

8A KEY TELEPHONE SYSTEM FOR USE AT 911 EMERGENCY REPORTING/ANSWERING BUREAUS IDENTIFICATION

1. GENERAL

1.01 The J53053A,L1 equipment unit (Fig. 1 and 2) is a wall mounting for housing key telephone units (KTUs) and circuit packs (CPs) which provide the various arrangements and features of the 8A Key Telephone System (KTS).

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

1.03 This issue of the section is based on the following drawings:

SD-69641-01 Issue 1—Station Systems—Key Telephone Systems No. 1A1, 1A2 or 6A—682AA, 683AA, 2682AA, 2683AA Telephone Set Circuit 18- and 30-Button Capacity for use with 2- and 4-Wire Lines Arranged for Dial Pulse or TOUCH-TONE® Calling and “A” Lead Control.

SD-69913-01 Issue 1—8A Key Telephone System for use at 911 Emergency Reporting/Answering Bureaus

If this section is to be used with equipment or apparatus reflecting later issues of the drawings, reference should be made to the SDs and CDs to determine the extent of the changes and the manner in which the section may be affected.

1.04 Condensed functional schematics and a description of each CP used in the 8A KTS are found in Part 3 of this section.

1.05 Table C furnishes lamp signal description for the 8A KTS.

2. IDENTIFICATION

2.01 Purpose: When equipped with the proper CPs and 400D KTUs, one J53053A equipment unit provides the following arrangements:

- (a) Up to five 1-way incoming 911 lines
- (b) Up to four 2-way dial or tie lines (maximum of eight 2-way lines to a 20 by 8 system)
- (c) Call transfer to responsible agencies via 2-way dial or tie lines
- (d) Emergency ringback on direct trunked 911 calls (see note)
- (e) Abandoned line tone on direct trunked 911 calls (see note)
- (f) Called party control on direct trunked 911 calls (see note)
- (g) Switchhook status.

Note: A direct trunk call is a call transmitted from the originating 911 CO direct to the 911 Emergency Reporting/Answering Bureau without going through an intermediate switching machine (eg, crossbar tandem).

2.02 Design Features:

- Wall mounted.
- Removable gray cover.
- Self-contained power supply or connection for externally provided power source.
- Swingout carrier assemblies hinged on the left of the backboard provide ease of access

NOTICE

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

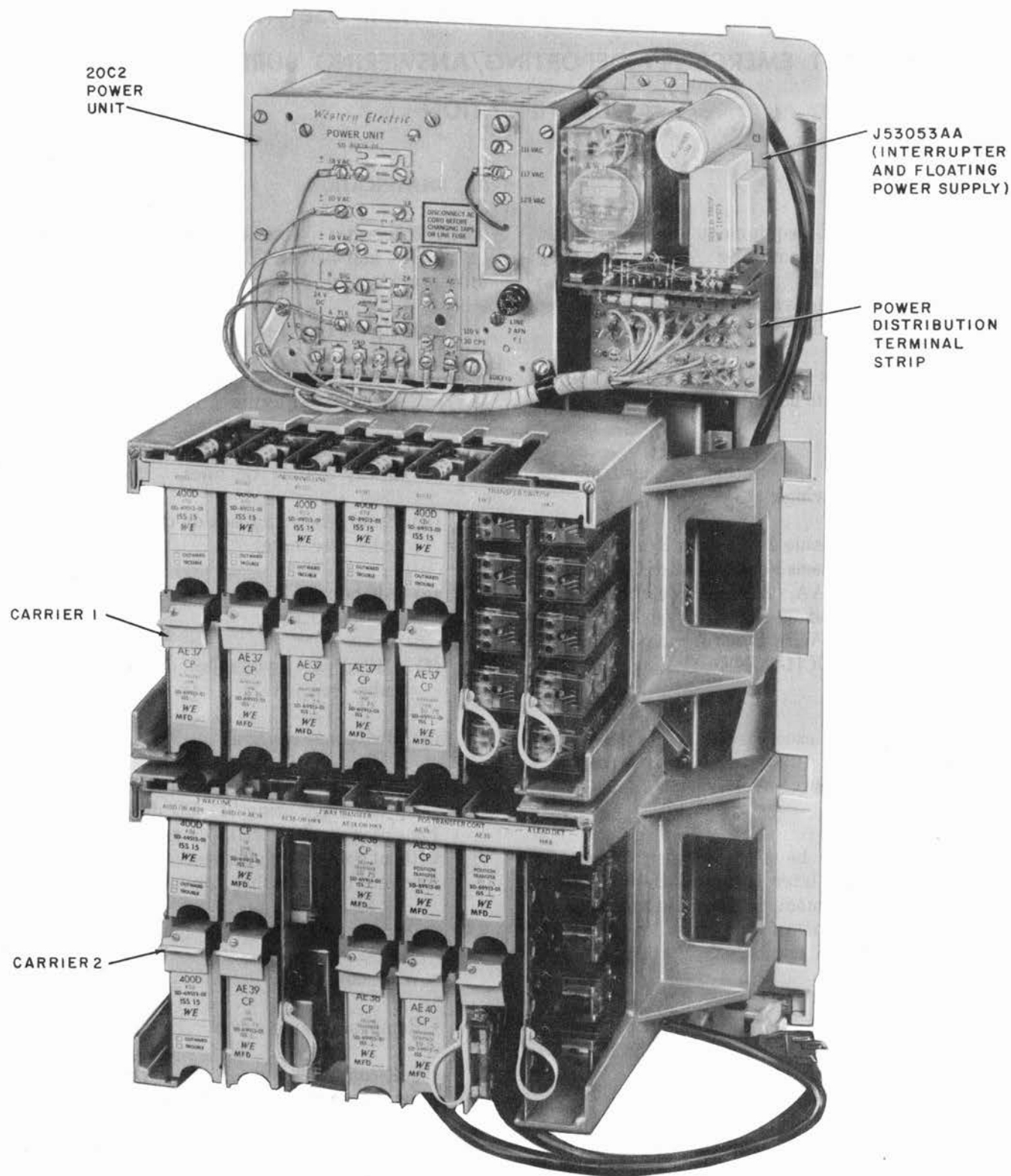


Fig. 1—J53053A,L1 Equipment Unit (Carrier Closed)

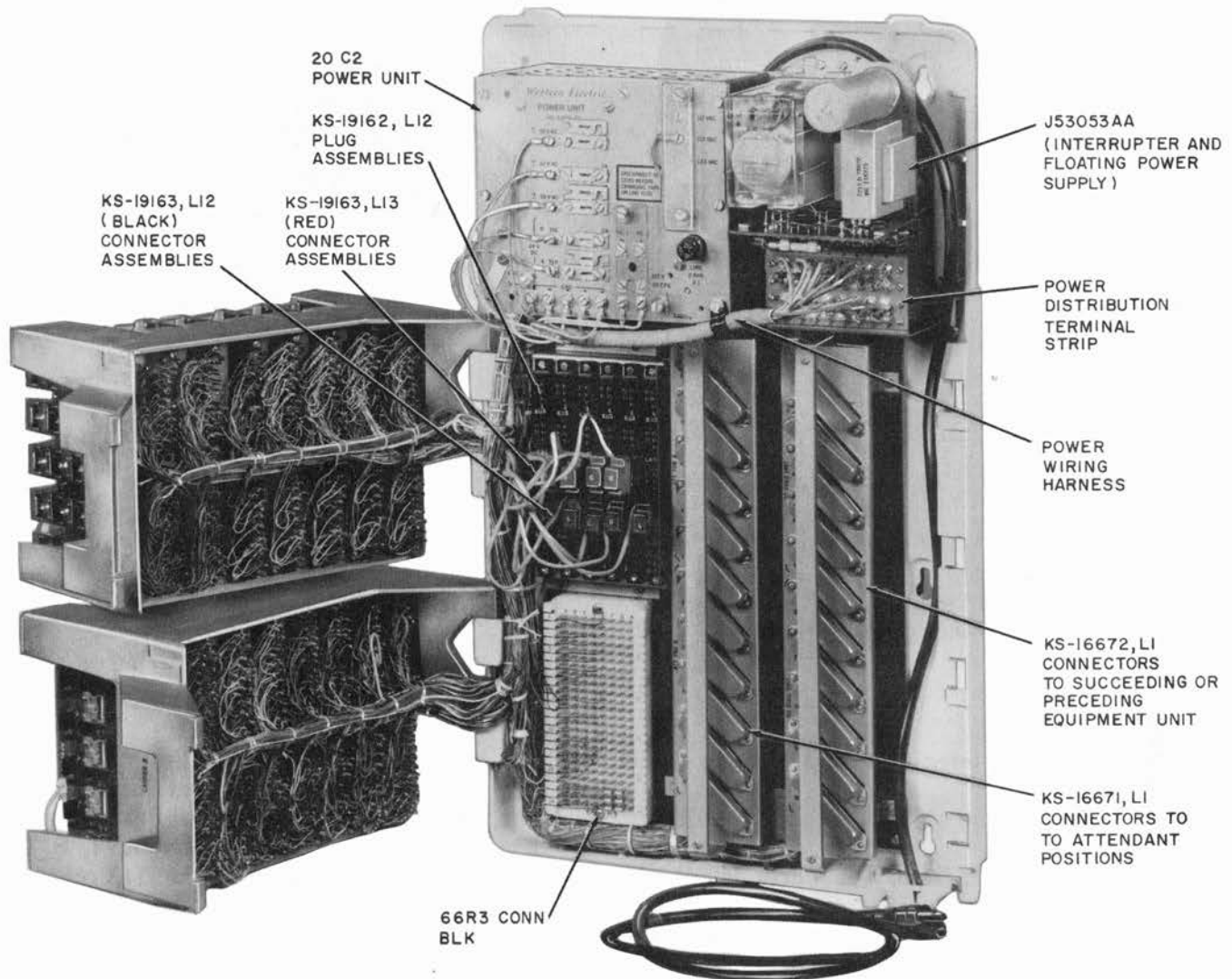


Fig. 2—J53053A,L1 Equipment Unit (Carrier Open)

to the cable connectors and the 66R3 connecting block.

