

“PICTUREPHONE®” SERVICE (PHASE 0)
1P2 KEY TELEPHONE SYSTEM
600 SERIES KEY TELEPHONE UNITS
IDENTIFICATION

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1. GENERAL

1.01 This section contains information on the 600 series key telephone units (KTUs) which provide audio/video PICTUREPHONE® service.

1.02 This section is reissued to:

- Add information on 619A, 620A, 621A, and 622A key telephone units
- Update functional schematics to include latest circuit information.

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

- CD- and SD-69605-02 Issue 1 (600A and 601A KTUs)
- CD- and SD-69606-01 Issue 3 (604A and 605A KTUs)
- CD- and SD-69607-01 Issue 3 (602A and 603A KTUs)
- CD- and SD-69618-01 Issue 2 (606A and 607A KTUs)
- CD- and SD-69632-01 Issue 4 (608A, 609A, 610A, 611A, 612A, 614A, 615A, 616A, 617A, 618A, 619A, 620A, 621A, 622A, 623A, 624A and 625A KTUs)

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.◀

2. IDENTIFICATION**600A Key Telephone Unit (Single or Multigroup Line Circuit)**

2.01 The 600A KTU (Fig. 1) is an 8-inch printed wiring board which provides all of the functions and features of the 400D KTU, plus the

additional control functions needed for PICTUREPHONE service. These features are:

- Pickup and hold of a CO, Centrex, or PBX line on an audio only or an audio/video call
- Choice of line ringing or common audible ringing on an incoming call
- Distinctive flashing lamp and audible signal to distinguish an audio or video incoming call
- Distinctive steady lamp signal to indicate a busy condition on an audio or video call
- Distinctive winking lamp signal to indicate when an audio or video call is held
- Individual line time-out of audible and visual signals on an abandoned incoming call.

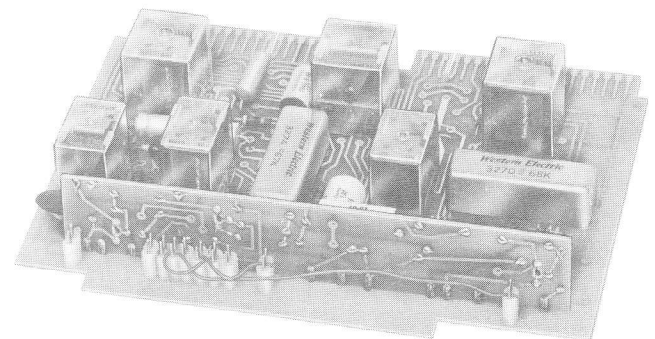


Fig. 1—600A Key Telephone Unit (Single or Multigroup Line Circuit)

2.02 Time-out and ringing option strapping on this unit must be accomplished by field forces at the time of installation. See the appropriate connection section for option strapping information.

601A Key Telephone Unit (Video Switch for all Arrangements)

2.03 The 601A KTU (Fig. 2) consists of two independent 4-wire video switch circuits on one 4-inch printed wiring board which provides:

- Switching of two video lines to a single video station

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- Switching of two video stations to a single video line
- An idle line termination for each video pair in the unoperated condition.

Note: May be used in all PICTUREPHONE key system arrangements where video switching is required.

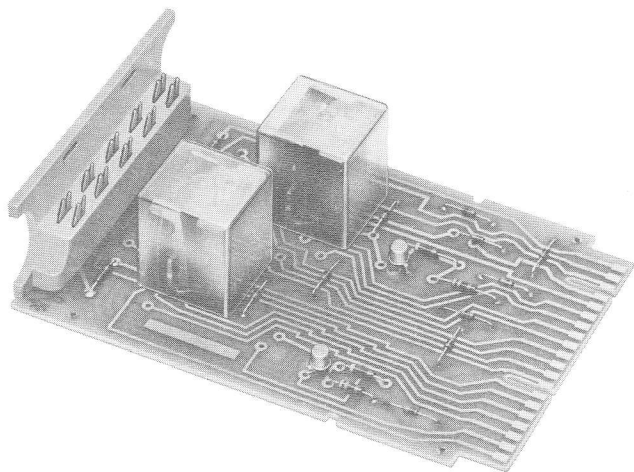


Fig. 2—601A Key Telephone Unit (Video Switch for All Arrangements)

602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line)

2.04 The 602A KTU is an 8-inch printed wiring board which connects group 1 to the CO, Centrex, or PBX line (optionally as an attendant group). This unit also provides:

- Common control for lockout
- System busy tone
- Termination of video line during idle and hold conditions
- Priority on simultaneous seizure of the line by different groups
- Time-out over line switch flash

- Directed call transfer with an external relay.

603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line)

2.05 The 603A KTU is an 8-inch printed wiring board which connects any two groups other than group 1 to the CO, Centrex, or PBX line and connects these groups to system busy tone when they are locked out. Switching functions are the same as for group 1 in the 602A KTU.

