 8 AND 13.  
 FOR RINGING OUT METALLIC, CONNECT GEN. YEL. TO 2  
 FOR RINGING OUT THRU GROUND, CONNECT GEN. YEL. TO 12.

911 TELEPHONE WITH HOOKSW. LATCH

SAME AS ABOVE EXCEPT HOOKSWITCH IS WIRED GREEN LEAD TO 1, WHITE LEAD TO 11.  
 LINE CORD, YELLOW CONNECTED TO 4 (FROM 3).  
 CONDENSER, GREEN CONNECTED TO 3 (FROM 4).



TO CONVERT TO COMMON BATTERY, DISCONNECT GEN. LEADS Y, W, B FROM 2, 3, 13 AND REMOVE GENERATOR. INSTALL DIAL BLANK OR DIAL. REMOVE GEN. COVER FROM TEL. CASE.

CHANGE: INDUCTION COIL LEADS (6) FROM 7 & 11 TO 2 & 13; HANDSET LEADS, RED FROM 10 TO 5, GREEN FROM 9 TO 4, YELLOW FROM 7 TO 6; HOOKSWITCH LEAD, WHITE 1 TO 9; CONDENSER LEADS GREEN 4 & 8 TO 187; STRAP 688.

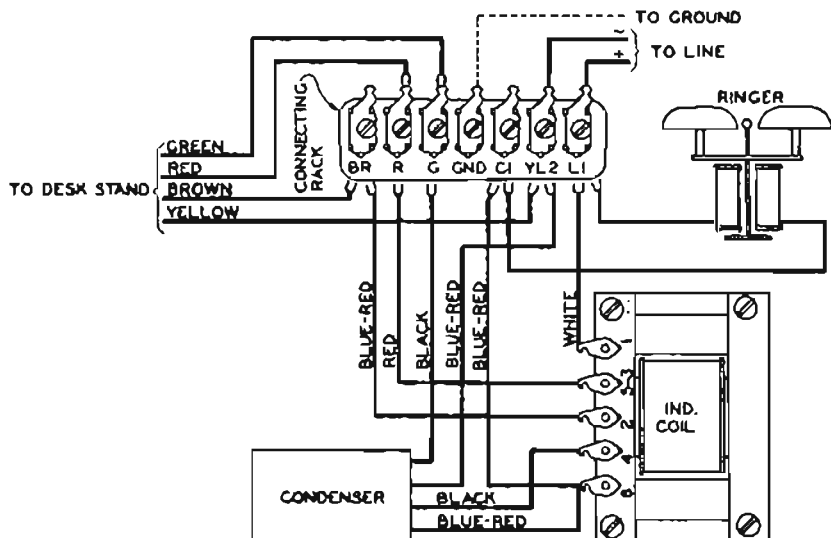
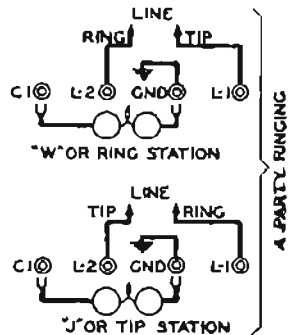
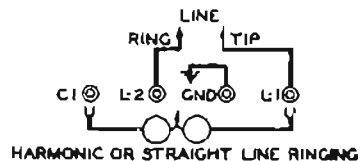
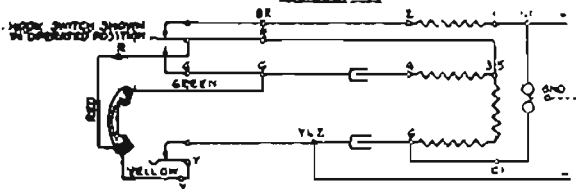
FOR METALLIC RINGING, CONNECT RINGER TO 7 & 3;  
 FOR GROUNDED RINGING, CONNECT RINGER TO 7 & 12.  
 WHEN DIAL IS USED, CONNECT HOOKSWITCH GREEN LEAD TO 11.  
 WHEN DIAL IS NOT USED, CONNECT HOOKSWITCH GREEN LEAD TO 10.  
 WITH 911 TELEPHONE: CONNECT HOOKSWITCH WHITE LEAD TO 6,  
 HANDSET GREEN LEAD TO 9, HANDSET YELLOW LEAD TO 4.

# TRIAD CIRCUIT

COMMON BATTERY D. S. BOX

21098

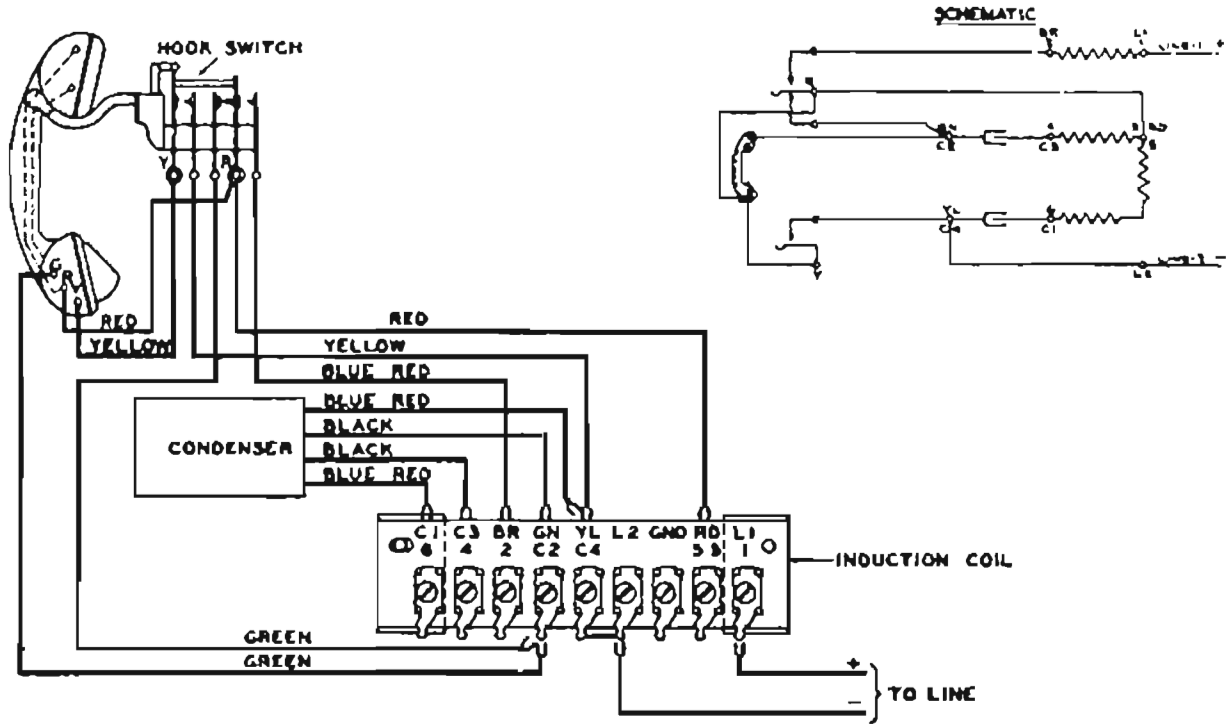
**SCHEMATIC**



21098

# COMM. BATT. WALL TELEPHONE CKT. WITH HANDSET

21071



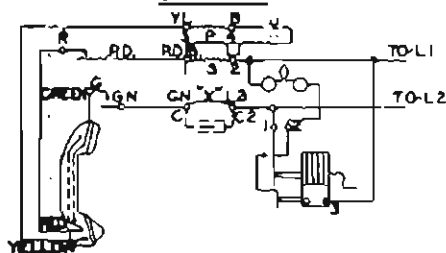
21071

# MAGNETO MASTERPHONE CIRCUIT

(SIMPLIFIED WIRING)

21063

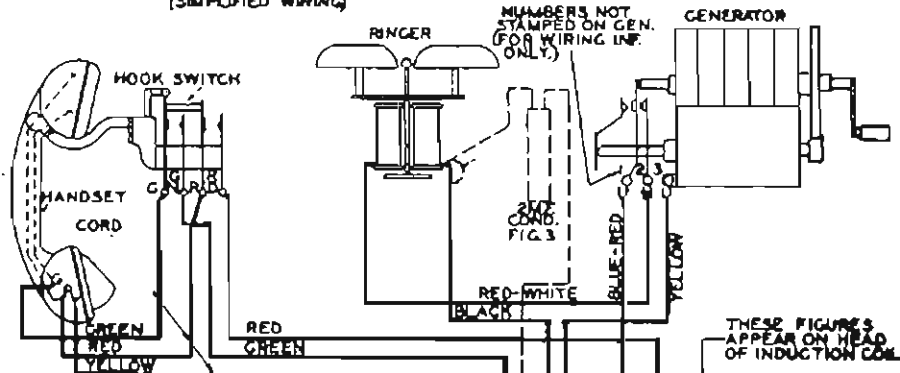
**SCHEMATIC**



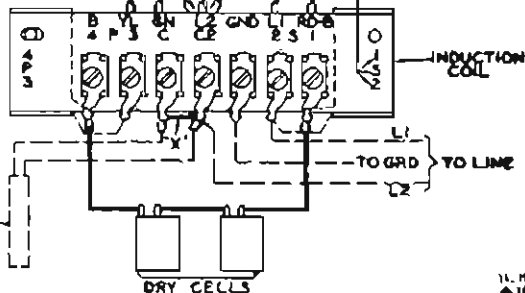
**FIG. 2**  
WHEN CONDENSER IN RECEIVER AND RINGER CIRCUIT, OR FIG. 2 IS SPECIFIED, REMOVE STRAP "X", CONNECT CONDENSER AS SHOWN AND CONNECT WIRE "Y" TO BINDING POST "GN" INSTEAD OF "L2".

**FIG. 3**  
WHEN CONDENSER IN RINGER CIRCUIT OR FIG. 3 IS SPECIFIED, CONNECT CONDENSER AS SHOWN AND OMIT WIRE "Y".

**FIG. 4**  
WHEN CONDENSER IN RECEIVER CIRCUIT OR FIG. 4 IS SPECIFIED REMOVE STRAP "X" AND CONNECT CONDENSER AS SHOWN.

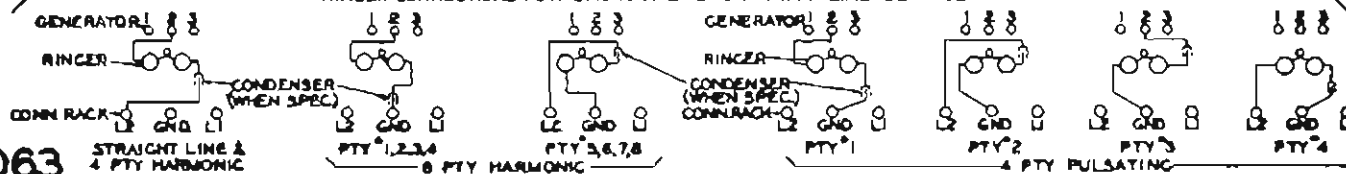


**NOTE**  
ALL WIRING IS FLEXIBLE.



11-19-34  
4-18-34

**RINGER CONNECTIONS FOR STRAIGHT LINE OR PARTY LINE SERVICE**

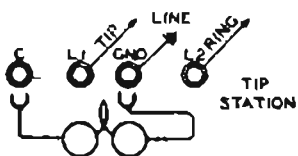
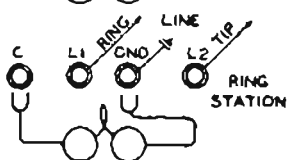
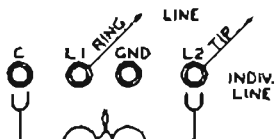
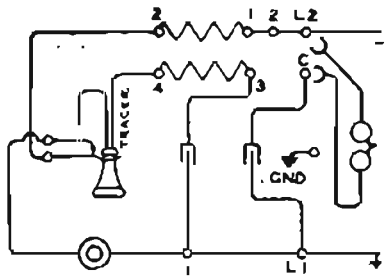


21063

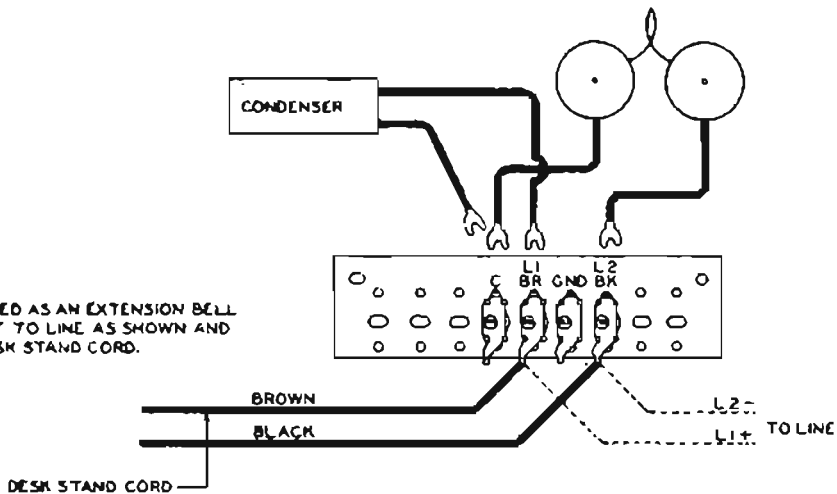
# COMMON BATT. DESK SET BOX CKT.

2-CONDUCTOR  
SIMPLIFIED WIRING

21059



NOTE -  
WHEN USED AS AN EXTENSION BELL  
CONNECT TO LINE AS SHOWN AND  
OMIT DESK STAND CORD.

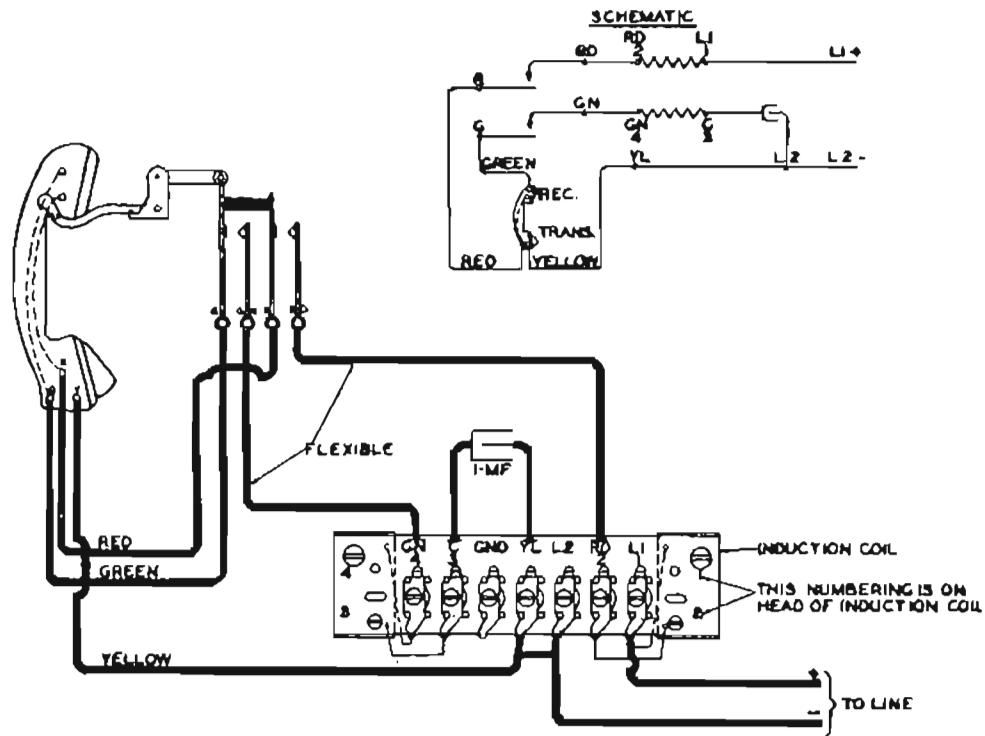


21059



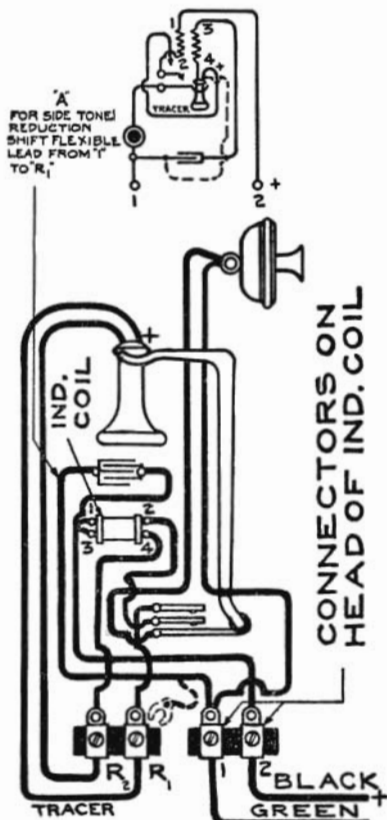
# COMMON BATT. EXTENSION SET CKT. WITH HANDSET

21058



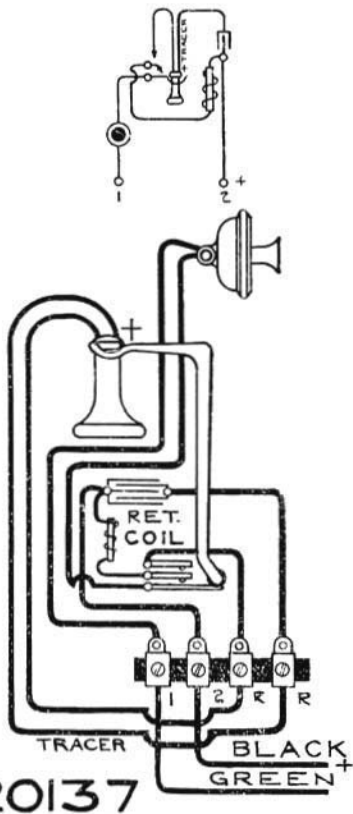
21058

FIG. 3 NO 97, 97-A

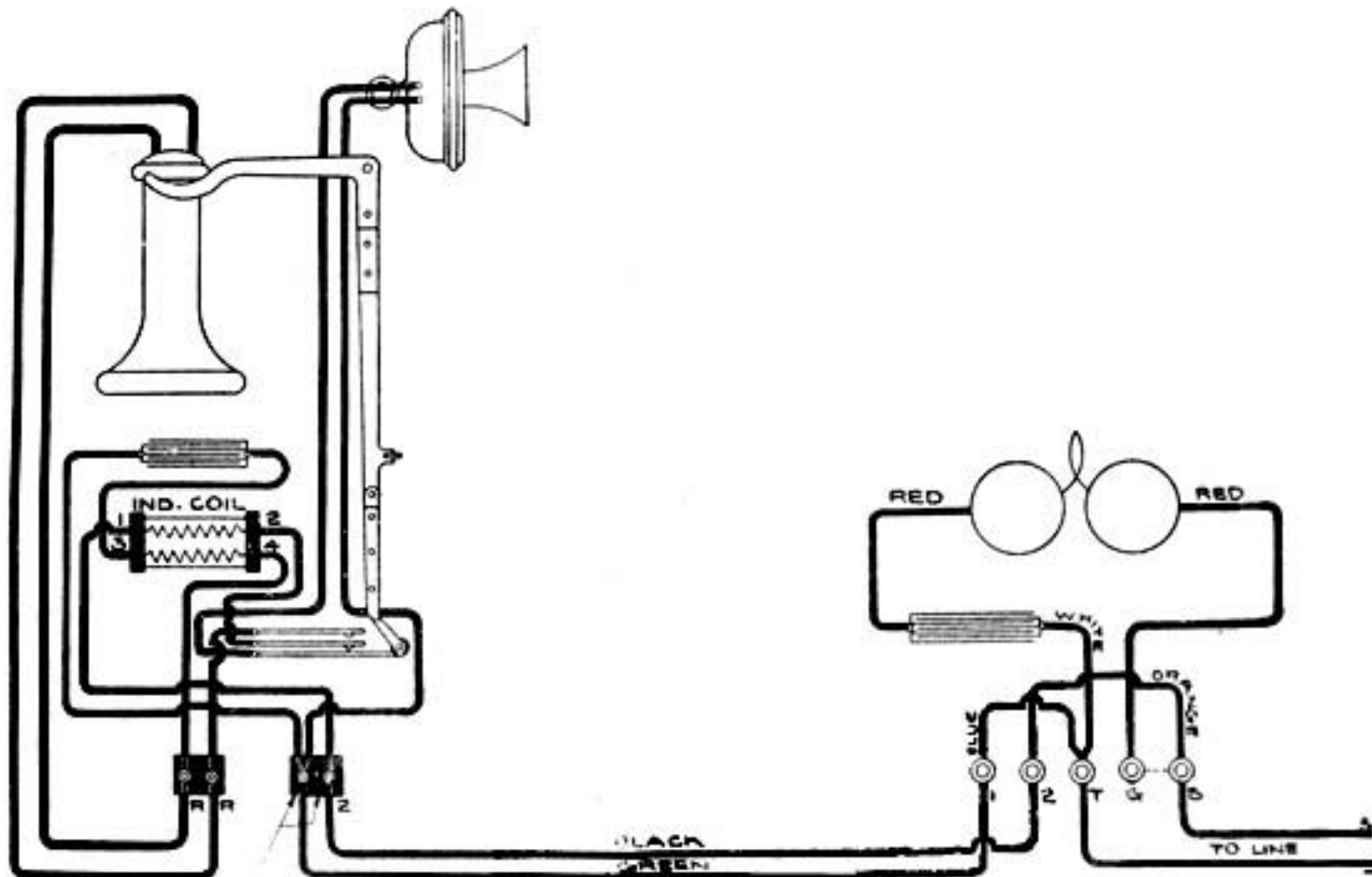
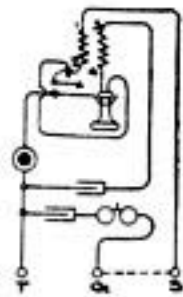


20137

FIG. 2. NO. 39,86,53



# WIRING OF COMM. BATT. DESK SET IND. COIL



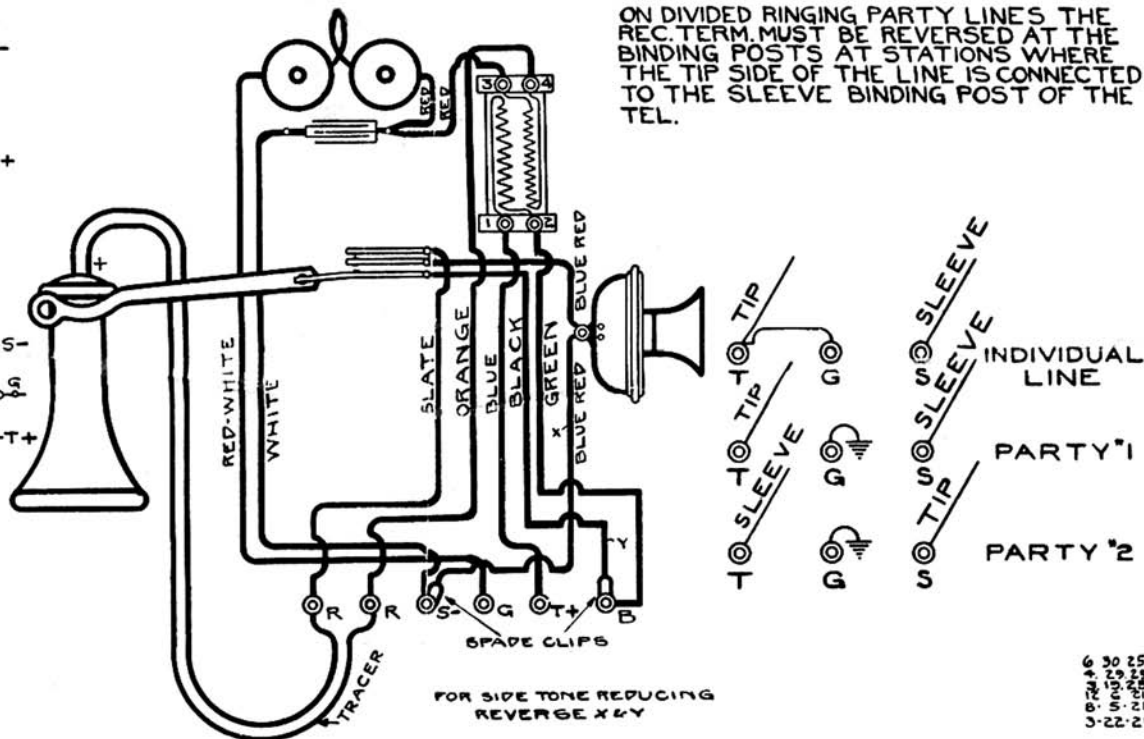
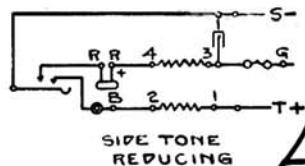
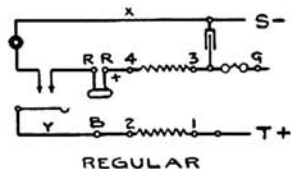
CONNECTORS ON  
HEAD OF IND. COIL

# WIRING OF COMM. BATT. HOTEL SET

## IND. COIL

### SIDE TONE REDUCING

14478



14478

# Kellogg Switchboard & Supply Co.

**INSPECTED** \_\_\_\_\_

**INSPECTED BY** \_\_\_\_\_

**CODE NO.** \_\_\_\_\_

# Kellogg Switchboard & Supply Co.

**INSPECTED** \_\_\_\_\_

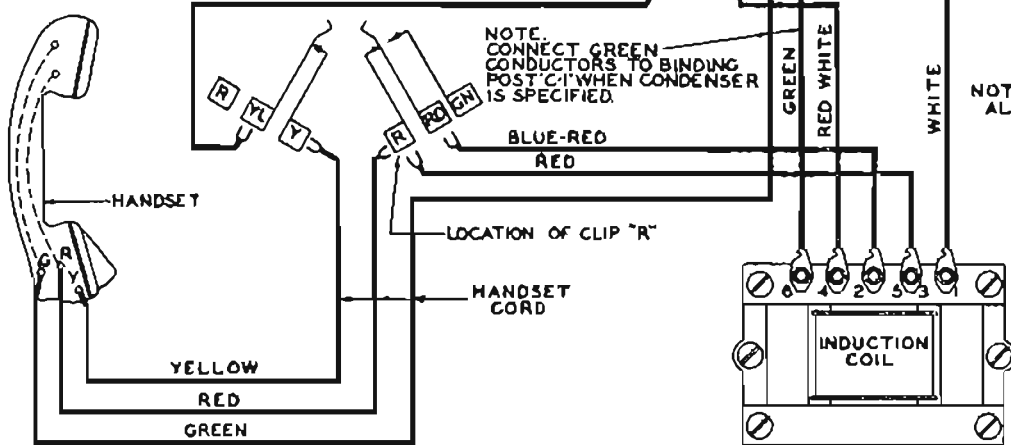
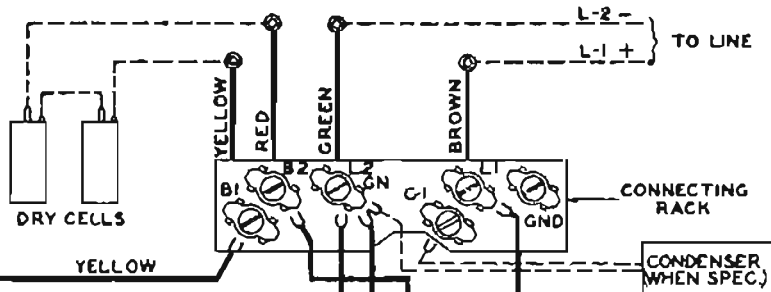
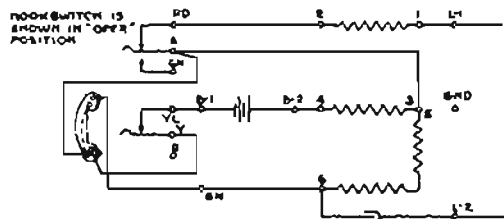
**INSPECTED BY** \_\_\_\_\_

**CODE NO.** \_\_\_\_\_

# TRIAD CIRCUIT

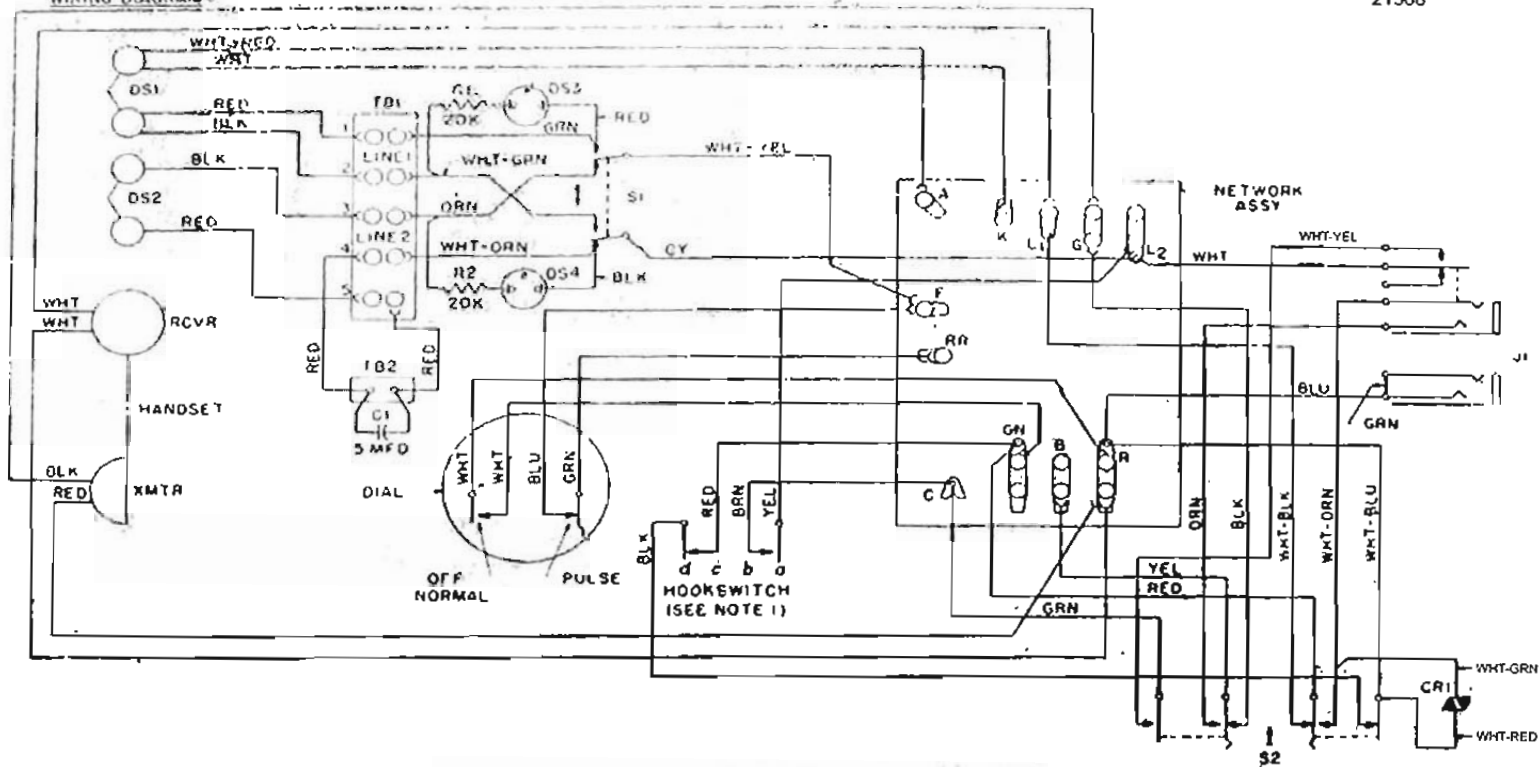
LOCAL BATTERY UNIT TYPE MASTERPHONE

**SCHEMATIC**

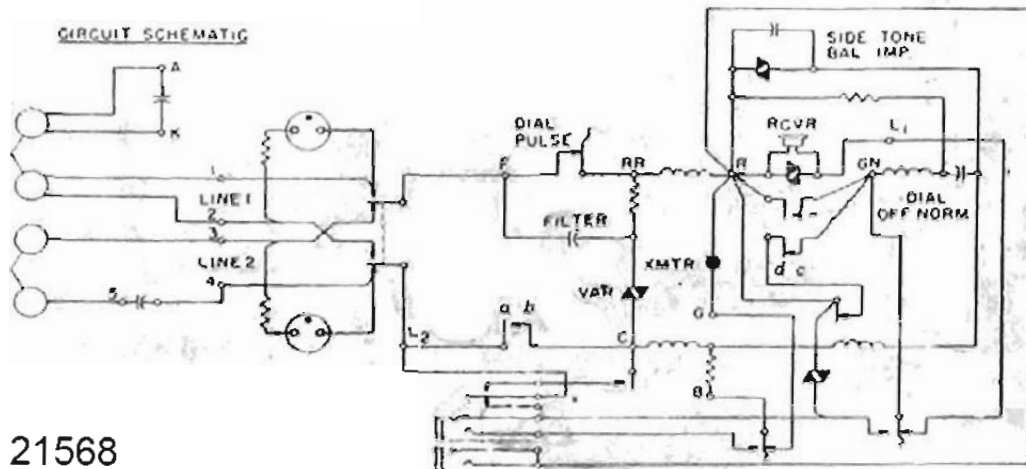




WIRING DIAGRAM



CIRCUIT SCHEMATIC



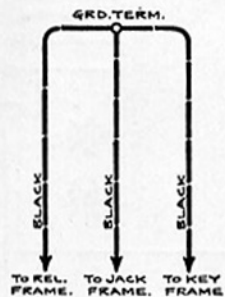
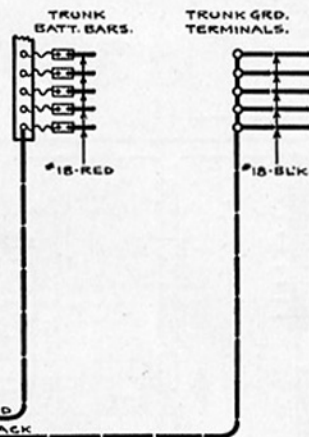
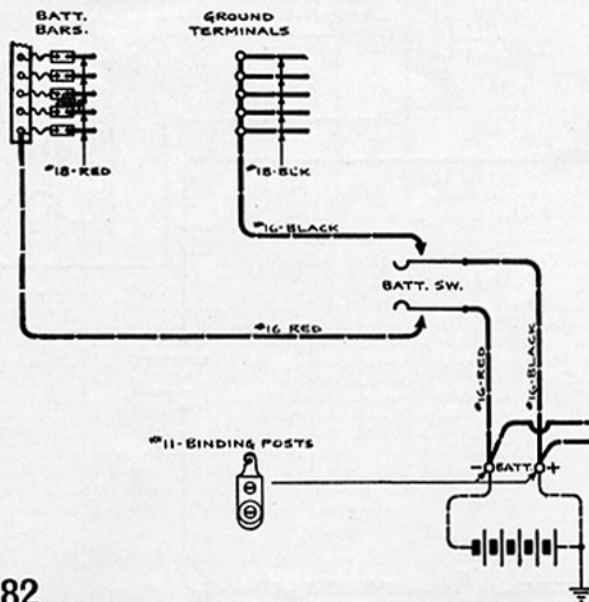
## NOTES.