- Ten 50-pin KS-16671,L1 connectors provide access for two CALL DIRECTOR® telephone sets.

Note: Due to the limited amount of space in the J53053A,L1 equipment unit, standard A75 and A100-type CALL DIRECTOR cables cannot be used.

- J53053AA (Fig. 3) (Interrupter and Floating Power Supply) plugs into a KS-16671,L1 connector (Fig. 1) located next to the power unit of the first J53053A,L1 equipment unit. The J53053AA provides a KS-19947,L2 interrupter for ringing and lamp interruption and a 24V floating power supply for the transfer release feature, plus two associated power fuses.
- J53053AB, (Fig. 4) (Auxiliary Relay Circuit) plugs into the KS-16671,L1 connector (Fig. 1)

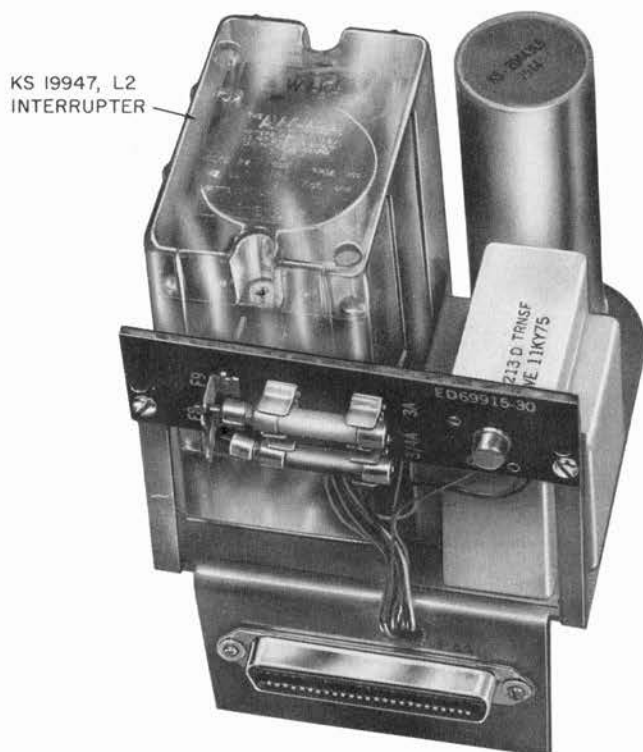


Fig. 3—J53053AA Interrupter and Floating Power Supply

of the second, third, and fourth J53053A,L1 equipment units of a system to provide lamp interruptions to each equipment unit from its own power supply, under control of the first J53053A,L1 equipment unit.

- Five 50-pin KS-16672,L1 connectors provide a coupling to the preceding J53053A,L1 equipment unit.
- Five 50-pin KS-16672,L1 connectors provide a coupling to the succeeding J53053A,L1 equipment unit.
- One 66R3 connecting block provides for termination of incoming CO tip and ring for five 911 lines, four 2-way lines, and connection for various optional features.
- Fuses mounted on a printed circuit board (KS-21651,L2) for easy access.
- Six KS-19162,L12 plug assemblies, each having five 5-contact female plugs, wired

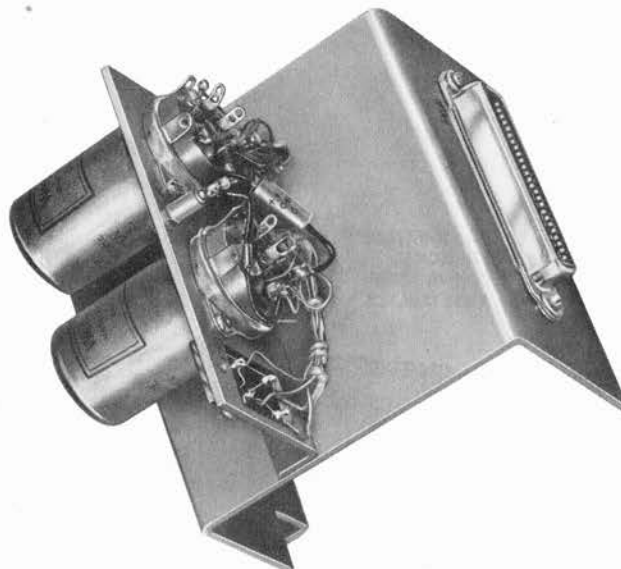


Fig. 4—J53053AB Auxiliary Relay Circuit

to the KS-16671,L1 connectors to the attendant telephone sets.

- Five KS-19163,L12 (black) and four KS-19163,L13 (red) connector assemblies, each assembly having five pins designated R, T, S, C, D (R, T, A, L, LG) wired to the 914A connectors of the five 911 lines and the four 2-way lines.

Note: The KS-19162,L12 plug assemblies and the KS-19163,L12 and L13 connector assemblies allow all J53053A,L1 equipment units to be identically shop-wired, and at the same time provide the field with flexibility of movement for the incoming 911 lines and 2-way lines.

- Provides connections for externally mounted traffic registers for counting call volume on 911 lines and 2-way lines.
- Provides connections for attachment of external recorder connectors to monitor all 911 calls on a per-line basis.
- Provides connections for externally mounted tone detector circuit (CP AE47) required when 911 lines are on carrier or have range extenders.

- A maximum of four 2-way dial lines per 20 by 8 system. (The 2-way dial lines must be terminated on buttons 2 through 5 of the last key strip on the CALL DIRECTOR set.)

2.03 Ordering Guide:

- J53053A Ordering Guide (see Table A)
- Separately ordered replacement apparatus (see Table B)
- Separately ordered attendant telephone sets (maximum two CALL DIRECTOR sets per J53053A,L1 unit)

- Set, Tel, 682AA-2-* (18-button, rotary dial)
- Set, Tel, 2682AA-2-* (18-button, TOUCH-TONE dial)
- Set, Tel, 683AA-3-* (30-button, rotary dial)
- Set, Tel, 2683AA-3-* (30-button, TOUCH-TONE dial).

*Specify color—3, 51, 56, 58, 59, 60, 61, 62, 64.

(d) Separately ordered components

- Cord, power (order by length as required)
 - 824013262—(P-40J326)—1-1/2 ft.
 - 824013270—(P-40J327)—2 ft.
 - 824013288—(P-40J328)—4 ft.
 - 824013296—(P-40J329)—6 ft.
 - 824010995—(P-40J099)—12 ft.

- Fuse alarm signals—one per 8A system

Visual Signal—Indicator, 15E-49 Lamp, A3 (24V)

Audible Signal ($\pm 110V$)—Refer to Section 463-110-100 for appropriate signal.



When audible fuse alarm signal is provided, a cut-off key should be provided and located close to the attendant positions.

- Switchhook status audible signal

Buzzer, KS-8109,L2 (max one per 8A system)

or

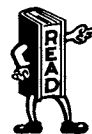
Buzzer, 7A-49 (max two per 8A system).

Note: Refer to Section 501-120-100 for mounting instructions.

- Connector, Cable, A25D (order by 6- or 9-foot lengths as required to interconnect two J53053A,L1 equipment units).
- Connector, Cable, A25B (order by length as required for connecting J53053,L1 equipment to CALL DIRECTOR telephone sets).

(e) Separately ordered optional equipment:

- Unit, Power, 47C1 (emergency power—refer to Section 167-449-101 for ordering and installation).
- J58876YH-1,L2 (traffic register cabinet equipped with 20 registers)—order one for up to twenty 911 lines and eight 2-way lines.
- J58876YH-1,L3 (white housing for L1)—order one as required.
- J58876YH-1,L7 (ivory housing for L1)—order one as required.
- J58876YH-1,L8 (black housing for L1)—order one as required.
- 840592018, Mat Packet (order as replacement item).



Do not power more than ten message registers from the B5 lead of any J53053A,L1 equipment unit.

- Panel, Modular, 620A (order as required for mounting up to eight CPs AE47).
- Panel, Modular, 642A (order as required for mounting up to four CPs AE47).
- Block, Connecting, 92A (order one for each 620A or 642A modular panel).

- Connector, Recorder, KS-19645,L4 (see Section 463-340-120 for ordering and installation information).
- D-180645, Kit of Parts—One required per CALL DIRECTOR (timed flash board) telephone set.
- Block, Connecting, 66B3-50—Order as required (when external cross-connect field is required).

(f) Replaceable components:

- Fuse, 70H (3/4 amp)—seven required per J53053A,L1
- Fuse, 70B (2.0 amp)—two required per J53053A,L1

Note: Six 3/4 amp and one 2 amp fuses on KS-21651,L2 fuse board; one 3/4 amp and one 2 amp fuses on J53053AA unit.

- Interrupter, KS-19947,L2 (see Table C)
- Lamp, A3 (visual fuse alarm)
- Circuit packs (see Table B).

3. IDENTIFICATION

3.01 The AE CPs are 40-pin printed circuit boards that plug into one 914A connector. The HK CPs are 80-pin printed circuit boards and plug into two 914A connectors, vertically aligned.