604A Key Telephone Unit (Station Lockout Circuit, Single Link Intercom)

2.06 The 604A KTU is an 8-inch printed wiring board which provides the following functions:

- Recognizes a PICTUREPHONE call and directs distinctive audible and visual signaling
- Provides idle line termination of video pairs
- Enables selected calling station circuit
- Locks out all other stations when a call is in progress
- Connects a system busy tone to audio/video switches of locked out stations
- Provides a distinctive steady lamp voltage for all stations to indicate a system busy condition (audio or video).

605A Key Telephone Unit (Audio/Video Link Circuit, Single Link Intercom)

2.07 The 605A KTU is an 8-inch printed wiring board which connects the audio and video pairs of the calling and called stations. This unit also provides:

- System busy tone to locked out stations
- Video pair reversal
- Turn-on-set control function
- Circuit to connect three stations.

606A Key Telephone Unit (Common-Half Cable Equalizer)

2.08 The 606A KTU (Fig. 3) is an 8-inch printed wiring board for video pair equalization from the customer to the CO or PBX. It provides:

- An input network which converts the incoming balanced signal to the unbalanced mode for equalization
- A simple static equalizer which is basically a shaped gain amplifier used to compensate for loss in the transmission line. It is not adjustable.
- A sync detector for recognizing the CO originated video supervisory signal which identifies a video call
- Remove loop-back function
- An output network for restoring the static equalizer output to the balanced mode for further transmission.

607A Key Telephone Unit (Control-Half Cable Equalizer)

2.09 The 607A KTU (Fig. 4) is an 8-inch printed wiring board for video pair equalization from the CO or PBX to the customer. It provides:

- An input and output network similar to the 606A KTU (common-half cable equalizer)
- A static equalizer which is basically a shaped gain amplifier which compensates for loss in the transmission line. Screw adjustments are provided for short, intermediate, or long length cables.

Note: A second 607A KTU may be inserted in the common video pair between the key telephone equipment and the 1A service unit when excessive cable lengths are encountered.

608A Key Telephone Unit (Transfer Circuit for 2- or 3-Link Intercom)

2.10 The 608A KTU is a 4-inch printed wiring board which is used to expand the 19 output leads of the 424A KTU (19-code selector circuit) to a total of 27 output leads.

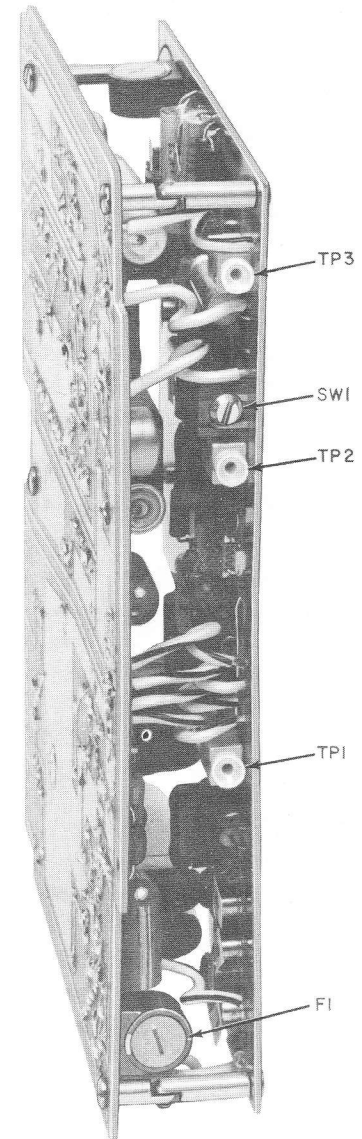


Fig. 3—606A Key Telephone Unit (Common-Half Cable Equalizer)

609A Key Telephone Unit (Add-on Transfer Connecting Circuit for 2- or 3-Link Intercom)

2.11 The 609A KTU is a 4-inch printed wiring board that:

- Connects the CO or PBX audio/video line to the intercom link being used.
- Removes hold condition of CO or PBX line
- Connects lamp voltage to the lamps of all add-on keys associated with the same line.

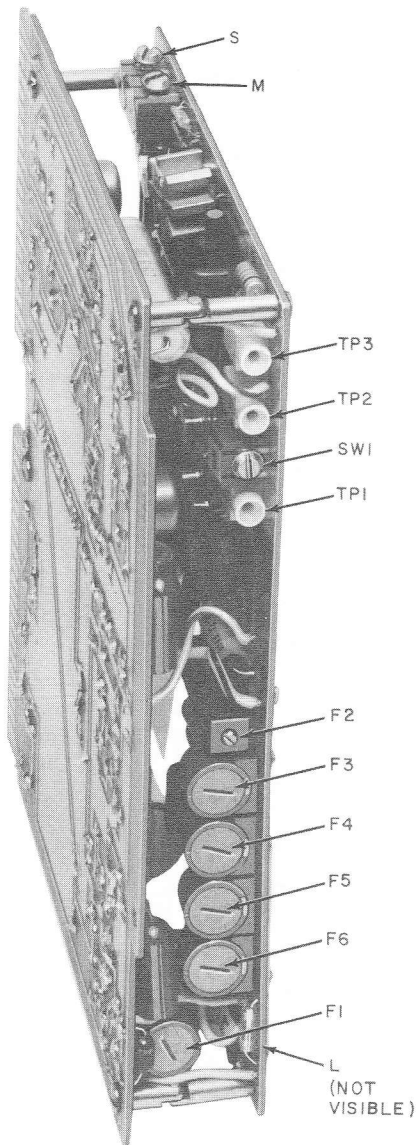


Fig. 4—607A Key Telephone Unit (Control-Half Cable Equalizer)

- During the added-on condition and prior to video transfer, the circuit holds both intercom stations so that either one may leave the intercom call and return as long as the other station does not hang up.

