



KELLOGG
Telephone & Transmission Department

Kellogg



Kellogg & Federal Equipment Diagrams

Last updated: 7 August 2010

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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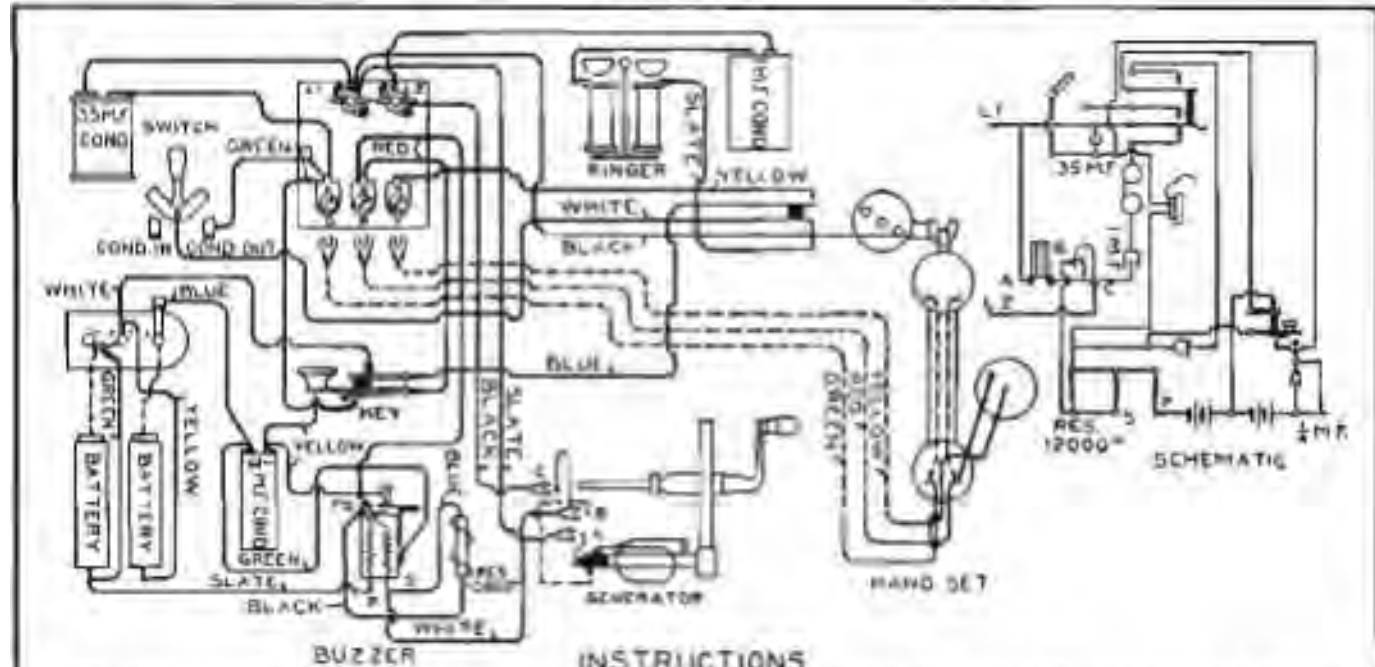
www.kelloggtelephone.com

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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.

EKT FOR #900-LR SPCL MASTERPHONE
 ES 2453 ITEM #1

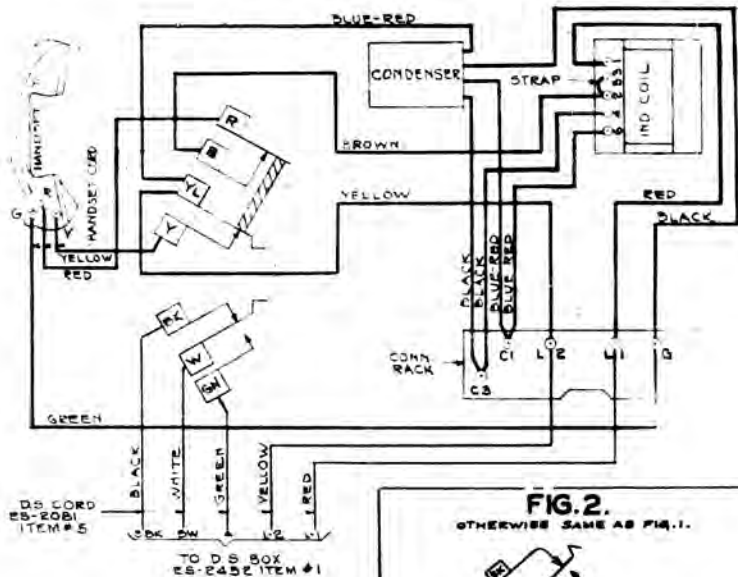
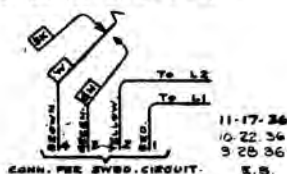


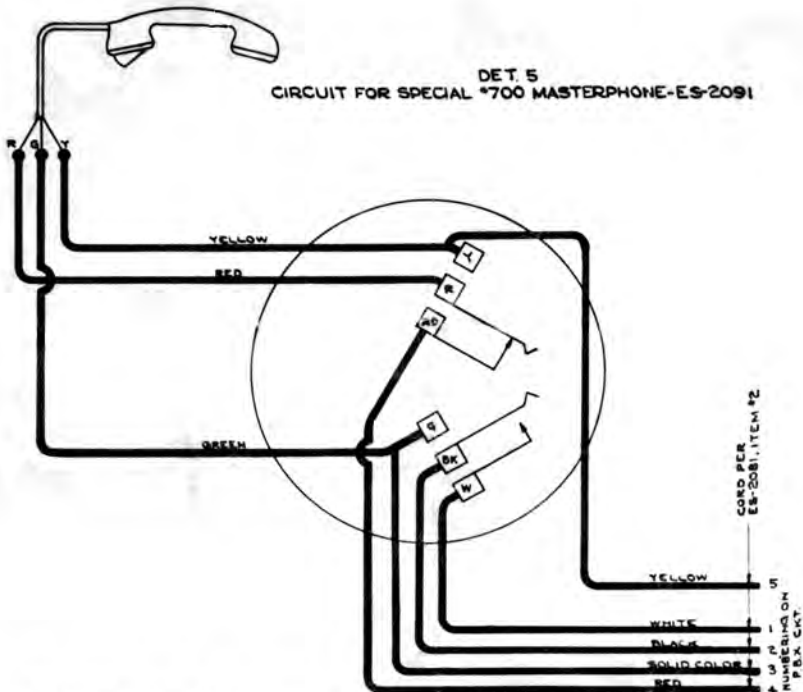
FIG. 2.
 OTHERWISE SAME AS FIG. 1.



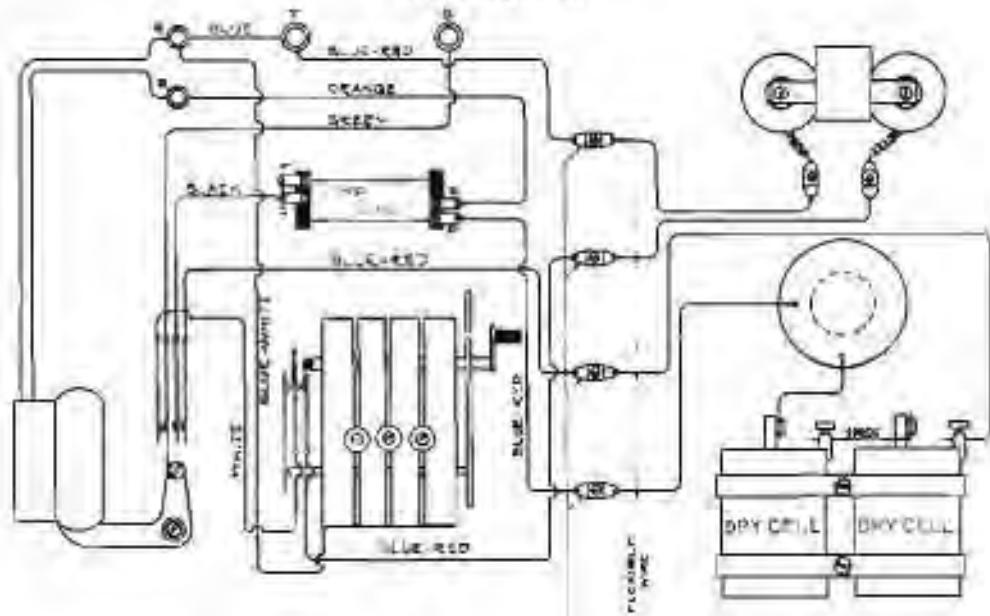
11-17-36.
 10-22-36
 9-28-86

E.S.
 11.17.1936

DET. 5
CIRCUIT FOR SPECIAL *700 MASTERPHONE-ES-2091



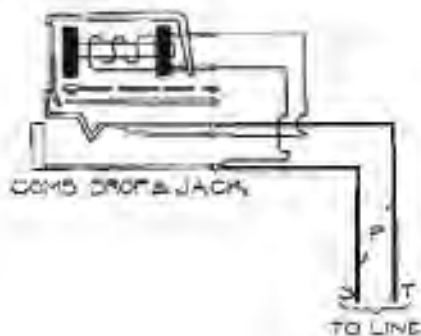
WIRING OF LINEMAN'S TEST SET WITH TRANSMITTER BRIDGING



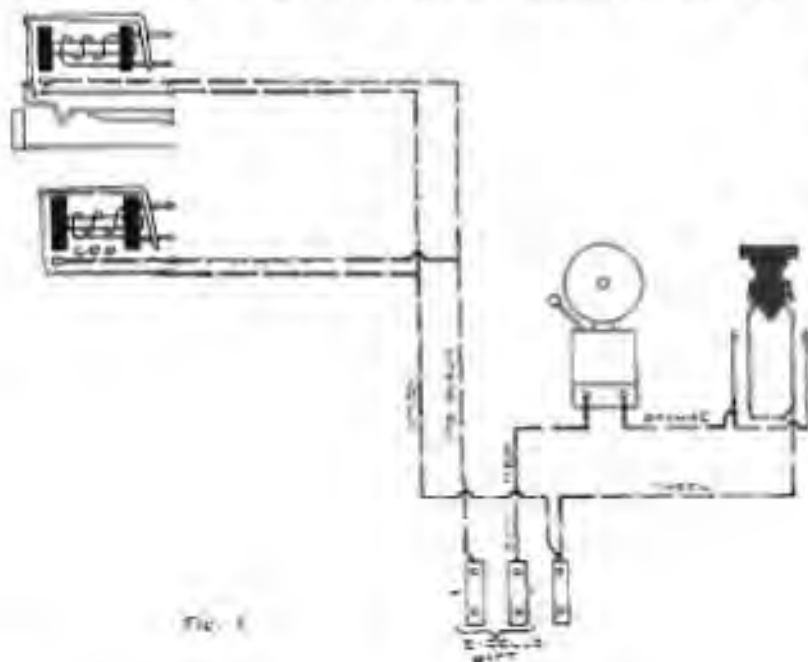
WIRE THROUGH 1/16 INCH O.
OR PUNCH IN BRIDGE

FEB 3 1926
REV. 28 1926
CY. REC. FEB 13 1926
FEB 28 1926
A D

Magneto Line Circuit Using Combined Drop and Jack

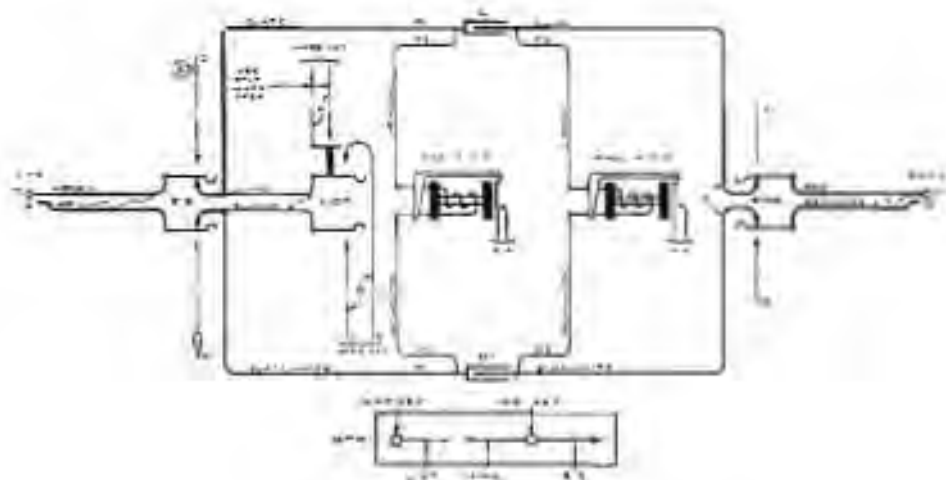


Night Alarm Circuit on Switchboards Having Drop Supervision



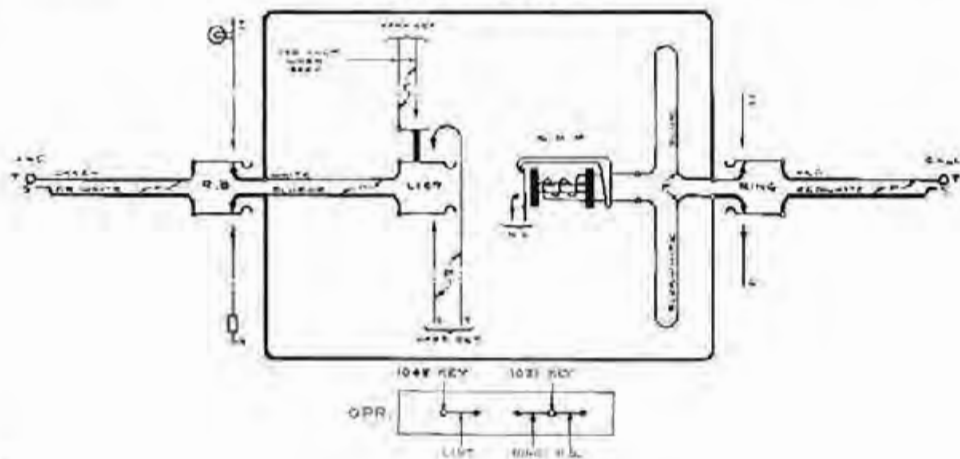
View of night alarm contact rod with knife combined drop and latch.

Magneto Cord Circuit With Double Drop Supervision With Condensers



Magneto Cord Circuit With Single Drop Supervision

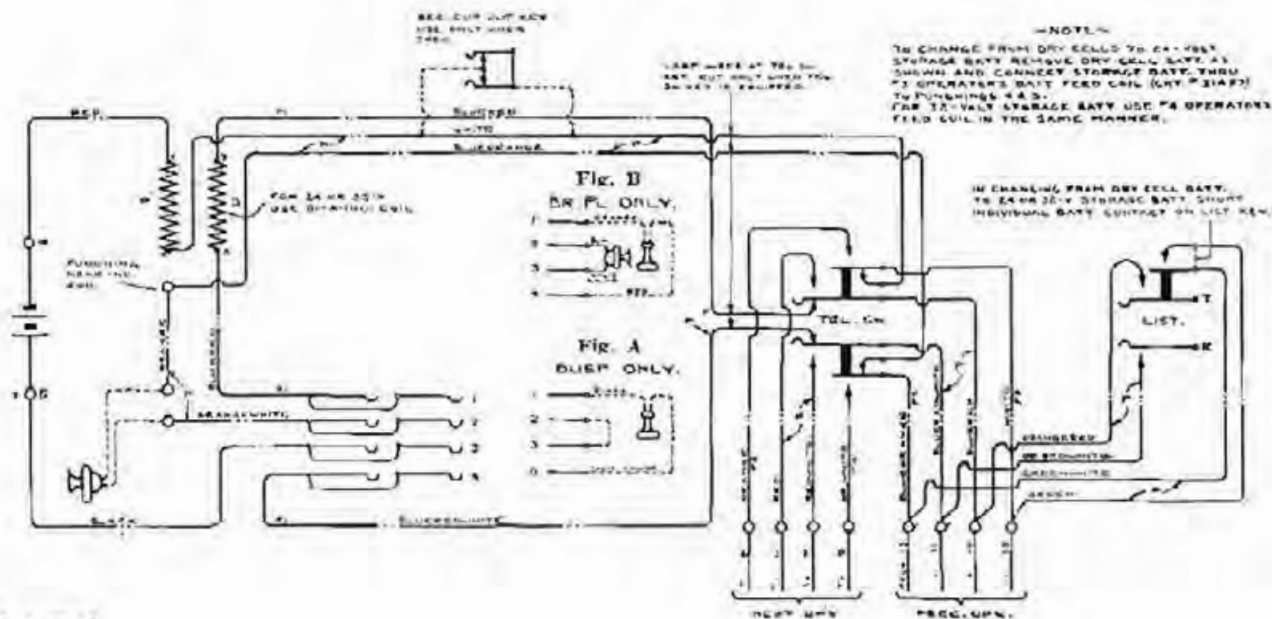
ckt. No. 19055-S



19055-S

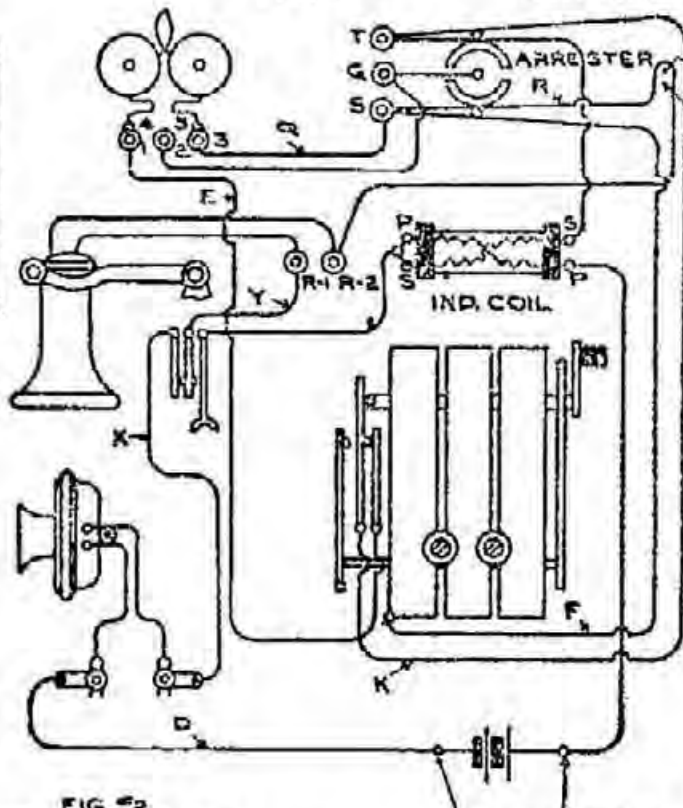
FROM KELLOGG CATALOG 7, PAGE 126

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



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

FIG. #1



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

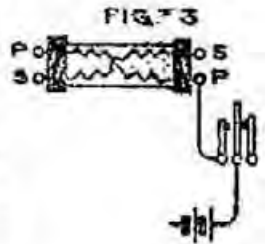
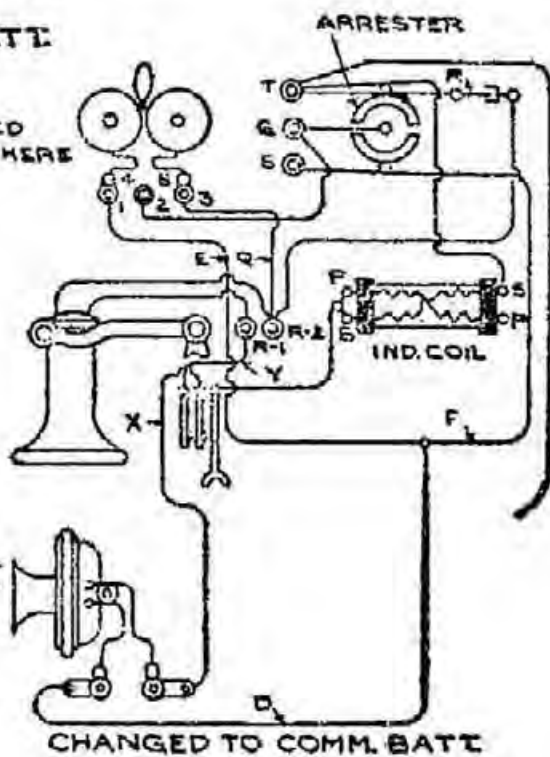


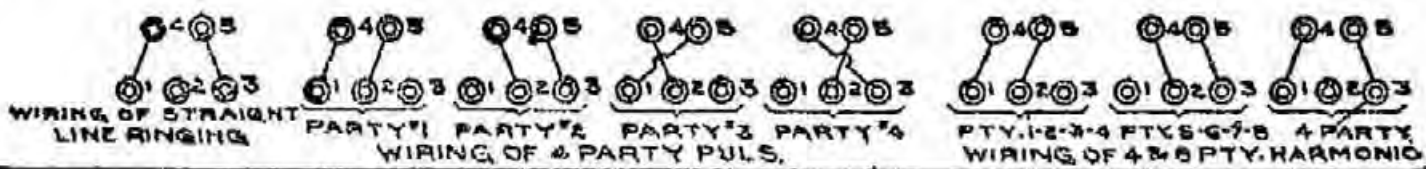
FIG. #4
TO RING OWN BELL
STRAP LEADS 'B' & 'K'
TOGETHER AT GEN.
SPRING.



NOTE: WHEN CHANGING TO COMMON BATT.
1. REMOVE GEN. & BATTERIES.
2. IF COND IS NOT ALREADY INSTALLED CUT
A 1-M.P. 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

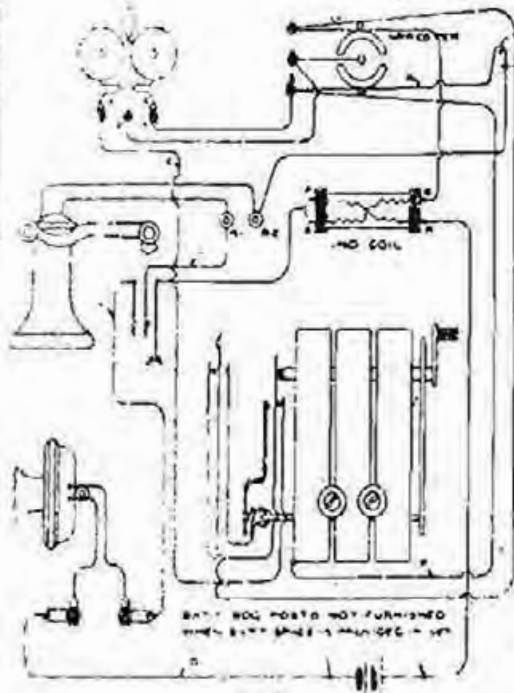
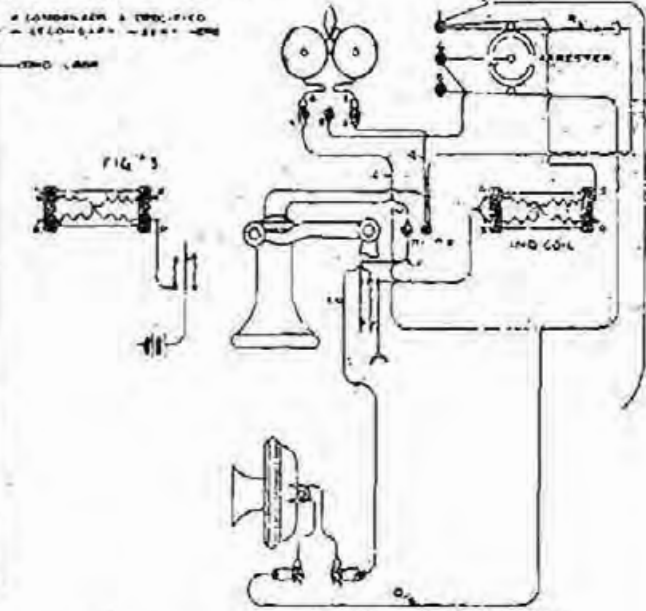


FIG. 2

1. CONDENSER IN UNDER THE TELEPHONE JACK ON FIG. 2
2. REMOVE BATTERY FROM BATTERY HOOD



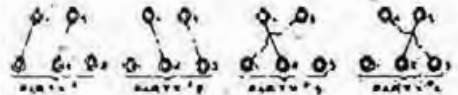
CHANGED TO COMM BATT

NOTE WHEN CHANGING TO COMM. BATT

- 1. REMOVE BATT & GENERATOR
- 2. IF CONDENSER IS NOT ALREADY INSTALLED CUT A 1/4" COND. W. LOOP
- 3. REMOVE 'A' FROM 'IND COIL' AND SOLDER TO 'Y'
- 4. REMOVE 'A' FROM 'IND COIL' AND SOLDER TO 'B' IF NOT ALREADY DONE
- 5. REMOVE 'D' & 'E'
- 6. TO AVOID BATT. IN CASE, REVERSE 'S' AT BATT. HOOD
- 7. CUT 'C' IN CASE TO PUSH BUTTON



WIRING OF SINGLE PARTY PULSE



WIRING OF 4 PARTY PULS



WIRING OF 4 PARTY BPT HARMONIC

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.
SPRINGS

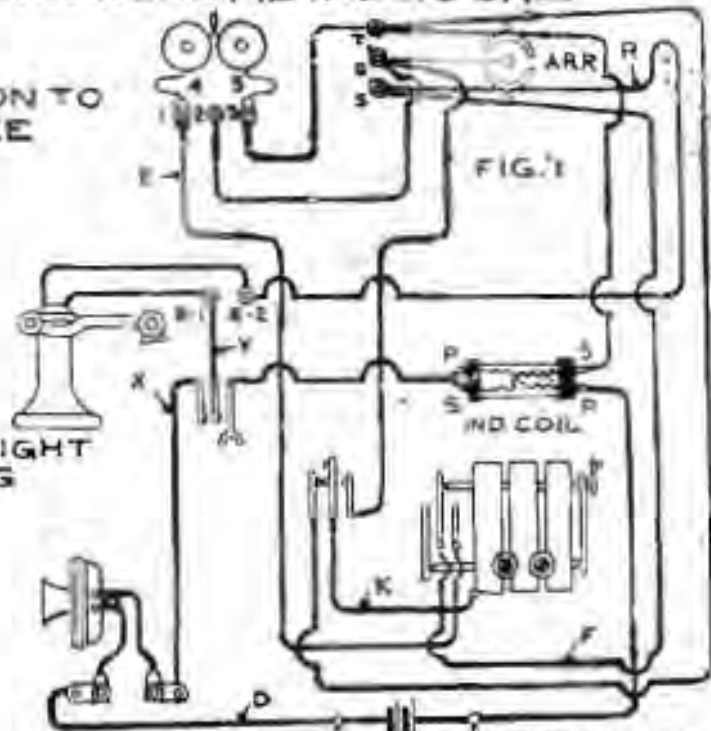


FIG. 1

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

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

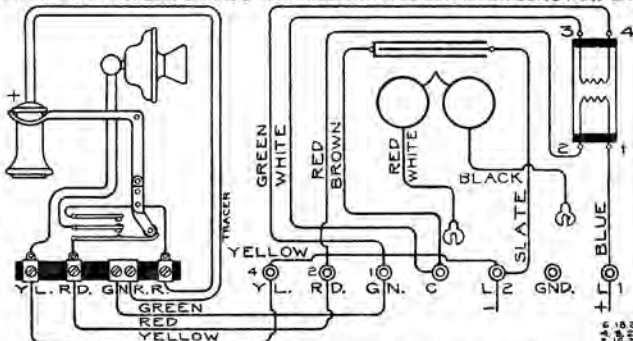
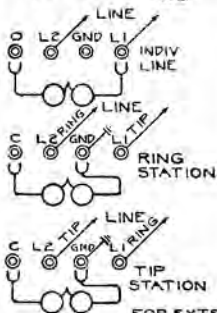
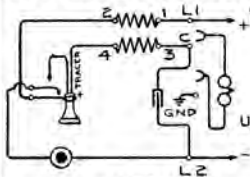
K.S.&S.CO.CHICAGO

C.B. DESK SET

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

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 RING BINDING POST OF THE TEL.

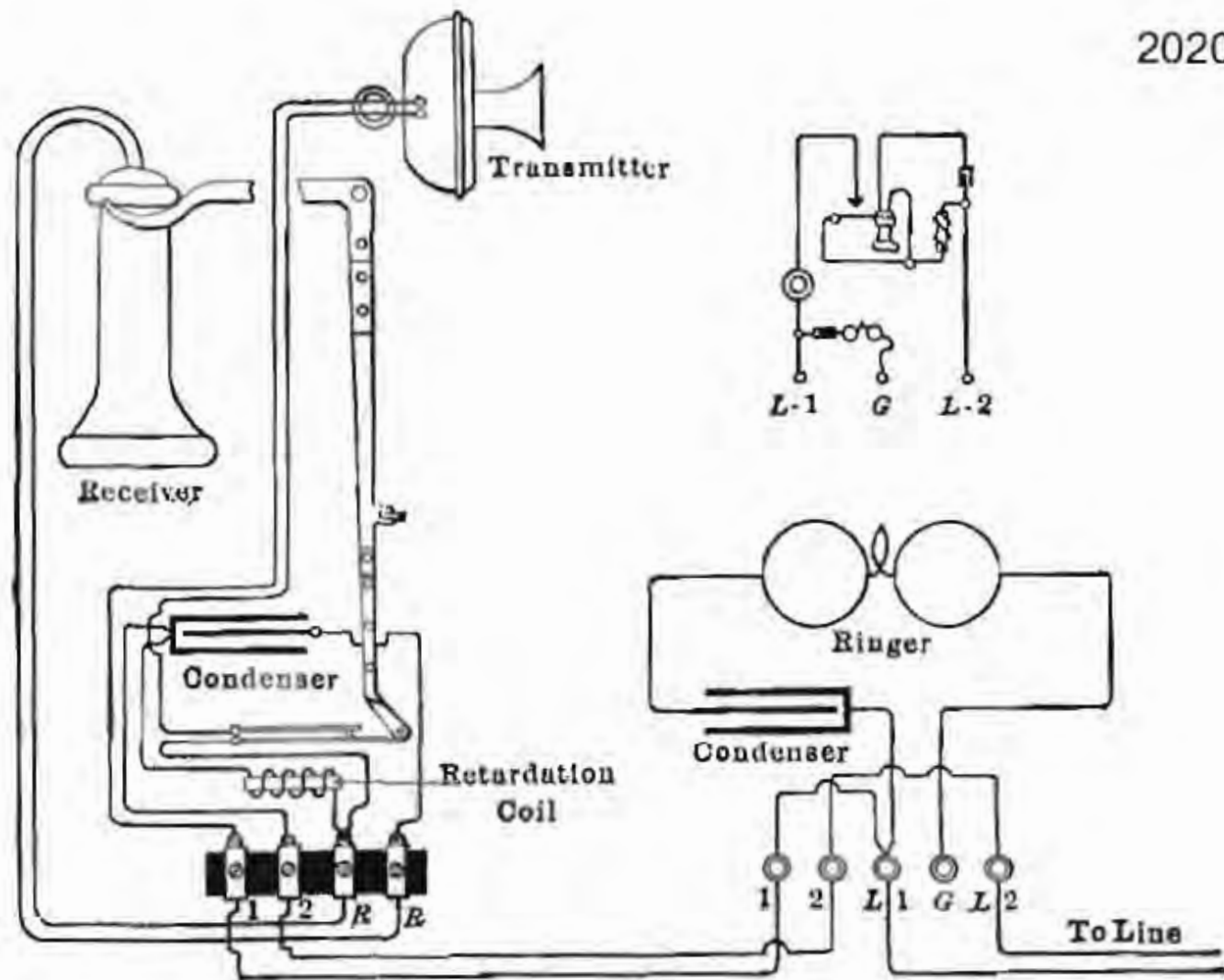
SIDE TONE REDUCTION FOR (NON-TOLL USERS ONLY) REVERSE YELLOW AND RED CORD TIPS AT BOX END ON MAIN SETS OR AT RACK END ON EXT. SETS (DISREGARD THIS NOTE WHEN R.S. BOX IS USED WITH AUTO. DESK STANDS AND FOLLOW NOTE ON AUTO. DESK STAND CKT.)



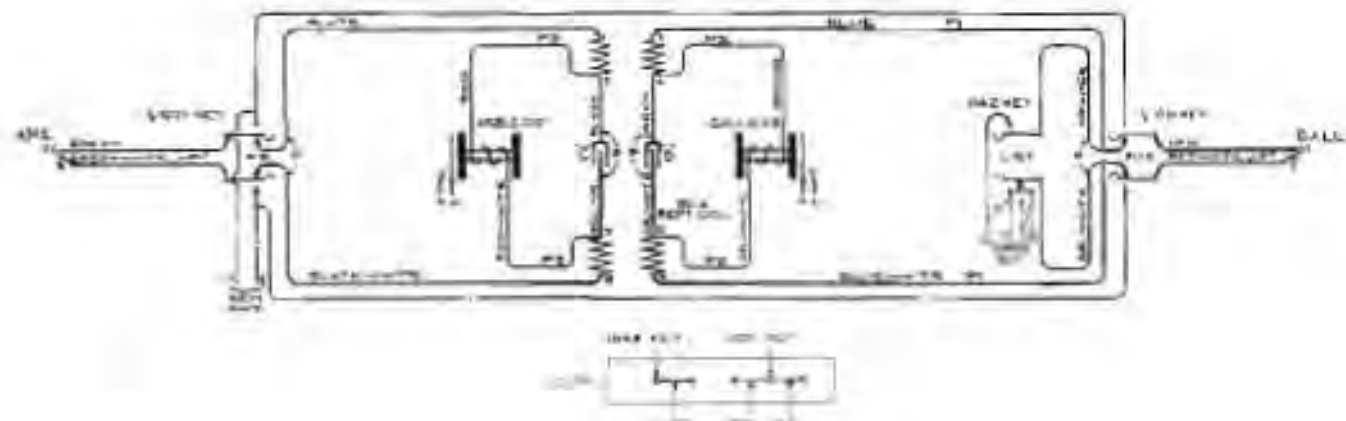
FOR EXTENSION TALKING SETS USE STANDS AND CONNECTING RACKS ONLY AND WIRE TO YELLOW, RED AND GREEN TERMINALS IN DESK SET BOX

20202

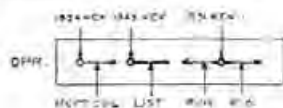
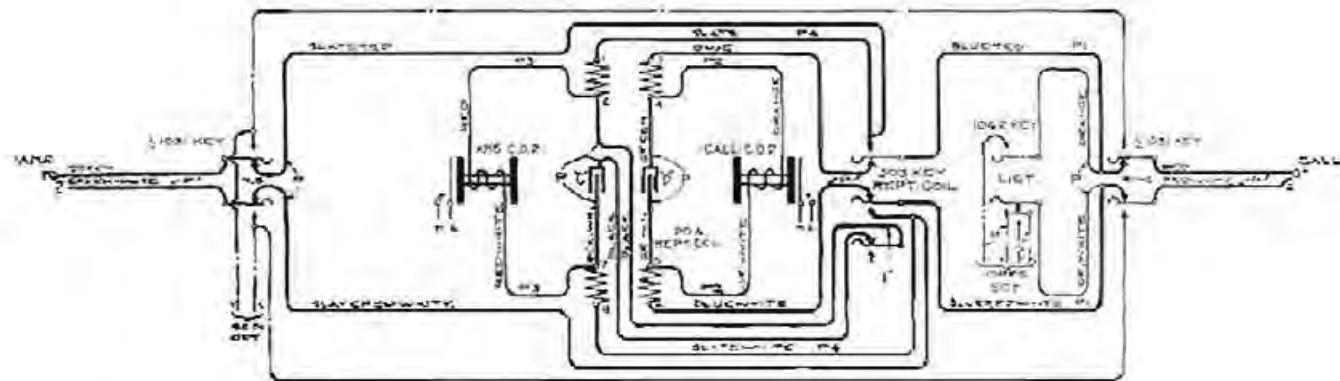
14745 15 26
12-7-1916
146-17-17
146-17-17



Magneto Cord Circuit With Double Drop Supervision and Repeating Coil



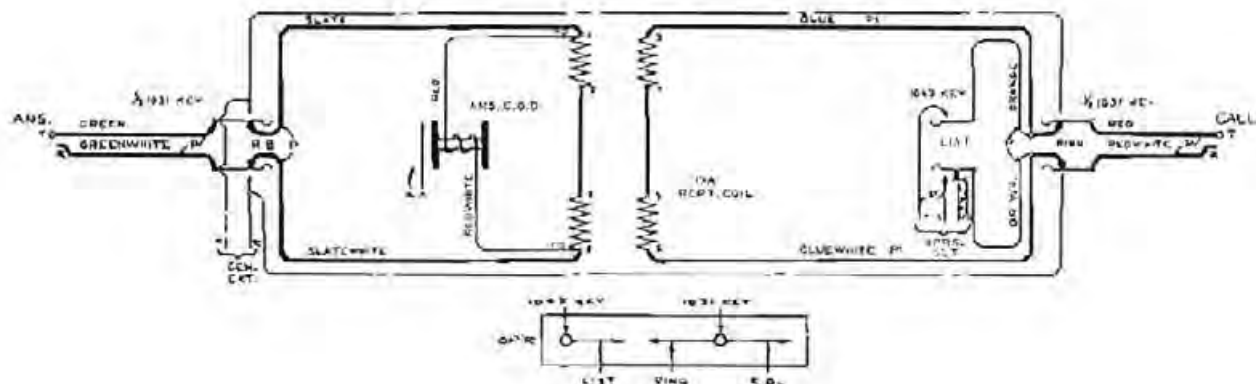
Magneto Cord Circuit With Double Drop Supervision, Repeating Coil, and Repeating Coil Cutout Key



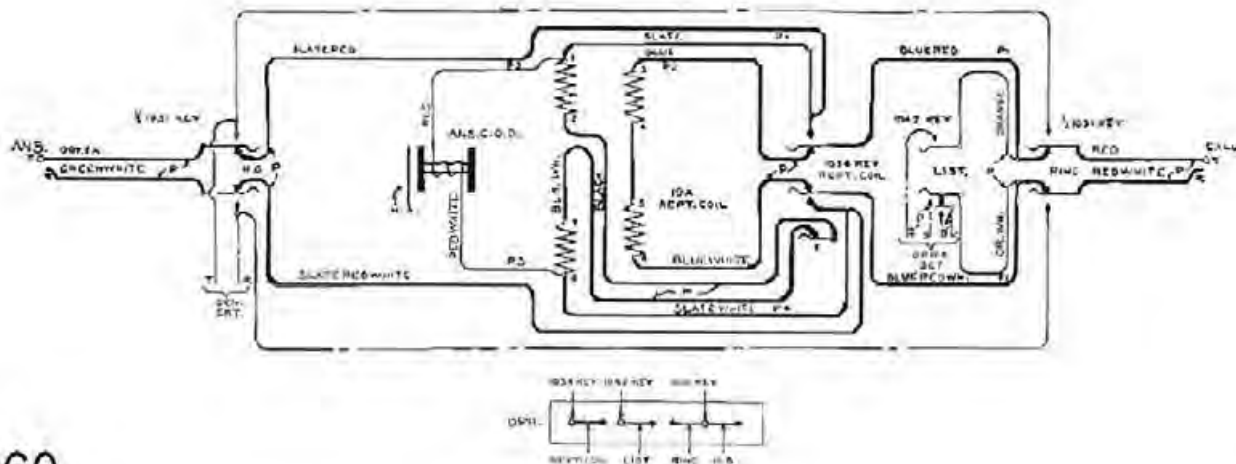
20237-B

FROM CATALOG 7, PAGE 121

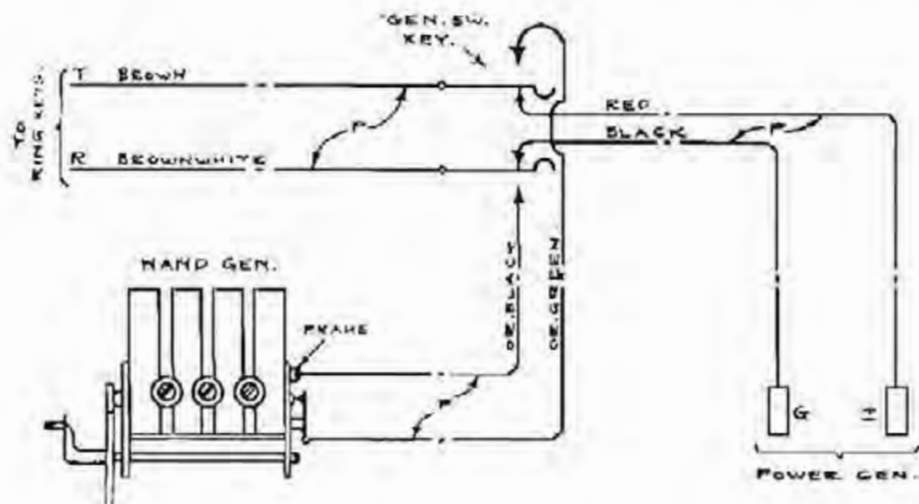
Magneto Cord Circuit With Single Drop Supervision and Repeating Coil



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



Standard Generator or Ringing Circuit for Kellogg Magneto Switchboards

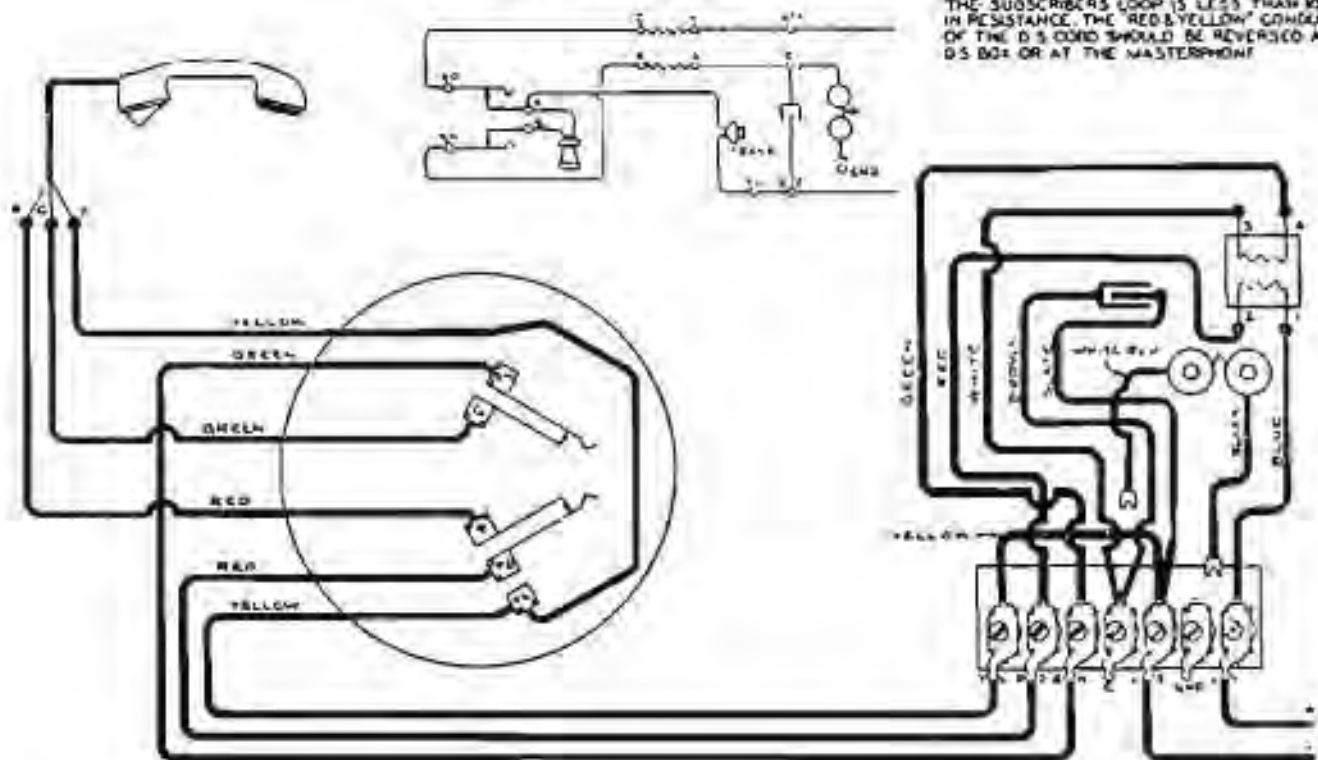


CB MASTERPHONE CKT. WITH HANDSET

21042

NOTE 1

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 COND SHOULD BE REVERSED AT THE D S BOX OR AT THE MASTERPHONE



21042

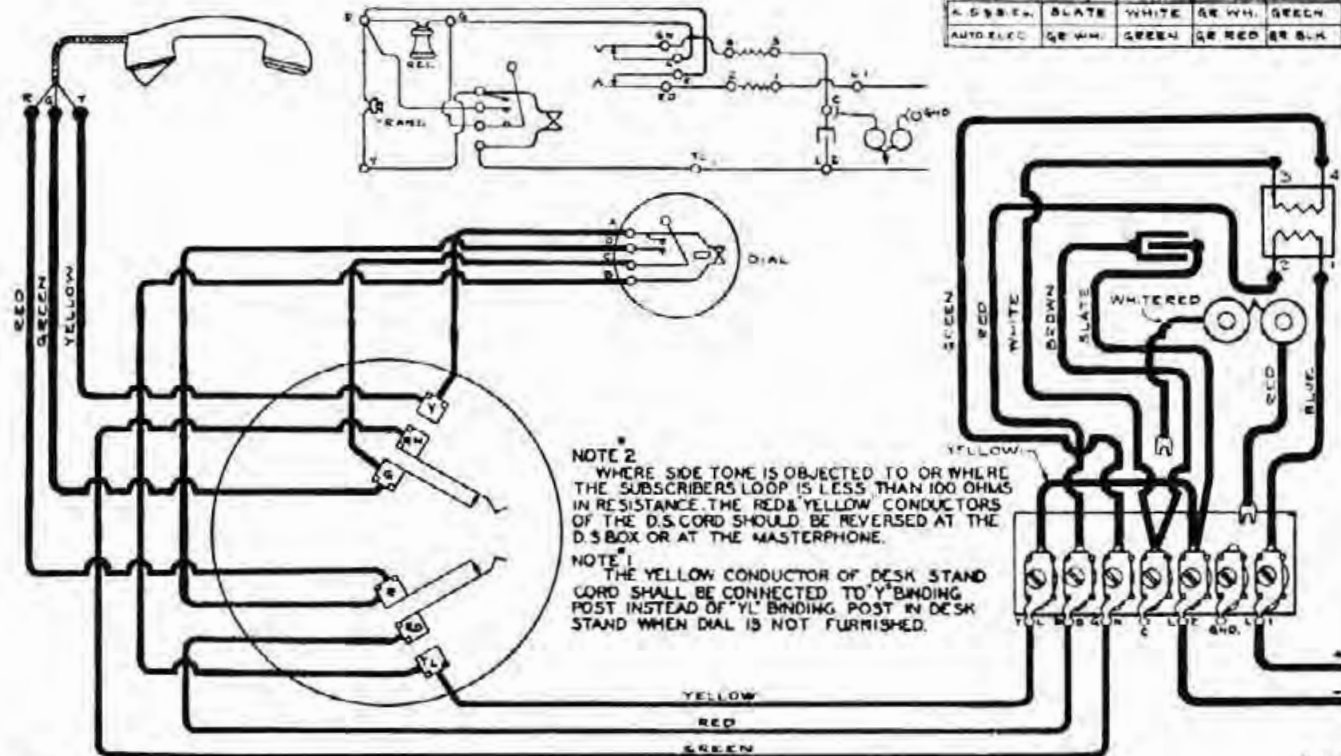
900, 700 SETS

TUL. 44
 1-12-34
 5-12-34
 8-12-34

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

21043

COLOR CODE FOR DIAL LEADS				
	A	B	C	D
A. D.S.B.N.	SLATE	WHITE	GR. WH.	GREEN
AUTO. E.L.C.	GR. WH.	GREEN	GR. RED	GR. BLK.



NOTE 2
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.

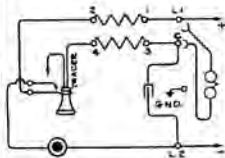
NOTE 1
THE YELLOW CONDUCTOR OF DESK STAND CORD SHALL BE CONNECTED TO 'Y' BINDING POST INSTEAD OF 'YL' BINDING POST IN DESK STAND WHEN DIAL IS NOT FURNISHED.

TO LINE
 10 17 30
 6 31 30
 7 23 30
 H. K. S. 1 16 30

21043

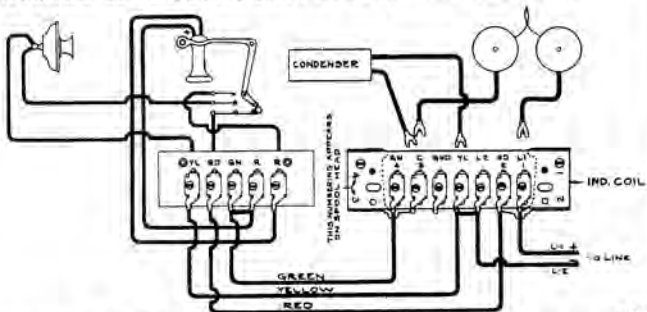
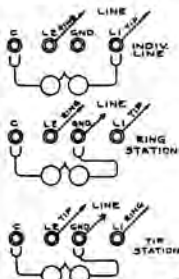
C.B. DESK SET CKT. THREE CONDUCTOR CORD IND. COIL IN D.S. BOX

21044



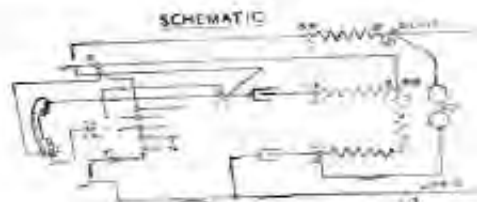
SIDE TONE REDUCTION (FOR NON-TOLL USERS ONLY) REVERSE YELLOW AND RED CORD TIPS AT BOX END ON MAIN SETS OR AT RACK END ON EXT. SETS. DISREGARD THIS NOTE WHEN D.S. BOX IS USED WITH AUTO. DESK STANDS AND FOLLOW NOTE ON AUTO. DESK STAND CKT. (IF THIS NOTE APPLIES ON D.S. BOX, THEN THIS NOTE SHALL APPLY.)

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 RING BINDING POST OF THE TELEPHONE.



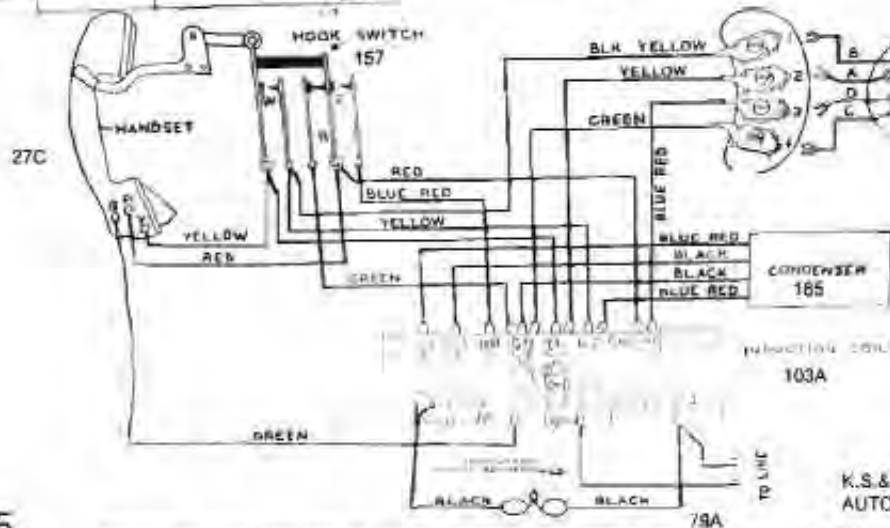
FOR EXTENSION TALKING SETS USE STANDS AND CONNECTING RACKS ONLY AND WIRE TO YELLOW, RED AND GREEN TERMINALS IN DESK SET BOX.

21044



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 HAND SET IS HUNG ON HOOK.

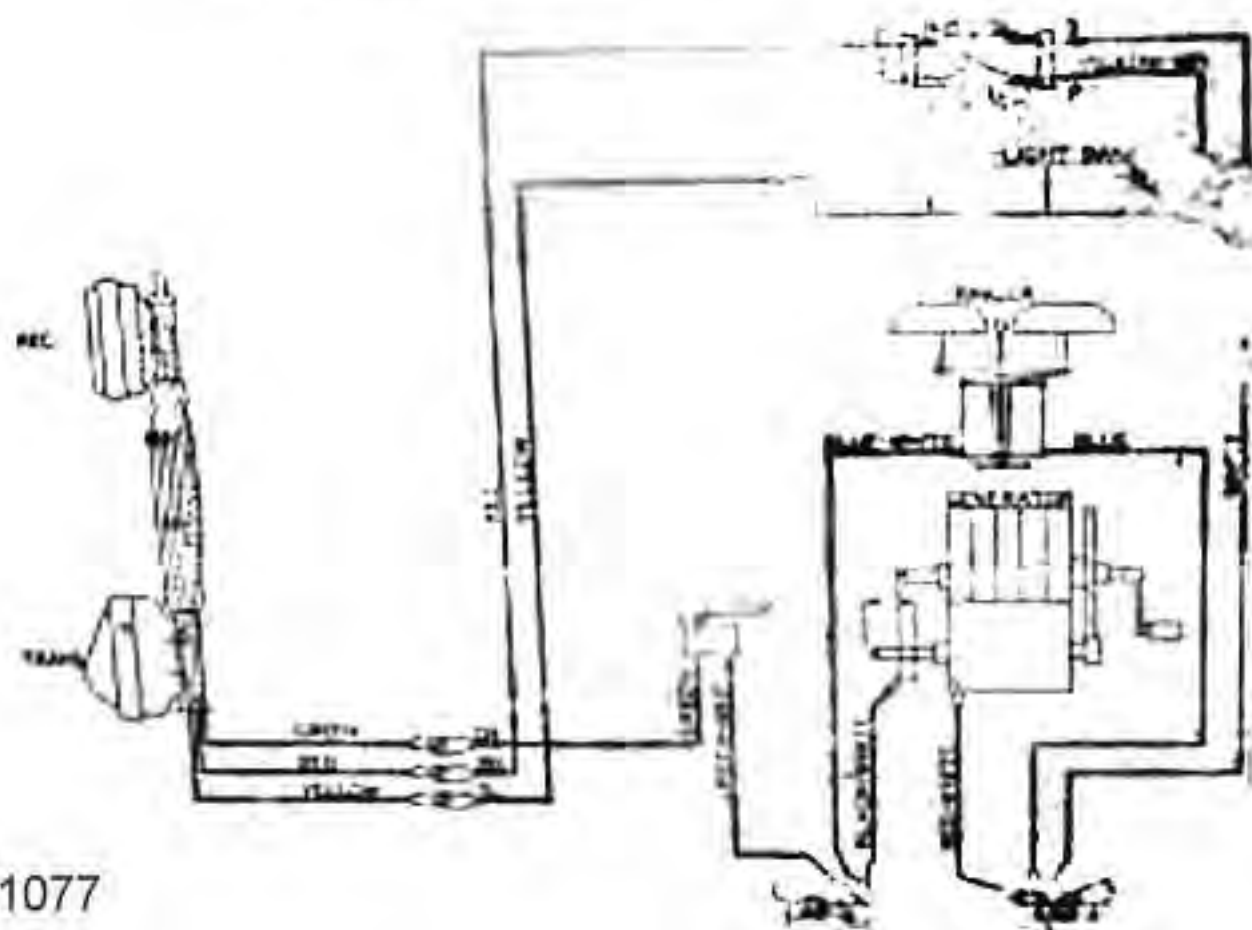


COLOR CODE FOR DIAL LEADS

	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 CAT

21077



21077

SCHEMATIC



RECEIVER

RECEIVER CORD

HOOK SWITCH

TRANSMITTER

GENERATOR

BLUE-RED

RINGER

SEE
NOTENOTE
ALL WIRING IS FLEXIBLE

NOTE 1

WHEN 2040 IS SPECIFIED IN THE LINE CAT. CONNECT
2040 AS SHOWN. REMOVE STRAP 'X' AND CONNECT WIRE
'Y' TO BINDING POST ON 'B' INSTEAD OF L-2.

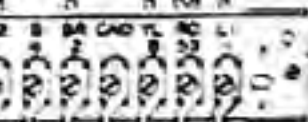
NOTE 2

WHEN 2040 IS SPECIFIED IN THE RECEIVER CAT.
CONNECT 2040 AS SHOWN AND REMOVE STRAP 'X'.

SEE NOTES 1 & 2

TO LINE

TO CMO.