CP AE35 (Position Transfer Circuit)

3.02 The AE35 (Fig. 5) provides the function which allows the 911 attendant to initiate a call transfer, including dialing when an incoming 911 call is being transferred to an outgoing dial line. One AE35 is required for each attendant position.

KS-21651,L2 (Fuse Board Assembly)

3.03 The KS-21651,L2 (Fig. 6) provides all the fusing for the J53053A,L1 except the interrupter fusing, which is separately mounted on

the J53053AA. The KS-21651,L2 furnishes fuse holders as follows:

- One 70B (2.0 amp) fuse for the $\pm 10V$ lamp supply
- Six 70H (3/4-amp) fuses which furnish power to the CPs, the attendant positions, and the externally mounted message registers.

Each J53053A,L1 comes equipped with one KS-21651,L2.

CP AE37 (Switchhook Status)

3.04 The AE37 (Fig. 7) provides indications to the attendant on the switchhook status (on-hook or off-hook) of the 911 calling party during a hold condition. If an off-hook caller is placed on hold, the 911 line lamp winks on the attendant telephone set. If the 911 caller goes on-hook and the attendant places the line on hold, the line lamp winks until the held caller goes off-hook. The lamp then changes from wink to flash and the switchhook status buzzer sounds. One AE37 is required for each incoming 911 line.

CP AE38 (Tie Line Transfer Circuit)

3.05 The AE38 (Fig. 8) provides a transmission path and control functions when an incoming call is transferred to a tie line. The AE38 is connected between the transfer switch (HK7) and the tie line circuit (AE39) during the transfer operation. One AE38 is required for each tie line circuit (AE39).

CP AE39 (Tie Line Circuit)

3.06 The AE39 (Fig. 9) provides a 2-way connection between the primary 911 bureau and the agency responsible for providing emergency services. The AE39 also provides -24V talk battery and optional audible ringing to the 911 attendant. One AE39 is required for each tie line.



The AE39 tie line circuit is designed for use on a metallic loop, not to exceed 2200 ohms, with a 415A KTU at the distant end. The AE39 is not compatible for tie lines operating over analog or digital carrier systems.

CP AE40 (Fuse Alarm, Common Audible and Transfer Control Circuit)

3.07 The AE40 (Fig. 10) is common to all attendant positions. When the 911 attendant operates the nonlocking TRF button on the CALL DIRECTOR set, the AE40 excludes all other attendant positions from the transfer switch until the attendant selects a 2-way line. The TRF lamp of the originating attendant position operates at LTR (30 ipm) and lights steadily at all other attendant positions until transfer is complete. The 911 attendant has approximately 5 seconds to complete the transfer before the timer circuit of the AE40 operates and releases the attendant who initiated the transfer. The AE40 also provides a common audible relay (K4) to drive an external ringer. A fuse alarm relay (K3) is provided to operate an external fuse alarm. One AE40 is required per 911 system.

CP AE47 (Tone Detector)

3.08 The AE47 detects the presence of a steady 480-Hz tone on 911 lines which are transmitted over carrier or are used with range extenders. This tone detector is necessary for the operation of the optional switchhook status circuit. One AE47 is required for each 911 line transmitted over carrier or using range extenders. The AE47 must be mounted in an apparatus mounting external from the J53053AA,L1 (see ordering guide).

CP HK7 (Transfer Switch)

3.09 The HK7 (Fig. 11) consists of 20 relays interconnected to form a 5 by 4 matrix which connects the T and R leads from any of five incoming 911 lines to the TO and RO leads of any of four outgoing 2-way lines and connects the incoming 911 line lamp to an interrupted lamp signal. One HK7 is required for every four 2-way lines with a maximum of two HK7 per J53053A,L1.

CP HK8 ("A" Lead Detector Circuit)

3.10 The HK8 (Fig. 12) detects the voltage level on the "A" lead input and operates relays K1 and K2 when the voltage level is at approximately -10 Vdc. There are five identical "A" lead detector

circuits on each CP HK8. One HK8 is required for every five 911 lines.

CP HK9 (Dial Line Transfer Circuit)

3.11 The HK9 (Fig. 13) provides a transmission path and control functions when an incoming 911 call is transferred to a 2-way dial line. The HK9 is connected in the system between a transfer switch (HK7) and a 2-way dial line circuit (400D KTU). One HK9 is required for every two 2-way lines.

3.12 KTUs and CPs are positioned in the J53053A,L1 equipment unit as illustrated in Fig. 14.

Timed Flash Circuit (D180645, Kit of Parts)

3.13 The 911 attendant depresses the FLASH button on the CALL DIRECTOR telephone set to operate the optional emergency ringback feature. In the D180645 Kit of Parts (Fig. 15), diode CR1 is a voltage regulator which maintains the voltage supply to transistor Q2 at -15 Vdc. Transistor Q2 is normally on due to the base current through resistors R3 and R7 and diode CR5. Transistors Q1 and Q3 are normally off and relay K1 is nonoperated. When ground is applied to terminal 8 (0-BK), the current through resistors R3 and R7 is diverted from the base of transistor Q2 through diode CR4, causing Q2 to turn off. Transistors Q1 and Q3 remain off due to the clamping action of diode CR3.

3.14 When ground is removed from terminal 8, transistors Q1 and Q3 turn on and relay K1 operates. The break contact (1 and 2) of K1 opens the ring lead to the attendant telephone set circuit, and the make contact shorts the T and R leads toward the attendant telephone set.

3.15 Capacitor C1 begins to charge toward -15 Vdc through resistors R3 and R7. Approximately 500 ms after removal of ground from terminal 8, the voltage on C1 reaches -7.5 Vdc, causing diode CR5 to conduct in the reverse direction. Transistor Q2 turns on, causing Q1 and Q3 to turn off and relay K1 to release.

TABLE A
J53053A ORDERING GUIDE

J53053A	DESCRIPTION	QUANTITY	CARR 1 CONNECTOR‡	CARR 2 CONNECTOR‡
List 1	Equipment Cabinet, e/w One diode matrix One KS-21651, L2† (fuse board assembly). Handles up to five 911 lines and four 2-way lines	1 per each five 911 lines		
List 2	400D Key Telephone Unit (KTU) for incoming 911 lines	1 per 911 line	J1A-J5A	
List 3*	AE39 Circuit Pack (CP) (tie line circuit)	1 per tie line		J1A-J2A J1B-J2B
List 4*	400D KTU line circuit for 2-way dial lines (max of four 2-way dial lines per system)	1 per 2-way dial line		J1A-J2A J1B-J2B
List 5*	AE37 CP (switchhook status circuit)	1 per 911 line	J1B-J5B	
List 6*	AE40 CP transfer control, fuse alarm, common audible circuits, and J53053AA (24V ungrounded power supply, KS-19947, L2 interrupter and associated fuses)	1 per 911 system		J5B (Mounts in first L1 of system)
List 7*	HK8 CP ("A" lead detector circuit)	1 per J53053A, L1 equipment unit		J7
List 8*	HK7 CP (transfer switch)	1 per four 2- way lines (max 2 per J53053A, L1)		
List 9*	AE38 CP (tie line transfer circuit)	1 per tie line		J3A-J4A J3B-J4B
List 10*	HK9 CP (dial line transfer circuit)	1 per each two dial lines		J3-J4
List 11*	AE35 CP (position transfer circuit)	1 per attendant pos. (max 2 per J53053A, L1)		J5A-J6A
List 12	202 Power Unit (mounts in first J53053A, L1 of system as shown in Fig. 1)	1 per 911 system		
List 13	19C2 Power Supply (one required in second and third J53053A, L1 of system)	1 per eqpt unit as stated		
List 14	J53053AB Aux Relay Circuit (one required in second, third, and fourth J53053A, L1 of system)	1 per equipment unit as stated		

* Optional feature

† For maintenance purposes, may be ordered as fuse, board, assembly, KS-21651, L2.

‡ Refer to Fig. 13 for positioning.

TABLE B

SEPARATELY ORDERED REPLACEMENT APPARATUS

APPARATUS	REPLACEMENT FOR	TYPE OF CIRCUIT	QUANTITY
Unit, Key, Telephone, 400D	J53053A,L2 and L4	CO or PBX line circuit	1 per 911 line 1 per 2W dial line
Pack, Circuit, AE35	J53053A,L11	Position transfer	1 per attendant position
Pack, Circuit, KS-21651,L2		Fuse board assembly	1 per equipment unit
Pack, Circuit, AE37	J53053A,L5	Switchhook status	1 per 911 line
Pack, Circuit, AE38	J53053A,L9	Tie line transfer	1 per tie line
Pack, Circuit, AE39	J53053A,L3	Tie line	1 per tie line
Pack, Circuit, AE40	J53053A,L6	Fuse alarm, common audible, and transfer control	1 per 911 system
Pack, Circuit, HK7	J53053A,L8	Transfer switch	1 per each four 2-way lines (max of two per J53053A,L1)
Pack, Circuit, HK8	J53053A,L7	"A" lead detector	1 per equipment unit
Pack, Circuit, HK9	J53053A,L10	Dial line transfer	1 per each two dial lines

TABLE C

LAMP SIGNAL DESCRIPTION FOR
8A KEY TELEPHONE SYSTEM

LAMP CONDITION	SIGNAL DURATION IN SECONDS	
	ON	OFF
Dark		
Steady		
LTR (30 ipm)	1.610-1.710	0.29-0.39
Flash (60 ipm)	0.45-0.55	0.45-0.55
Fast Flash (120 ipm)	0.22-0.28	0.22-0.28
Wink	0.367-0.373	0.02-0.05

LTR — Lamp signal rate of 911 lamp and 2-way line lamps when a 911 call is transferred to a 2-way dial or tie line and TRF lamp during setup of transfer. (Lamp Transfer Rate)

Flash — Lamp signal rate when a held (on-hook) 911 line goes off-hook and audible signal sounds to alert the attendant.