610A Key Telephone Unit (Add-on Transfer Control Circuit for 2- or 3-Link Intercom)

2.12 The 610A KTU consists of three independent circuits one per link mounted on an 8-inch printed wiring board. Each circuit serves to activate

one of the add-on transfer connecting circuits associated with the same link.

611A Key Telephone Unit (Hold Circuit for 2- or 3-Link Intercom)

2.13 The 611A KTU consists of two independent circuits mounted on a 4-inch printed wiring board. One hold circuit is required for each station equipped with the hold feature. The hold circuit:

- Maintains ground on the "AH" lead of the associated station circuit keeping it operated during the hold condition
- Causes the associated video crosspoint relay to release, removing video from the held station
- Controls the lamp wink mode of the held intercom station.

612A Key Telephone Unit (Station Circuit for 2- or 3-Link Intercom)

2.14 The 612A KTU is an 8-inch printed wiring board. One station circuit is required for each intercom station. It provides the following features:

- Serves as an interface between the video station and the key telephone (intercom) system
- Signals the register circuit when service is requested
- Differentiates between called and calling party
- Distinctive flashing lamp and audible signal to distinguish between an audio or video incoming call
- Choice of audible signaling options.

614A and 615A Key Telephone Units (Link Circuit for 2- or 3-Link Intercom)

2.15 The 614A and 615A KTUs are 8-inch printed wiring boards which together control an

associated portion of the switch matrix. The link circuit also provides for:

- Station dialing and control functions associated with optional features
- Talk battery to connected stations
- Audible tones (dial, ringback, station busy, and permanent signal timeout)
- Control of CO or PBX lines added to the intercom by stations equipped with "add-on" feature
- Preventing video connection between more than two stations when a third, or a third and fourth station are brought in using the "add-on" feature
- Stations to be alerted by use of a direct station selection (DSS) key
- Recalling register circuit by means of a register recall key.

616A Key Telephone Unit (Paging Control Circuit for 2- or 3-Link Intercom)

2.16 The 616A KTU is an 8-inch printed wiring board which permits dial access to a customer-provided paging system (via a standard paging trunk circuit). The 616A KTU is substituted for a station circuit (612A KTU) in this arrangement.

617A and 618A Key Telephone Units (Register Circuit for 2- or 3-Link Intercom)

2.17 The 617A and 618A KTUs are 8-inch printed wiring boards which provide the main control functions during the processing of an intercom call. The register circuit:

- Recognizes requests for service and activates the selector.
- Selects and enables an idle link circuit
- Releases selector and connects it to selected link circuit.
- Causes dial tone to be transmitted to the calling party from the selected link circuit and removes dial tone when the first dial

pulse or TOUCH-TONE digit is received by the selector.

- Signals link circuit to connect appropriate audible tones.

619A Key Telephone Unit (Video Conference Control Circuit for 2- or 3-Link Intercom)

2.18 The 619A KTU is an 8-inch printed wiring board which contains a common circuit and three identical control circuits. The common circuit provides:

- Memory for voice switching
- Memory for leader override (a feature which allows a conferee to transmit his image to all other conferees and lock-in this condition by inhibiting all voice switching)