- 1- WHEN HANDSET IS REMOVED, CONTACTS a & d MAKE BEFORE CONTACTS c & b BREAK



FIG. 1.

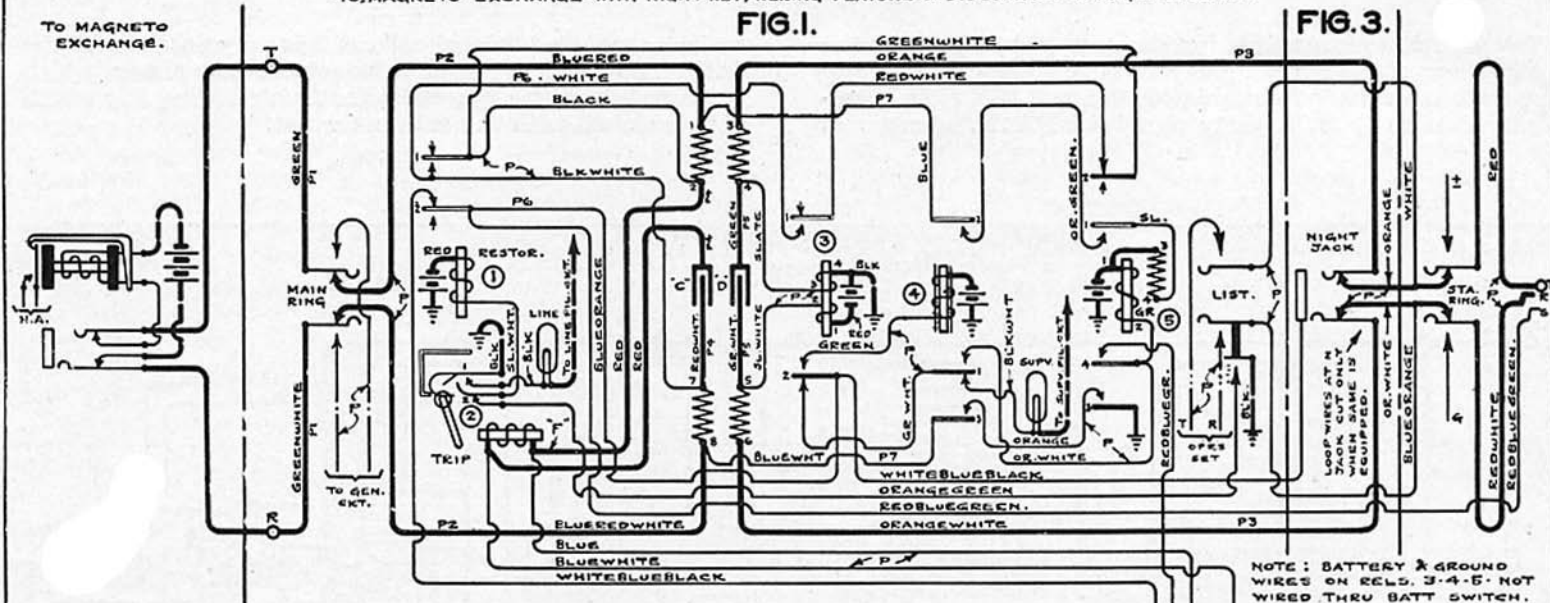
FIG. 2.

FIG. 3.  
GROUNDING CIRCUIT.

## 2-WAY PLUG ENDED P.B.X. TRUNK CIRCUIT.

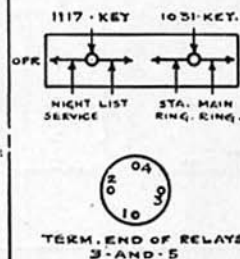
TO MAGNETO EXCHANGE WITH NIGHT KEY, REKEY FEATURE &amp; DISCONNECT TO MAGNETO EXCH.

35277



RELAY NO.	CODE NO	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS
			SPRING TENSION	ARM TRAVEL	TEST			READJUST						
					TERM.	HOLD	AFTER SOAR	OPERATE	NON OPERATE	RELEASE	OPERATE	NON OPERATE	RELEASE	
1	2064-S-DE	800		.020				.016	.006		.014	.007		
2	2061-S-FU	1000						.012	.004		.010	.005		
3	2002-T-C	1000		.016	SERIES			.014		.003	.013	.0035		
4	2081-B-8U	1000	15 $\frac{1}{2}$	.015				.014			.013			$\frac{1}{8}$ " COP. SLEEVE. RED PIN .005
5	2080-C-EQ	1000	15 $\frac{1}{2}$	.015	1 $\frac{1}{2}$ X 2			.014			.013			

FIG. 2.

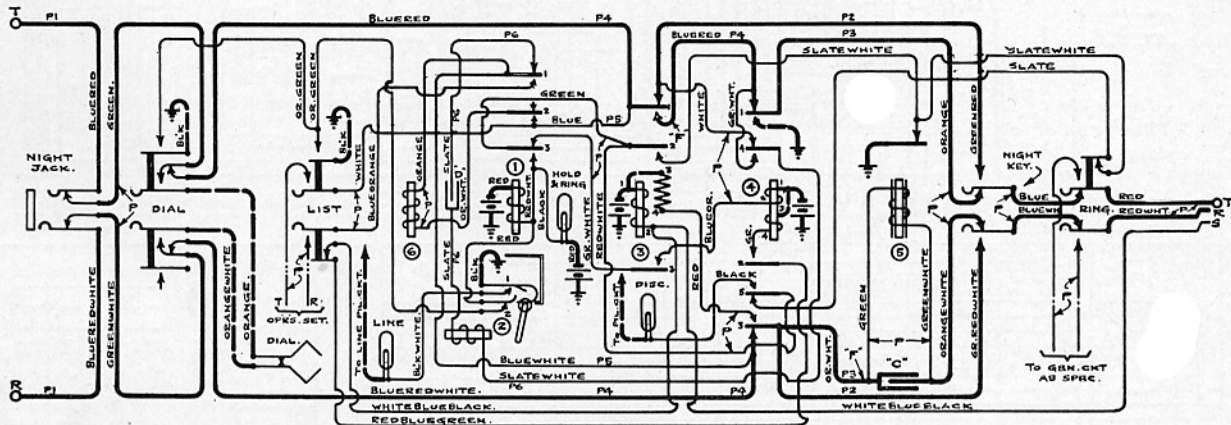


35277

## 2-WAY PLUG ENDED PB.X. TRUNK CIRCUIT.

TO A 2-WIRE COMMON BATTERY AUTOMATIC EXCHANGE - WITH RINGING FEATURE.

35275



RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS		
			SPRING TENSION	ARM. TRAVEL	TEST			READJUST								
					TERM.	HOLD	AFTER SOAK	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE			
1	2068-3-DG	800	15-G					.014				.013				
2	2061-3-FU	1000						.012	.004			.010	.006			
3	2081-C-EQ	1000	20-C	.020				.014	.005			.012	.006			
4	2027-T-F	800	15-G					.030				.028				
5	2030-3-A7	500		.015	1/2			.025				.022		.006	1/2" COP. OLDSW. REG. SW. 1000"	
6	2053-5-K	300													NO SPRING.	



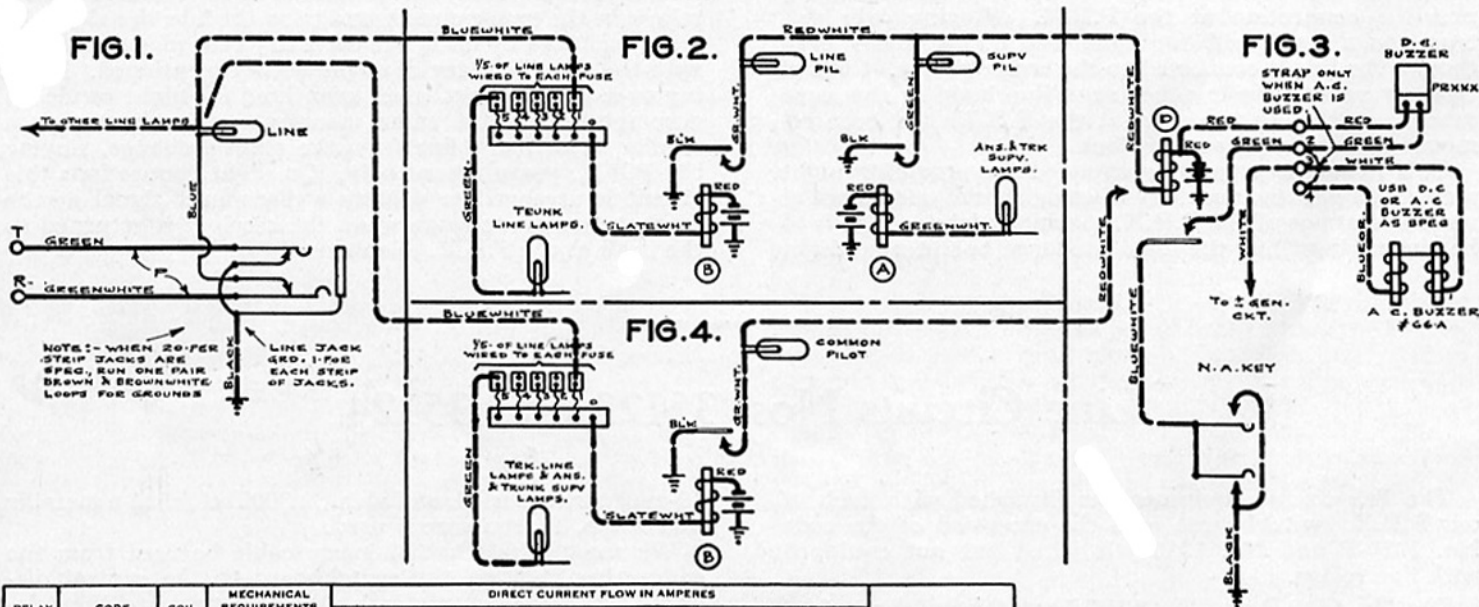
TERM. END OF RELS  
3-AND-4.

35275

# COMM. BATT. LINE CIRCUIT.

NON-MULT WITH LINE, PILOT & N A WITHOUT LINE RELAYS

35124

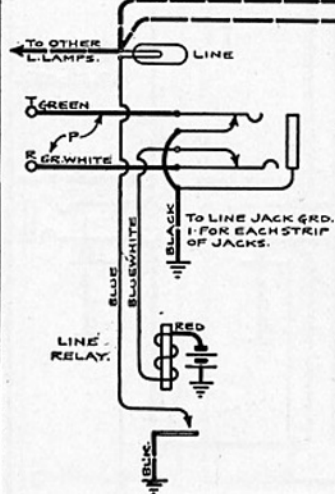
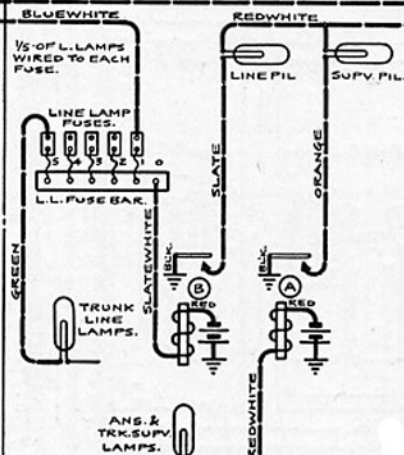
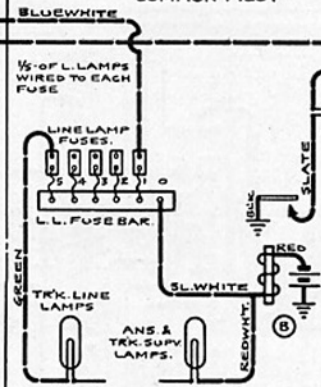
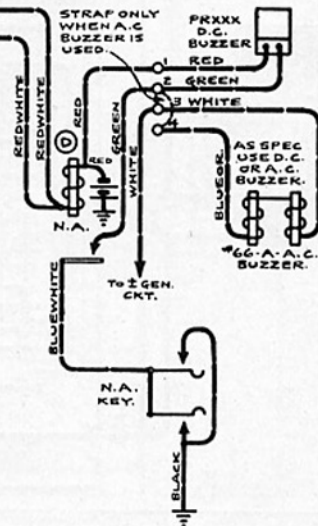


RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS		
			SPRING TENSION	ARM. TRAVEL	TEST			READJUST								
					TERM.	HOLD	AFTER SOAK	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE			
	FIG. # 2.															
A & B	2043-S-EA	7.47"		.015				.032	.010		.030	.012				
	FIG. # 3															
D	2043-S-EA	7.47"		.015				.032	.010		.030	.012				
	FIG. # 4															
B	2043-S-EA	7.47"		.015				.032	.010		.030	.012				

35124

**COMM. BATT. NON-MULT. LINE CIRCUIT.**  
 WITH LINE RELAY - PILOT & N. A.

35122

**FIG. 1.**  
 LINE.

**FIG. 2.**  
 LINE & SUPV. PILOT

**FIG. 4.**  
 COMMON PILOT

**FIG. 3.**  
 NIGHT ALARM.


RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS	
			SPRING TENSION	ARM. TRAVEL	TEST			READJUST							
					TERM.	HOLD	AFTER SDK	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE		
LINE	Z6-D	500		.015					.012		.005	.010		.005	750 Loop RESIST.
A & B	2043-S-EA	7.47		.015				.032	.010			.030	.012		
D	2043-S-EA	7.47		.015				.032	.010			.030	.012		

35122

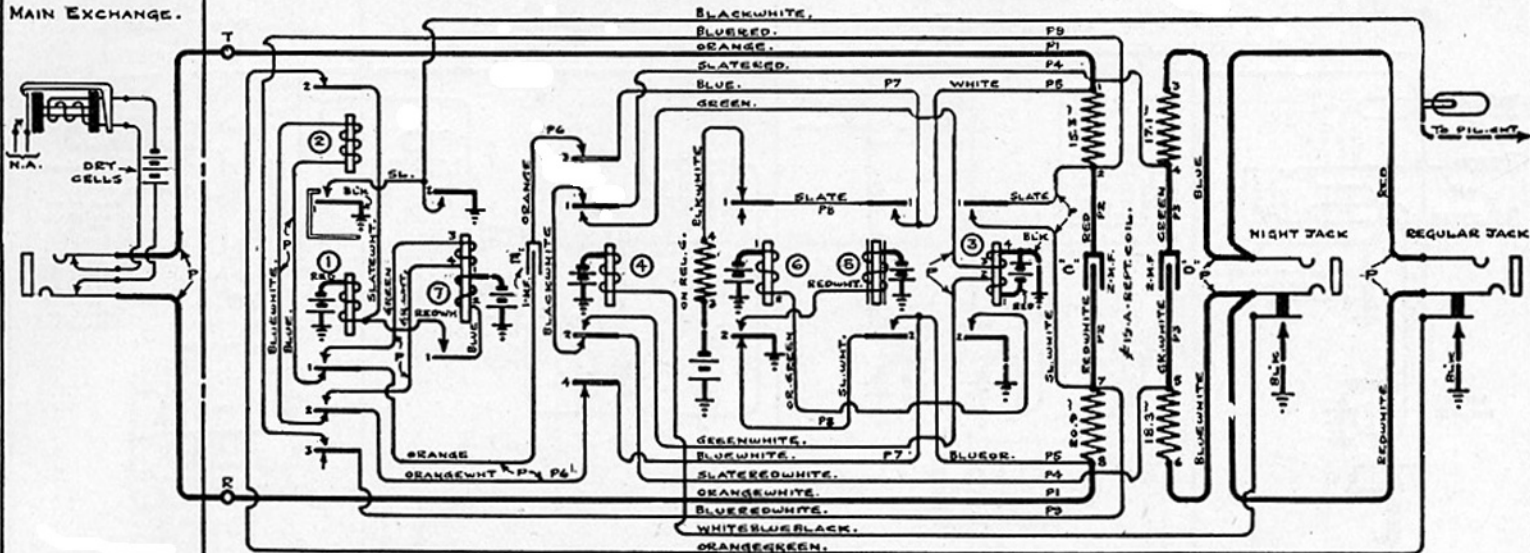


## TWO WAY TRUNK CIRCUIT.

35116

ARR. TO OPERATE WITH A MAGNETO MAIN EXCH WITH NIGHT SERVICE & DISCONNECT  
AT MAIN EXCH. ON NIGHT SERVICE. 14-TO-28-V. WITH RINGING FEATURE

MAIN EXCHANGE.



RELAY NO.	CODE NO	COIL RES.	MECHANICAL REQUIREMENTS	DIRECT CURRENT FLOW IN AMPERES								REMARKS		
				TEST				READJUST						
				TERM.	HOLD	AFTER SOAK	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE		RELEASE	
1	2068-E-D4	800 <sup>Ω</sup>	SPRING TENSION 20-60 ARM TRAVEL .020				.016				.015			
2	2061-S-FU	1000 <sup>Ω</sup>					.012	.004			.010	.005		
3	2037-T-C	1500 <sup>Ω</sup>	.020	SEERK	.200		.014		.003		.013		.0035	
4	2005-S-W	1000 <sup>Ω</sup>	15-G				.014				.013			
5	2057-S-BU	1000 <sup>Ω</sup>	.015				.012	.004			.010	.005		NO REPT. ALB. WIRE REL. FOR ADJ.
6	2002-C-EG	1000 <sup>Ω</sup>	20-G	.020	1 KE		.014				.012			
7	2056-T-F	800 <sup>Ω</sup>	.015				.016	.006			.014	.007		

NOTE:-  
BATTERY WIRES ON RELAYS 3-4-5-6 & GROUND WIRES ON RELAYS 3 & 6 & GROUND WIRE ON NIGHT JACK ARE NOT WIRED THRU BATTERY SWITCH.

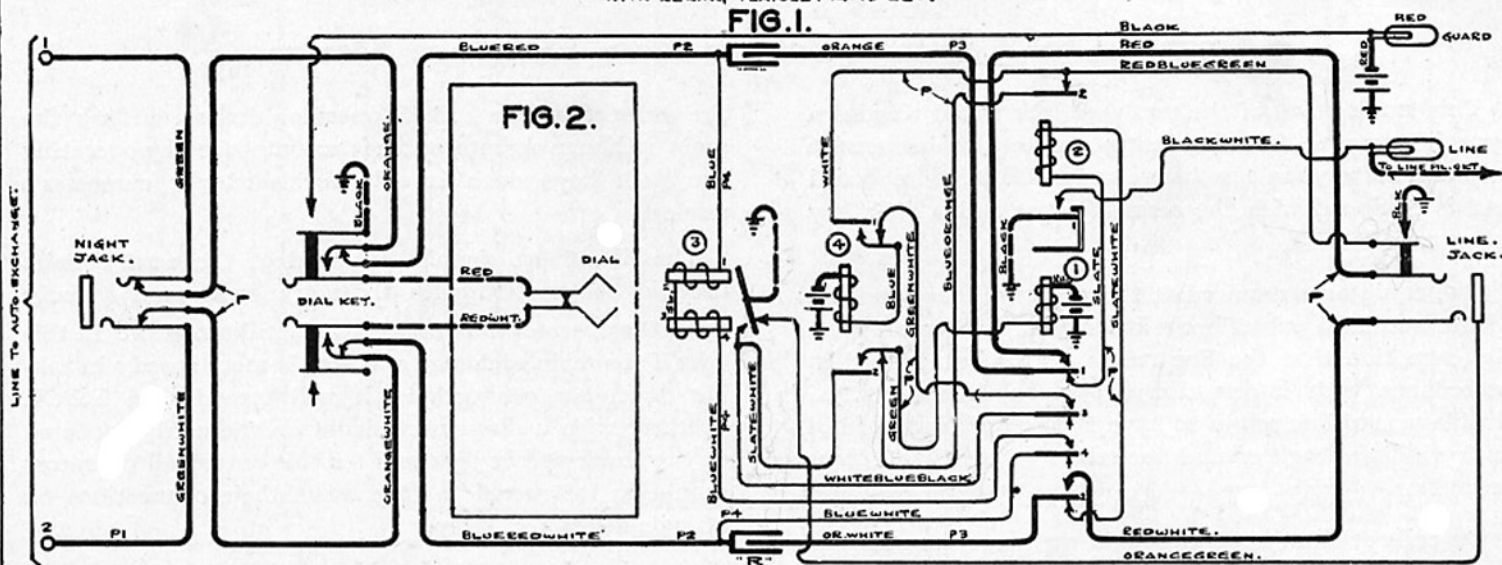


TERM. END OF RELAYS  
3-6 AND 7

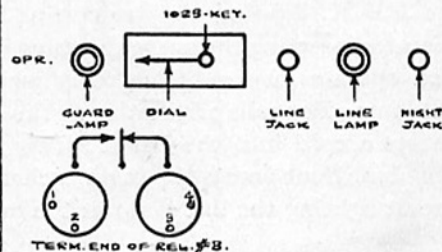
## TWO WAY PB.X. TRUNK CIRCUIT.

TO A 2-WIRE COMM. BATTERY EXCHANGE.  
WITH RINGING FEATURE. 14- TO 28-V.

35115



RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS	
			SPRING TENSION	ARM. TRAVEL	TEST					READJUST					
					TERM.	HOLD	AFTER SOAK	OPERATE	NON OPERATE	RELEASE	OPERATE	NON OPERATE	RELEASE		
1	2060-5-06	800 <sup>Ω</sup>	15-16	.020				.0165				.015			
2	2061-5-F6	500 <sup>Ω</sup>						.014	.005			.012	.006		
3	546-B	200 <sup>Ω</sup>	10-11	.010				.0045		.0004		.004		.0005	
4	2007-3AH	1000 <sup>Ω</sup>		.020				.014	.005			.013	.006	.0005	



35115

AUG. 30. 1926



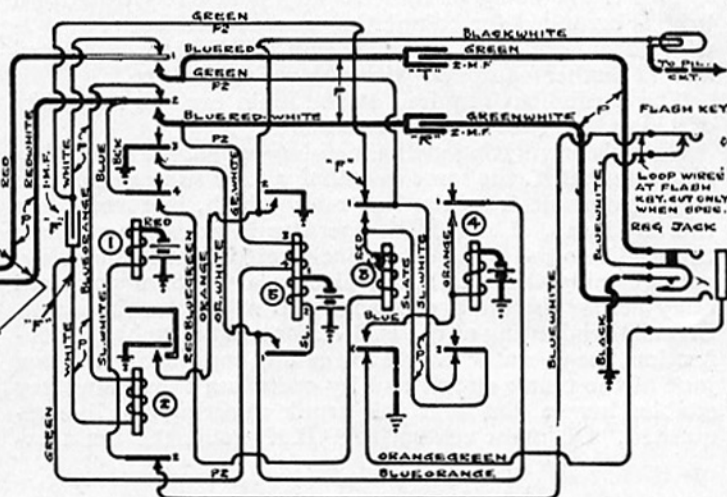
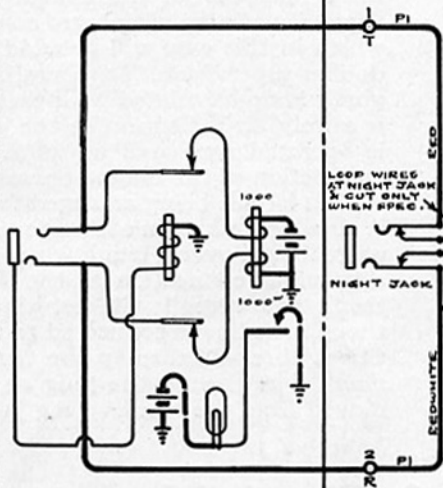
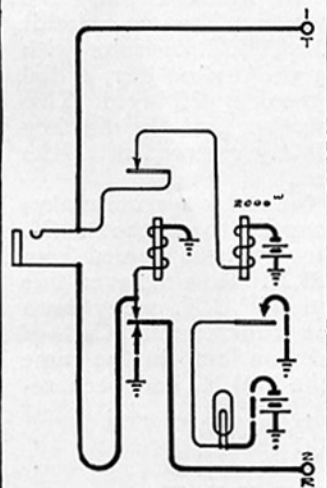
## TWO WAY TRUNK CIRCUIT.

WITH OR WITHOUT FLASH KEY 14-TO 25-OR 34-TO-48-VOLTS  
WITH RING FEATURE.

35114

2-WIRE, MAIN EXCHANGE.

3-WIRE, MAIN EXCHANGE.



RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES									REMARKS		
			SPRING TENSION	ARM TRAVEL	TEST			READJUST								
					TERM.	HOLD	AFTER SOAK	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE			
1	2060-S-Dq	800 <sup>Ω</sup>	20.4	.020				.0165				.015				14-TO-25-VOLTS
2	2061-S-FS	500 <sup>Ω</sup>						.010	.0035		.008	.004				
3	2002-S-K	300 <sup>Ω</sup>		.025				.018	.007		.017	.008				
4	2002-S-AH	100 <sup>Ω</sup>		.020				.014	.005		.013	.006				
5	2056-TF	800 <sup>Ω</sup> 1000 <sup>Ω</sup>		.015	1A2			.016	.006		.014	.007				
1	2060-S-FP	250 <sup>Ω</sup>	20.4	.020				.016			.014				34-TO-48-VOLTS	
2	2061-S-FU	1000 <sup>Ω</sup>						.010	.0035		.008	.004				
3	2002-S-AC	500 <sup>Ω</sup>		.020				.024	.011		.022	.012				
4	2002-S-W	1000 <sup>Ω</sup>		.020				.034	.004		.010	.005				
5	2056-TY	1000 <sup>Ω</sup> 1000 <sup>Ω</sup>		.015	1A2			.014	.005		.012	.006				



TERM-END OF REL. #5

14-TO-25-VOLTS

34-TO-48-VOLTS

35114

SUBS. OP'R'S. TEL. CIRCUIT.  
SIDE TONE REDUCING.  
NON-MULT.

32571

FIG. 2.

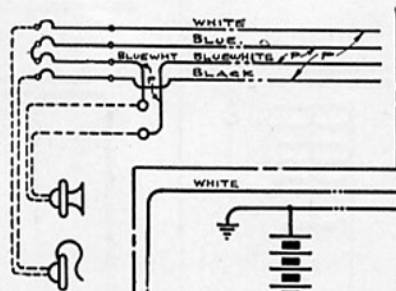


FIG. I.

