

## SUBSCRIBER SETS—634YT

### LOCAL BATTERY — CONNECTIONS

#### 1.00 INTRODUCTION

This section covers the combination of apparatus, circuit diagrams, and connections for the 634YT subscriber set when associated with hand telephone sets for local battery talking — common battery signaling service.

1.01 This section is reissued to give 3-element tube connections at negative ring and tip parties of 4-party full selective and 8-party semi-selective lines to prevent bell tap and possible false test for tip party in ANI step-by-step offices.

1.02 Due to extensive changes, marginal arrows have been omitted.

1.03 This item is rated "Manufacture Discontinued."

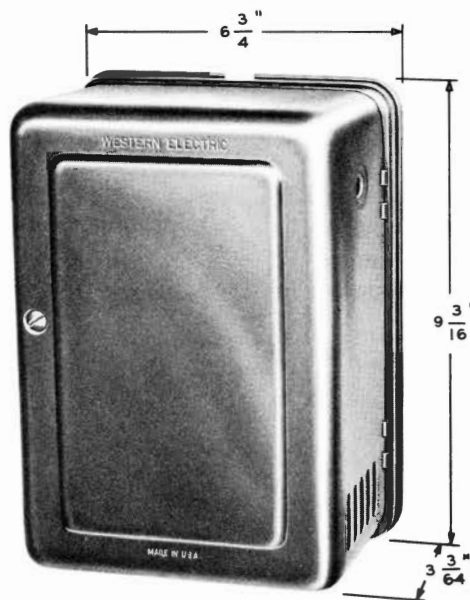


Fig. 1 — 634-Type

TABLE A — COMBINATION OF APPARATUS

Sub. Set Code	Components			
	Induction Coil	Capacitor	Ringer	Electron Tube
634YT	104A or 113D	149D, 449D, 149B, or 449B	6A, 7A, 8A, 68A, or B3C	313A, 313C, 333A, or 426A

**2.00 GENERAL**

**2.01** The 634YT subscriber set may be used in combination with hand telephone sets to provide service at local battery talking — common battery signaling stations; however, its use is not recommended when the hand telephone set is equipped with an F- or G-type handset.

**2.02** These sets may come equipped with either a 104A or 113D induction coil, but the coils are not interchangeable in the field. The corresponding terminals of the two coils are given below:

104A — L1	RBK	C	A	BL	SL
113D — S	S1	S2	S3	P	P

**2.03** Means are provided in the sets whereby any one of four different network connections, A to D, may be made in the induction coil balancing circuit to obtain a satisfactory sidetone balance when sets are used on the different types of subscriber loops employed in the plant.

**2.04** Unless otherwise specified, sets are furnished with the A network, as shown in the circuit diagrams herein. Necessary changes in the set to obtain the other networks are shown as follows:

**SETS EQUIPPED WITH 104A INDUCTION COILS**

**Network B:** Connect a KS-8058, 400-ohm, or KS-13490, List 2, 390-ohm resistor between A on induction coil and BK. Connect black lead from capacitor to wood screw. (See note 1.)

**Network C:** Connect yellow lead from capacitor to C on induction coil and connect one end of black strap on C to wood screw.

**Network D:** Connect black lead from capacitor to wood screw and connect one end of black strap on C to BK.

**SETS EQUIPPED WITH 113D INDUCTION COILS**

**Network B:** Connect a 63FD or KS-8058, 280-ohm, or KS-13490, List 2, 300-ohm resistor between S3 on induction coil and BK. (See notes 1 and 2.)

**Network C:** Connect white lead from S3 on induction coil to wood screw and connect black lead from capacitor to BK.

**Network D:** Connect black strap from S2 on induction coil to BK.

**Notes**

1. The 63FD or KS-8058, 280- or 400-ohm, or KS-13490, List 2, 300-ohm resistor is not furnished as part of the set and must be obtained separately.

2. To make this connection, the white lead from S3 on induction coil should be connected to any unused terminal on the set and the resistor should be connected between the terminal and BK. If there is no unused terminal, an extra terminal should be added to the set.

**2.05** When dry cells are employed for transmitter battery supply, they shall be connected in series with the battery terminals of the subscriber set using the number of cells specified in the section which covers transmission zoning.

**2.06** Where stations receive transmitter battery supply from a common source, a filter is necessary in each transmitter circuit. This filter and its connections are covered in the section which deals with battery supply filters.