Fast Flash — Lamp signal rate for all incoming calls on 911 lines and 2-way lines.

Wink — Lamp signal rate when a line is placed on hold.

Note: ipm = interruptions per minute

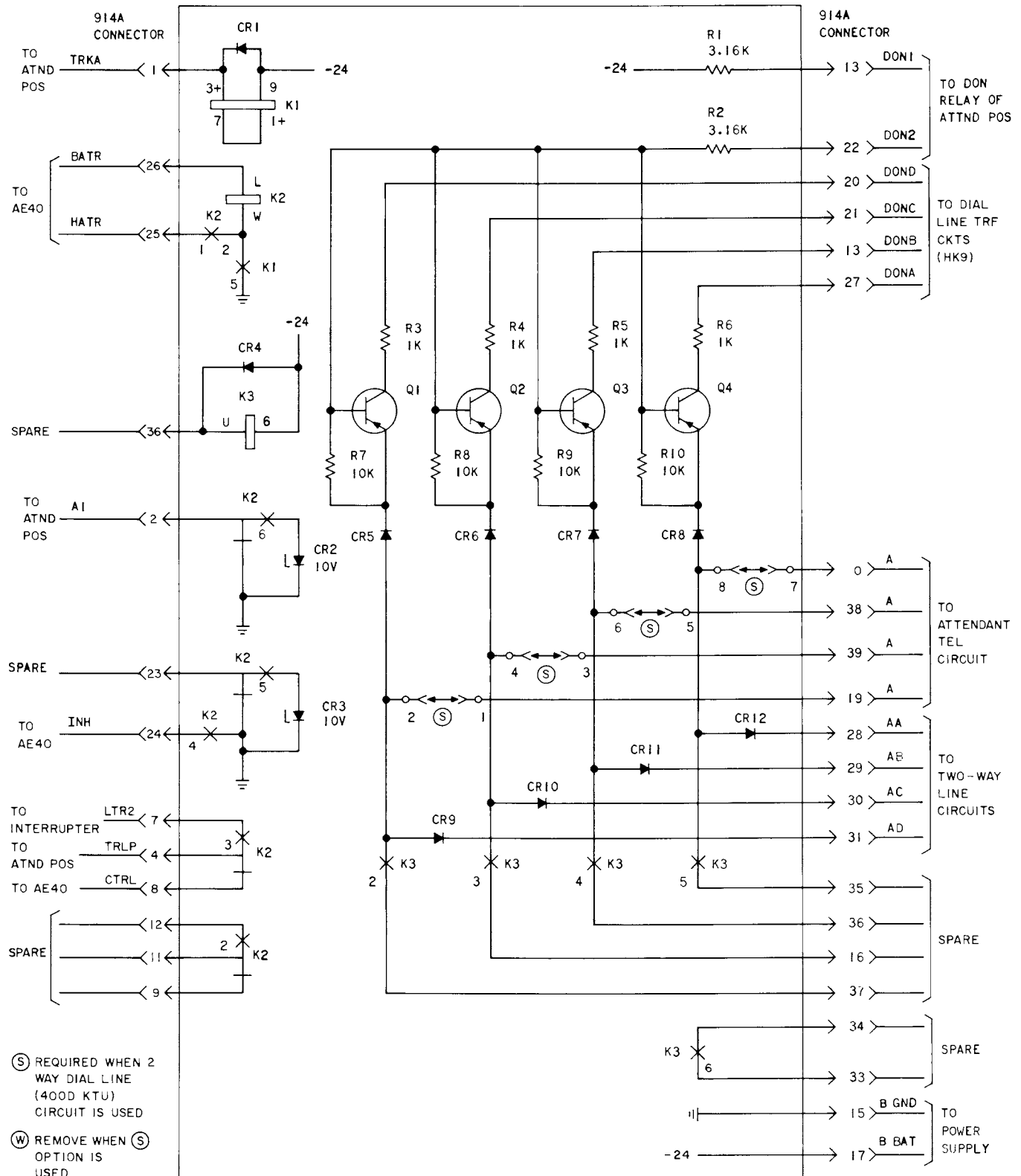


Fig. 5—Condensed Functional Schematic of Circuit Pack AE35 (Position Transfer Circuit)

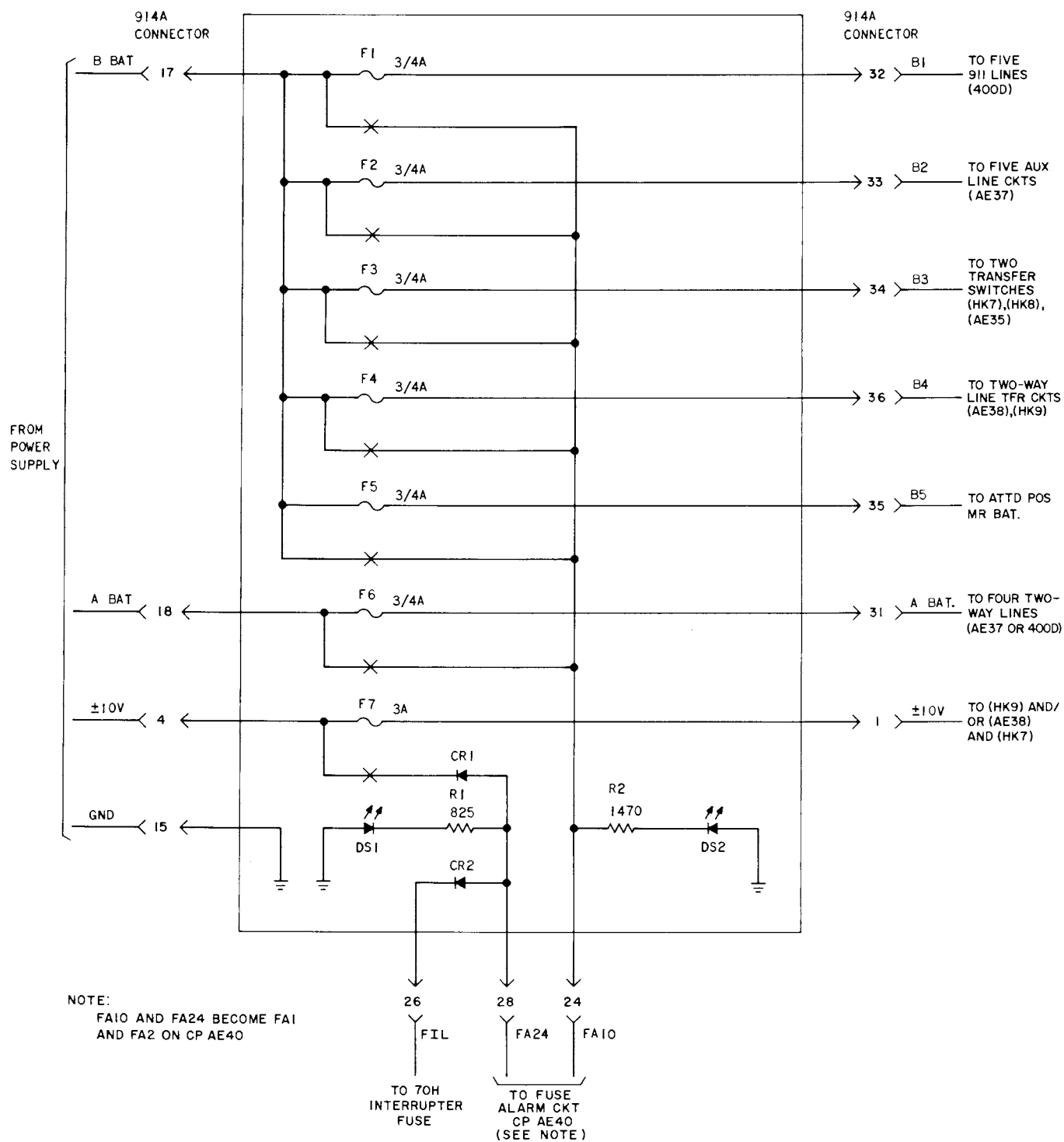


Fig. 6—Condensed Functional Schematic of Circuit Pack KS-21651,L2 (Fuse Board Assembly)