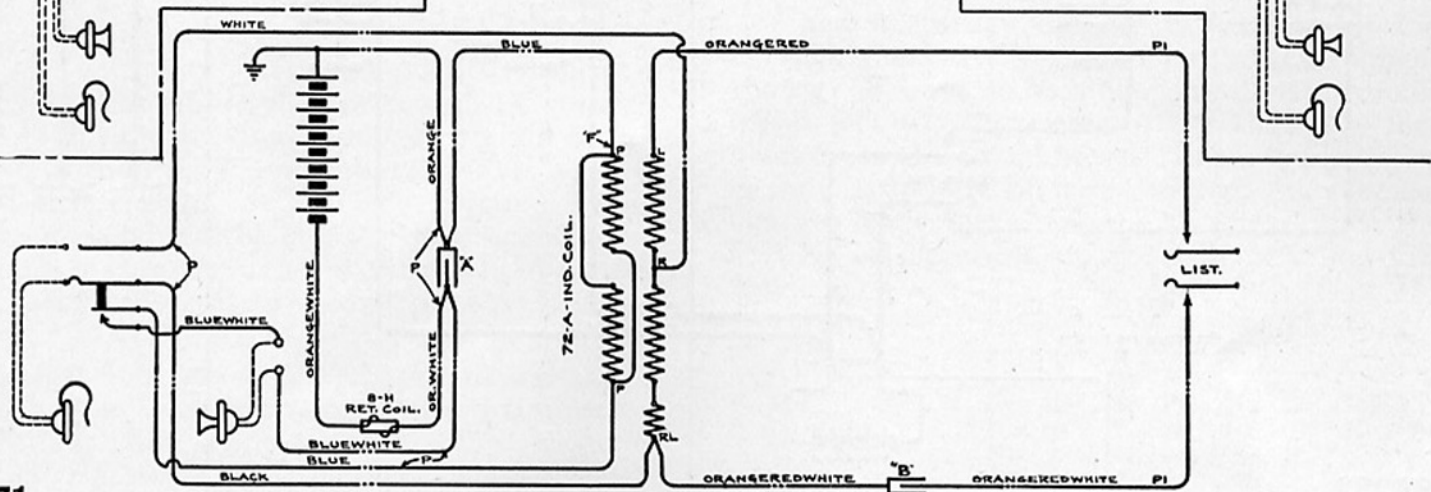
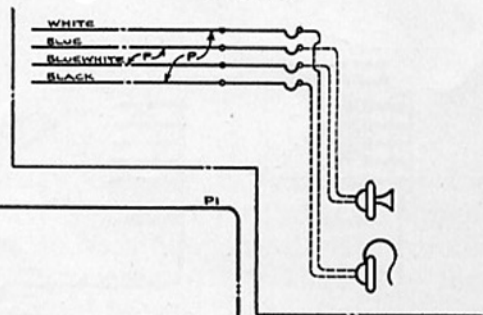


FIG. 3.



32571

# TWO WAY TRUNK CIRCUIT. PLUG ENDED - WITH NIGHT JACK.

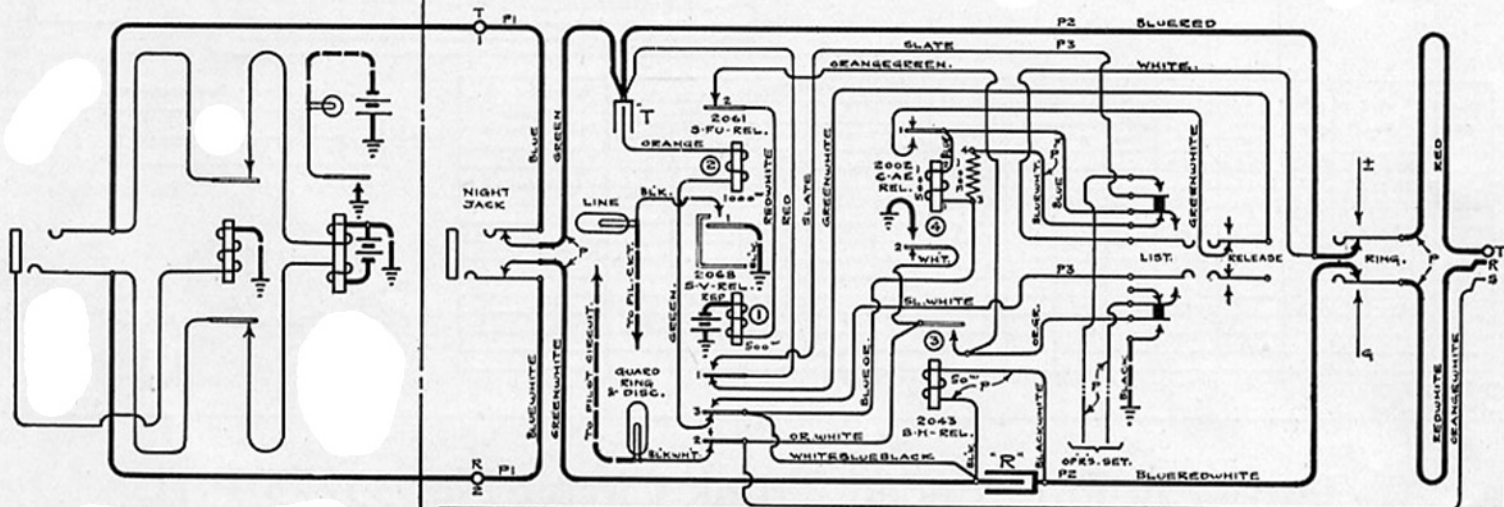
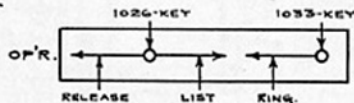
30531

MAIN EXCHANGE.



TERM. END OF REL. #4

P. B. X



RELAY NO.	CODE NO.	MTG POS.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES.									REMARKS.
			SPRING TENSION	ARM. TRAVEL	TEST			READJUST.						
					TERM.	HOLD	AFTER SHAK	OPERATE	NON OPERATE	RELEASE	OPERATE	NON OPERATE	RELEASE	
1	2068-S.V		20.6	.020				.038			.024			
2	2061-S.FU							.012	.004		.010	.005		
3	2043-S.H							.020		.004	.018		.005	
4	2002-C.AE			.020	1 1/2			.022	.009		.020	.010		

30531

 SEPT 10, 1925.  
 JUNE 1, 1922.

FIG. 1.

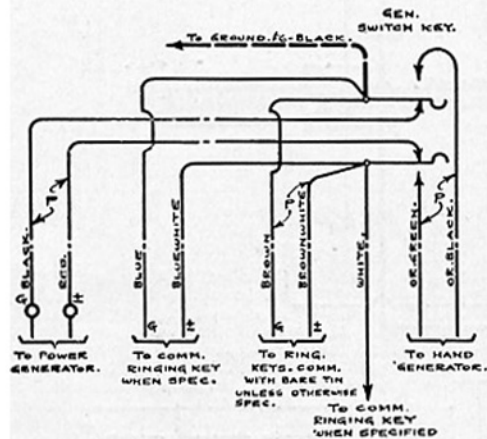
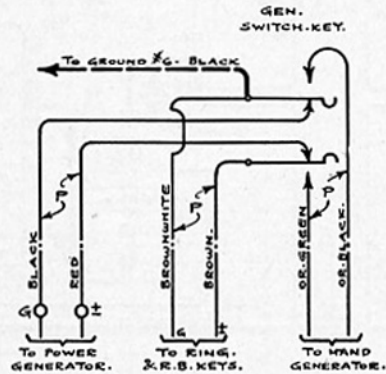


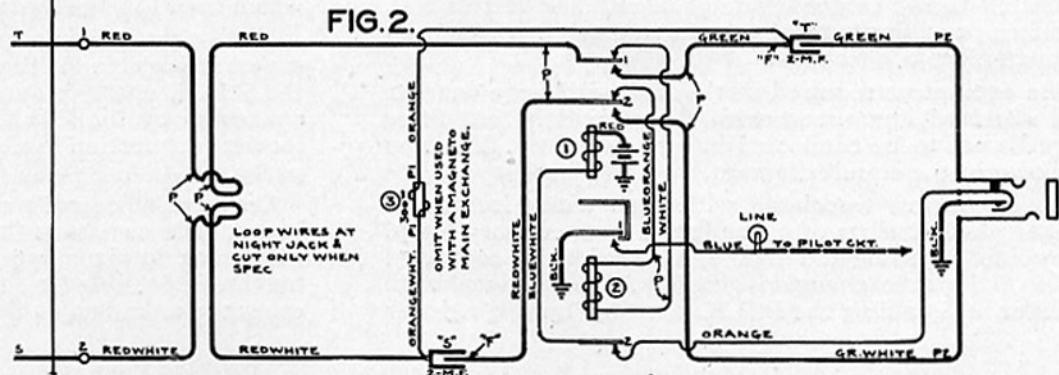
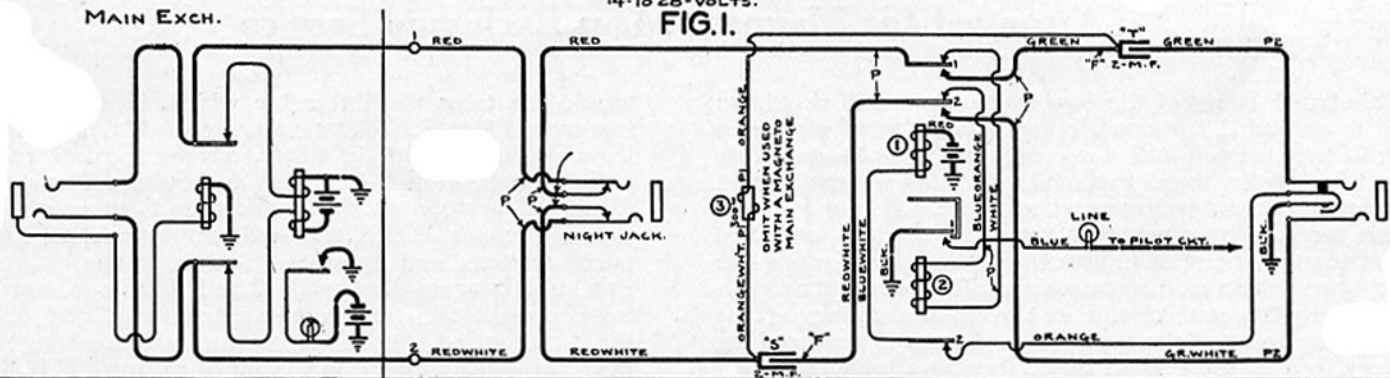
FIG. 2.



## TWO WAY TRUNK CIRCUIT.

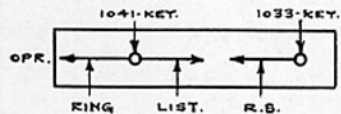
JACK ENDED - WITH & WITHOUT NIGHT JACK.  
TO MAGNETO & COMM. BATT. EXCH.  
14-TO 28-VOLTS.

20108



20108

FIG. 1.



LOOP GREEN & GR.WHT WIRES AT RINGBACK KEY CUT ONLY WHEN PIGS #1-OR-3 ARE SPEC.

FIG. 4.

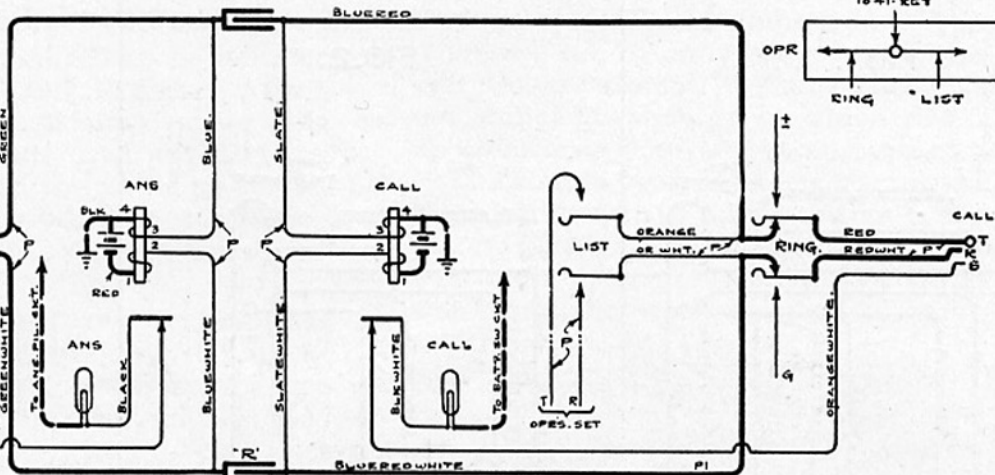
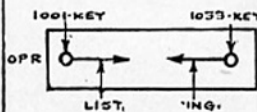


FIG. 2.

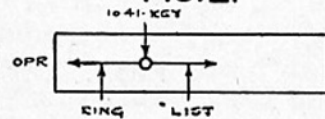
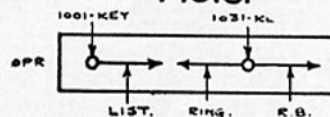


FIG. 3.



TERM END OF  
ANG & CALL REL'S

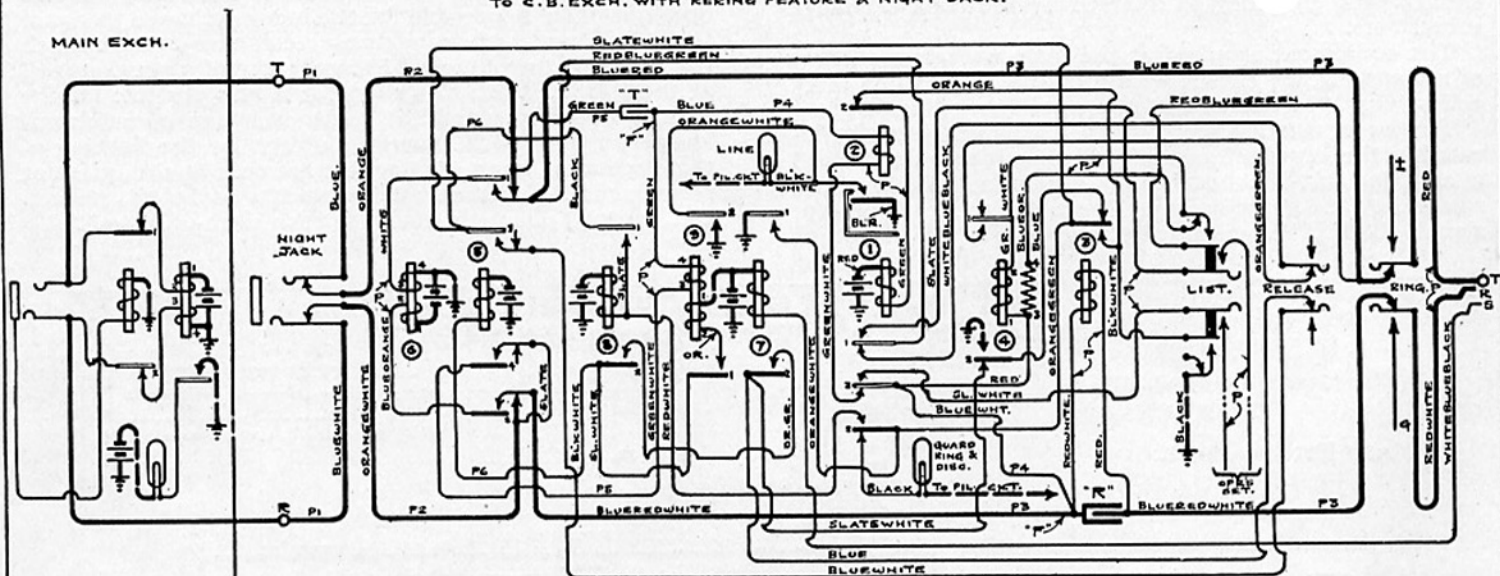
RELAY NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES								REMARKS	
			SPRING TENSION	ARM. TRAVEL.	TEST				READJUST.					
					TERM.	HOLD.	AFTER LOCKS	OPERATE	NON OPERATE	RELEASE	OPERATE	NON OPERATE		RELEASE
ANS.	2030-T.C.	100-100		.020				.014		.003	.018		.0035	
CALL	2030-T.C.	100-100		.020				.014		.003	.018		.0035	



# 2-WAY PLUG ENDED P.B.X. TRUNK CKT.

TO C.B. EXCH. WITH RERING FEATURE & NIGHT JACK.

35353



RELAY NO.	CODE NO.	COIL REB.	MECHANICAL REQUIREMENTS	DIRECT CURRENT FLOW IN AMPERES									REMARKS							
				TEST					READJUST											
				SPRING TENSION	ARM. TRAVEL	TERM.	HOLD	AFTER SOAK	OPERATE	NON-OPERATE	RELEASE	OPERATE		NON-OPERATE	RELEASE					
1	2068-SV	500 <sup>m</sup>							.034											
2	2061-SFU	1000 <sup>m</sup>	20-G	.020					.010	.0035		.008	.004							
3	2044-SH	500 <sup>m</sup>		.015					.026		.005	.024	.004							
4	2002-CAE	500 <sup>m</sup>							.015	.006		.014	.0065	.004						
5	2003-SV	500 <sup>m</sup>	20-G	.020					.034			.024								
6	2053-TJ	500 <sup>m</sup>																		NO SPRINGS.
7	2037-SV	500 <sup>m</sup>		.020					.034	.005		.012	.006							
8	2037-SV	500 <sup>m</sup>		.020					.034	.005		.012	.006							
9	2056-TF	500 <sup>m</sup>		.015					.018	.008		.016	.008							



TERM END OF REL'S.  
4-6-AND-5.

35353

OCT. 11, 1927.

# WIRING OF EXTENSION BELL

COMMON BATTERY

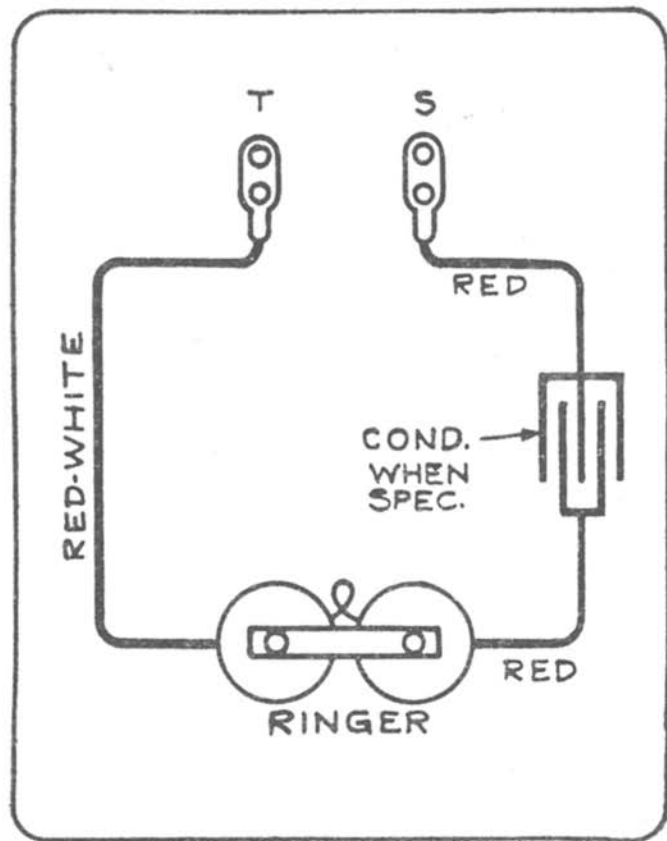
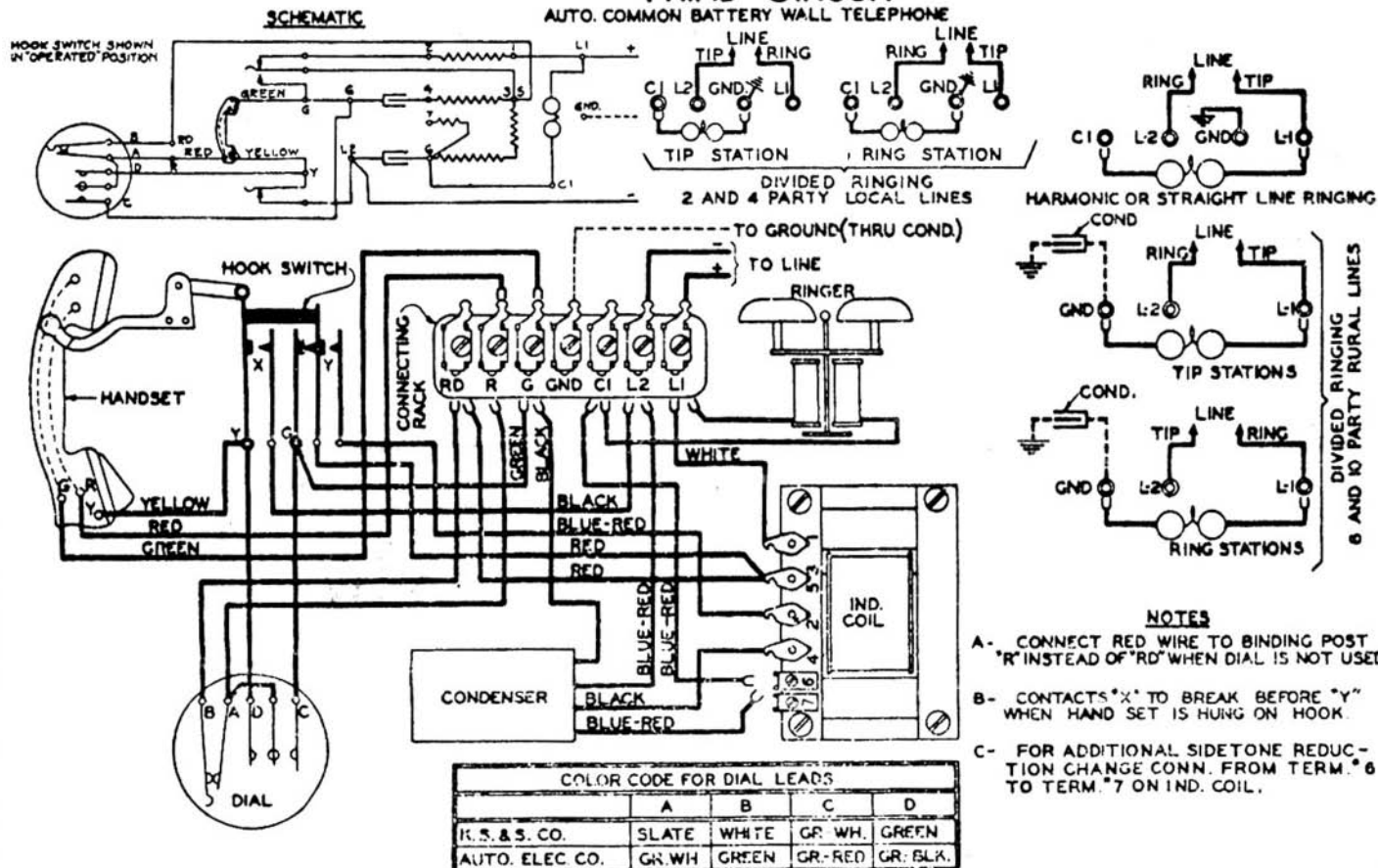


FIG. 3<sup>#</sup>



## TRIAD CIRCUIT

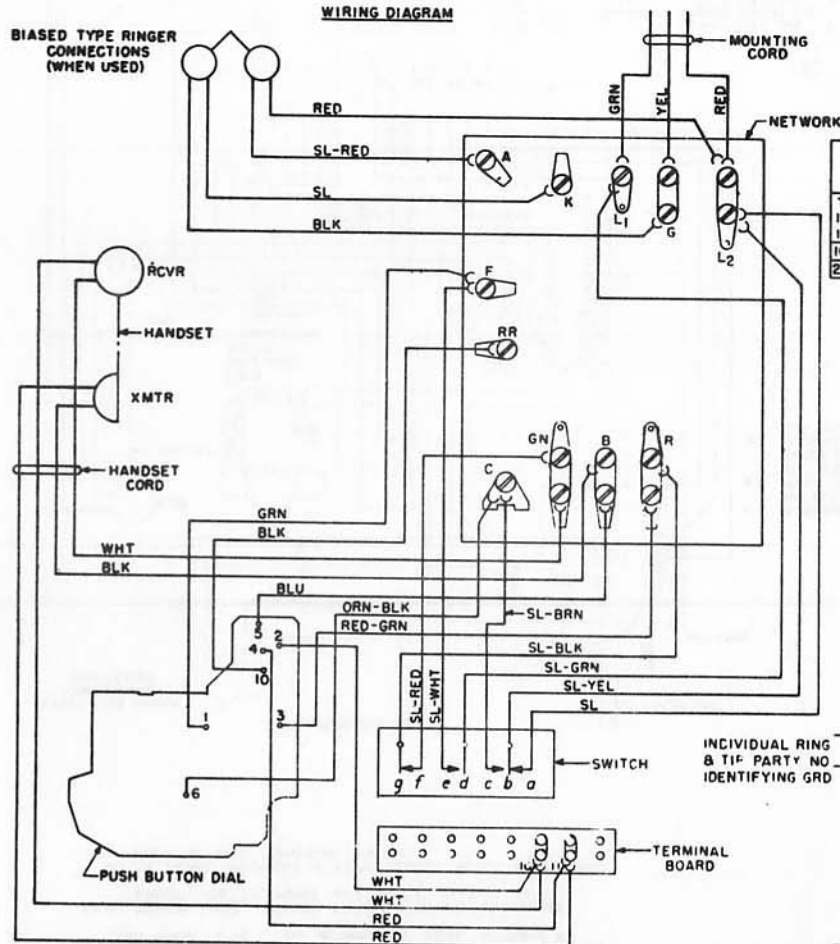
21096



21096

8 74 58  
5 3 58  
12 21 76  
4 2 24  
8 28 35

P.C.



**NOTES:**

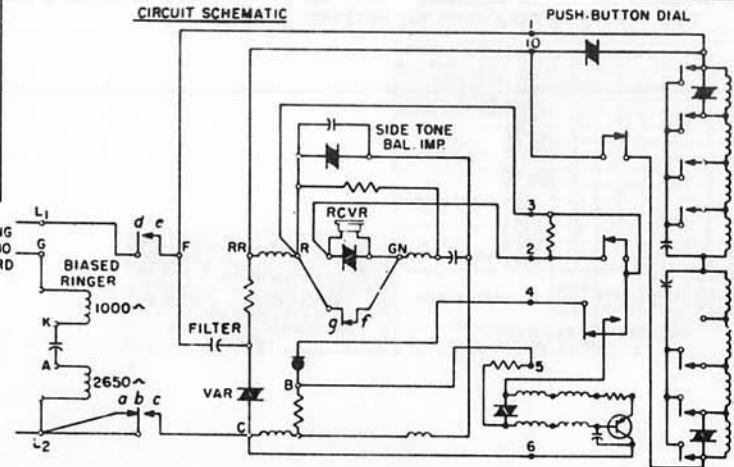
- 1-CONNECT YELLOW MOUNTING CORD LEAD TO SAME TERMINAL AS RED MOUNTING CORD LEAD AT CONNECTING BLOCK FOR ALL CLASSES OF SERVICE EXCEPT THOSE LISTED IN TABLE "A"
- 2-FOR TIP-PARTY WITH NO IDENTIFYING GROUND MOVE RED RINGER LEAD FROM L2 TO L1 ON NETWORK AS SHOWN IN TABLE "B"

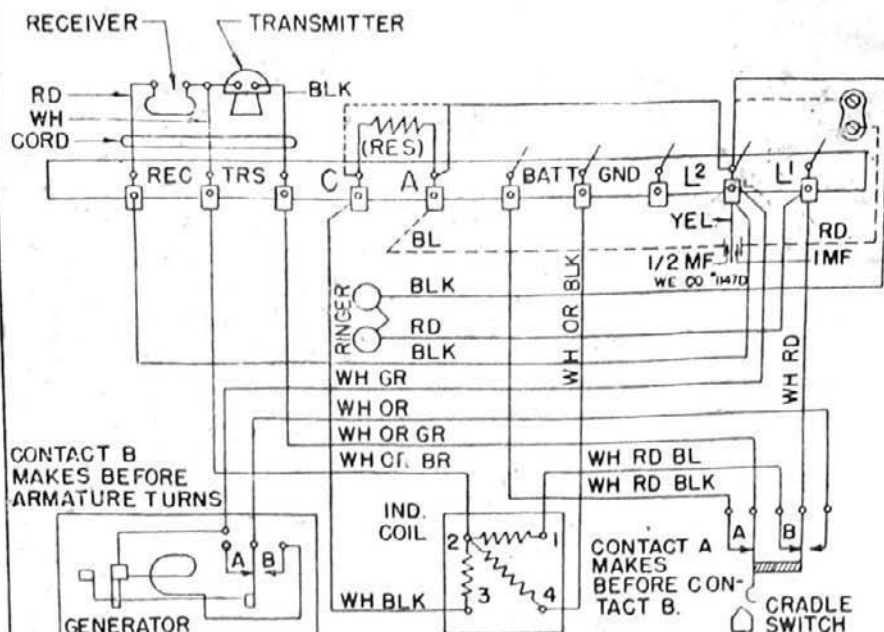
**TABLE "A"**  
RINGER LEAD CONNECTIONS TO SILENCE RINGER PERMANENTLY

TIP PARTY IDENTIFYING GRD.	RINGER LEADS			
	RED	BLACK	SLATE	SLATE-RED
1000 OHMS	K	G	B	K
2650 OHMS	B	K	K	G

**TABLE "B"**  
LINE & RINGER CONNECTIONS

WIRE OR LEAD	INDIV. OR BRDG.	RING PARTY	TIP PARTY		
			NO IDENT. GRD.	1000 OHMS	2650 OHMS
MOUNTING CORD IN SET	RED	L2	L2	L2	L2
	GRN	L1	L1	L1	L1
	YEL	G	G	G	G
RINGER LEADS	RED	L2	L2	L1	K
	BLK	G	G	G	B
	SL	K	K	K	B
	SL-RED	A	A	A	B
HOOKSWITCH LEADS	SL	L2	L2	A	A
	SL-WHT	F	F	C	C
	SL-BRN	C	C	C	F
MOUNTING CORD AT CONN. BLOCK	RED	R	R	R	G
	GRN	G	G	G	R
	YEL	G	Y	Y	Y
LINE WIRE AT CONN. BLOCK	RING GRD.	RED	R	R	R
	TIP	GRN	G	G	G
	YEL	Y	Y	Y	Y





## FTR 804A TELEPHONE

THIS SET IS WIRED AND EQUIPPED FOR ZONE 3 OPERATION. SHOULD LINE CONDITIONS PLACE THIS SET IN ANY OTHER ZONE THE FOLLOWING TABLE SHOULD BE USED. ATTENTION IS DRAWN TO THE DOTTED LINES ON THE ABOVE CIRCUIT: CONNECTING A 1/2 MF. CONDENSER BETWEEN L<sub>2</sub> AND "A." A NETWORK IS SET UP TO OFF SET A CONDITION OF EXTREME LINE CAPACITANCE. THIS NETWORK IS NOT RECOMMENDED HOWEVER, UNDER NORMAL LINE CONDITIONS.