**3.00 CONNECTIONS**

**3.01** To connect the subscriber set to its associated hand telephone set, the appropriate circuit diagram herein should be matched with

the circuit diagram on the foldout page in the section covering the connections for the hand telephone set or coin collector. It should be noted that changes in the wiring of the subscriber set are required in some cases; therefore, the connection tables should be followed closely.

**3.02** Connections in table form are also given for each type of subscriber connection. Table C covers the connections when individual source of transmitter battery is employed, and Table E covers the connections when transmitter battery is obtained from a common source.

**3.03** When inductive noise is encountered due to power and telephone lines being in proximity, the negative parties can be protected under average inductive conditions by connecting the electron tube control gap between the tip and ring of the line rather than from one side of the line to ground.

**3.04** The positive parties must be equipped with 4-element electron tubes in order to realize the increased main gap protection between the signaling side of the line and ground.

**3.05** Connections for use when average induction is encountered are shown in Table F, and when severe induction is encountered in Table G.

TABLE B — ASSOCIATED APPARATUS

Class of Service	Hand Telephone Set	
	Desk Type	Hang-up Type
4-Party Selective	202E, F, G, or H	201A, B, C, or D
8-Party Semiselective	215A, B, C, or D	211E, F, G, or H 213A, B, E, or C

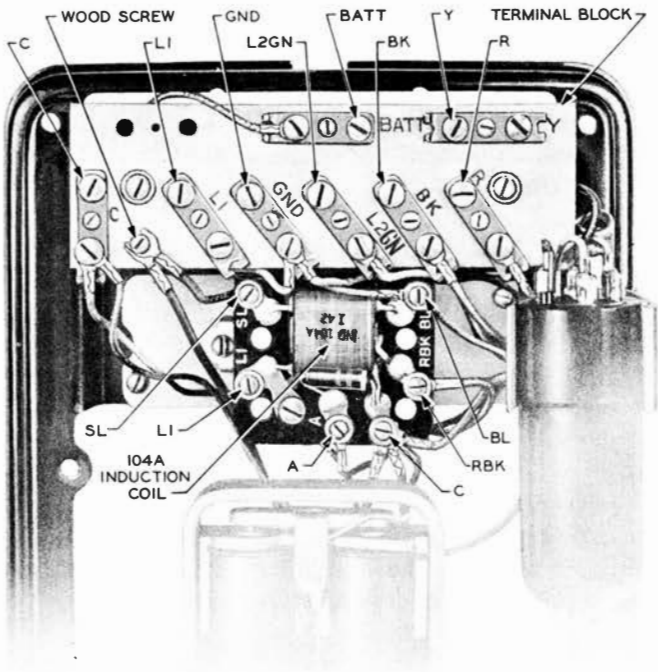
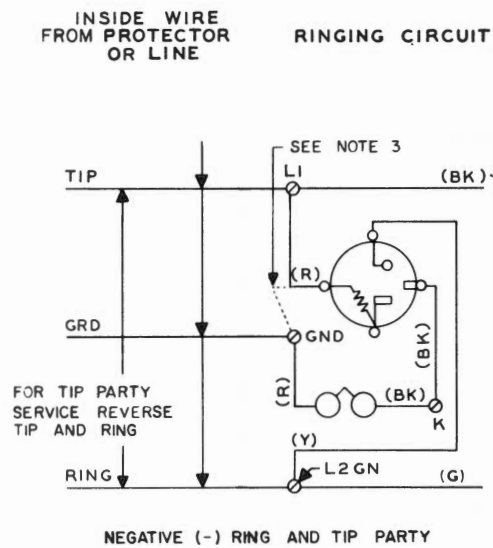


Fig. 2 — 634YT

TABLE C — CONNECTIONS

Wire or Lead		Negative (−) Parties		Positive (+) Parties	
		Ring Positions 1 and 5	Tip Positions 2 and 6	Ring Positions 3 and 7	Tip Positions 4 and 8
Mounting Cord or Local Wiring	R	R	R	R	R
	Y	Y	Y	Y	Y
	BK	BK	BK	BK	BK
	GN	L2GN	L2GN	L2GN	L2GN
Ringer Lead	R	GND	GND	L2GN	L2GN
	BK	K	K	K	K
Electron Tube Lead	R	L1	L1	L2GN	L2GN
	Y	L2GN	L2GN	GND	GND
	BK	K	K	K	K
Inside Wire from Protector or Line	Ring	L2GN	L1	L2GN	L1
	Tip	L1	L2GN	L1	L2GN
	GND	GND	GND	GND	GND