P.M.P.
2040

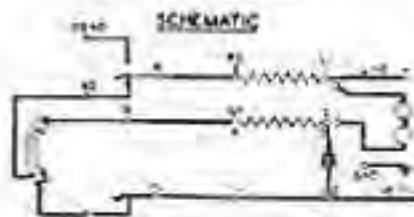
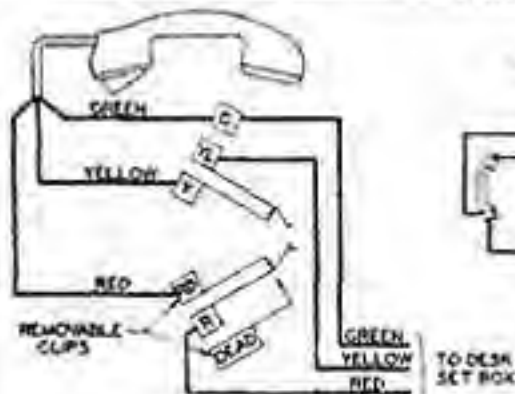
DRY CELLS

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

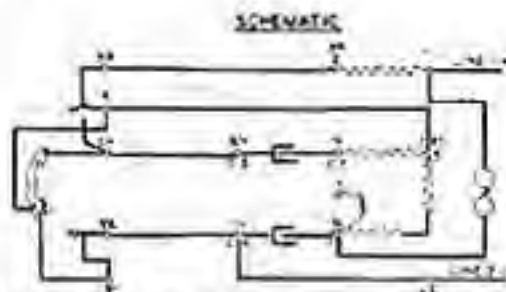
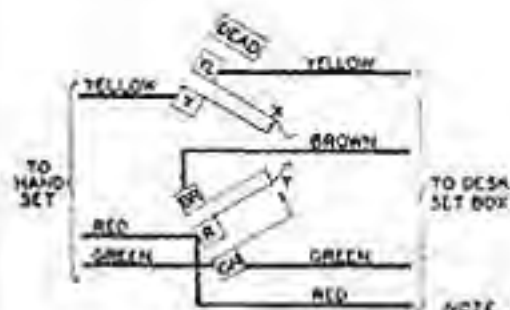
NOTE 2 - THE DESIGNATION CLIPS "RO" AND "DEAD" ARE REMOVABLE

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

1 - REMOVE DESIGNATION CLIP "RO" FROM BINDING POST DR
2 - TRANSFER DESIGNATION CLIP "DEAD" FROM BINDING POST GN TO BINDING POST "G"

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

FIG. 2 TRIAD CKT.



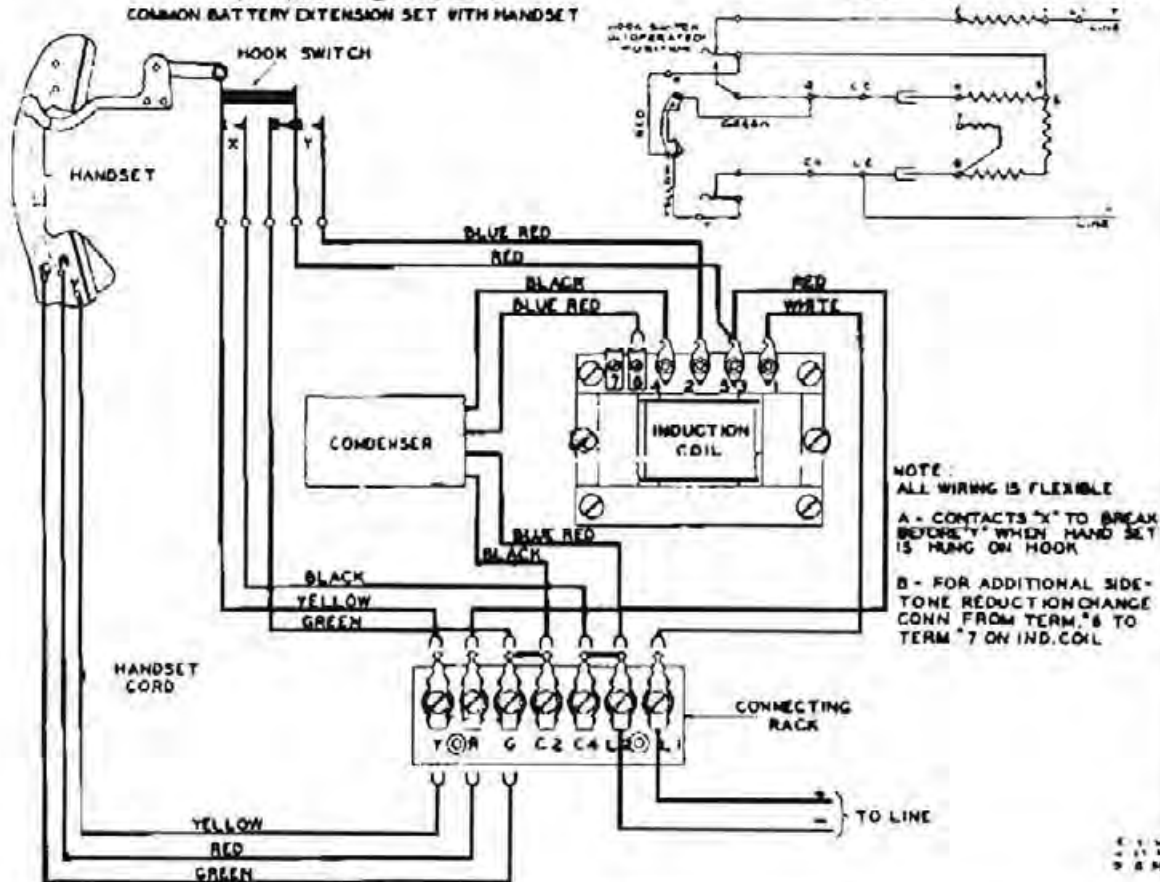
NOTE 4 - CONTACTS "R" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK

TRIAD CIRCUIT

SCHEMATIC

21086

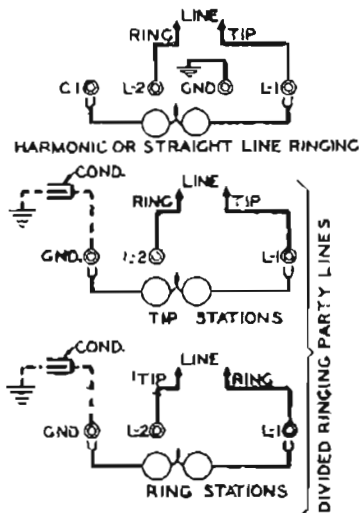
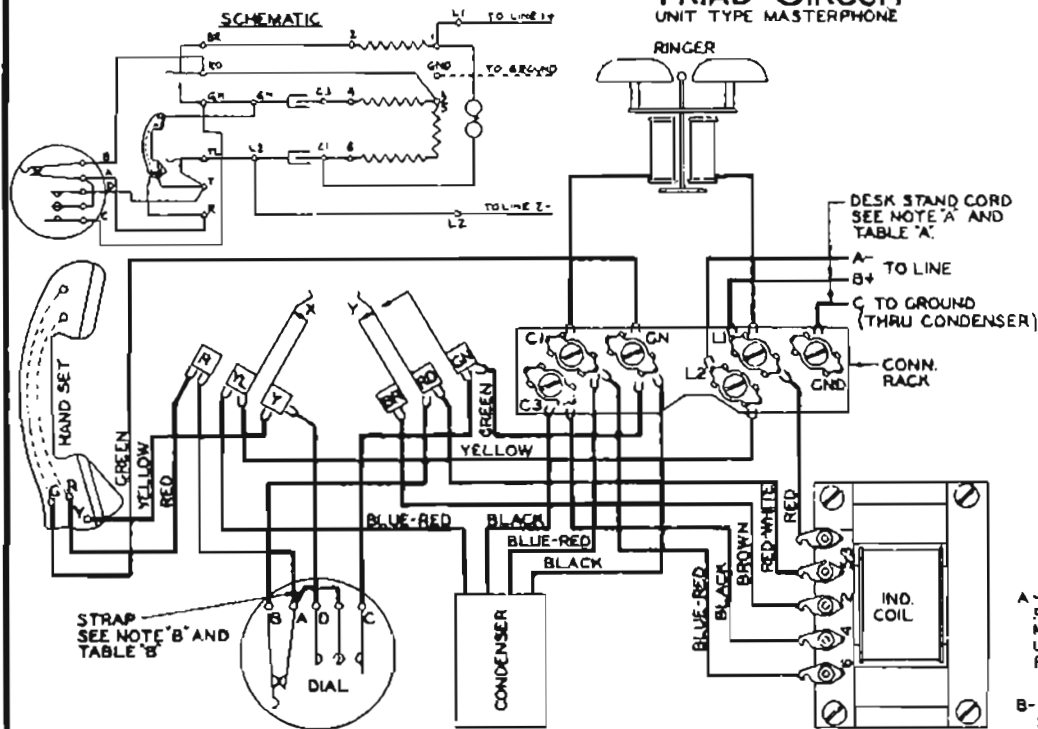
COMMON BATTERY EXTENSION SET WITH HANDSET



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

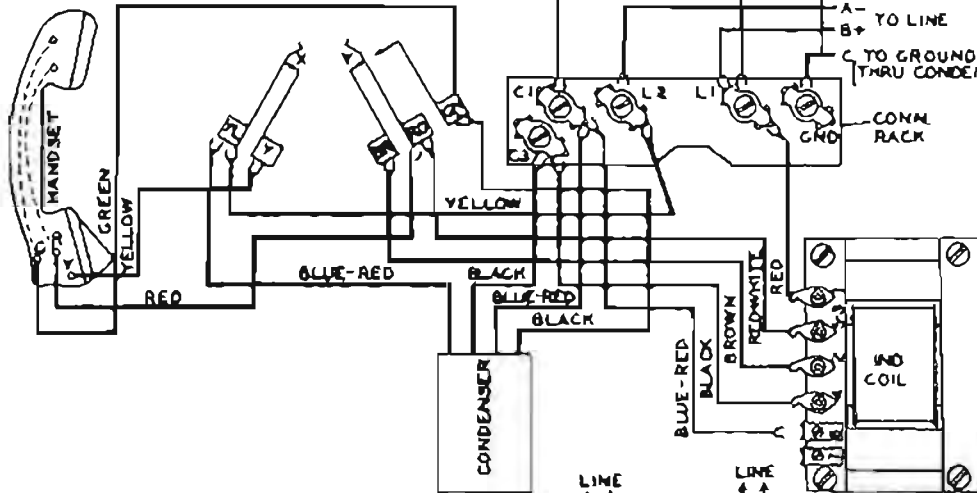
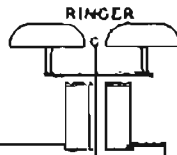
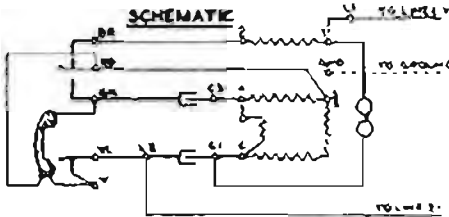
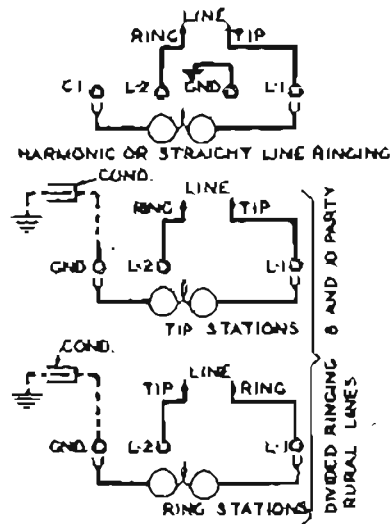
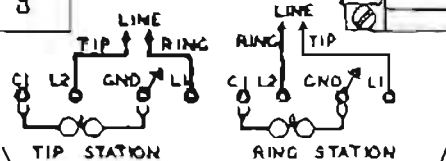


TABLE-A
TRACER COLORS OF D.S. CORD CONDUCTORS

	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.

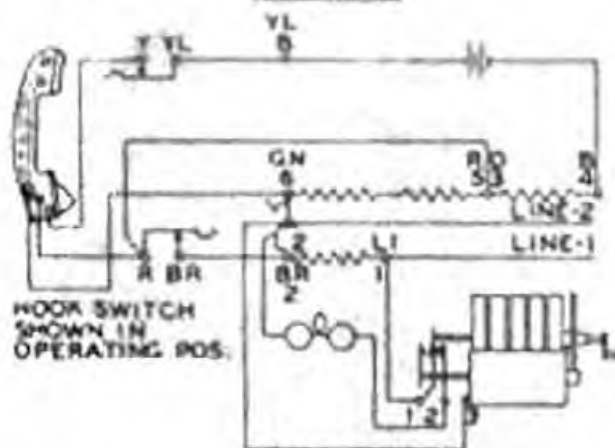
DIVIDED RINGING
2 AND 4 PARTY LOCAL LINES

8-24-1936 J.M.

21092

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

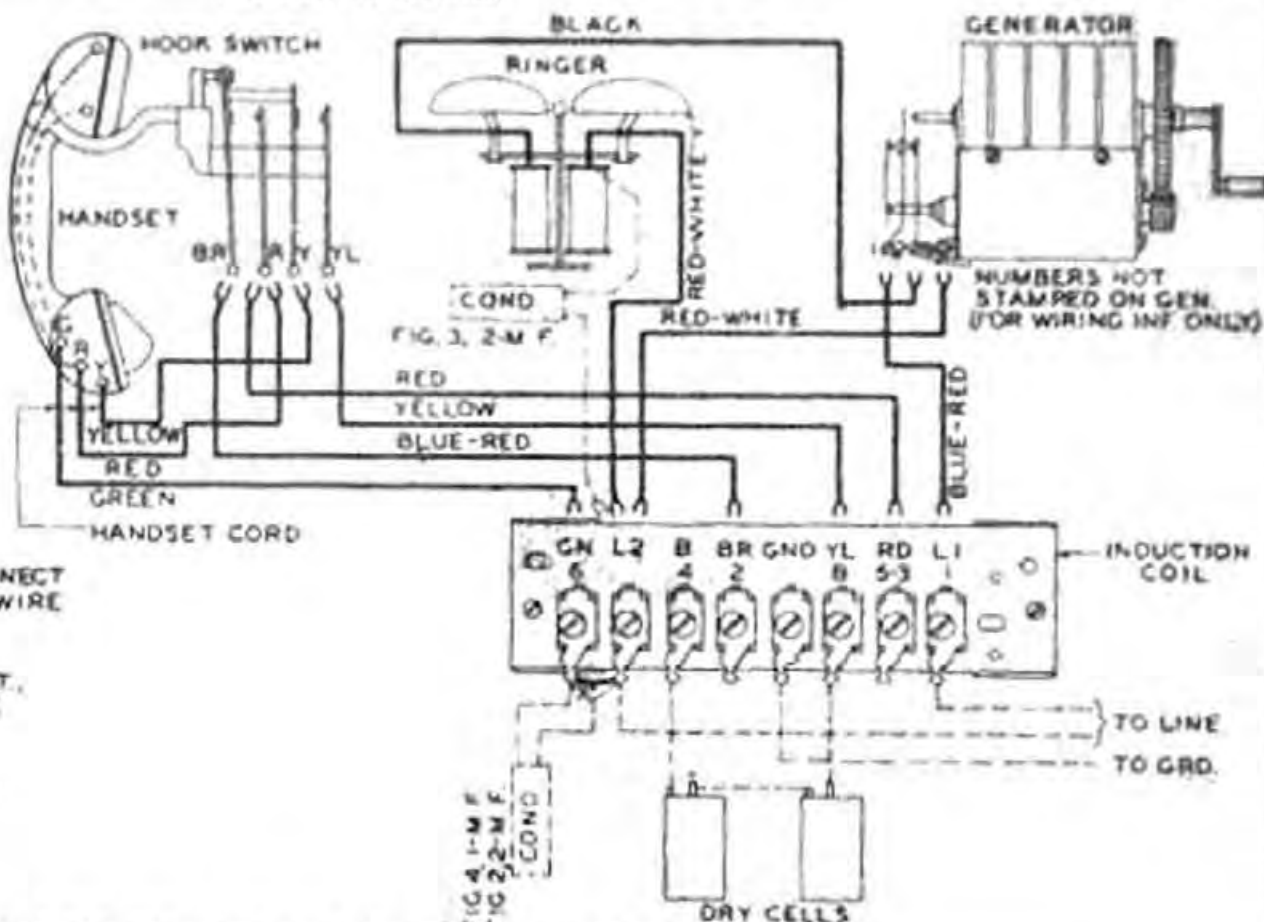
WHEN COND. IS SPECIFIED IN THE RECEIVER CKT. CONNECT COND. AS SHOWN AND REMOVE STRAP "X".

FIG. 3

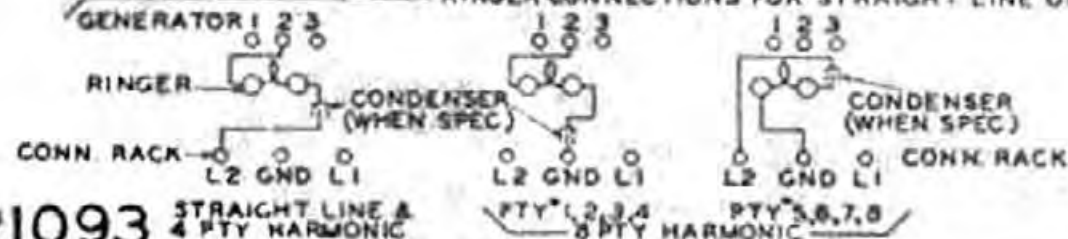
WHEN COND. IS SPECIFIED IN THE RINGER CKT. CONNECT COND. AS SHOWN AND OMIT WIRE "Y".

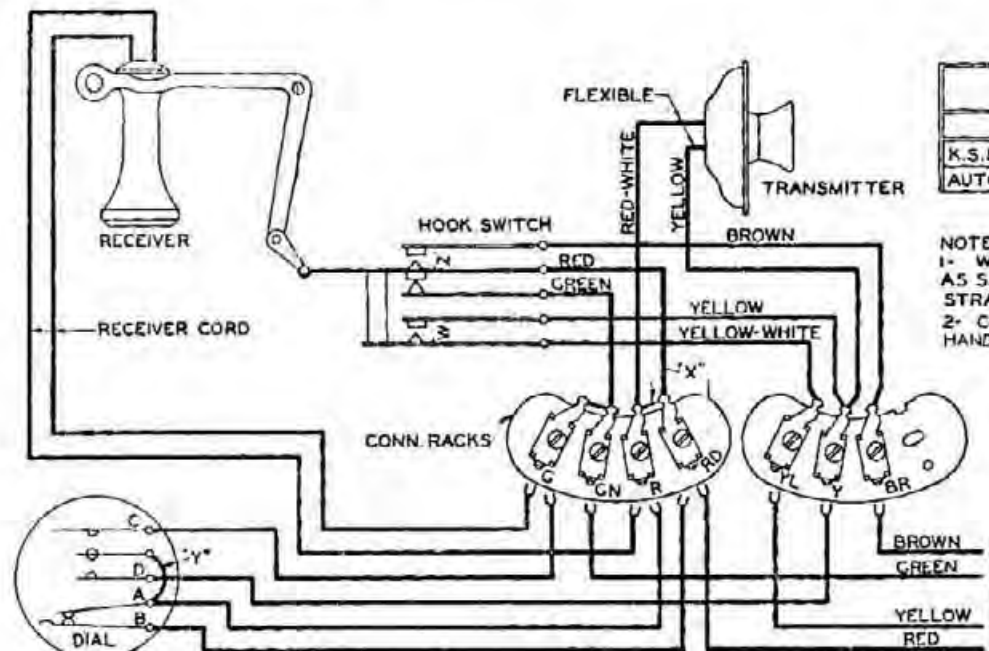
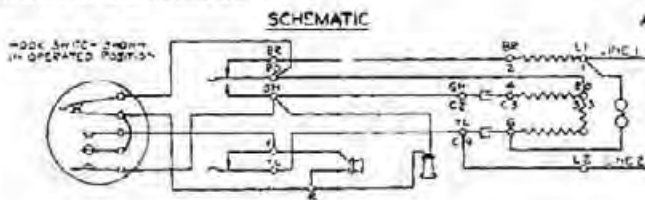
LOCAL BATT. TEL. TRIAD CKT.
(SIMPLIFIED WIRING)

21093

FIG. 4-1-M.F.
FIG. 2-2-M.F.
COND.

RINGER CONNECTIONS FOR STRAIGHT LINE OR PARTY LINE SERVICE

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



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:

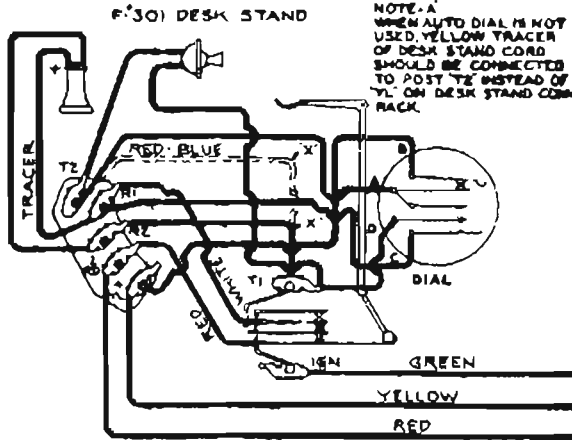
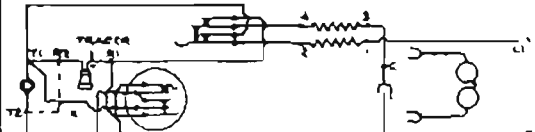
- 1- WHEN *S TYPE DIAL IS USED CONNECT STRAP "Y" AS SHOWN. WHEN DIAL IS NOT USED CONNECT STRAP "X".
- 2- CONTACTS "W" TO BREAK BEFORE "Z" WHEN HAND SET IS HUNG ON HOOK.

AUTO. C.B. DESK SET.

INDUCTION COIL BOOSTER CKT.

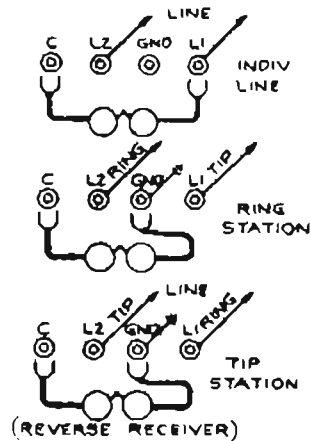
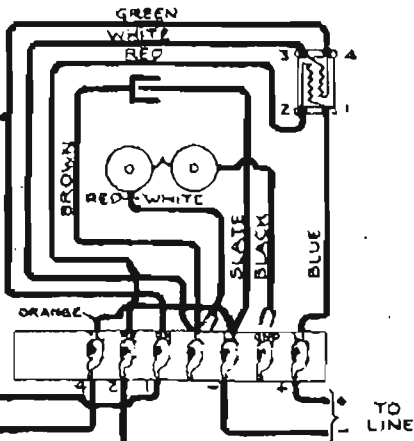
21176

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

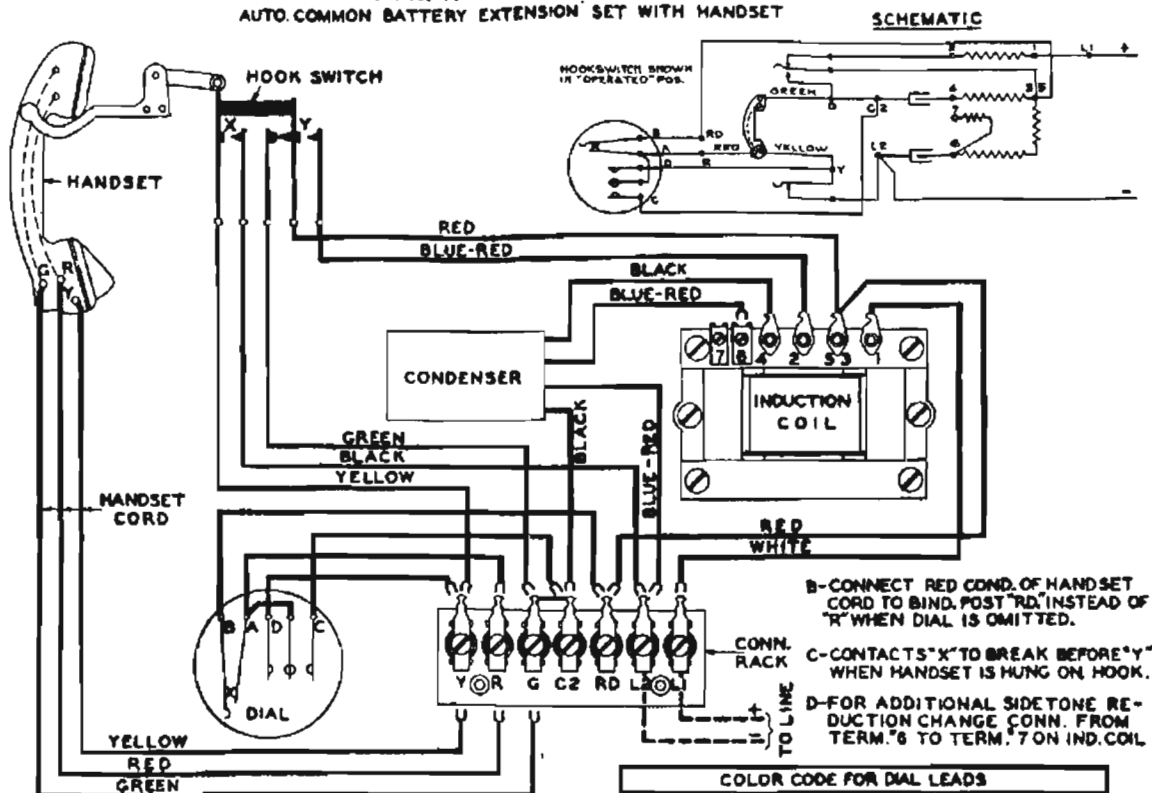
3 5 57
6 17 28

F301

TRIAD CIRCUIT

AUTO. COMMON BATTERY EXTENSION SET WITH HANDSET

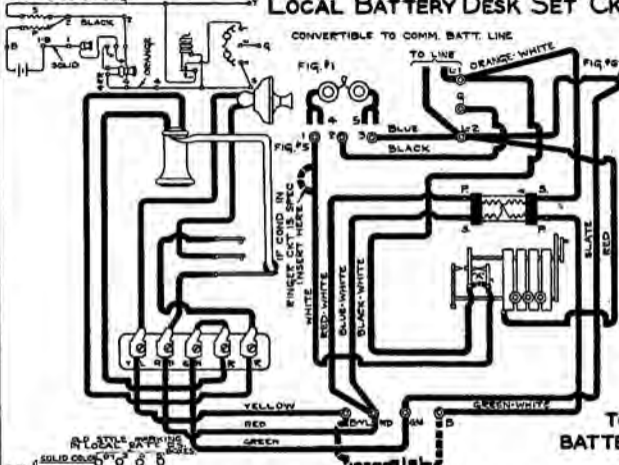
21187



21187

LOCAL BATTERY DESK SET CKT.

21188-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
BLUE WIRE TO 'GN' INSTEAD
OF 'L-2'

FIG. #3

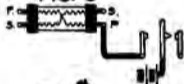


FIG. #4

TO RING OWN BELL
USE STRAP 'X' AT
GEN. SPRING

TO CONVERT TO COMMON
BATTERY SEE CIRCUIT 21188-C

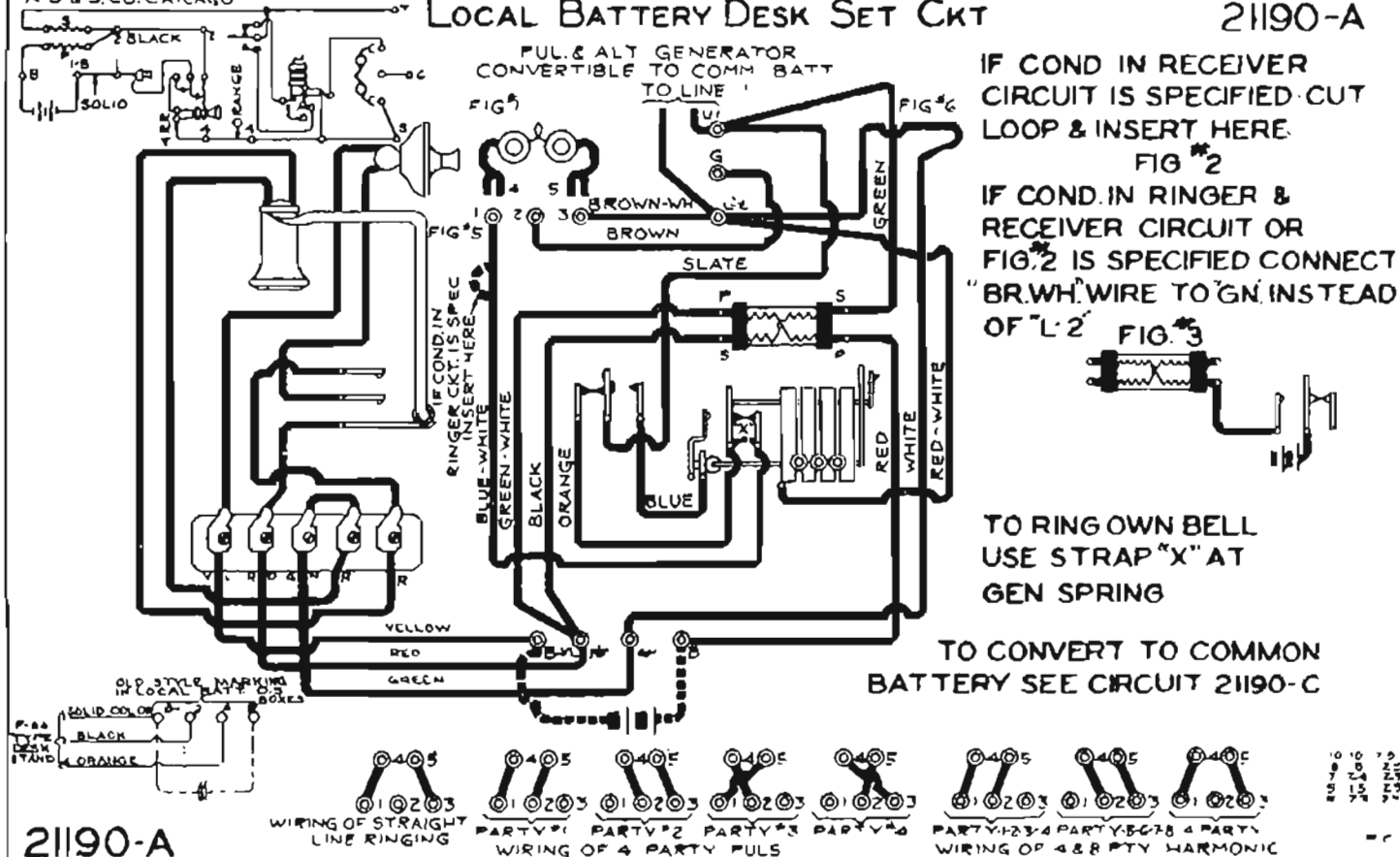


10-10-29
3 8 38
5 24 29
8 18 23
8 8 27

21188-A

LOCAL BATTERY DESK SET CKT

21190-A

PUL. & ALT. GENERATOR
CONVERTIBLE TO COMM. BATT

21190-A

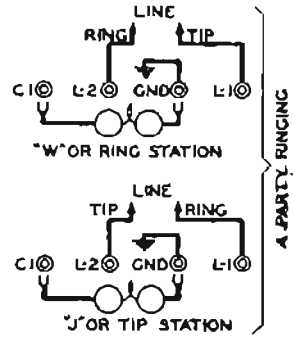
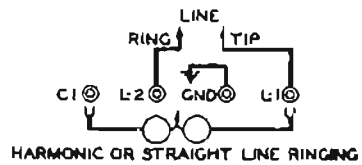
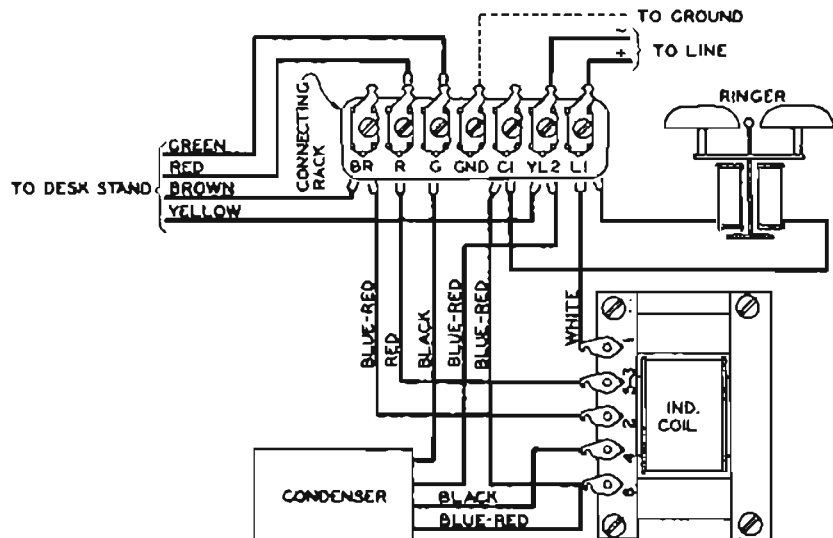
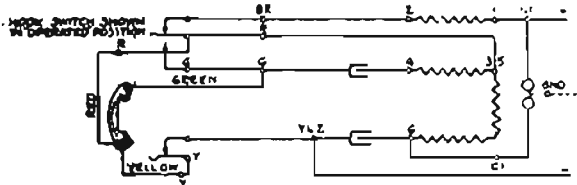
10 10 75
7 8 25
5 9 25
2 2
6 2
4 2

TRIAD CIRCUIT

COMMON BATTERY D. S. BOX

21098

SCHEMATIC



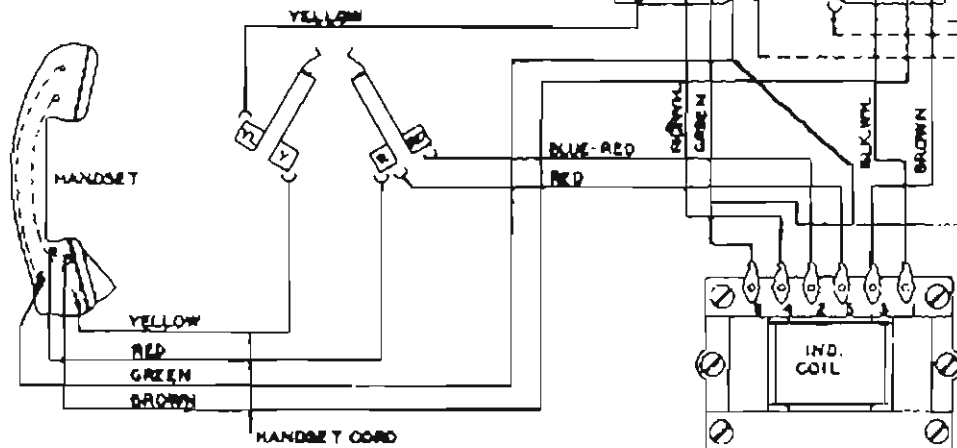
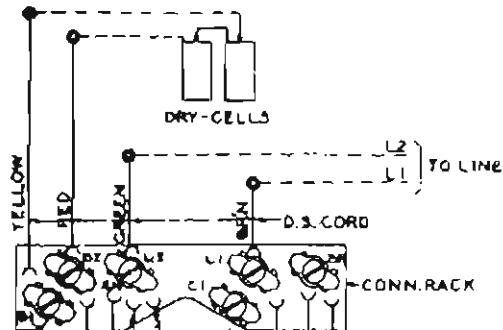
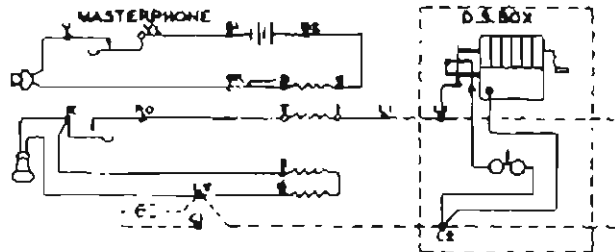
21098

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".

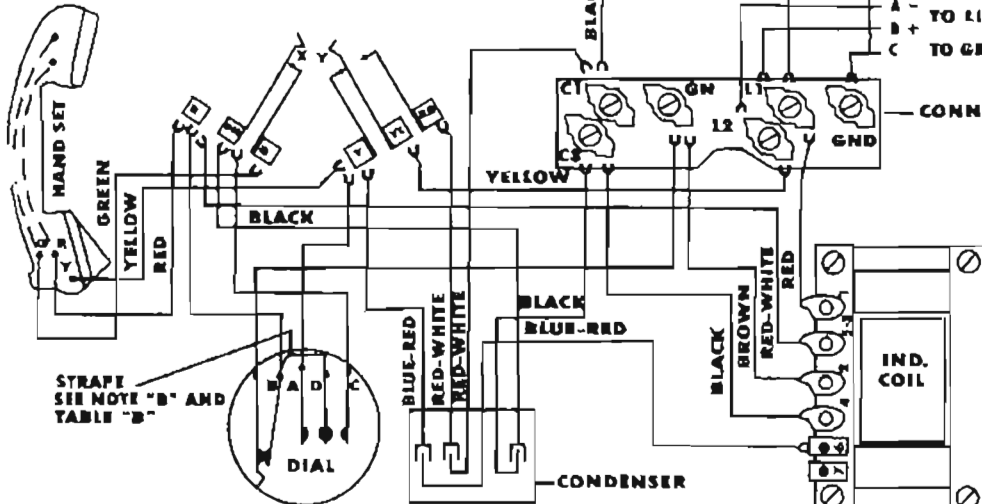
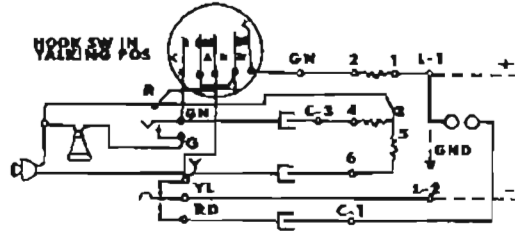
21229

951CLR

6-5-1939

K.S. & S.C. CHICAGO

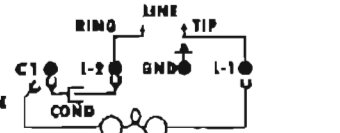
SCHEMATIC



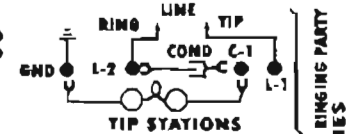
STRAP
SEE NOTE "B" AND
TABLE "B"

TRIAD CIRCUIT
DIVIDED RINGING
AUTO COMM BATT UNIT TYPE MASTERPHONE

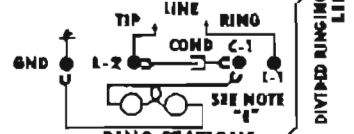
WHERE BELL TAPPING OCCURS AT AN EXTENSION STATION WHILE DIALING FROM THE MAIN STATION. REVERSE THE LINE CONNECTIONS "L-1 & L-2" ON "STRAIGHT LINES" ONLY.



HARMONIC OR STRAIGHT LINE RINGING ONLY.



TIP STATIONS



RING STATIONS

DIVIDED RINGING RINGING PARTY LINES

- 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 U.S. CORD CONDUCTORS

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

TABLE B
COLOR CODE FOR DIAL LEADS

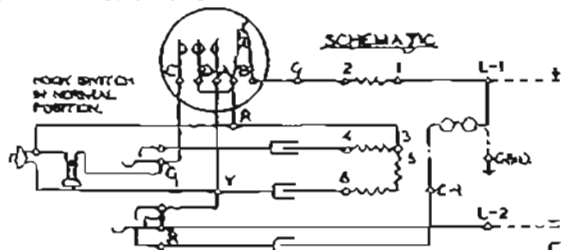
	A	B	C	D
K.S. & S.CO.	SLATE	WHITE	GR-WH	GREEN
AUTO. ELIC. CO.	GR-WH	GREEN	OR-RED	OR-BLK

21236-A

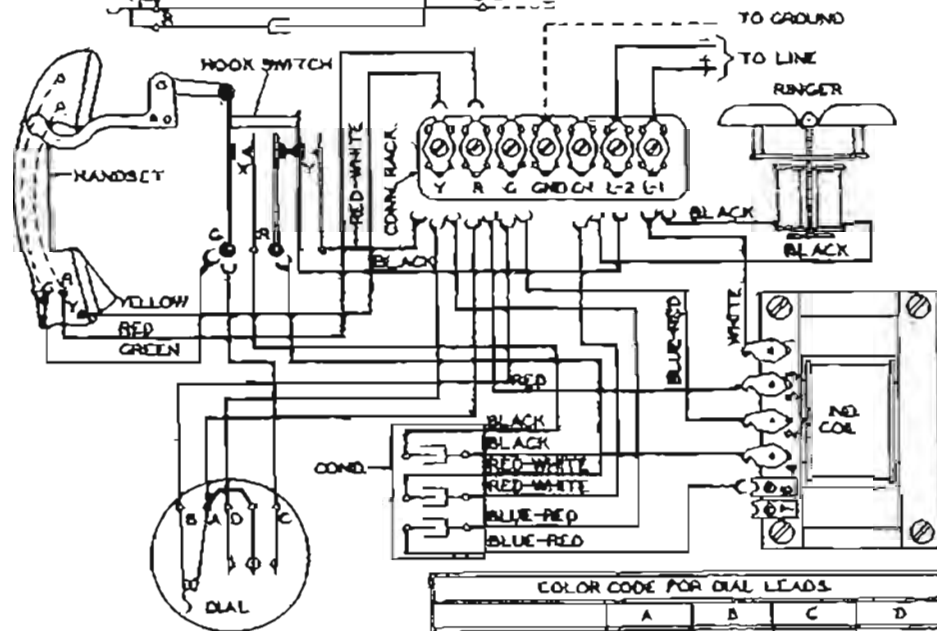
TRIAD CIRCUIT

DIVIDED RINGING AUTO COIL
BATTERY WALL TELEPHONE.

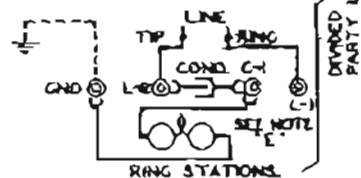
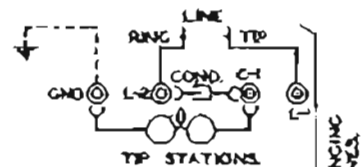
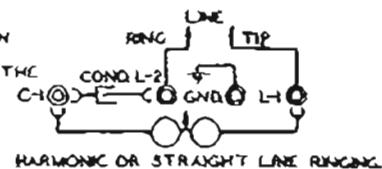
21238-A



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.



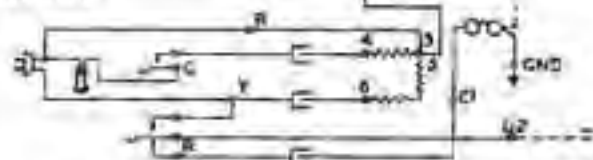
- A-CONNECT "BLUE-RED" WIRE TO BIND POST "A" INSTEAD OF "E" WHEN DIAL IS NOT USED.
- B-CONTACTS "X" TO BREAK BEFORE "Y" WHEN HANDSET IS HUNG ON HOOK.
- C- FOR ADDITIONAL SIDE TONE REDUCTION CHANGE CONNECTION FROM TERM. "B" TO "7" ON RING COIL.
- D- USE $\frac{1}{2}$ M.F. CONDENSER IN SERIES WITH HARMONIC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

21238-A

9917 WALL PHONE

2-6-4
E.L.B.
K.V.L.

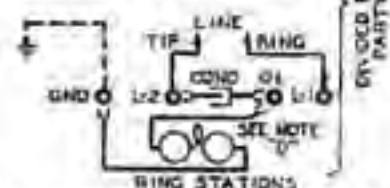
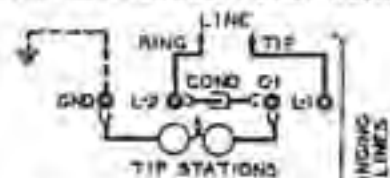
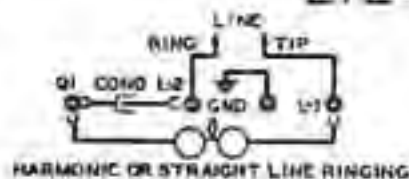
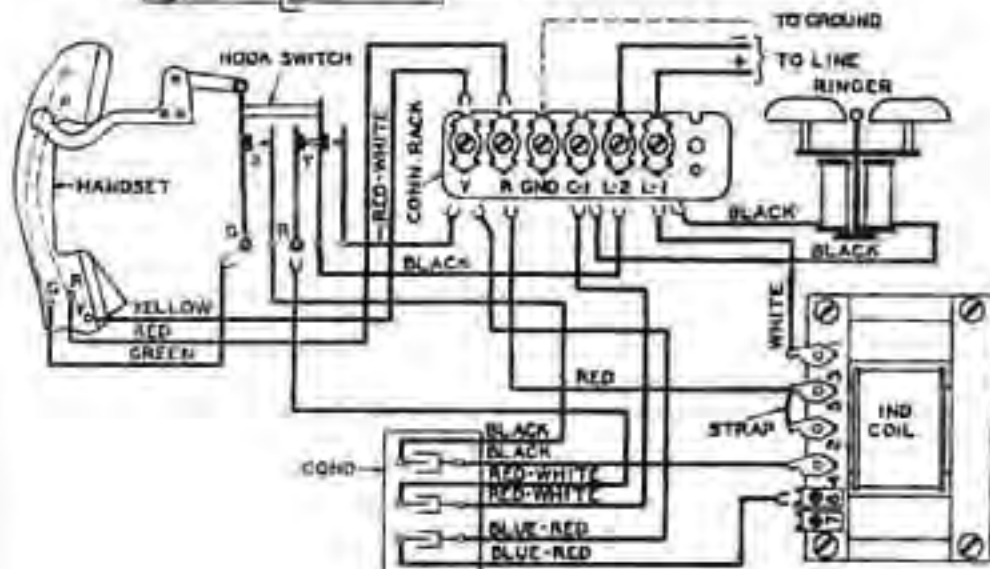
2-26-1941

HOOK SWITCH
IN NORMAL
POSITION

TRIAD CIRCUIT

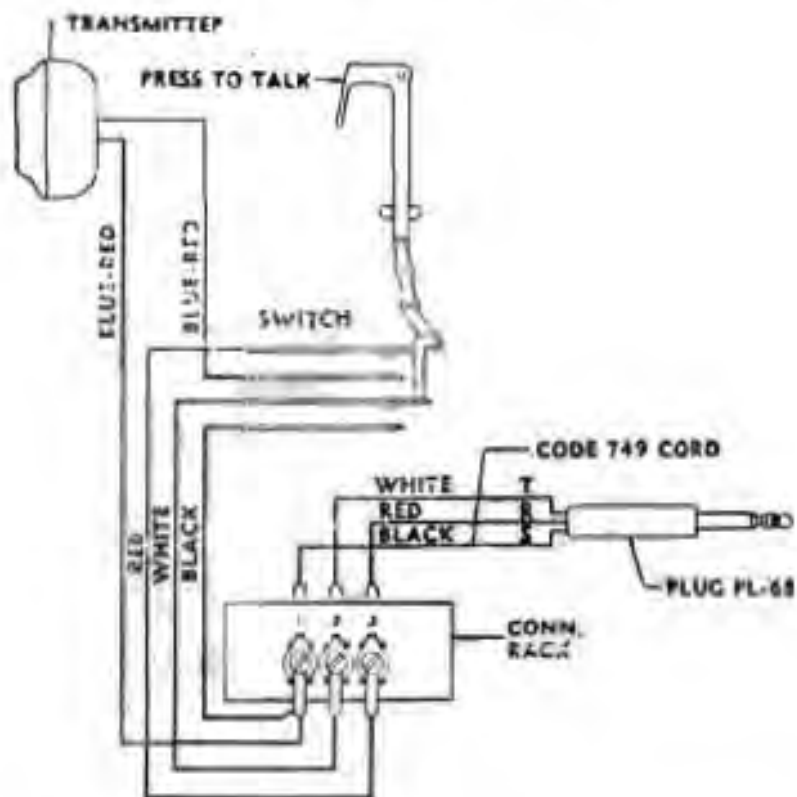
DIVIDED RINGING
COMM. BATTERY WALL TELEPHONE

21240



- A- CONTACTS X TO BREAK BEFORE Y WHEN HANSET IS HUNG ON HOOK.
- B- FOR ADDITIONAL SIDE TONE REDUCTION CHANGE CONNECTION FROM TERM. B TO T ON IND. COIL.
- C- USE $\frac{1}{2}$ M.F. CONDENSER IN SERIES WITH HARMONIC RINGERS IN FREQ. OF 42, 54, 60, 66 & 68 $\frac{1}{2}$ 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)

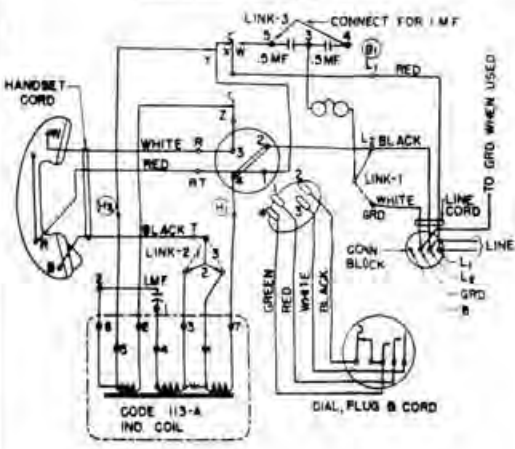


FIG 2 LOCAL BATTERY (LB OR MAGNETO)

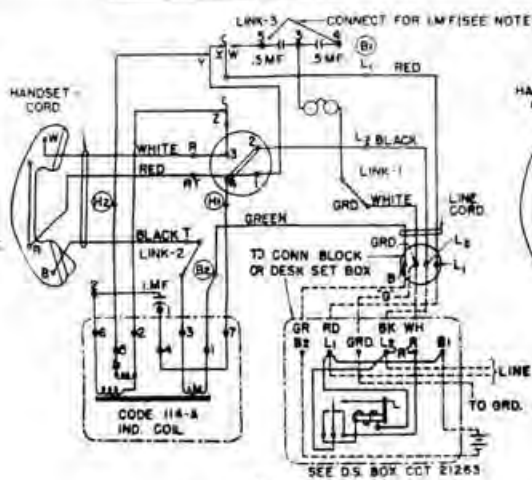


FIG 3 CB SIGNALLING - LB TALKING

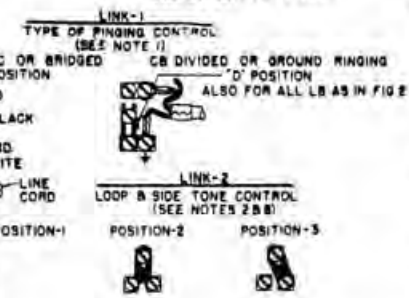
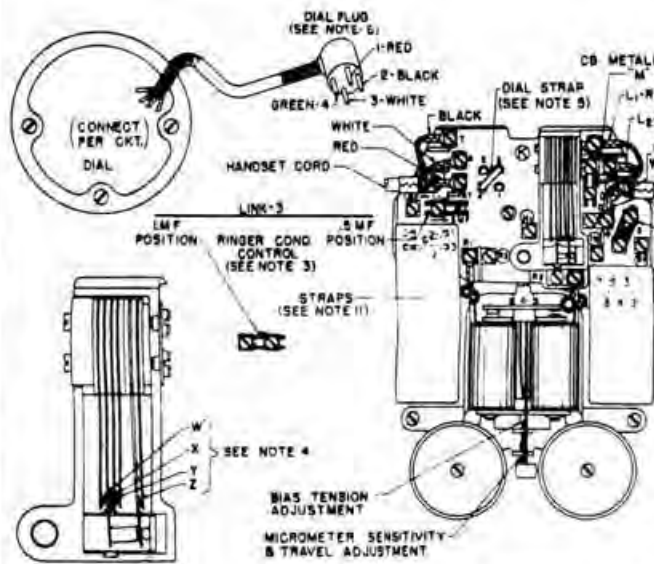
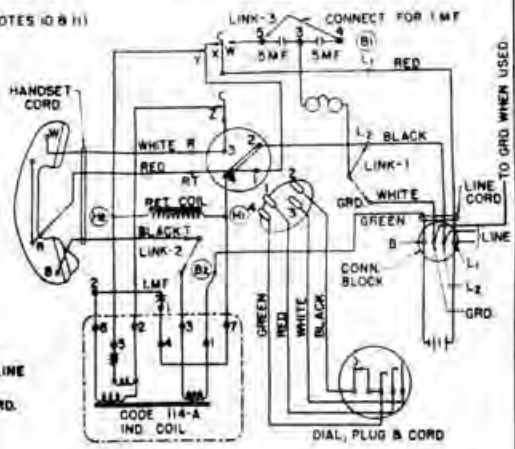


TABLE OF RINGERS

PTY.	FREQUENCY SELECTIVE (HARMONIC) TYPES			POLARITY SELECTIVE TYPES			NON-SELECTIVE TYPES
	CY	HA	HB	BI	BC	BA	
1	33/3	HA1	30	HB1	20	HC1	BC
2	30	HA2	42	HB2	60	HC2	BB
3	66/3	HA3	54	HB3			BA
4	162/3	HA4	66	HB4			
5	29	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 3B & 4 AND 1B2, MOVE SLIDE PLATE OF LINK-3 TO 1MF POSITION

- NOTES:
1. TO CHANGE FROM 'METALLIC' TO 'DIVIDED RINGING' WHEN A GROUND LEAD IS CONNECTED TO *, MOVE LINK-1 FROM L₁(M) TO * (D). FOR LB (FIG 2) USE 'D' POSITION ONLY.
 2. POSITION-1 FOR ALL LB 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 HANDSET BREAKS 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 L₁ & L₂ AT THE EXTENSION.

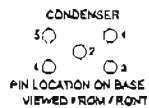
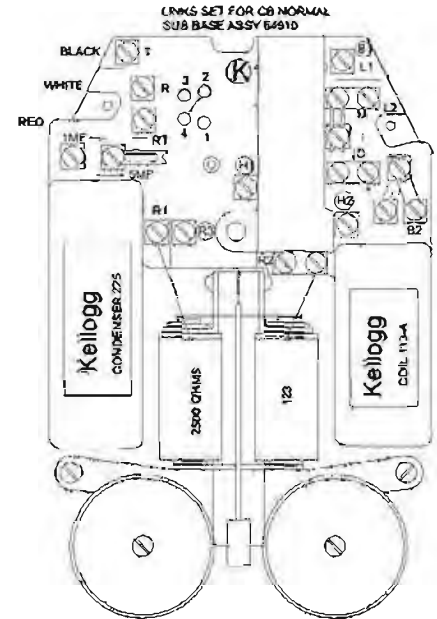
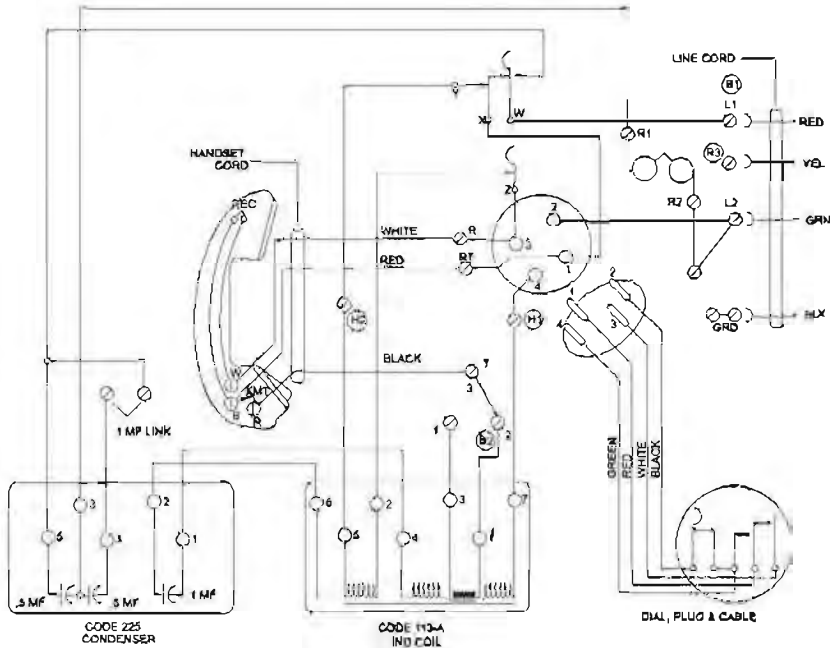
7. WHEN MAXIMUM TRANSMISSION IS NOT ESSENTIAL C-TRANSMITTERS MAY BE USED IN LB TALKING CIRCUIT

8. FOR CB SIGNALLING LB TALKING TELEPHONES REQUIRING A RETARD COIL CONNECT TO H₁ & H₂. SEE SCHEMATIC DRAWING FOR CIRCUIT.

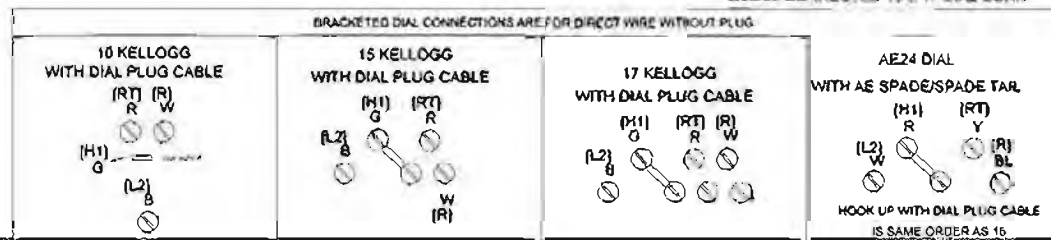
9. FOR 'LR' TYPE TELEPHONES USE ABOVE APPLICABLE CIRCUITS EXCEPT RINGER IS OMITTED.