ZONE N <sup>o</sup>	LINE LOOP RANGE IN OHMS	TRANS. LEVEL (SIDE TONE REDUCTION)	RESISTOR TO BE USED (OHMS)
1	50 TO 200	db 5 TO 14	100
2	200 TO 300	db 7 TO 14 1/2	250
3	300 TO 750	db 7 TO 14	400
4	750 TO 1200	db 7 TO 14	900
5	1200 TO 1800	db 9 TO 16 1/2	1300
6	1800 TO 2300	db 10 TO 14	1800

WIRING DIAGRAM

11314( )79 & 11316( )79 TYPE TELEPHONE CIRCUIT

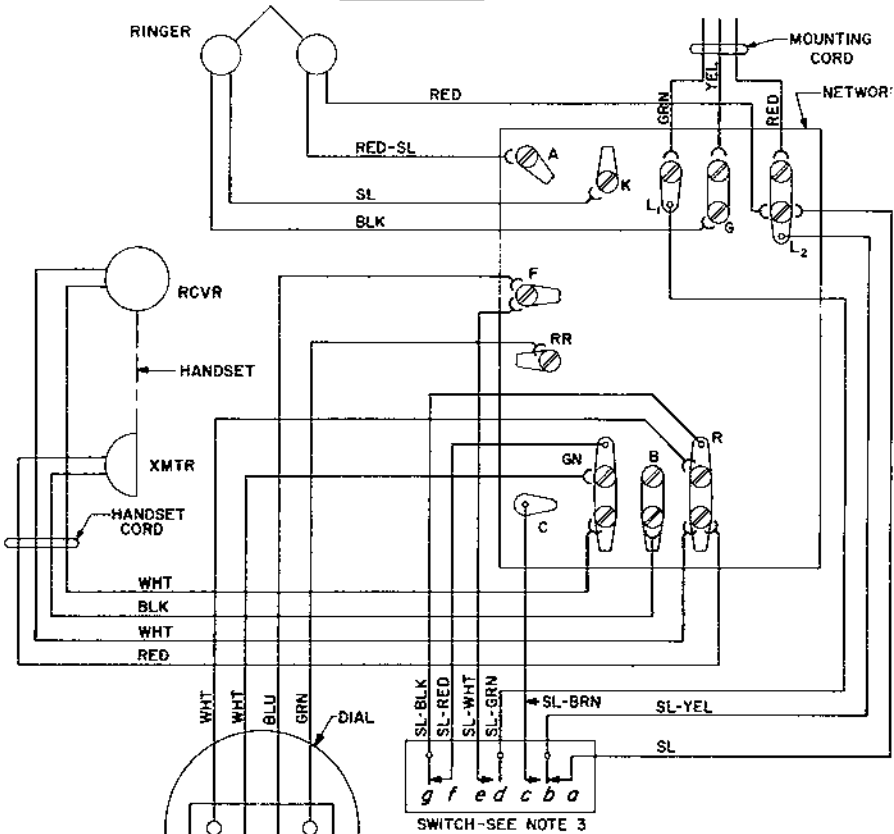


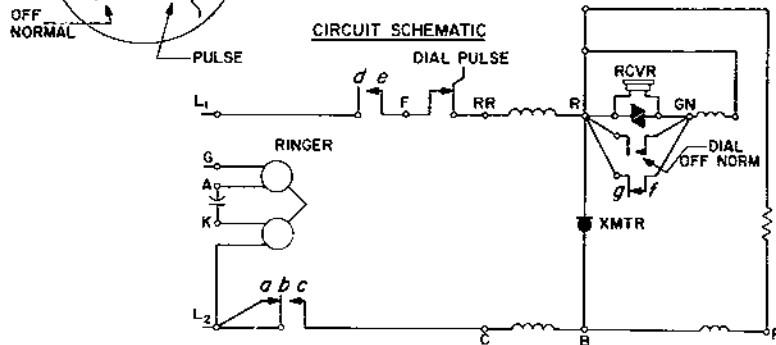
TABLE OF CONNECTIONS (BIASED RINGERS)

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK				
	LINE			MTG CORD			MTG CORD		RINGER LEADS		
	RING	TIP	GRD	RED	GRN	YEL	RED	GRN	YEL	RED	BLK
BRIDGED	R	G	Y	R	G	G	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	K
RING PARTY	R	G	Y	R	G	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	K
TIP PARTY	R	G	Y	G	R	Y	L <sub>2</sub>	L <sub>1</sub>	G	L <sub>2</sub>	K

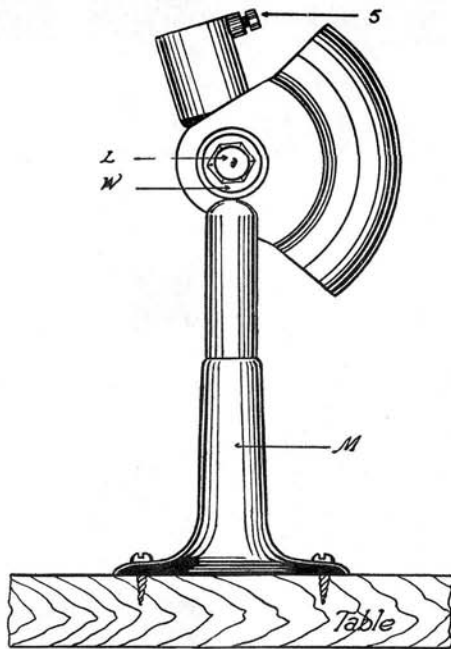
NOTES

1. FOR MANUAL SERVICE:  
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
2. TO PERMANENTLY SILENCE RINGER:  
TRANSFER RED RINGER LEAD TO (A) TERMINAL ON NETWORK.
3. WHEN THE HANDSET IS REMOVED CONTACT *gf* BREAKS LAST.

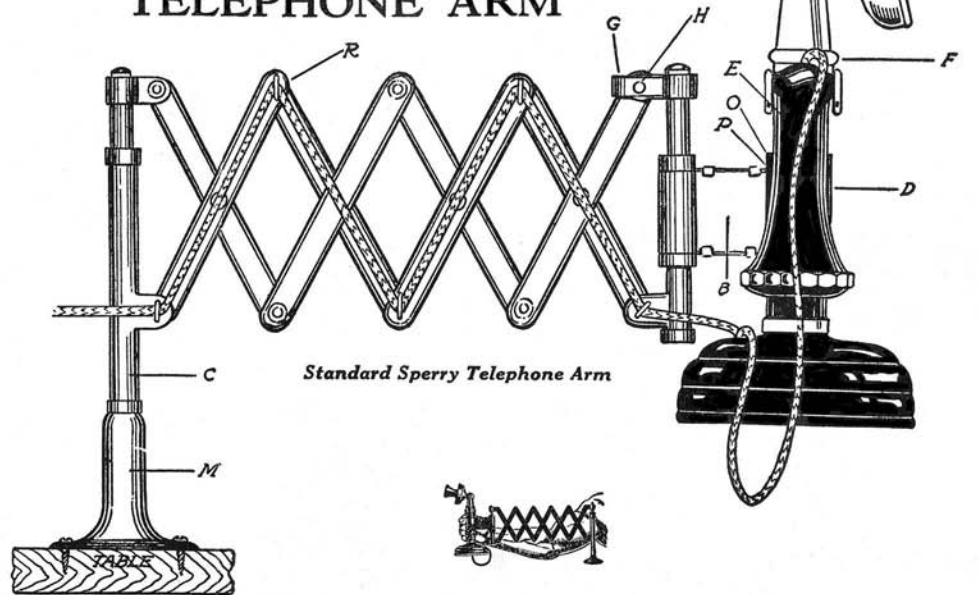
CIRCUIT SCHEMATIC



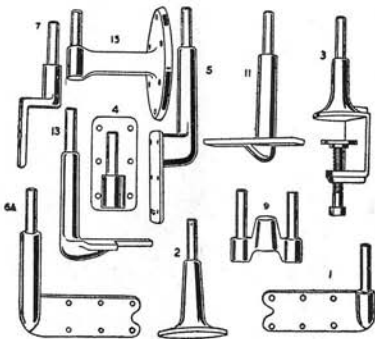
# Instructions for Setting Up The SPERRY TELEPHONE ARM



Universal Attachment with Mounting



Standard Sperry Telephone Arm



Sperry Mountings

1. Screw the Mounting (M) to desk, table or wall. In ordering the arm, care should be taken that a suitable type of mounting is selected. Refer to the cut of mountings.
2. Slip the hollow tube (C) over the steel rod protruding from the mounting.
3. Adjust the two clamp holders (D) around the telephone barrel in such a manner that the slide (O) points in the reverse direction from the telephone mouthpiece. The pointer attached to the clamp should rest against the rim of the transmitter holder (F) in order to prevent the telephone from sliding down.
4. The telephone is now ready to be attached to the arm. This is accomplished by pushing the slide of the clamps (O) down the slide of the clamp holder (P). In case the clamps do not go all the way down, flush with the clamp holder, a few taps with a hammer will force it down. To remove the telephone from the bracket, grip the telephone barrel firmly, pushing upward, and give the clamp holder a few taps with a hammer, or a piece of wood, downwards.
5. Attach the dummy receiver-holder (G) to the arm with the screw and nut enclosed in the other end of the line "holds the wire," while someone is called to the telephone.
6. Attach the cord to the arm in the manner shown in the illustration. The cord-holders as well as the screws for the mounting will be found in a small envelope, enclosed with the arm.

## UNIVERSAL ATTACHMENT

The Standard Arm is easily converted into a Universal Arm having an up-and-down motion in addition to the in-and-out motion of the Standard Arm, by inserting the Universal Attachment, shown in the illustration above, between the mounting and the arm.

Place the arm in such a position that it stands parallel with the attachment. Then fix it in that position by tightening the screw (S). Should the arm, after some use, not retain its position when moved upward, tighten the bolt (L) to increase the friction.

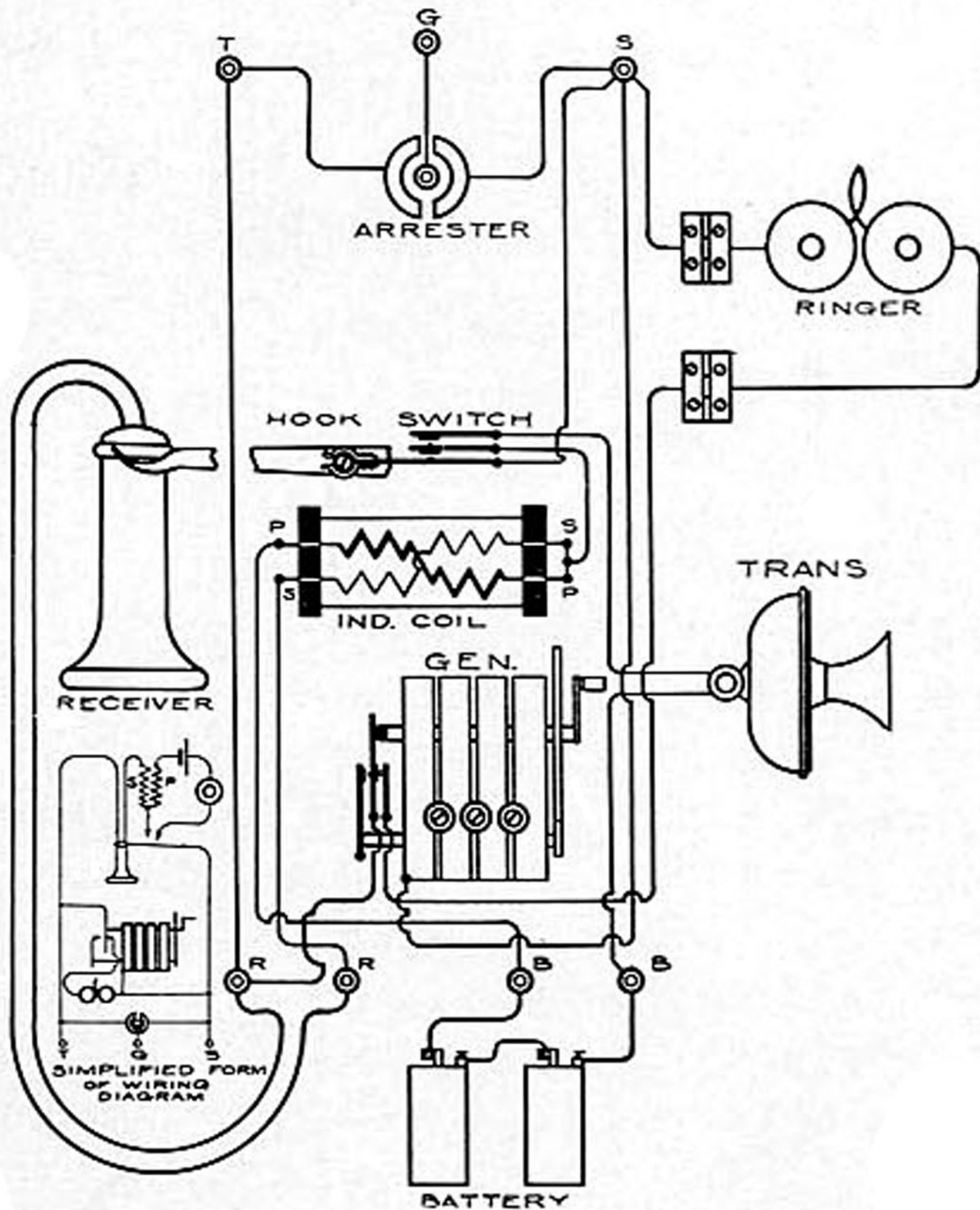
Form No. 453-10M-3-26-K-L

KELLOGG SWITCHBOARD & SUPPLY CO. - - CHICAGO

FOUND WITH AN ORIGINAL MINT SPERRY ARM DATED MARCH 1926

# CIRCUIT #10374

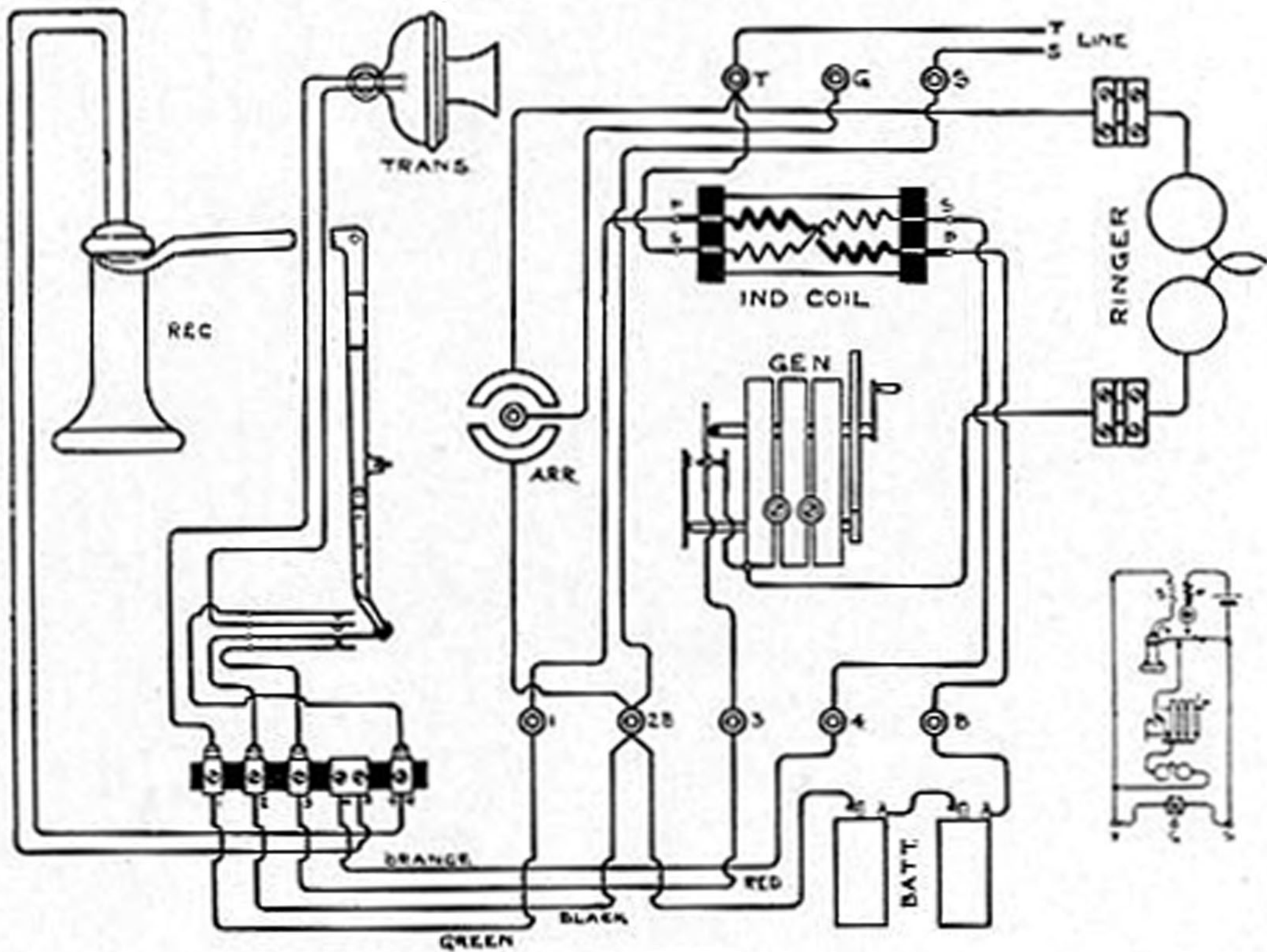
## BRIDGING HOTEL SET CIRCUIT





# CIRCUIT 10373

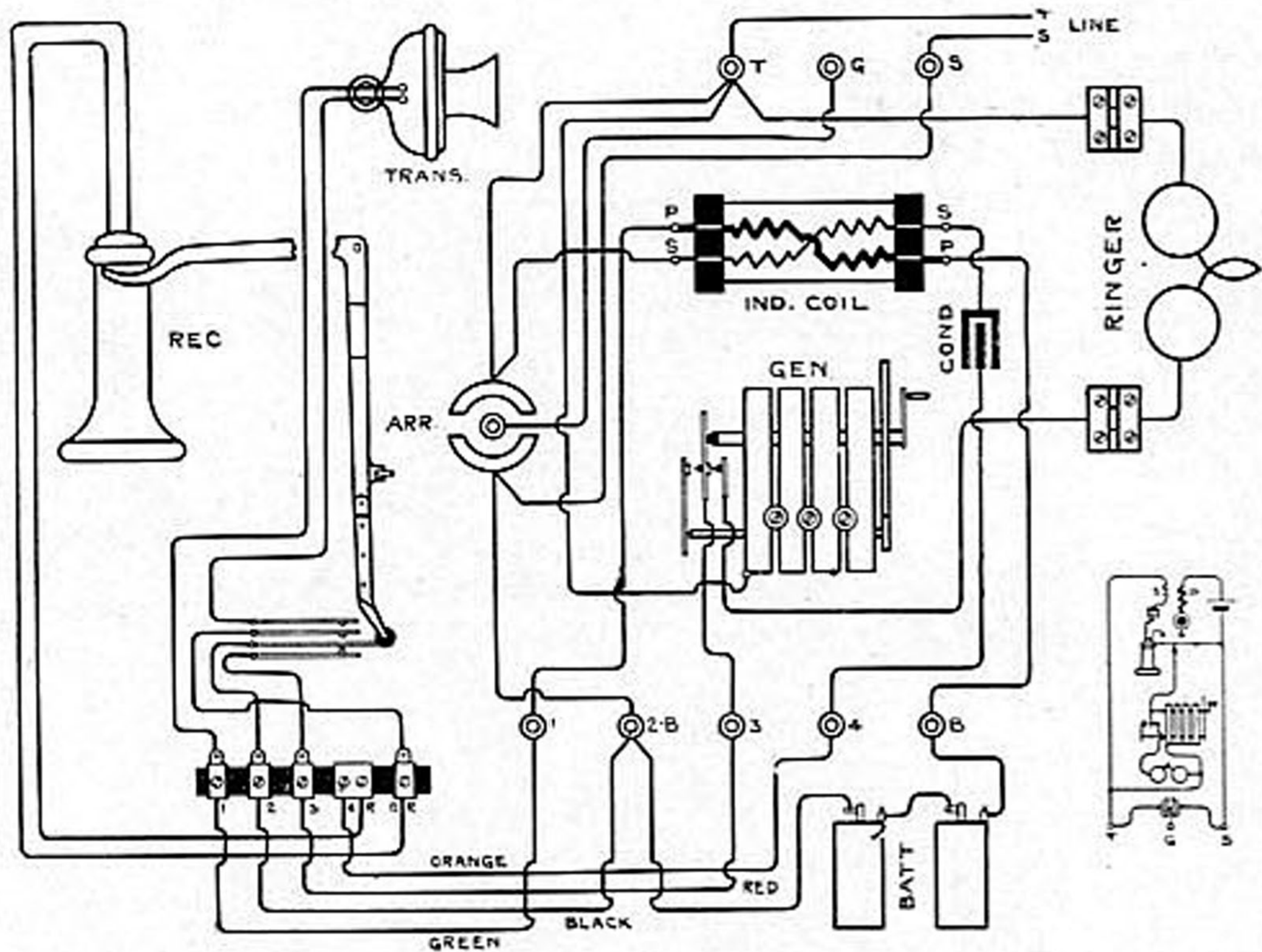
## SERIES DESK SET CIRCUIT



# CIRCUIT #10372

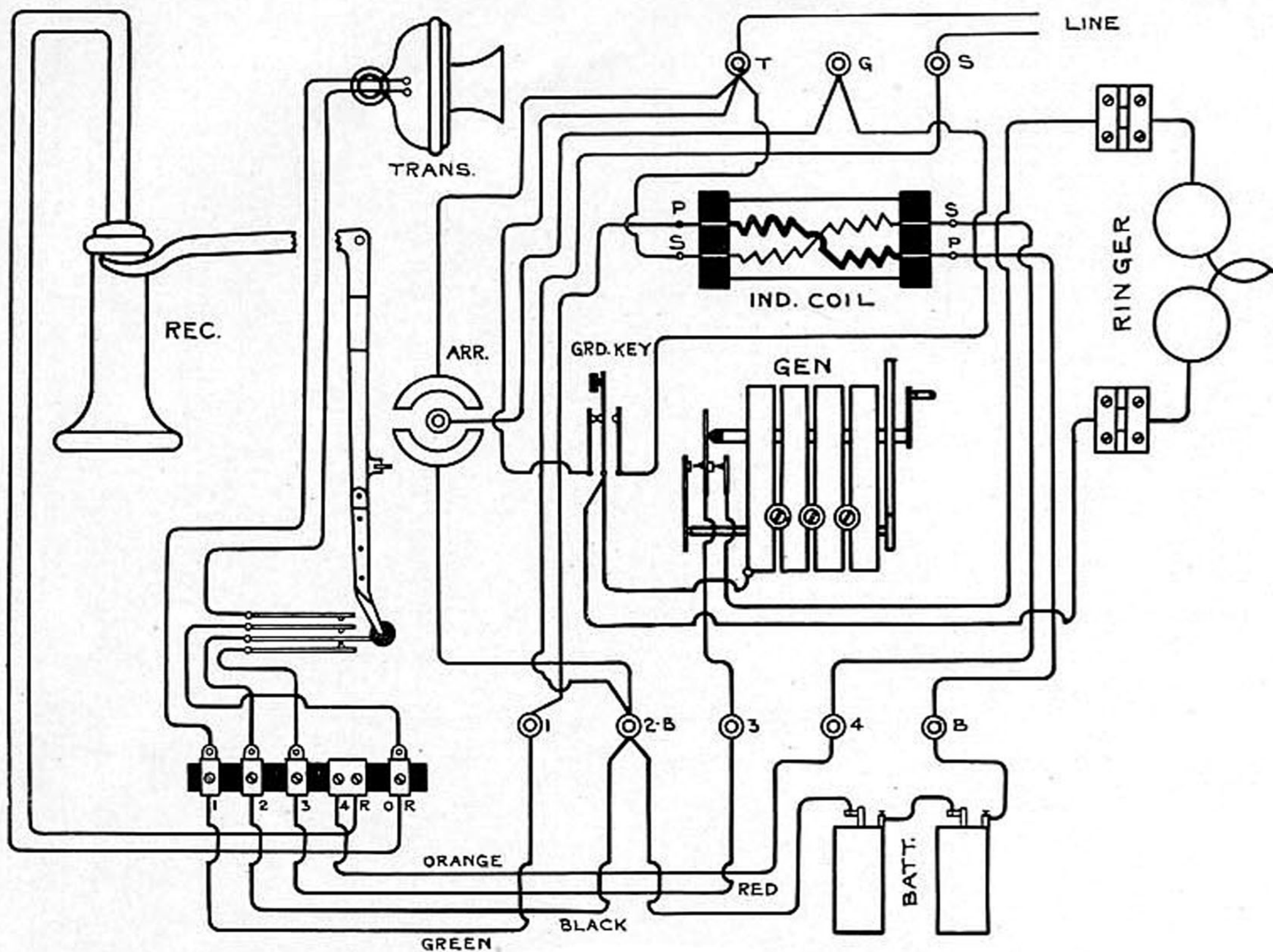
## BRIDGING DESK SET CIRCUIT

### A.C. GEN. & COND. IN SECONDARY

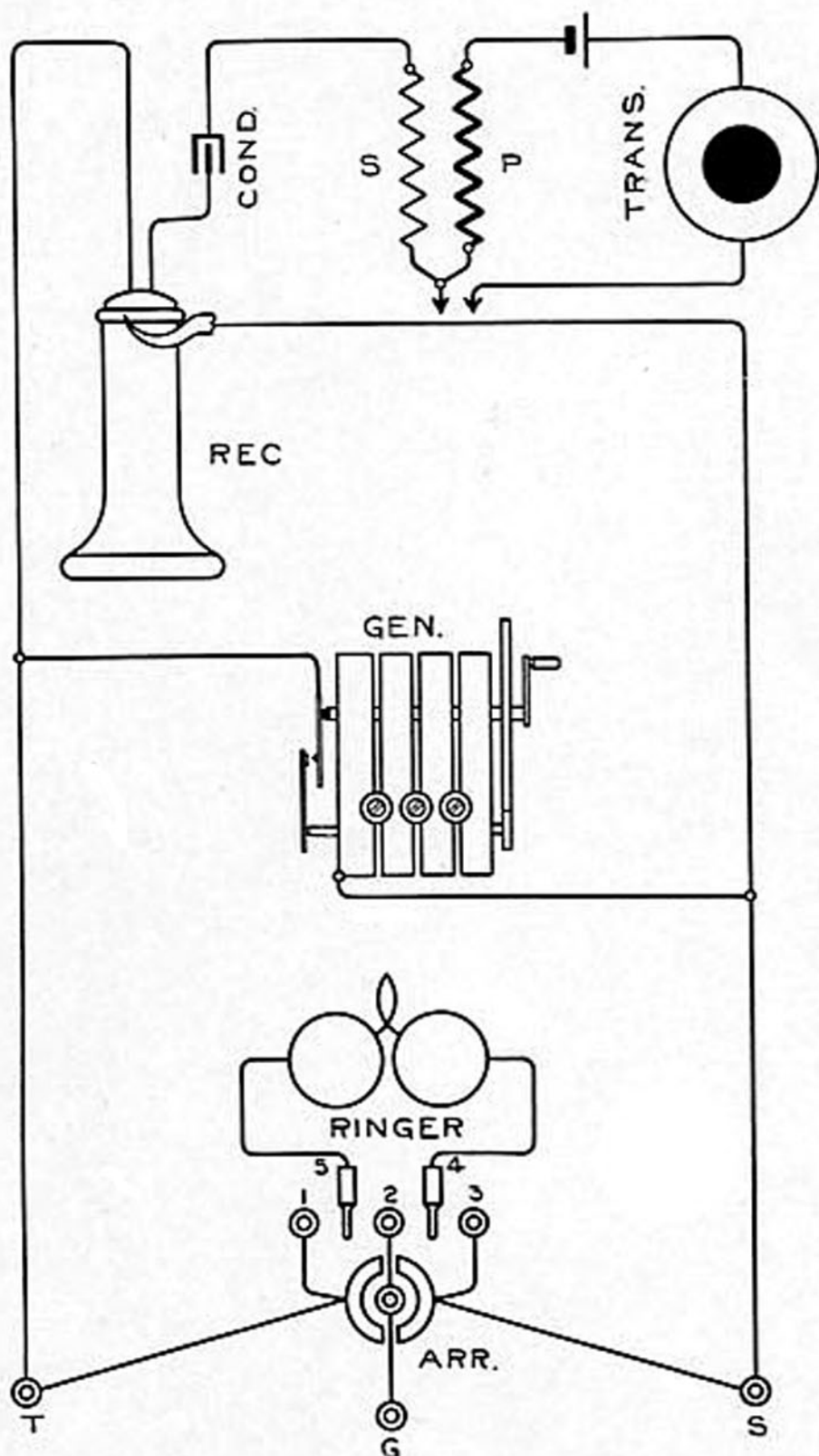




CIRCUIT No. 9841  
 BRIDGING DESK SET CIRCUIT  
 WITH GROUNDING KEY



CIRCUIT #9834  
BRIDGING SUB'S. SET CKT  
4 - PARTY  
COMPACT

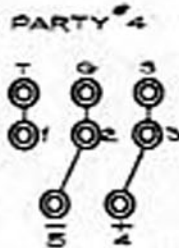
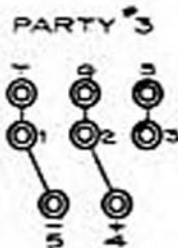
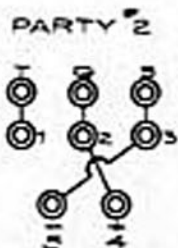
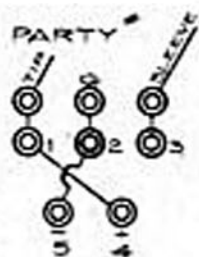
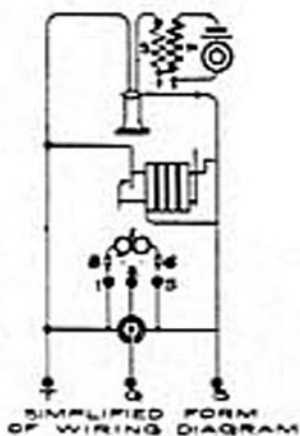
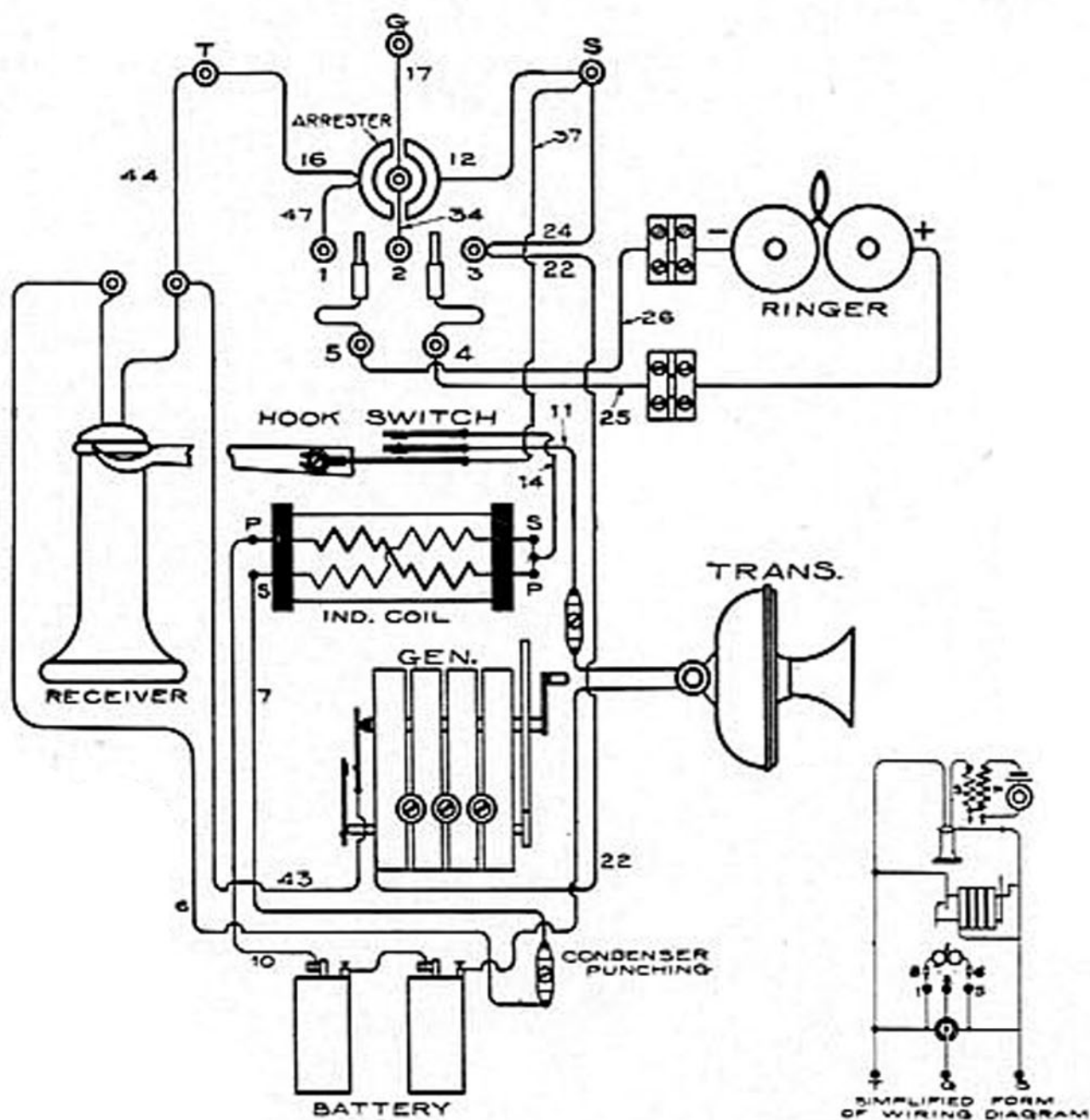