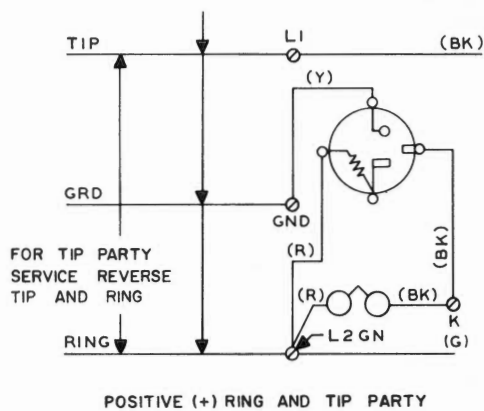
Extension stations without ringer shall be connected in the same way as the associated main station, except that both leads from ringer shall be connected to terminal K.



NOTE 1: TO SILENCE RINGER PERMANENTLY, CONNECT RED AND BLACK RINGER LEADS TO TERMINAL K.

NOTE 2: FOR ADDITIONAL INFORMATION ON INDUCTIVE INTERFERENCE, REFER TO SECTION ENTITLED INDUCTIVE NOISE.

NOTE 3: FOR NEGATIVE STATIONS IN OFFICES WITHOUT AN I RED LEAD FROM TUBE MAY BE CONNECTED TO GRD TERMINAL INSTEAD OF TERMINAL L1 IF RINGER OPERATION IS MARGINAL.



## TALKING CIRCUIT

MTG CORD OR LOCAL WIRING

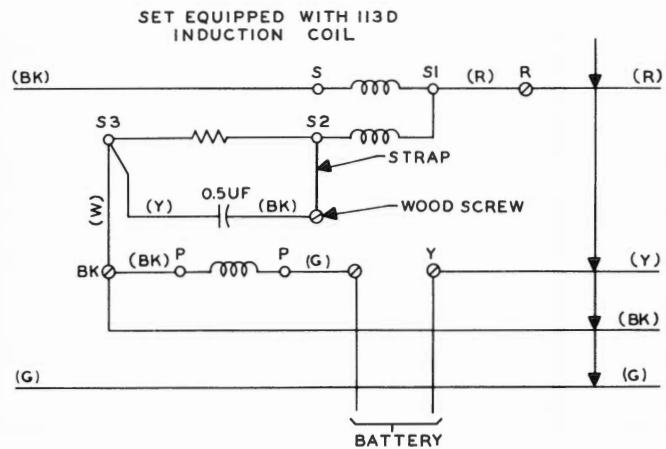
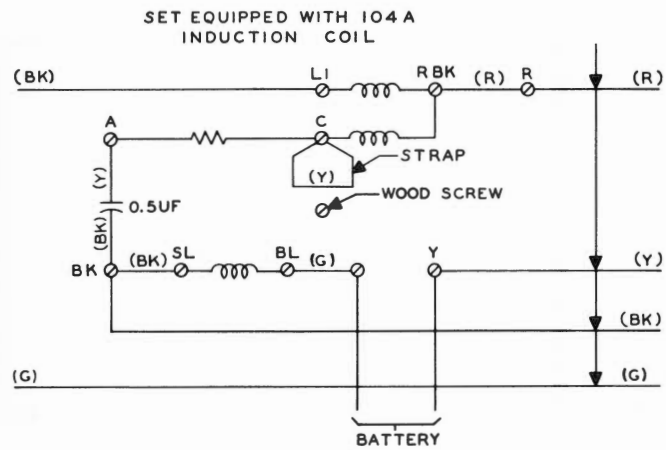


Fig. 3 — 634YT Subscriber Set  
Local Transmitter  
Battery Supply

TABLE D — ASSOCIATED APPARATUS

Class of Service	Hand Telephone Set	
	Desk Type	Hang-up Type
4-Party Selective 8-Party Semiselective	207A, B, C, or D	211E, F, G, or H (Modified)

