

## TELEPHONE SET—2504B AND 2504BM

### IDENTIFICATION, INSTALLATION, CONNECTIONS, AND MAINTENANCE



Fig. 1—2504B Telephone Set

#### 1. GENERAL

1.01 The 2504B (Fig. 1) or 2504BM telephone set is intended solely for use with specially engineered lines—**not for general telephone use.**

1.02 This section is reissued to add:

- T1A ringer
- 4228-type network
- 2504BM (modular) telephone set

1.03 The 2504BM (modular) telephone set is the same as the 2504B except it is equipped with a 616D jack assembly and a modular G15Y handset which accept the H4DU handset cord. The H4DU cord must be ordered separately.

#### 2. IDENTIFICATION

##### PURPOSE

2.01 These are desk-type telephone sets for use with individual lines, 1A1 or 1A2 key telephone systems, and 3-type speakerphone systems.

##### ORDERING GUIDE

2.02 Order complete telephone set as follows:

- 2504B-\*
- 2504BM-\*

##### (a) *Replaceable Components*

- Cord, Mounting, D24E-\*
- Dial, 35C3A
- 819040551 (P-90D055) Guard Assembly
- Housing Assembly (see Table B)
- Faceplate Assembly (see Table C)
- 812558039 (P-25E803) Card Retainer
- Ringer, N1A or T1A
- Set, Hand, G3Y-\* (2504B)
- Set, Hand, G15Y-\* (2504BM)
- Cord, Handset, H4DU-\* (2504BM)

\*Refer to Table A for color.

##### (b) *Replaceable Optional Components*

- Buzzer, KS-8109L2 (AC or DC)

#### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

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- Buzzer, KS-20419L1 (10 volt AC only)

(c) *Customer Instruction Pamphlet GN-2439 (packaged with telephone set).*

### DESIGN FEATURES

**2.03** These sets provide the following services or features:

- 2- and 4-wire service
- 3-type speakerphone (optional)
- Exclusion feature
- AC or DC operated buzzer (optional)
- End-to-end signaling
- Ringer cutoff.

### OPERATING FEATURES

**2.04** *Exclusion Switch:* Operated by lifting left line switch plunger. Replacing handset restores exclusion switch to normal.

**2.05** *Ringer:* Volume is adjustable from LOUD to OFF in three set steps. The OFF position is blocked by a factory placed machine screw. Remove this screw for ringer cutoff.

### 3. INSTALLATION

**3.01** Install set in accordance with standard installation procedures.

**3.02** Install the KS-8109L2 buzzer (AC or DC), ordered separately, on bracket assembly located in rear of set close to the network. Using the two nylon screws and washers furnished, mount the buzzer so that its frame is insulated from the metal bracket.

**3.03** Install the KS-20419L1 buzzer (10 volt AC only), ordered separately, at any convenient location within the telephone set. Provide mounting screw as required or secure buzzer with an existing

screw. Refer to appropriate section in Division 501 for detailed information on KS-20419L1 buzzer.

**3.04** The set mounting cord is plug-ended to mate with the system cabling connector or 66-type connecting block.

**3.05** Cord tip insulators on the D24E mounting cord must be removed to terminate leads for speakerphone, buzzer, and 4-wire service.



**Do not pull insulators off cord tips. Cut insulators off with electrician scissors or diagonal pliers to prevent breaking conductors or stripping of cord tips.**

### 4. CONNECTIONS

**4.01** The 2504B or 2504BM telephone set is factory-wired for 2-wire service.



**No change in wiring other than those specified in this practice shall be made.**

### 5. MAINTENANCE

**5.01** *Replaceable Apparatus*—Refer to Ordering Guide.

**5.02** Component parts should be maintained in accordance with section covering the item.

**5.03** Plungers, operating bracket switch, and switchhook shall move freely without binding or squeaking.

(a) Clean with KS-2423 cloth moistened with KS-7860 petroleum spirits.