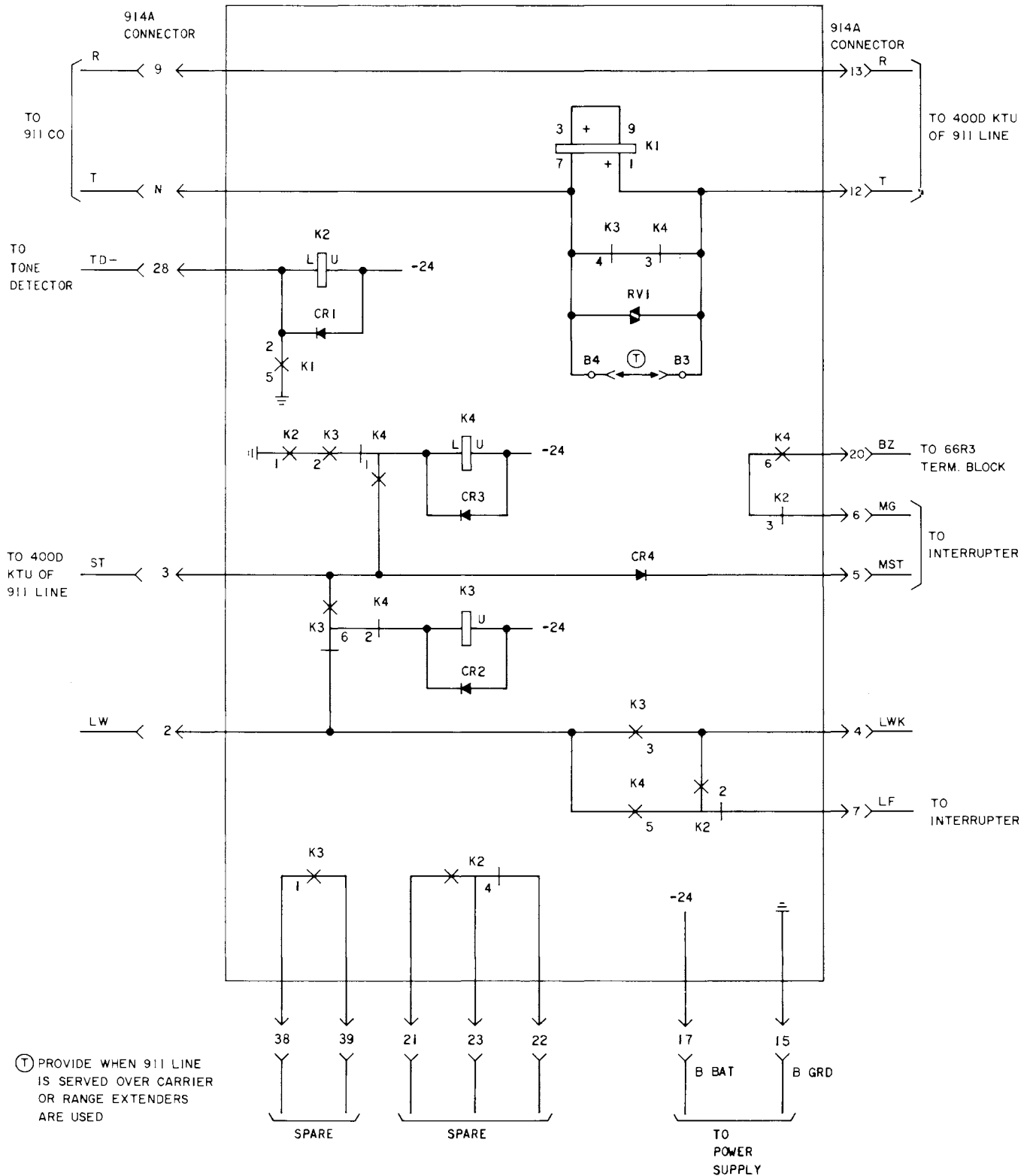


Fig. 7—Condensed Functional Schematic of Circuit Pack AE37 (Switchhook Status Circuit)

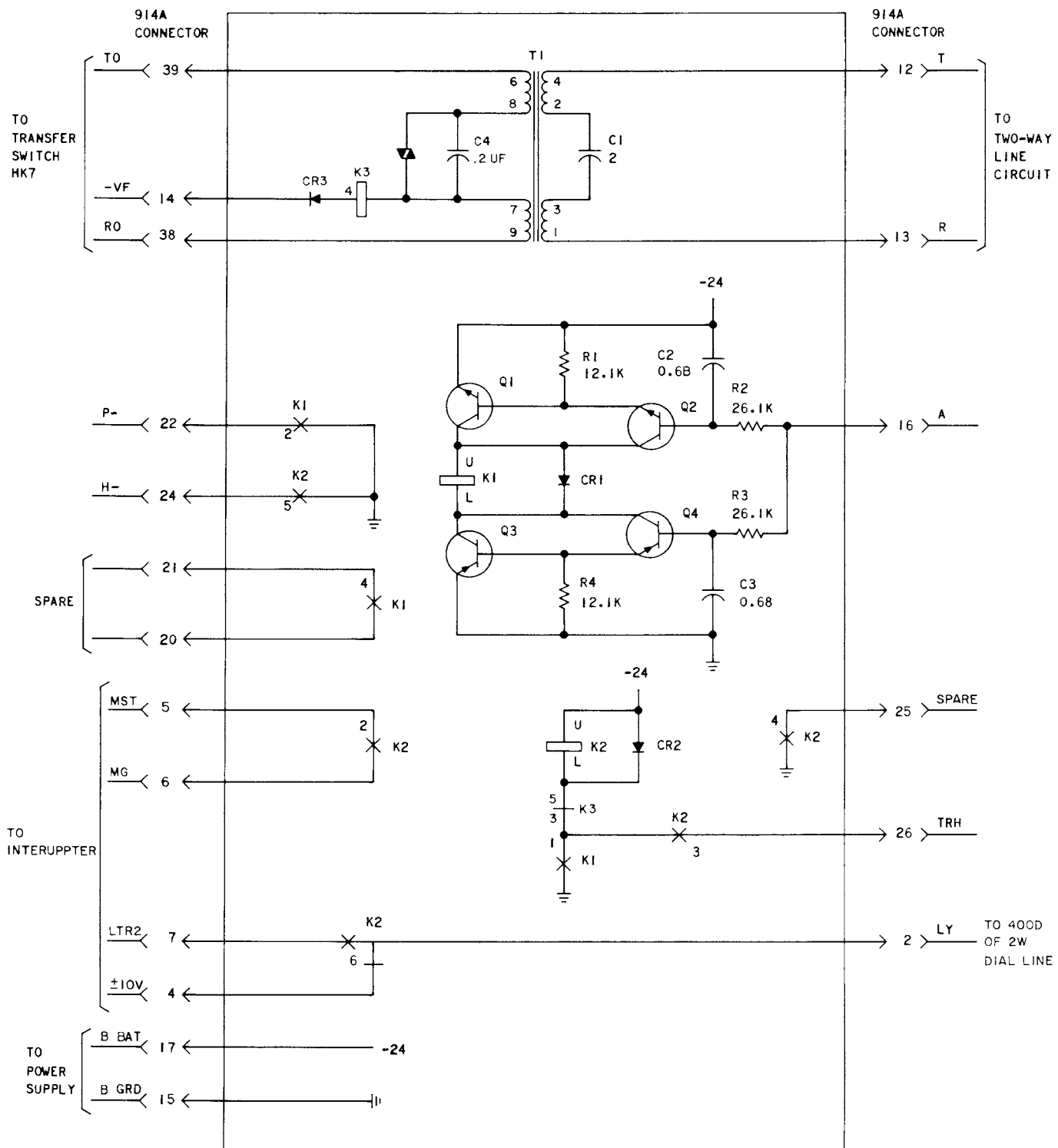


Fig. 8—Condensed Functional Schematic of Circuit Pack AE38 (Tie Line Transfer Circuit)

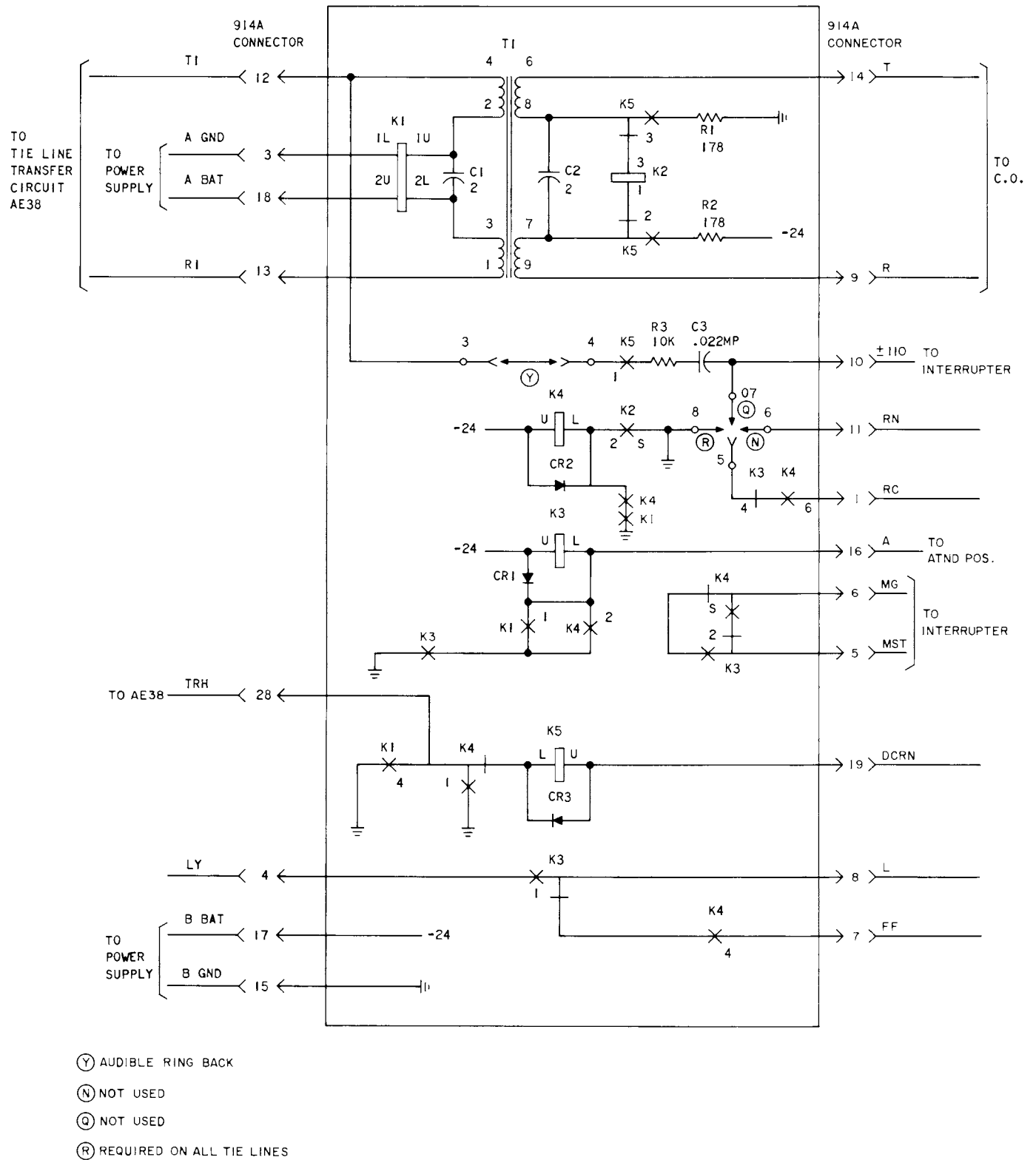


Fig. 9—Condensed Functional Schematic of Circuit Pack AE39 (Tie Line Circuit)