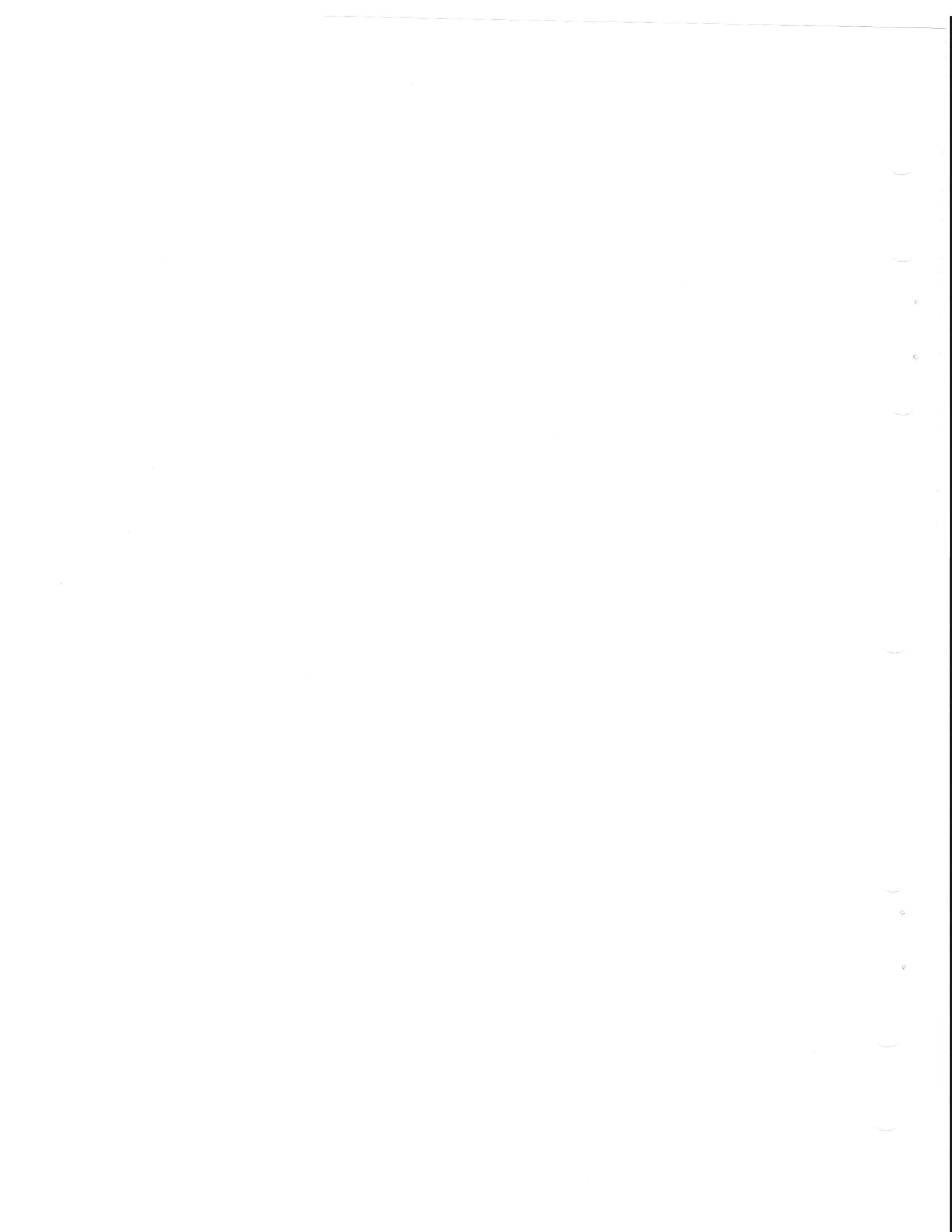
Each control circuit:

- Establishes a PICTUREPHONE Intercom Conference Key System (PICKS) connection on its associated link
- Excludes PICKS connections on other links
- Supplies ground to voice operated video switches (621A KTU)
- Lights CONF key
- Switches common pairs of video leads of the switch matrix into the input of the video amplifiers (620A KTU)
- Forwards an override ground which switches a CO or PBX line into the conference and at the same time inhibits all voice switching.

620A Key Telephone Unit (Video Amplifier for 2- or 3-Link Intercom)

2.19 The 620A KTU is an 8-inch printed wiring board which contains a video amplifier for use in a PICKS connection. Two are required.

2.20 These zero gain amplifiers allow five PICTUREPHONE® stations to be bridged without losing signal strength.



621A Key Telephone Unit (Voice Operated Video Switch for 2- or 3-Link Intercom)

2.21 The 621A KTU is an 8-inch printed wiring board containing two identical voice operated video switches which serve two individual stations. The voice operated video switch:

- Switches transmit and receive video pairs to and from the appropriate video amplifiers during a PICKS conference
- Detects the transmit state of a PICTUREPHONE station speakerphone
- Provides for present talker receiving video image of previous talker
- Provides for third party listener viewing present talker
- Provides for leader override
- Provides for station hold condition during conference.

622A Key Telephone Unit (Manually Operated Video Switch for CO or PBX Lines for 2- or 3-Link Intercom)

2.22 The 622A KTU is an 8-inch printed wiring board which is functionally identical to the 621A KTU, described in 2.21 with the following exceptions:

- This circuit allows a CO or PBX line to be included in a PICKS conference but not as a voice-switched station.

- The CO or PBX line becomes the present talker station whenever one of the intercom conferees depresses the line key associated with this line.

- Depression of the intercom key restores normal voice switching among intercom stations and the CO or PBX station is treated as a last talker and subsequently as a listener as voice switching occurs.

- The manual video switch has no hold feature.

Note: The CO or PBX line is connected into a PICKS conference by depressing the add-on conference key.◀

623A, 624A and 625A Key Telephone Units (Switch Matrix Circuit for 2- or 3-Link Intercom)

2.23 The 623A, 624A and 625A KTUs are 8-inch printed wiring boards containing seven relays each which provide all of the crosspoint contacts required to interconnect stations with the intercom. The 18 contacts (3 relays) associated with each link circuit, for every station in the system, are associated with switching functions necessary for the audio, video, and features portion of a given call. Each KTU provides crosspoint connections for seven stations per link in the intercom.