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)

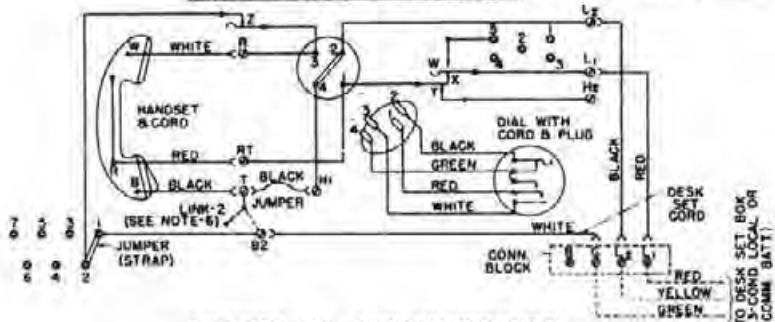
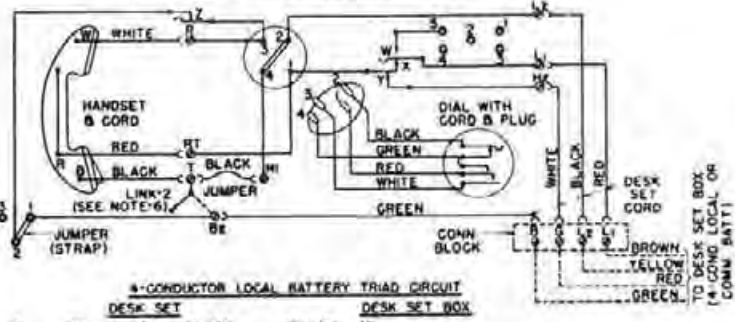
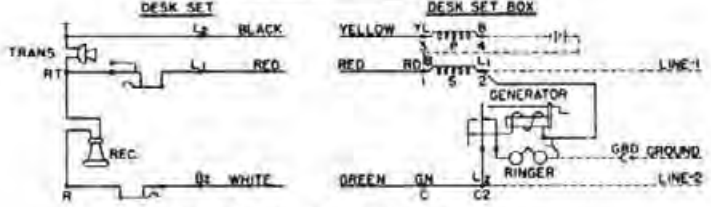


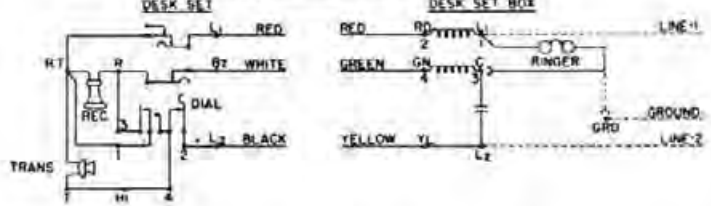
FIG. 2 LOCAL OR COMMON BATTERY (4 CONDUCTOR)



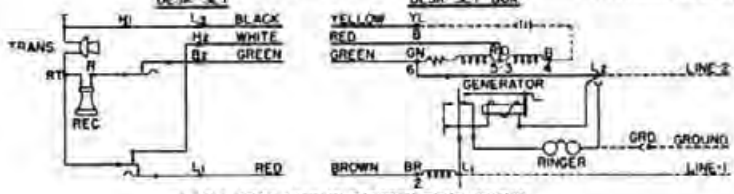
3-CONDUCTOR LOCAL BATTERY BOOSTER CIRCUIT



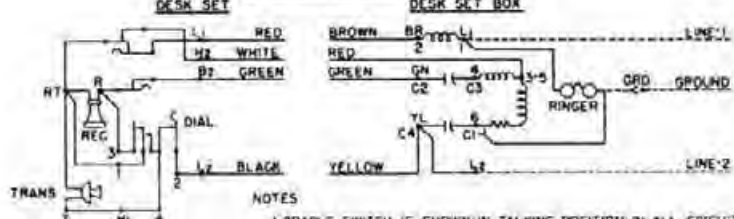
3-CONDUCTOR COMMON BATTERY BOOSTER CIRCUIT



4-CONDUCTOR LOCAL BATTERY TRIAD CIRCUIT



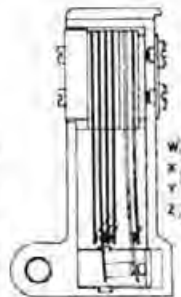
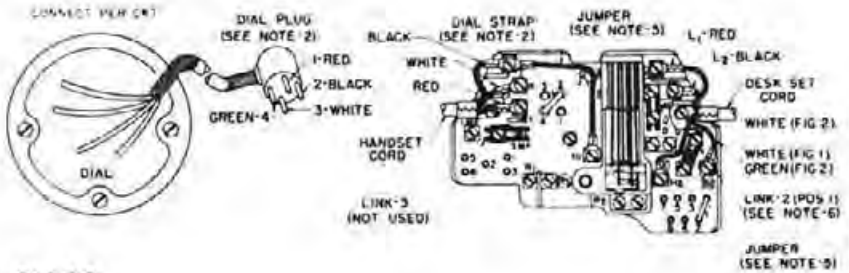
4-CONDUCTOR COMMON BATTERY TRIAD CIRCUIT

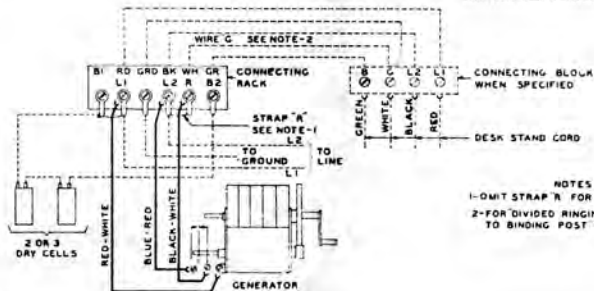
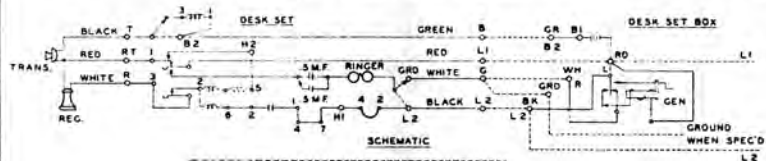


NOTES

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 L1, B1 & L2 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).

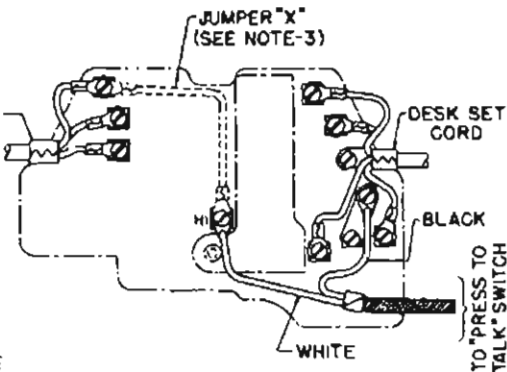
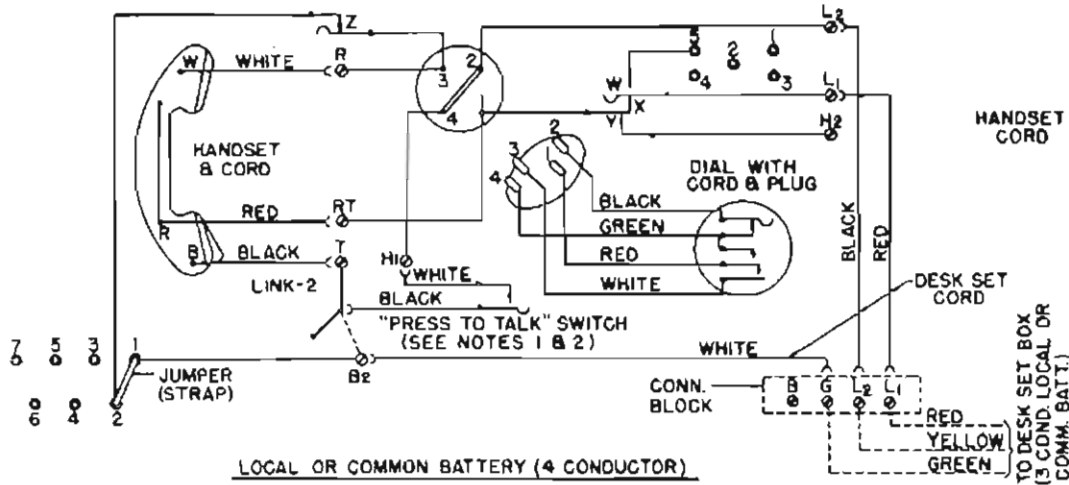
CONNECT PER CRT





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

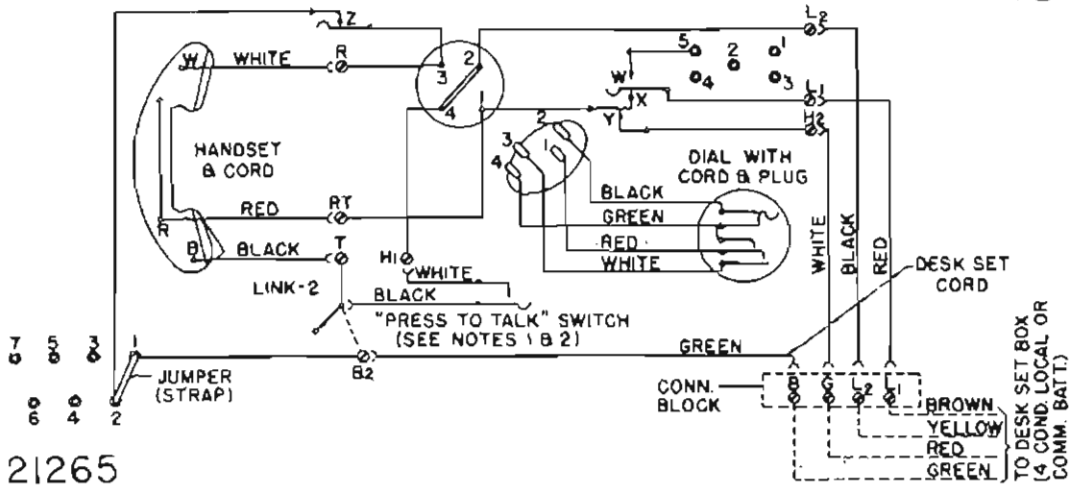
LOCAL OR COMMON BATTERY (3 CONDUCTOR)



NOTES:

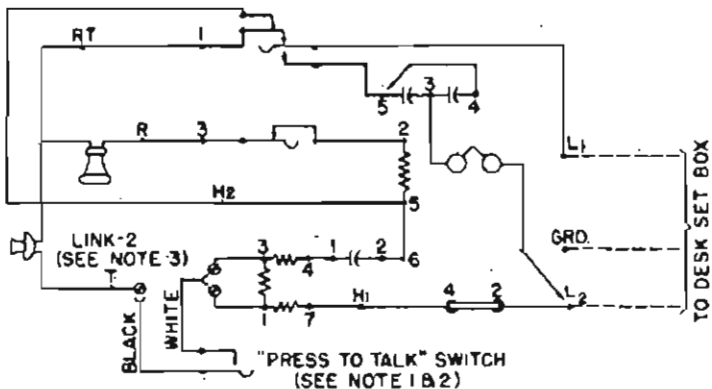
1. THIS CIRCUIT SUPPLEMENTS CIRCUIT 21260 TO SHOW THE CONNECTIONS FOR THE "PRESS TO TALK" SWITCH ONLY.
2. TO "FLASH" THE OPERATOR MOVE THE "PRESS TO TALK" SWITCH LEVER SLOWLY UP AND DOWN.
3. WHEN "PRESS TO TALK" SWITCH IS USED OMIT JUMPER "X".

LOCAL OR COMMON BATTERY (4 CONDUCTOR)

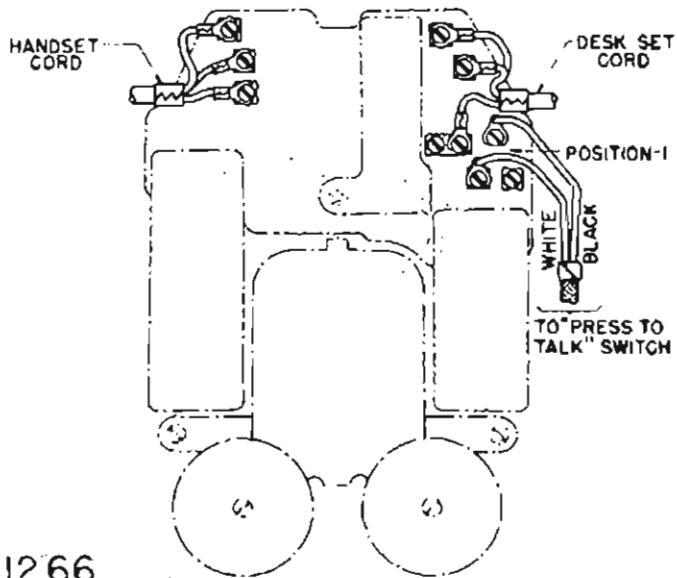
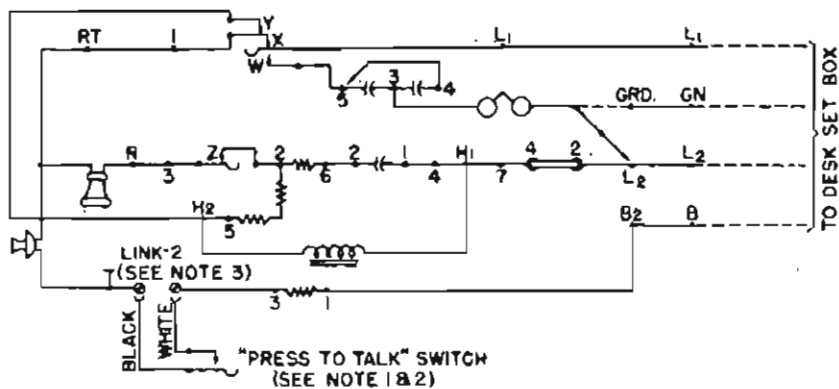


TO DESK SET BOX (4 COND. LOCAL OR COMM. BATT.)

COMMON BATTERY



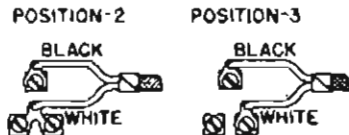
LOCAL BATTERY (MAGNETO) OR COM. BAT. SIGNALLING, LOCAL BATT. TALKING



NOTES:

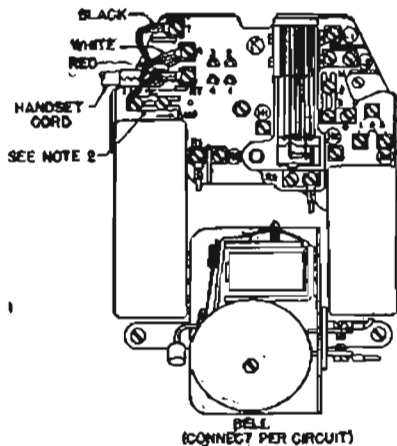
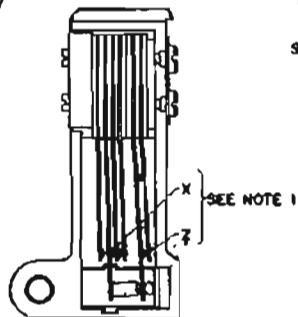
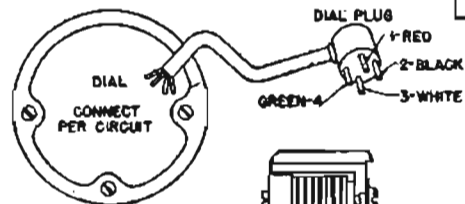
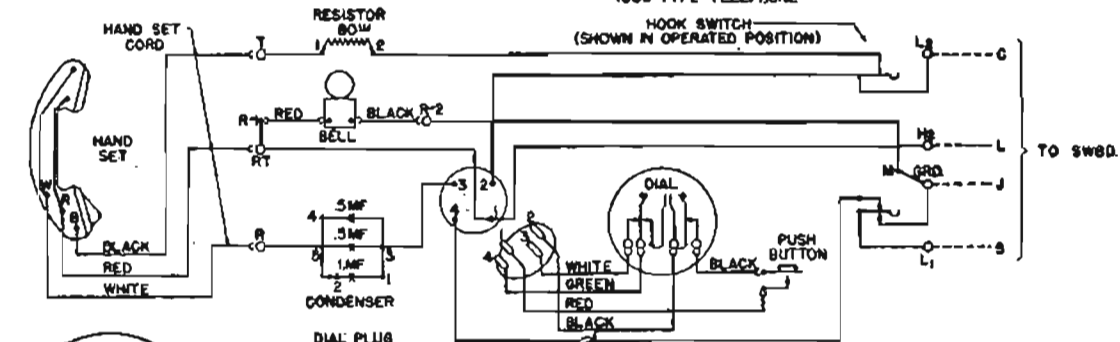
1. THIS CIRCUIT SUPPLEMENTS CIRCUIT 21258 TO SHOW THE CONNECTIONS FOR THE "PRESS TO TALK" SWITCH ONLY.
2. TO "FLASH" THE OPERATOR MOVE THE "PRESS TO TALK" SWITCH LEVER SLOWLY UP AND DOWN.
3. WHEN "PRESS TO TALK" SWITCH IS USED REMOVE LINK PLATE (CONTACT STRAP) FROM LINK-2.

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



SELECT-O-PHONE CIRCUIT

1000 TYPE TELEPHONE



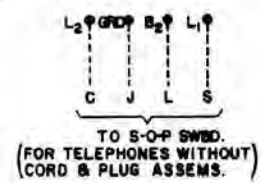
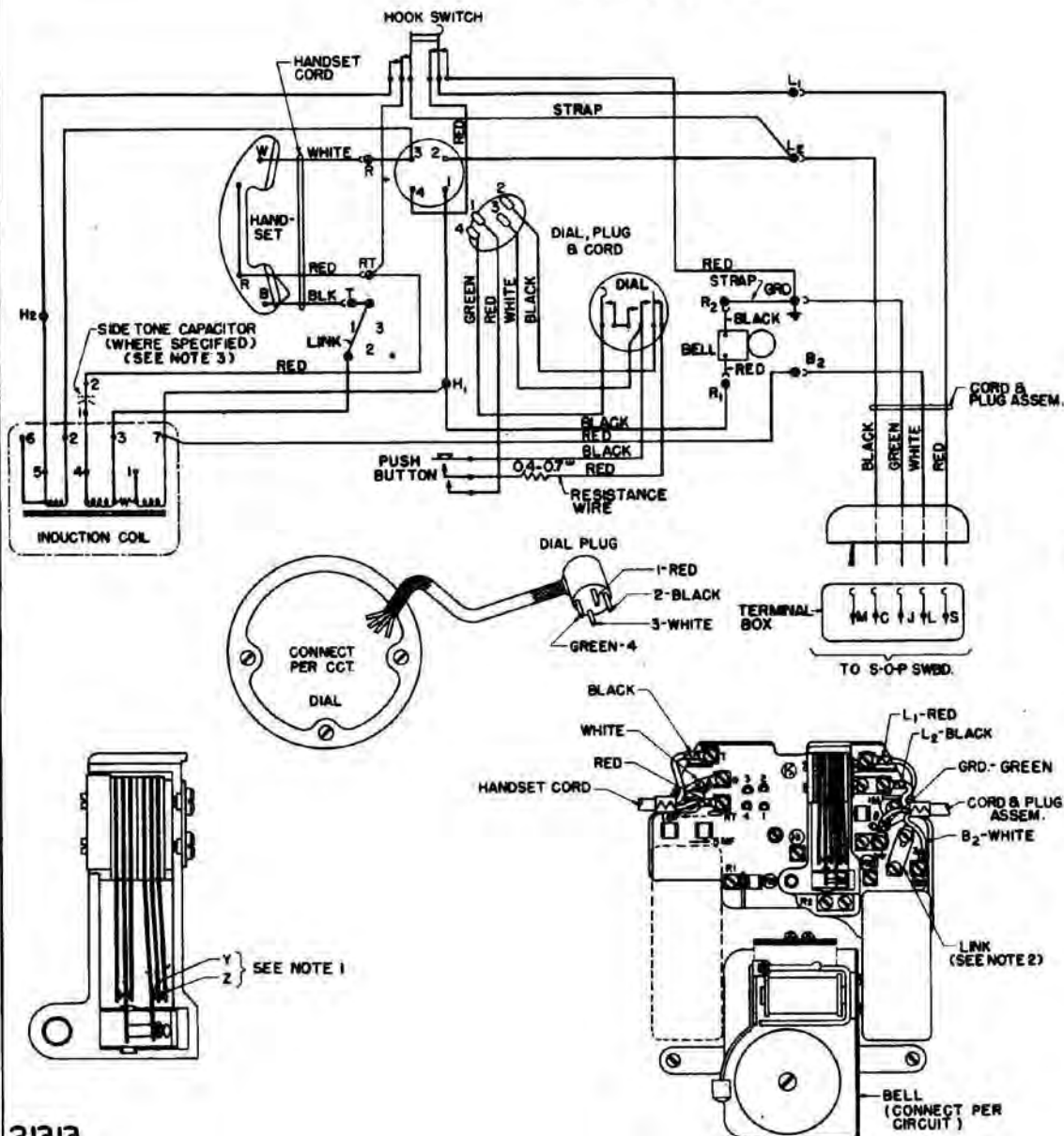
NOTE:

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

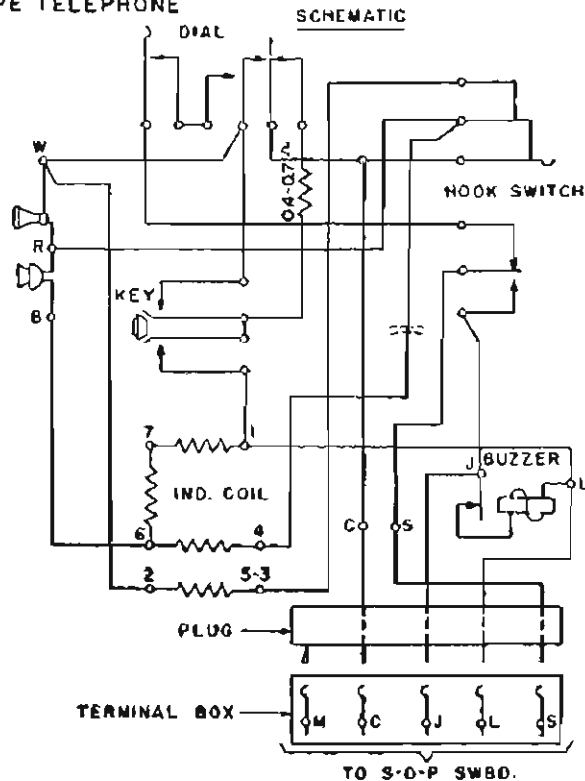
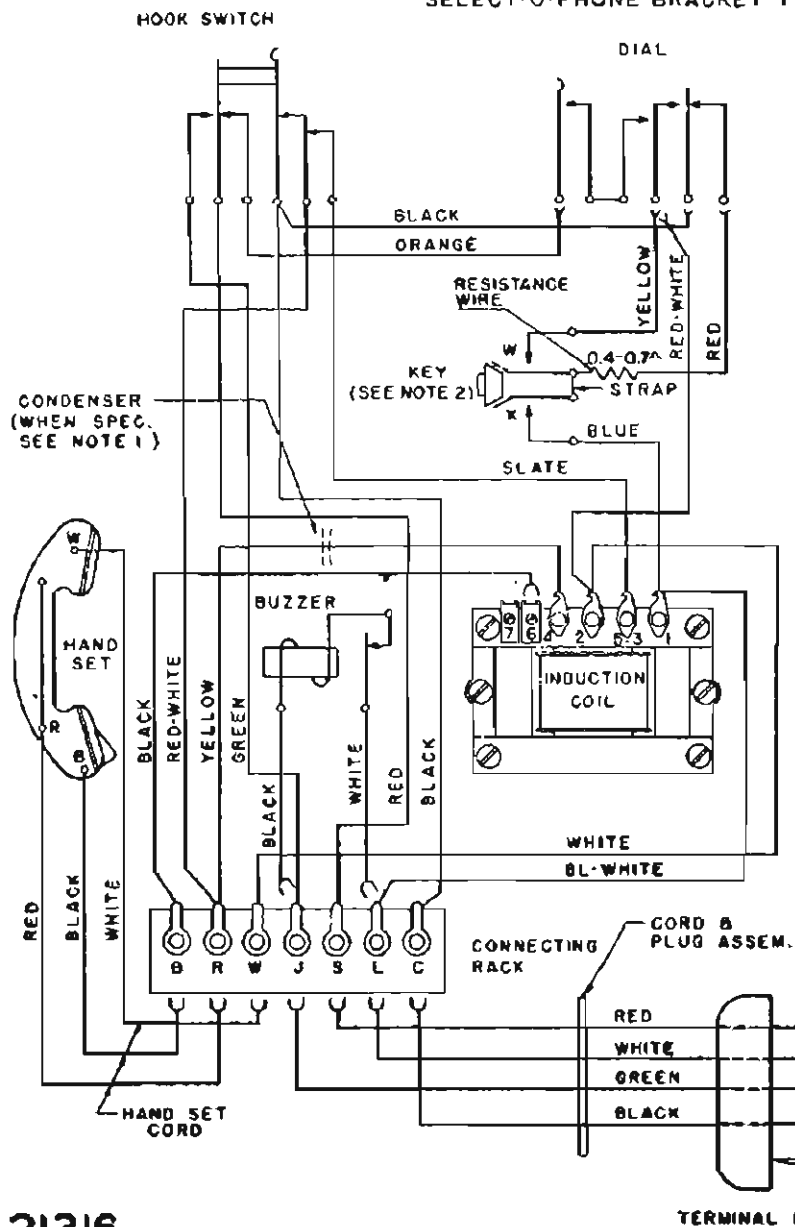
21313



- NOTES:
- 1- HOOK SWITCH IS SHOWN IN TALKING POSITION. REPLACING HANDSET BREAKS CONTACTS "2" BEFORE "4". 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

BIASED TYPE RINGER CONNECTIONS (WHEN USED).

FREQ. SELECTIVE RINGER CONNECTIONS (SEE RINGER TABLE)

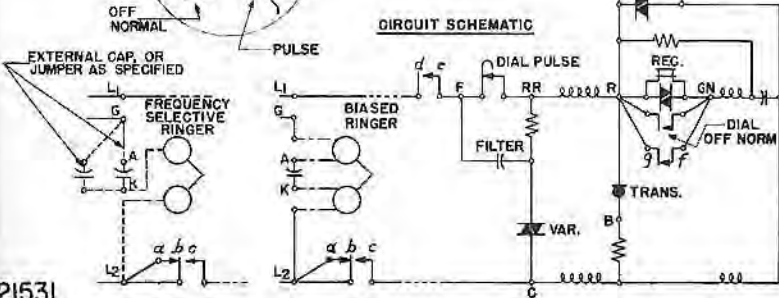
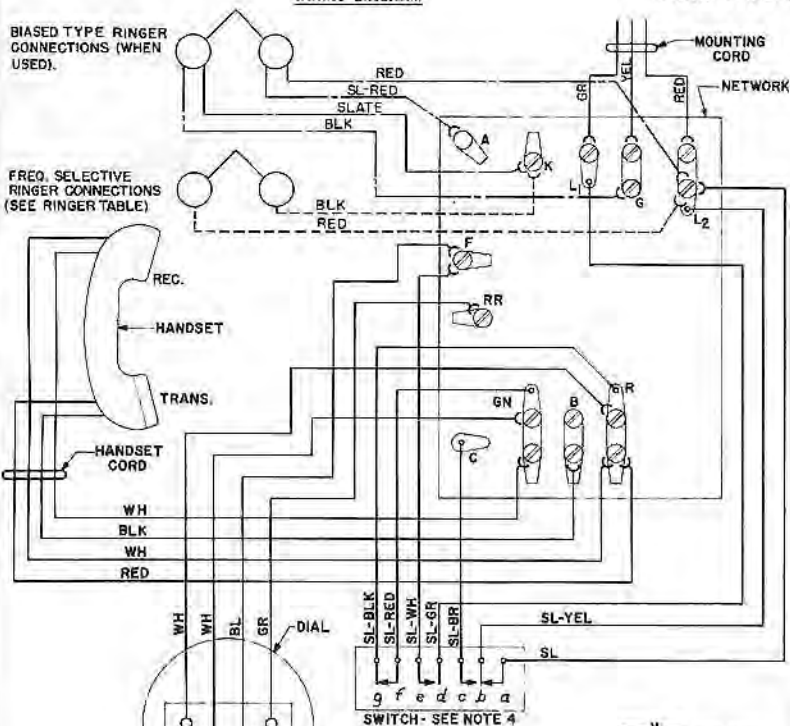


TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 4)

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE			MTG. CORD			MTG. CORD			RINGER LEADS			
	RING	TIP	GND.	RED	GR	YEL	RED	GR	YEL	RED	BLK	SL	SL-RED
BRIDGED Δ	R	G	Y	R	G	G	L2	L1	G	L2	G	K	A
RING PARTY Δ	R	G	Y	R	G	Y	L2	L1	G	L2	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	L2	L1	G	L2	G	K	A
TIP PARTY DIAL MESSAGE RATE *	R	G	Y	G	R	Y	L2	L1	G	K	G	B	B
AUTOMATIC TICKETING *	R	G	Y	G	R	Y	L2	L1	G	B	B	K	G

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

* TRANSFER SLATE SWITCH LEAD FROM (L2) 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 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 (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 *gf* BREAKS LAST.

TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	EXTERNAL CAPACITOR			CONNECTIONS IN SET.
	CY.	PTY.	UF	
HA 1	33 $\frac{1}{3}$	1	.25	SEE NOTE 5
HA 2	50	2	.1	5
HA 3	66 $\frac{2}{3}$	3	.1	5
HA 4	162 $\frac{2}{3}$	4	—	6
HA 5	25	5	—	6
HB 1	30	1	—	6
HB 2	42	2	.25	5
HB 3	54	3	.1	6
HB 4	66	4	.1	5
HB 5	16	5	—	6
HC 1	20	1	—	5
HC 2	60	2	.1	5
HC 3	30	3	—	6
HC 4	40	4	.25	5
HC 5	50	5	.1	5

NOTES:

- MOUNT THE CONDENSER FURNISHED ON THE "K" TERMINAL OF THE NETWORK. CONNECT THE LOOSE CONDENSER LEAD TO THE "G" TERMINAL.
- CONNECT JUMPER FROM "A" TO "G" ON THE NETWORK.

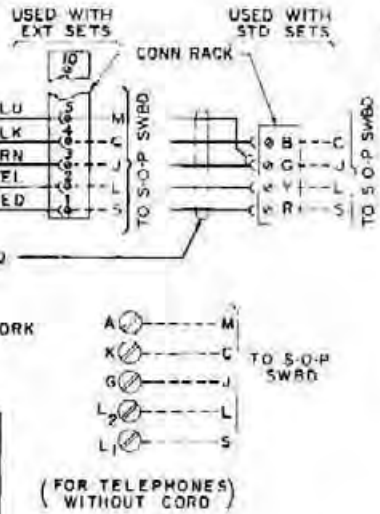
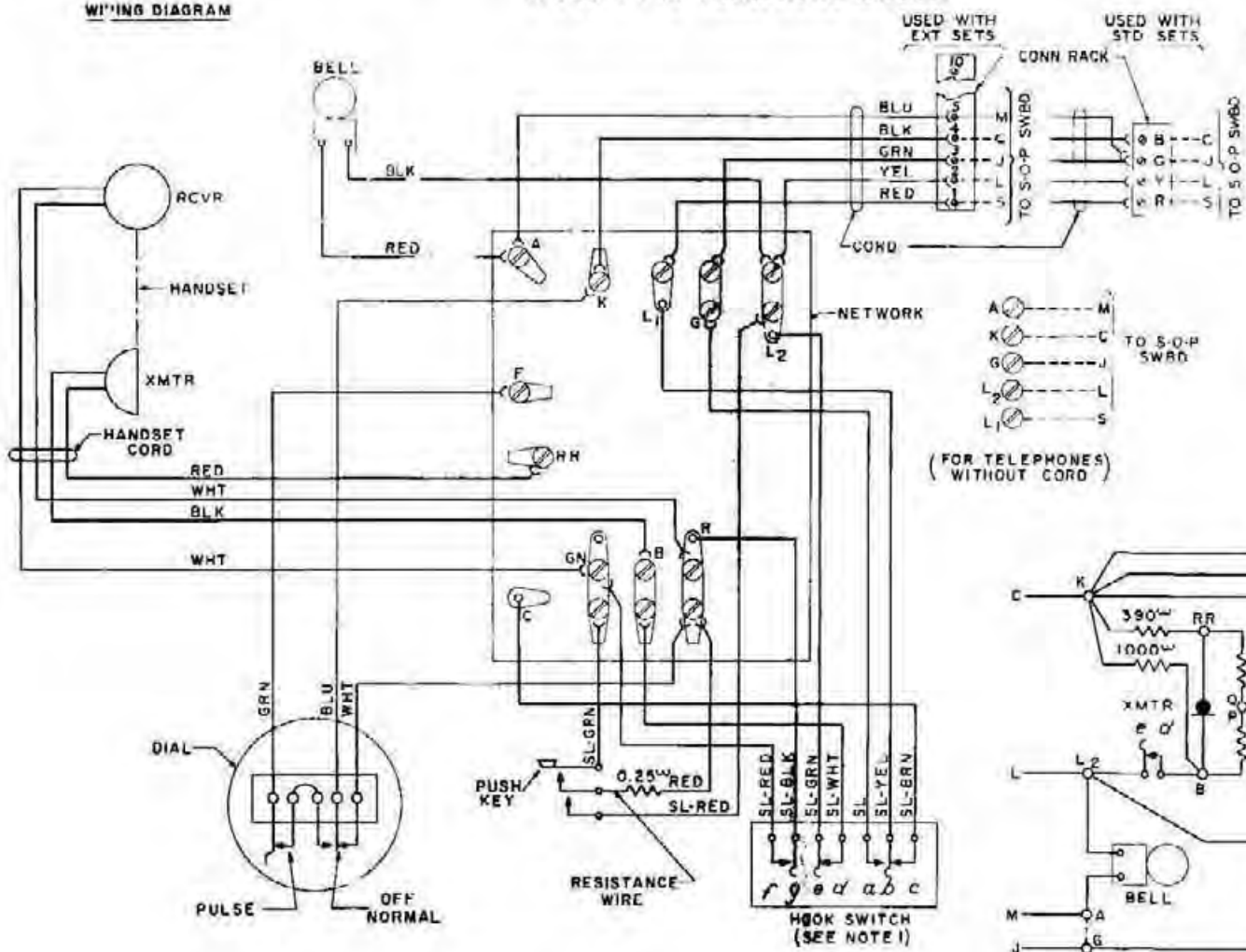
CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONN. IN SET (ALSO SEE TABLE OF RINGERS)	
	LINE			MTG. CORD			RED	BLACK
	RING	TIP	GND	RED	GR	YEL		
BRIDGED	R	G	Y	R	G	G	L2	K
RING PARTY	R	G	Y	R	G	Y	L2	K
TIP PARTY	R	G	Y	G	R	Y	L2	K

* IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

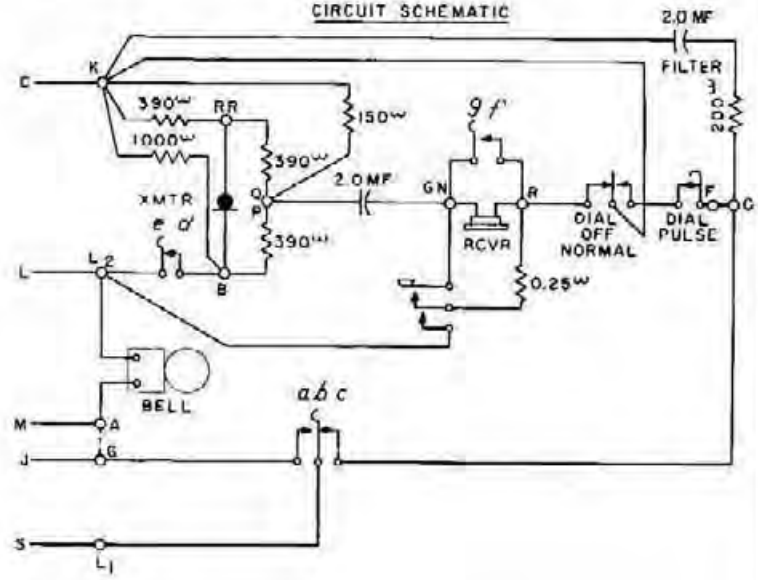
K-500 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM

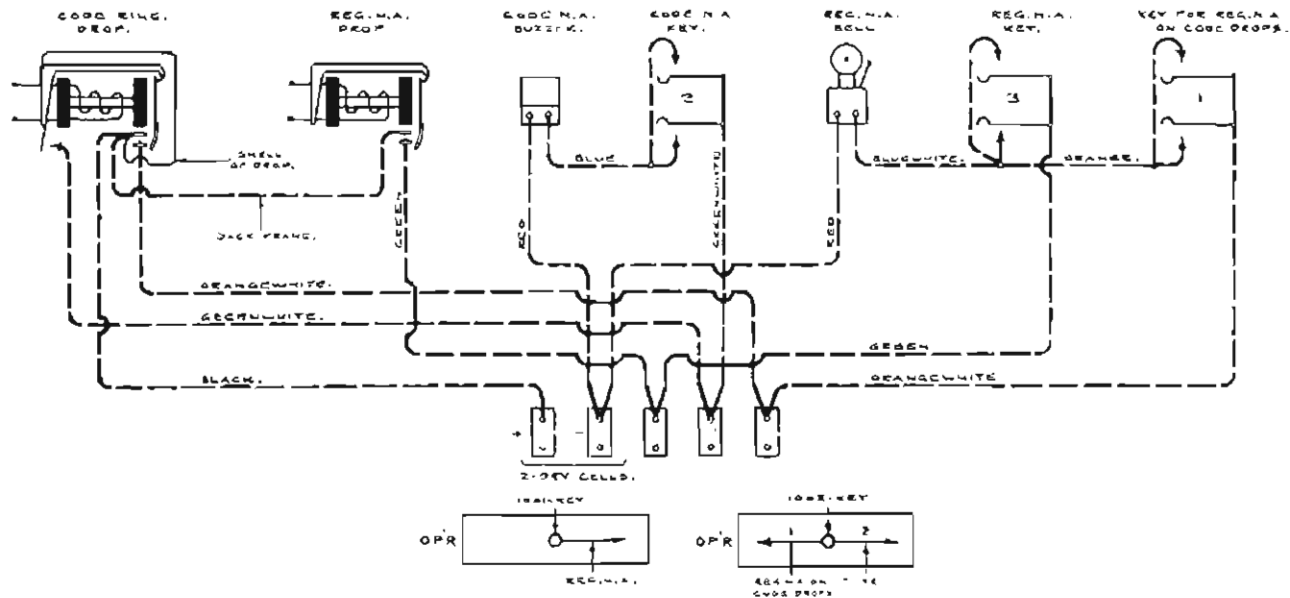


NOTES
 1- HOOK SWITCH IS SHOWN IN TALKING POSITION WHEN THE HANDSET IS REPLACED CONTACT 9f MAKES FIRST. OTHER ORDER OF CONTACTING IS NOT CRITICAL

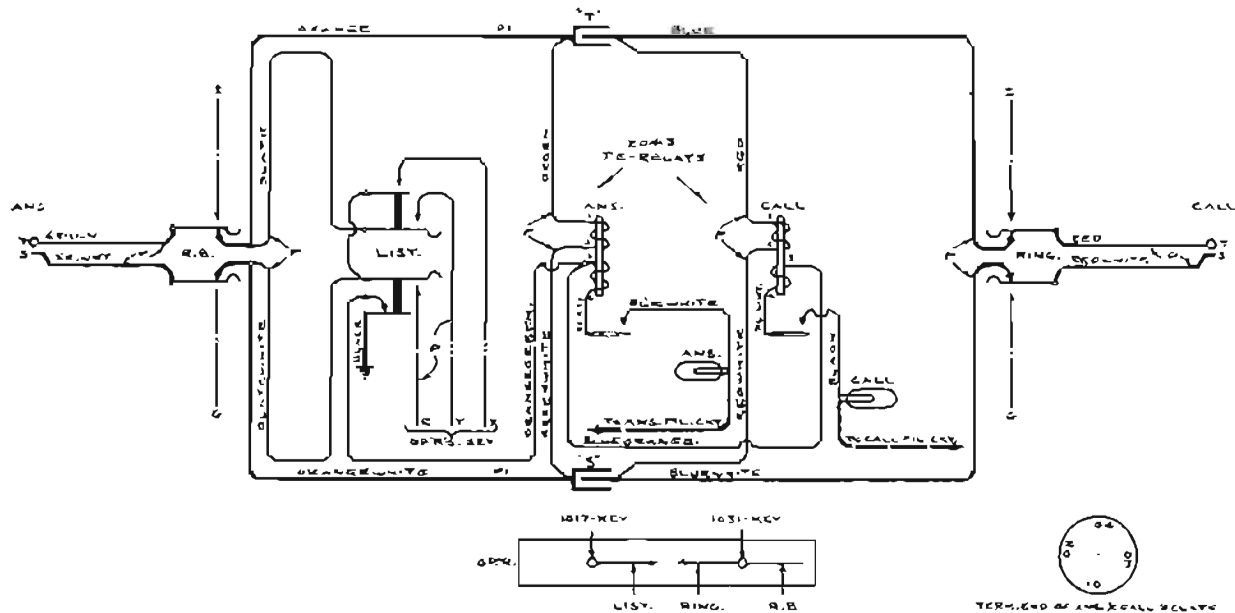
CIRCUIT SCHEMATIC



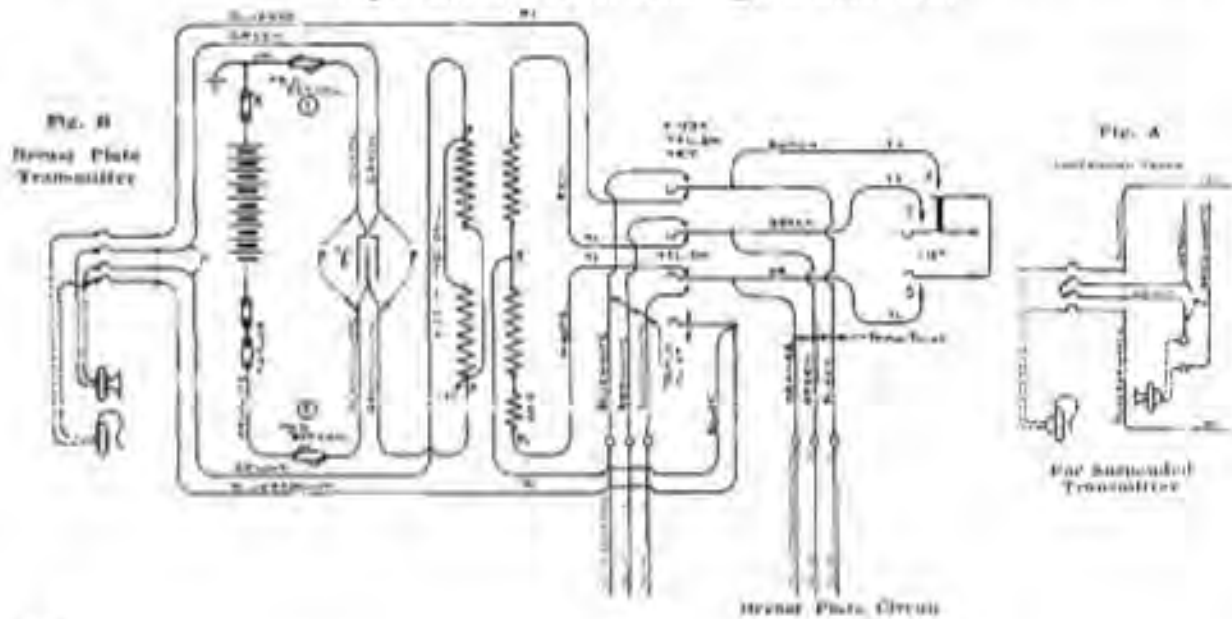
Code and Regular Night Alarm Circuit Used on Switchboards Having Drop Supervision



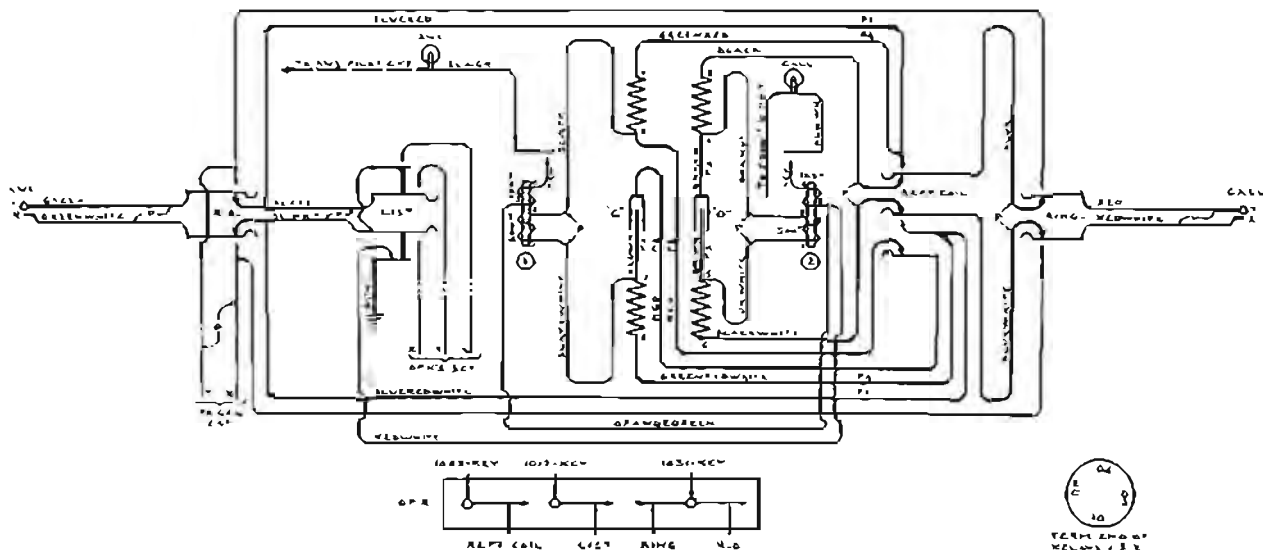
Magneto Cord Circuit With Double Lamp Supervision With Condensers



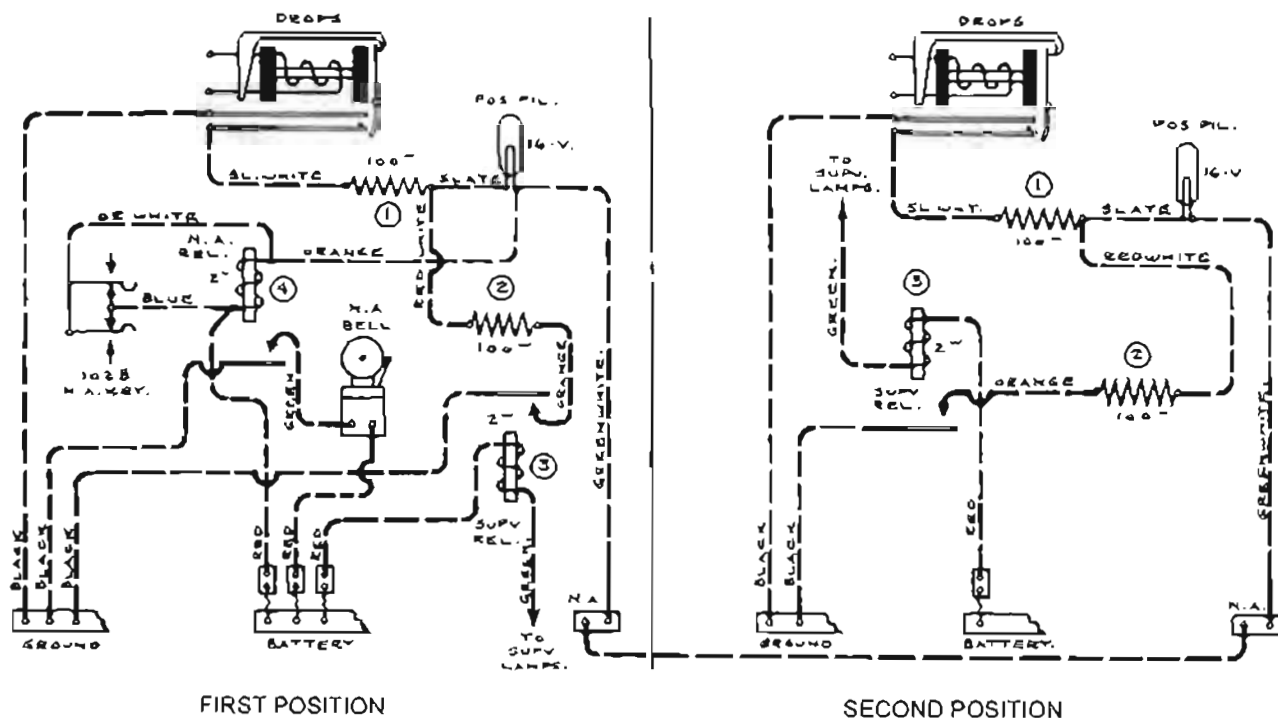
Magneto Operator's Telephone Circuit With Either Suspended (Fig. A) or Breast Plate Type Transmitter (Fig. B). Circuit Operated From Storage Batteries.



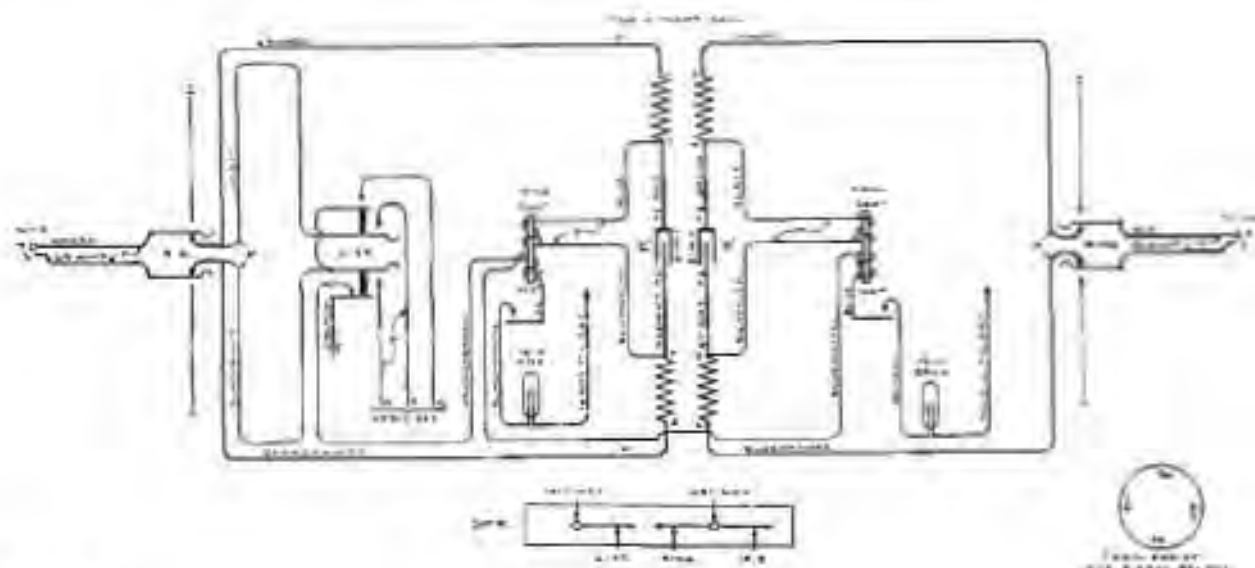
Magneto Cord Circuit With Double Lamp Supervision, Repeating Coil and Repeating Coil Cutout Key



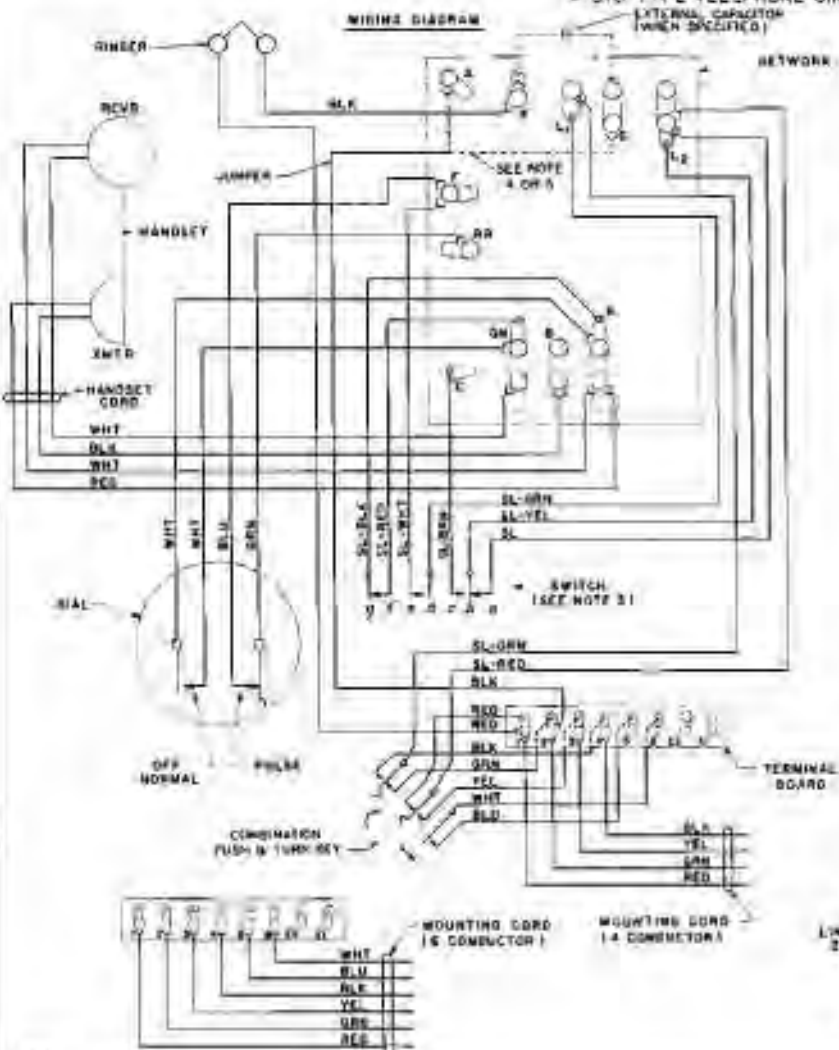
Pilot Lamp Circuit and Night Alarm Used on Switchboards Having Lamp Supervision



Magneto Cord Circuit With Double Lamp Supervision and Repeating Coil



M-510 TYPE TELEPHONE CIRCUIT



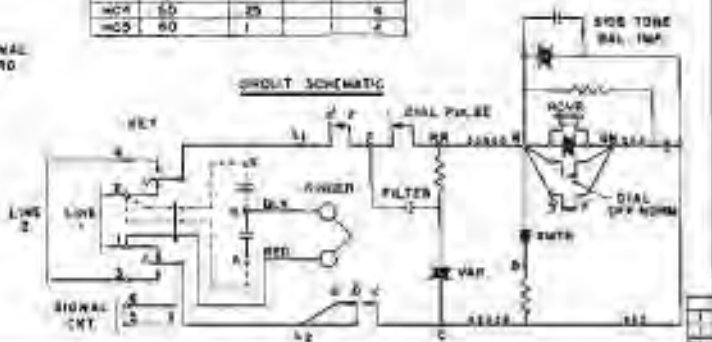
NOTE:

- 1-FOR MANUAL SERVICE-
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO CR1 TERMINAL ON NETWORK.
- 2-TO PERMANENTLY SILENCE RINGER-
TRANSFER RED RINGER LEAD TO (K1) TERMINAL ON NETWORK.
- 3-WHEN THE HANDSET IS REMOVED FROM CRADLE CONTACT *gr* BREAKS LAST.
- 4-MOUNT THE CONDENSER FURNISHED ON THE "R" TERMINAL OF THE NETWORK. CONNECT THE LEAD CONDENSER LEAD TO THE "R" 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 HARMONICS

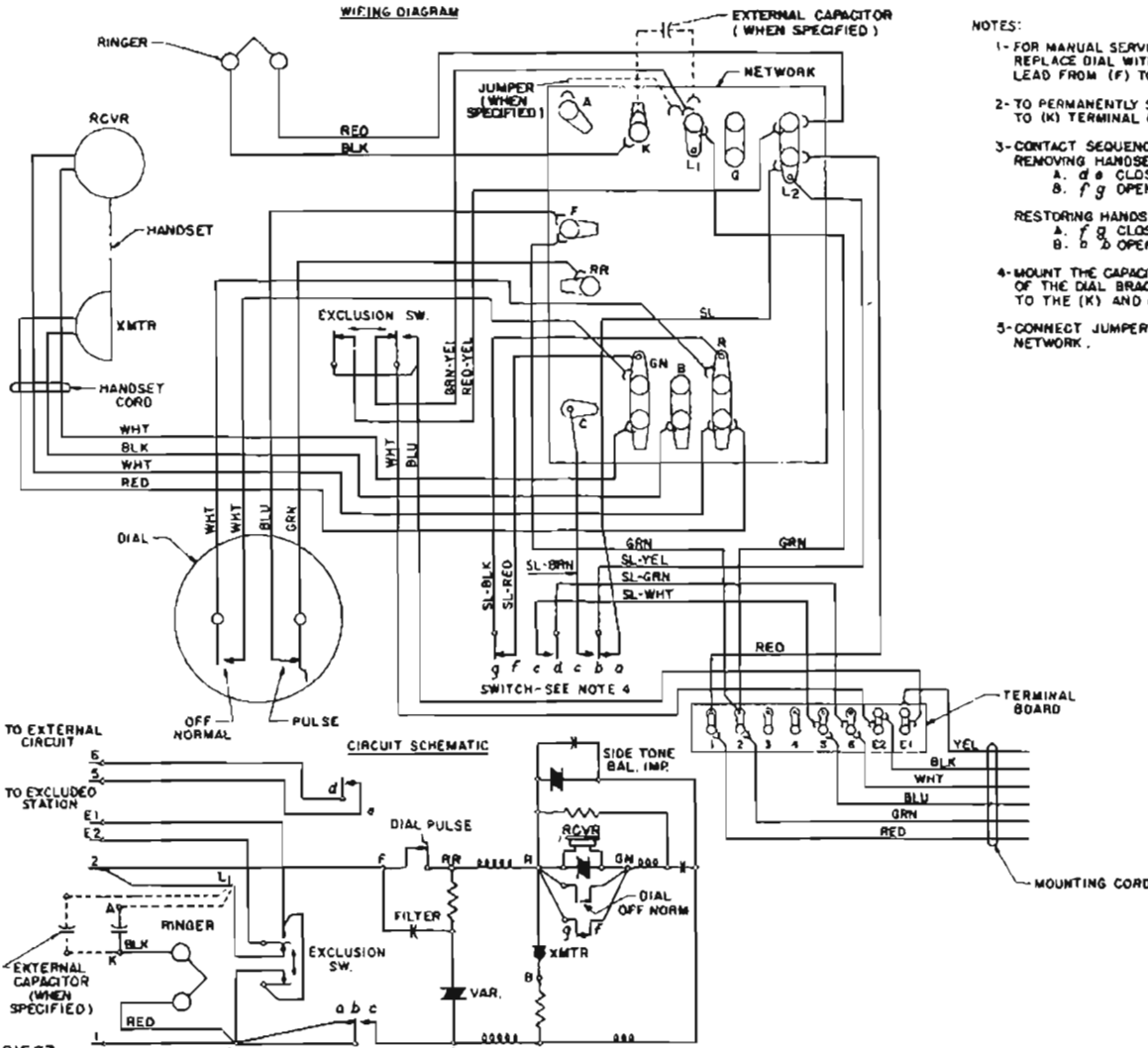
FREQ	CYCLES	WV	CONNECTIONS IN SET
H1	33 1/2	.30	SEE NOTE 4
H2	50	—	4
H3	66 2/3	—	4
H4	100	—	5
H5	165	—	5
H6	200	—	4
H7	300	—	4
H8	42	.25	4
H9	54	—	4
H10	66	—	4
H11	100	—	5
H12	200	—	5
H13	40	—	4
H14	50	.20	4
H15	60	—	4

CIRCUIT SCHEMATIC



K-502 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM



EXTERNAL CAPACITOR
(WHEN SPECIFIED)

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

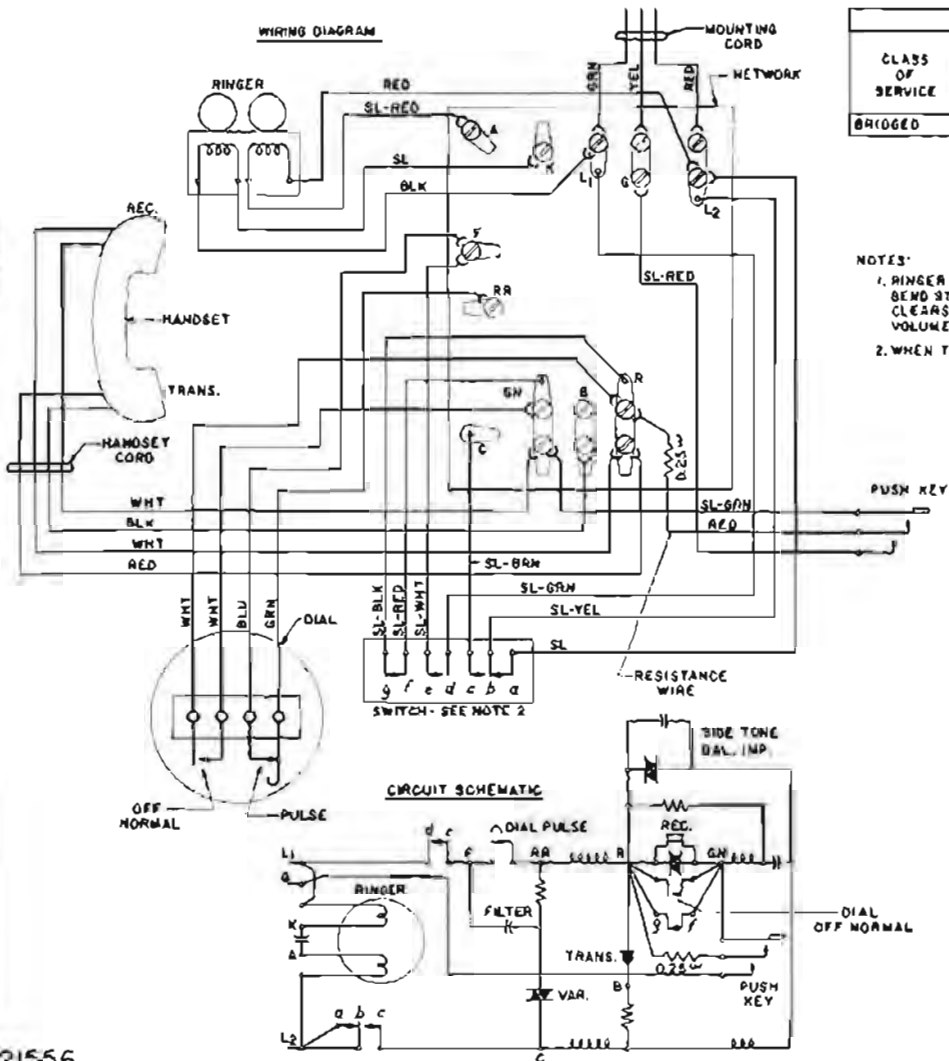


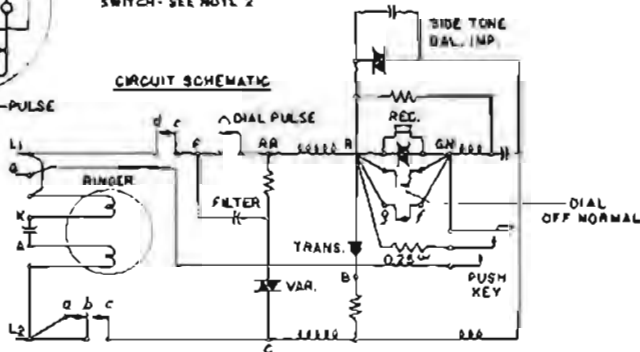
TABLE OF CONNECTIONS

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	I-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 ₂	L ₁	G	L ₂	L ₁	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

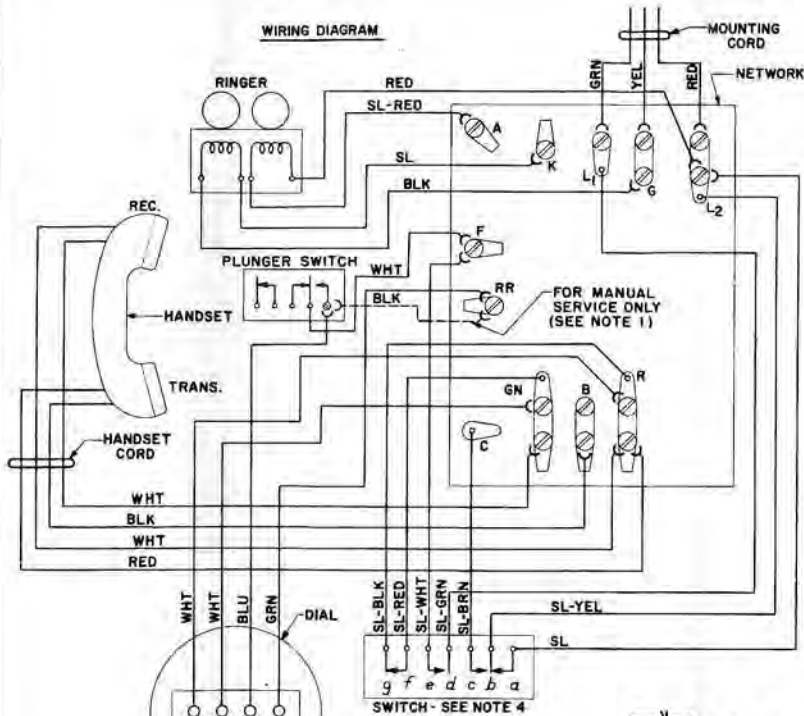


TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 4)

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONNECTIONS AT NETWORK						
	LINE			MTG. CORD			MTG. CORD			RINGER LEADS			
	RING	TIP	GRD.	RED	GRN	YEL	RED	GRN	YEL	RED	BLK	SL	SL-RED
BRIDGED Δ	R	G	Y	R	G	G	L ₂	L ₁	G	L ₂	G	K	A
RING PARTY Δ	R	G	Y	R	G	Y	L ₂	L ₁	G	L ₂	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	L ₂	L ₁	G	L ₂	G	K	A
TIP PARTY DIAL MESSAGE RATE *	R	G	Y	G	R	Y	L ₂	L ₁	G	K	G	B	B
AUTOMATIC TICKETING *	R	G	Y	G	R	Y	L ₂	L ₁	G	B	B	K	G

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

* TRANSFER SLATE SWITCH LEAD FROM (L₂) TO (A) TERMINAL ON NETWORK.