# CIRCUIT #9833

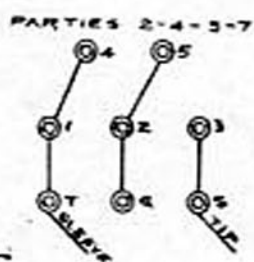
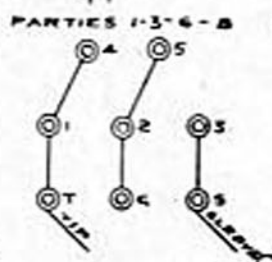
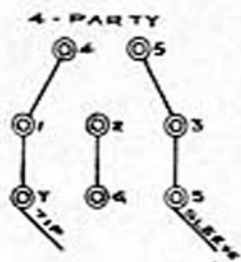
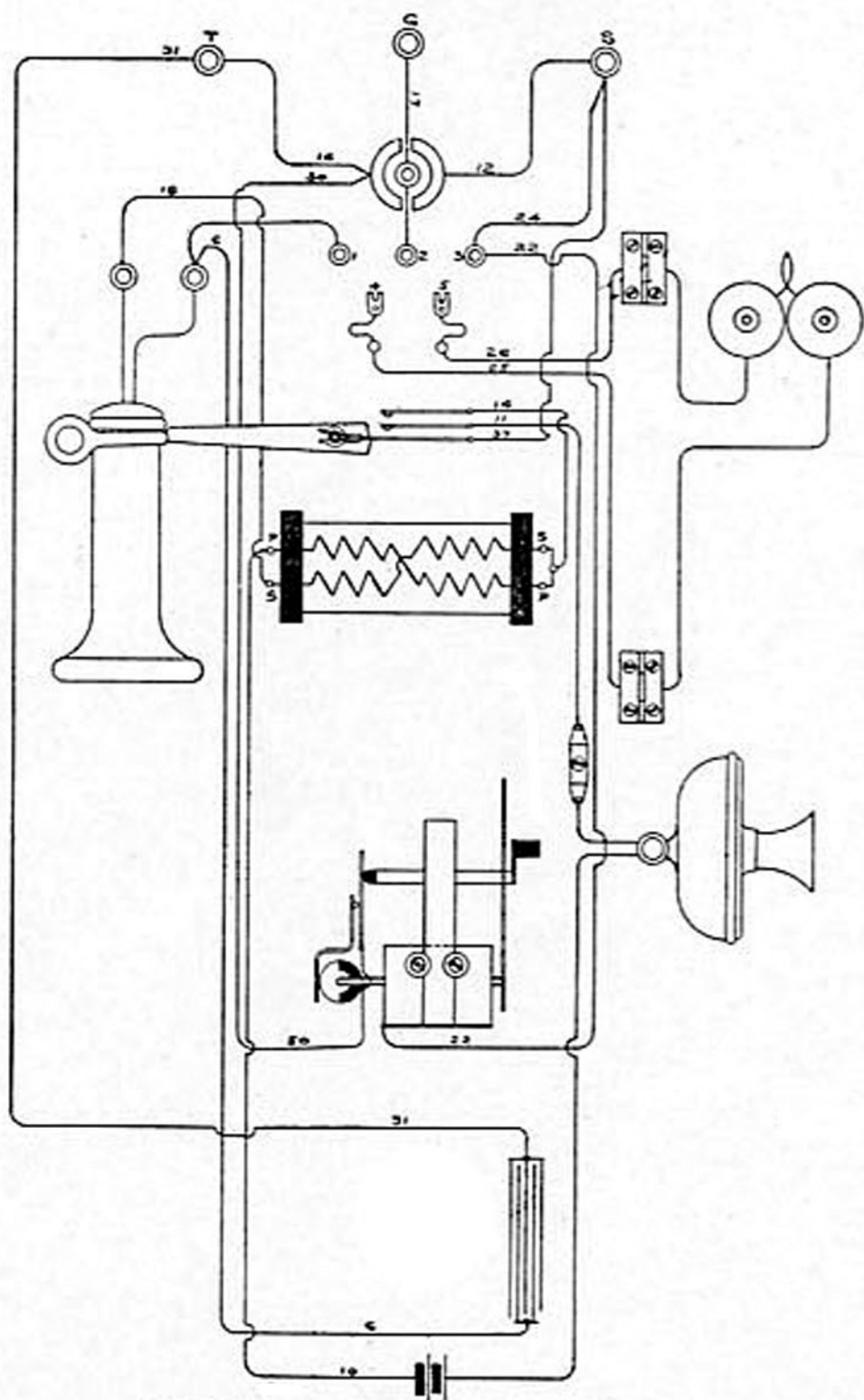
## BRIDGING SUB'S. SET CIRCUIT

### A. C. GEN. - 4 PARTY

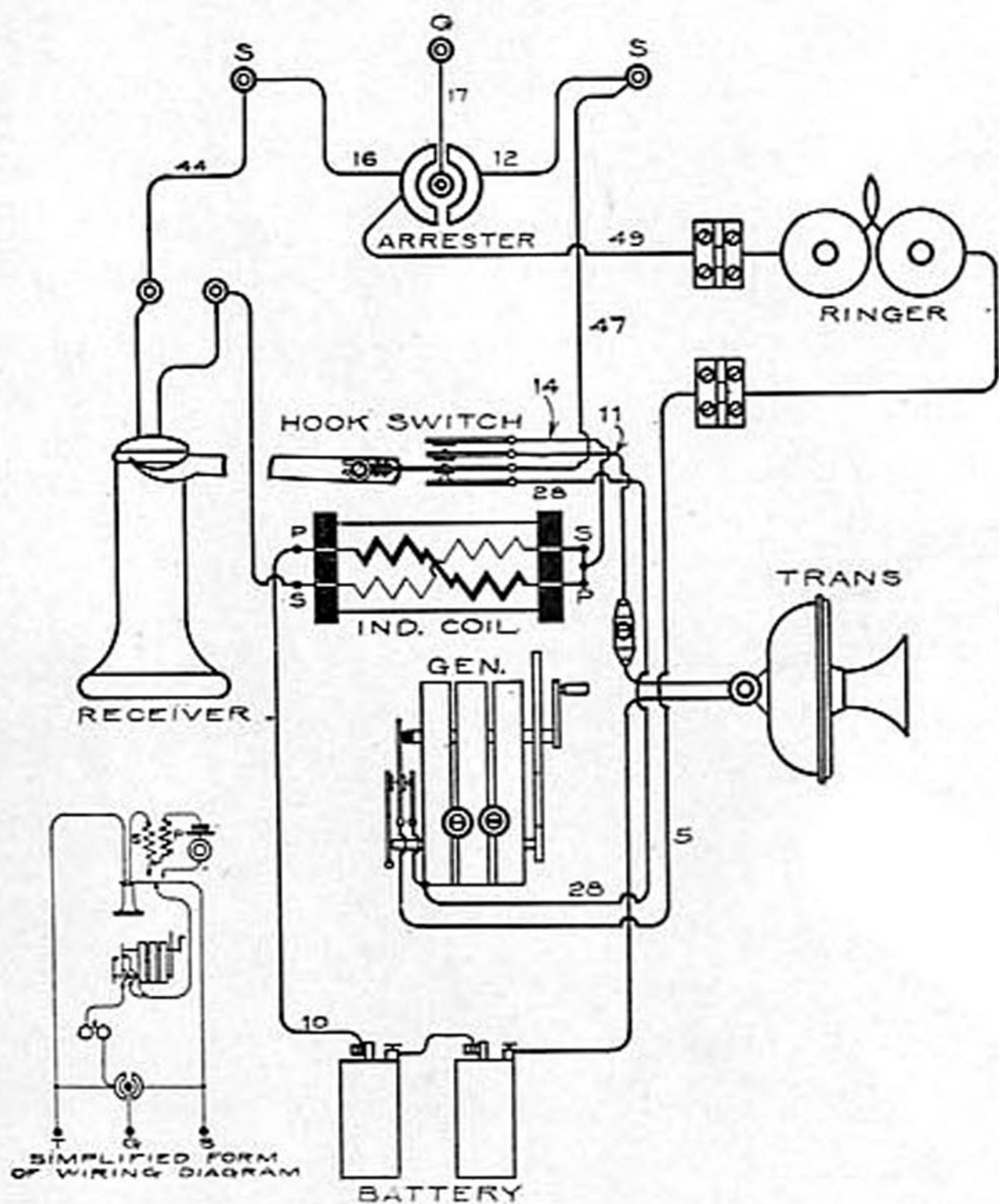
### COMPACT



CIRCUIT NO. 9832  
 BRIDGING SUB'S SET CIRCUIT  
 A. C. GEN. 4 & 8 PARTY HARMONIC  
 COMPACT



CIRCUIT #9831  
 SERIES SUB'S SET CIRCUIT  
 A. C. GEN.  
 COMPACT



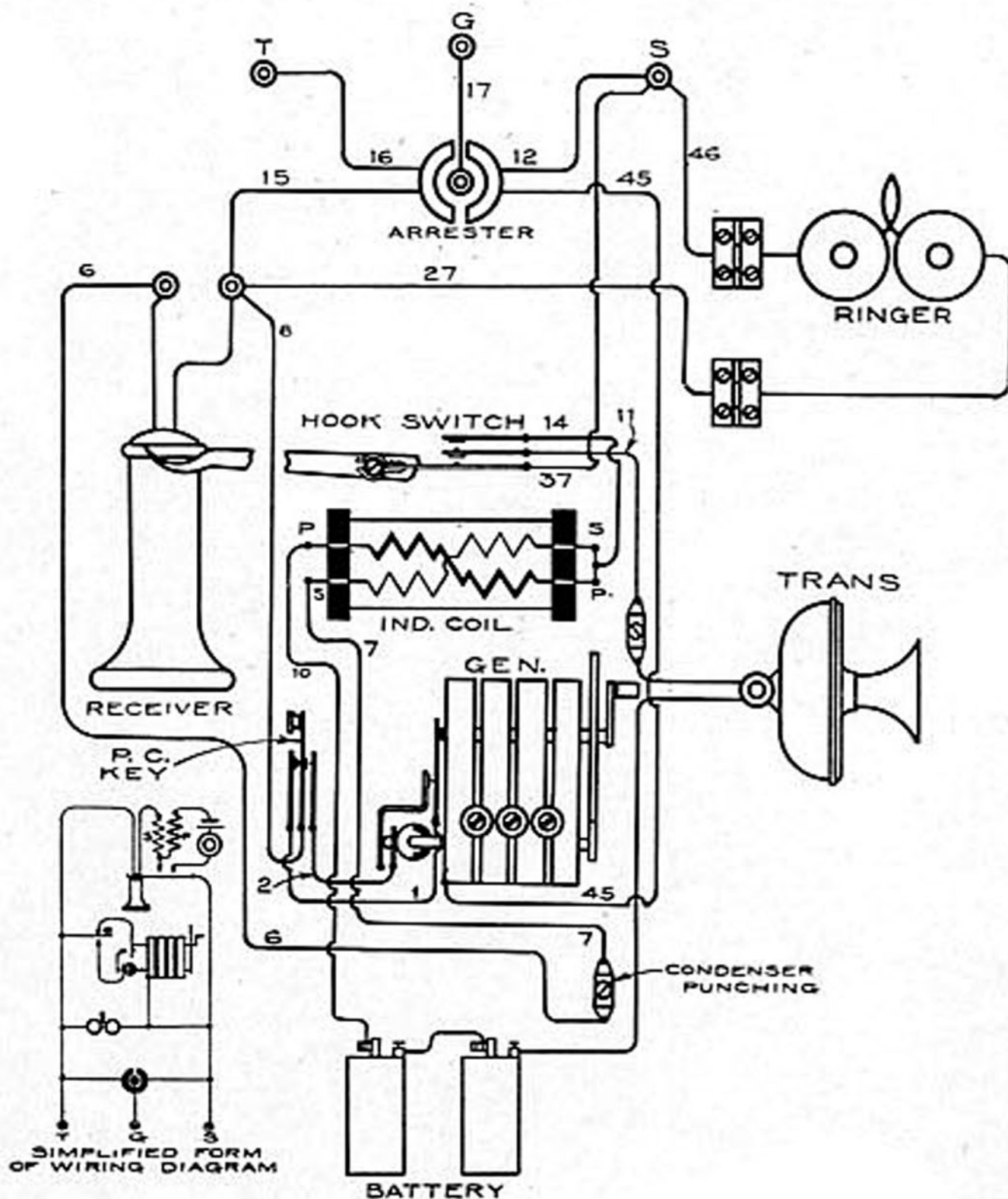
**Figure 3**



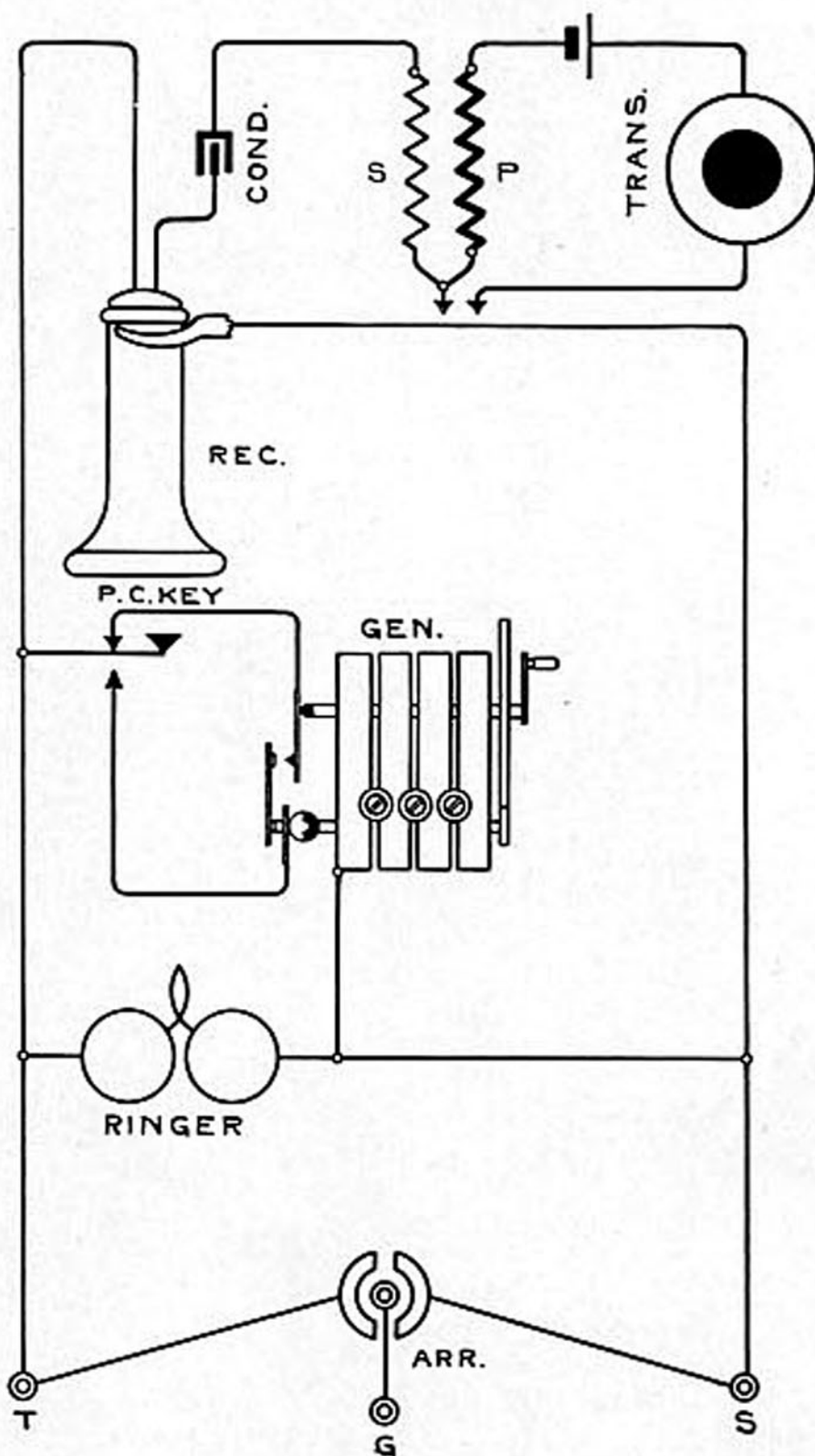
# CIRCUIT #9830

## BRIDGING SUB'S. SET CIRCUIT

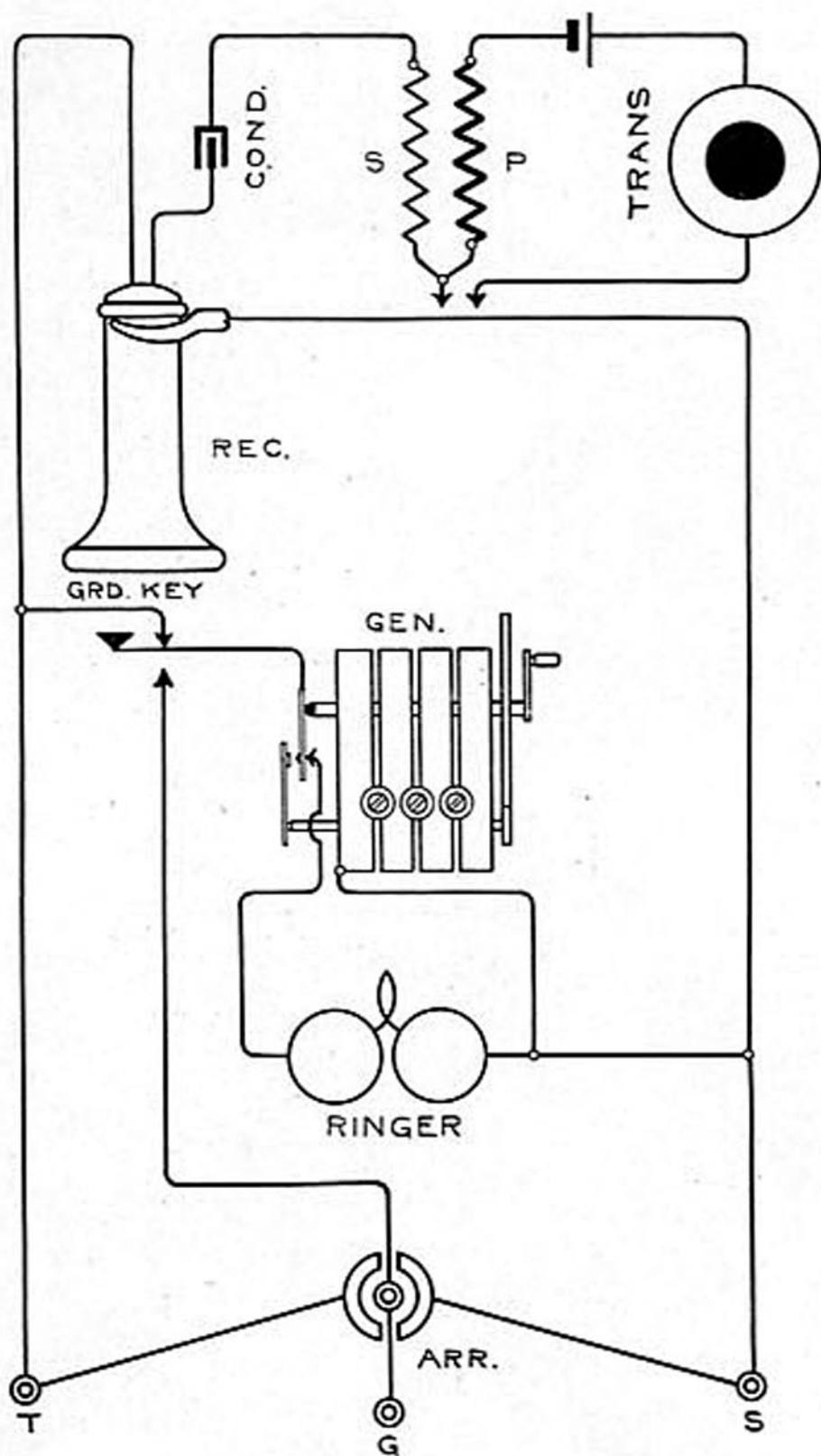
### P. & A.C. GEN. RINGER PERMANENTLY BRIDGED COMPACT



CIRCUIT \*9829  
BRIDGING SUBS. SET CKT.  
PULS. & A.C. GEN. - COND. IN SECONDARY  
RINGER PERMENANTLY BRIDGED  
COMPACT



CIRCUIT #9828  
BRIDGING SUBS. SET CKT.  
COND. IN SECONDARY & GRD. KEY  
COMPACT



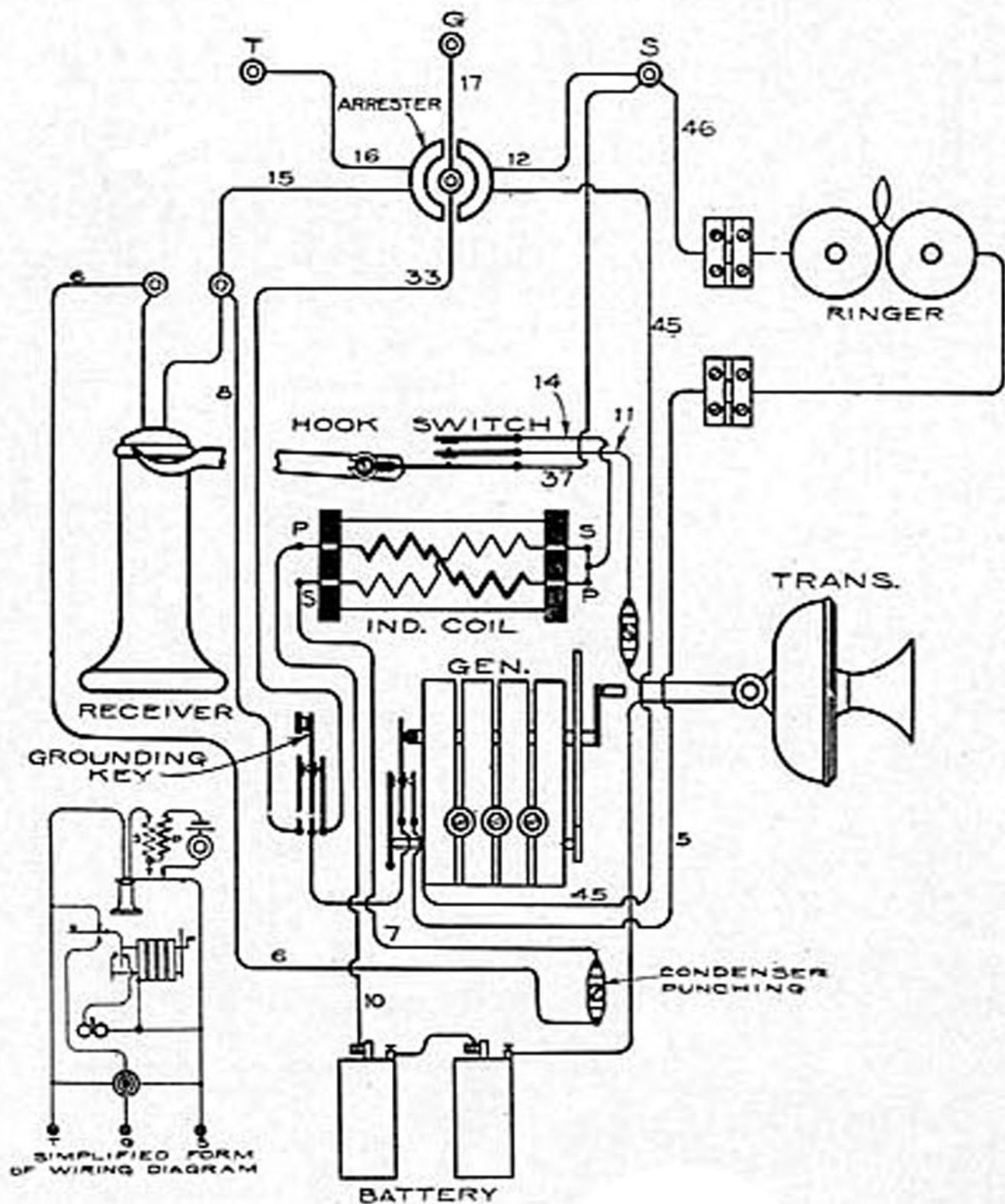


# CIRCUIT 9827

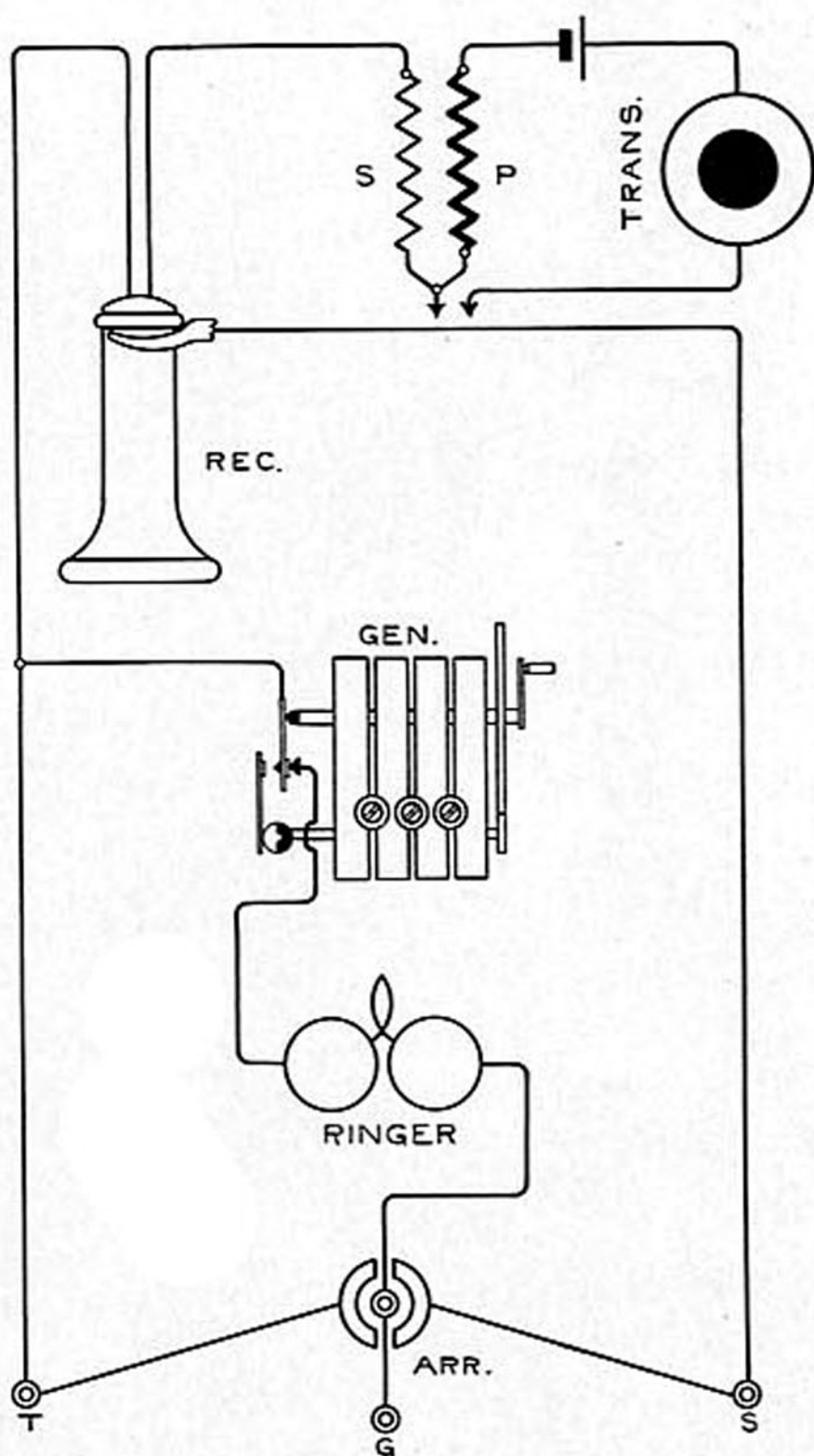
## BRIDGING SUB'S SET CIRCUIT

### A. C. GEN.-GROUNDING KEY

### COMPACT



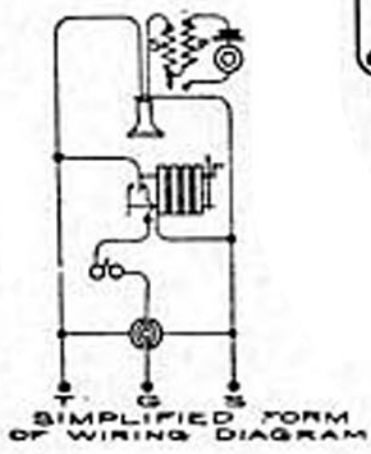
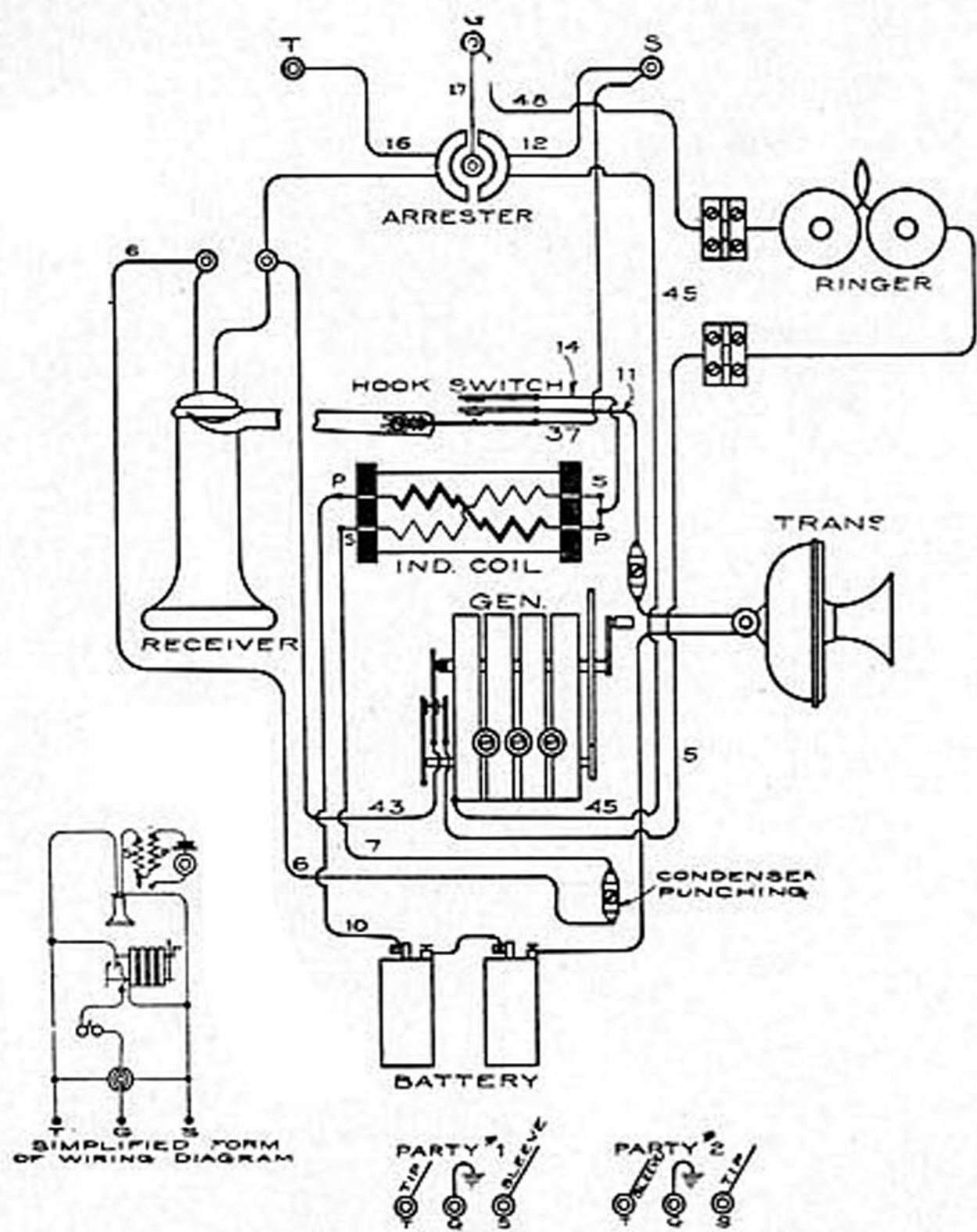
CIRCUIT \*9825  
BRIDGING SUBS. SET CKT.  
PULS. GEN - 2 PARTY  
COMPACT