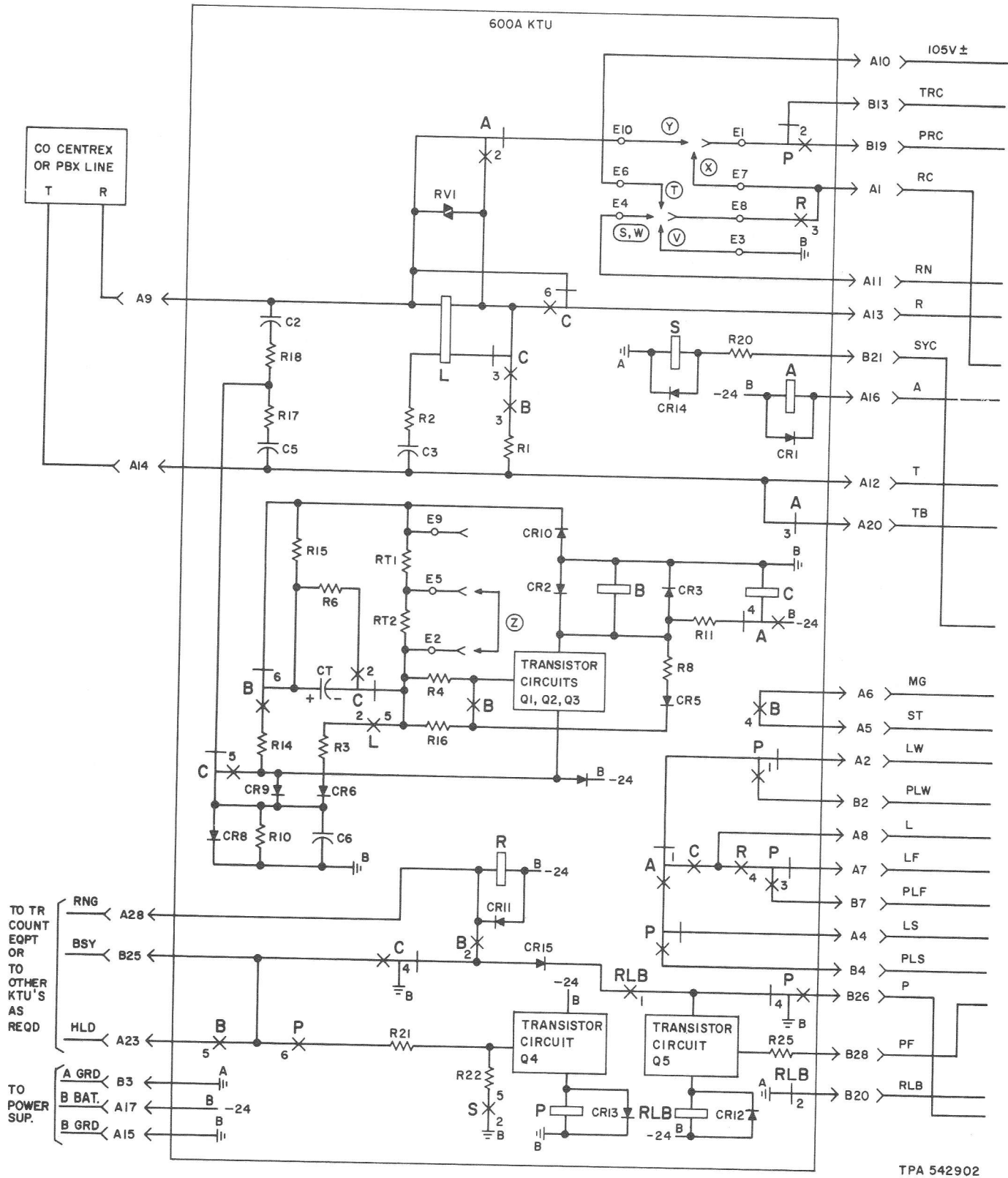


Fig. 5—Condensed Functional Schematic of 600A Key Telephone Unit (Single or Multigroup Line Circuit) (Sheet 1 of 2)