(b) Lubricate plungers and bearing surfaces with No. 2 or softer graphite pencil.

**5.04** Clean switchhook contacts when required with a 265C tool. Replace set if other trouble exists in the switchhook assembly.

TABLE A

COLOR ORDERING GUIDE

TEL SET, MTG CORD, HOUSING, HANDSET, HANDSET CORD	SUFFIX	COORDINATED FACEPLATE COLOR	SUFFIX
Black	-03	Charcoal	-70
Ivory	-50	Muted Ivory	-80
Moss Green	-51	Lt. Green	-71
Red	-53	Muted Red	-69
Pastel Yellow	-56	Lt. Yellow	-72
White	-58	Lt. Gray	-73
Lt. Beige	-60	Muted Beige	-75
Aqua Blue	-62	Muted Blue	-76

TABLE C

ORDERING GUIDE FOR FACEPLATE ASSEMBLY

COORD COLOR	SUFFIX	TELEPHONE SET	
		2504B	2504BM
Charcoal	-70	818645707 (P-86D570)	Comcode not available at this time
Muted Ivory	-80	818645806 (P-86D580)	
Lt. Green	-71	818645715 (P-86D571)	
Muted Red	-69	818645699 (P-86D569)	
Lt. Yellow	-72	818645723 (P-86D572)	
Lt. Gray	-73	818645731 (P-86D573)	
Muted Beige	-75	818645756 (P-86D575)	
Muted Blue	-76	818645764 (P-86D576)	

TABLE B

ORDERING GUIDE FOR HOUSING ASSEMBLY

COLOR	SUFFIX	TELEPHONE SET	
		2504B	2504BM
Black	-03	818488033 (P-84H803)	Comcode not available at this time
Ivory	-50	818488504 (P-84H850)	
Green	-51	818488512 (P-84H851)	
Red	-53	818488538 (P-84H853)	
Yellow	-56	818488561 (P-84H856)	
White	-58	818488587 (P-84H858)	
Lt. Beige	-60	818488603 (P-84H860)	
Aqua Blue	-62	818488629 (P-84H862)	