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 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 (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 *gf* BREAKS LAST.

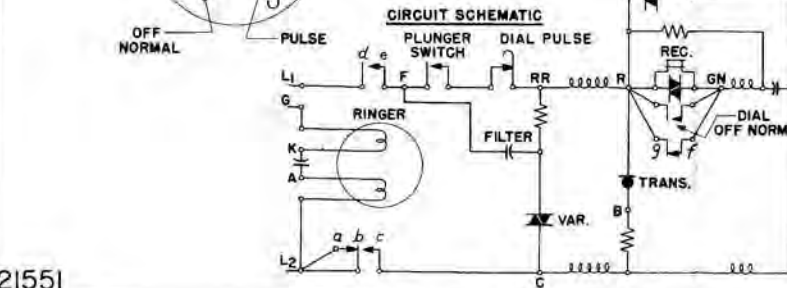


TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	CY.	PTY.	MFD.	CONNECTIONS IN SET	
				LINE	MTG. CORD
HA 1	33 1/3	1	.35	SEE NOTE 5	
HA 2	50	2	.1		5
HA 3	66 2/3	3	.1		5
HA 4	162 2/3	4	—		6
HA 5	25	5	—		6
HB 1	30	1	—		6
HB 2	42	2	.25		5
HB 3	54	3	.1		5
HB 4	66	4	.1		5
HB 5	16	5	—		6
HC 1	20	1	—		6
HC 2	60	2	.1		5
HC 3	30	3	—		6
HC 4	40	4	.25		5
HC 5	50	5	.1		5

NOTES:

- MOUNT THE CAPACITOR FURNISHED WITH RINGER ON THE LEFT SIDE OF THE DIAL BRACKET. CONNECT THE LEADS OF CAPACITOR TO THE "K" AND "G" TERMINALS ON NETWORK.
- CONNECT JUMPER FROM "A" TO "G" ON THE NETWORK.

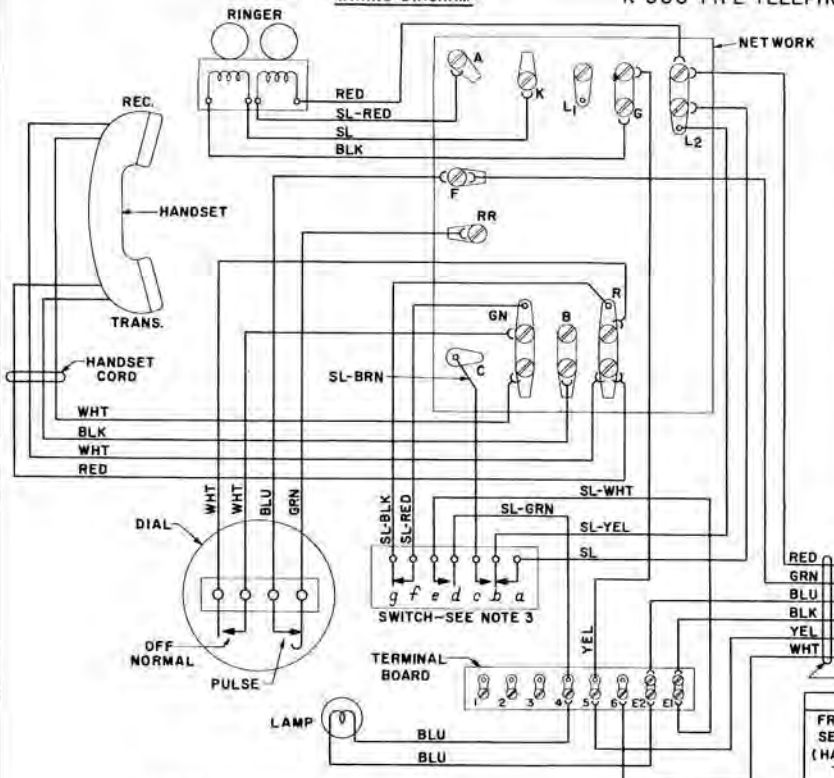
CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONN. IN SET (ALSO SEE TABLE OF RINGERS)		
	RING	TIP	GRD.	RED	GRN	YEL	RED	BLK	SL-RED
BRIDGED	R	G	Y	R	G	G	L ₂	K	
RING PARTY	R	G	Y	R	G	Y	L ₂	K	
TIP PARTY	R	G	Y	G	R	Y	L ₂	K	

* IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

WIRING DIAGRAM

K-500 TYPE TELEPHONE CIRCUIT



CIRCUIT SCHEMATIC

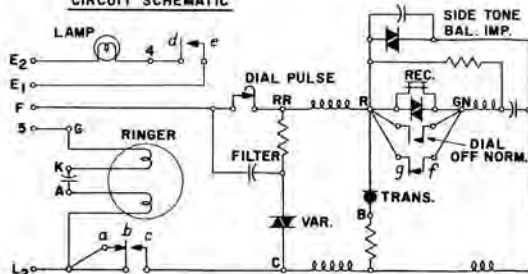


TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 3)

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	SL	SL-RED
BRIDGED Δ	1	2	3	1	2	2	L ₂	F	5*	L ₂	G	K	A
RING PARTY Δ	1	2	3	1	2	3	L ₂	F	5*	L ₂	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	1	2	3	2	1	3	L ₂	F	5*	L ₂	G	K	A
TIP PARTY DIAL MESSAGE RATE **	1	2	3	2	1	3	L ₂	F	5*	K	G	B	B
AUTOMATIC TICKETING **	1	2	3	2	1	3	L ₂	F	5*	B	B	K	G

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

* TERMINAL "5" IS ON TERMINAL BOARD.

** TRANSFER SLATE SWITCH LEAD FROM (L₂) 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 (K) 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 RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.
- 3- WHEN THE HANDSET IS REMOVED CONTACT *gf* BREAKS LAST.
- 4- MOUNT THE CONDENSER FURNISHED ON THE "K" TERMINAL OF THE NETWORK. CONNECT THE LOOSE CONDENSER LEAD TO THE "G" TERMINAL.
- 5- CONNECT JUMPER FROM "A" TO "G" ON THE NETWORK.
- 6- CONNECT 6 OR 8V AC OR DC FOR DIAL LIGHT TO TERMINALS 7 & 8 ON CONNECTING BLOCK.
- 7- CONNECT MOUNTING CORD WHT, BLU AND BLK 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 (G) AND PLATE LEAD TO (B) MUST REMAIN CONNECTED FOR PARTY IDENTIFICATION.

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

TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	CONNECTIONS IN SET	
	CY.	PTY.
HA 1 33 ¹ / ₃	1	SEE NOTE 4
HA 2 50	2	4
HA 3 66 ² / ₃	3	4
HA 4 16 ² / ₃	4	5
HA 5 25	5	5
HB 1 30	1	5
HB 2 42	2	4
HB 3 54	3	4
HB 4 66	4	4
HB 5 16	5	5
HC 1 20	1	5
HC 2 60	2	4
HC 3 30	3	5
HC 4 40	4	4
HC 5 50	5	4

CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

RINGING SERVICE	CONNECTIONS AT CONNECTING BLOCK						CONN. IN SET (ALSO SEE TABLE OF RINGERS)	
	LINE			MTG. CORD			RINGER LEADS	
	RING	TIP	GRD	RED	GRN	YEL	RED	BLACK
BRIDGED	1	2	3	1	2	2	L ₂	K
RING PARTY	1	2	3	1	2	3	L ₂	K
TIP PARTY	1	2	3	2	1	3	L ₂	K

↑ IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

K-501 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM

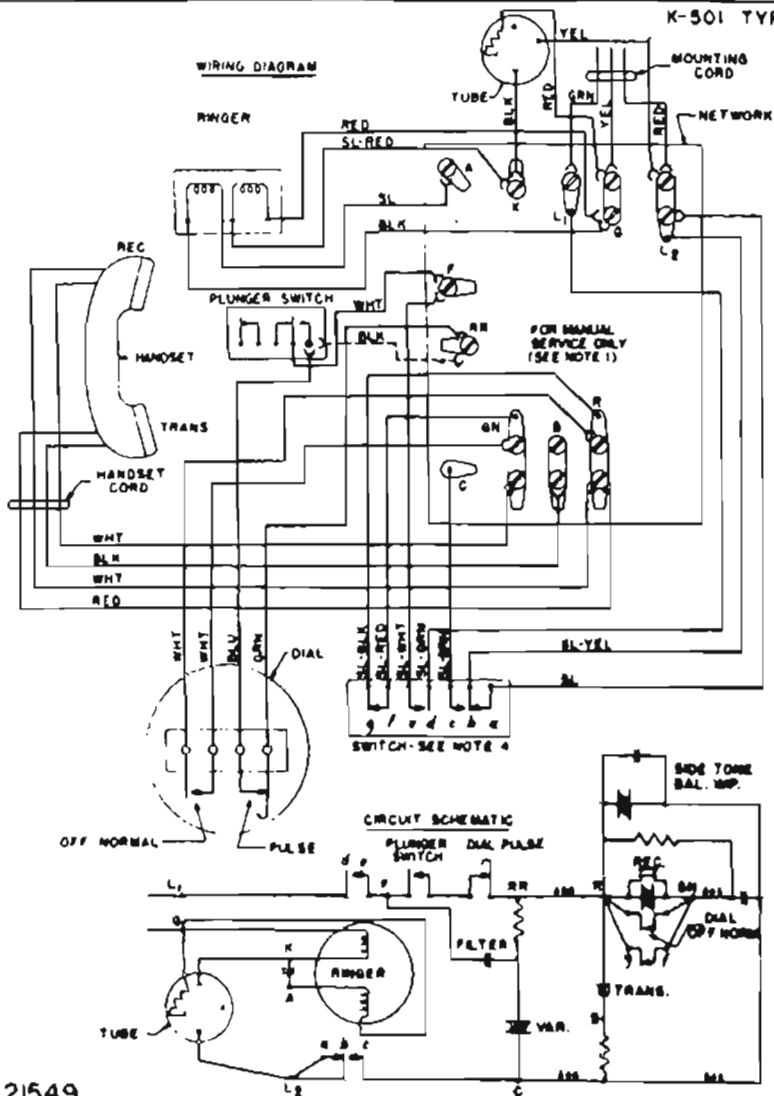


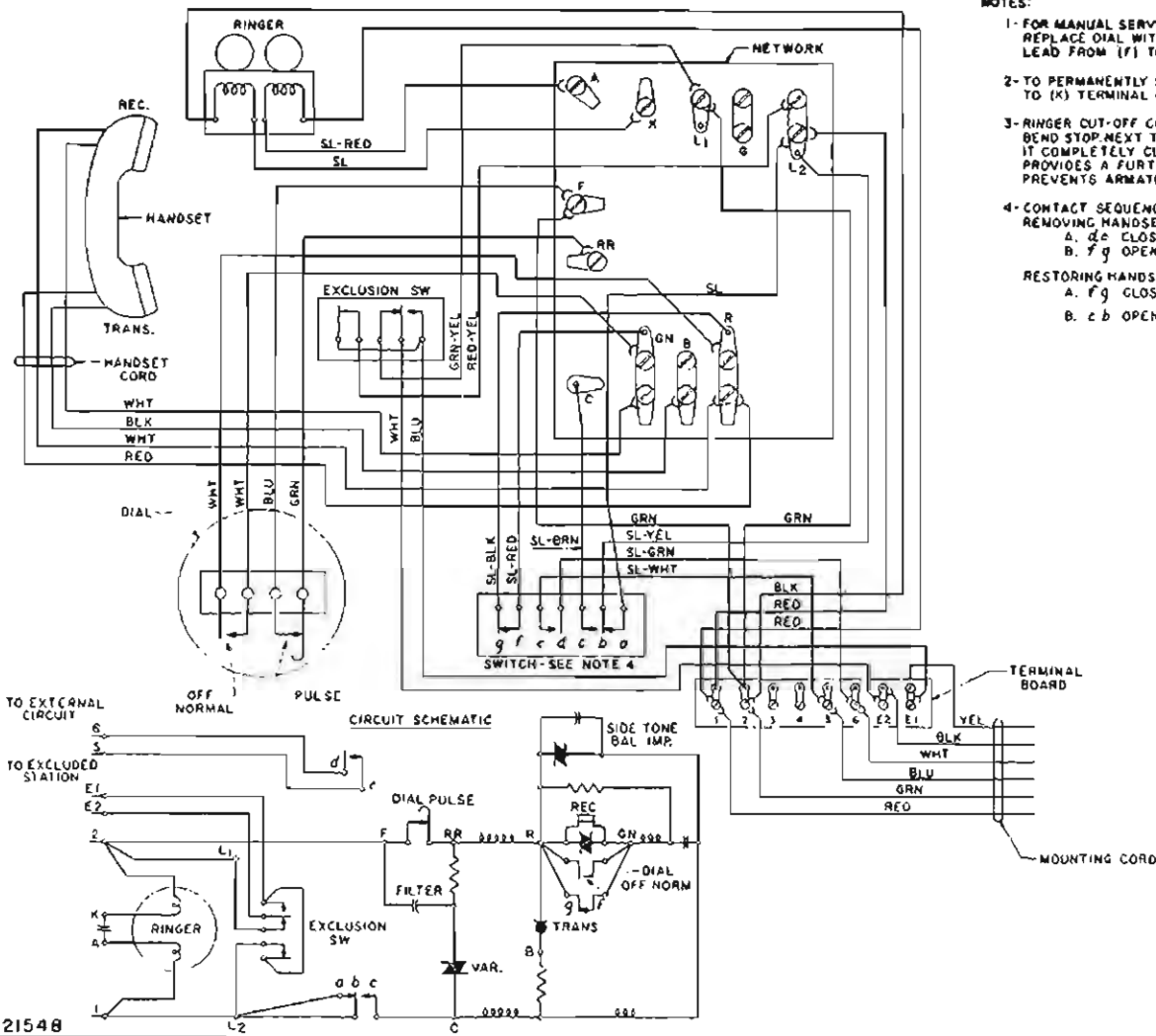
TABLE OF CONNECTIONS (POLARIZED RINGING)

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK								CONNECTIONS AT NETWORK							
	LINE				MTC CORD				TUBE LEADS				HYPER LEADS			
	RR	TIP	GRD	RED	GRN	YEL	YEL	BLK	RED	RED	BLK	H	RED	BLK	H	RED
(-) RING	R	G	Y	R	G	Y	L ₂	H	G	G	A	K				
(+) RING	R	G	Y	R	G	Y	L ₂	K	L ₂	L ₂	L ₂	A	K			
(-) TIP	R	G	Y	G	R	Y	L ₂	K	G	G	A	K				
(+) TIP	R	G	Y	G	R	Y	L ₂	K	L ₂	L ₂	L ₂	A	K			

NOTES:

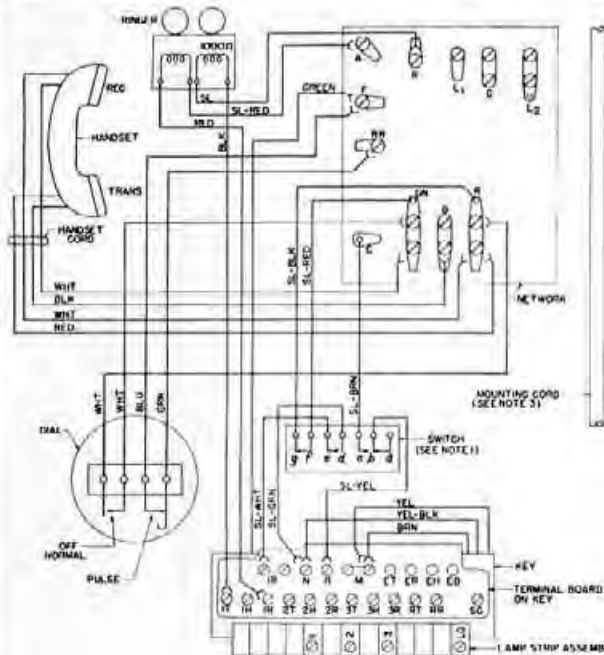
- FOR MANUAL SERVICE, REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND CONNECT PLUNGER SWITCH TO (RR) TERMINAL ON NETWORK WITH BLK LEAD AS SHOWN.
- TO PERMANENTLY SILENCE RINGER: FOR RING PARTY, CONNECT THE YELLOW MOUNTING CORD CONDUCTOR TO THE (R) TERMINAL OF THE CONNECTING BLOCK. FOR TIP PARTY CONNECT THE 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 c CLOSURES BEFORE c b
B. f g OPENS
RESTORING HANDSET
A. f g CLOSURES
B. c b OPENS BEFORE d e



NOTES

- 1-CONTACT NEARBY REMOVING HANDSET
A-DECLOSES BEFORE RA
B-P OPENS
RESUMING HANDSET
A-F CLOSURE
B-C OPENS BEFORE DC
- 2-FOR MANUAL SERVICE, REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER GREEN KEY LEAD FROM (F) TERMINAL TO (HR) TERMINAL ON NETWORK
- 3-SEE TABLE FOR CONNECTIONS
- 4-RINGER CUT-OFF CONTROL BY CUSTOMER BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE BRN OF THE RING FRAME. THIS PROVIDES A FURTHER POSITION ON VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT
- 5-KEY FEATURE DESIGNATIONS
H=HELD
P=PICK-UP
S=SIGNAL
M=CONVERTIBLE, PICK UP OR SIGNAL
DD=CONDUCTORS ARE TAPED AND STORED IN TELEPHONE
- 7-PROVIDE "M" WIRING WHEN BUZZER IS TO OPERATE ON DC FEELS AS, AND PROVIDE "N" WIRING WHEN THE BUZZER IS TO OPERATE ON DC

TABLE A
UNIVERSAL KIAI SYSTEM CONVERSION-STATION BUSY SIGNAL CONNECTIONS

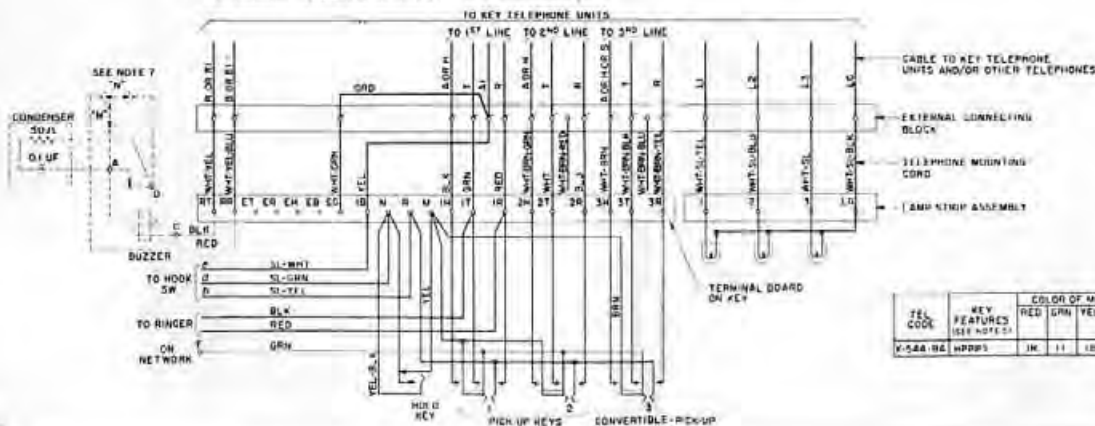
KEY TEL SYS	HOLD KEY AND SWITCH LEADS			
	SL-WHT	SL-GRN	SL-YEL	TEL
NO STATION BUSY LAMP	UNIV	IB	N	R
	KIAI	IB	N	M

TABLE B
RINGER CONNECTIONS

	WHEN USED AS BRIDGED NUMBER ON ANT LINE	RINGER OR BUZZER LEAD			
		SL-RED	SL	BLK	RED
SET RINGER OR BUZZER NOT TO BE CUT OFF IN SET	WITH COIL	B	K	T	M
	WITHOUT COIL	S	A	BT	DD

TABLE C
CONVERT FROM PICK-UP TO NON-LOCKING OR VICE VERSA AND CHANGE LEADS AS FOLLOWS

BUTTON SETS	NO OF PICK-UP KEYS	NO OF SIG KEYS CONVERTED FROM BU KEYS	NO OF PRIVATE AND INTERCOMMUNICATING LINES WITH COMMON SIG KEY	KEY LEADS			
				TEL-GRN	BRN	SL-GRN	BLK-GRN
1	1			M			
2	2			SC			

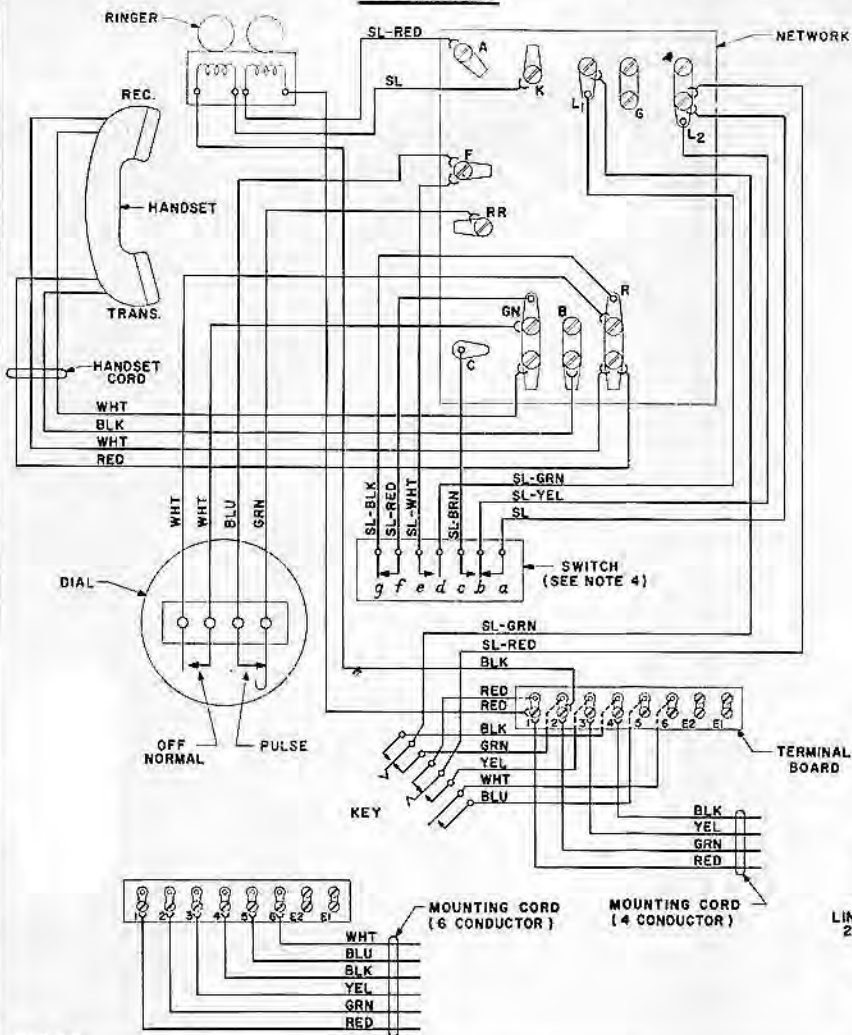


COLOR OF MOUNTING CORD CONDUCTORS TO TERMINALS ON KEY AND LAMP TERMINAL STRIP

TEL CODE	KEY FEATURES (SEE NOTE 2)	RED	GRN	YEL	BLK	BLU	WHT	WHT-GRN	WHT-BRN	WHT-BLU	WHT-RED	WHT-YEL	WHT-GRN	WHT-BRN	WHT-BLU	WHT-RED	WHT-YEL	GRN	SL-GRN	SL	BLK	TEL	BLU	
V-54	WA	WR	PS																					

K-510 TYPE TELEPHONE CIRCUIT

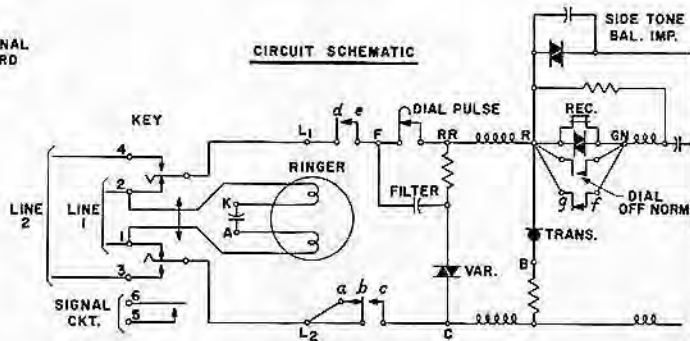
WIRING DIAGRAM



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 (K) 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. WHEN THE HANDSET IS REMOVED FROM CRADLE CONTACT g BREAKS LAST.

CIRCUIT SCHEMATIC



PHONE CIRCUIT

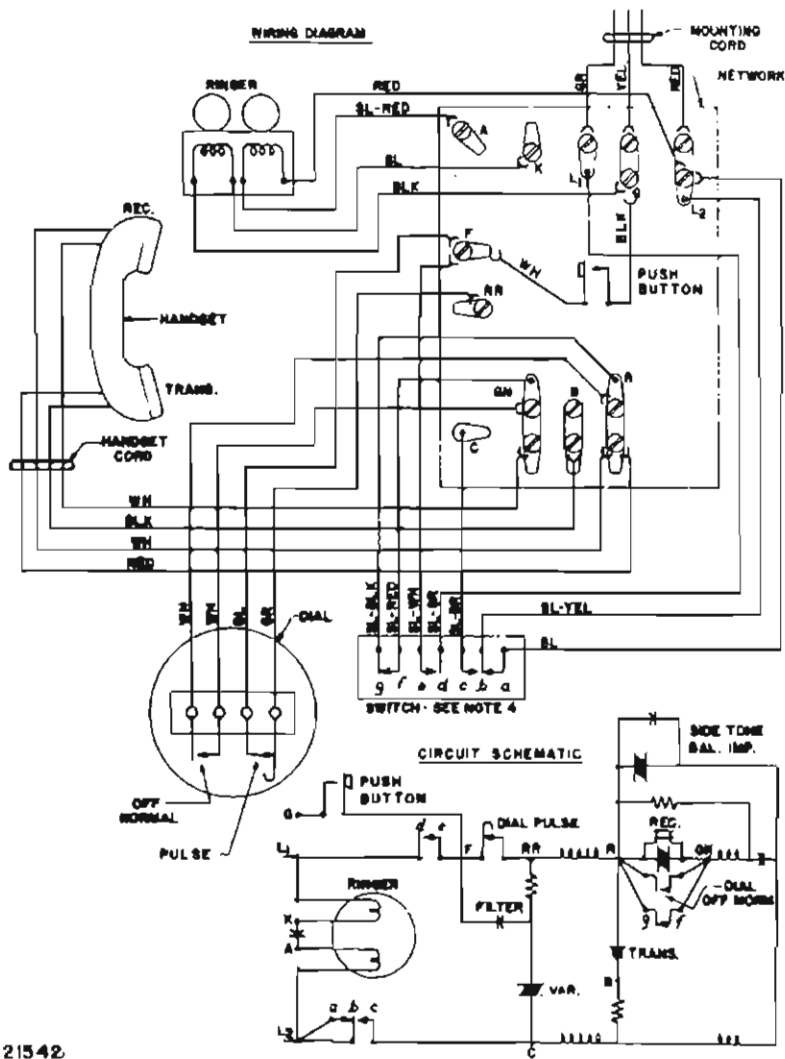


TABLE OF CONNECTIONS (BIASED RINGERS) (SEE NOTES 1 TO 4)

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	L2	L1	0	L2	L1	K	A
RING PARTY Δ	R	G	Y	R	G	Y	L2	L1	0	L2	0	K	A
TIP PARTY Δ	R	G	Y	0	R	Y	L2	L1	0	L2	0	K	A
EXCEPT DIAL MESSAGE RATE	R	G	Y	0	R	Y	L2	L1	0	L2	0	K	A
TIP PARTY DIAL MESSAGE RATE	R	G	Y	0	R	Y	L2	L1	0	X	0	0	0
Δ AUTOMATIC TICKETING	R	G	Y	0	R	Y	L2	L1	0	0	0	K	0

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

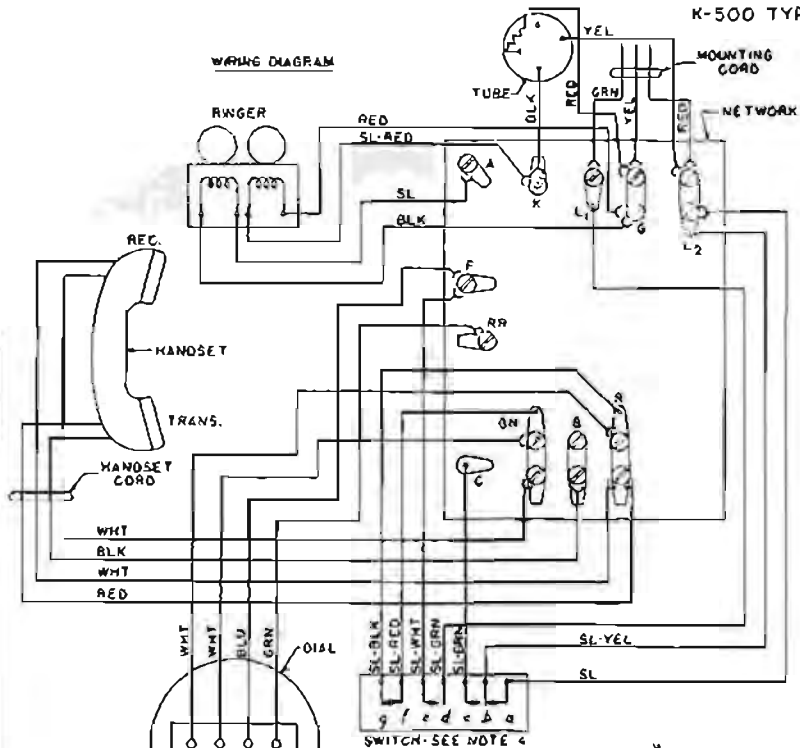
◆ TRANSFER SLATE SWITCH LEAD FROM (L₂) TO (A) TERMINAL ON NETWORK.

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 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 (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

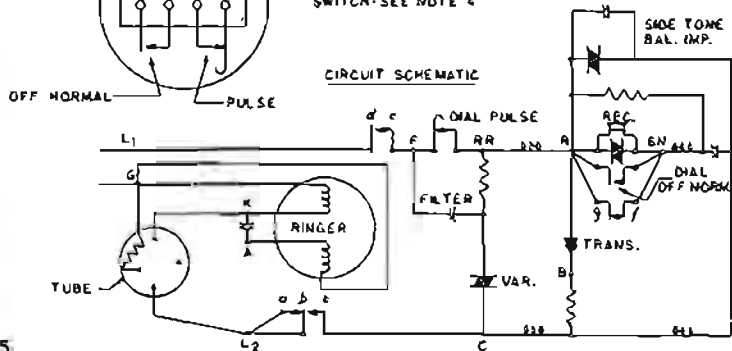


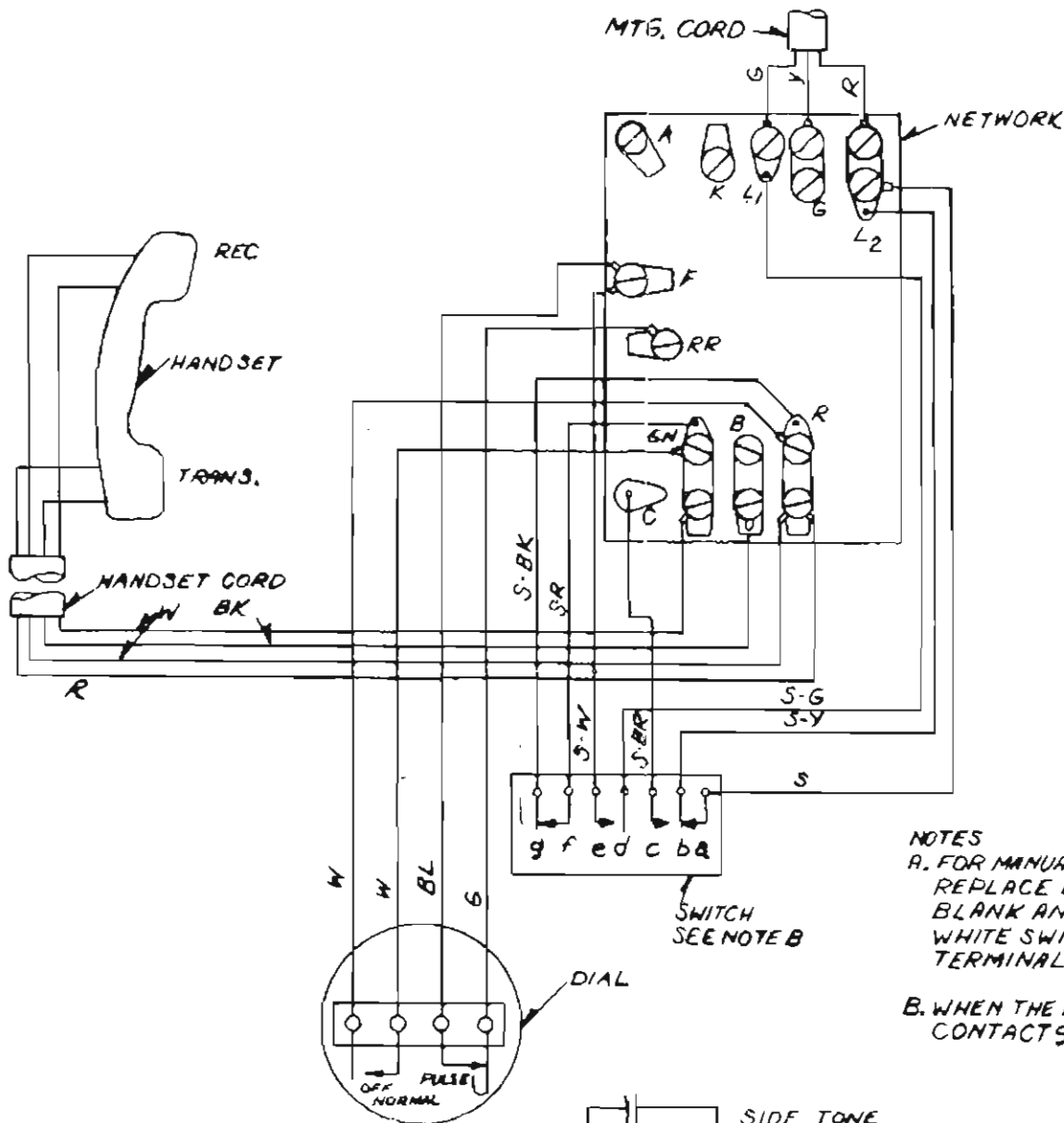
TABLE OF CONNECTIONS (POLARIZED RINGS)

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	X	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 (A) 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.

WIRING DIAGRAM (591BW)

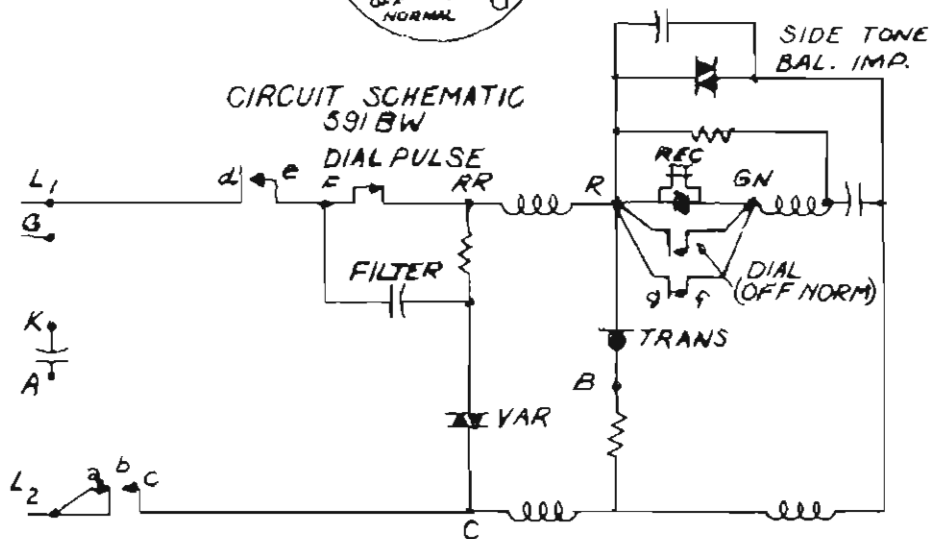


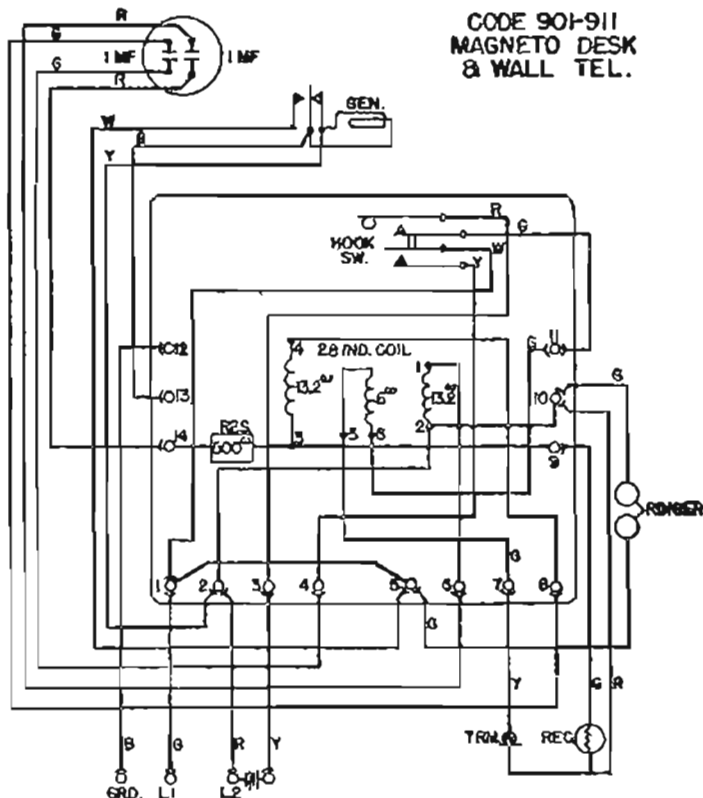
NOTES

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 g f BREAKS LAST.

CIRCUIT SCHEMATIC
 591BW



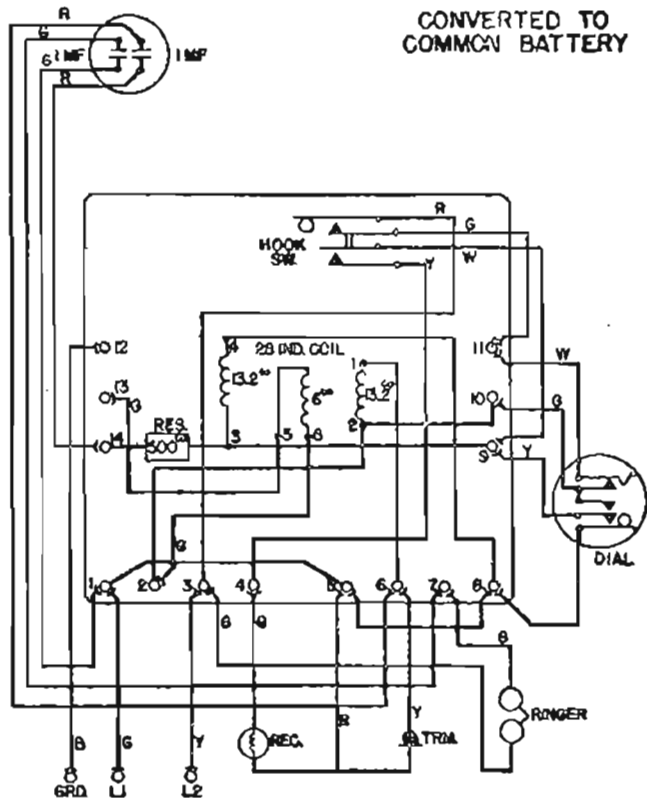


901 TELEPHONE

FOR METALLIC RINGING, CONNECT RINGER TO 8 AND 10.
 FOR GROUNDED RINGING, CONNECT RINGER TO 8 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

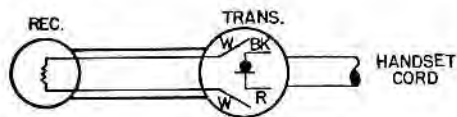
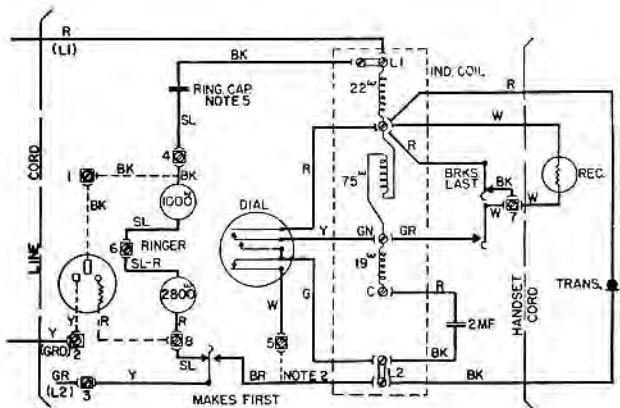
SAME AS ABOVE EXCEPT HOOKSWITCH IS WIRED GREEN LEAD TO 1, WHITE LEAD TO 11.
 LINE CORD, YELLOW CONNECTED TO 4 (FROM 3).
 CONDENSER, GREEN CONNECTED TO 3 (FROM 4).



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 13; STRAP 6 & 8.

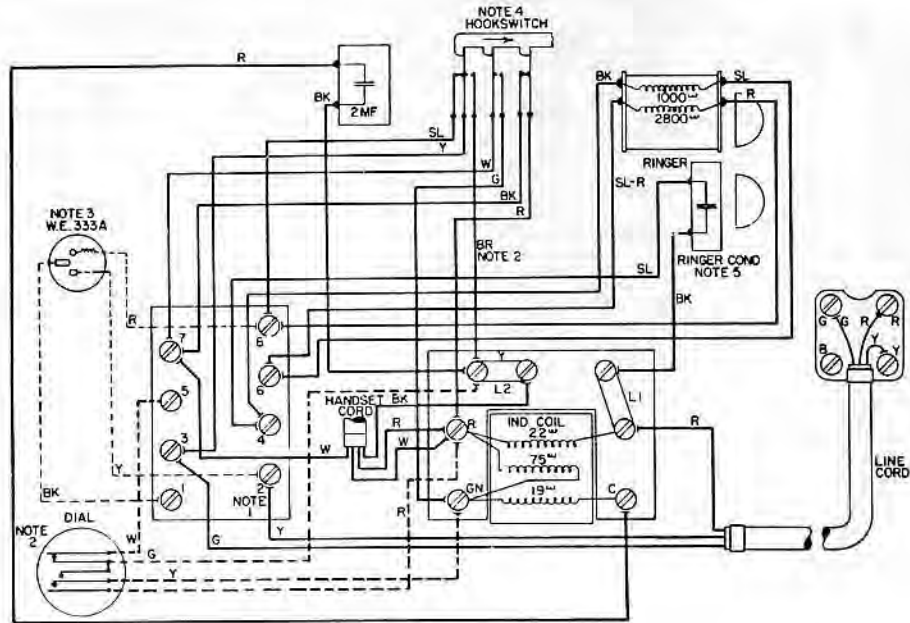
FOR METALLIC RINGING, CONNECT RINGER TO 7 & 8;
 FOR GROUNDED RINGING, CONNECT RINGER TO 7 & 12.
 WHEN DIAL IS USED, CONNECT HOOKSWITCH GREEN LEAD TO 11.
 WHEN DIAL IS NOT USED, CONNECT HOOKSWITCH GREEN LEAD TO 10.
 WITH 911 TELEPHONE: CONNECT HOOKSWITCH WHITE LEAD TO 6,
 HANDSET GREEN LEAD TO 9, HANDSET YELLOW LEAD TO 4.



SCHEMATIC

NOTES:

1. Connect Red Ringer Lead to Term. 6 for *Metallic Ringing*, or to Term. 3 for *Grounded Ringing*.
2. When Dial is used, Connect Brown Hookswitch Lead to 5 on Terminal Panel and Dial Leads as shown for A.E. Co. Dial.
For W.E. Type 7 Dial, Connect Dial Leads; White to Term. 5, Green to L2 on Ind. Coil, Yellow to GN on Ind. Coil, and Red to R on Ind. Coil.
3. Connect Gas Tube or Neon Lamp when used to Term. 8 & 4; Connect Slate Lead from Ringer Cond. to Term. 8; Connect Red Lead from Ringer to Term. 3.
Connect 333A Tube as shown and Move Black Ringer Lead from Term. 4 to Term. 8 for +



WIRING DIAGRAM

4. For *Hookswitch Latch*.
Move Red Hookswitch Lead from Ind. Coil R to Ind. Coil C.
Move Black Hookswitch Lead from Term. 7 to Ind. Coil C.
Move Black Handset Cord from Ind. Coil L2 to Term. 7.
Move Green Hookswitch Lead from Ind. Coil to Ind. Coil L2.
Move White Handset Cord from Term. 7 to Ind. Coil GN.

5. RINGER CONDENSERS

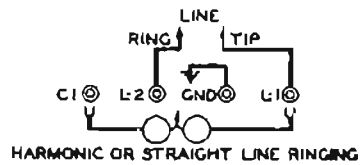
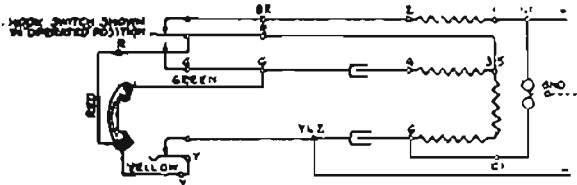
Freq.	Condenser
Straight Line.....	70G 0.5MF
16	} 70A 1.0MF
16 2/3	
20	
25.....	70G 0.5MF
30	} 70C 0.25MF
33 1/3	
40	
42	70D 0.15MF
50	} 70E 0.10MF
54	
60	
66	} 70F 0.05MF
66 2/3	

TRIAD CIRCUIT

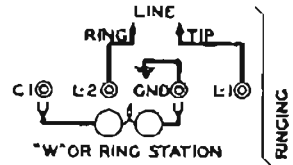
COMMON BATTERY D. S. BOX

21098

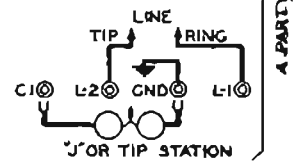
SCHEMATIC



HARMONIC OR STRAIGHT LINE RINGING

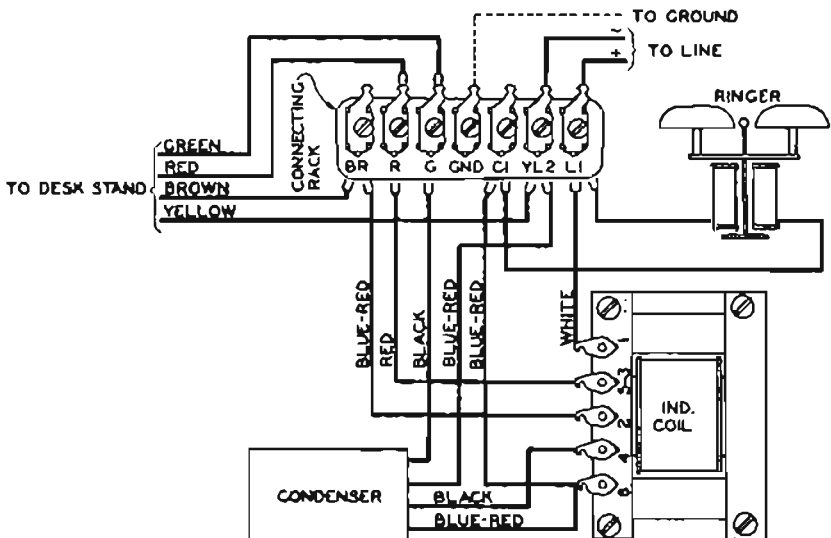


"W" OR RING STATION



"J" OR TIP STATION

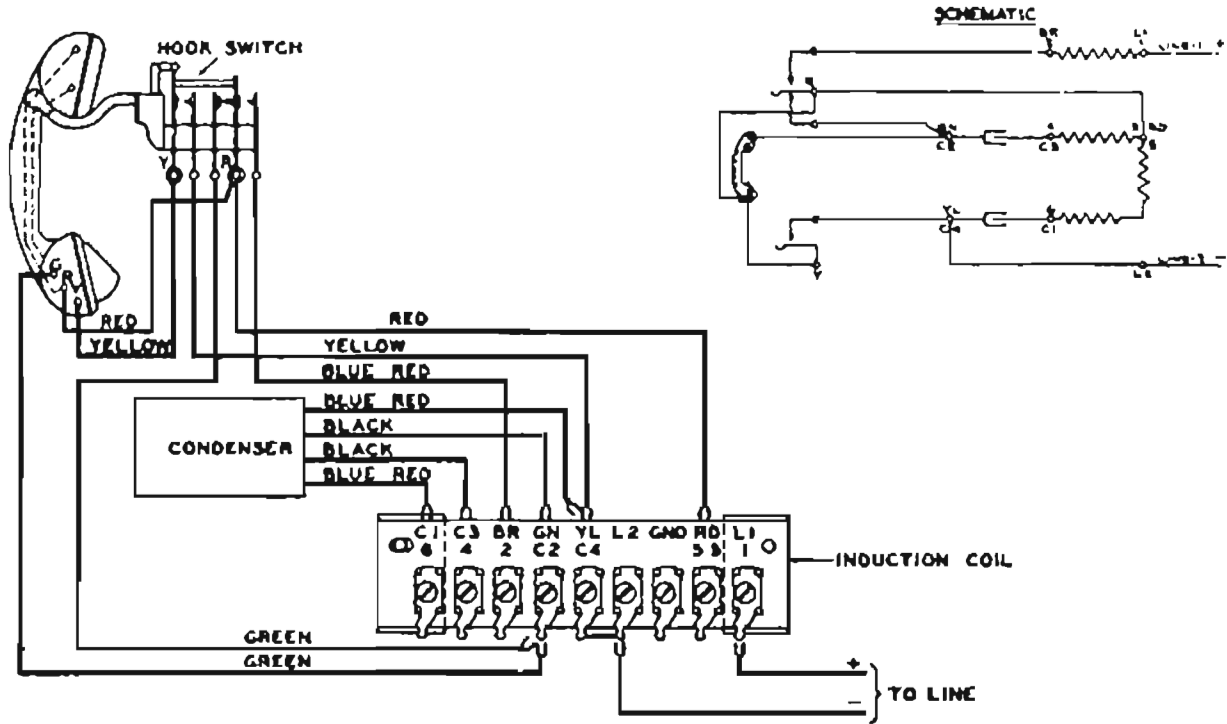
A PARTY RINGING



21098

COMM. BATT. WALL TELEPHONE CKT. WITH HANDSET

21071



21071

MAGNETO MASTERPHONE CIRCUIT

(SIMPLIFIED WIRING)

21063

SCHEMATIC

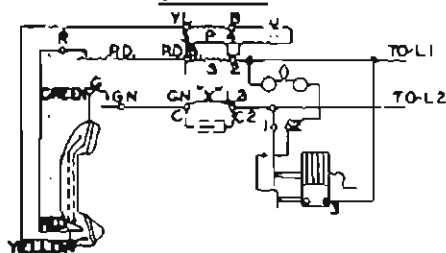
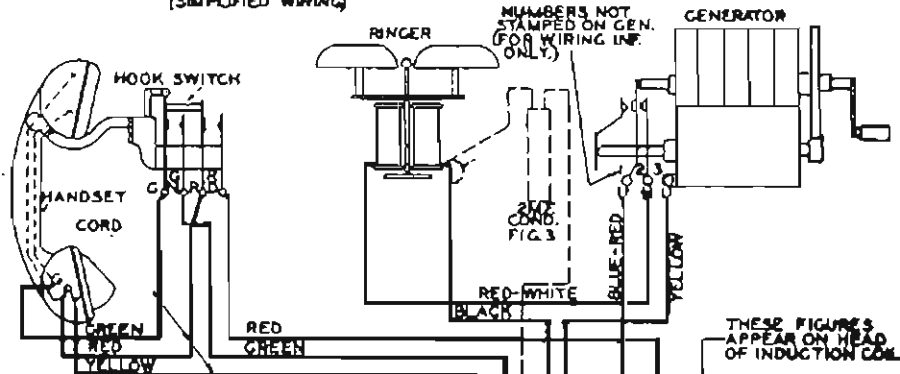


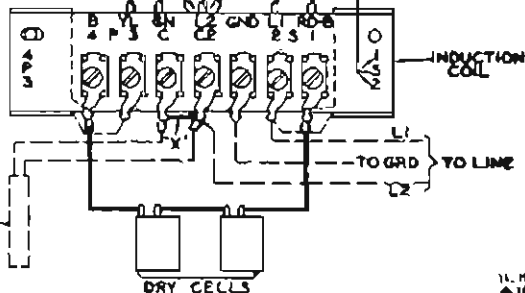
FIG. 2
WHEN CONDENSER IN RECEIVER AND RINGER CIRCUIT, OR FIG. 2 IS SPECIFIED, REMOVE STRAP "X", CONNECT CONDENSER AS SHOWN AND CONNECT WIRE "Y" TO BINDING POST "GN" INSTEAD OF "L2".