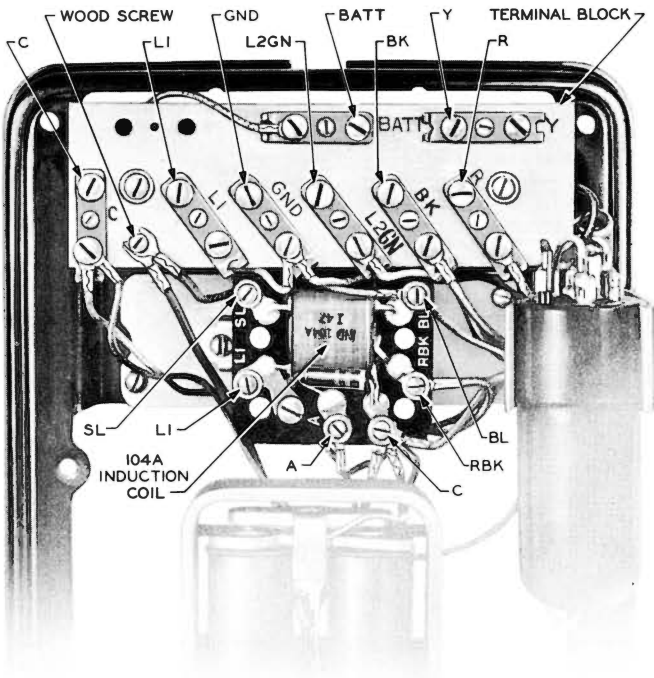


Fig. 4 — 634YT

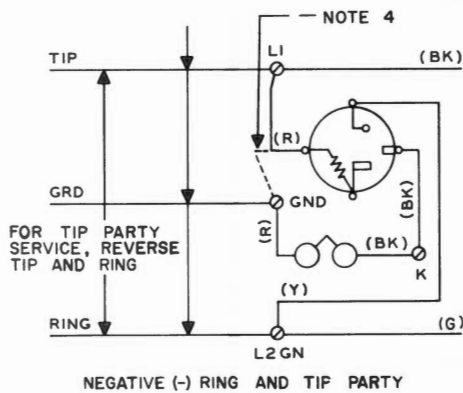
TABLE E — CONNECTIONS

Wire or Lead		Negative (−) Parties		Positive (+) Parties	
		Ring Positions 1 and 5	Tip Positions 2 and 6	Ring Positions 3 and 7	Tip Positions 4 and 8
Mounting Cord or Local Wiring	R	R	R	R	R
	W	BK	BK	BK	BK
	Y	Y	Y	Y	Y
	BL	*	*	*	*
	GN	L2GN	L2GN	L2GN	L2GN
	RR	*	*	*	*
Ringer Lead	R	GND	GND	L2GN	L2GN
	BK	K	K	K	K
Electron Tube Lead	R	L1	L1	L2GN	L2GN
	Y	L2GN	L2GN	GND	GND
	BK	K	K	K	K
Inside Wire from Protector or Line	Ring	L2GN	L1	L2GN	L1
	Tip	L1	L2GN	L1	L2GN
	GND	GND	GND	GND	GND
Extension stations without ringer shall be connected in the same way as the associated main station, except that both leads from ringer shall be connected to terminal K.					

\*Use any spare terminal in set to which cords or wires and the lead from SL or D on induction coil may be connected together. If there is no unused terminal available, an extra terminal should be added to the set.

INSIDE WIRE  
FROM PROTECTOR  
OR LINE

RINGING CIRCUIT

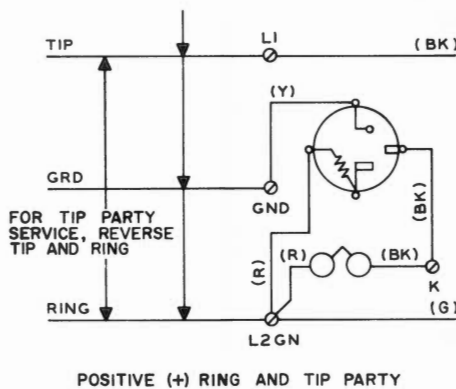


NOTE 1: MAY BE ANY SPARE TERMINAL IN SET.

NOTE 2: TO SILENCE RINGER PERMANENTLY, CONNECT RED AND BLACK RINGER LEADS TO TERMINAL K.

NOTE 3: FOR ADDITIONAL INFORMATION ON INDUCTIVE INTERFERENCE REFER TO SECTION ENTITLED INDUCTIVE NOISE.