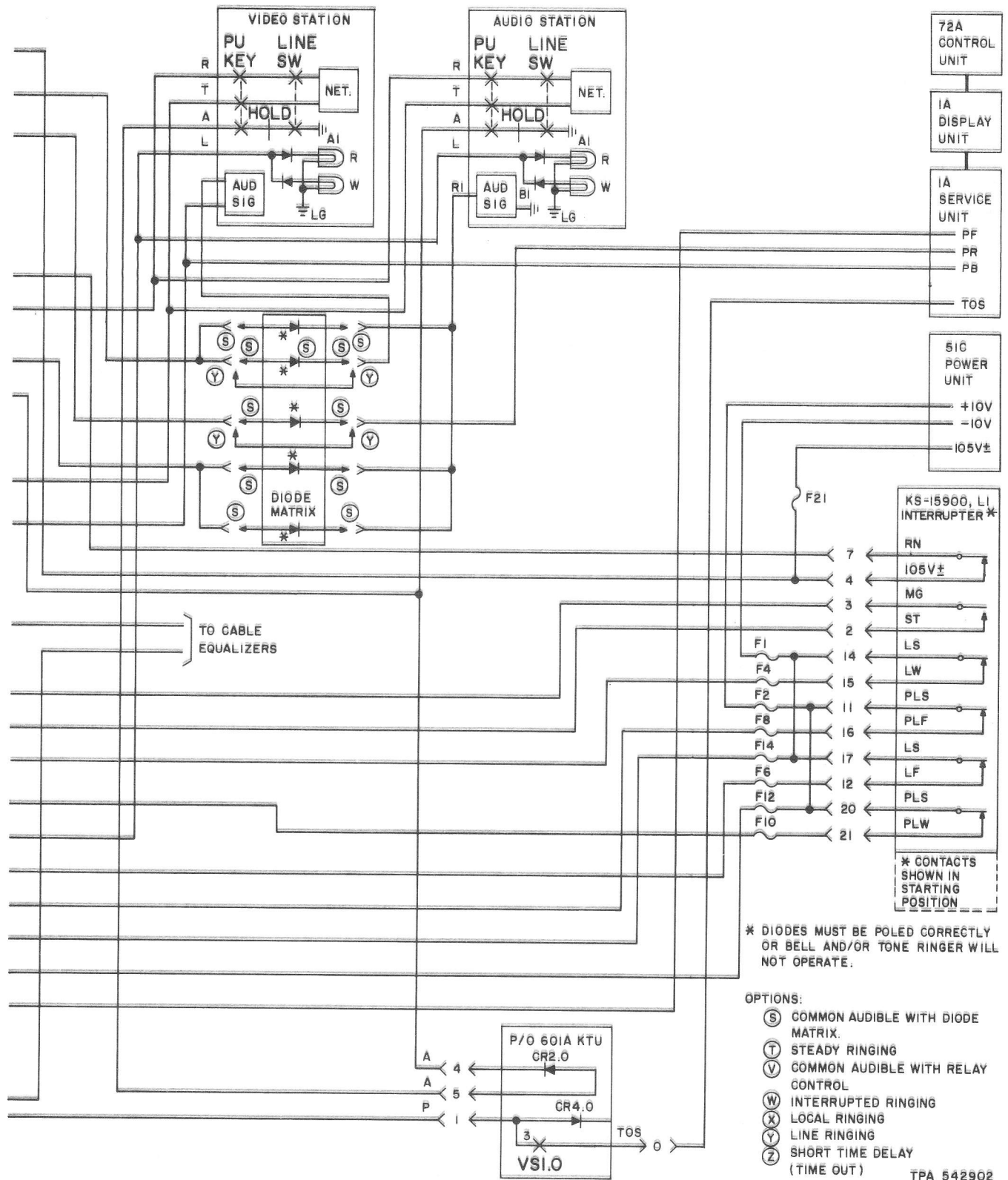


Fig. 5—Condensed Functional Schematic of 600A Key Telephone Unit (Single or Multigroup Line Circuit) (Sheet 2 of 2)