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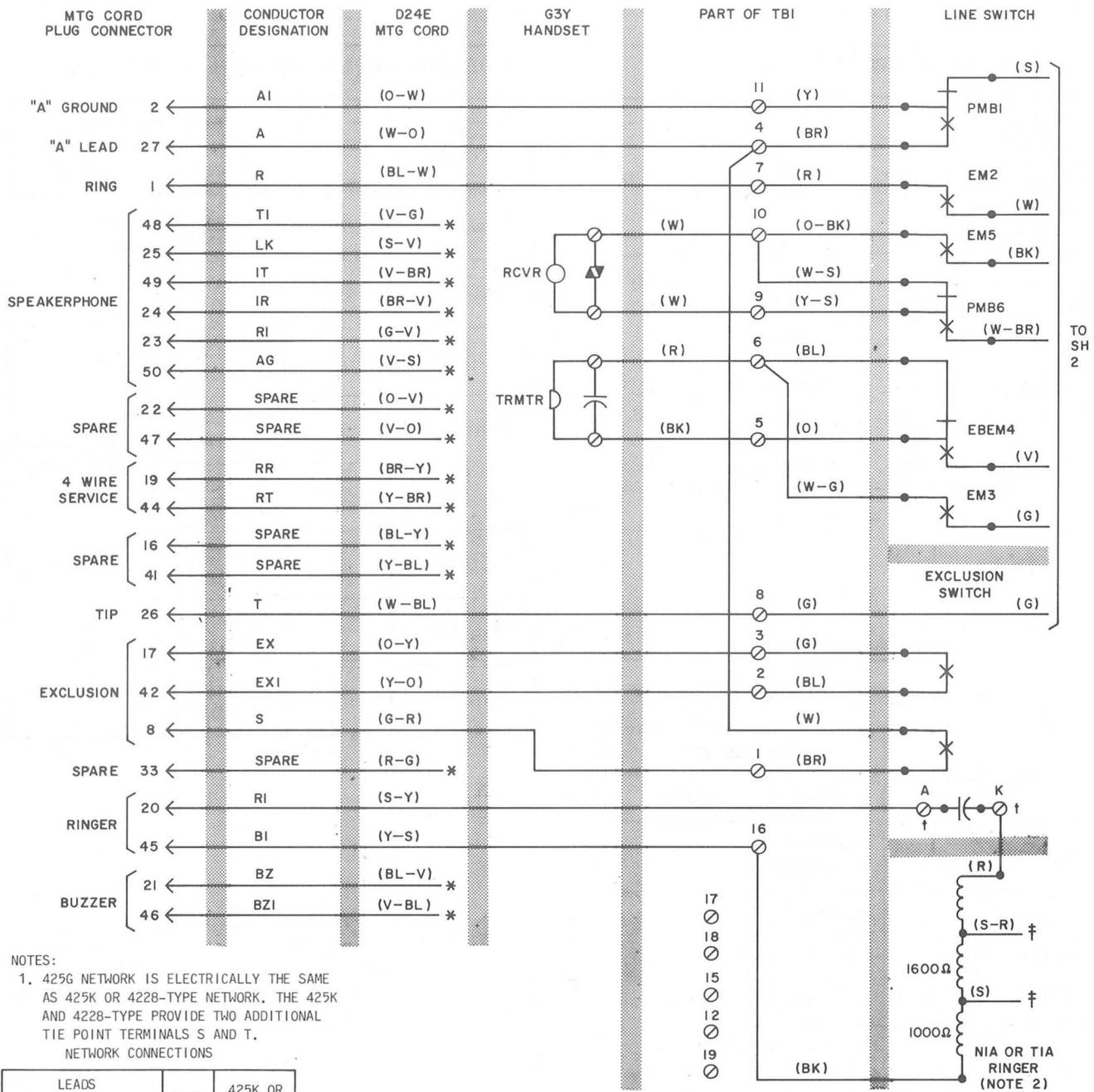


Fig. 2—2504B Telephone Set, Connections (Sheet 1 of 2)