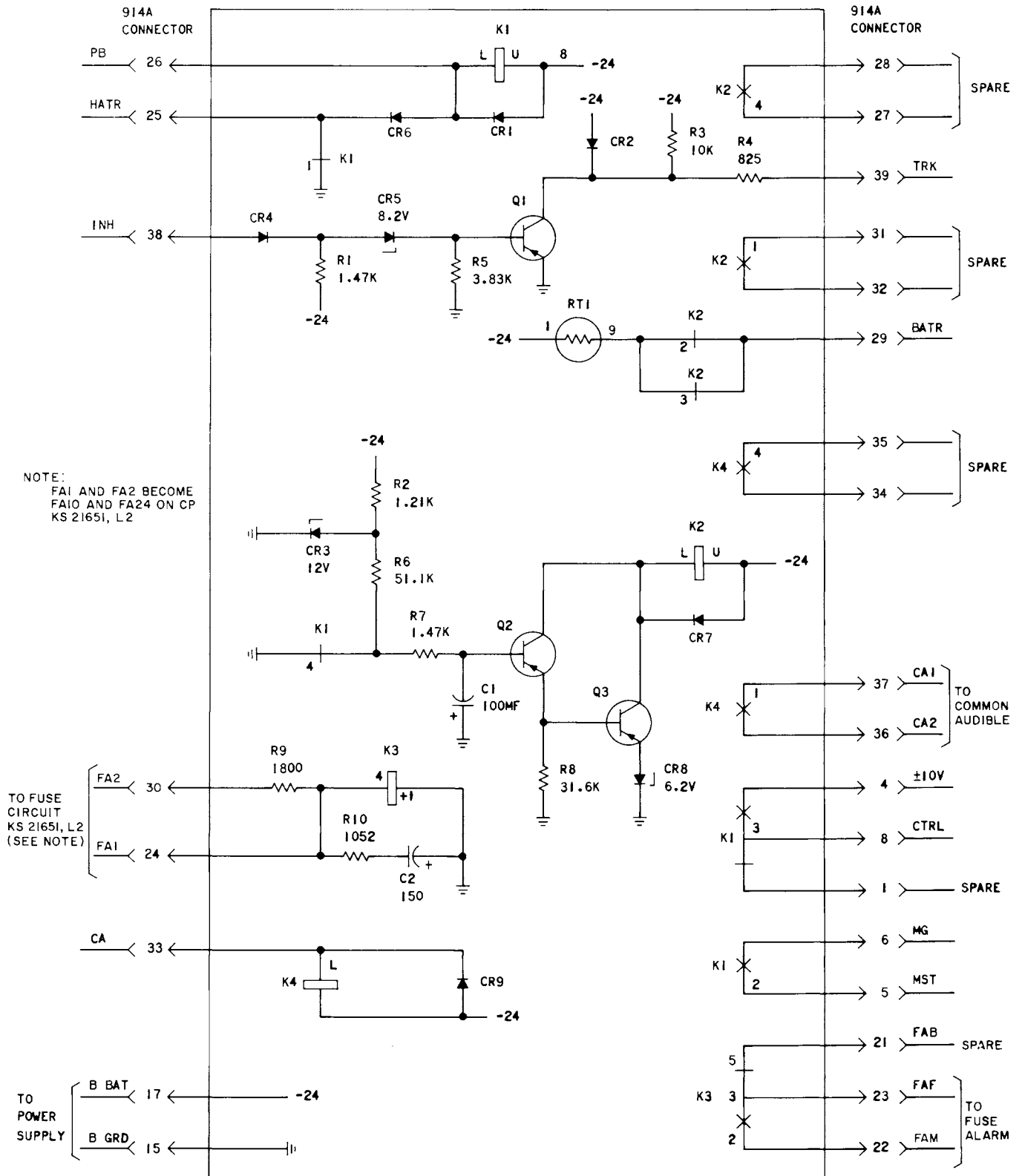


Fig. 10—Condensed Functional Schematic of Circuit Pack AE40 (Transfer Control Circuit)

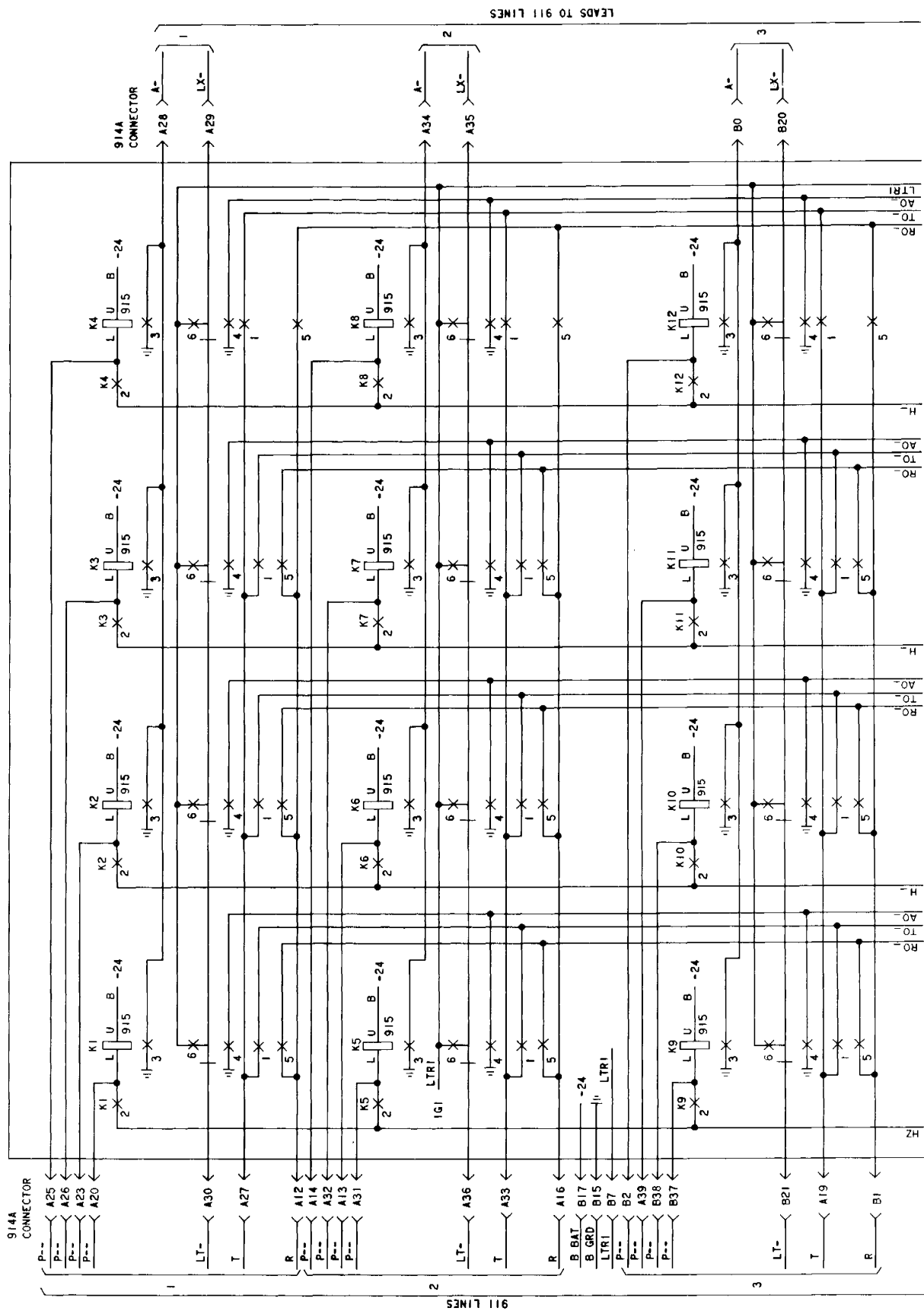


Fig. 11—Condensed Functional Schematic of Circuit Pack HK7 (Transfer Switch)—Sheet 1 of 2