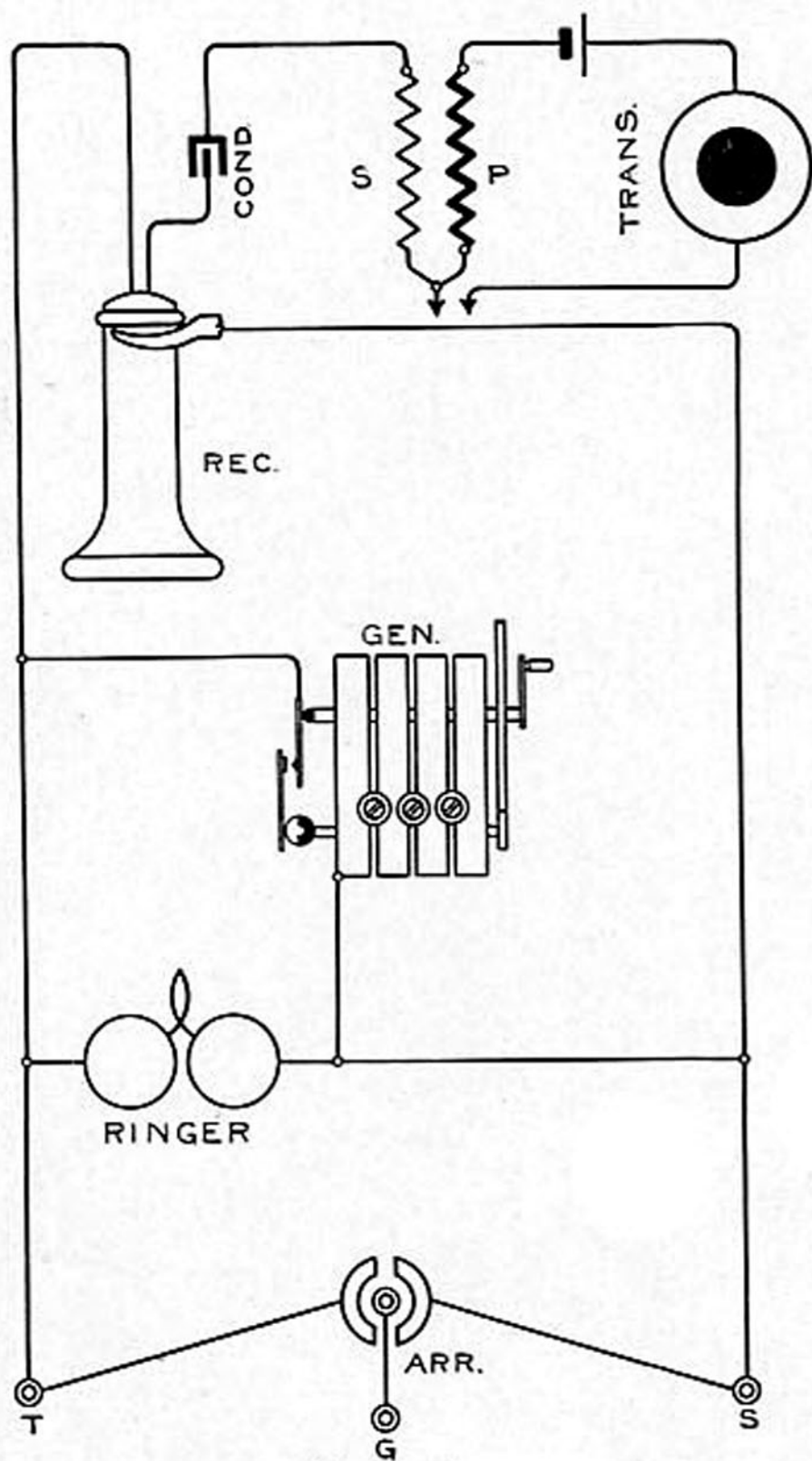
# CIRCUIT # 9824

## BRIDGING SUB'S. SET CIRCUIT

### A. C. GEN. - 2 PARTY COMPACT



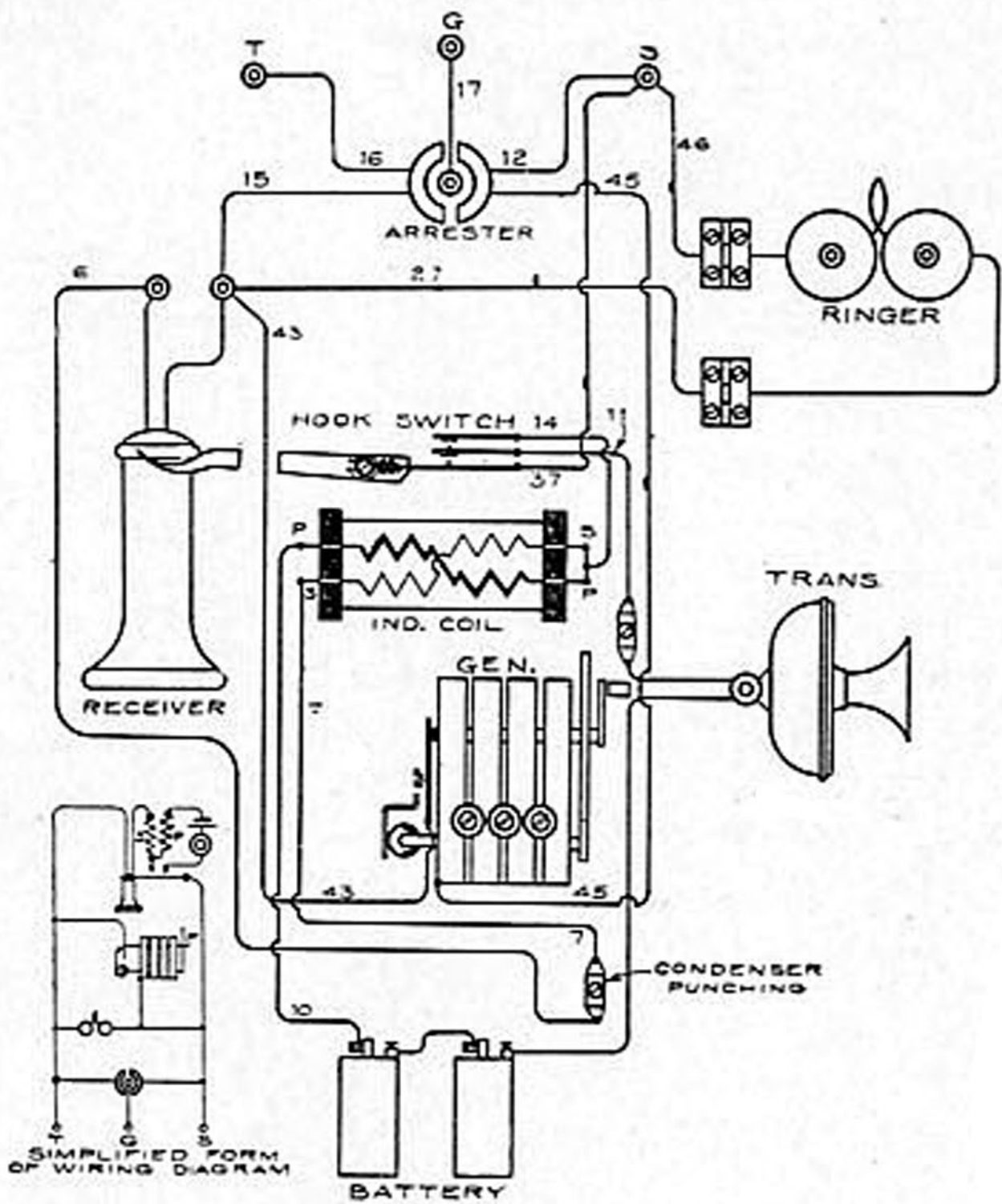
CIRCUIT NO. 9823  
BRIDGING SUBS. SET CKT.  
PULS. GEN-COND. IN SECONDARY  
RINGER PERMANENTLY BRIDGED  
COMPACT



# CIRCUIT 9822

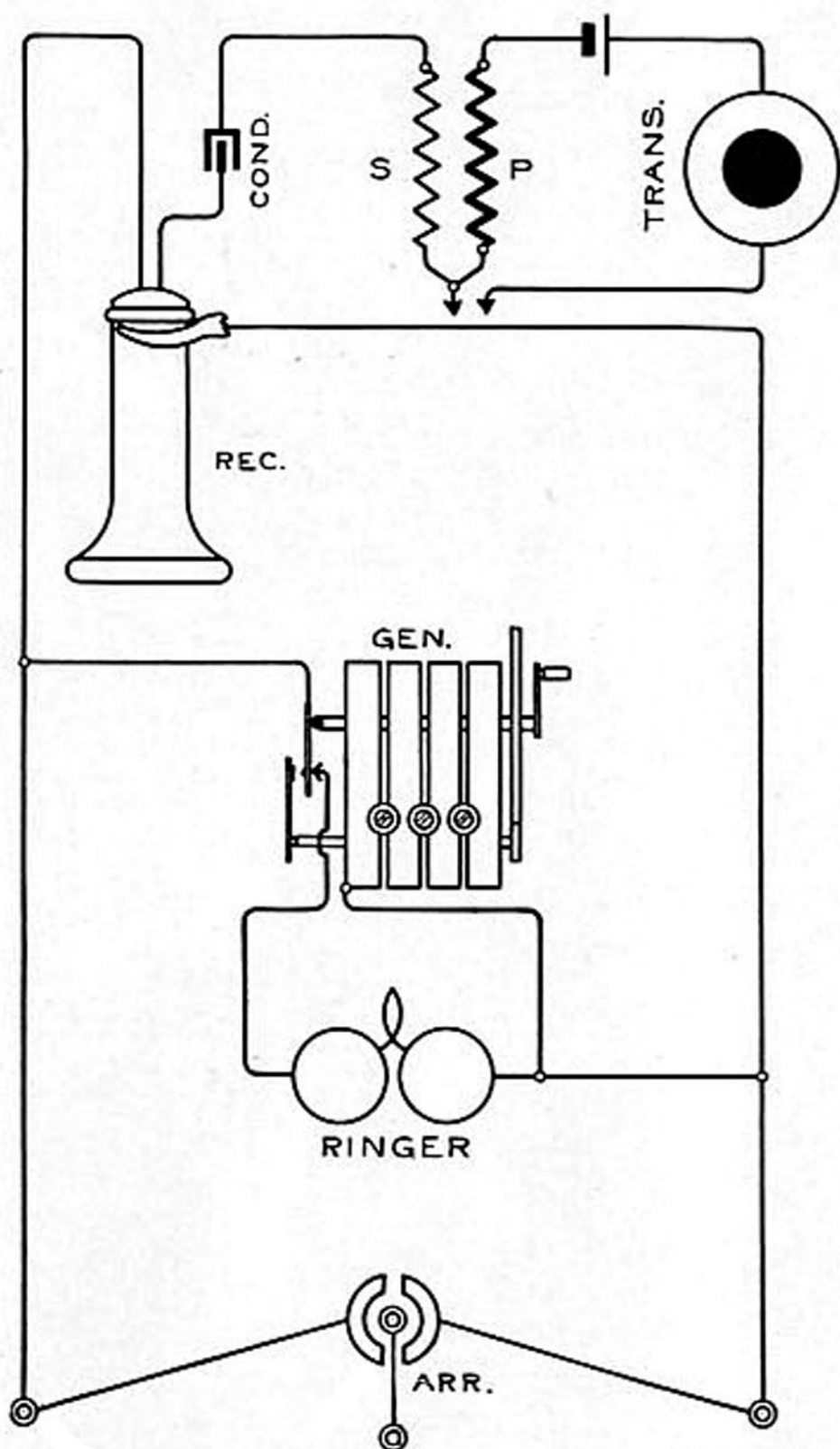
## BRIDGING SUB'S. SET CIRCUIT

### P. C. GEN. RINGER PERMANENTLY BRIDGED COMPACT

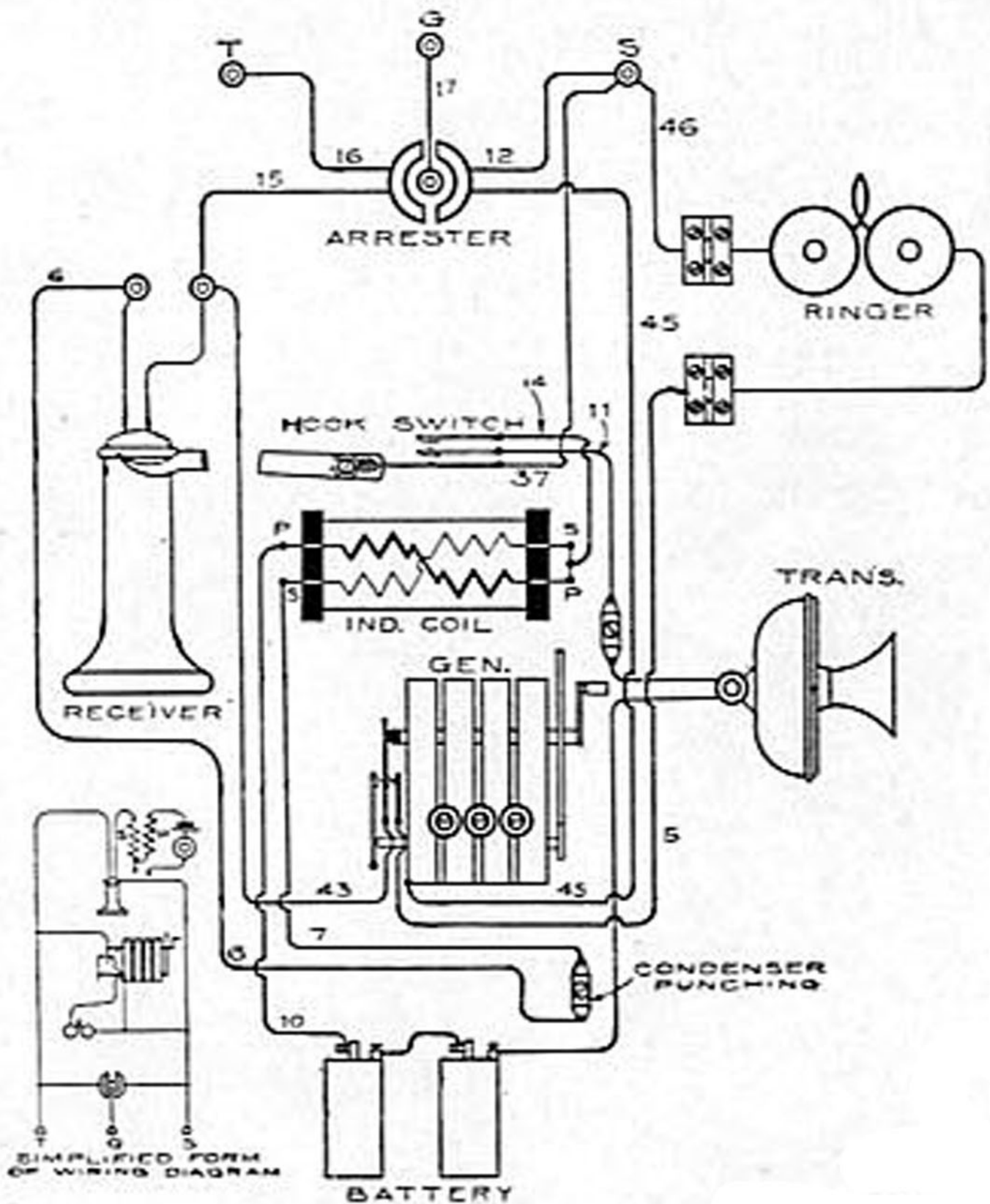




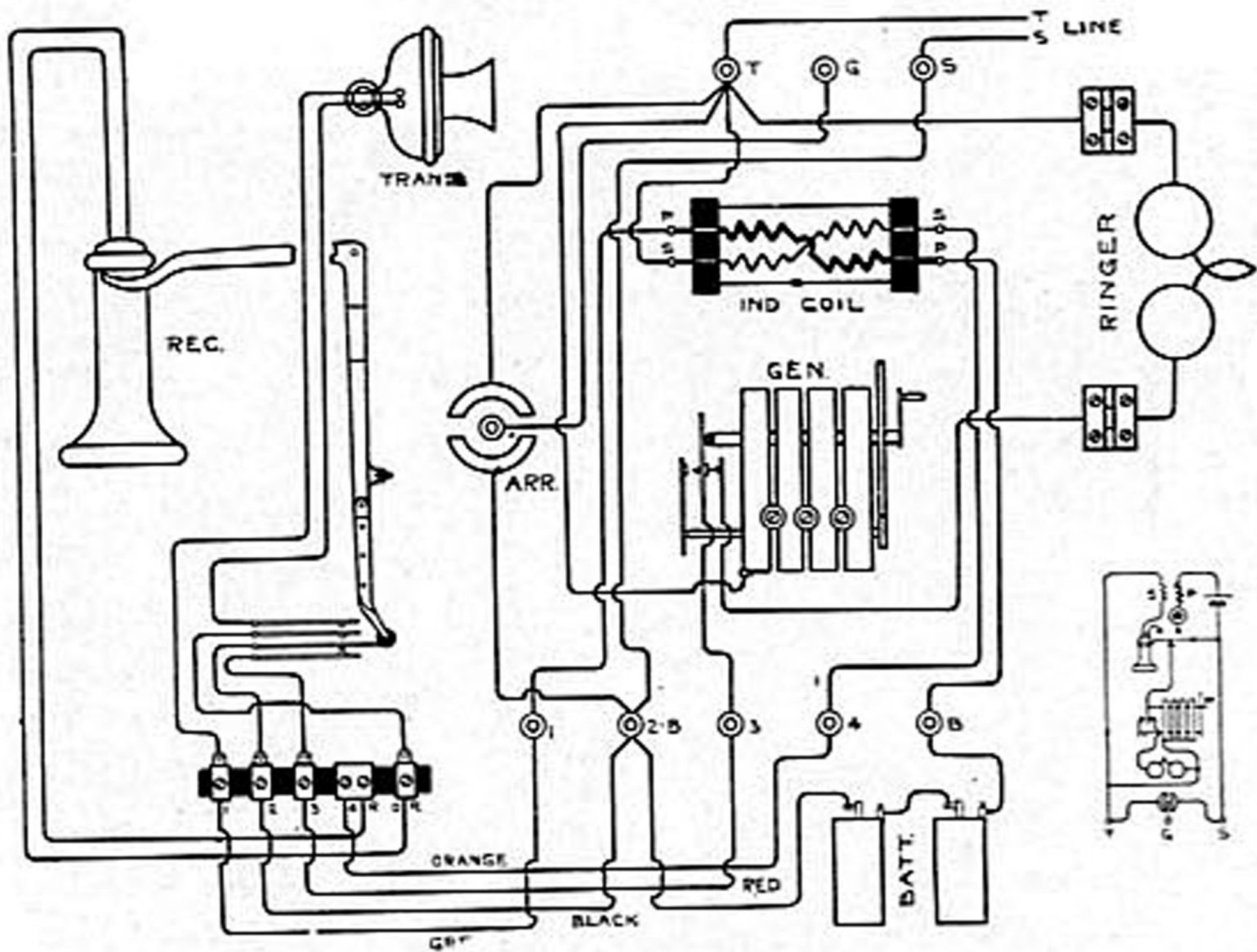
CIRCUIT #9819  
BRIDGING SUB'S. SET CKT.  
A.C. GEN. & COND. IN SECONDARY  
COMPACT



# CIRCUIT 9818 BRIDGING SUB'S SET CIRCUIT COMPACT



# CIRCUIT #8980 BRIDGING DESK SET CIRCUIT A.C. GEN.





# CIRCUIT #7279 SERIES HOTEL SET CIRCUIT

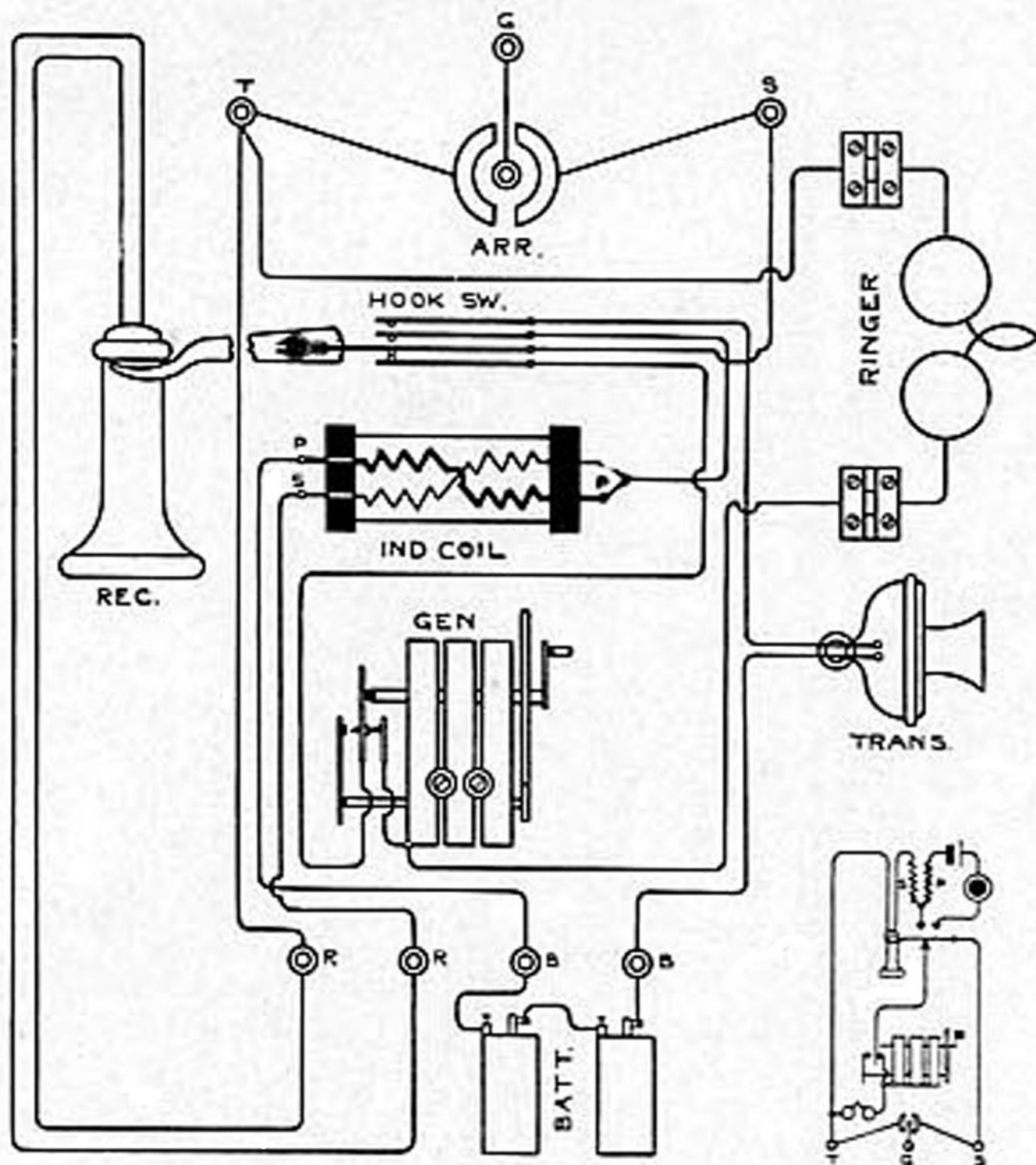
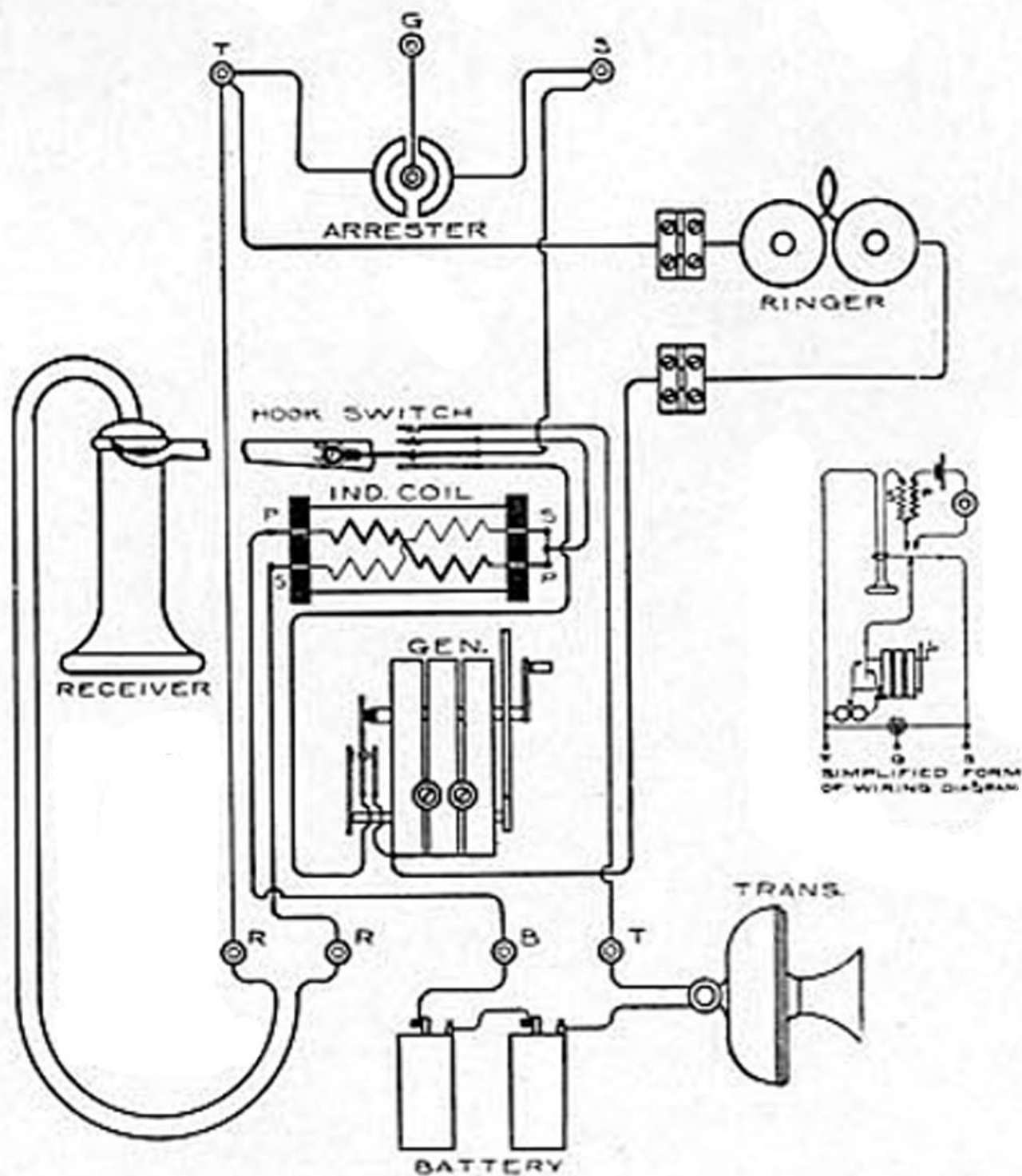