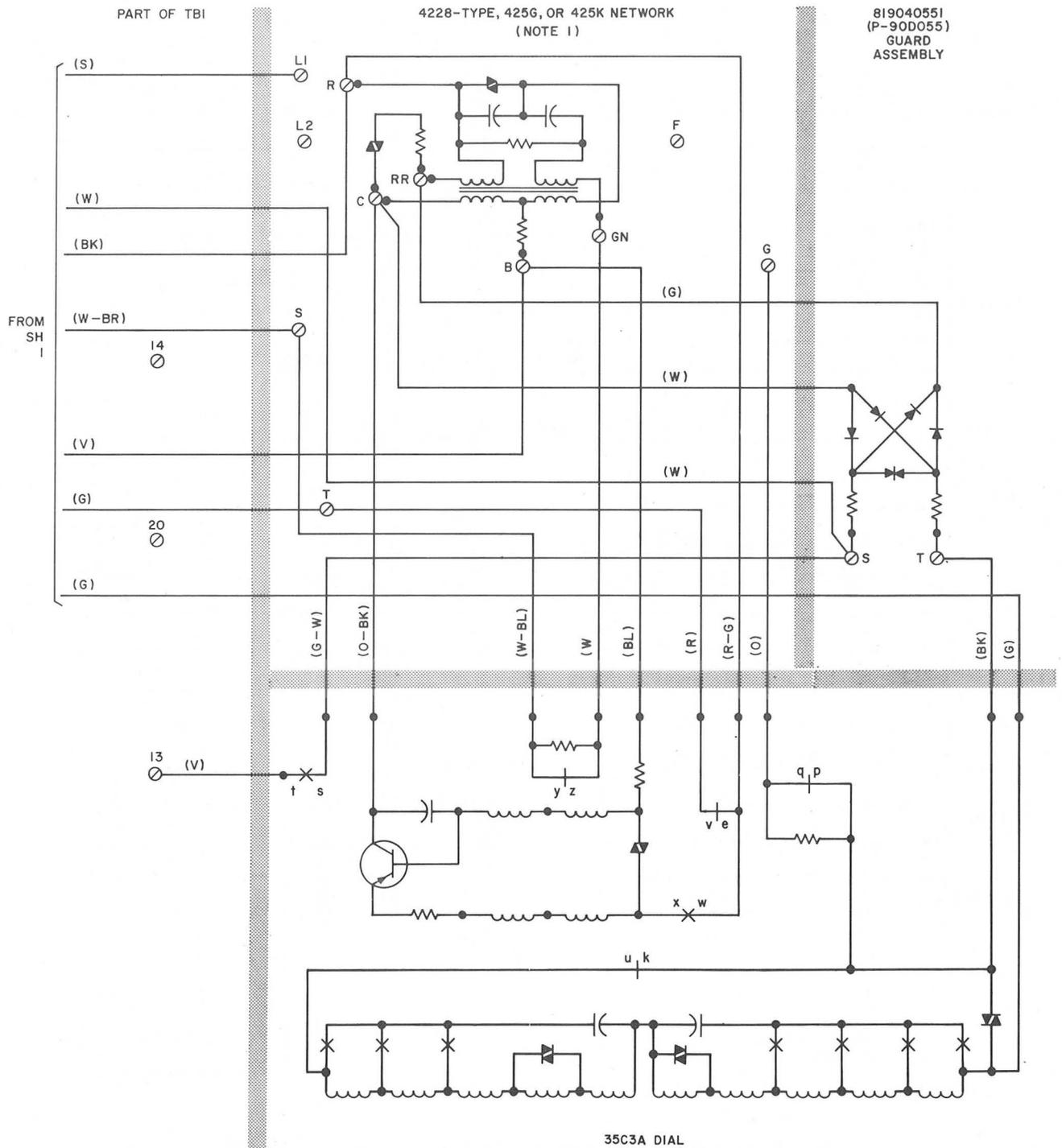


Fig. 2—2504B Telephone Set, Connections (Sheet 2 of 2)