NOTE 4: FOR NEGATIVE STATIONS IN OFFICES WITHOUT ANI, RED LEAD FROM TUBE MAY BE CONNECTED TO GRD TERMINAL INSTEAD OF TERMINAL L1 IF RINGER OPERATION IS MARGINAL.



## TALKING CIRCUIT

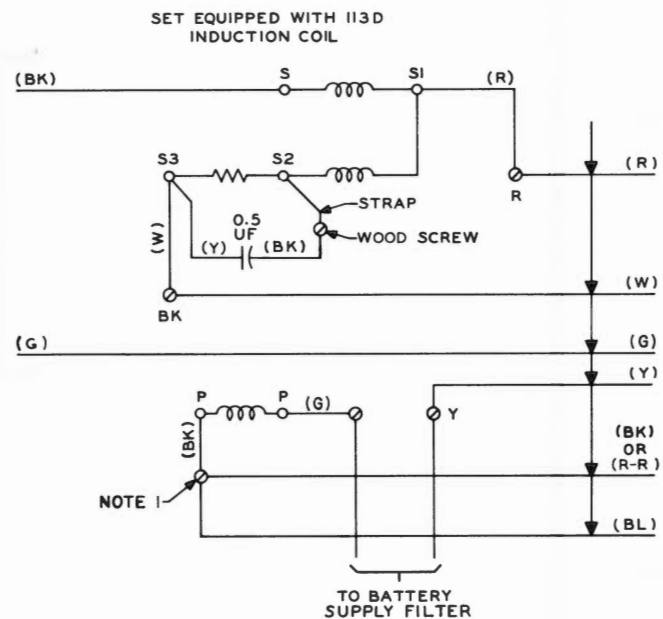
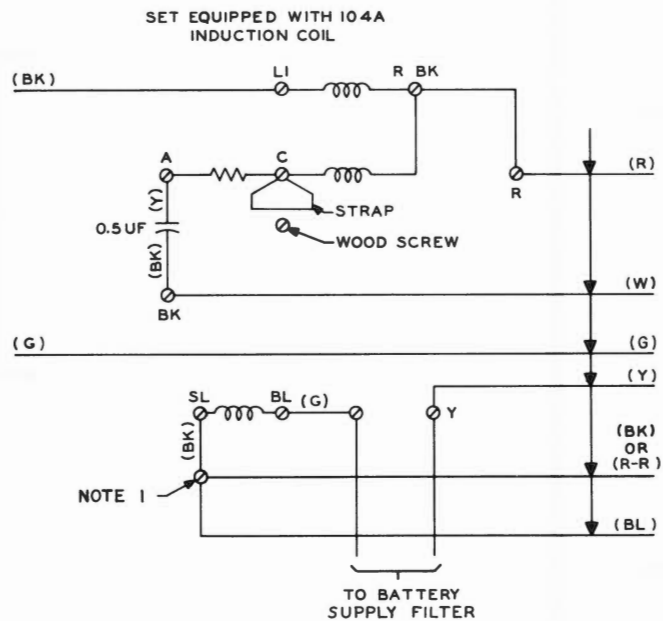
MTG CORD OR  
LOCAL WIRING

Fig. 5 — 634YT Subscriber Set  
Common Transmitter  
Battery Supply

TABLE F — CONNECTIONS — AVERAGE INDUCTION

Party	Line			Ringer			Electron Tube			Type of Tube
	Ring	Tip	GND	R	BK	R	GN	BK	Y	
Negative Ring	L2	L1	GND	GND	K	L1	—	K	L2	426A
Tip	L1	L2	GND	GND	K	L1	—	K	L2	426A
Positive Ring	L2	L1	GND	K	GND	L2	L1	L2	K	425A
Tip	L1	L2	GND	K	GND	L2	L1	L2	K	425A

TABLE G — CONNECTIONS — SEVERE INDUCTION

Party	Line			Ringer			Electron Tube			Type of Tube
	Ring	Tip	GND	R	BK	R	GN	BK	Y	
Negative Ring	L2	L1	GND	K	L2	L1	L2	GND	K	425A
Tip	L1	L2	GND	K	L2	L1	L2	GND	K	425A
Positive Ring	L2	L1	GND	K	GND	L2	L1	L2	K	425A
Tip	L1	L2	GND	K	GND	L2	L1	L2	K	425A

*Note:* For additional information concerning induction, reference should be made to the section covering inductive noise.