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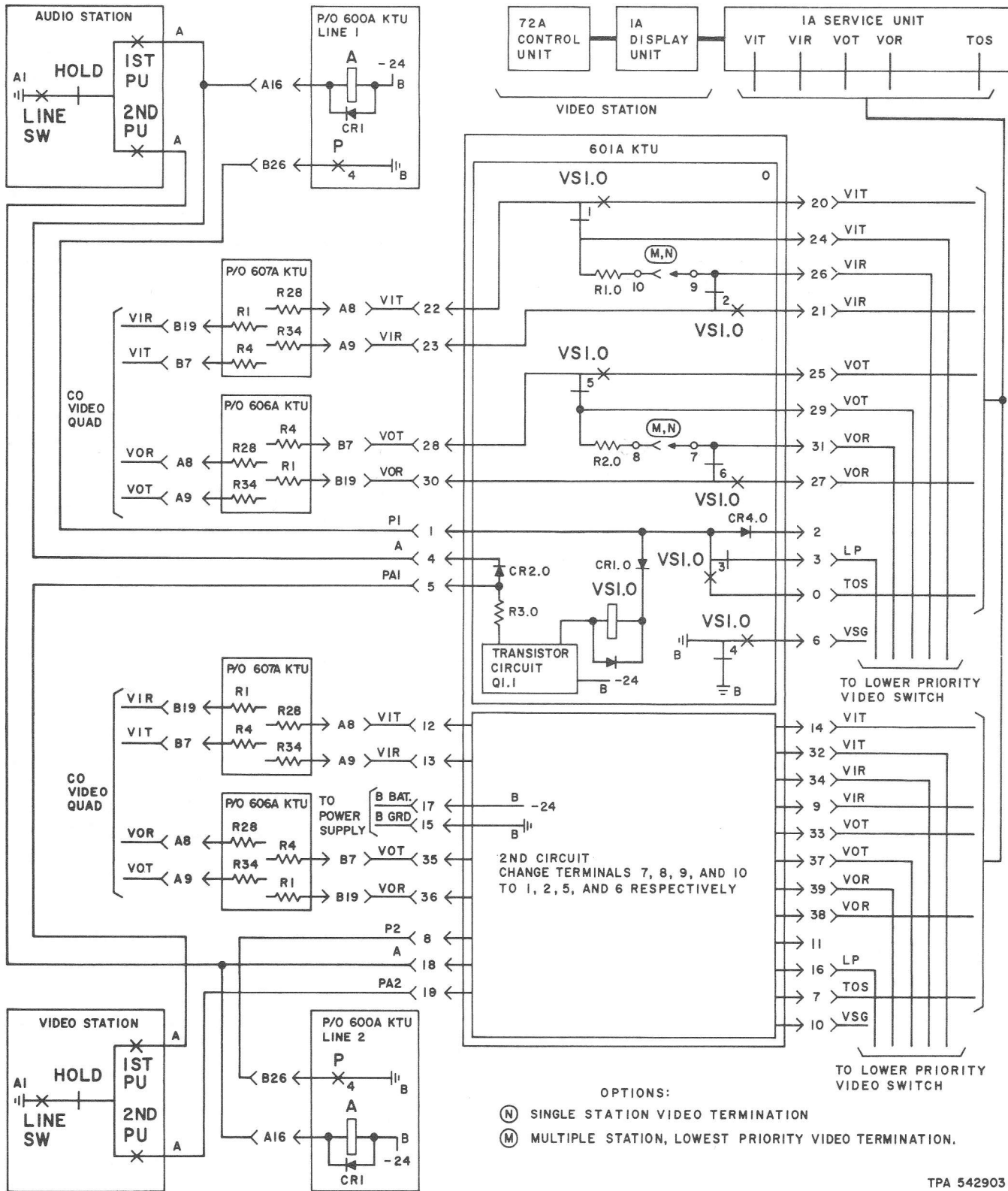


Fig. 6—Condensed Functional Schematic of 601A KTU (Video Switch for All Arrangements)