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.

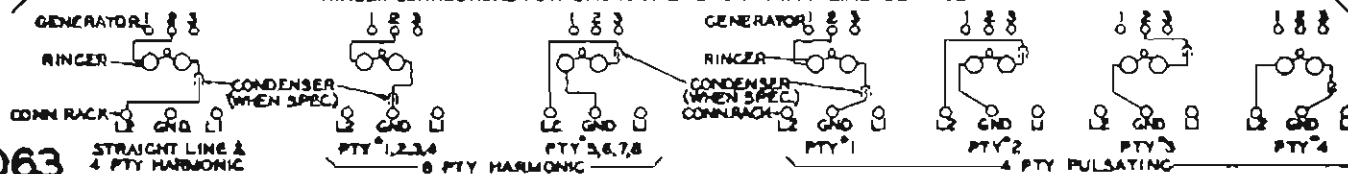


NOTE
ALL WIRING IS FLEXIBLE.



11-19-24
4-18-24

RINGER CONNECTIONS FOR STRAIGHT LINE OR PARTY LINE SERVICE

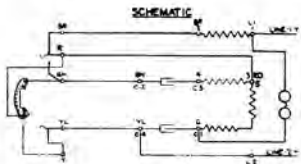
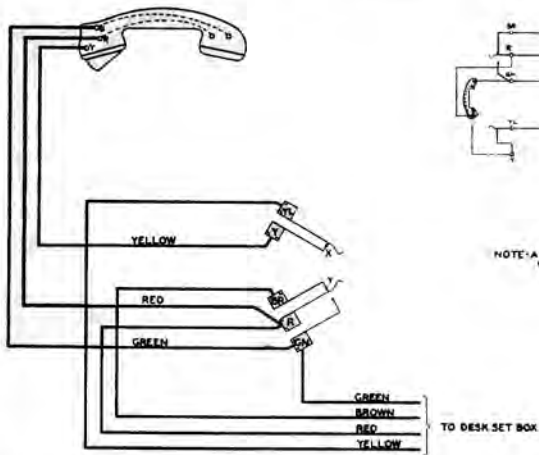


21063

COMM. BATT. MASTERPHONE CKT.

WITH HANDSET

21072



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

21072

RESTORED BY KELLOGG MIKE

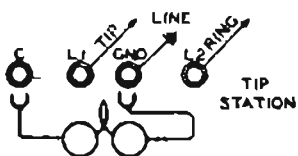
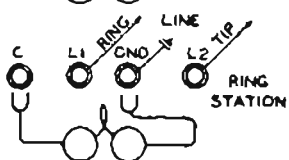
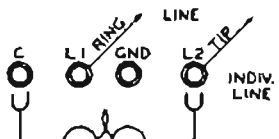
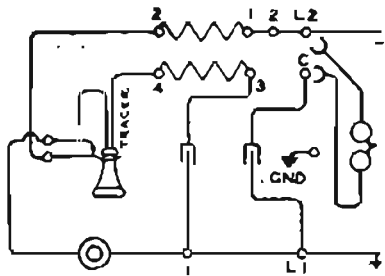
2 11 11
4 26 32
P.C.

4.27.1936

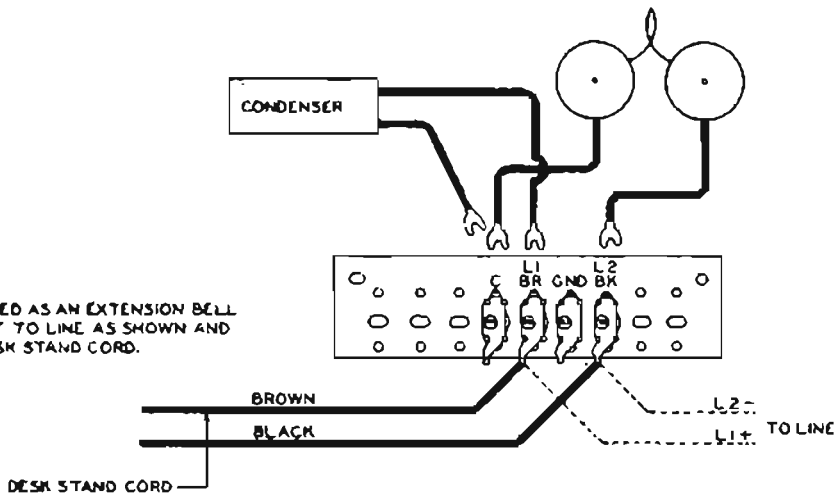
COMMON BATT. DESK SET BOX CKT.

2-CONDUCTOR
SIMPLIFIED WIRING

21059



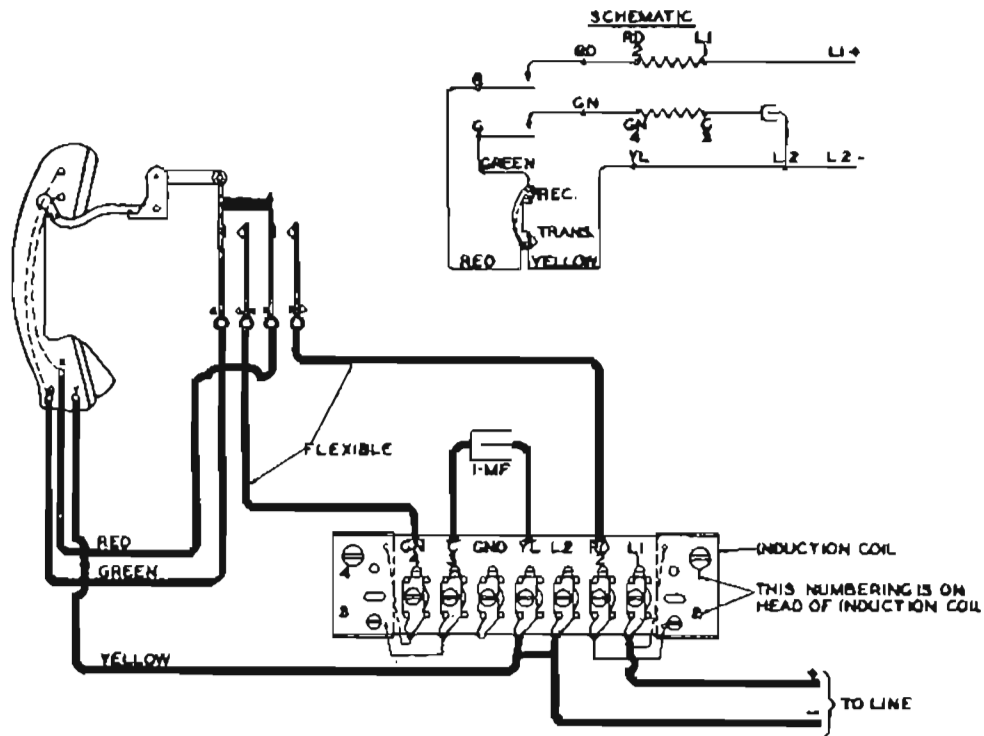
NOTE -
WHEN USED AS AN EXTENSION BELL
CONNECT TO LINE AS SHOWN AND
OMIT DESK STAND CORD.



21059

COMMON BATT. EXTENSION SET CKT. WITH HANDSET

21058



21058

FIG.3 NO 97, 97-A

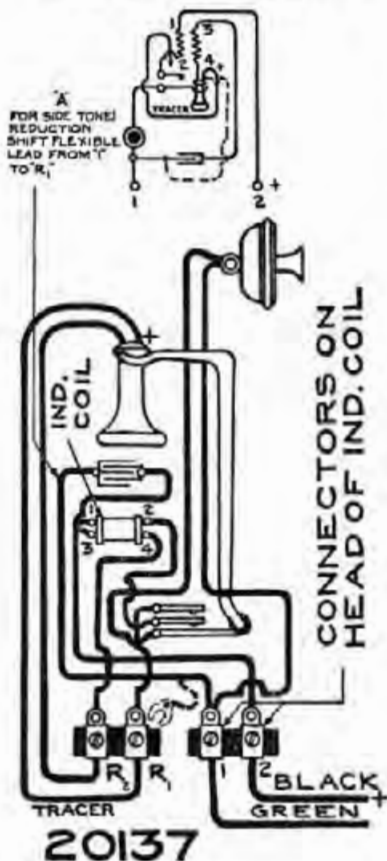
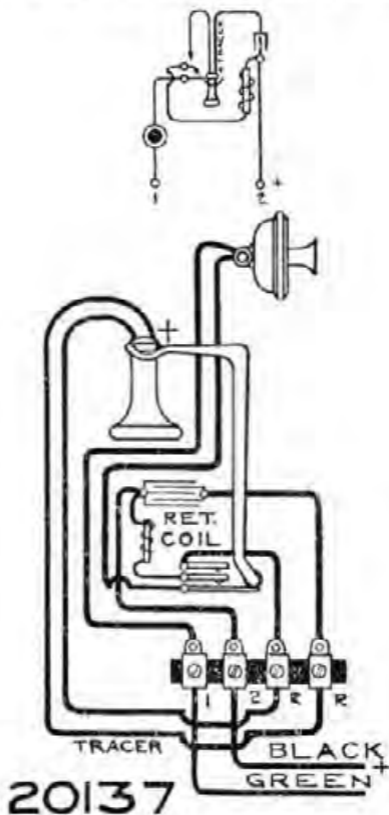
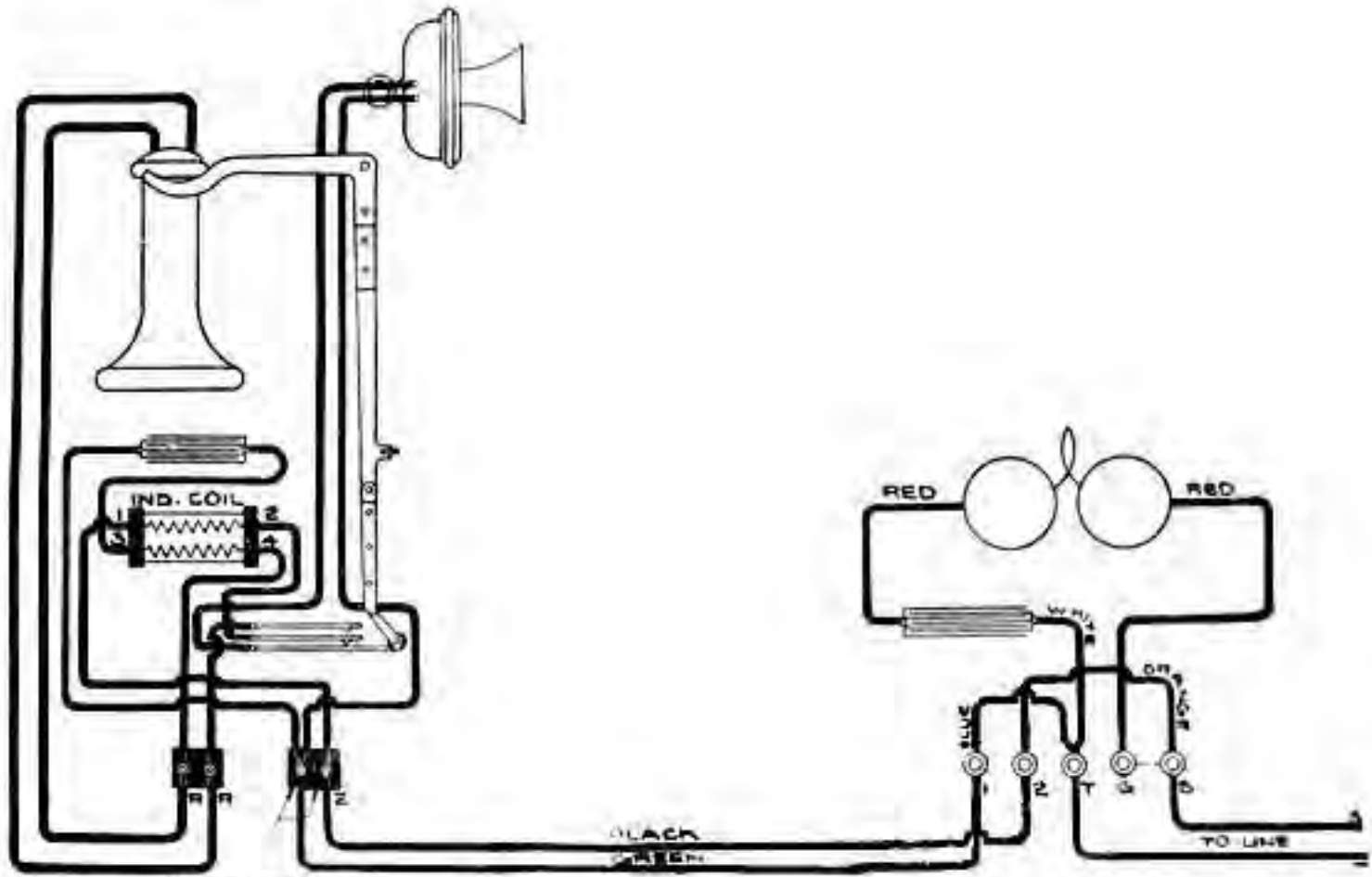
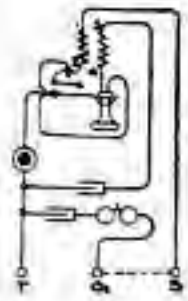


FIG. 2. NO. 39,86,53



WIRING OF COMM. BATT. DESK SET IND. COIL



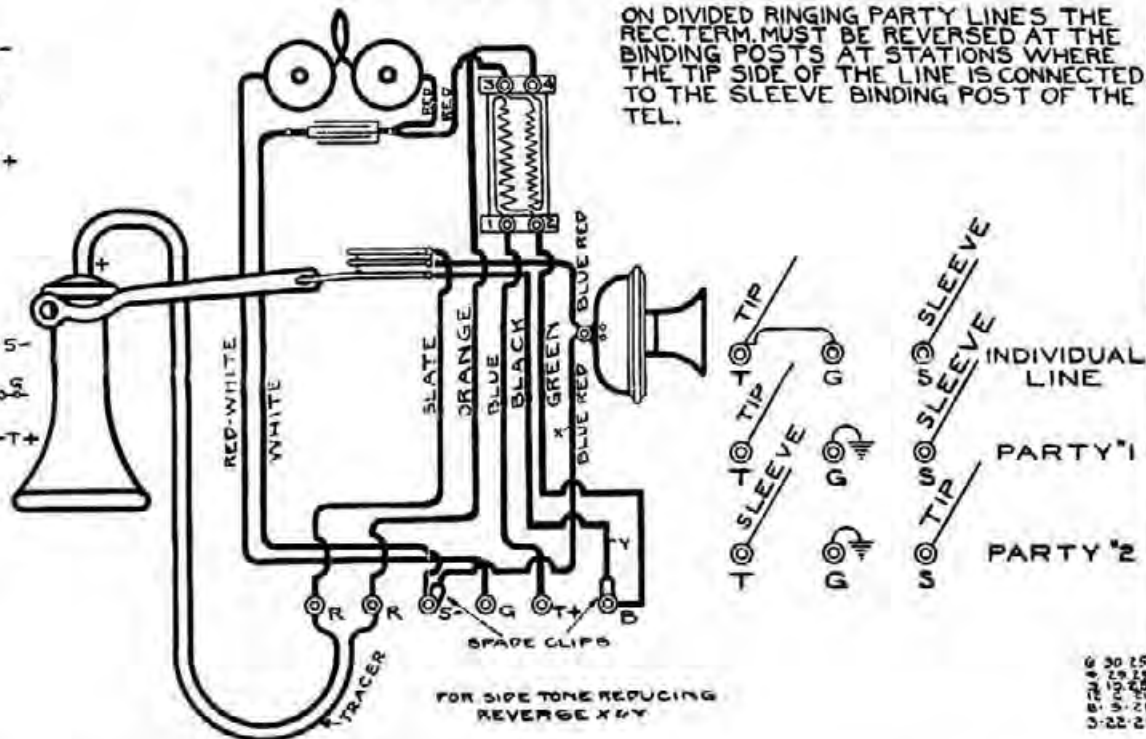
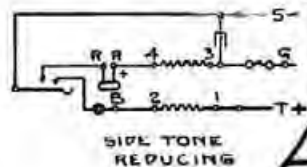
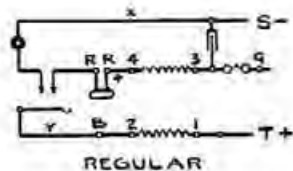
CONNECTORS ON
HEAD OF IND. COIL

WIRING OF COMM. BATT. HOTEL SET

IND. COIL

SIDE TONE REDUCING

14478



14478

6 30 25
5 28 23
4 26 21
3 24 17
2 22 13
1 20 9

W.J.R.
A.D.

Kellogg Switchboard & Supply Co.

INSPECTED _____

INSPECTED BY _____

CODE NO. _____

Kellogg Switchboard & Supply Co.

INSPECTED _____

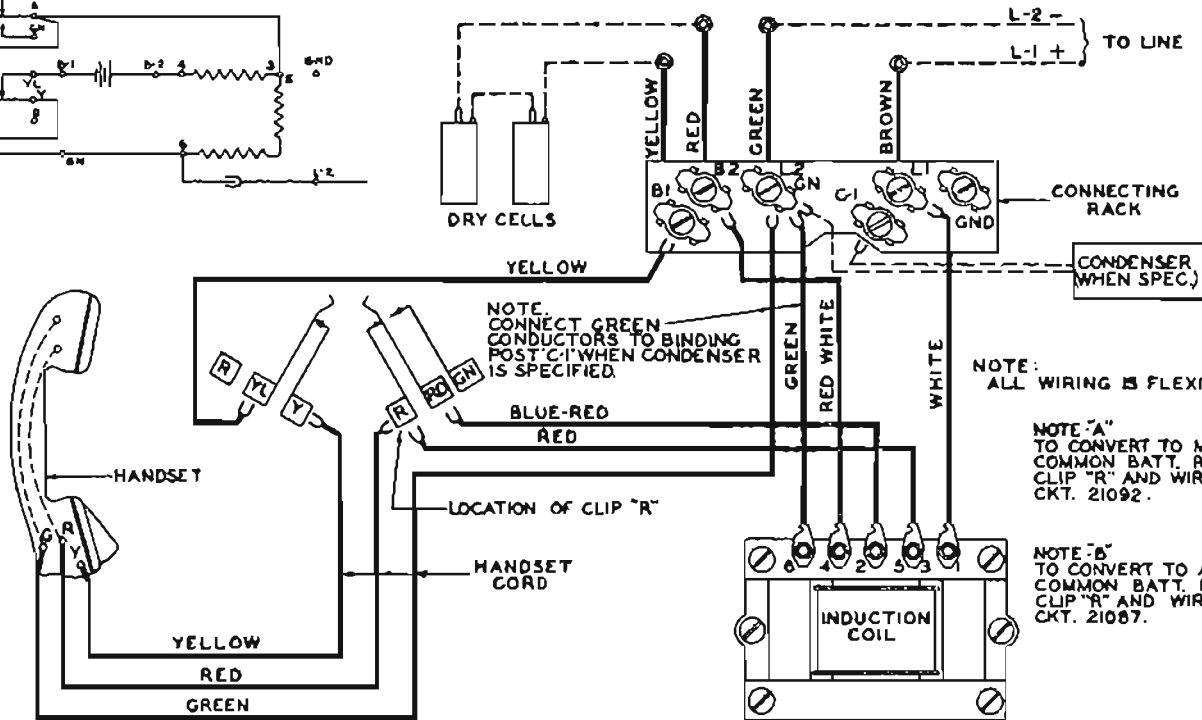
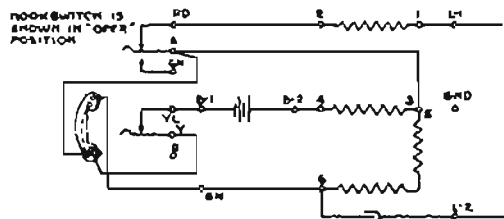
INSPECTED BY _____

CODE NO. _____

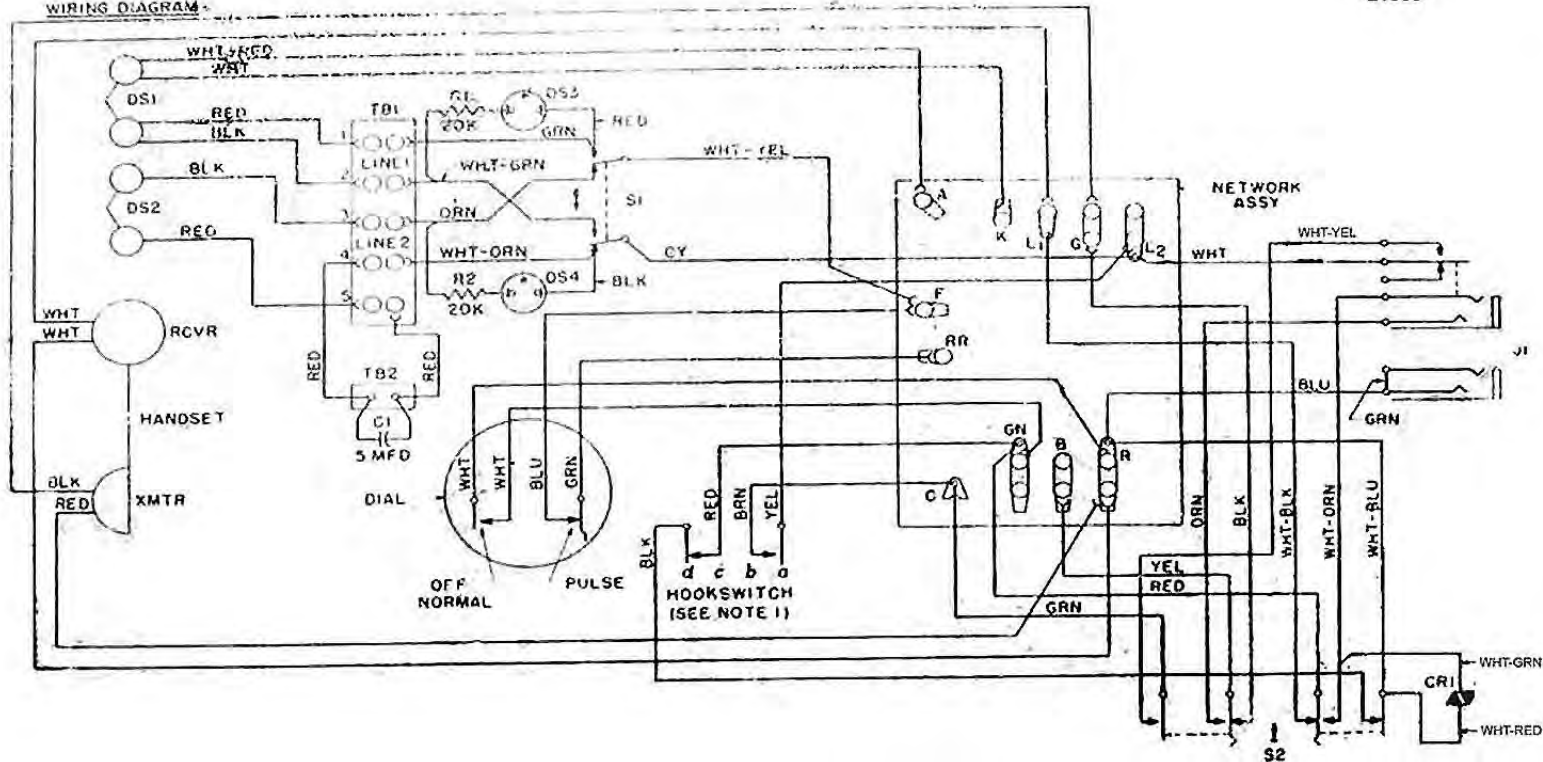
TRIAD CIRCUIT

LOCAL BATTERY UNIT TYPE MASTERPHONE

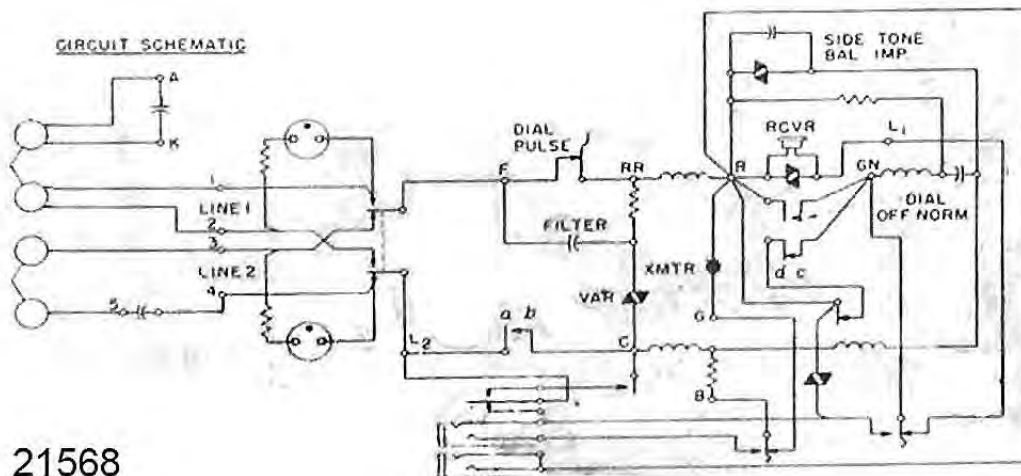
SCHEMATIC



WIRING DIAGRAM



CIRCUIT SCHEMATIC



NOTES.

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

TAKEN FROM A 81150 TEL SET
SET DATED 3/61

FIG. 1.

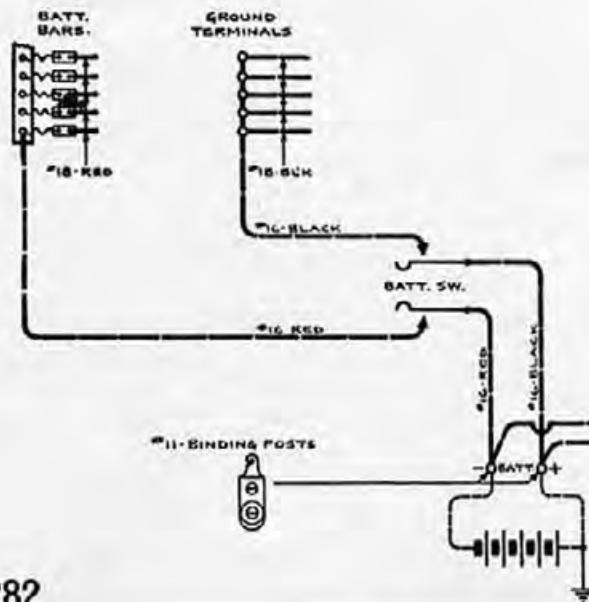
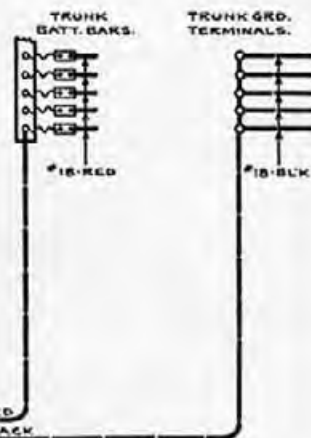


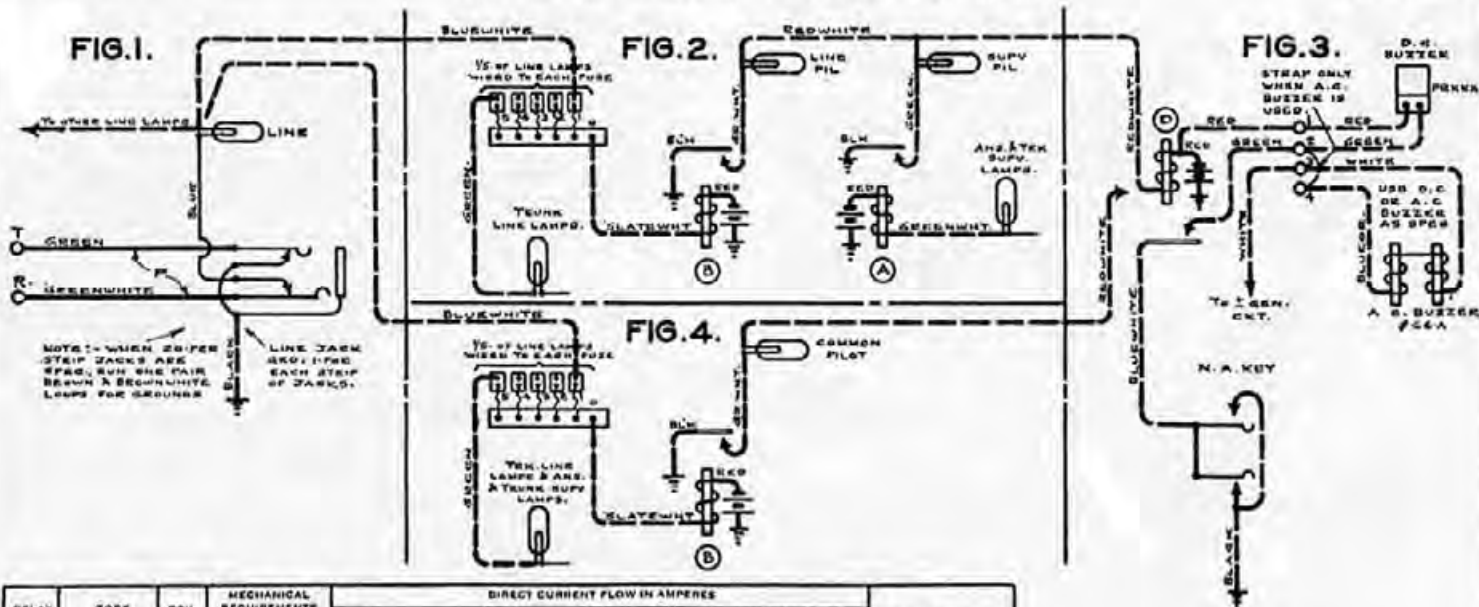
FIG. 2.

FIG. 3.
GROUNDING CIRCUIT.

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 SOON	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE			
	FIG. # 2.														
A & B	2-43-3-2A	7.47"		.018				.032	.010		.030	.012			
	FIG. # 3														
D	2-43-3-2A	7.47"		.018				.032	.010		.030	.012			
	FIG. # 4														
B	2-43-3-2A	7.47"		.018				.032	.010		.030	.012			

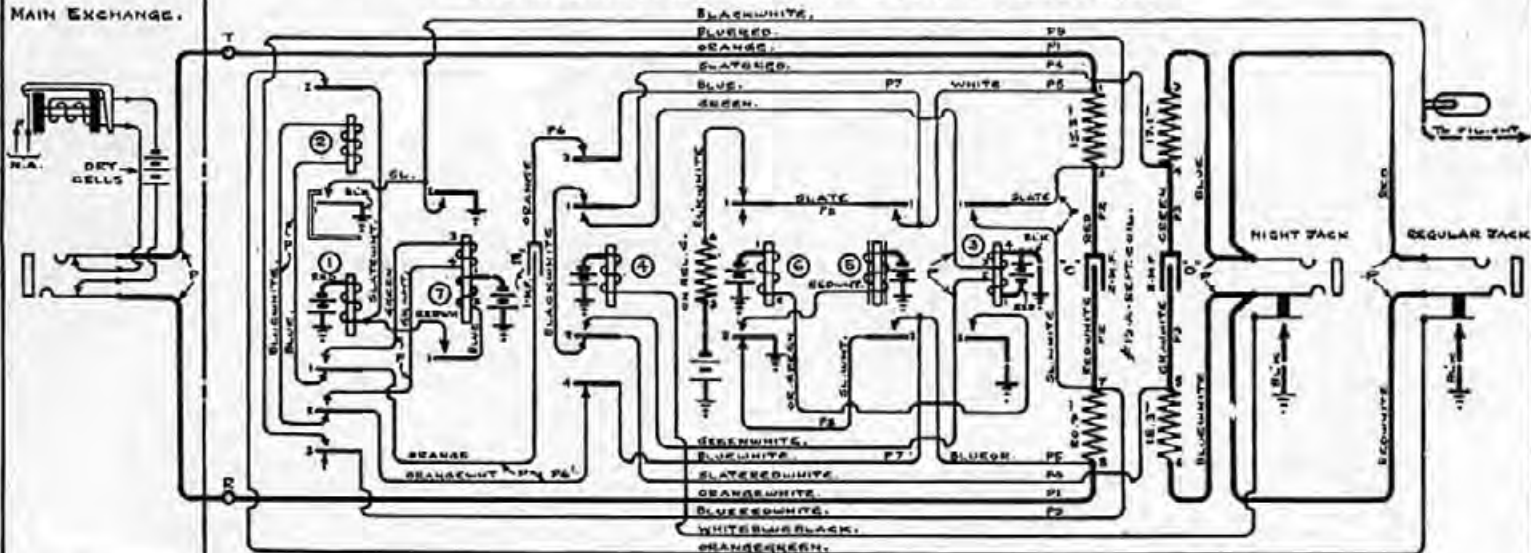
35124

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 SOAR	OPERATE	NON-OPERATE	RELEASE	OPERATE	NON-OPERATE	RELEASE				
1	2042-C-D4	3000	20-00	.020			.012	.004		.010	.005					
2	2061-S-FU	1000					.012	.004		.010	.005					
3	2037-T-C	1000		.020	PERM	.004	.014	.003		.010	.005					
4	2085-S-W	1000	15-0	.020			.014			.010						
5	2057-J-BU	1000		.010			.012	.004		.010	.005					
6	2002-C-00	1000	20-0	.020	1/2		.014			.012						
7	2056-T-F	1000		.010			.010	.002		.014	.007					

NOTE:-
BATTERY WIRES ON RELAYS 3-4-5-6-7 AROUND
WIRES ON RELAYS 3 & 6 A GROUND WIRE ON
NIGHT JACK ARE NOT WIRED THRU BATTERY
SWITCH.



TERM. END OF RELAYS
3-4 AND 7

35116

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

32571

FIG. 2.

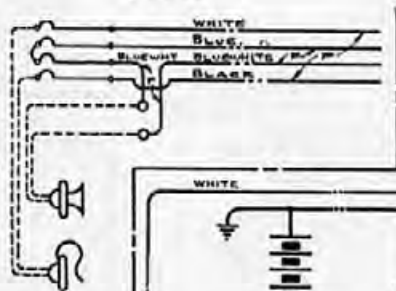


FIG. I.

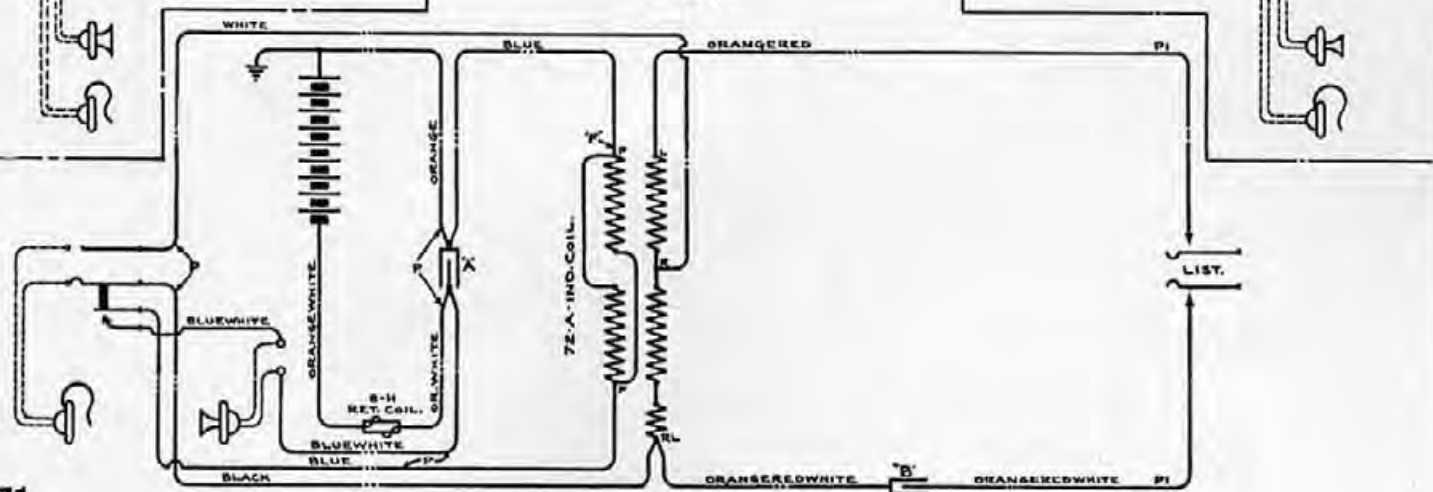
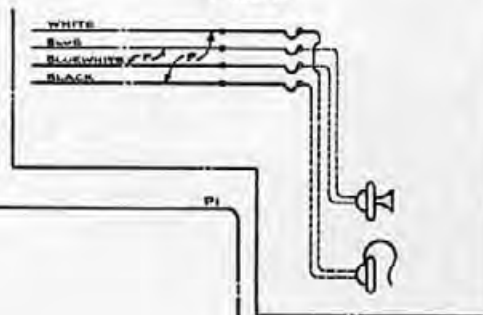


FIG. 3



32571

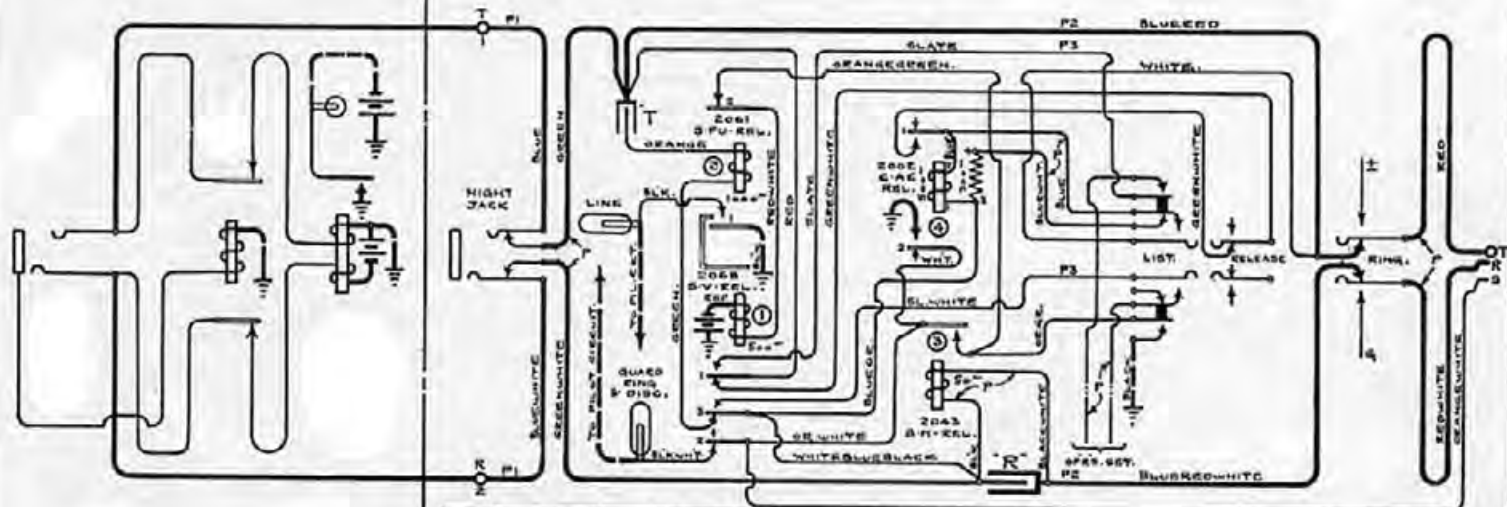
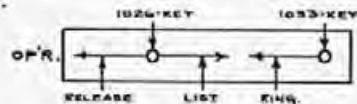
TWO WAY TRUNK CIRCUIT. PLUG ENDED - WITH NIGHT JACK.

30531

MAIN EXCHANGE.



P. B. X



RELAY NO.	CODE NO.	HTG. Pdg.	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES.								REMARKS.		
			SPRING TENSION	ARM. TRAVEL	TEST				READJUST.						
					TRIP	HOLD	AFTER SHAK	OPERATE	NON OPERATE	RELEASE	OPERATE	NON OPERATE		RELEASE	
1	2068-S.V		20-5	.020				.038			.024				
2	2061-S.FU							.012	.004		.010	.005			
3	2093-S.FU							.020		.004	.015				
4	2002-C.AE			.020	1.2			.022	.005		.020	.010			

30531

 SEPT 10, 1925.
 JUNE 1, 1922.

FIG. 1.

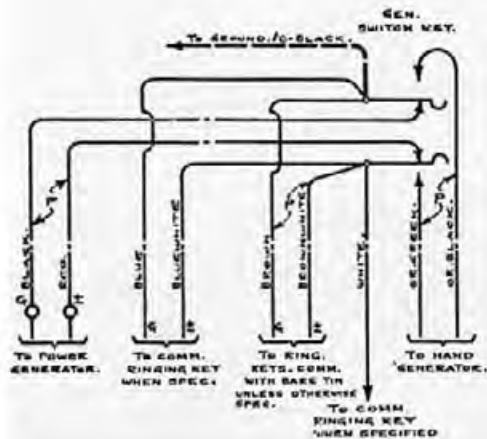
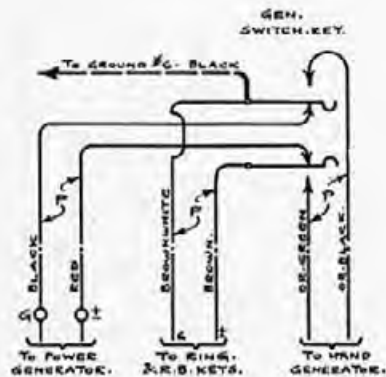


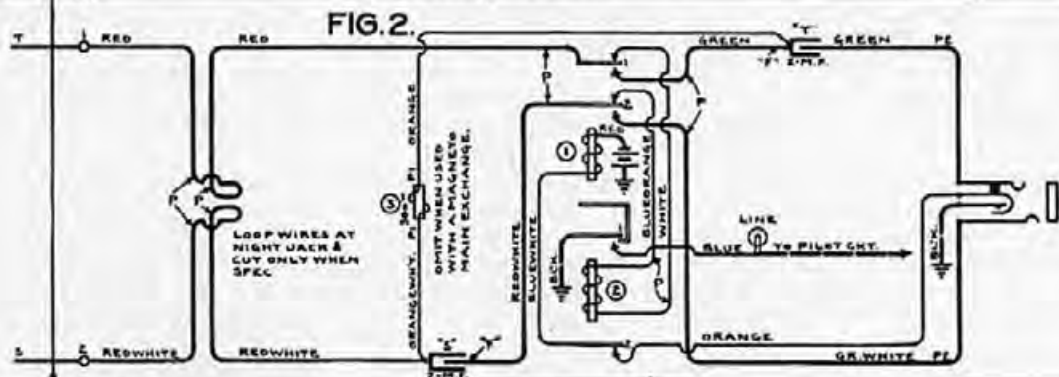
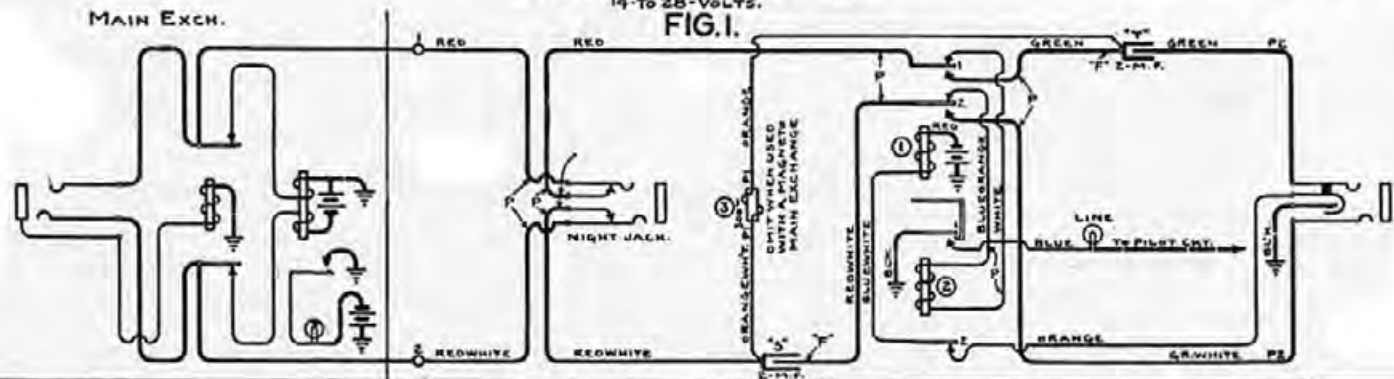
FIG. 2.



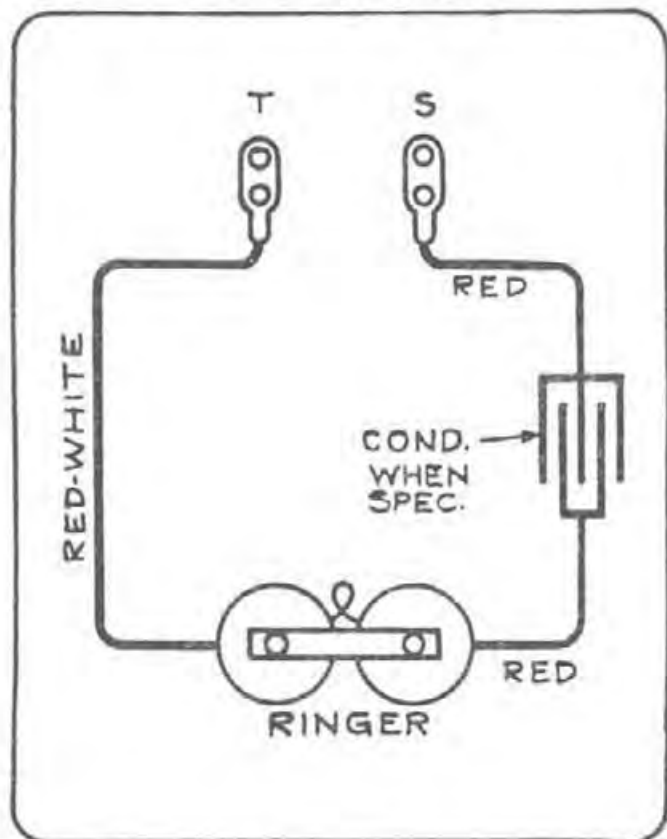
TWO WAY TRUNK CIRCUIT.

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

20108

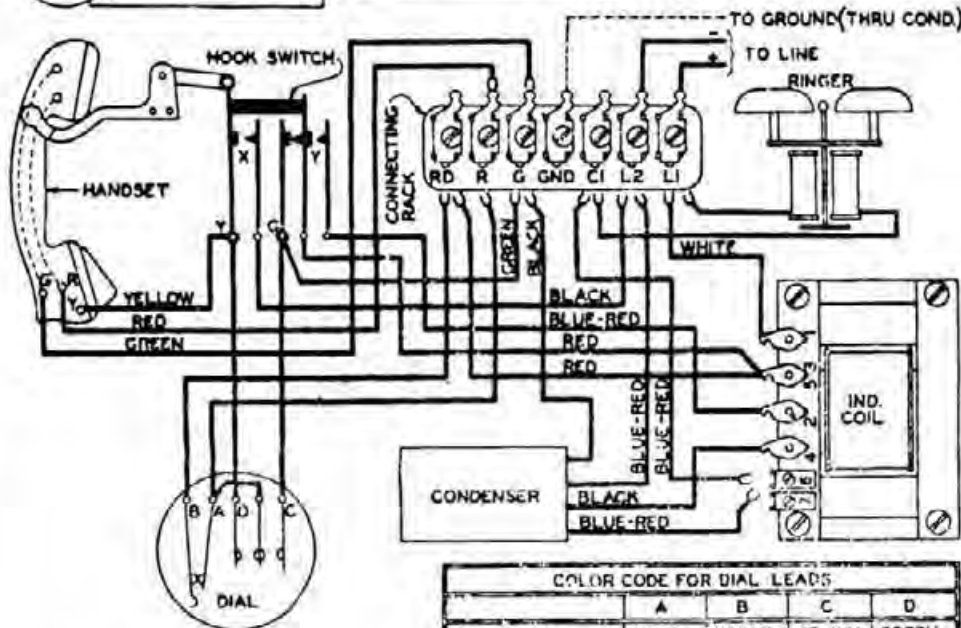
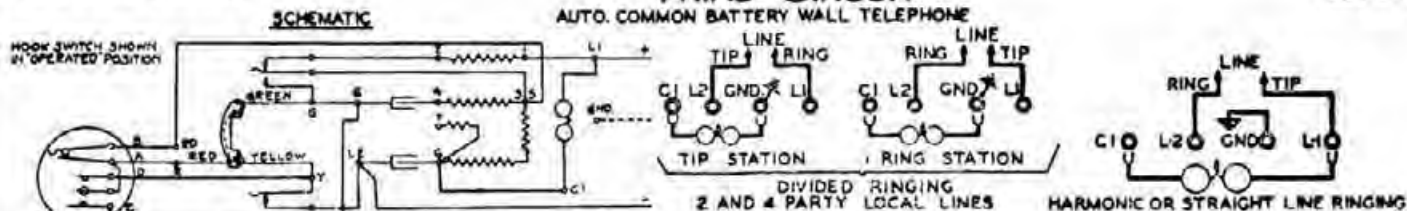


20108

WIRING OF EXTENSION BELL
COMMON BATTERYFIG. 3[#]

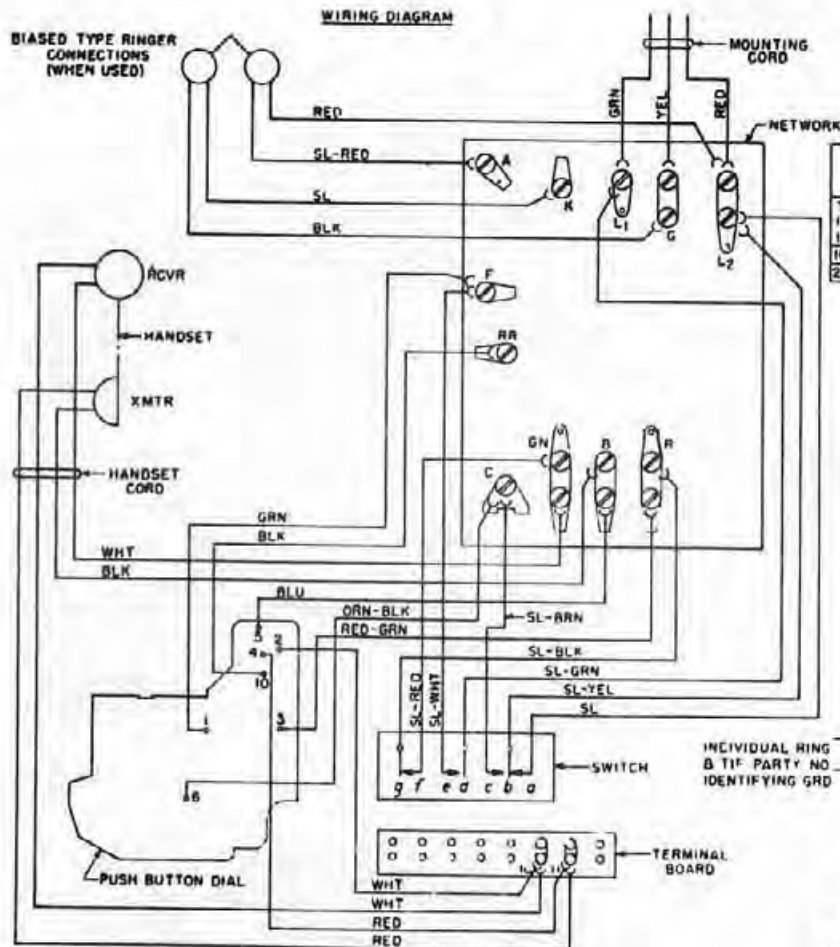
TRIAD CIRCUIT

AUTO. COMMON BATTERY WALL TELEPHONE



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.

- NOTES**
- A- CONNECT RED WIRE TO BINDING POST "R" INSTEAD OF "RD" WHEN DIAL IS NOT USED.
 - B- CONTACTS "X" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK
 - C- FOR ADDITIONAL SIDETONE REDUCTION CHANGE CONN. FROM TERM "6" TO TERM "7" ON IND. COIL.