Figure 33

# CIRCUIT #7278

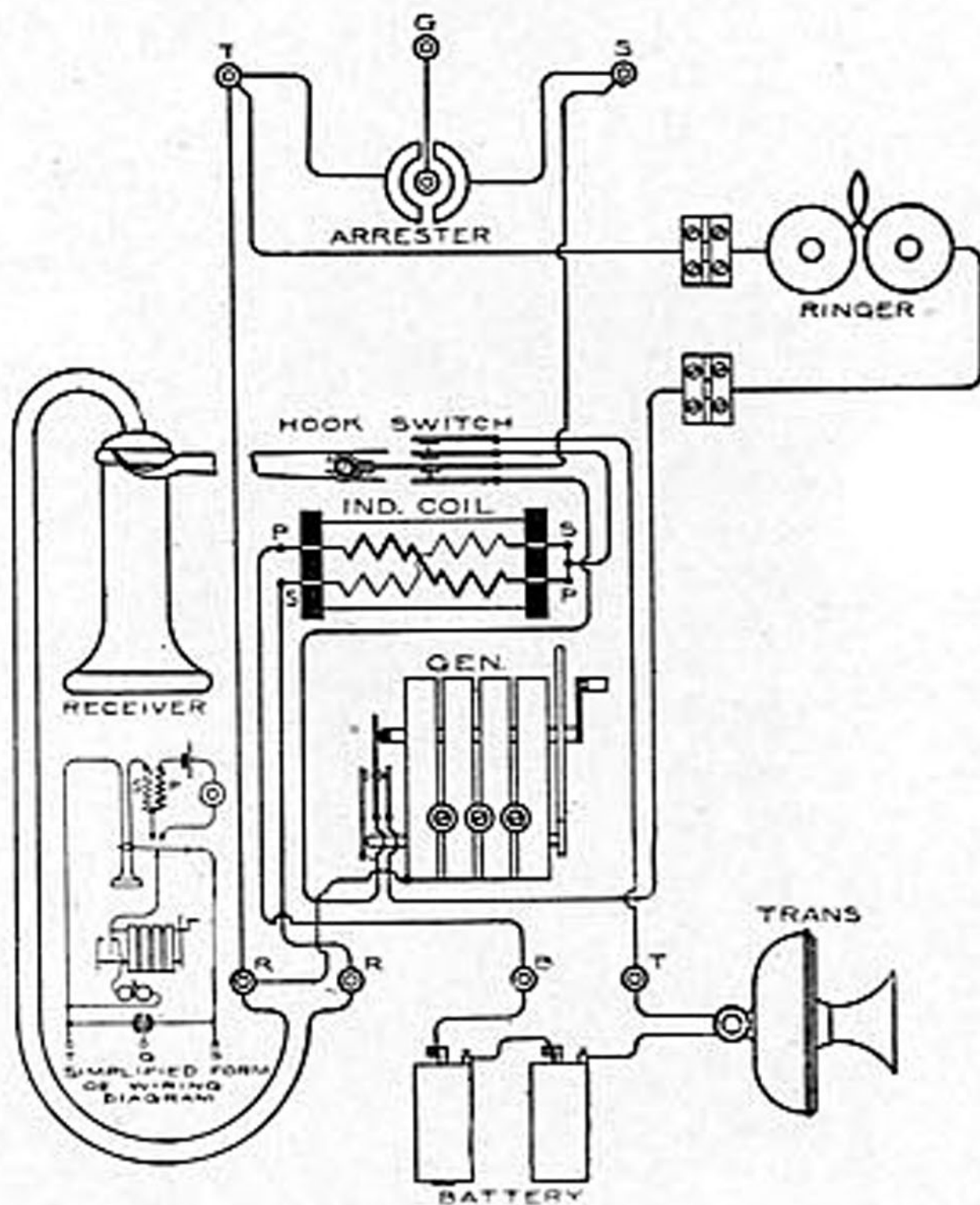
## SERIES SUB'S SET CIRCUIT REGULAR



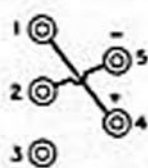
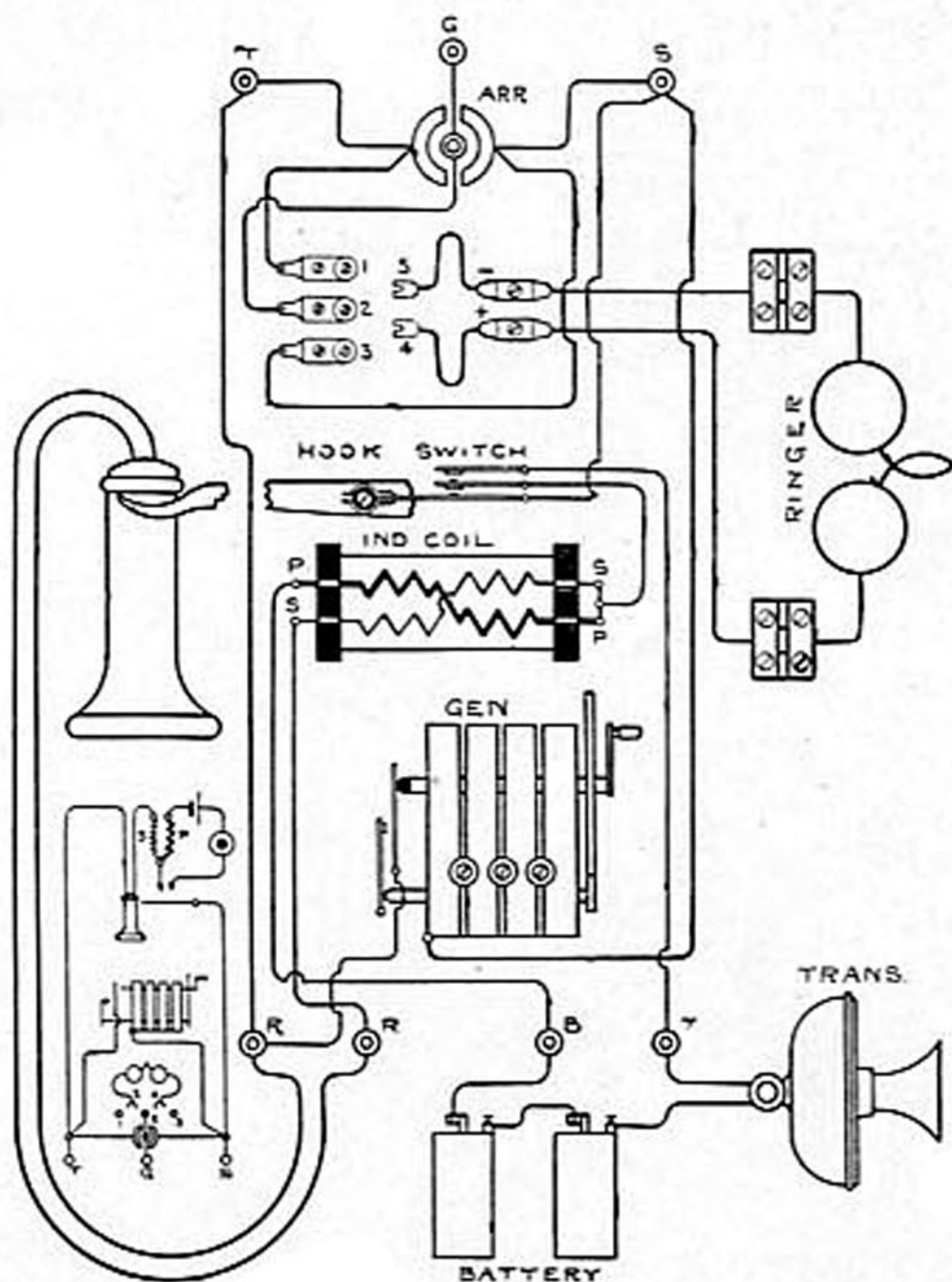
# CIRCUIT #2482

## BRIDGING SUB'S. SET CIRCUIT

### REGULAR



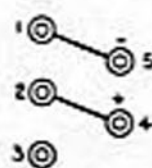
# CIRCUIT # 751 BRIDGING SUB'S. SET CIRCUIT 4 PARTY PULS.



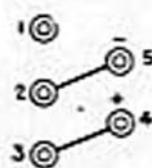
STA. 1



STA. 2



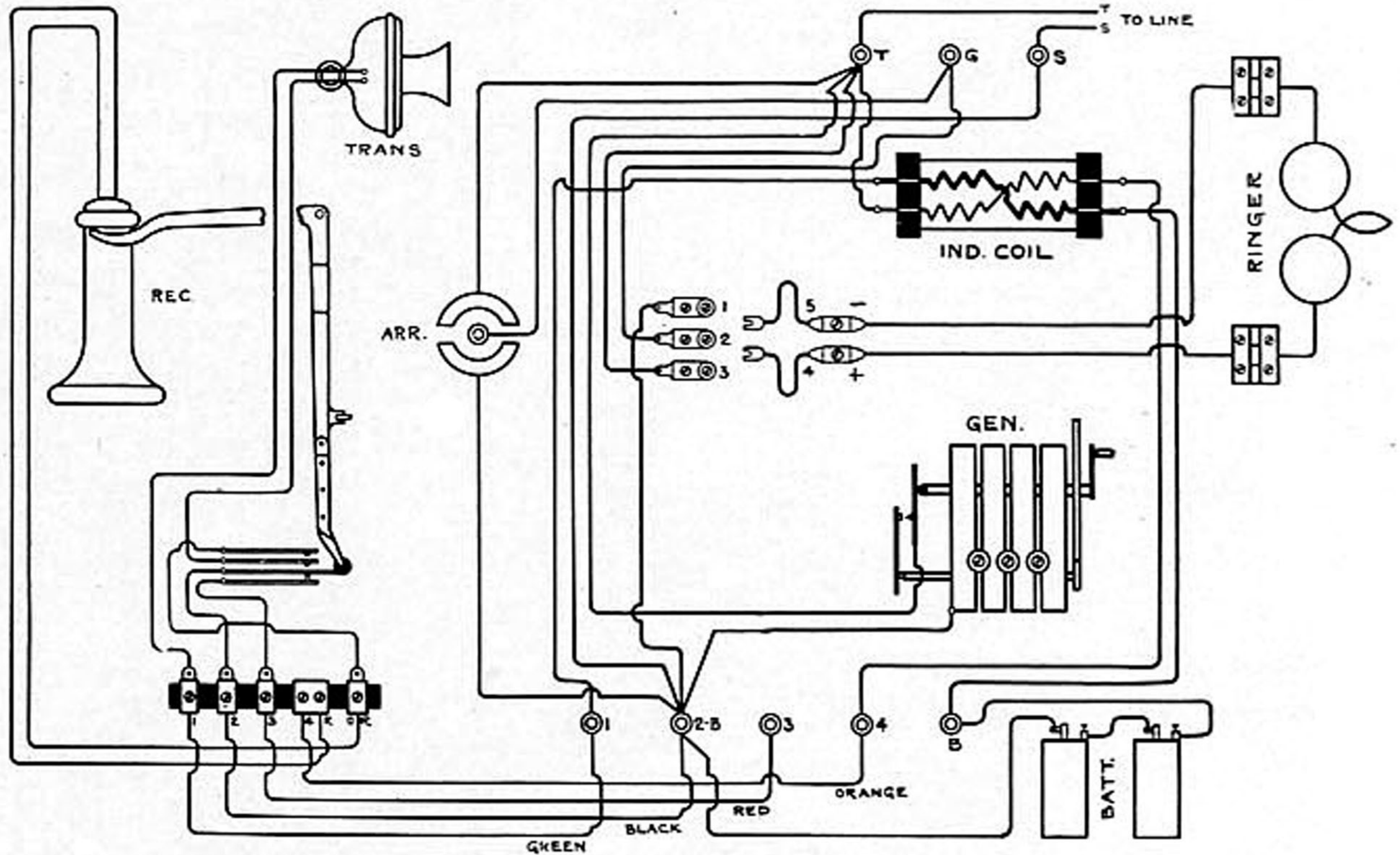
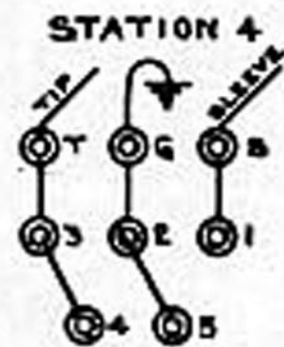
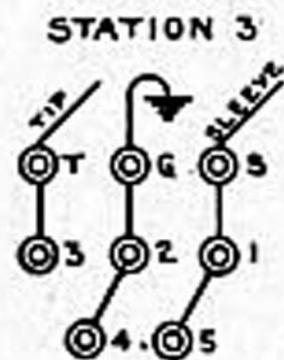
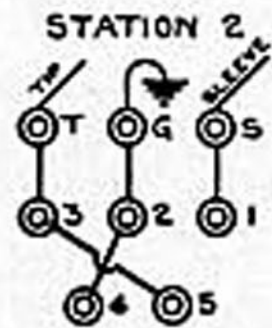
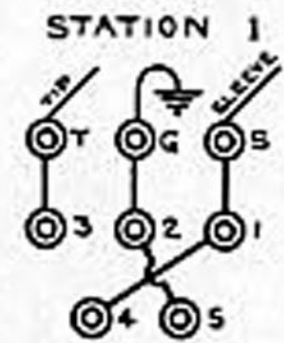
STA. 3

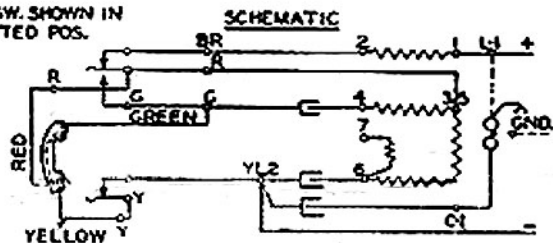


STA. 4

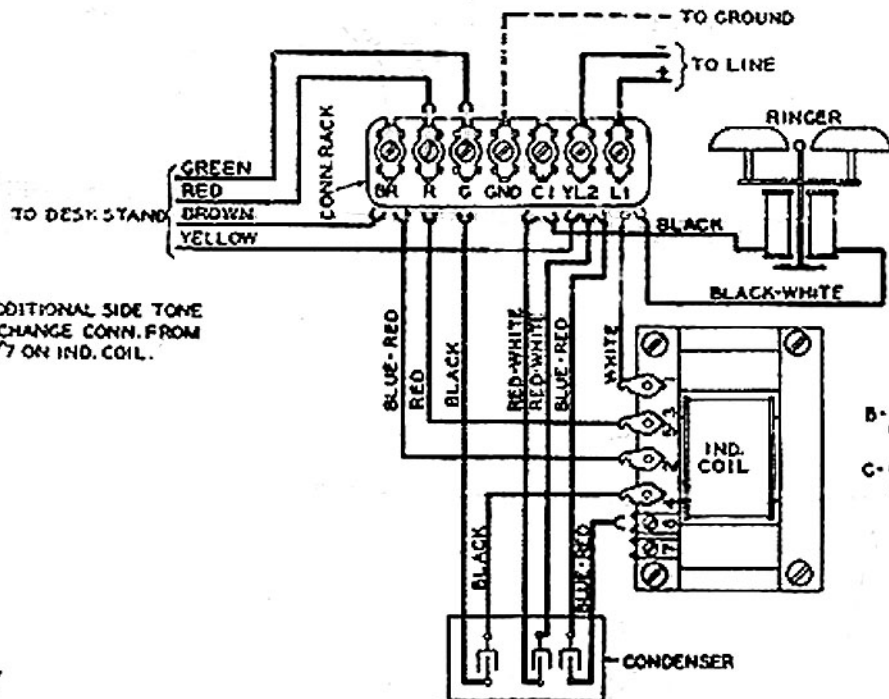


# CIRCUIT No. 10375 BRIDGING DESK SET CIRCUIT 4 PARTY PULSATING

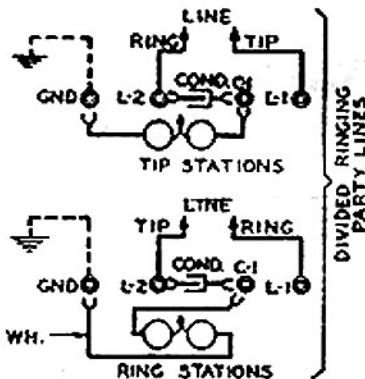
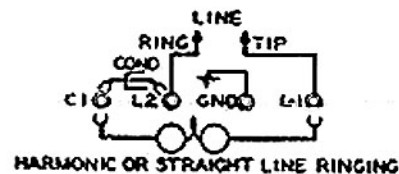


HOOK SW. SHOWN IN  
OPERATED POS.**TRIAD CIRCUIT**DIVIDED RINGING  
COMMON BATTERY D.S. BOX

21237



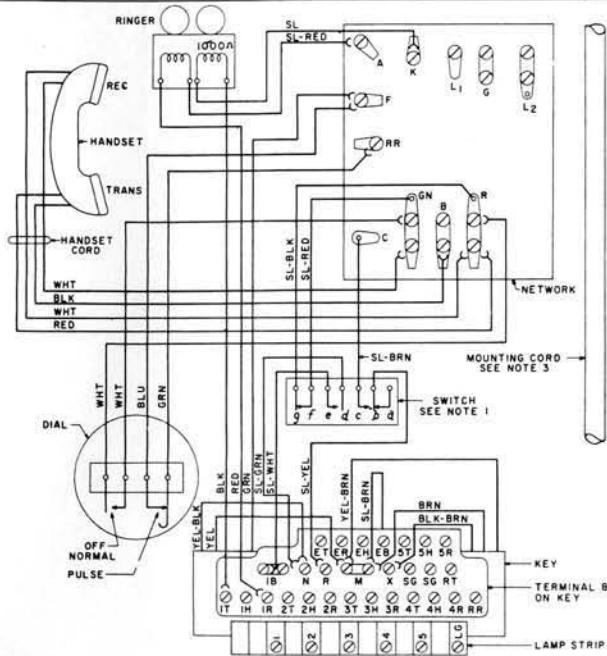
NOTE:  
"A" - FOR ADDITIONAL SIDE TONE  
REDUCTION CHANGE CONN. FROM  
TERM. 6 TO 7 ON IND. COIL.



B- REVERSE RINGER LEADS AS SHOWN  
ON BIASED RINGERS ONLY.

C- USE  $\frac{1}{2}$  M.F. CONDENSER IN SERIES WITH  
HARMONIC RINGERS IN FREQ. OF 42, 54, 60,  
66 & 65% FOR ALL OTHER RINGERS  
USE P.M.F. CONDENSER.

21237



NOTES

- 1-CONTACT SEQUENCE  
REMOVING HANDSET  
A, d e CLOSSES BEFORE c d  
B, f g OPENS  
RESTORING HANDSET  
A, f g CLOSSES  
B, c d OPENS BEFORE d e
- 2-FOR MANUAL SERVICE REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER GREEN KEY LEAD FROM (F) TERMINAL TO (RR) TERMINAL ON NETWORK.
- 3-SEE TABLE FOR CONNECTIONS.
- 4-FOR RINGER CUT-OFF CONTROL BY CUSTOMER BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- 5-KEY FEATURE DESIGNATIONS:  
H- HOLD  
P- PICK-UP  
S- SIGNAL  
PS- CONVERTIBLE, PICK-UP OR SIGNAL
- 6-DD\* CONDUCTORS ARE TAPED AND STORED IN TELEPHONE.
- 7-PROVIDE "M" WIRING WHEN THE BUZZER IS TO OPERATE ON 60 CYCLES AC, AND PROVIDE "N" WIRING WHEN THE BUZZER IS TO OPERATE ON DC.

TABLE A  
UNIVERSAL-KIAI SYSTEM CONVERSION-STATION BUSY SIGNAL CONNECTIONS  
CONNECTION OF HOLD KEY & SWITCH LEADS

KEY TEL SYS	HOLD KEY B SWITCH LEADS				M/W CORD
	SL-WHT	SL-GRN	SL-YEL	YEL	
NO STATION BUSY LAMP	UNIV IB	IB	N	R	M
KIAI IB	N	R	M	N	M
WITH STATION BUSY LAMP*	UNIV SG	L2 #	N	R	M
KIAI IB	L2 #	R	M	N	G* TO N

\* TERMINAL ON NETWORK

TABLE B  
RINGER CONNECTIONS

	RINGER OR BUZZER LEAD			
	SL-RED	SL	BLK	RED
SET RINGER OR BUZZER NOT TO BE CUT OFF IN SET	WHEN USED AS BRIDGED RINGER ON ANY LINE			
	A	K	T	R
	WHEN USED AS PRIVATE LINE COMMON SIG. OR OTHER USE			
	WITH CONDO	A	K	RT
	WITHOUT CONDO	A	A	RR

TABLE C  
PICKUP-SIGNALING CONVERSION  
CONVERT FROM LOCKING TO NON-LOCKING OR VICE-VERSA AND CHANGE LEADS AS FOLLOWS:

	NO. OF PICKUP KEYS	NO. OF SIG KEYS CONVERTED FROM P.U. KEYS	NO. OF PRIVATE AND INTERCOMMUNICATING LINES WITH COMMON SIG KEY	KEY LEADS			
				YEL- BRN	BRN	SL- BRN	BLK- BRN
6 BUTTON SET	5			M	M	M	X
	4	1		M	M	M	SG
	3	2		M	M	SG	X
	2	3		M	X	SG	X
	4	1	2	X	X	5H	SG
	4	1	3	X	X	5H	SG

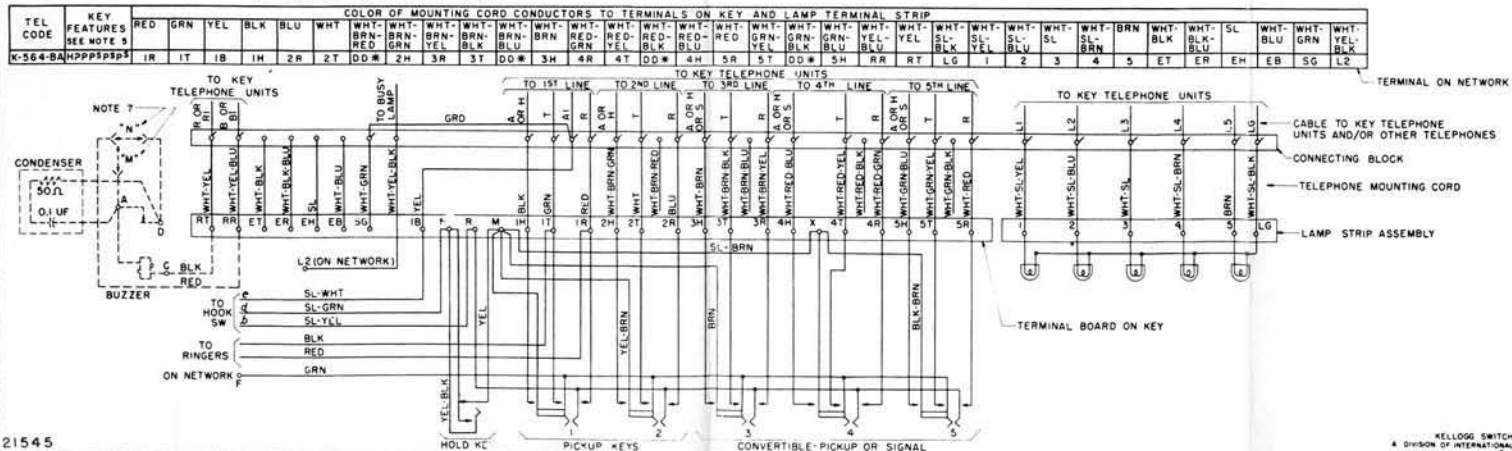
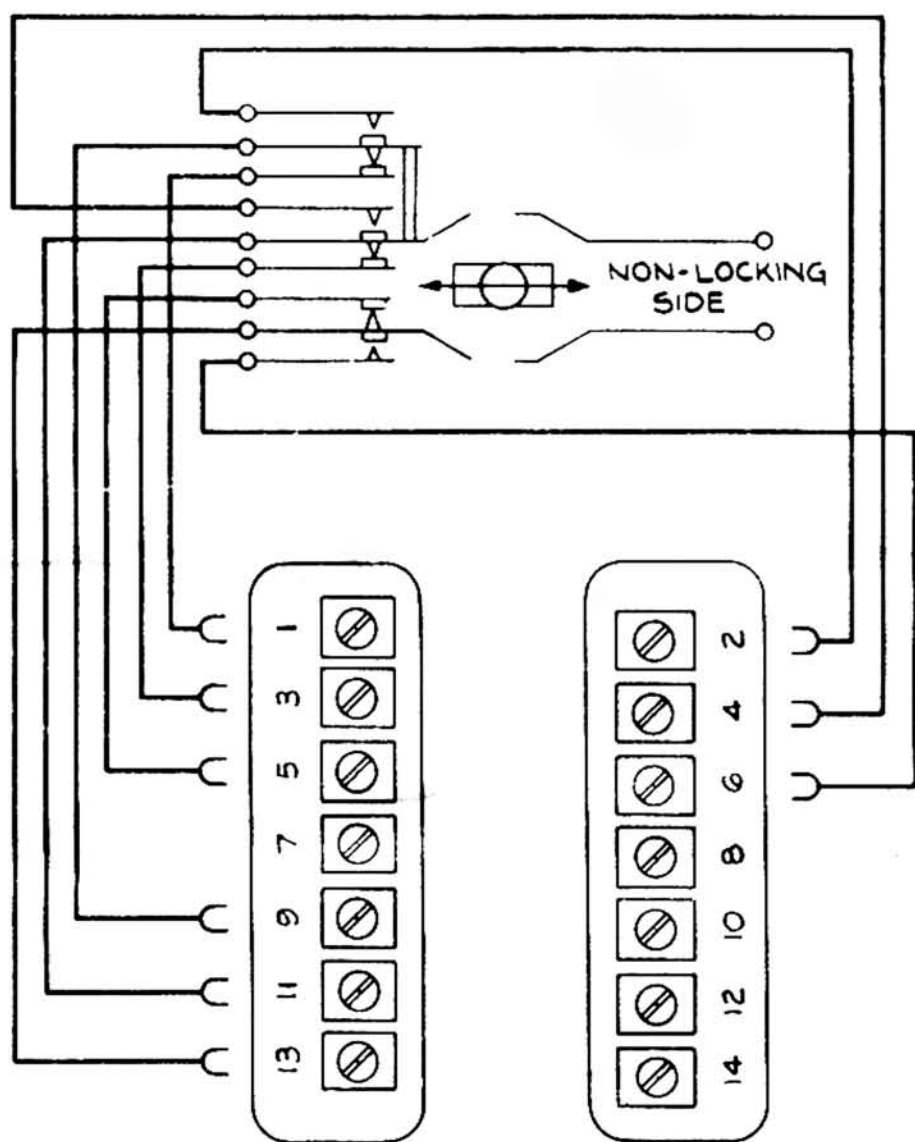


FIG. 1

# 31



200281

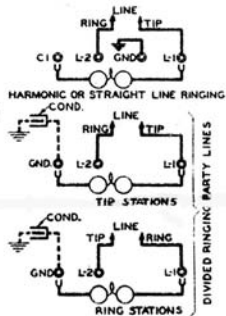
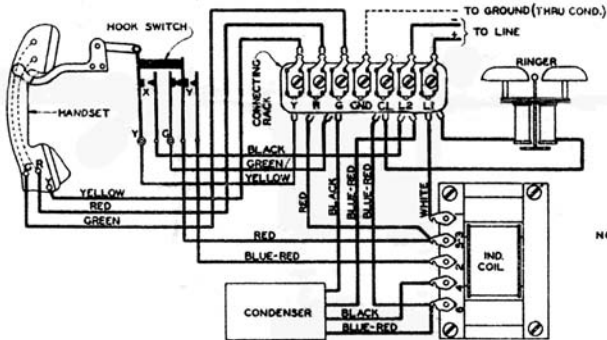
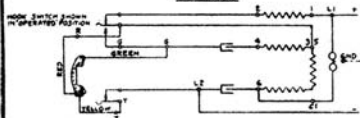
1  
ISSUE  
NO.



# TRIAD CIRCUIT

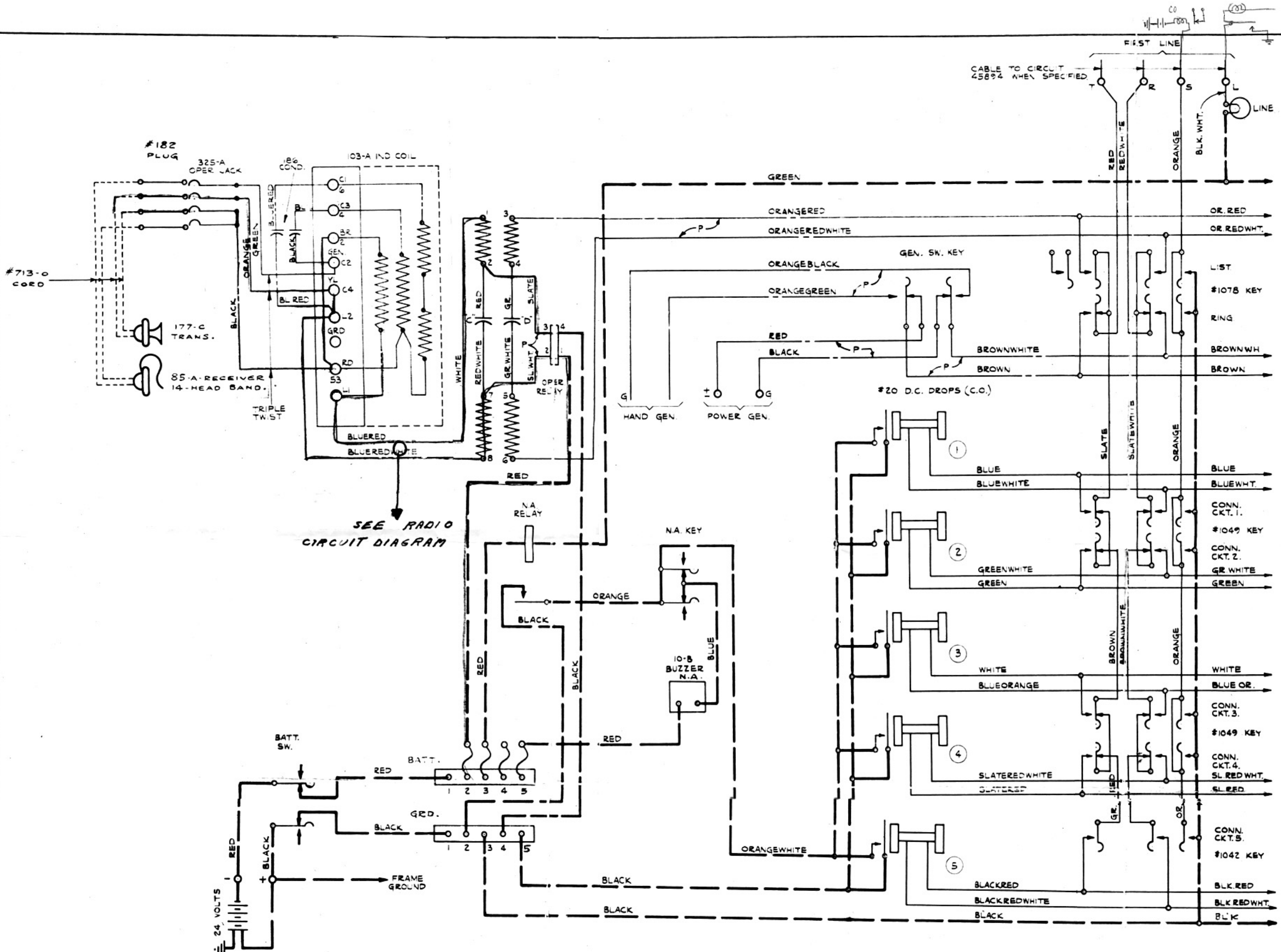
COMMON BATTERY WALL TELEPHONE

**SCHMATIC**



NOTE-A- CONTACTS "X" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK.