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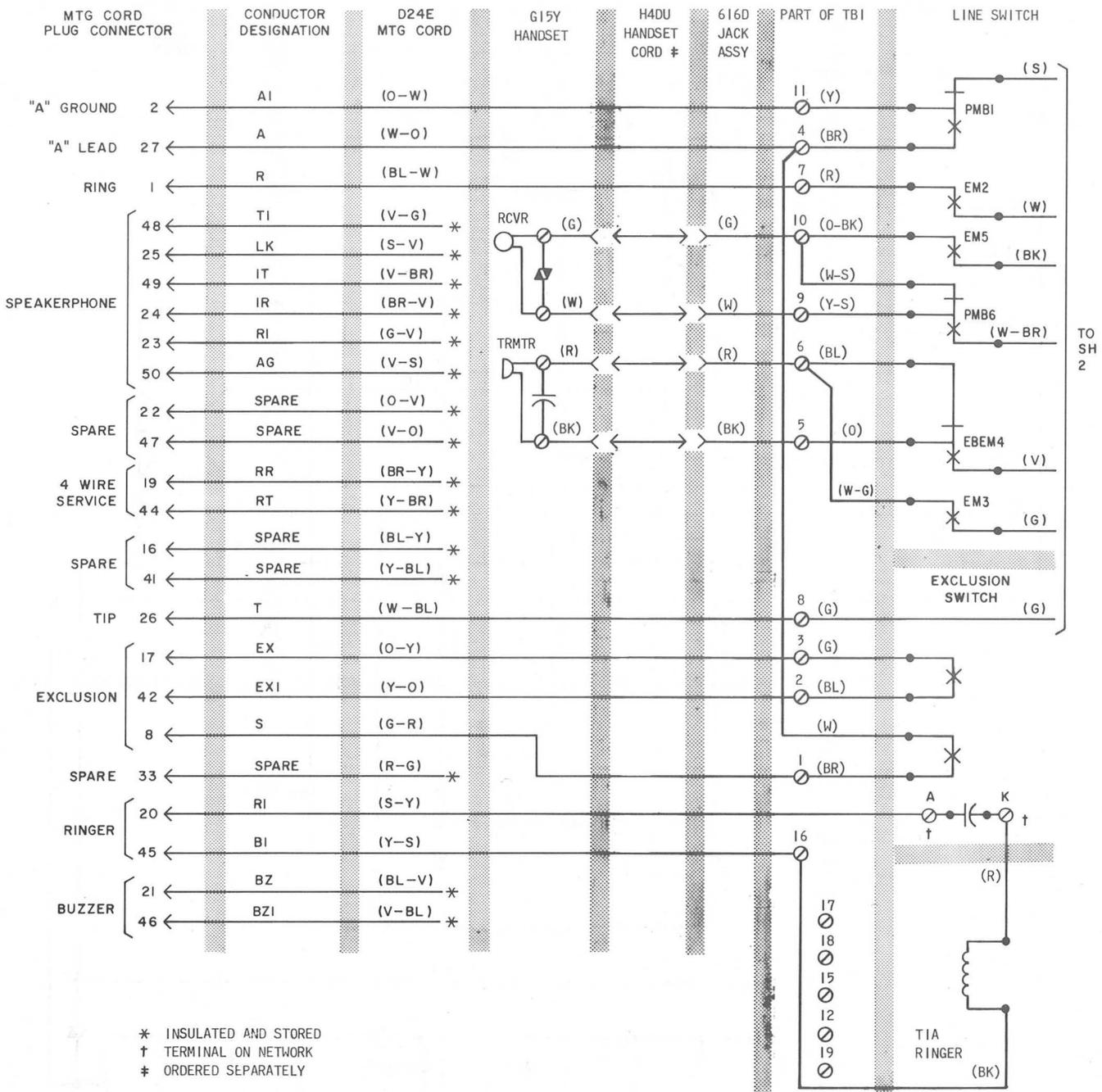


Fig. 3—2504BM Telephone Set, Connections (Sheet 1 of 2)



TABLE D

## CONNECTIONS FOR OPTIONAL BUZZERS

BUZZER*	OPERATION	MTG. CORD LEAD	CONNECT MTG CORD LEAD TO
KS-8109L2	AC	BL-V V-BL	Terminal A of buzzer Terminal C of buzzer
	DC	BL-V V-BL	Buzzer frame Terminal C of buzzer
KS-20419L1	AC	BL-V V-BL	Two spare screw terminals, terminate BUZZER LEADS TO same terminals or use D-161488 connectors

\*Buzzer leads BZ (BL-V) and BZ1 (V-BL) may be connected to the R, R1, or BZ and B, B1 or BZ1 terminals, respectively, at the associated switching equipment to provide the required buzzer operation.

TABLE E

3-TYPE  
SPEAKERPHONE CONNECTIONS

MTG CORD		CONNECT TO	
LEAD	DESIG	TBI	NET.
(V-G)	T1		G
(G-V)	R1	7	
(S-V)	LK		L1
(V-S)	AG	4	
(BR-V)	IR	13	
(V-BR)	IT	*	

\*Insulated and stored.

TABLE F

## 4 - WIRE CONVERSION

LEADS	COLOR	REMOVE FROM NET.	CONNECT TO TBI
Dial	(W)	GN	17
Line Switch	(BK)	R	18
Mtg Cord	(BR-Y)		17
Mtg Cord	(Y-BR)		18