NOTES:

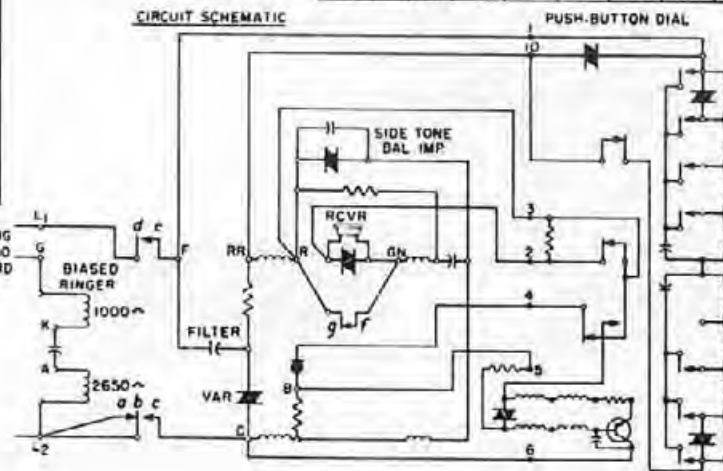
- 1-CONNECT YELLOW MOUNTING CORD LEAD TO SAME TERMINAL AS RED MOUNTING CORD LEAD AT CONNECTING BLOCK FOR ALL CLASSES OF SERVICE EXCEPT THOSE LISTED IN TABLE "A"
- 2-FOR TIP-PARTY WITH NO IDENTIFYING GROUND MOVE RED RINGER LEAD FROM L2 TO L1 ON NETWORK AS SHOWN IN TABLE "B"

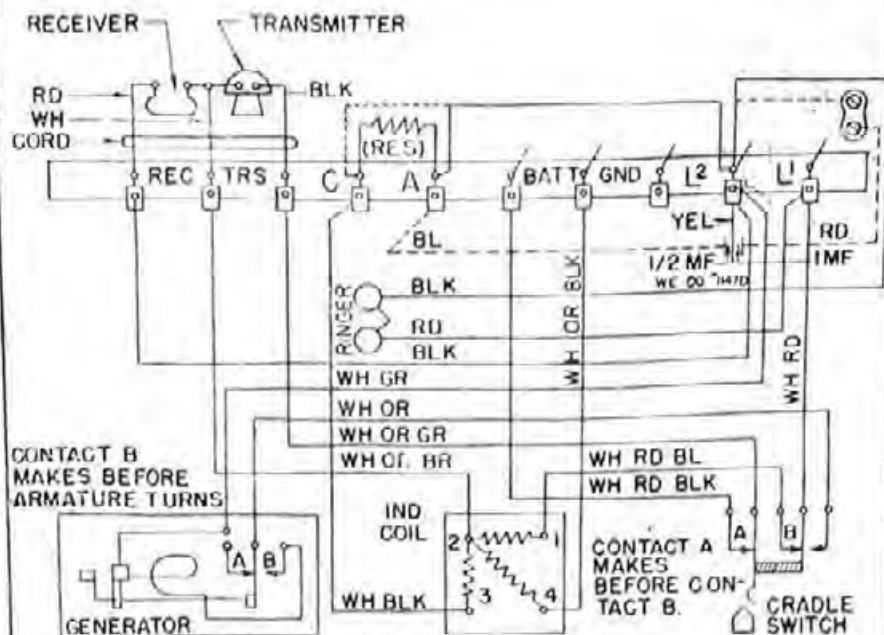
TABLE "A"
RINGER LEAD CONNECTIONS TO SILENCE RINGER PERMANENTLY

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	AFD	L2	L1	K	B
	BLK	G	G	G	B
	SL	K	K	K	B
HOOKSWITCH LEADS	SL-RED	A	A	A	G
	SL	L2	L2	A	A
MOUNTING CORD AT CONN BLOCK	SL-WHT	F	F	F	C
	SL-BRN	C	C	C	F
	RED	R	R	R	G
LINE WIRE AT CONN BLOCK	GRN	G	G	G	R
	YEL	G	Y	Y	Y
	RING TIP	RED	R	R	R
RING GRO.	GRN	G	G	G	G
	YEL	Y	Y	Y	Y
	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 L₂ 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 ^o	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

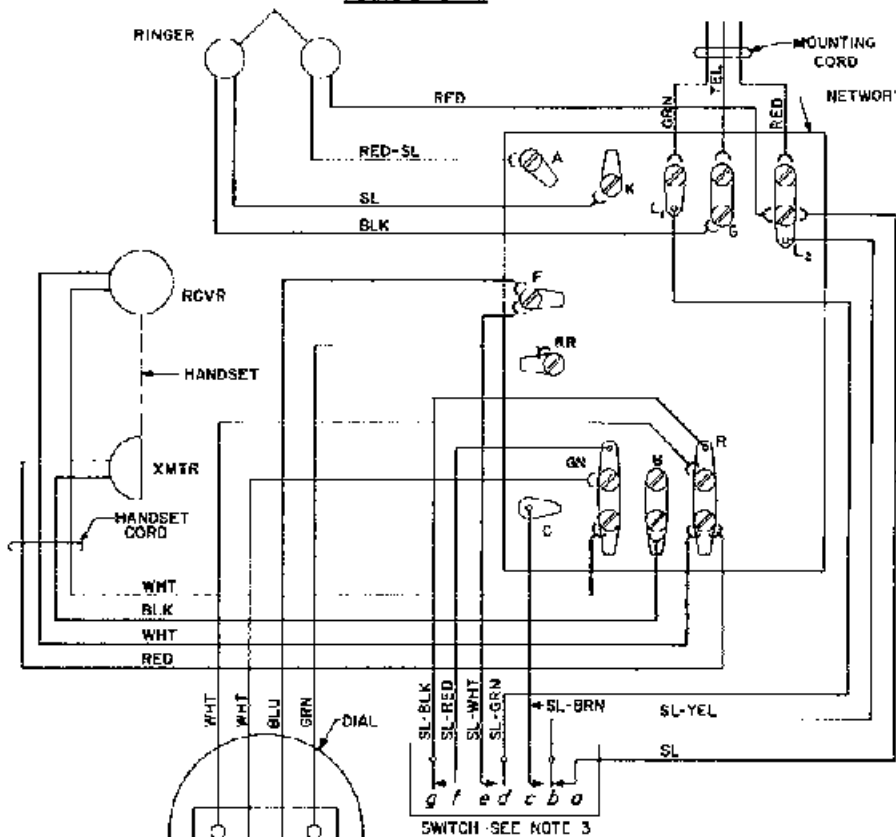


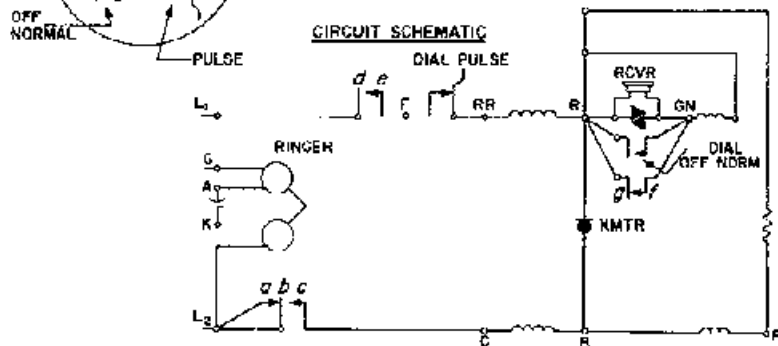
TABLE OF CONNECTIONS (BIASED RINGERS)

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 ₂	L ₁	G	L ₂	K
RING PARTY	R	G	Y	R	G	Y	L ₂	L ₁	G	L ₂	K
TIP PARTY	R	G	Y	G	R	Y	L ₂	L ₁	G	L ₂	K

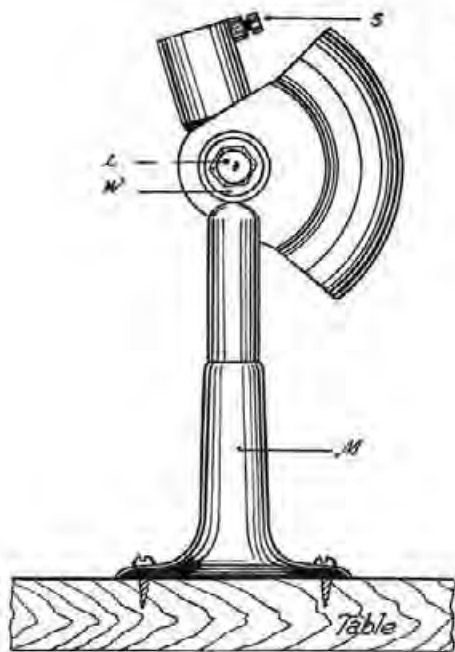
NOTES

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 *g* BREAKS LAST

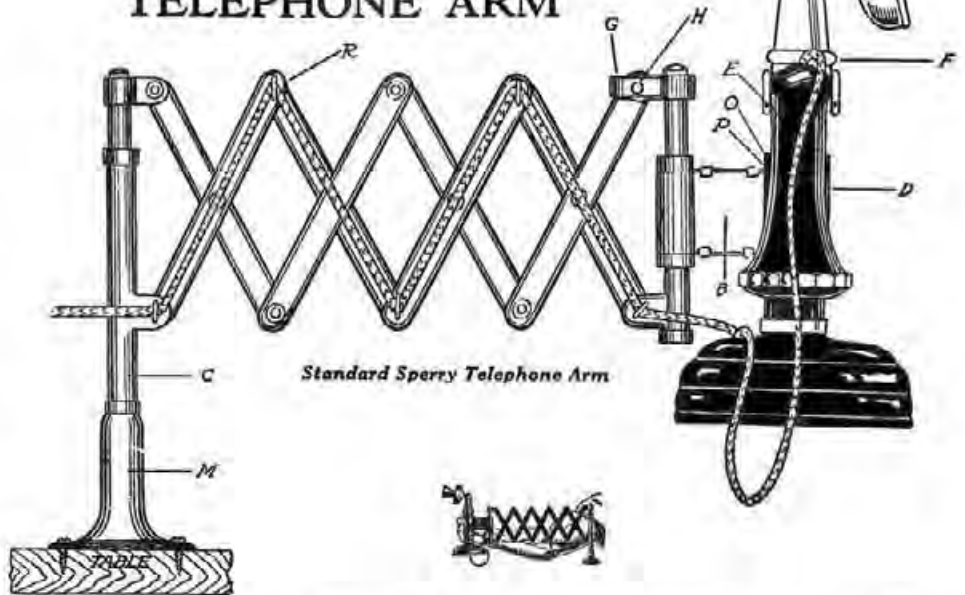
CIRCUIT SCHEMATIC



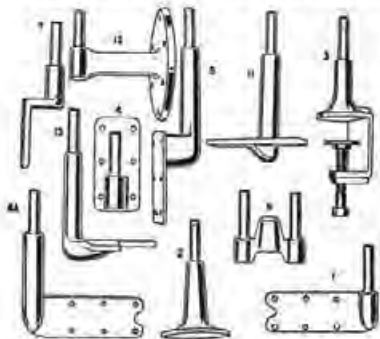
Instructions for Setting Up The SPERRY TELEPHONE ARM



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.

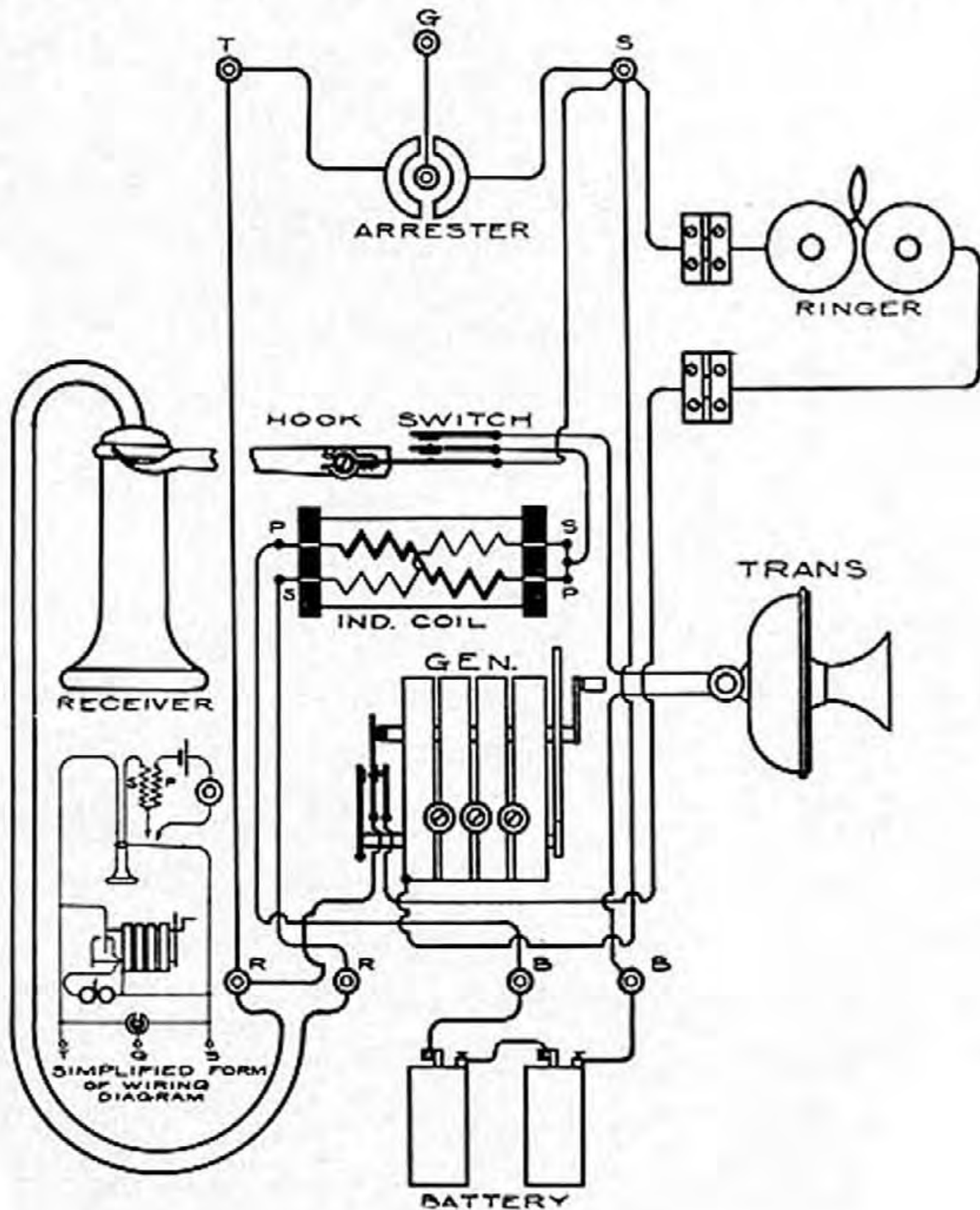
Form No. 453-10M-3-26-K-L

KELLOGG SWITCHBOARD & SUPPLY CO. - - CHICAGO

FOUND WITH AN ORIGINAL MINT SPERRY ARM DATED MARCH 1926

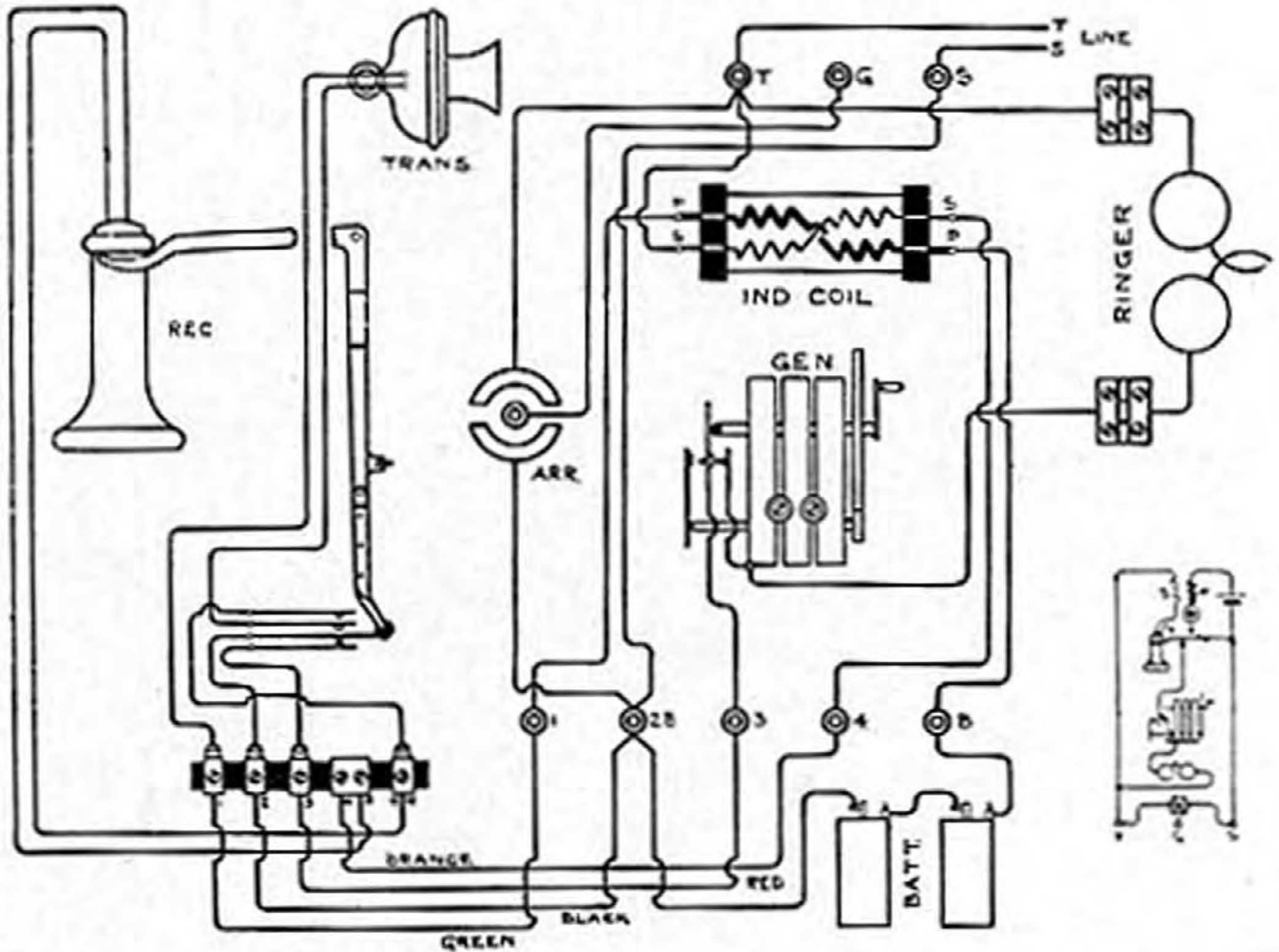
CIRCUIT #10374

BRIDGING HOTEL SET CIRCUIT



CIRCUIT 10373

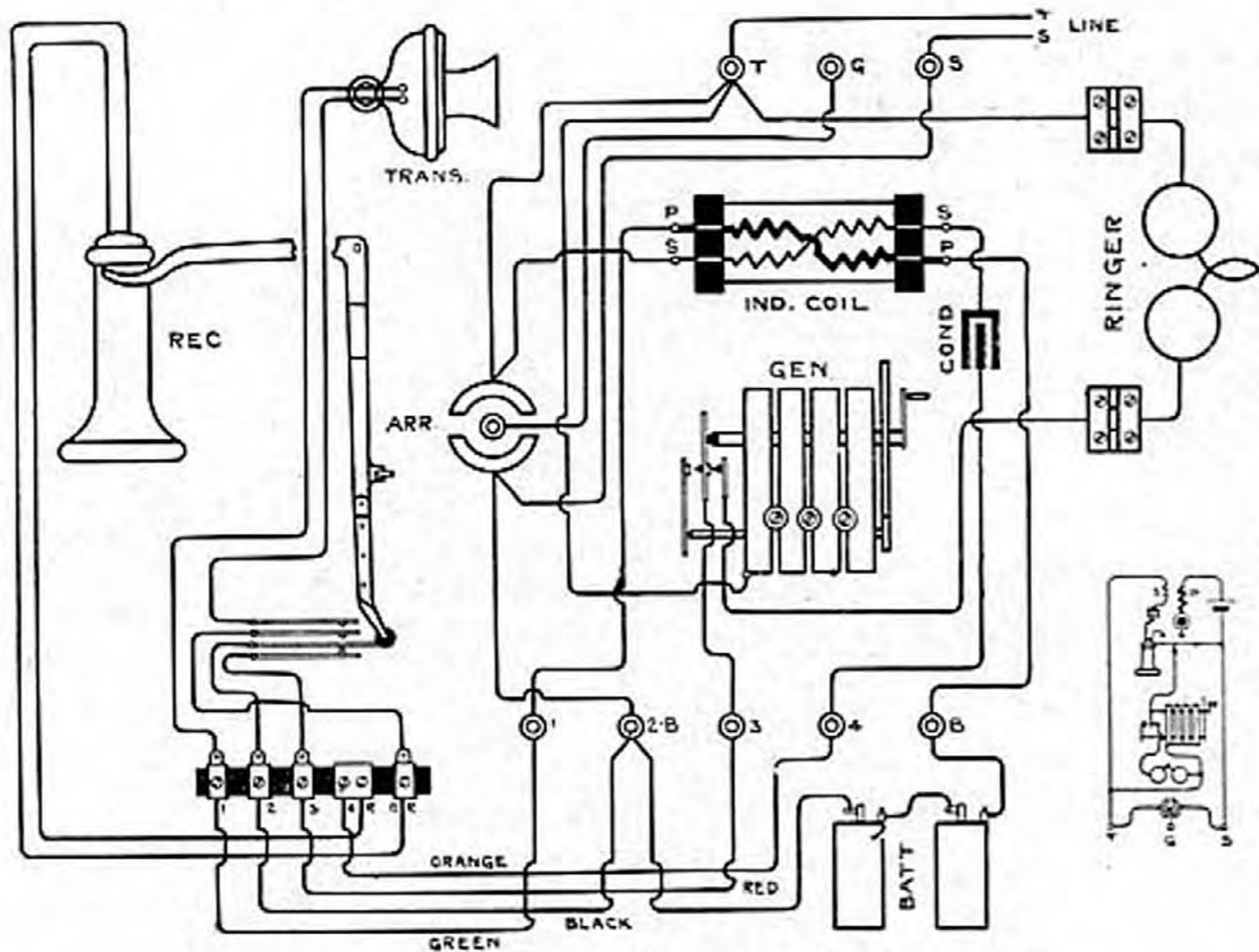
SERIES DESK SET CIRCUIT



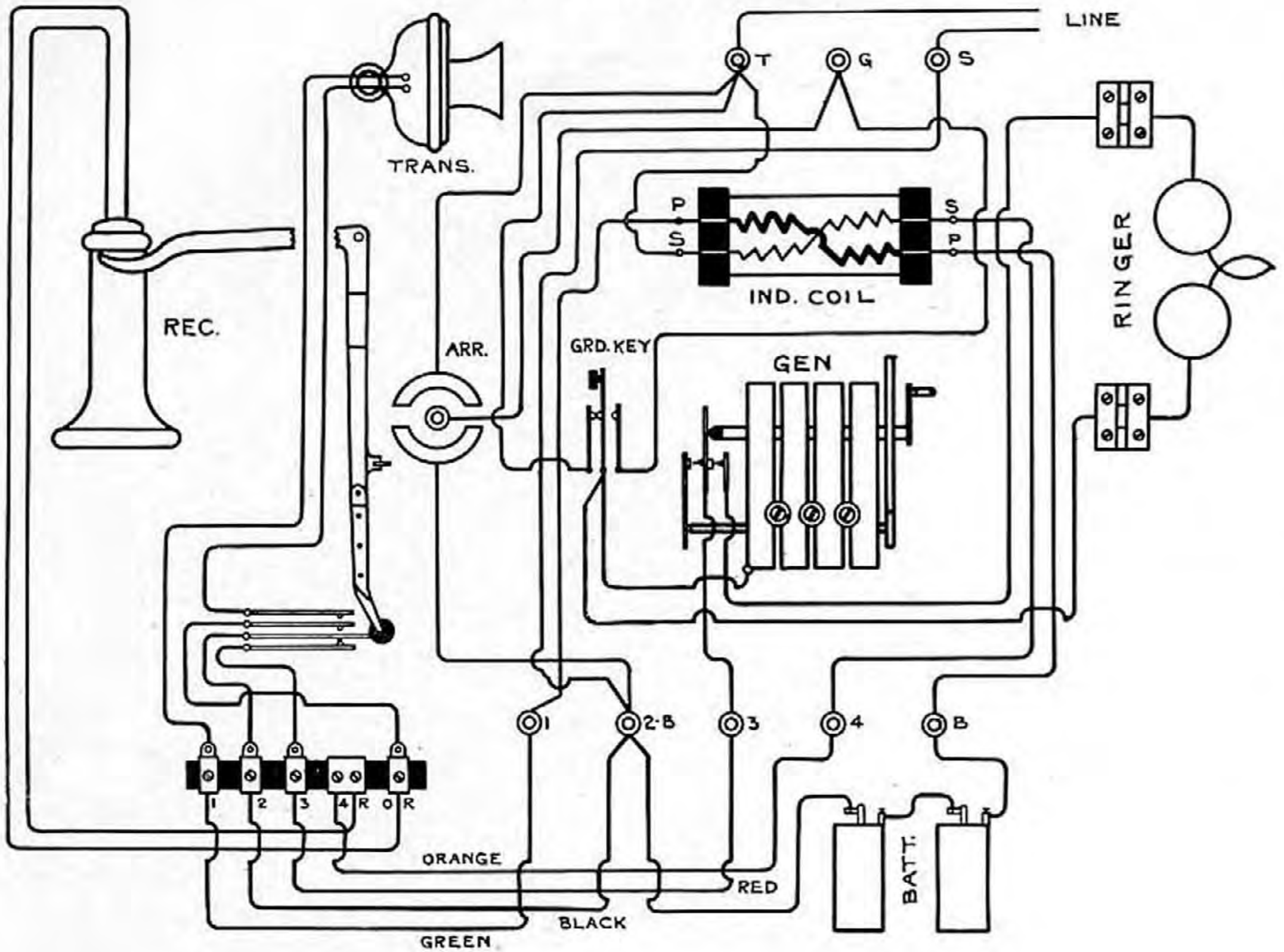
CIRCUIT #10372

BRIDGING DESK SET CIRCUIT

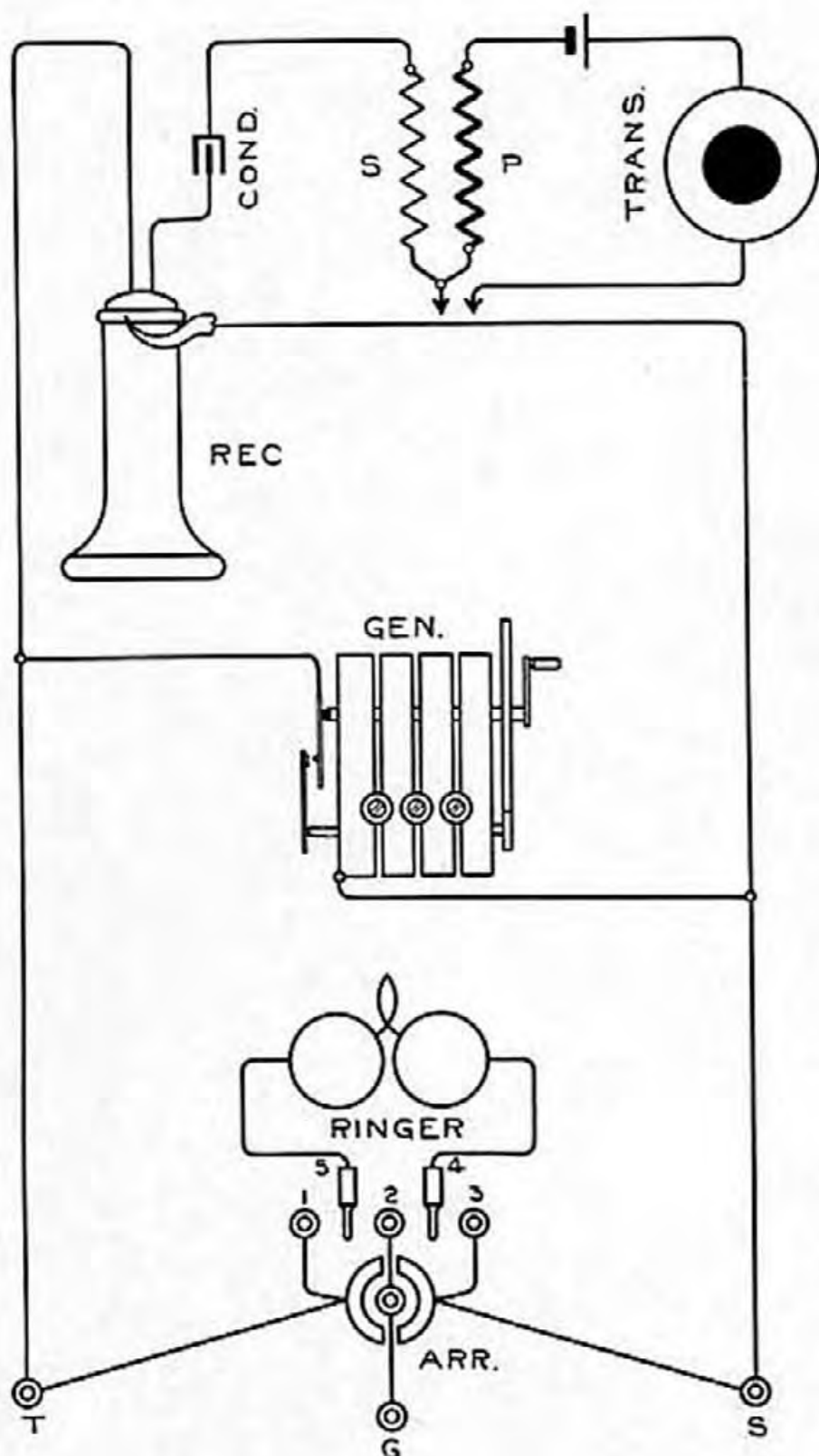
A.C. GEN. & COND. IN SECONDARY



CIRCUIT NO. 9841
 BRIDGING DESK SET CIRCUIT
 WITH GROUNDING KEY



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

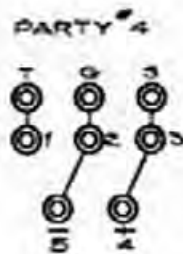
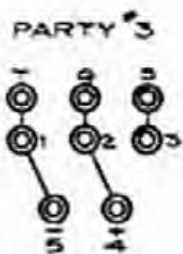
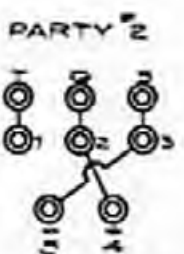
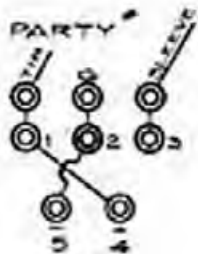
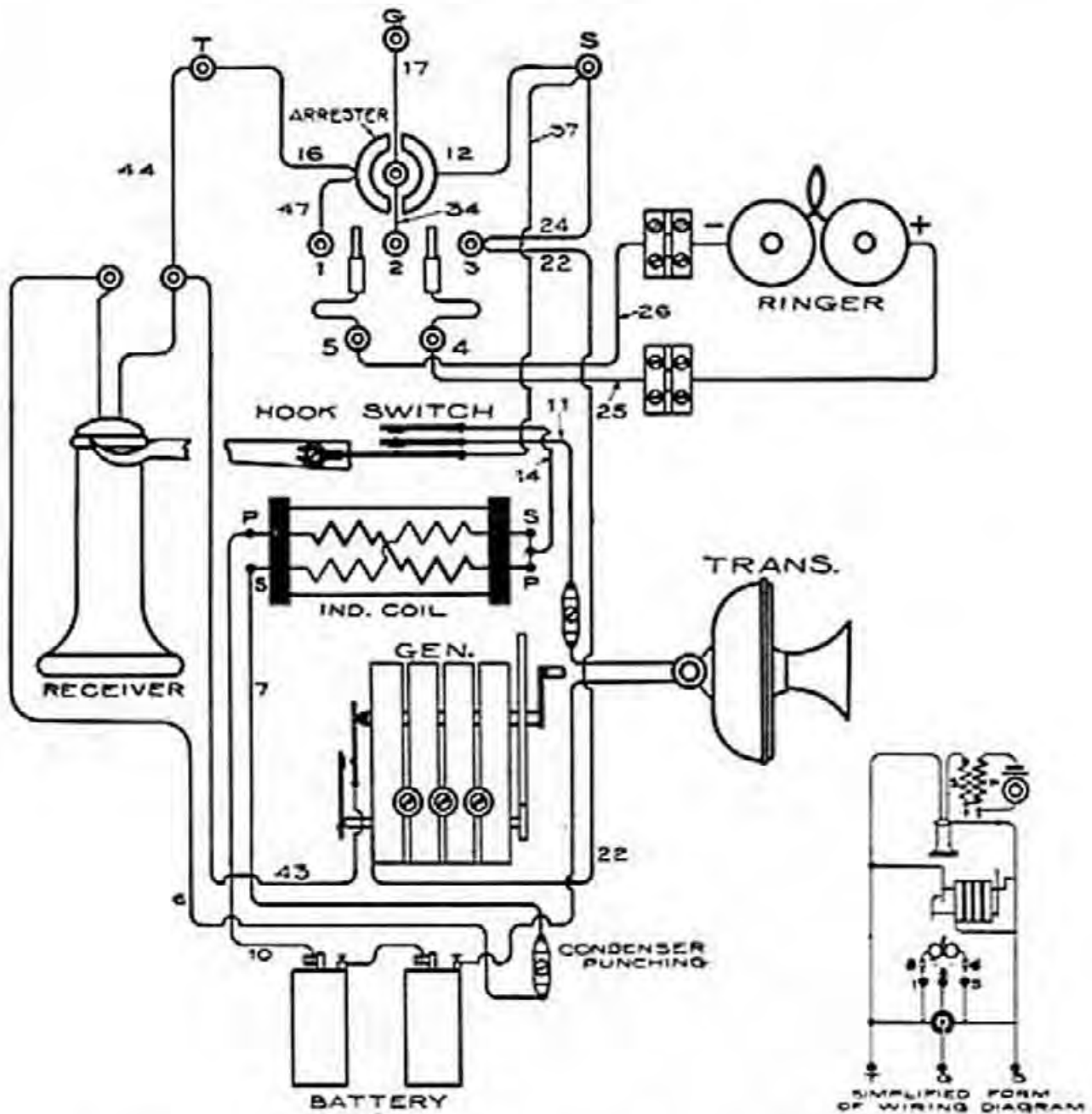


CIRCUIT #9833

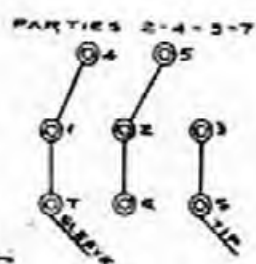
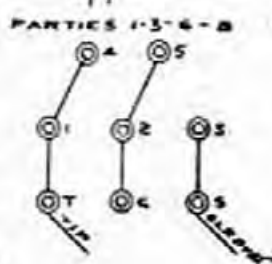
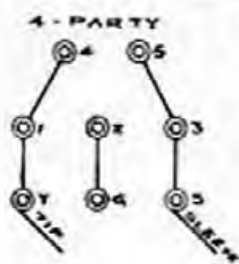
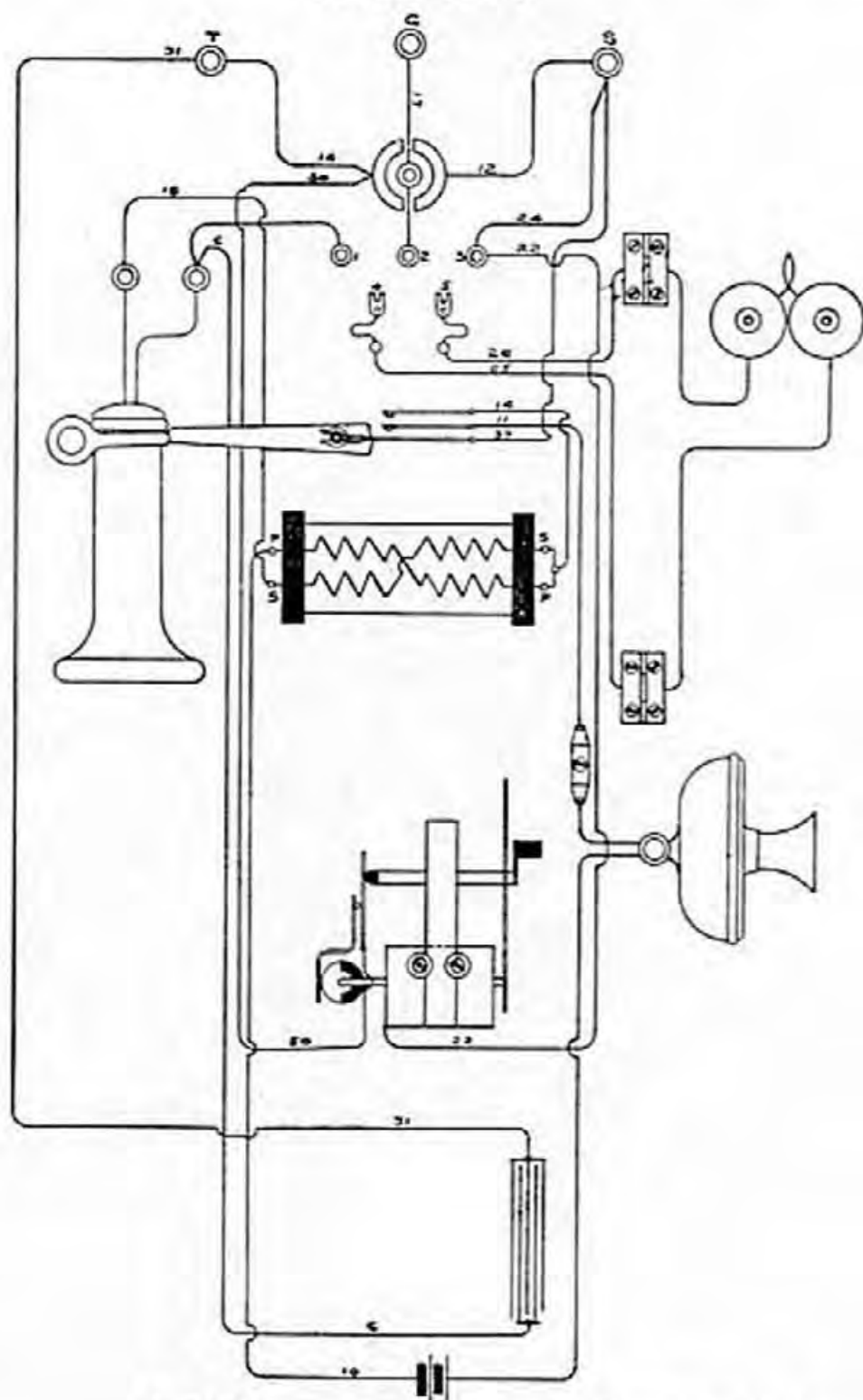
BRIDGING SUB'S. SET CIRCUIT

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

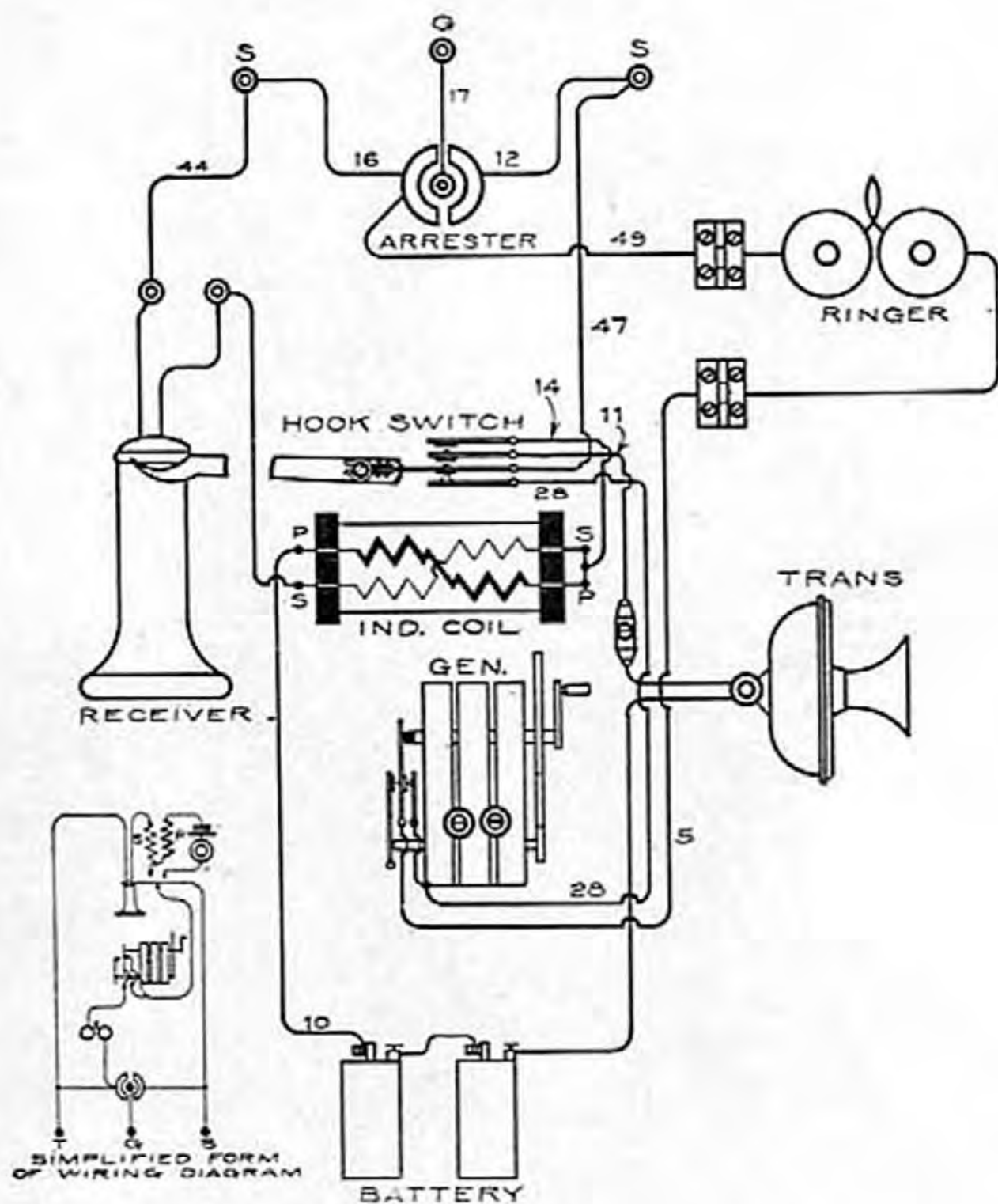
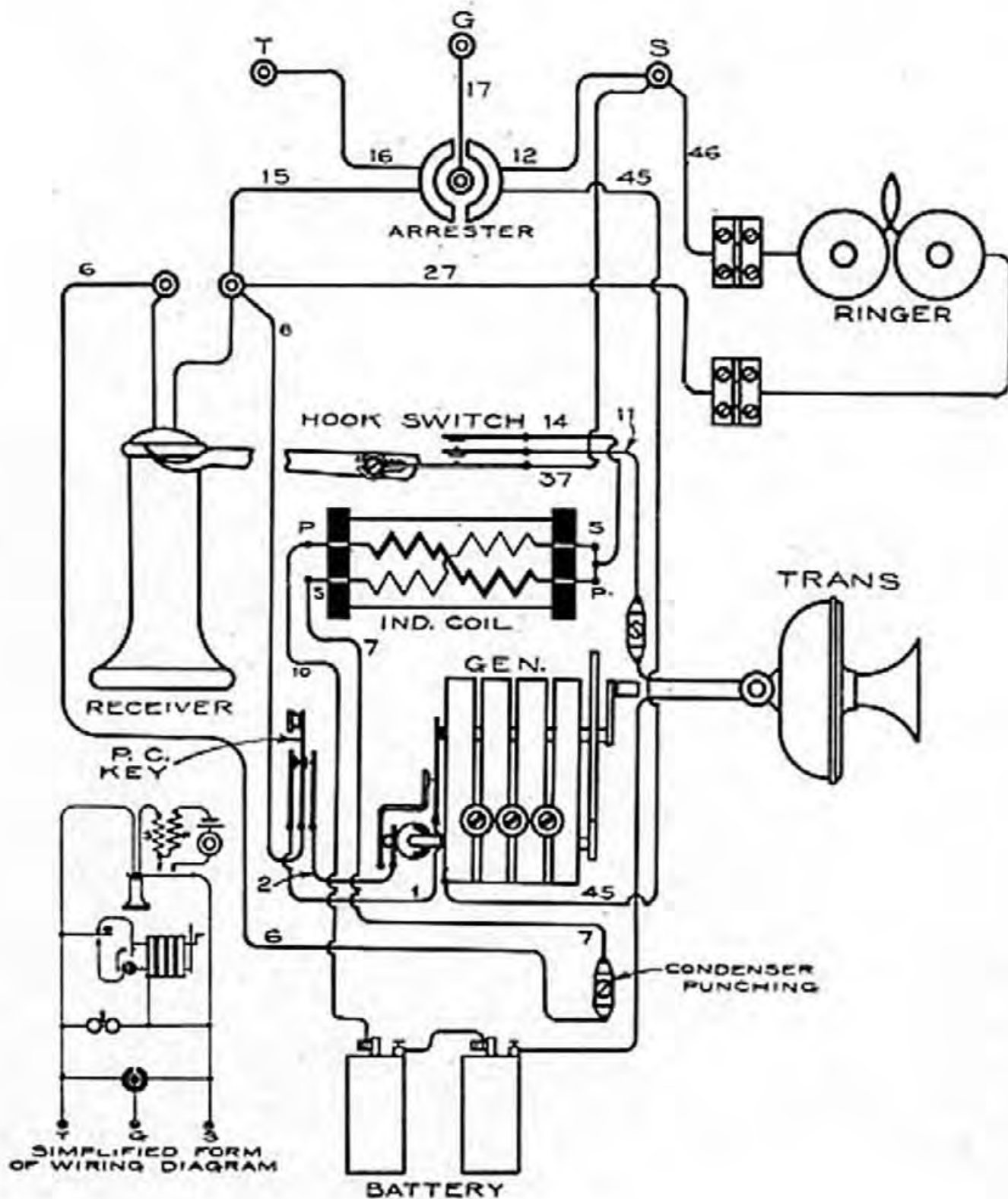