45893



SEE RADIO  
CIRCUIT DIAGRAM

REL. NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES				REMARKS
			SPRING TENSION	ARM. TRAVEL	TEST	READJUST	NON OPERATE	RELEASE	
N.A.	2102-S-HG	3.5	15-G	.015	AFTER SOAK	NON OPERATE	OPERATE	NON OPERATE	24 OR 45 VOLTS
OPER	2053-T-Z	75	75		1.500	.037	.0015	.022	NO SPRINGS

CHANGES	APPD.
ISSUE 1.	
APPD. CHKD. ENGR DRWG <i>[Signature]</i> DATE 10.30.49	

**MAGNETO CORDLESS P.B.X. CCT.**  
5-CONN. CIRCUITS - LAMP SIGNAL - REG. N.A.

45893

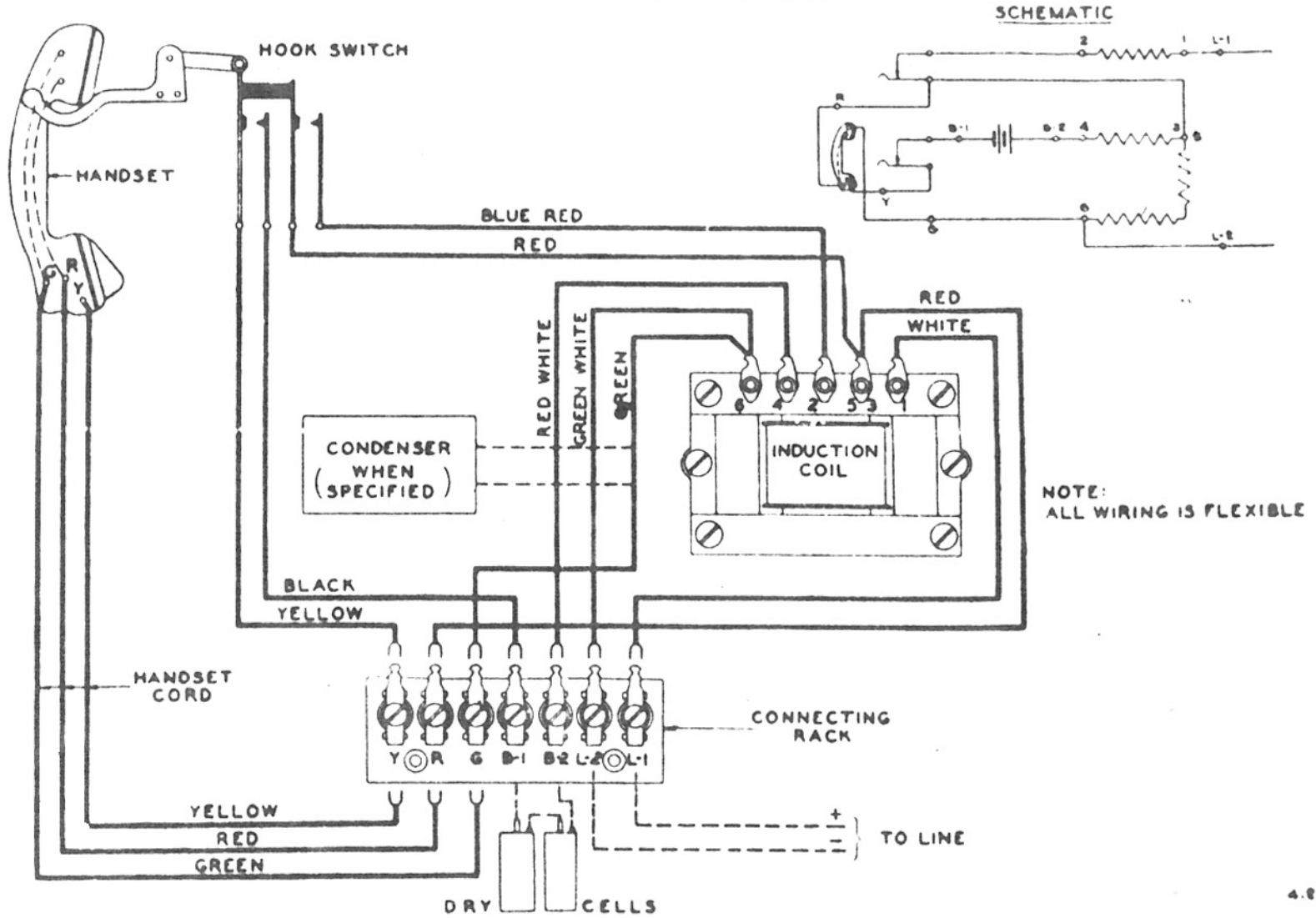
ISSUE NO.

KELLOGG SWITCHBOARD & SUPPLY CO.  
CHICAGO, ILL., U.S.A.

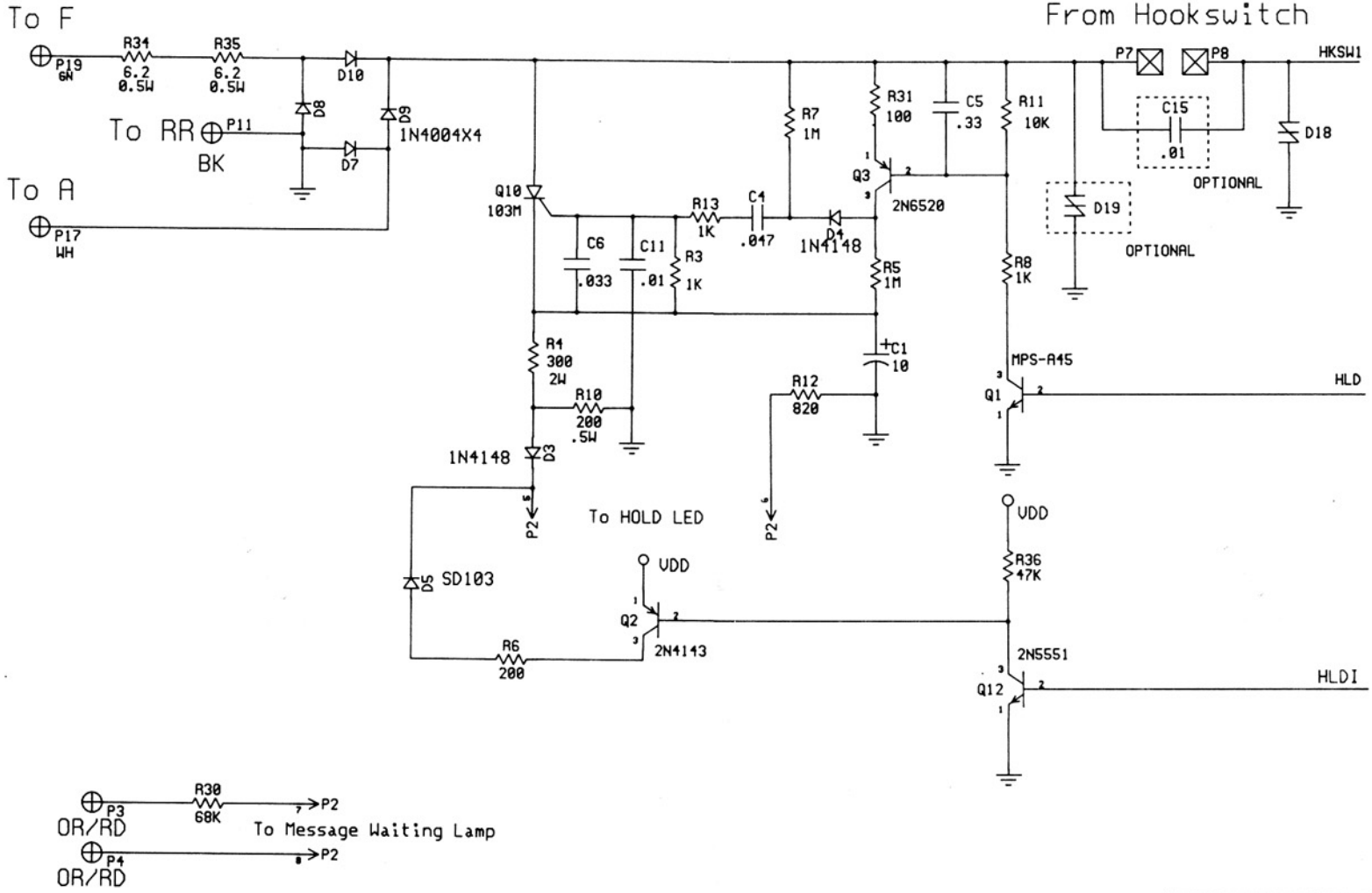
# TRIAD CIRCUIT

LOCAL BATTERY BRACKET TYPE MASTERPHONE

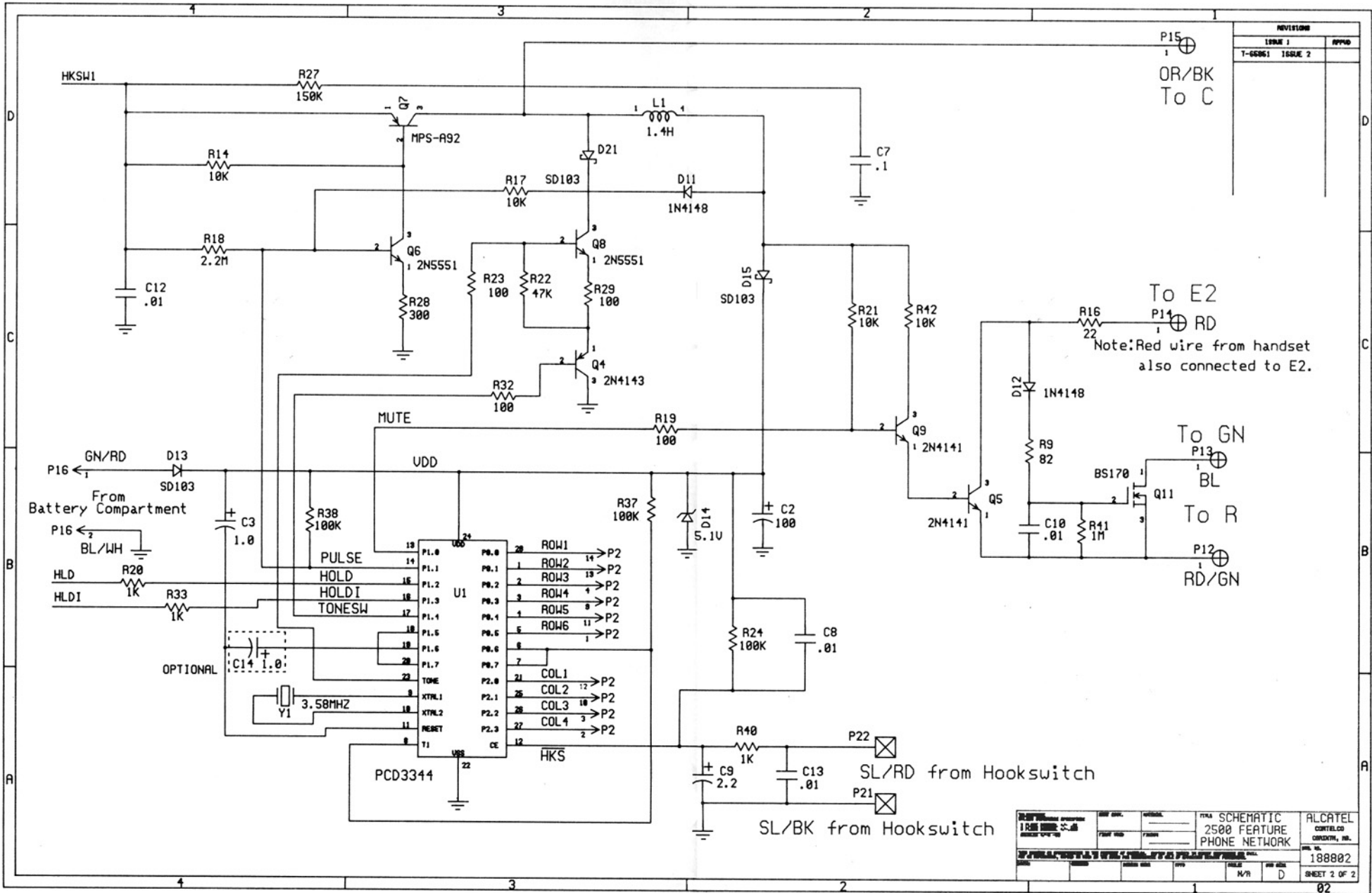
21199



REVISIONS	
TABLE 1	APPD
T-52261 REVISED BY: JMS DATE: 11/17/82 REVISED BY: JMS DATE: 11/17/82 REVISED BY: JMS DATE: 11/17/82 REVISED BY: JMS DATE: 11/17/82	



SCHEMATIC	ALCATEL
2500 FEATURE	CONTROL
PHONE NETWORK	CORPORATION, INC.
188802	
SHEET 1 OF 2	01



REVISION		APPD
ISSUE 1		
T-50061	ISSUE 2	

To E2  
 P15 ⊕  
 OR/BK  
 To C

To E2  
 P14 ⊕  
 RD  
 Note: Red wire from handset  
 also connected to E2.

To GN  
 P13 ⊕  
 BL  
 To R  
 P12 ⊕  
 RD/GN

SL/RD from Hookswitch  
 P22 ⊗  
 P21 ⊗  
 SL/BK from Hookswitch

<small>DESIGNED BY</small> <small>DATE</small> <small>REVISED BY</small> <small>DATE</small>	<small>APPD</small> <small>DATE</small> <small>REVISED BY</small> <small>DATE</small>	<small>TITLE</small> SCHEMATIC 2500 FEATURE PHONE NETWORK	<small>ALCATEL</small> <small>CONTECO</small> <small>CONTRACT NO.</small> 188802 <small>REV. NO.</small> SHEET 2 OF 2
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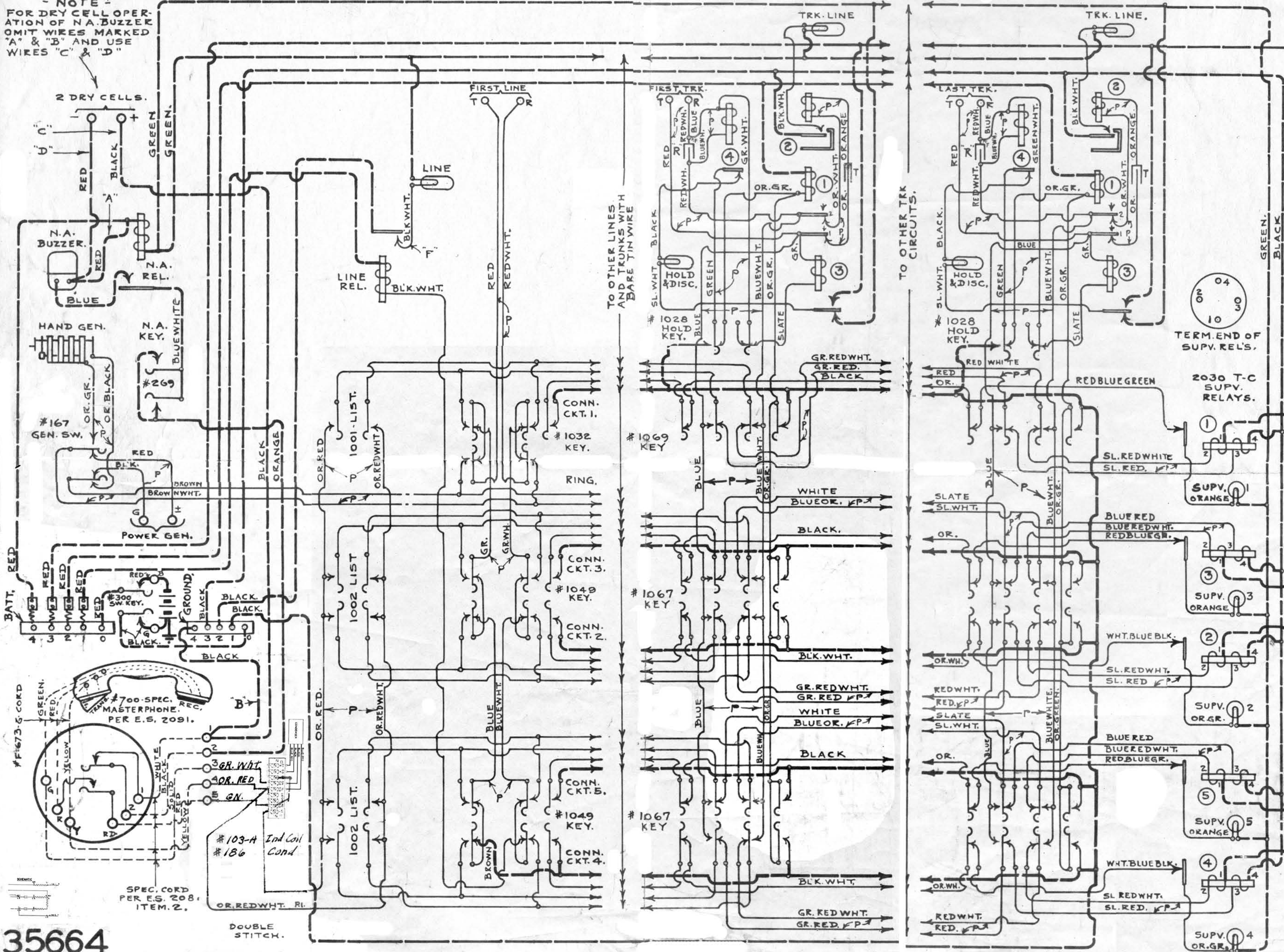
**CORDLESS P.B.X. CIRCUIT.**

TRKS TO COMM. BATT., MAIN EXCHANGE WITH OR WITHOUT LINE RELAYS.  
THRU. BATT. FEED.  
MASTER PHONE OPERATORS SET.

35664

APPD. CHKD. *Dec 11 1931*  
ENGR. *HPS 7/11/30*  
DRWG. *KOR*  
WESLACO, TEXAS.  
BRD. #17679.

**NOTE**  
FOR DRY CELL OPERATION OF N.A. BUZZER OMIT WIRES MARKED "A" & "B" AND USE WIRES "C" & "D"



REL. No.	CODE No.	COIL RES.	MECHANICAL REQUIREMENTS	TEST			DIRECT CURRENT FLOW IN AMPERES.		REMARKS.	
				ARM. TENSION	TRAVEL	TERM. HOLD	AFTER SOAK	NON OPERATE		OPERATE
1	2064 S-DG	800 <sup>Ω</sup>	20-G	.020	.024	.004	.018	.010	.005	
2	2062 S-FS	500 <sup>Ω</sup>	.020	.013	.002	.002	.010	.020	.003	
3	2001 S-K	300 <sup>Ω</sup>	.015	.023	.003	.001	.020	.012	.004	
4	2049 S-H	50 <sup>Ω</sup>	.015	.014	.001	.002	.012	.002	.002	
LINE	26-D	500 <sup>Ω</sup>	.020	.0145	.002	.002	.012	.002	.003	
SUPV.	2030 T-C	100 <sup>Ω</sup>	SER.	.035	.007	.007	.032	.019	.008	
N.A.	2043 S-EA	7.47 <sup>Ω</sup>	.010	.034	.007	.007	.032	.014	.008	40. OR 48 VOLTS.
1	2064 S-AQ	1000 <sup>Ω</sup>	20-G	.020	.022	.002	.019	.014	.008	
LINE	26-K	1000 <sup>Ω</sup>	.015	.022	.002	.002	.014	.008	.008	

**NOTE**  
WHEN 4- TRUNKS ARE SPEC. COLORS OF TRUNKS ON LAST TRUNK CONN. KEYS WILL BE THE SAME AS THOSE ON FIRST TRUNK CONN. KEYS.

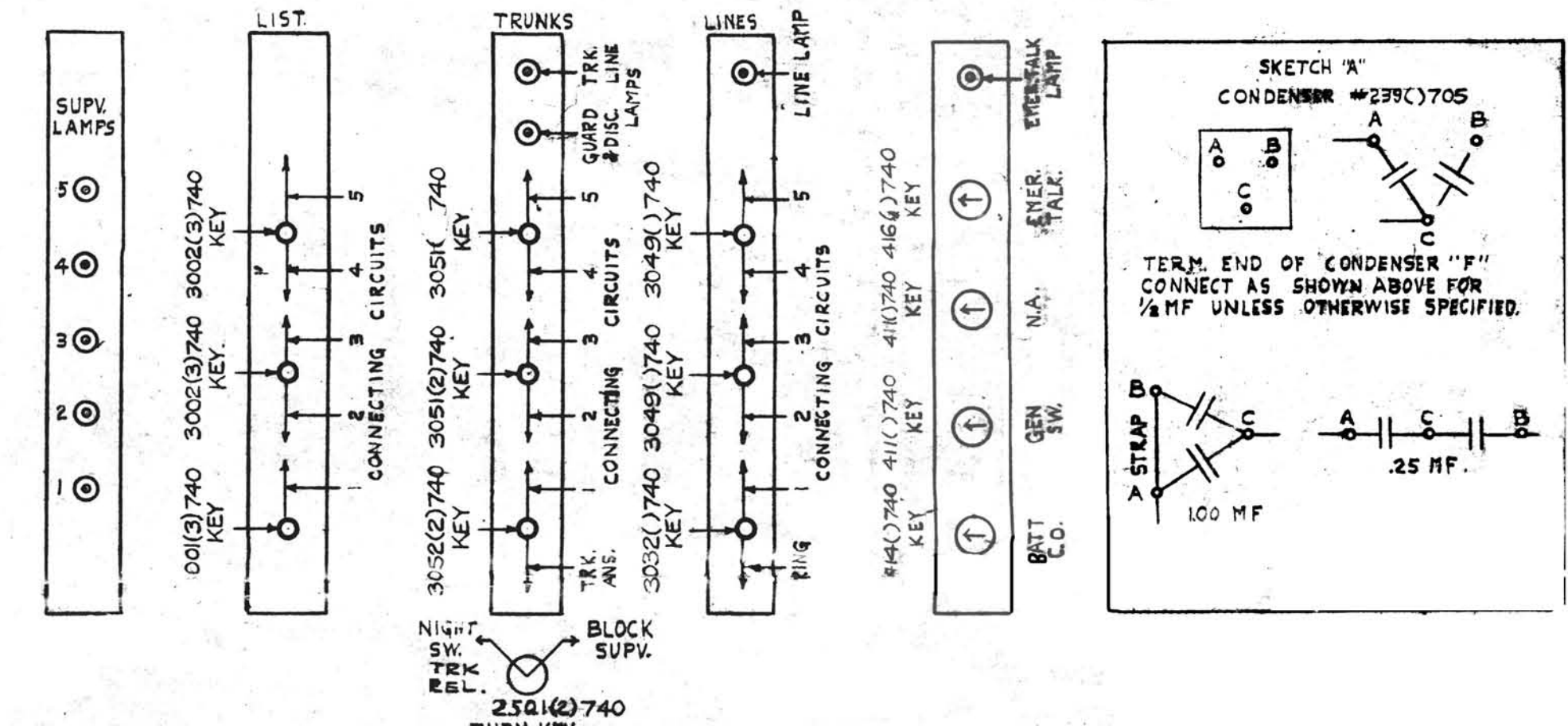
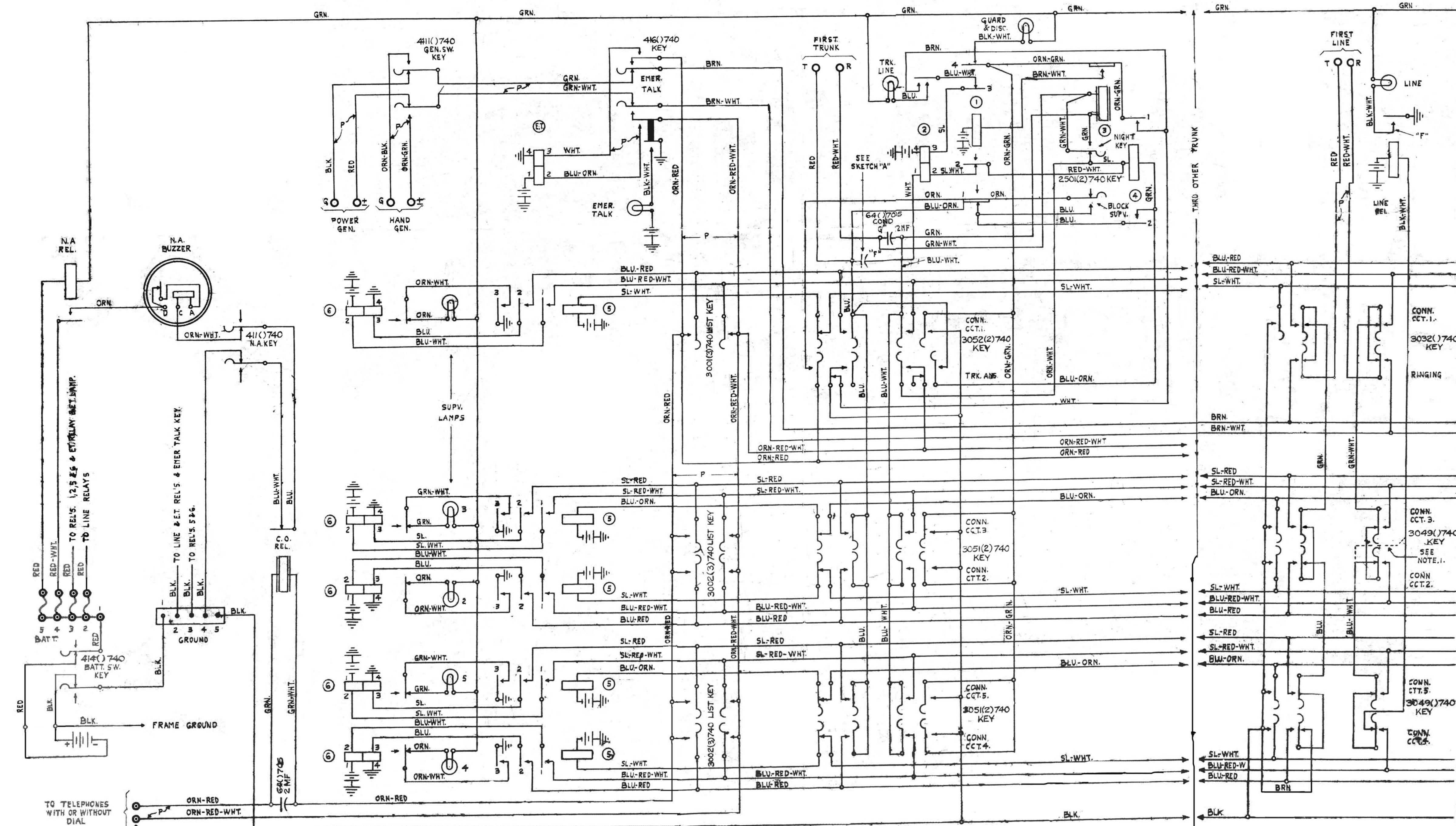
DEC. 11, 1931.  
JULY, 11, 1930.

35664



47859

CIRCUIT DIAGRAM RESTORED FROM AN ORIGINAL BLUE PRINT FURNISHED WITH A TYPE 3000 5 X 12 CORDLESS SWITCH BOARD -- SCANNED AND RESTORED BY KELLOGG MIKE NEALE 2008  
ORIGINAL BLUE PRINT FROM THE COLLECTION OF KEITH CHESHIRE



REL. NO.	CODE NO.	COIL RES.	MECHANICAL REQUIREMENTS	DIRECT CURRENT FLOW IN AMPERES					READJUSTMENT			REMARKS	
				TERM.	HOLD	AFTER SOAK	OPER.	NON OPER.	REL'SE	OPER.	NON OPER.		REL'SE
1	2005-S-DG	800	15-G .015				.017			.014			24-VOLTS
1	2005-S-Y	2000	" "				.013			.009			48-VOLTS
2	A-2093-C-EA	750	" "	1.82			.0075			.006			24 OR 48-VOLTS
3	D-2029-S-AK	100	" "				.008			.016			24 OR 48-VOLTS
4	A-2037-S-V	390	15-G "				.008	.003		.007	.006		24 OR 48-VOLTS
5	2081-S-V	500	20-G .020				.027			.018			24-VOLTS
5	2081-S-W	1000	20-G "				.027			.014			48-VOLTS
6	2001-PC	100	" SERIES				.018		.0025	.015	.003		24 OR 48-VOLTS
LINE	26(D)670	500	" "				.016		.002	.014			24 VOLTS
LINE	26(K)670	1000	" "				.013		.0028	.010			48-VOLTS
C.D.	D 2001-S-AJ	50	15-G "				.013		.024	.022			24 OR 48-VOLTS RES. PIN. 003
N.A.	2102-S-H6	3.5	" "				1500	.037		.0015	.002		24 OR 48-VOLTS
E.T.	2053-PC	100	" "										

NOTES +  
1. DOTTED WIRE SHOWN AT CONNECTING KEY-2 TO BE LEFT LONG ENOUGH TO REACH CONNECTING KEY 4- WHEN ONLY THREE CONNECTING CIRCUITS ARE EQUIPPED.

CHANGES  
ISSUE 1  
ISSUE 2  
ISSUE 3  
ISSUE 4  
ISSUE 5

CHANGED CODE NO'S OF KEYS PER ST. 5377  
4-17-57

CHGD. COILS OF REL'S G & E.T. FROM T.C. TO PC & R.O. OF REL. 6 PER E-44-1018, ISSUE 5  
10-10-57

ADDED F.G.C. PER STOI-000313 ISSUE 6 E-44-M-1453 2-28-58

APPD. 4-17-57  
CHG. F.G.C.  
ENR. P.M.  
DRG. 4-17-57  
DATE 9-8-1954

CORDLESS PBX CIRCUIT  
TRUNKS TO AUTO. MAIN EXCHANGE  
24 OR 48 VOLTS

# 47859

KELLOGG SWITCHBOARD AND SUPPLY  
A DIVISION OF I.T.T. CORPORATION  
CHICAGO, ILL. U.S.A.