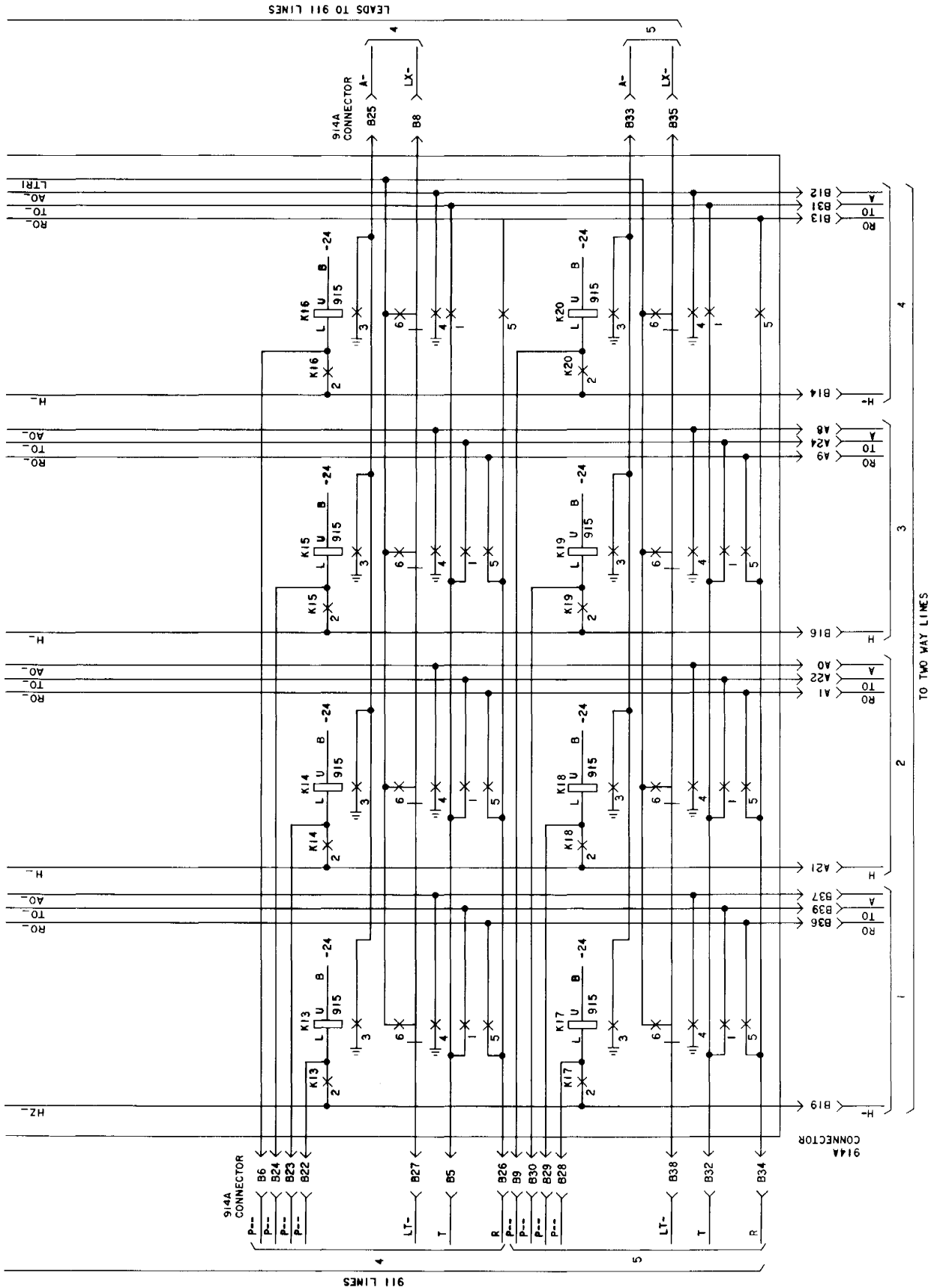
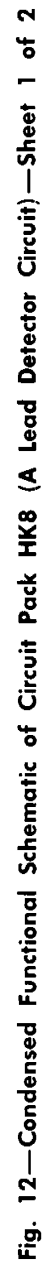
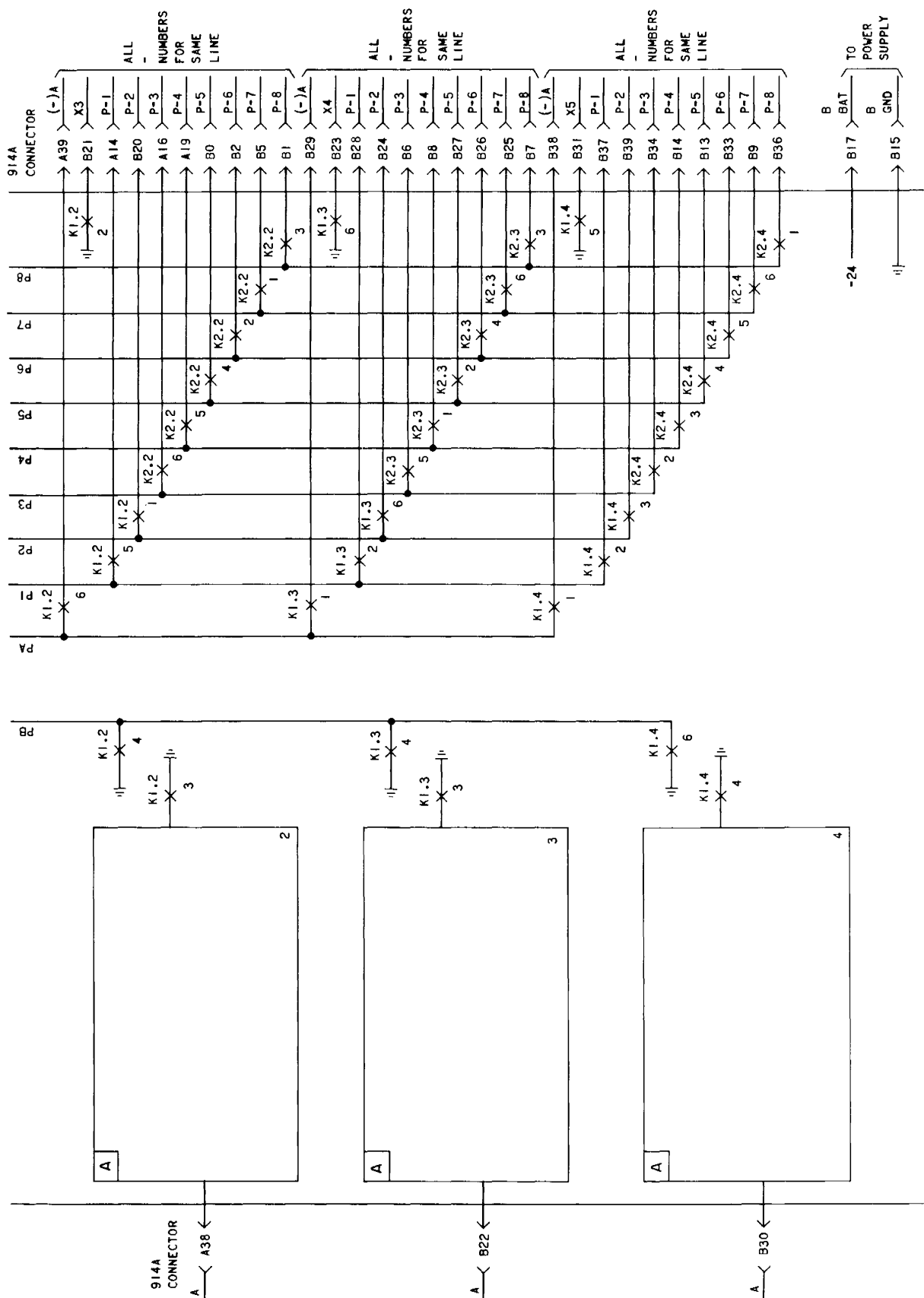


Fig. 11—Condensed Functional Schematic of Circuit Pack HK7 (Transfer Switch)—Sheet 2 of 2

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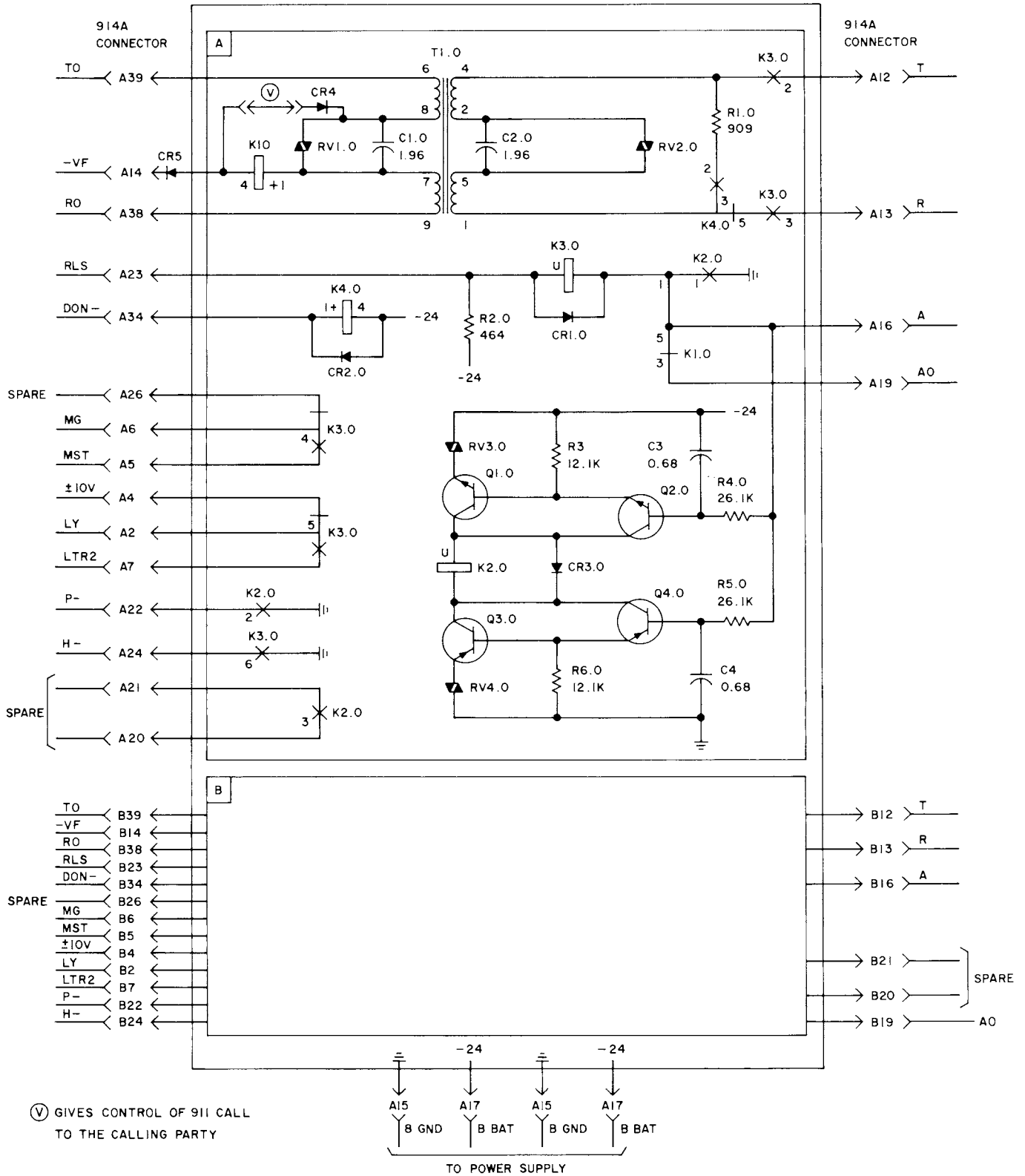