Figure 3

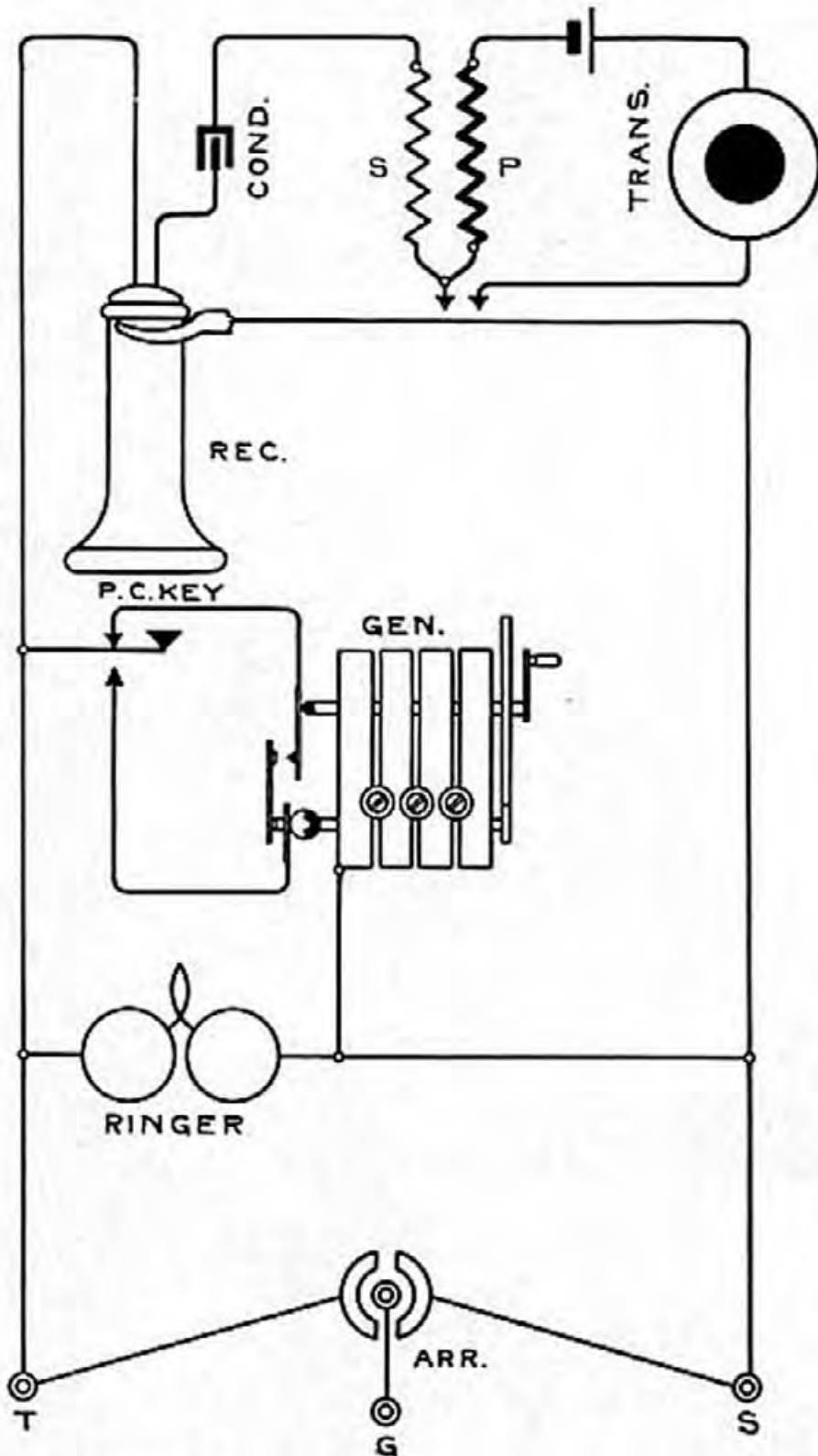
CIRCUIT #9830

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

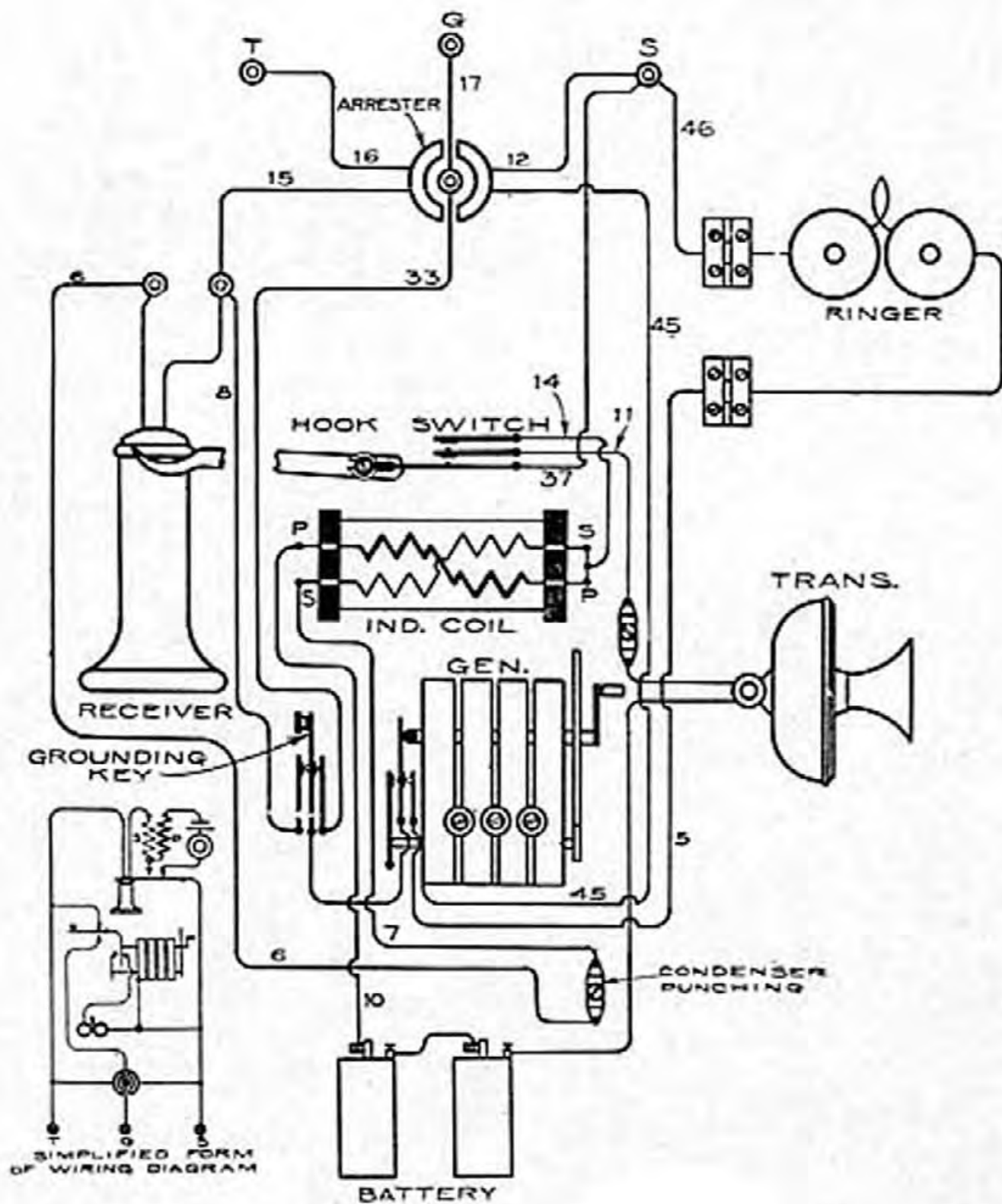


CIRCUIT 9827

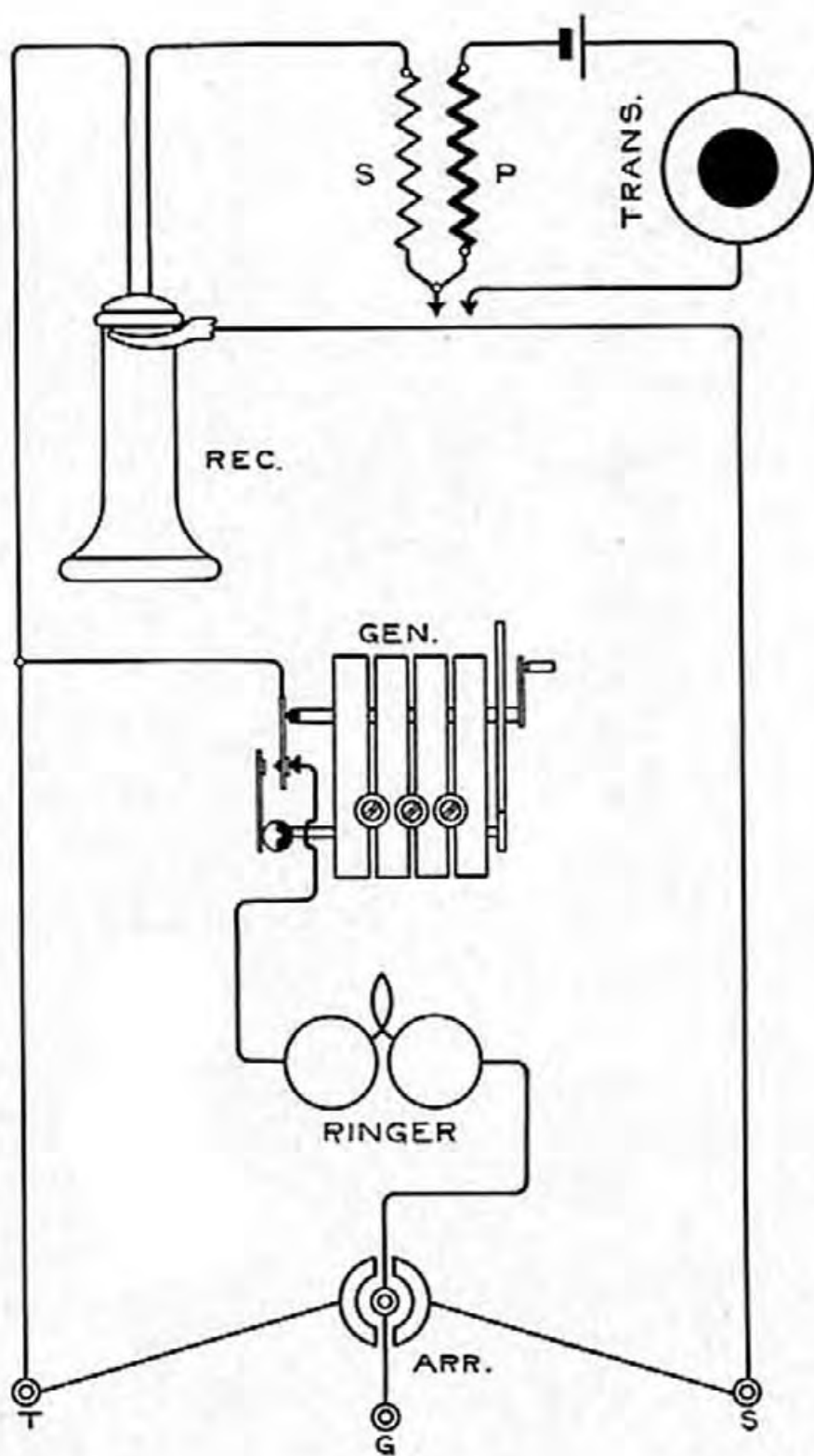
BRIDGING SUB'S SET CIRCUIT

A. C. GEN.-GROUNDING KEY

COMPACT



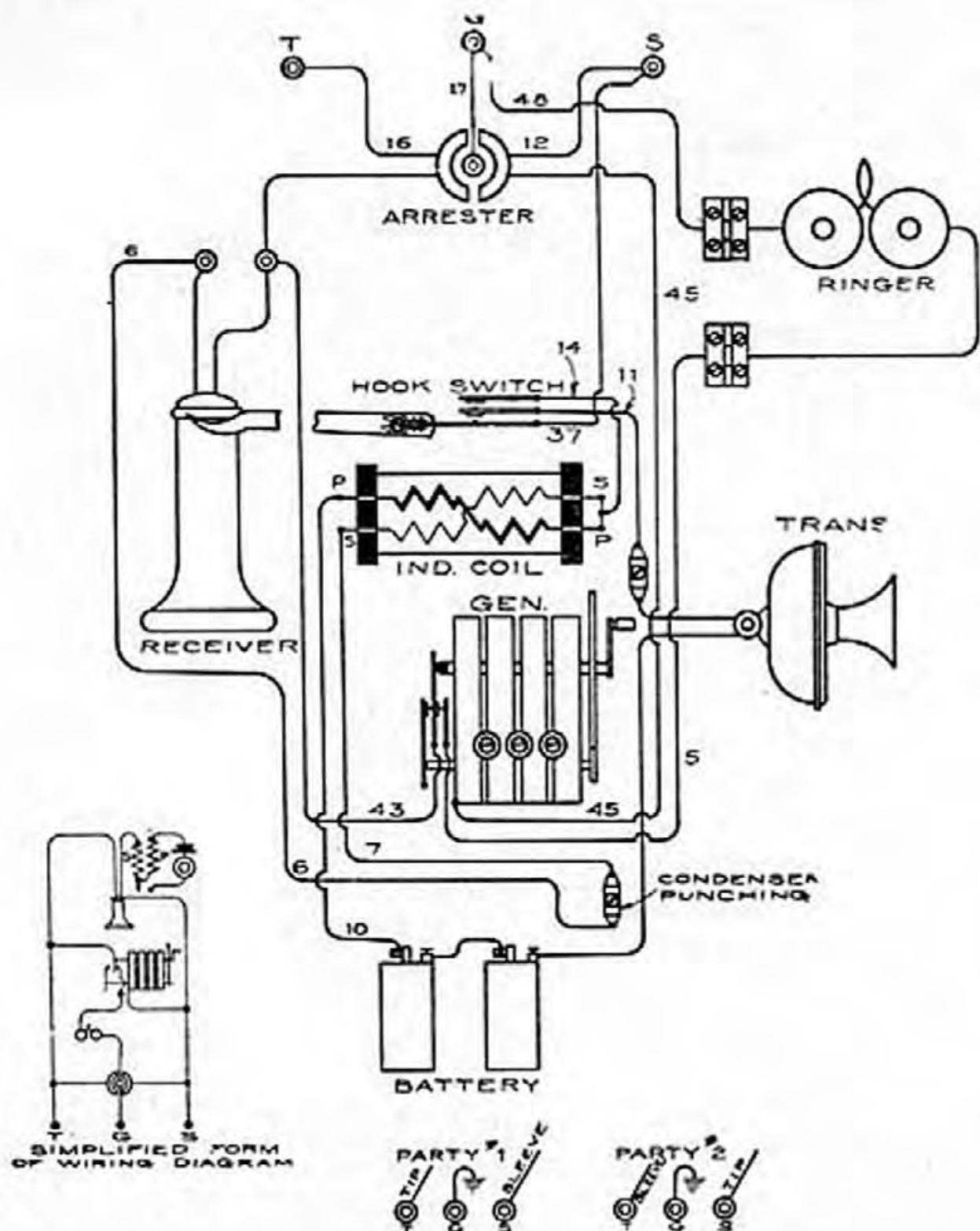
CIRCUIT *9825
BRIDGING SUBS. SET CKT.
PULS. GEN - 2 PARTY
COMPACT



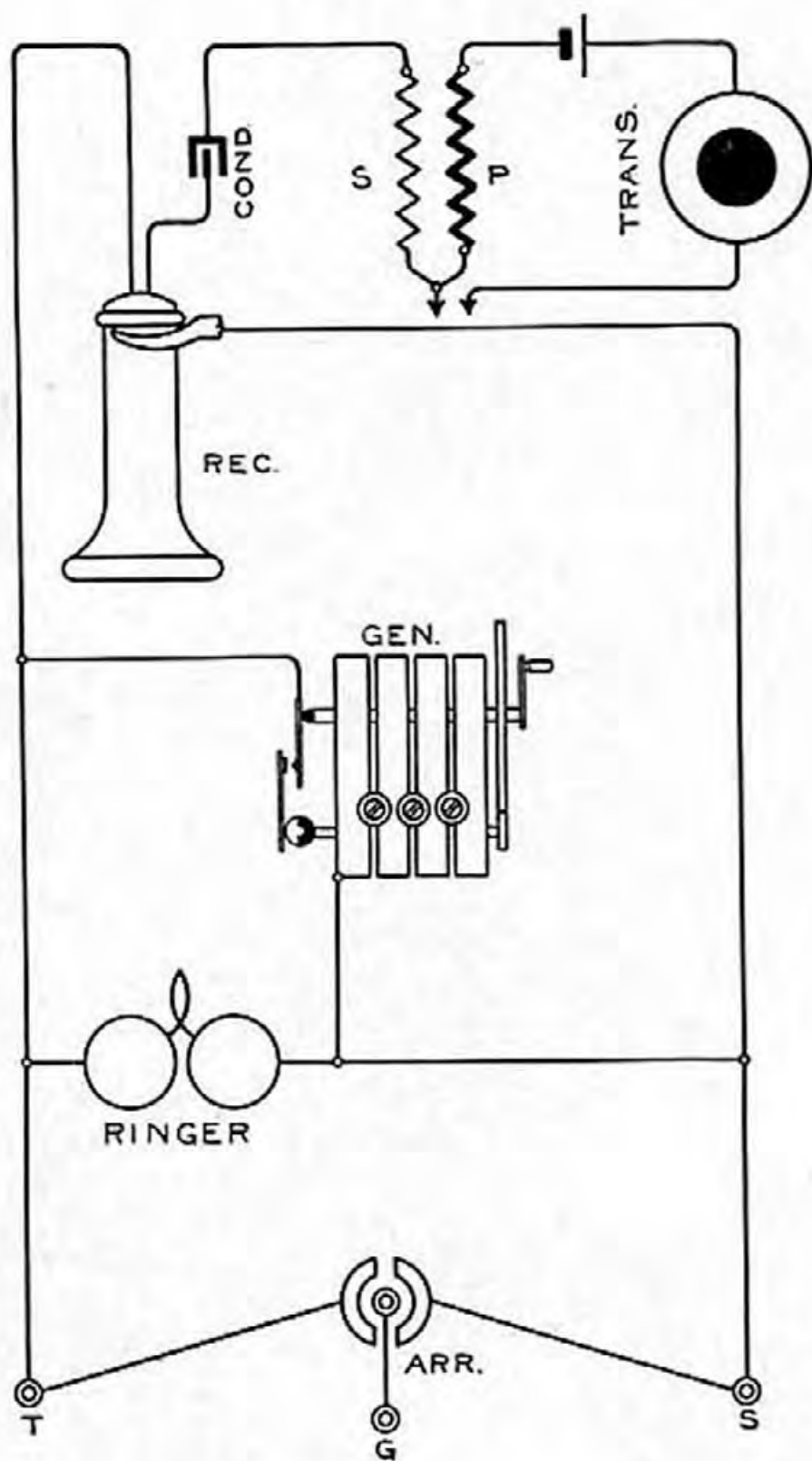
CIRCUIT # 9824

BRIDGING SUB'S. SET CIRCUIT

A. C. GEN. - 2 PARTY COMPACT



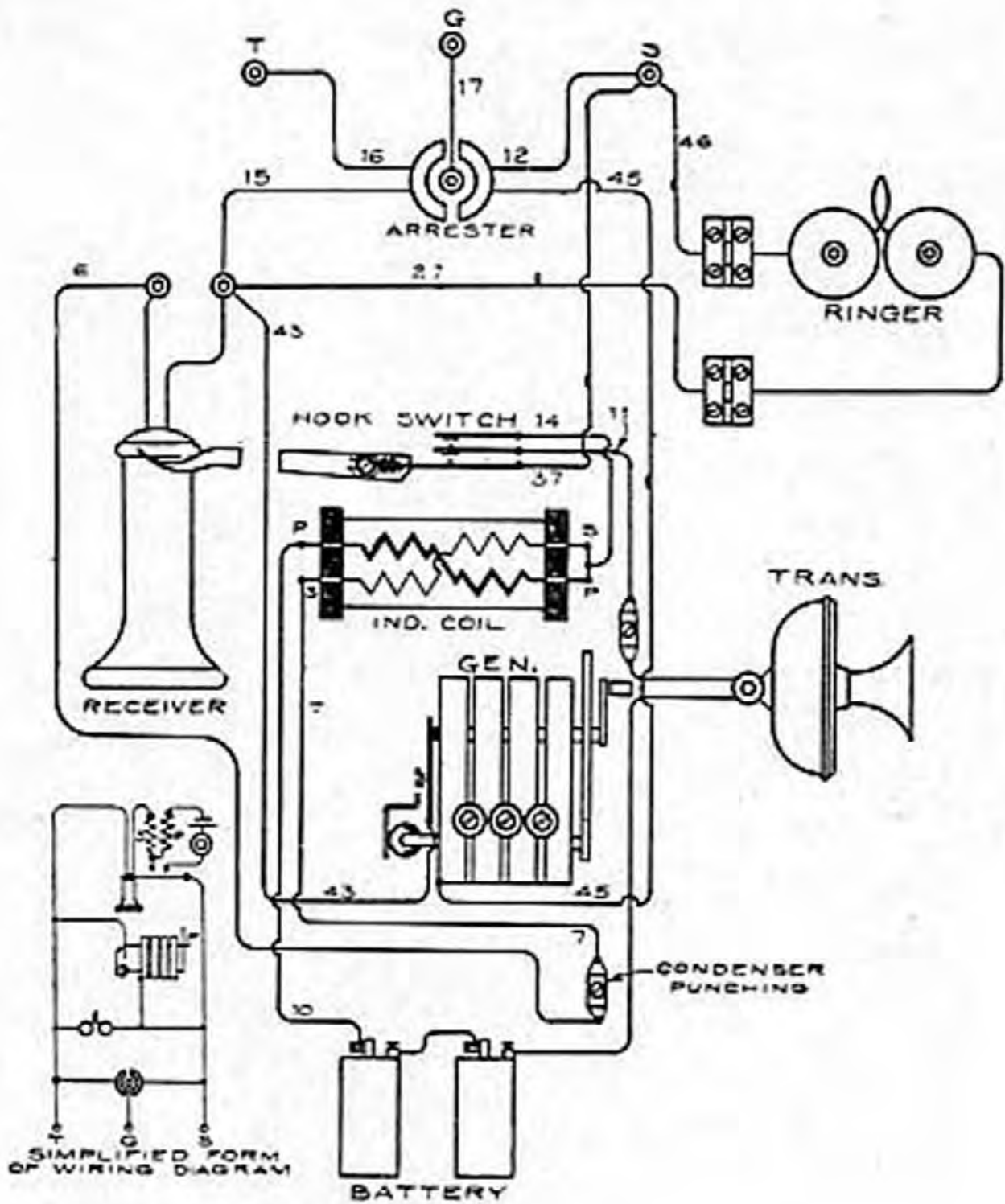
CIRCUIT NO. 9823
BRIDGING SUBS. SET CKT.
PULS. GEN-COND. IN SECONDARY
RINGER PERMANENTLY BRIDGED
COMPACT



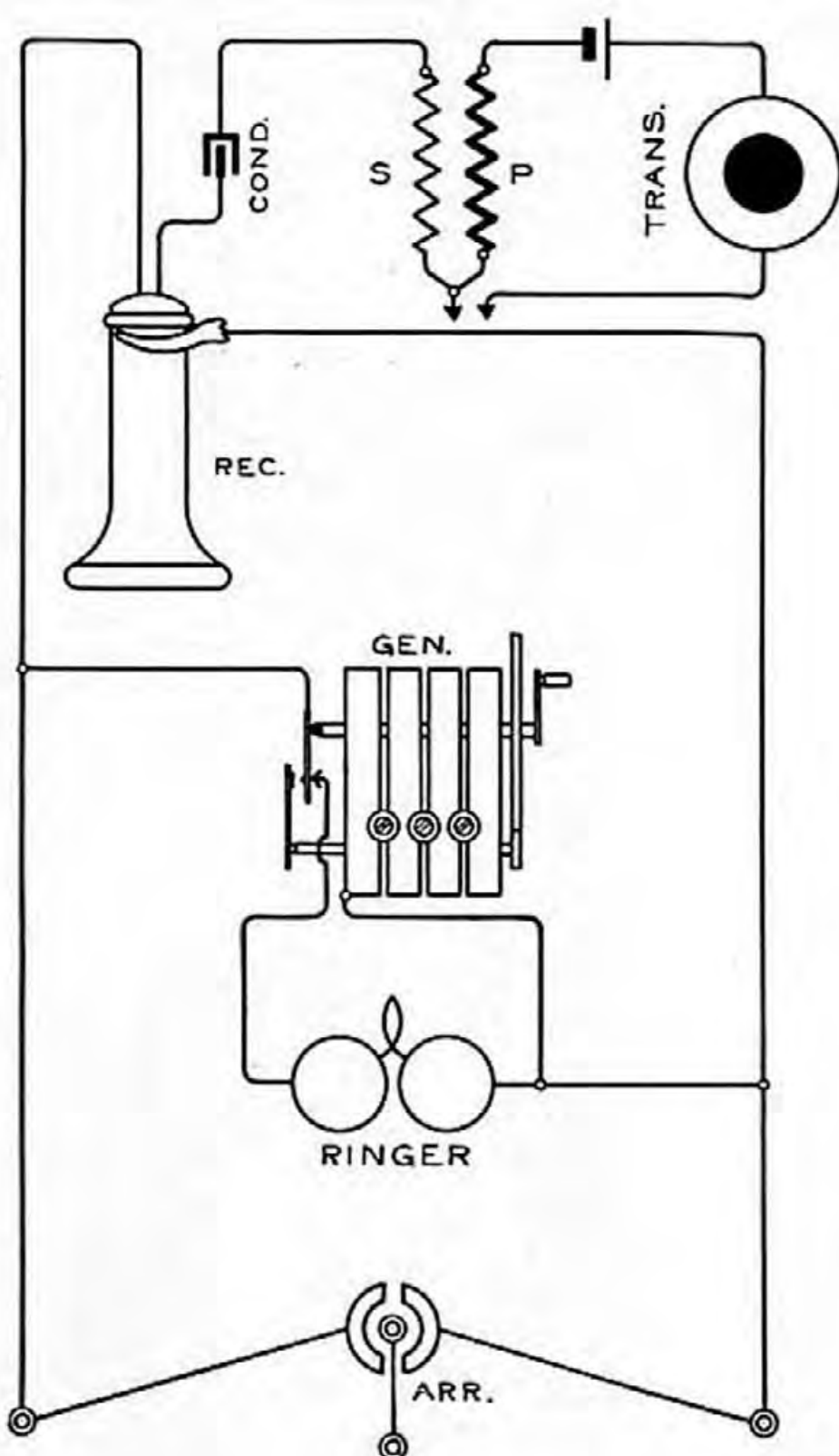
CIRCUIT 9822

BRIDGING SUB'S. SET CIRCUIT

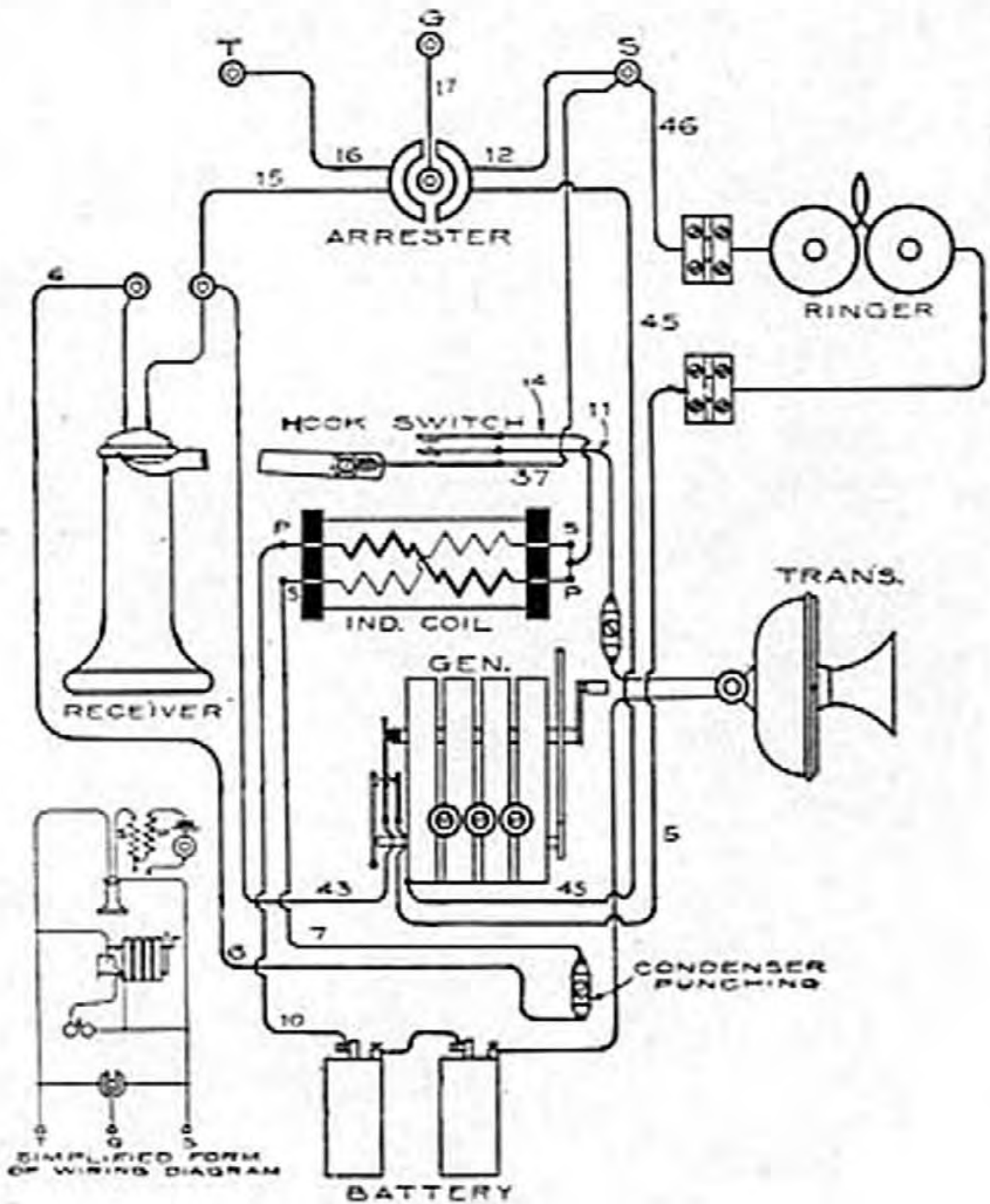
P. C. GEN. RINGER PERMANENTLY BRIDGED COMPACT



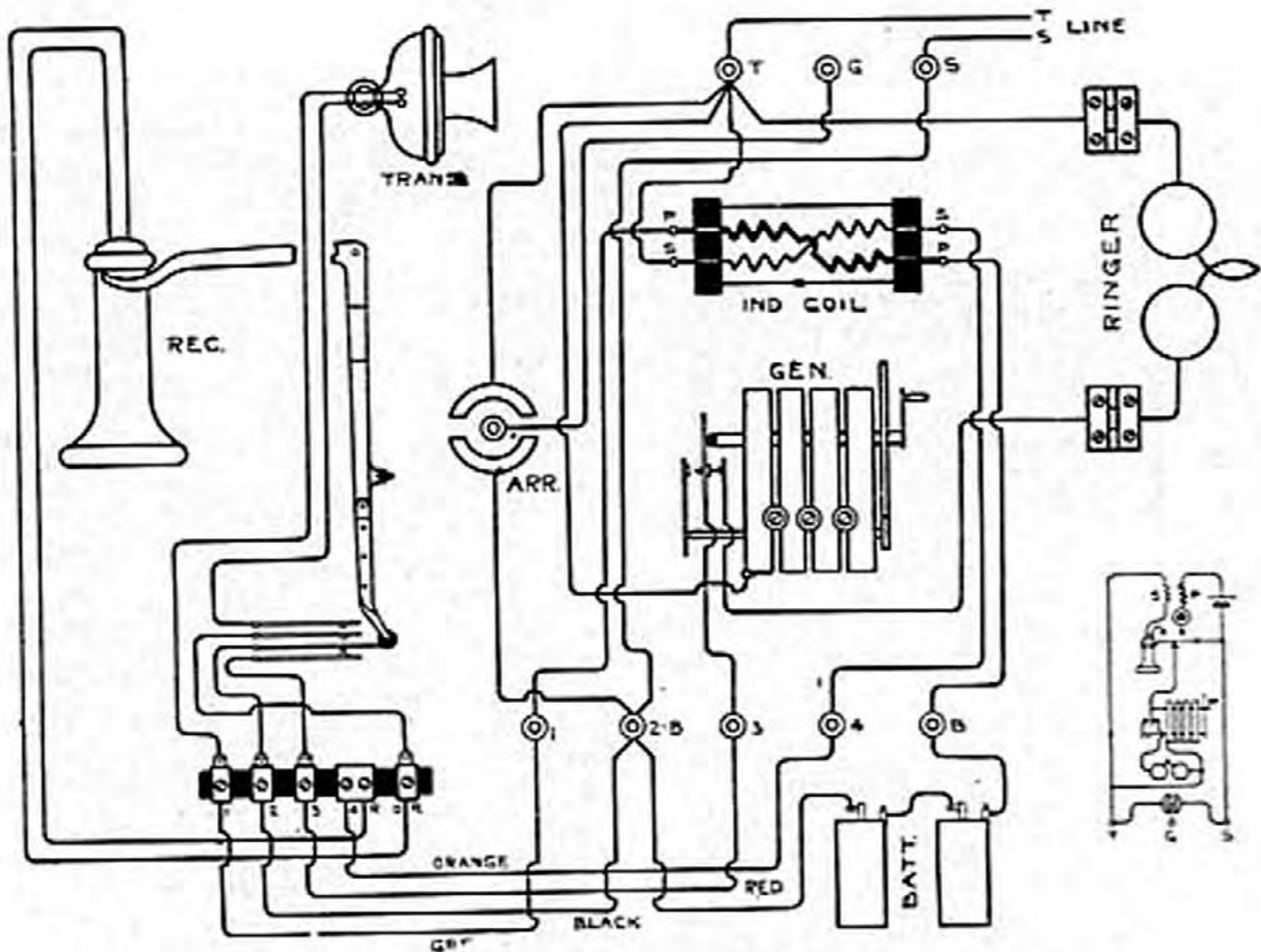
CIRCUIT #9819
BRIDGING SUB'S. SET CKT.
A.C. GEN. & COND. IN SECONDARY
COMPACT



CIRCUIT 9818 BRIDGING SUB'S SET CIRCUIT COMPACT



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



CIRCUIT #7279 SERIES HOTEL SET CIRCUIT

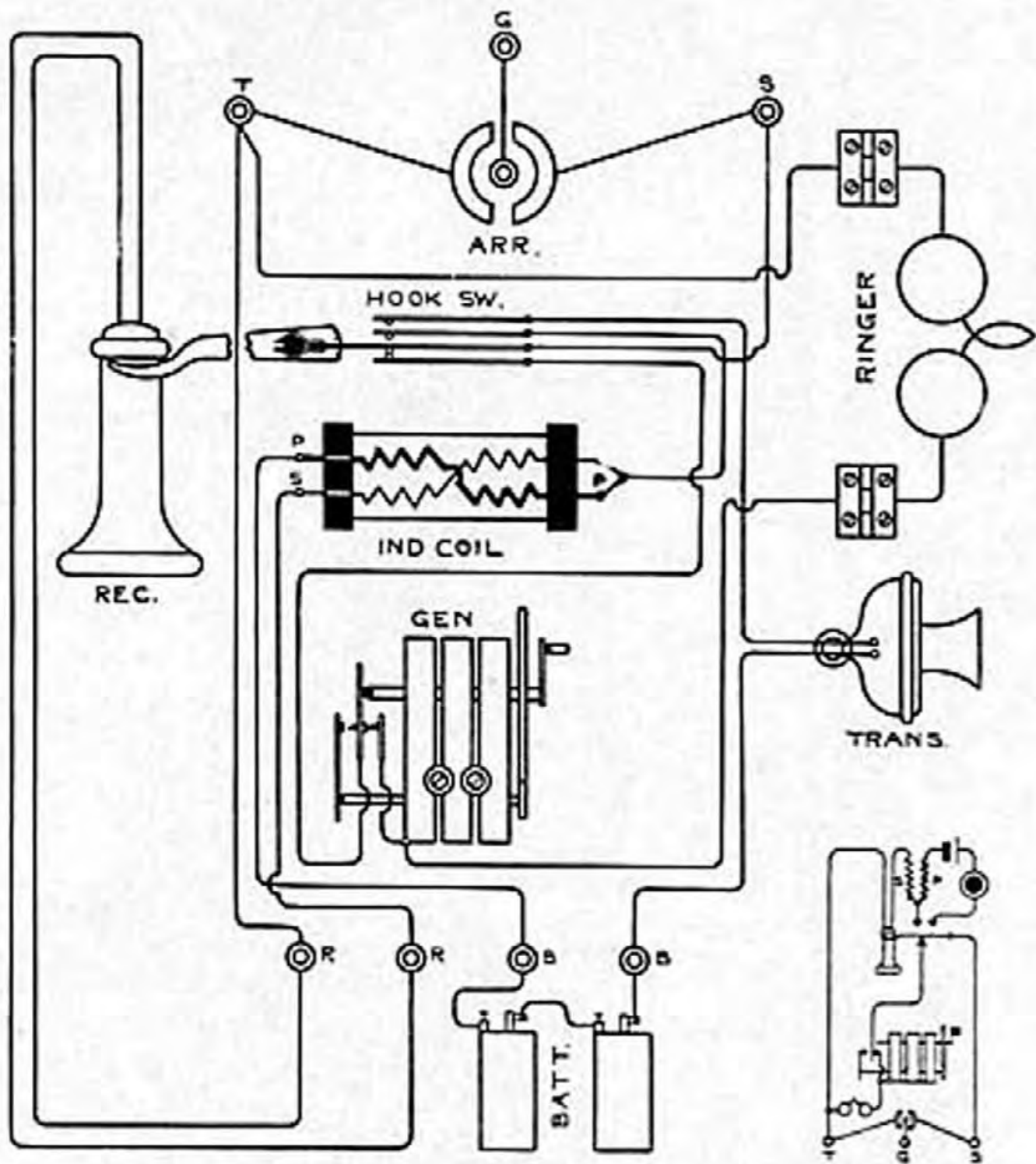
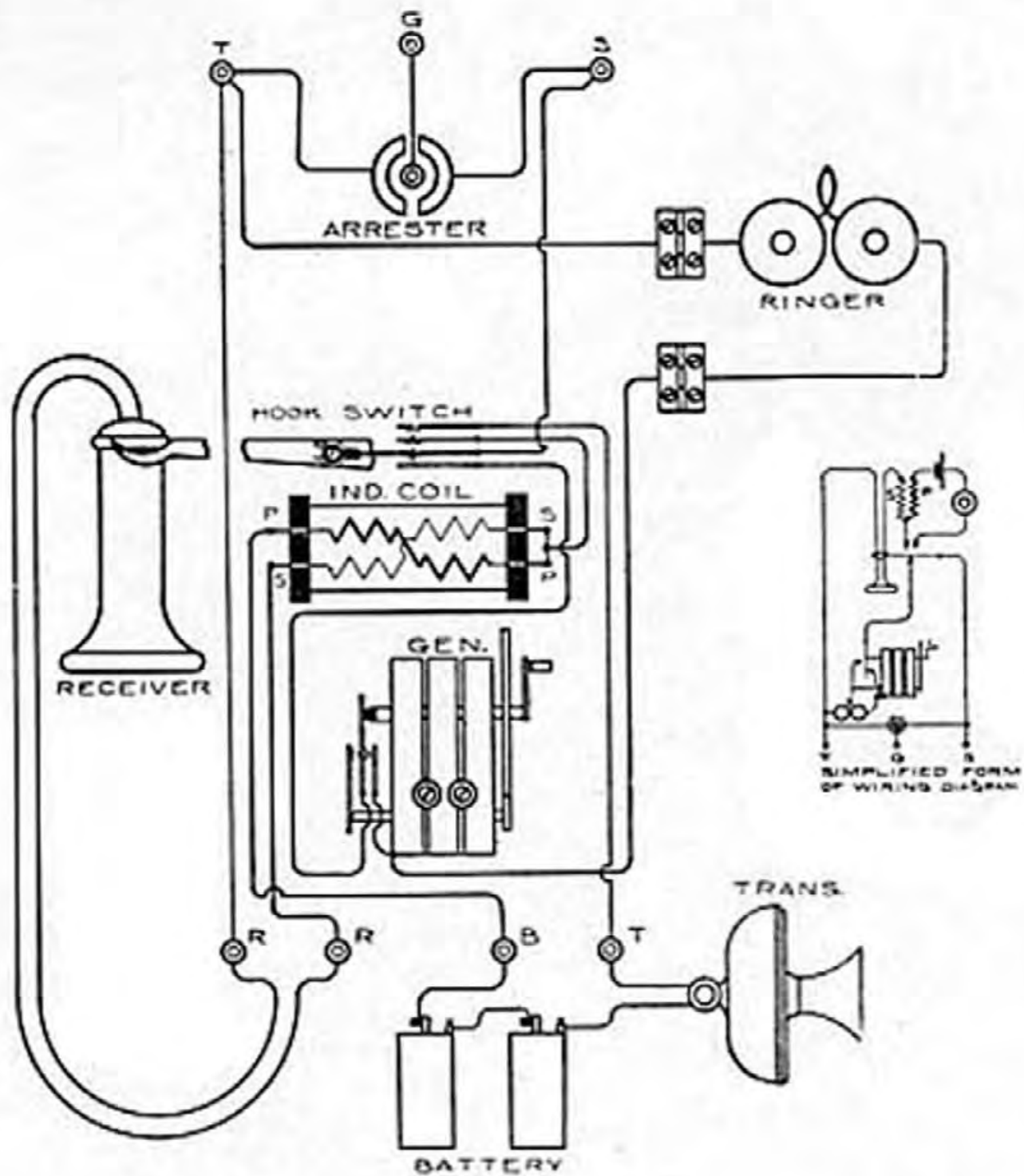


Figure 33

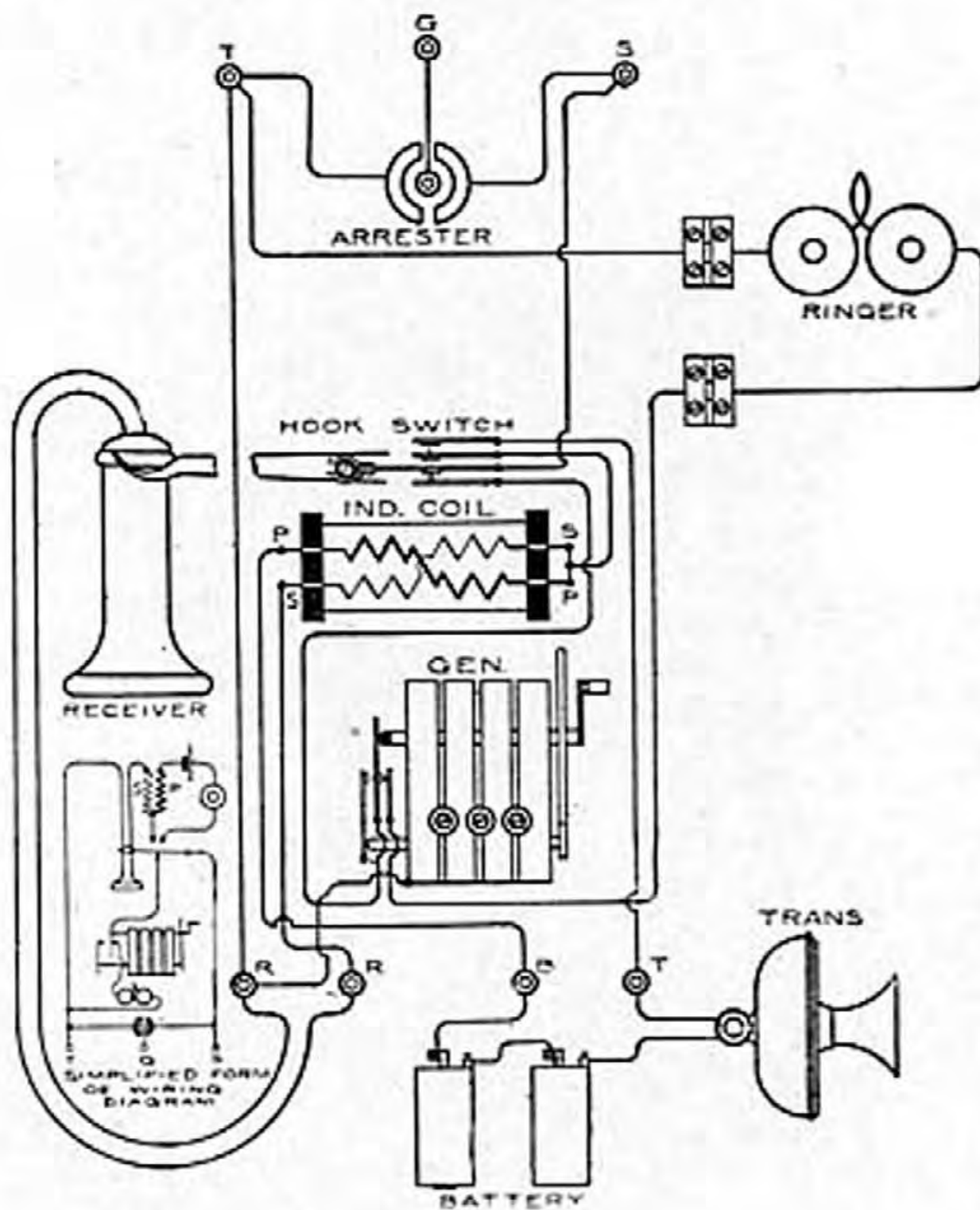
CIRCUIT #7278

SERIES SUB'S SET CIRCUIT REGULAR



CIRCUIT #2482

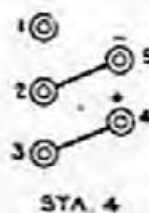
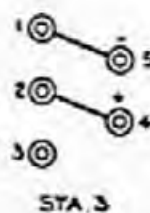
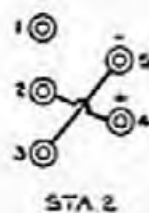
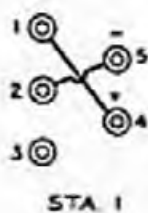
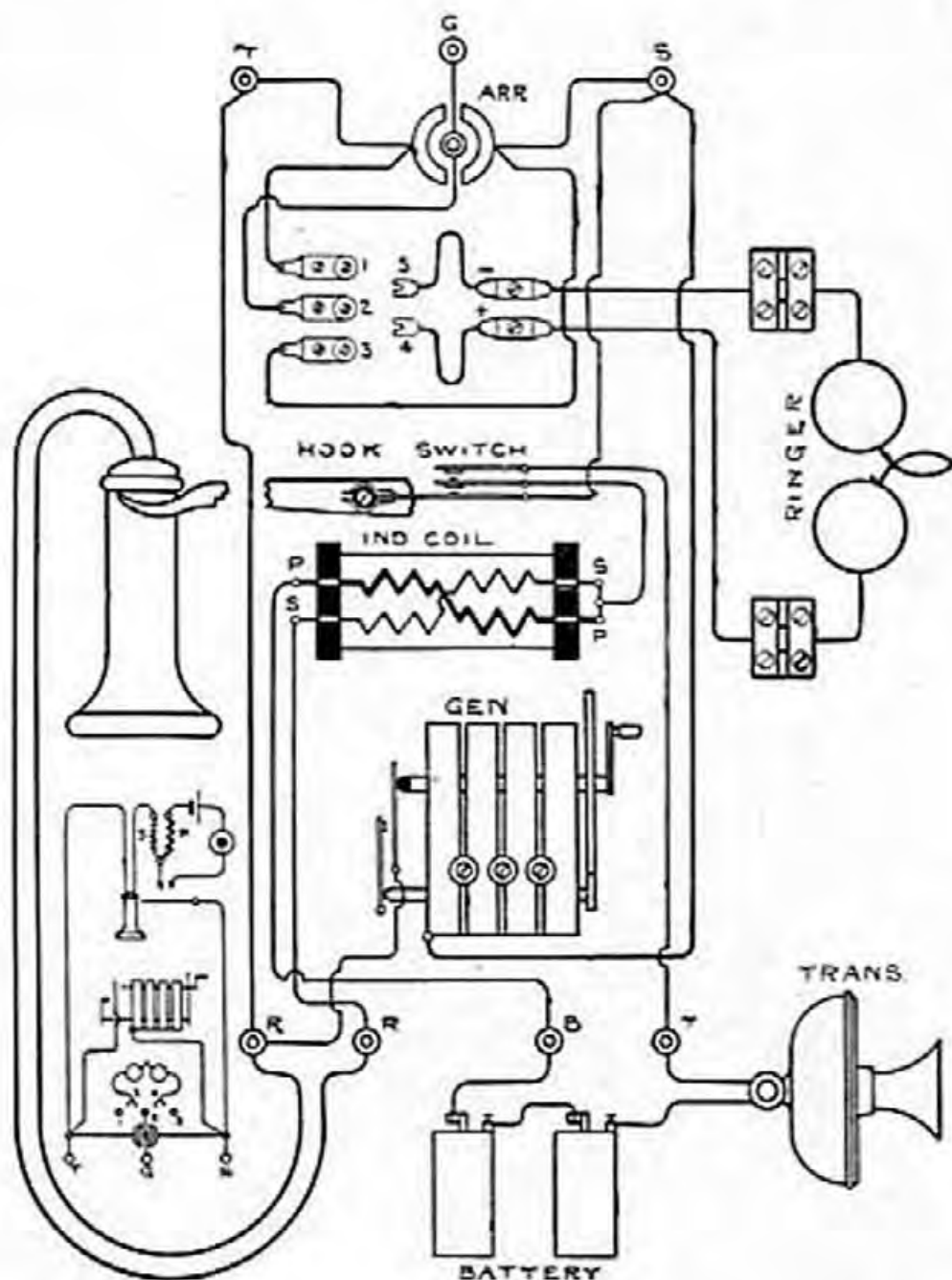
BRIDGING SUB'S. SET CIRCUIT REGULAR



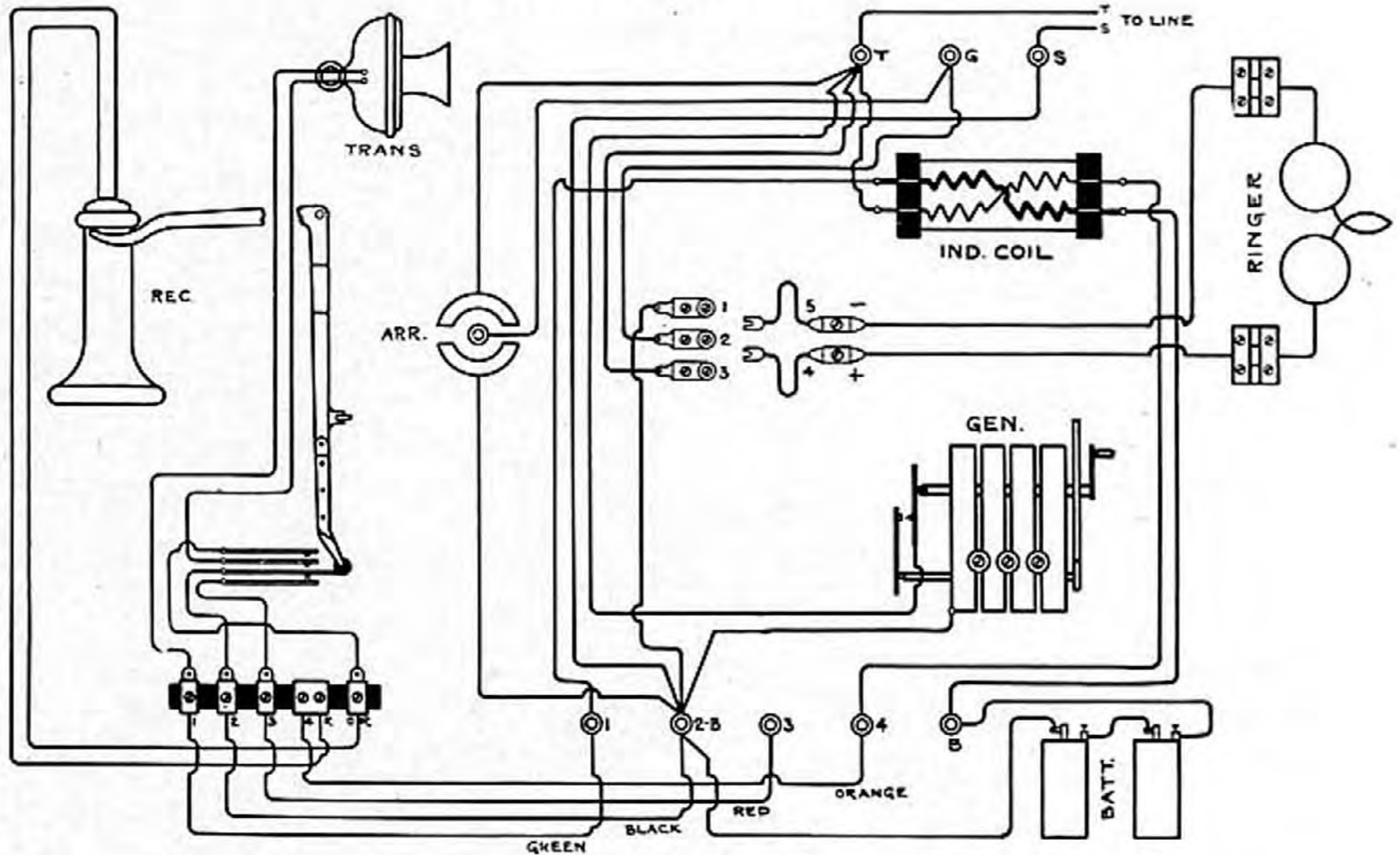
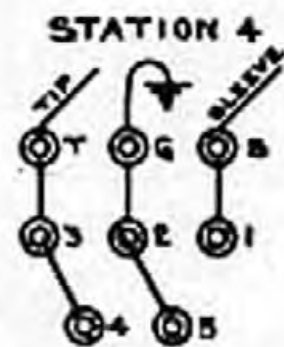
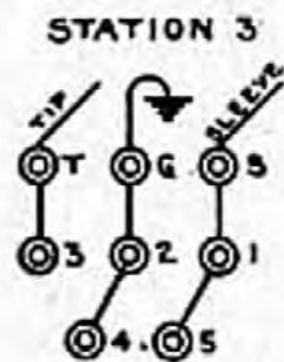
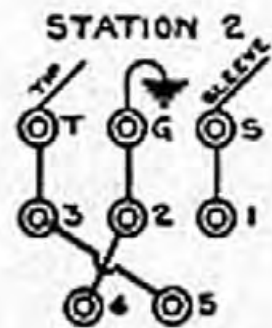
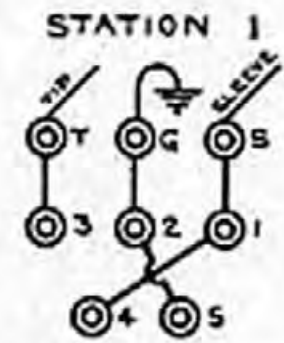
CIRCUIT # 751

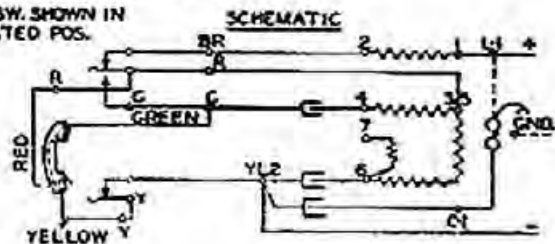
BRIDGING SUB'S. SET CIRCUIT

4 PARTY PULS.



CIRCUIT No. 10375 BRIDGING DESK SET CIRCUIT 4 PARTY PULSATING

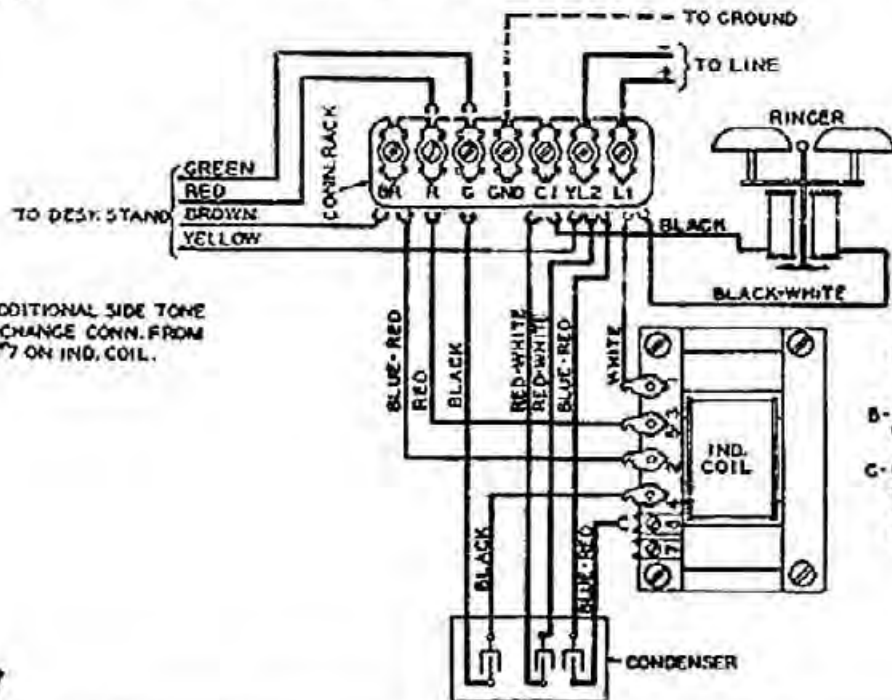


HOOK SW. SHOWN IN
OPERATED POS.

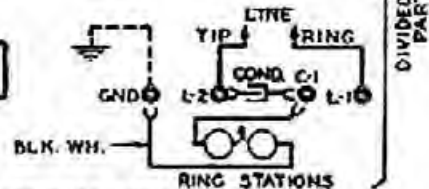
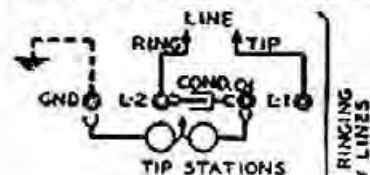
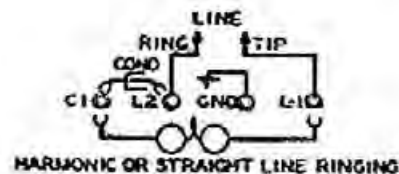
TRIAD CIRCUIT

DIVIDED RINGING
COMMON BATTERY 0.5.80X

21237



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

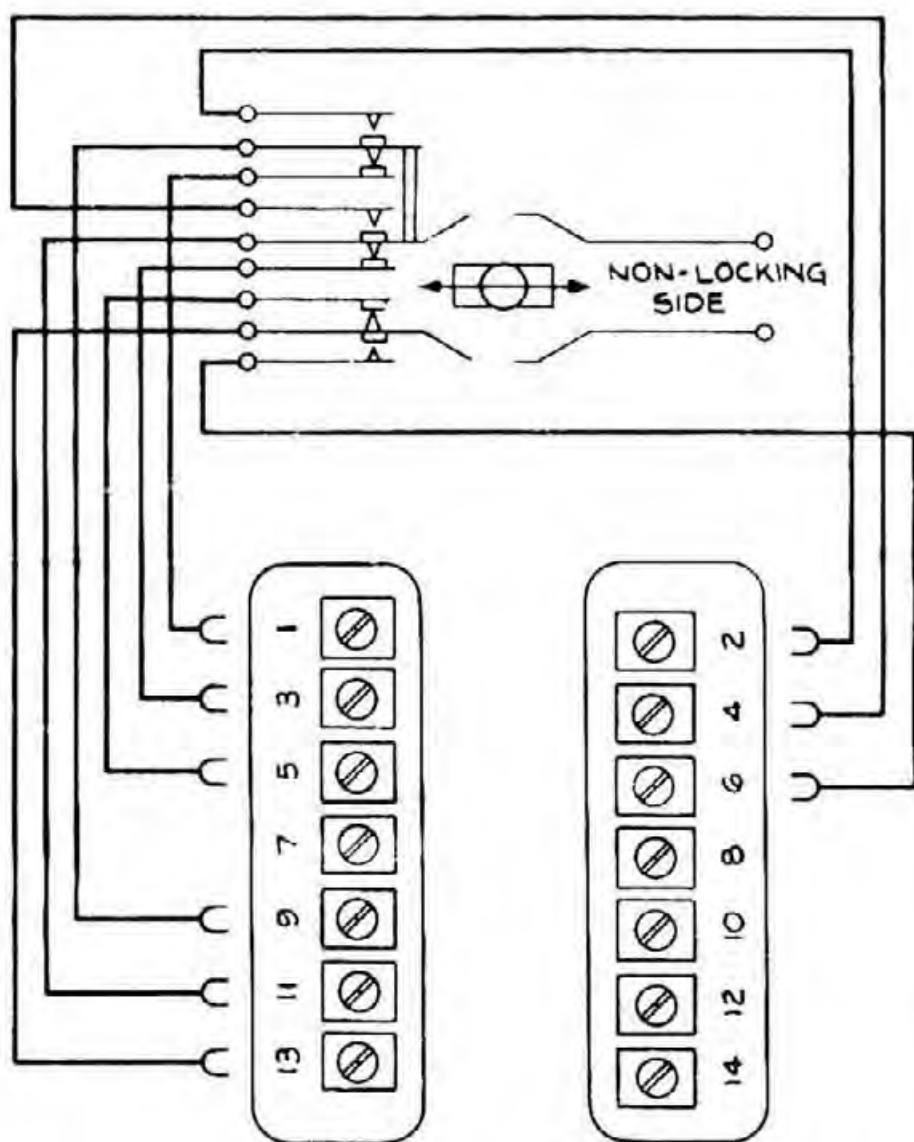
DIVIDED RINGING
PARTY LINES

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,
68 & 65%. FOR ALL OTHER RINGERS
USE P.M.F. CONDENSER.

21237

FIG. 1
31



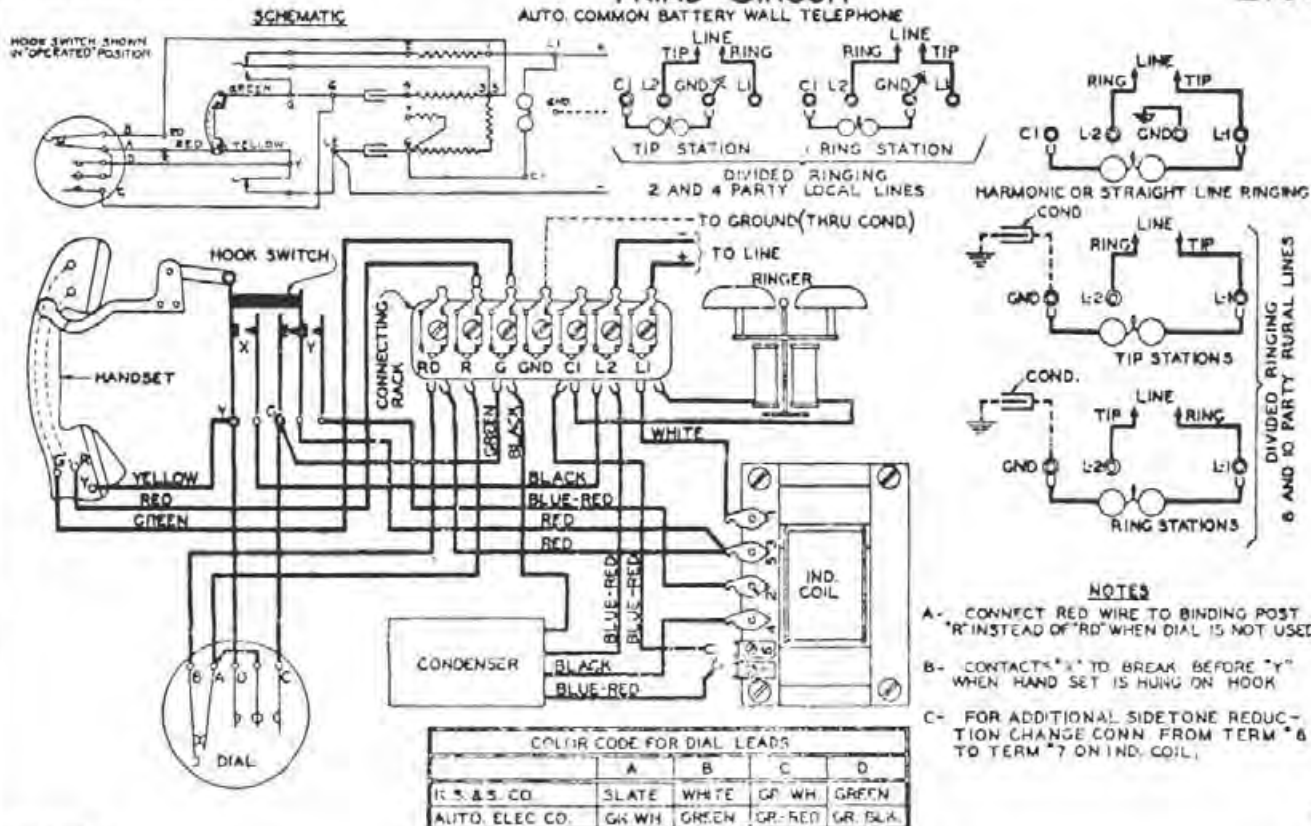
200281

1
ISSUE
NO.

TRIAD CIRCUIT

21096

AUTO. COMMON BATTERY WALL TELEPHONE



21096

9917 MASTERPHONE

8-24-1938

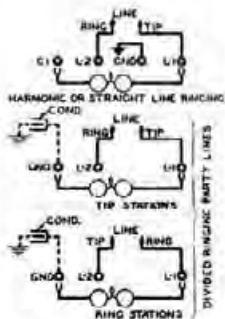
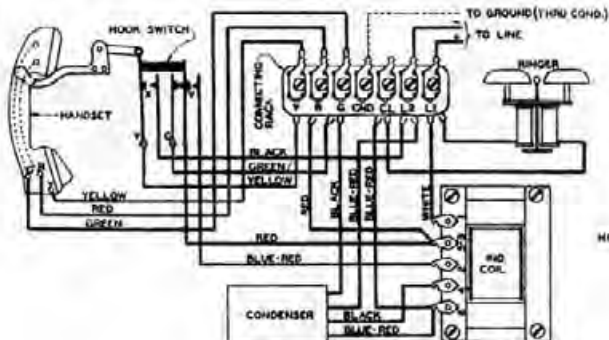
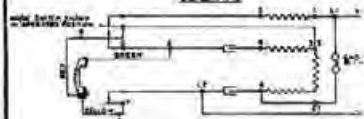
 8 74 34
 5 3 34
 17 20 34
 8 78 34

TRIAD CIRCUIT

COMMON BATTERY WALL TELEPHONE

21097

SCHEMATIC



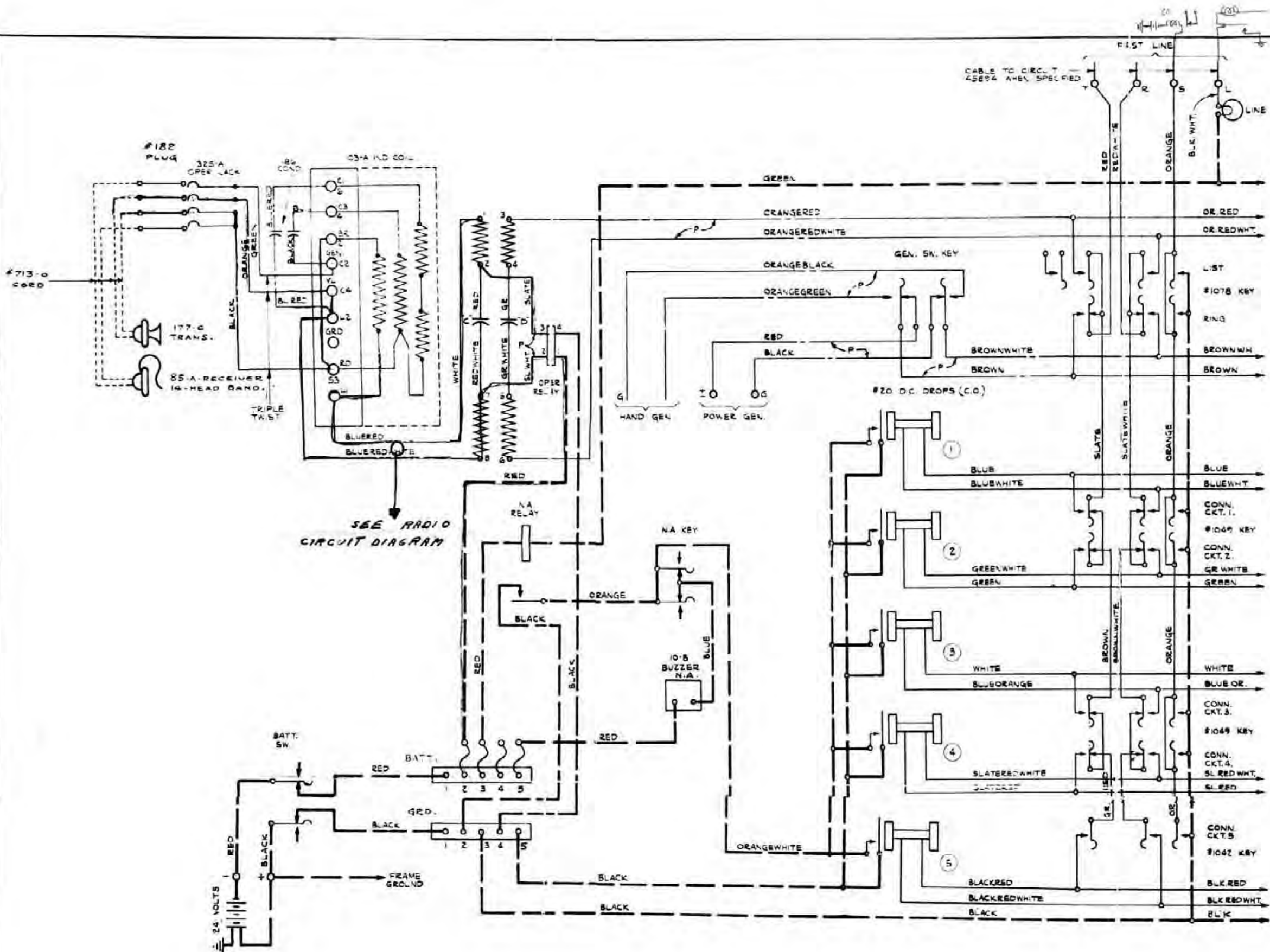
NOTE—A-A CONTACTS "X" TO BREAK BEFORE "Y" WHEN HAND SET IS HUNG ON HOOK.

21097

9900 MASTERPHONE

12-21-1936

45893



REL NO	CODE NO.	COIL RES	MECHANICAL REQUIREMENTS		DIRECT CURRENT FLOW IN AMPERES				REMARKS
			SPRING TENS ON TRAVEL	ARM. TRAVEL	TEST	READJUST	NON OPERATE	NON RELEASE	
N/A	2102-5-HG	3.5	15-G	.015	AFTER SOAK	OPERATE	OPERATE	.022	24 DC 45 VOLTS
OPER	2053-TZ	15	75		HOLD TERM.	OPERATE	OPERATE	.0015	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

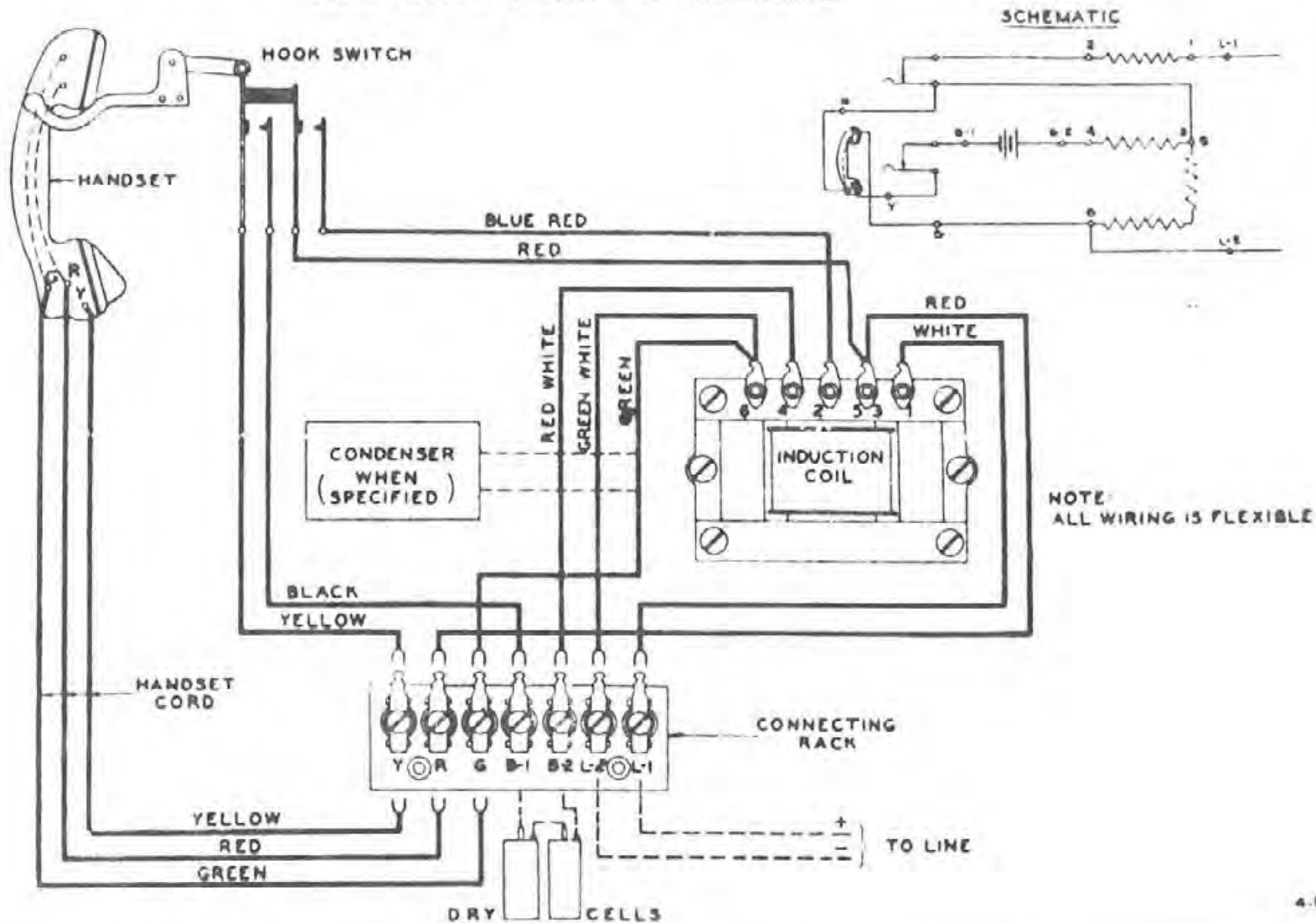
ISSUE NO.

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

TRIAD CIRCUIT

LOCAL BATTERY BRACKET TYPE MASTERPHONE

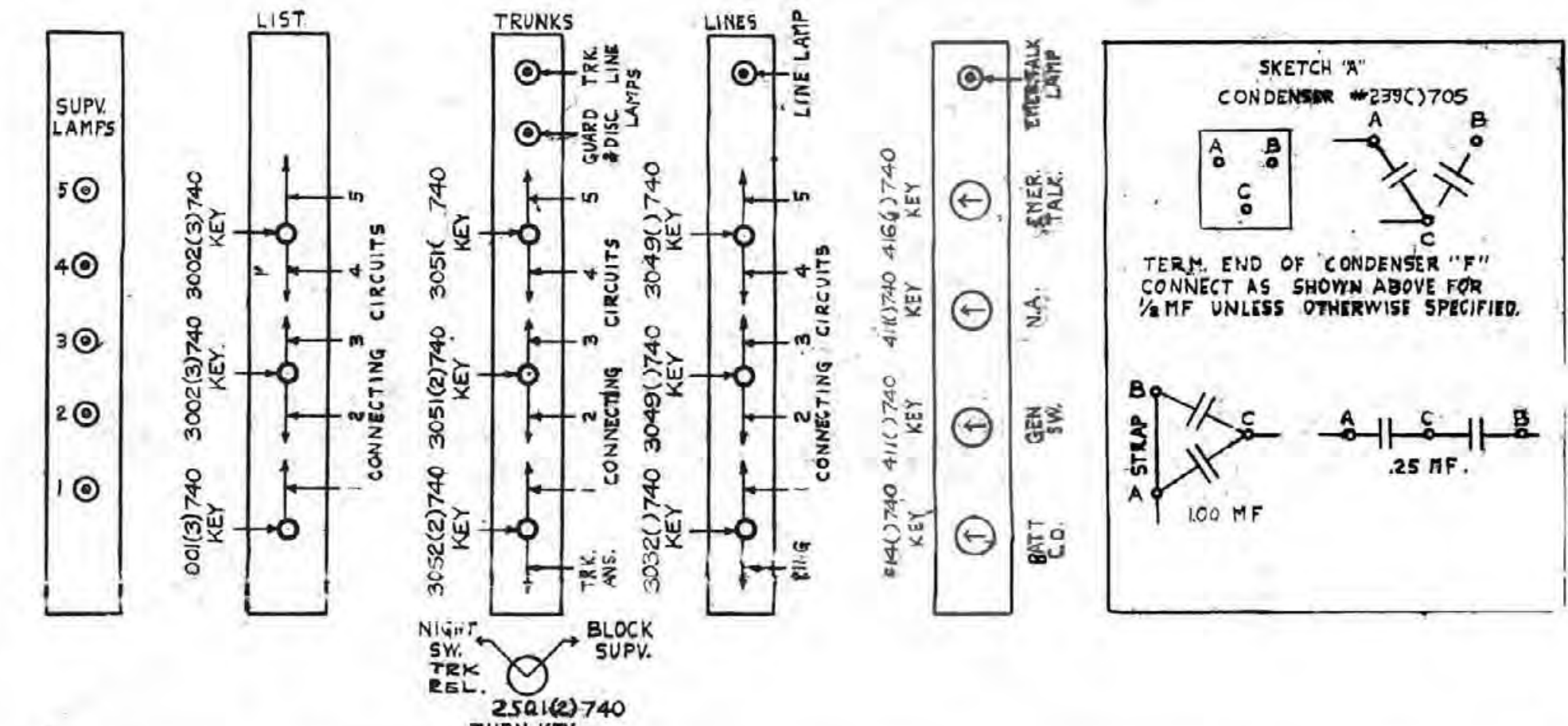
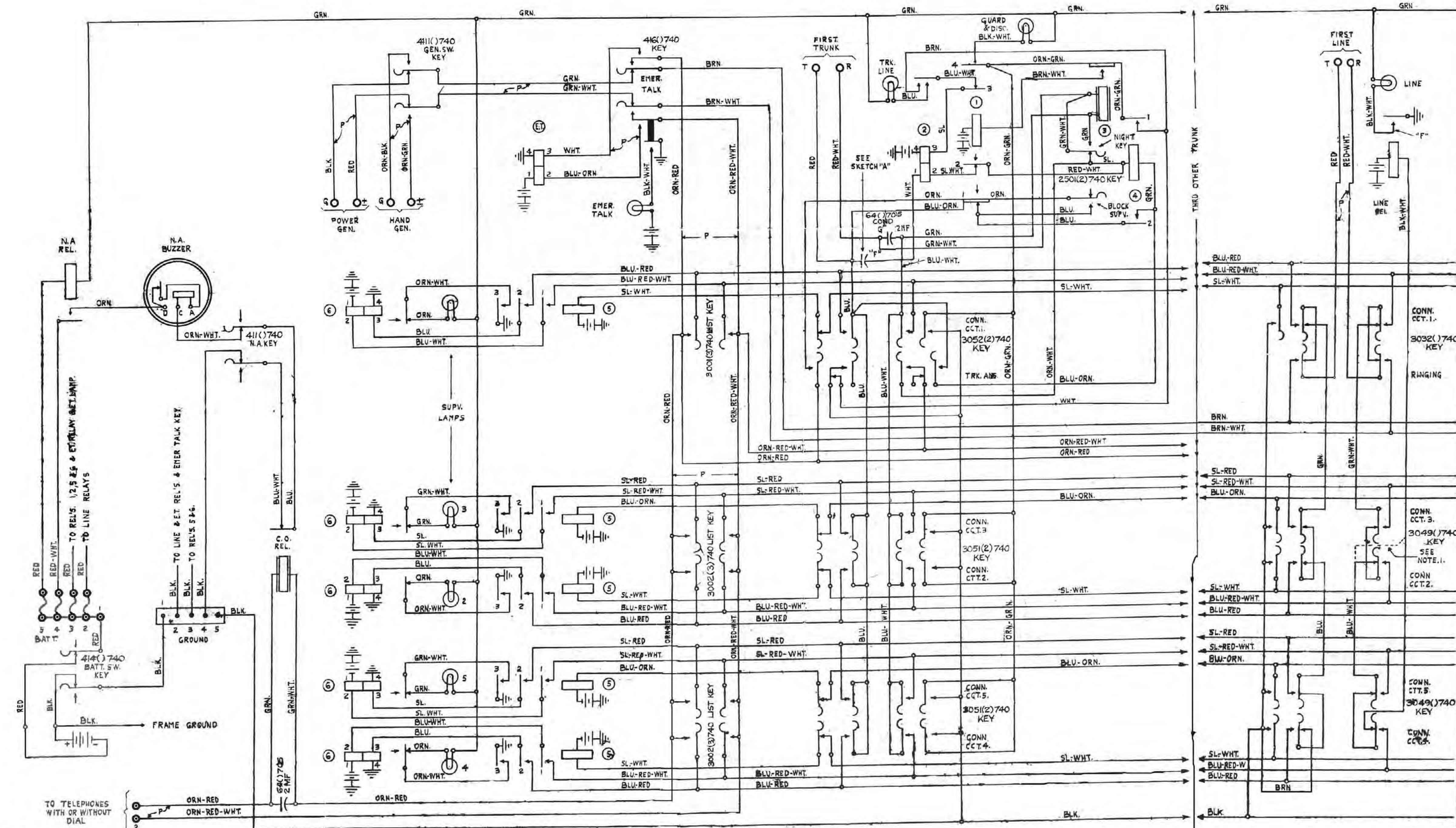
21199



21199

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.	RELISE	OPER.	NON OPER.		RELISE
1	2005-S-DG	800	15-G .015				.017			.014			24-VOLTS
1	2095-S-Y	2000	" "				.013			.0085			48-VOLTS
2	A-2093-C-EA	750	" "	132			.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	.008		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	.04		24 VOLTS
LINE	26(K)670	1000	" "				.018			.0028	.010		48-VOLTS
C.R.	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
 CHANGED CODE NO'S OF KEYS
 ISSUE 2. 2-21-55.
 IN REMARKS COLUMN OF REL. 2
 REMOVED RES. PIN. 003. PER
 CO. E-51-367. 11-1-55.
 ISSUE 3.
 CHANGED CODE NO'S OF KEYS
 PER ST. 5377 4-17-57
 CHG. CODE OF REL'S C & E.T.
 FROM TO L. PC & R.O. OF REL
 6 PER E-44-1018. 10-10-57
 ADDED F.G.C. PER ST. 000313
 ISSUE 6 E-44-1453 2-28-58

APPD. 4-17-57
 ENGR. F. 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.

BRIDGING SUB SET CIRCUIT

21031

A.C. GENERATOR - CONVERTIBLE TO COMM.

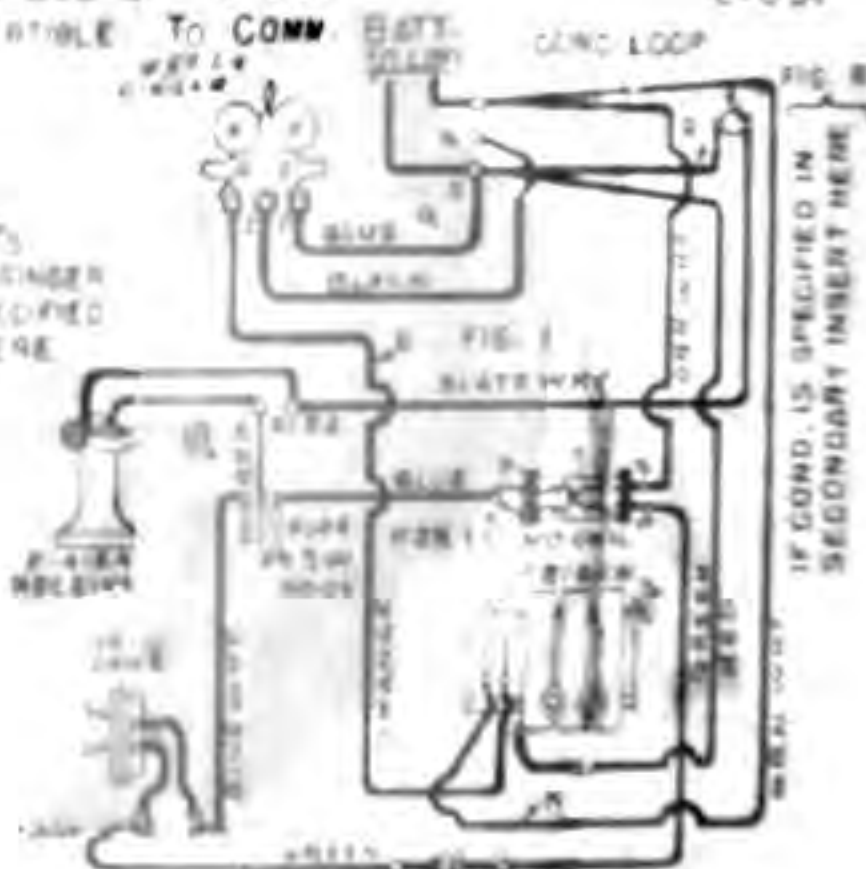


IF CONDENSER IN RINGER AND SECONDARY CKT OR FIG. 2 IS SPECIFIED CONNECT G TO A INSTEAD OF S

FIG. 4

TO RING OWN BELL STRAP LEADS E & K TOGETHER AT GEN. SPRINGS

FIG. 3
IF COND. IN RINGER CKT IS SPECIFIED INSERT HERE



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

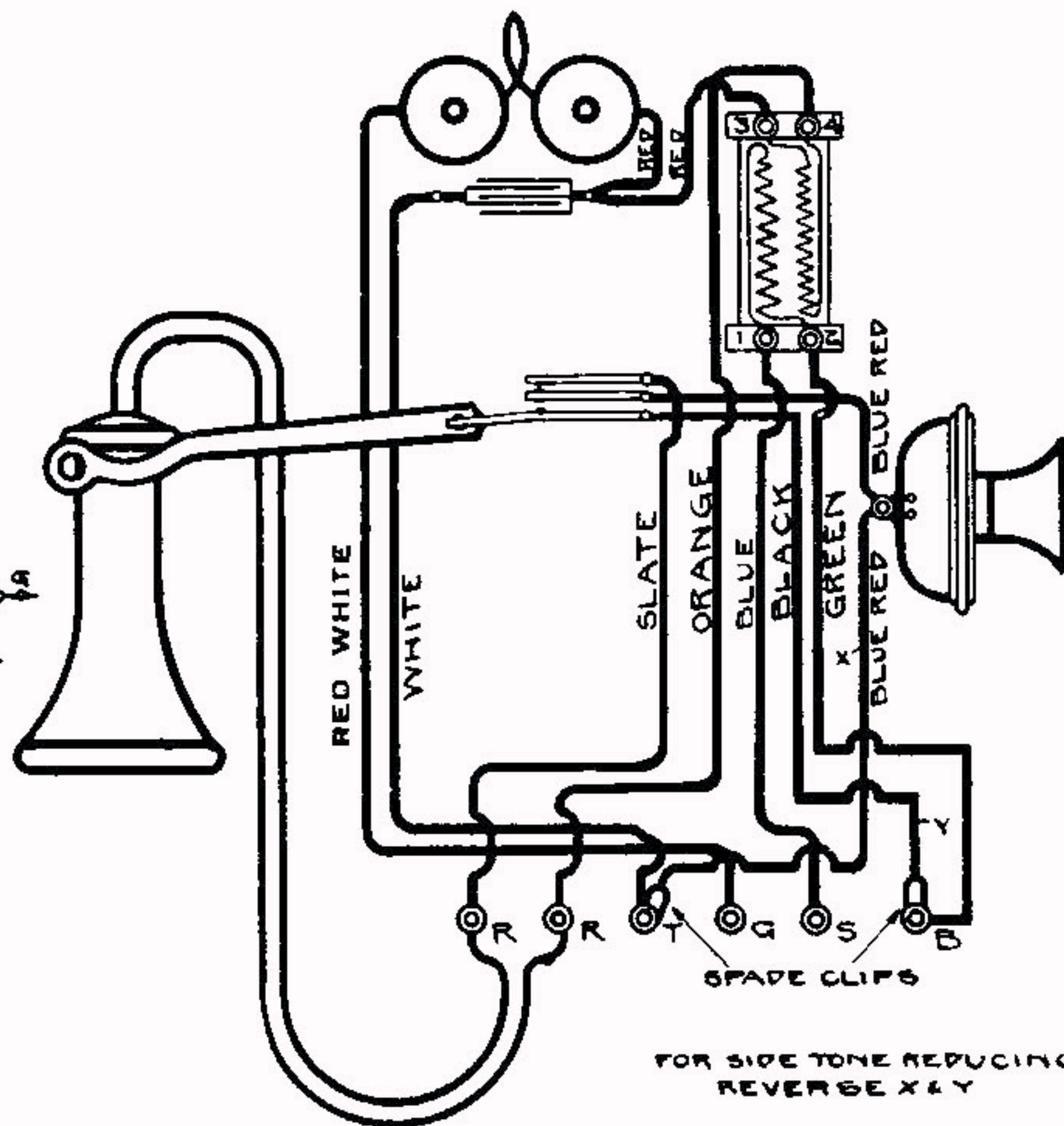
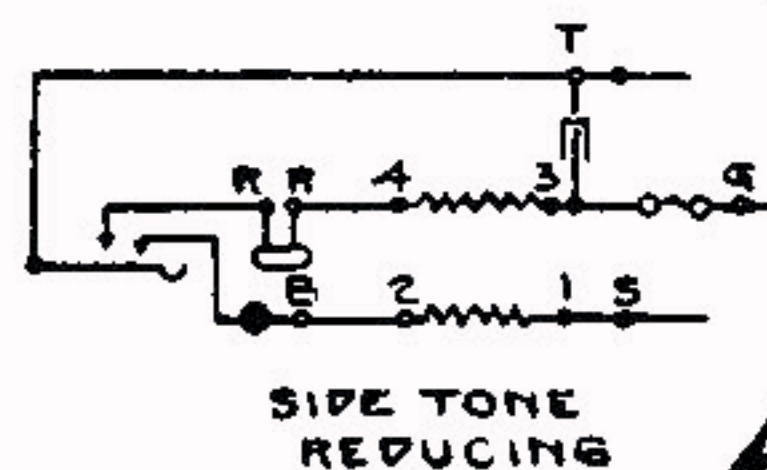
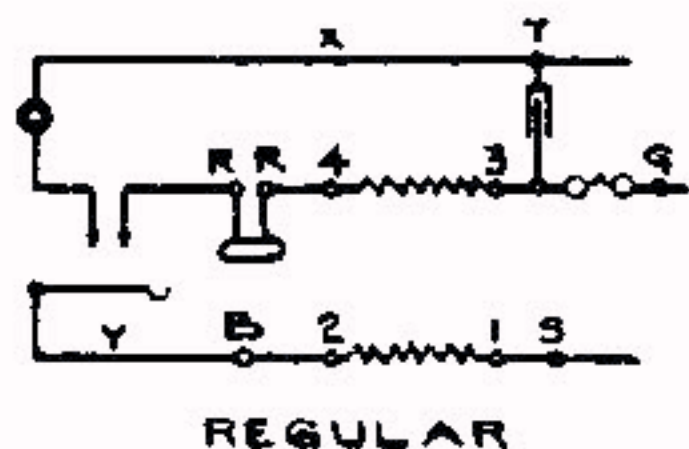
IF COND. IS SPECIFIED IN SECONDARY INSERT HERE

21031
21031

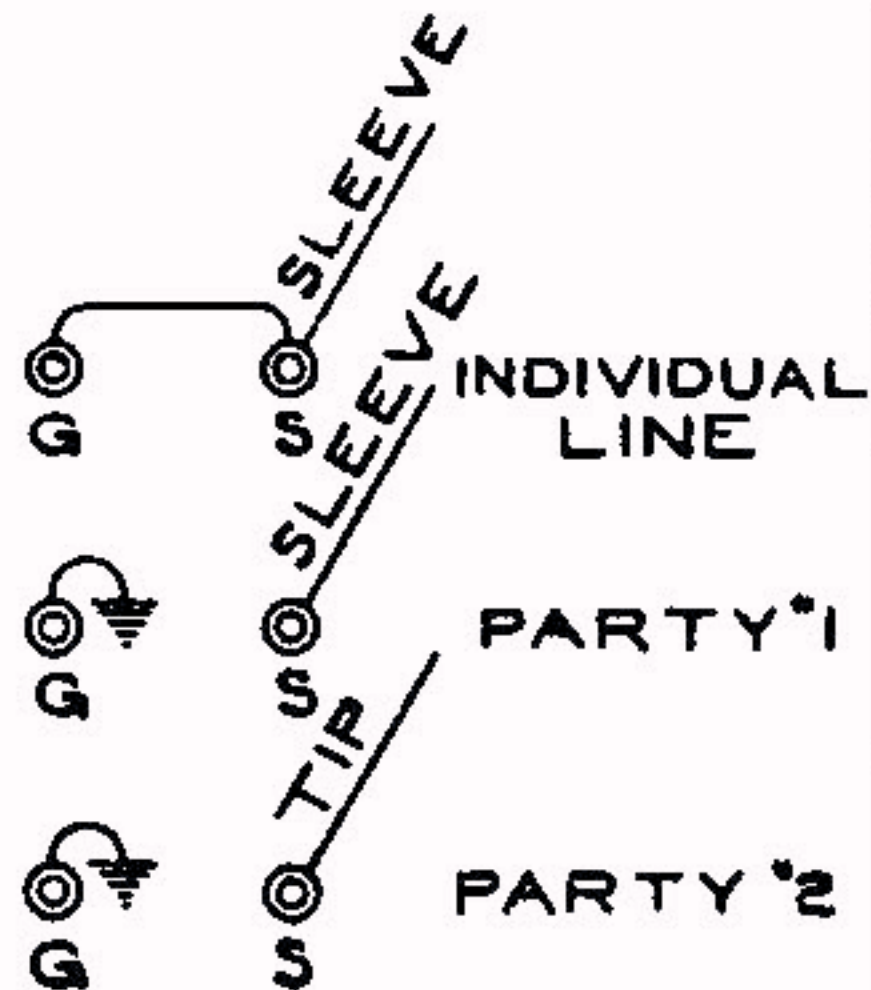
WE NEED SOME HELP WITH THIS ONE WHICH CAME FROM A FUZZY PHOTOGRAPH IF YOU HAVE A BETTER COPY OF 21031 PLEASE EMAIL IT TO US, THANKS

PHOTOGRAPHED IN A F-1983 WOOD HOTEL SET CIRCA 1950

WIRING OF COMM. BATT. HOTEL SET IND. COIL SIDE TONE REDUCING



TO TIP
TO SLEEVE



FOR SIDE TONE REDUCING
REVERSE X & Y

K-500 TYPE TELEPHONE CIRCUIT

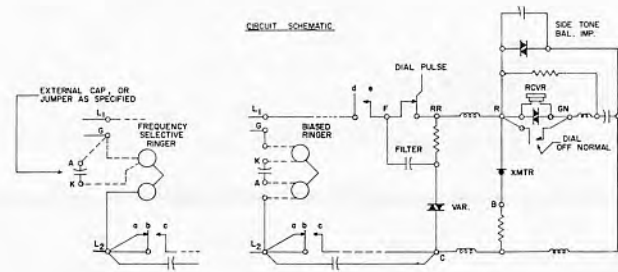
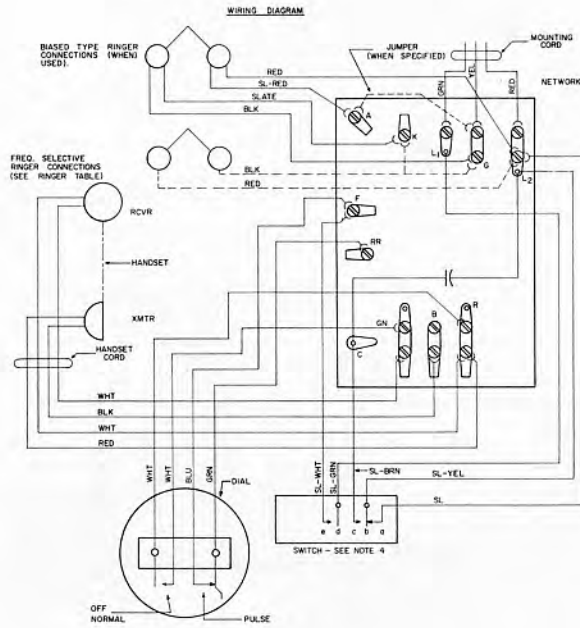


TABLE OF CONNECTIONS (BIASED RINGER) (SEE NOTES 1 TO 4)

CLASS OF SERVICE	CONNECTIONS AT CONNECTION BLOCK					CONNECTIONS AT NETWORK							
	LINE	MTG. CORD		MTG. CORD		RINGER LEADS		RINGER LEADS					
	RING	TIP	GND	RED	GR	YEL	RED	GR	YEL	RED	BLK	SL	SL-RED
BRIDGED Δ	R	G	Y	R	G	G	L ₂	L ₁	G	L ₂	G	*	A
RING PARTY Δ	R	G	Y	R	G	Y	L ₂	L ₁	G	L ₂	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	L ₂	L ₁	G	L ₂	G	K	A
TIP PARTY DIAL MESSAGE RATE *	R	G	Y	G	R	Y	L ₂	L ₁	G	K	G	B	B
AUTOMATIC TICKETING *	R	G	Y	G	R	Y	L ₂	L ₁	G	B	B	K	G

Δ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR FLAT AND MESSAGE RATE SERVICE.
* TRANSFER SLATE SWITCH LEAD FROM (L₂) 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 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 (G) 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. (CONTINUED ON NOTE 7).
 - RINGER CUT-OFF CONTROL BY CUSTOMER: BEND STOP NEAR 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 CONTACTS #4 CLOSE AND CONTACTS #5 REMAIN OPEN. WHEN HOOKSWITCH IS MOVED TO THE "TALK" POSITION CONTACTS #5 CLOSE.
 - CONNECT BLACK RINGER LEAD TO THE (G) TERMINAL ON THE NETWORK.
 - CONNECT BLACK RINGER LEAD TO THE (K) TERMINAL ON THE NETWORK AND CONNECT JUMPER FROM (A) TO (G).
 - FOR FREQUENCY SELECTIVE RINGERS TRANSFER RED RINGER LEAD FROM (L₂) TO (K) ON NETWORK.

TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	CY	PTY	UF	CONNECTIONS IN SET
HA 1	33 1/3	1	35	SEE NOTE 5
HA 2	50	2	1	5
HA 3	66 2/3	3	1	5
HA 4	16 2/3	4	-	6
HA 5	25	5	-	6
HB 1	30	1	-	6
HB 2	42	2	25	5
HB 3	54	3	1	5
HB 4	66	4	1	5
HB 5	16	5	-	6
HC 1	20	1	-	6
HC 2	40	2	1	5
HC 3	30	3	-	6
HCA 1	40	4	25	5
HCS	50	5	1	5

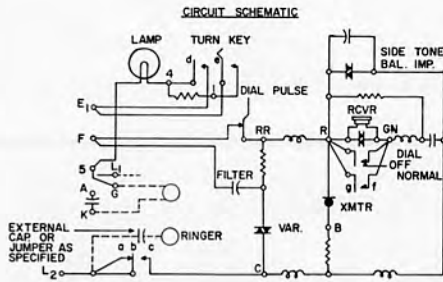
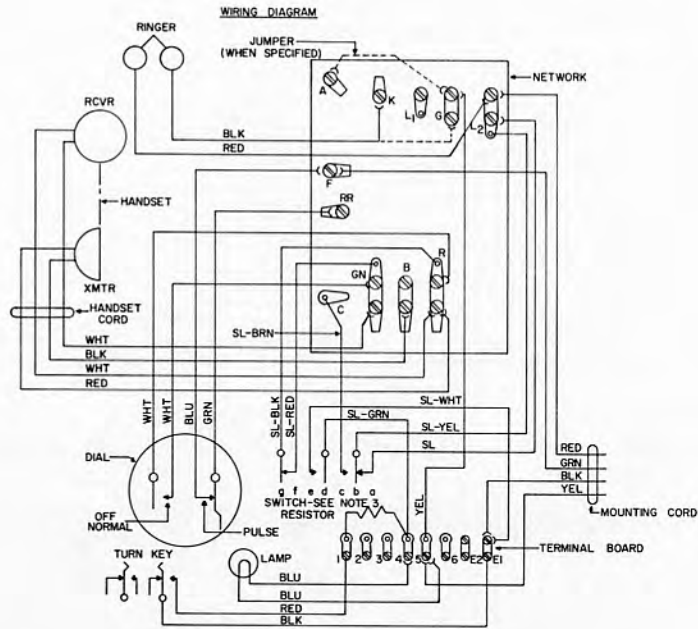
CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

RINGING SERVICE	CONNECTIONS AT CONNECTION BLOCK					CONNECTIONS AT NETWORK							
	LINE	MTG. CORD		MTG. CORD		RINGER LEADS		RINGER LEADS					
	RING	TIP	GND	RED	GR	YEL	RED	GR	YEL	RED	BLK	SL	SL-RED
BRIDGED	R	G	Y	R	G	G	L ₂	L ₁	G	L ₂	G	*	A
RING PARTY	R	G	Y	R	G	Y	L ₂	L ₁	G	L ₂	G	K	A
TIP PARTY	R	G	Y	G	R	Y	L ₂	L ₁	G	L ₂	G	K	A

* IF GROUND WIRE IS BROUGHT TO CONNECTING BLOCK

K-500 TYPE TELEPHONE CIRCUIT

(DIAL LIGHT - NIGHT LIGHT)



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. WHEN HANDSET IS REMOVED CONTACT OF BREAKS LAST.
4. CONNECT BLACK RINGER LEAD TO TERMINAL (G) ON THE NETWORK.
5. CONNECT BLACK RINGER LEAD TO TERMINAL (L) ON THE NETWORK, AND CONNECT JUMPER FROM (A) TO (G).

TABLE OF CONNECTIONS FOR FREQUENCY SELECTIVE RINGERS

CLASS OF SERVICE	CONNECTIONS AT CONNECTING BLOCK								CONNECTIONS AT NETWORK				
	LINE			MTG. CORD			DIAL LIGHT POWER 5-BV		MTG. CORD				
	RING	TIP	GRD	RED	GRN	YEL	BLK	AC	OR DC	RED	GRN	YEL	BLK
BRIDGED	R	G	Y	R	G	G	B	G	B	L ₂	F	5*	E ₁ *
RING PARTY	R	G	Y	R	G	Y	B	Y	B	L ₂	F	5*	E ₁ *
TIP PARTY	R	G	Y	G	R	Y	B	Y	B	L ₂	F	5*	E ₁ *

* - TERMINALS "5" AND "E₁" ARE ON TERMINAL BOARD.

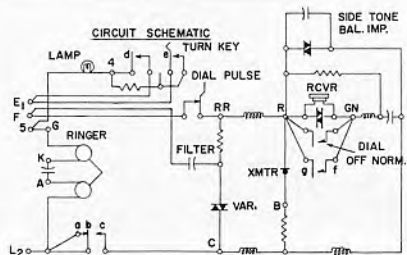
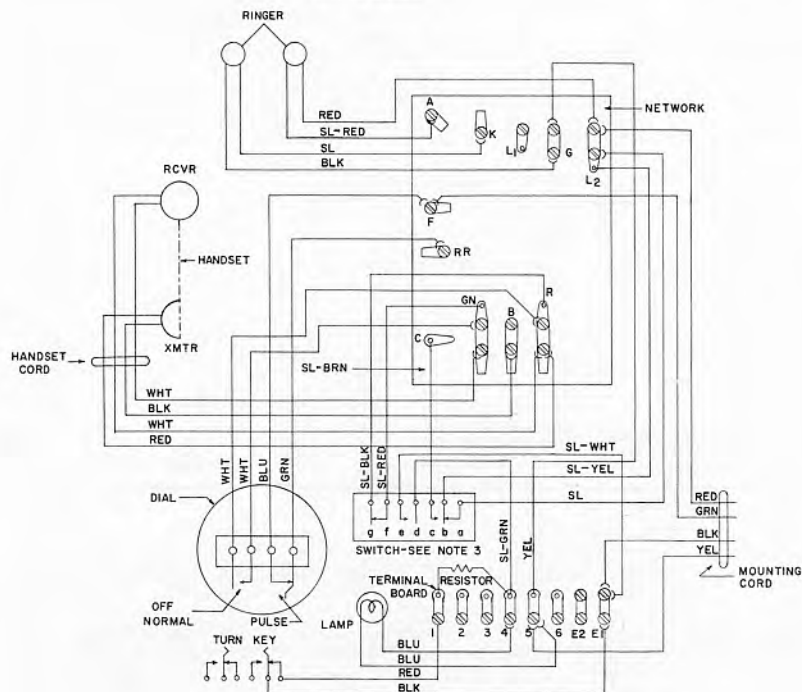
TABLE OF RINGERS

FREQUENCY SELECTIVE (HARMONIC) TYPES	CYCLES	EXTERNAL CAPACITOR U/F	CONNECTIONS IN SET
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	60	.1	4
HC3	30	—	5
HC4	40	.25	4
HC5	50	.1	4

K-500 TYPE TELEPHONE CIRCUIT

(DIAL LIGHT - NIGHT LIGHT)

WIRING DIAGRAM



NOTES:

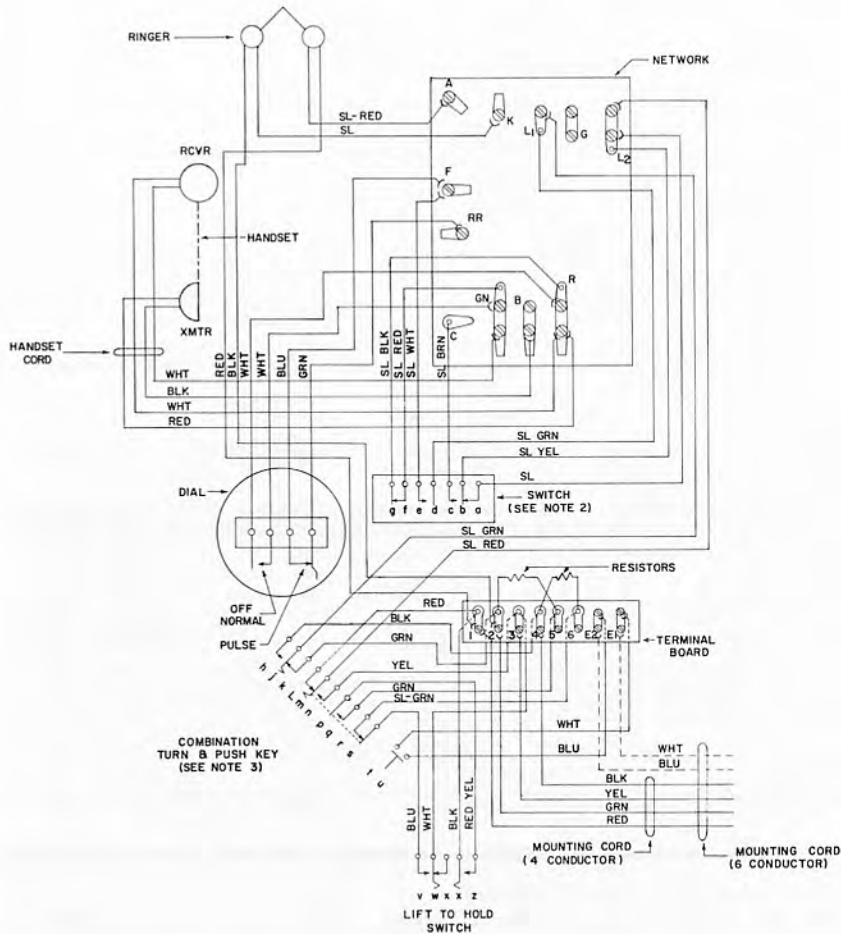
- 1- TO PERMANENTLY SILENCE RINGER:
FOR BRIDGED, RING PARTY AND TIP PARTY TRANSFER BLACK RINGER LEAD TO (K) TERMINAL ON NETWORK.
- 2- RINGER CUT-OFF CONTROL BY CUSTOMER:
BEND STOP NEXT TO DETENT ON RINGER VOLUME CONTROL SO THAT IT COMPLETELY CLEARS THE RIM OF THE RINGER FRAME. THIS PROVIDES A FURTHER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

CLASS OF SERVICE	TABLE OF CONNECTIONS FOR BIASED RINGERS																
	CONNECTIONS AT CONNECTION BLOCK						CONNECTIONS AT NETWORK										
	LINE	MTG. CORD		DIAL LIGHT		MTG. CORD		RINGER LEADS		RINGER LEADS							
RING	TIP	GND	RED	GRN	YEL	BLK	POWER	6-BY DC-AC	RED	GRN	YEL	BLK	RED	BLK	SL	SL-RED	
BRIDGED Δ	R	G	Y	R	G	B	G	B	L2	F	5*	E1*	L2	G	K	A	
RING PARTY Δ	R	G	Y	R	G	Y	B	Y	B	L2	F	5*	E1*	L2	G	K	A
TIP PARTY EXCEPT DIAL MESSAGE RATE	R	G	Y	G	R	Y	B	Y	B	L2	F	5*	E1*	L2	G	K	A

Δ CONNECTIONS FOR BRIDGED AND RING PARTIES ARE FOR FLAT AND MESSAGE RATE SERVICE:
* TERMINAL "5" & "E1" ARE ON TERMINAL BOARD.

K-575 TYPE TELEPHONE CIRCUIT

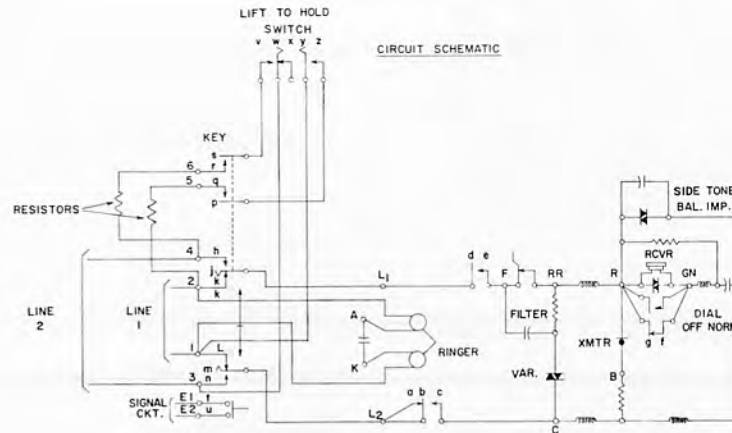
WIRING DIAGRAM



NOTES:

1. FOR MANUAL SERVICE, REPLACE DAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
2. WHEN THE HANDSET IS REMOVED FROM CRADLE CONTACT qf BREAKS LAST.
3. WHEN TURN SPRING ASSY. IS OPERATED, CONTACTS pq SHALL MAKE BEFORE CONTACTS jk AND lm BREAK. FOLLOWING THIS, CONTACTS hj AND mn SHALL MAKE BEFORE CONTACTS rs BREAK.
4. TO PERMANENTLY SILENCE RINGER, TRANSFER RED RINGER LEAD TO (K) TERMINAL ON NETWORK.
5. 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 THE VOLUME CONTROL WHICH PREVENTS ARMATURE MOVEMENT.

CIRCUIT SCHEMATIC

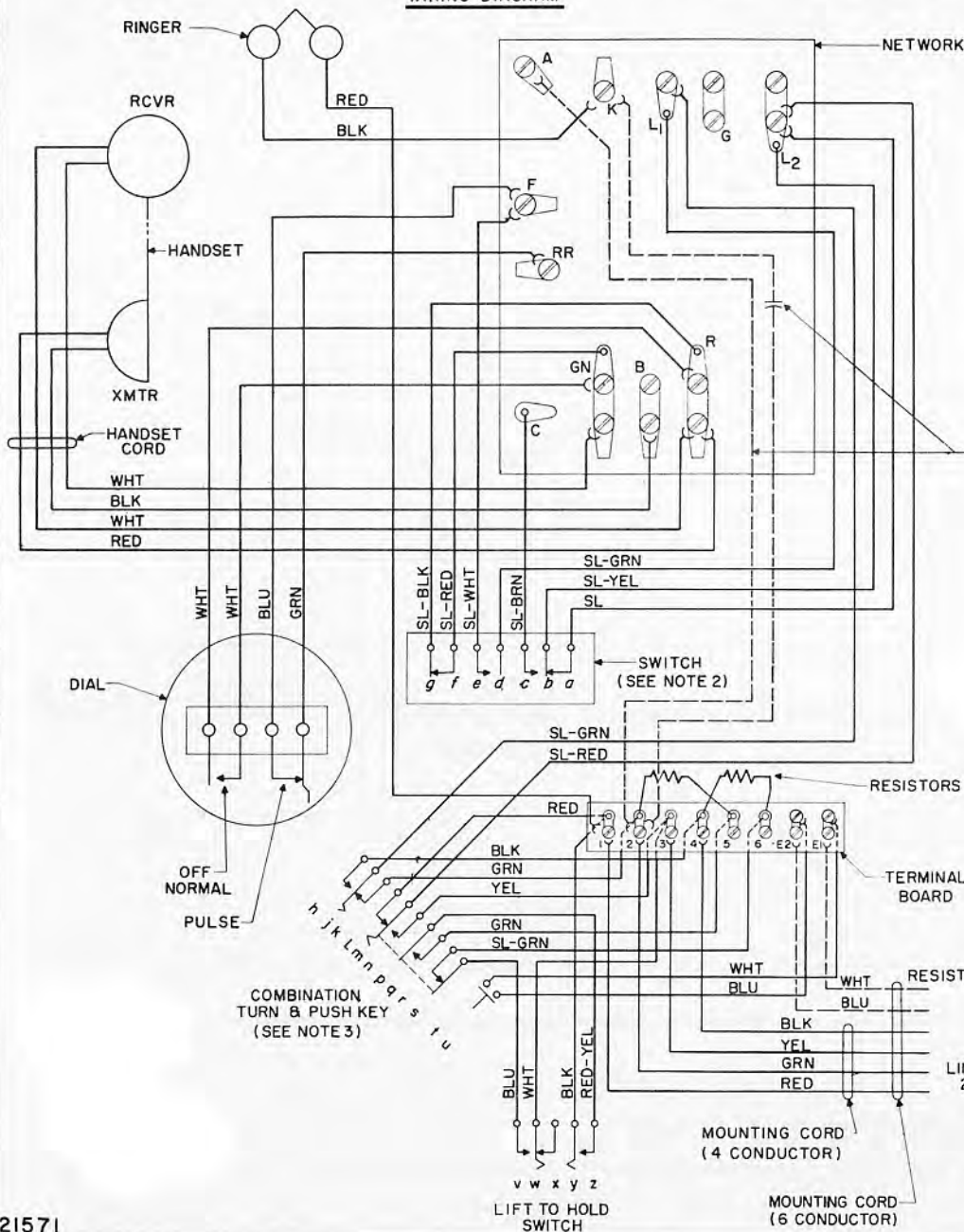


K-575 TYPE TELEPHONE CIRCUIT

WIRING DIAGRAM

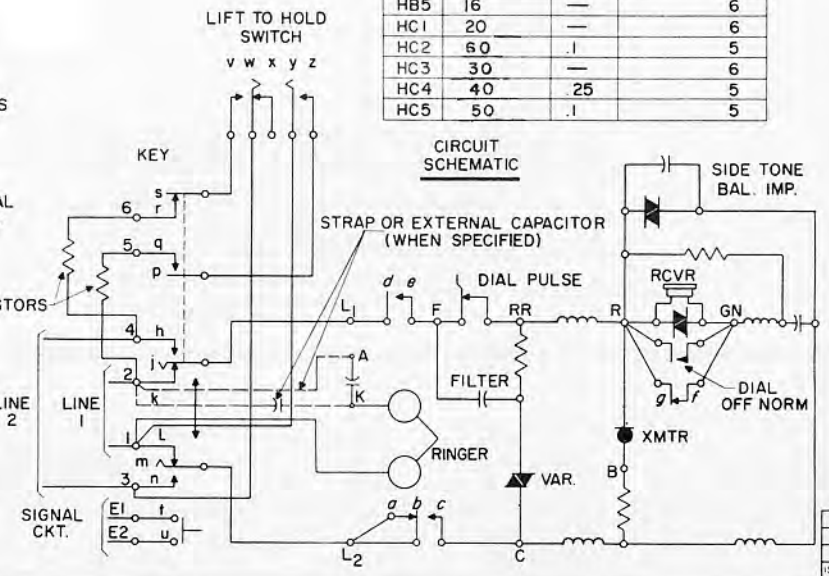
NOTES:

- 1-FOR MANUAL SERVICE:
REPLACE DIAL WITH DUMMY PLUG ASSEMBLY AND TRANSFER SLATE-WHITE SWITCH LEAD TO (RR) TERMINAL ON NETWORK.
- 2-WHEN THE HANDSET IS REMOVED FROM CRADLE, CONTACT *gf* BREAKS LAST.
- 3-WHEN TURN SPRING ASSY IS OPERATED, CONTACTS *pq* SHALL MAKE BEFORE CONTACTS *jk* AND *lm* BREAK. FOLLOWING THIS, CONTACTS *hj* AND *mn* SHALL MAKE BEFORE CONTACTS *rs* BREAK.
- 4-TO PERMANENTLY SILENCE RINGER, TRANSFER RED RINGER LEAD TO (K) TERMINAL ON NETWORK.
- 5-MOUNT CAPACITOR FURNISHED WITH RINGER ON LEFT SIDE OF DIAL BRACKET, CONNECT THE LEADS OF THE CAPACITOR BETWEEN (K) TERMINAL ON THE NETWORK AND (2) ON THE TERMINAL BOARD.
- 6-CONNECT JUMPER BETWEEN (A) TERMINAL ON THE NETWORK AND (2) ON THE TERMINAL BOARD.



STRAP OR EXTERNAL CAPACITOR (WHEN SPECIFIED)

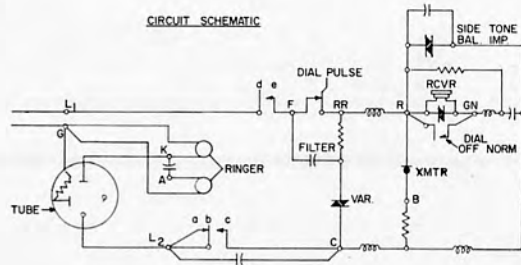
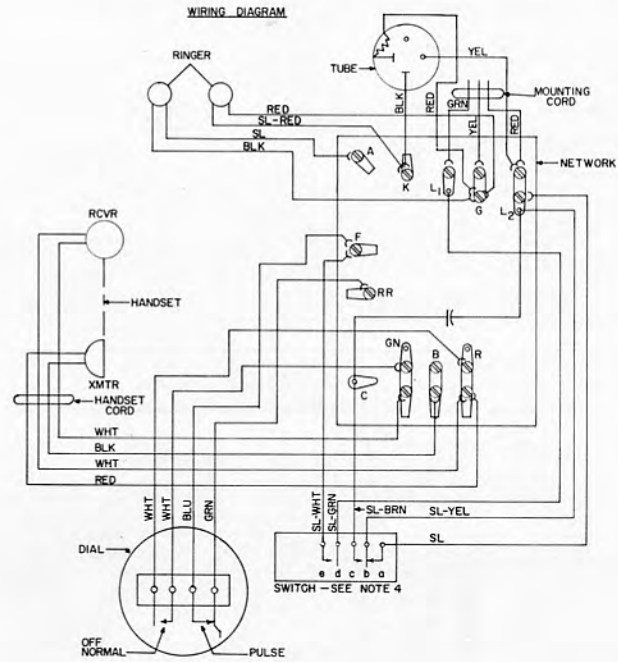
TABLE OF RINGERS			
FREQUENCY SELECTIVE (HARMONIC) TYPES	VALUE OF EXTERNAL CAPACITOR	CONNECTIONS IN SET	
PTY.	CYCLES	LIF	
HA1	33 1/3	.35	SEE NOTE 5
HA2	50	.1	5
HA3	66 2/3	.1	5
HA4	16 2/3	—	6
HA5	25	—	6
HB1	30	—	6
HB2	42	.25	5
HB3	54	.1	5
HB4	66	.1	5
HB5	16	—	6
HC1	20	—	6
HC2	60	.1	5
HC3	30	—	6
HC4	40	.25	5
HC5	50	.1	5



CIRCUIT SCHEMATIC

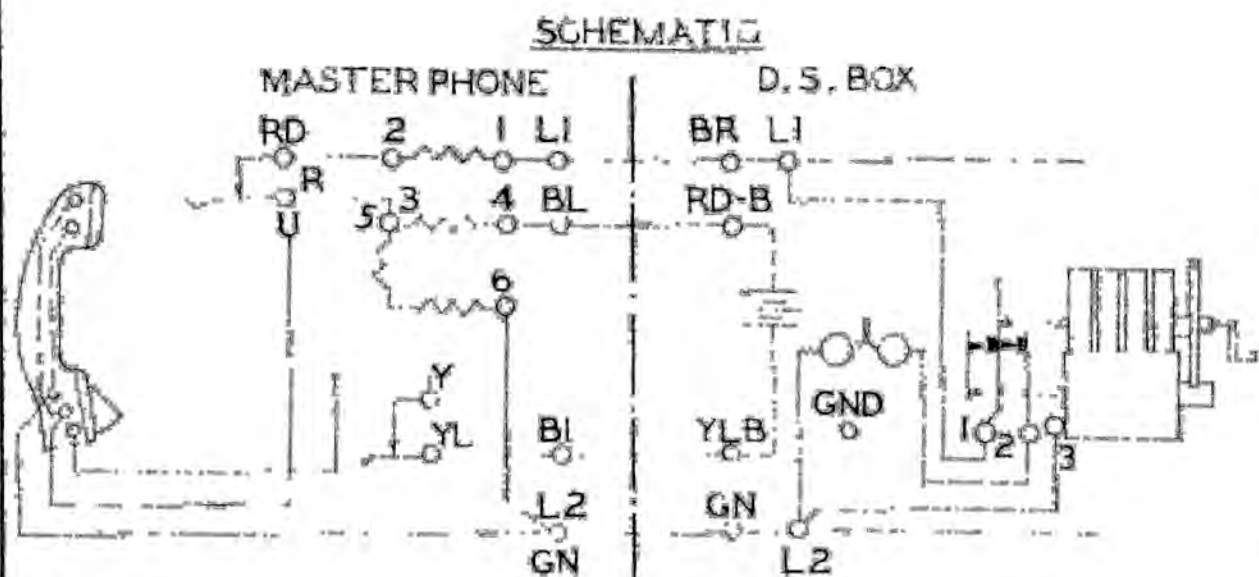
21571

K-500 TYPE TELEPHONE CIRCUIT



CLASS OF SERVICE	TABLE OF CONNECTIONS (POLARIZED RINGING)												
	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	K
(+) RING	R	G	Y	R	G	Y	G	K	L2	L2	L2	A	K
(-) TIP	R	G	Y	G	R	Y	L2	K	G	G	G	A	K
(+) TIP	R	G	Y	G	R	Y	G	K	L2	L2	L2	A	K

- 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:
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.
- WHEN THE HANDSET IS REMOVED CONTACTS *de* CLOSE AND CONTACTS *bc* REMAIN OPEN. WHEN HOOKSWITCH IS MOVED TO THE "TALK" POSITION, CONTACTS *bc* CLOSE.



NOTE: ALL WIRING IS FLEXIBLE.

ROOM SWITCH SHOWN IN OPERATING POSITION.

FIG. 2

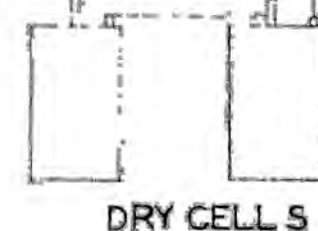
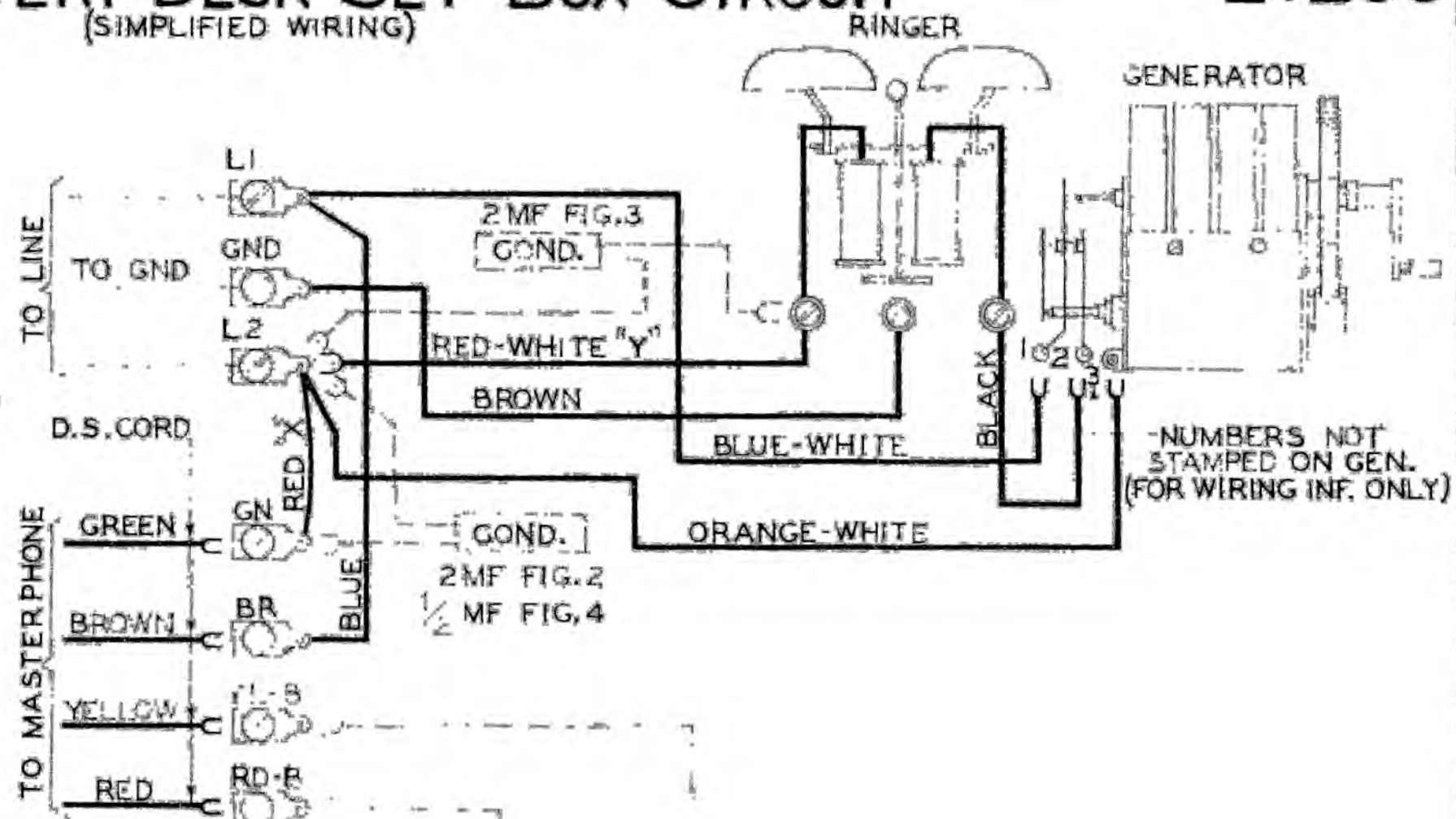
WHEN COND. IN RECEIVER AND RINGER CKT. OR FIG. 2 IS SPECIFIED CONNECT COND. AS SHOWN REMOVE STRAP "X" AND CONNECT WIRE "Y" TO BINDING POST GN INSTEAD OF L2.

FIG. 3

WHEN COND. IN RINGER CKT. OR FIG. 3 IS SPECIFIED CONNECT COND. AS SHOWN AND OMIT WIRE "Y".

FIG. 4

WHEN COND. IN RECEIVER CKT. OR FIG. 4 IS SPECIFIED CONNECT COND. AS SHOWN AND REMOVE STRAP "X".



5-30-57
8-23-37
4-7-37

RINGER CONNECTIONS FOR STRAIGHT LINE OR PARTY LINE SERVICE