Fig. 13—Condensed Functional Schematic of Circuit Pack HK9 (Dial Line Transfer Circuit)

SECTION 473-310-101

FIRST EQUIPMENT UNIT
J53053A, LIST 1 EQUIPPED FOR 5-911 TRUNKS,
4-2 WAY DIAL LINES OR 4-PRIVATE LINES

SECOND EQUIPMENT UNIT
J53053A, LIST 1 EQUIPPED FOR 5-911 TRUNKS,
AND 4-PRIVATE LINES

CARRIER 1

J1A	J2A	J3A	J4A	J5A	J6	J7
911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	TR SW CKT	TR SW CKT
J1B	J2B	J3B	J4B	J5B	HK 7	HK 7
SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	(NOTE 2)	

CARRIER 1

J1A	J2A	J3A	J4A	J5A	J6	J7
911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	TR SW CKT	TR SW CKT
J1B	J2B	J3B	J4B	J5B	HK 7	HK 7
SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	(NOTE 2)	

CARRIER 2

J1A	J2A	J3A	J4A	J5A	J6A	J7
TIE LINE CKT AE39 OR DIAL LINE CKT 400D (NOTE 3)	TIE LINE CKT AE39 OR DIAL LINE CKT 400D (NOTE 4)	TIE LINE TR CKT AE38 OR 1/2 DIAL LINE TR CKT HK9 (NOTE 3)	TIE LINE TR CKT AE38 OR 1/2 DIAL LINE TR CKT HK9 (NOTE 4)	POS TR CKT AE35	POS TR CKT AE35	A LEAD DETECTOR CKT HK 8
J1B	J2B	J3B	J4B	J5B	J6B	A LEAD DETECTOR CKT HK 8
TIE LINE CKT AE39 OR DIAL LINE CKT 400D (NOTE 3)	TIE LINE CKT AE39 OR DIAL LINE CKT 400D (NOTE 4)	TIE LINE TR CKT AE38 OR 1/2 DIAL LINE TR CKT HK9 (NOTE 3)	TIE LINE TR CKT AE38 OR 1/2 DIAL LINE TR CKT HK9 (NOTE 4)	FA, CA, AND TR CONT CKT AE40	FUSE CKT KS 21651 L2 (NOTE 5)	

CARRIER 2

J1A	J2A	J3A	J4A	J5A	J6A	J7
TIE LINE CKT AE39	TIE LINE CKT AE39	TIE LINE TR CKT AE38	TIE LINE TR CKT AE38	POS TR CKT AE35	POS TR CKT AE35	A LEAD DETECTOR CKT HK 8
TIE LINE CKT AE39	TIE LINE CKT AE39	TIE LINE CKT AE39	TIE LINE CKT AE39		FUSE CKT KS 21651 L2 (NOTE 5)	A LEAD DETECTOR CKT HK 8

Fig. 14—KTU and Circuit Pack Location in Carrier Positions of the J53053A, L1 Equipment Unit for a Maximum of Twenty-Two Lines (Sheet 1 of 2)

THIRD EQUIPMENT UNIT
J53053A, LIST I EQUIPPED FOR 5-911 TRUNKS

CARRIER 1						
J1A	J2A	J3A	J4A	J5A	J6	J7
911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	TR SW CKT HK 7	TR SW CKT HK 7
J1B	J2B	J3B	J4B	J5B	(NOTE 2)	
SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37		

FOURTH EQUIPMENT UNIT
J53053A, LIST I EQUIPPED FOR 5-911 TRUNKS

CARRIER 1						
J1A	J2A	J3A	J4A	J5A	J6	J7
911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	911 LINE CKT 400 D KTU	TR SW CKT HK 7	TR SW CKT HK 7
J1B	J2B	J3B	J4B	J5B	(NOTE 2)	
SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37	SW-HOOK STATUS CKT AE 37		

CARRIER 2						
J1A	J2A	J3A	J4A	J5A	J6A	J7
				POS TR CKT AE35	POS TR CKT AE35	A LEAD DETECTOR CKT HK8
J1B	J2B	J3B	J4B	J5B	J6B	
					FUSE CKT KS 21651 L2 (NOTE 5)	

CARRIER 2						
J1A	J2A	J3A	J4A	J5A	J6A	J7
				POS TR CKT AE35	POS TR CKT AE35	A LEAD DETECTOR CKT HK8
J1B	J2B	J3B	J4B	J5B	J6B	
					FUSE CKT KS 21651 L2 (NOTE 5)	

NOTES:

1. THE 914A CONNECTORS ARE KEY SLOTTED TO ACCEPT THE PLUG-INS ONLY AS SHOWN
2. HK7 REQUIRED IN THIS CONNECTOR ONLY WHEN TWO-WAY LINES EXCEED FOUR
3. WHEN J1A AND J1B ARE EQUIPPED WITH 400D KTU, J3A AND J3B MUST BE EQUIPPED WITH HK9. WHEN J1A AND J1B ARE EQUIPPED WITH AE39, J3A AND J3B MUST BE EQUIPPED WITH AE38
4. WHEN J2A AND J2B ARE EQUIPPED WITH 400D, KTU, J4A AND J4B MUST BE EQUIPPED WITH HK9. WHEN J2A AND J2B ARE EQUIPPED WITH AE39, J4A AND J4B MUST BE EQUIPPED WITH AE38.

5. FUSE BOARD DOES NOT PULL OUT COMPLETELY, ONLY PARTIALLY FOR FUSE REPLACEMENT.

Fig. 14—KTU and Circuit Pack Location in Carrier Positions of the J53053A, L1 Equipment Unit for a Maximum of Twenty 911 Lines (Sheet 2 of 2)

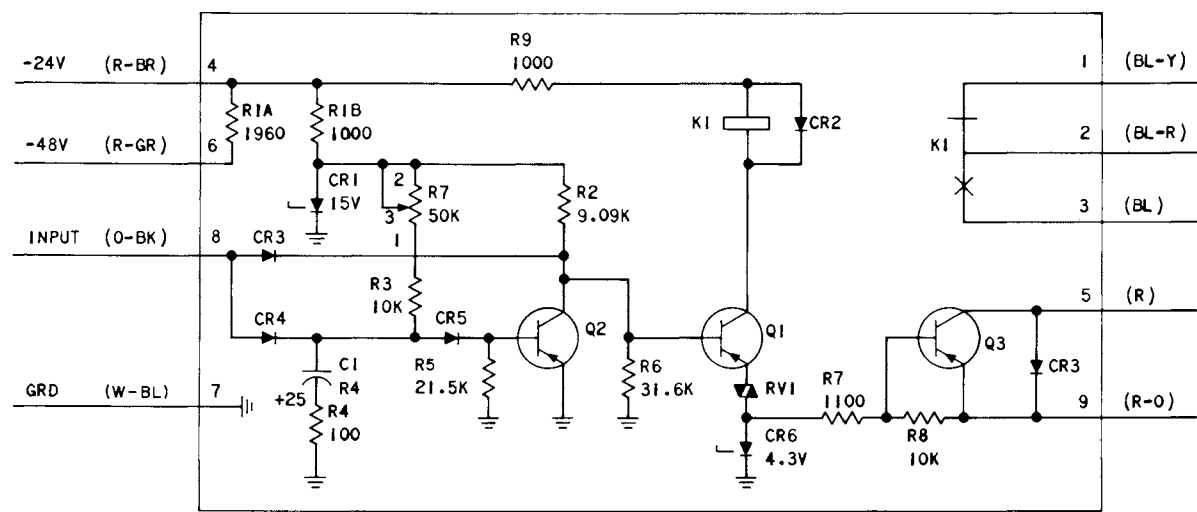


Fig. 15—Timed Flash Circuit (D180645, Kit of Parts)