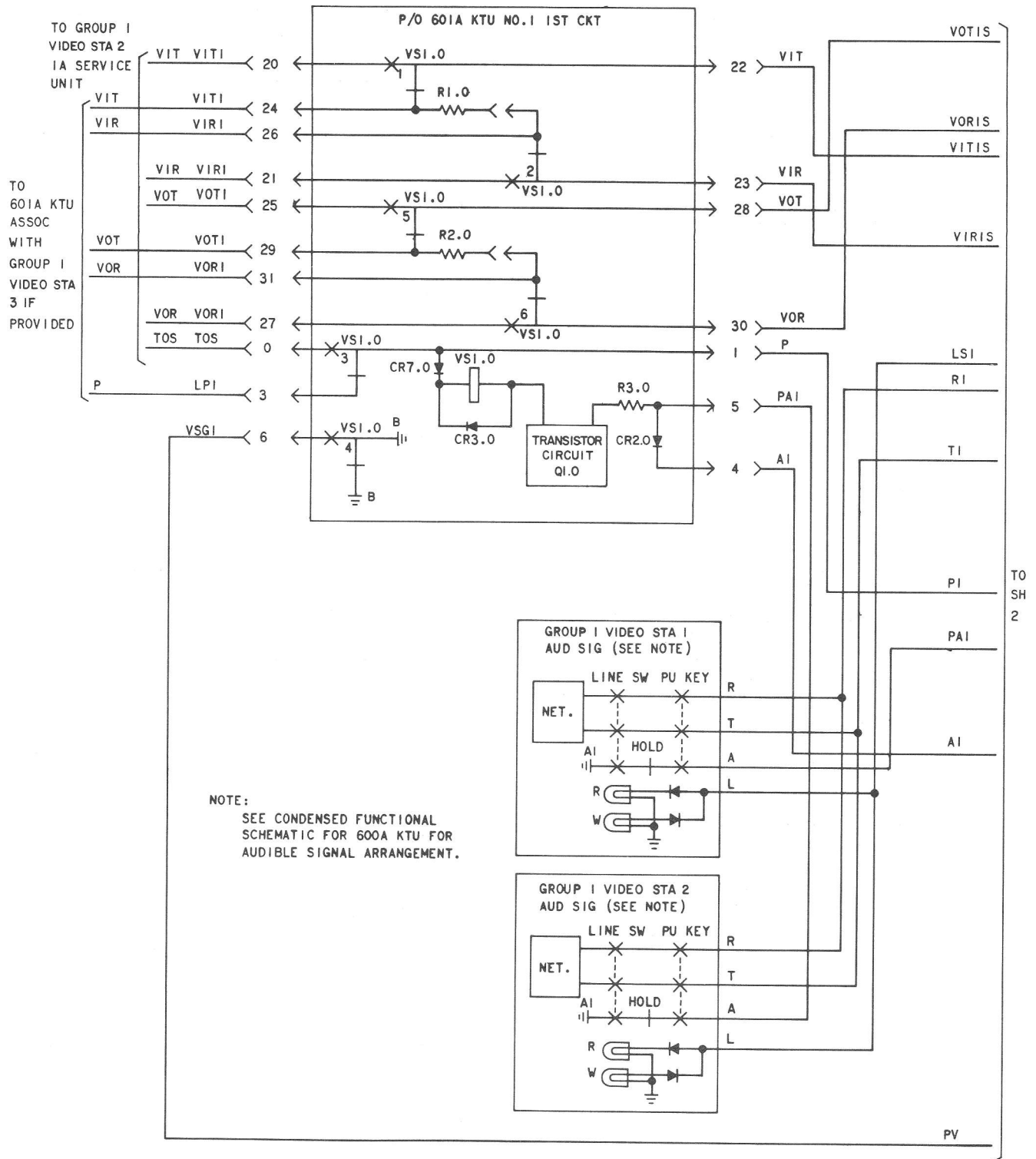


Fig. 7—Condensed Functional Schematic of 602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) and 603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) (Sheet 1 of 5)

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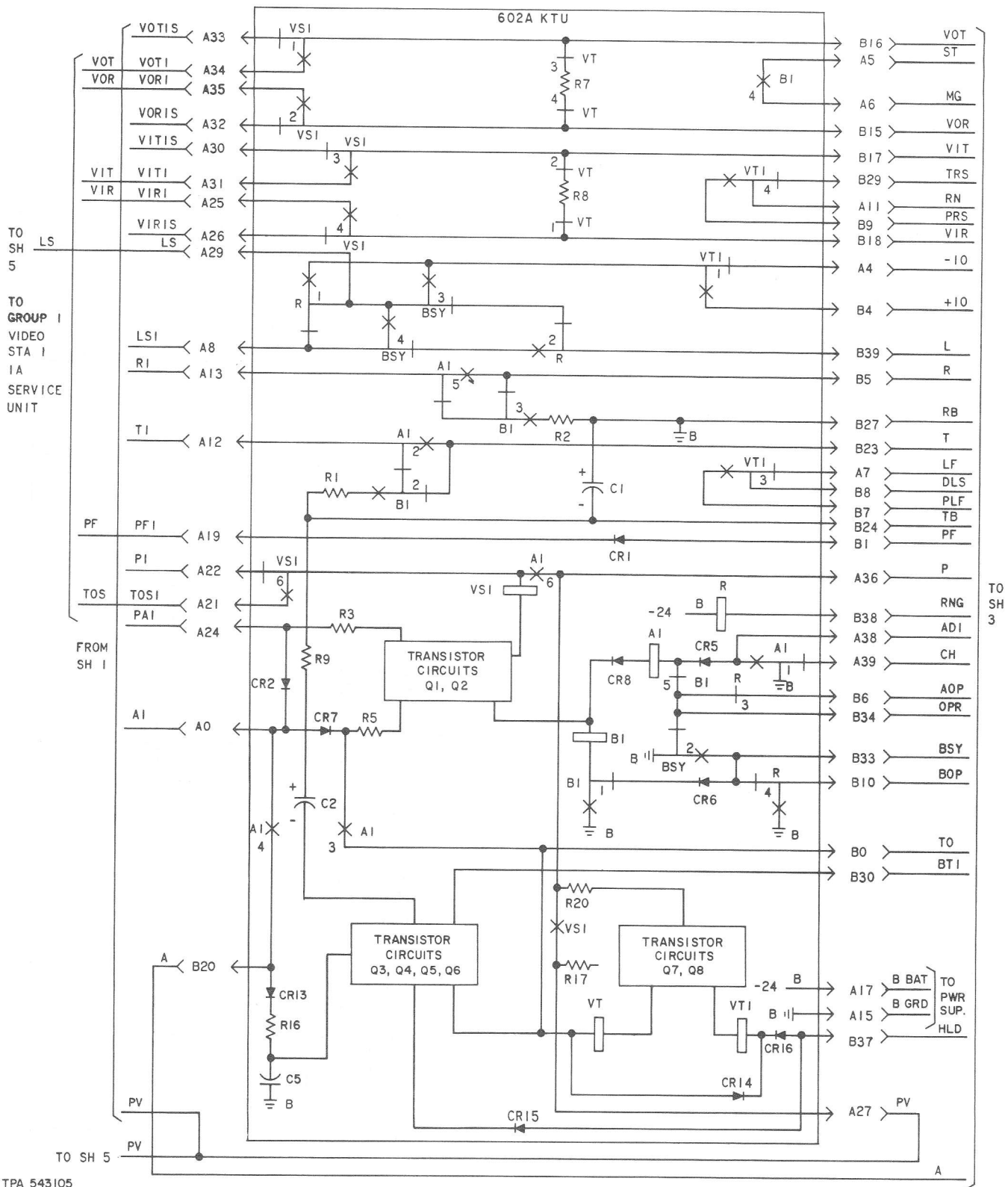


Fig. 7—Condensed Functional Schematic of 602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) and 603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) (Sheet 2 of 5)

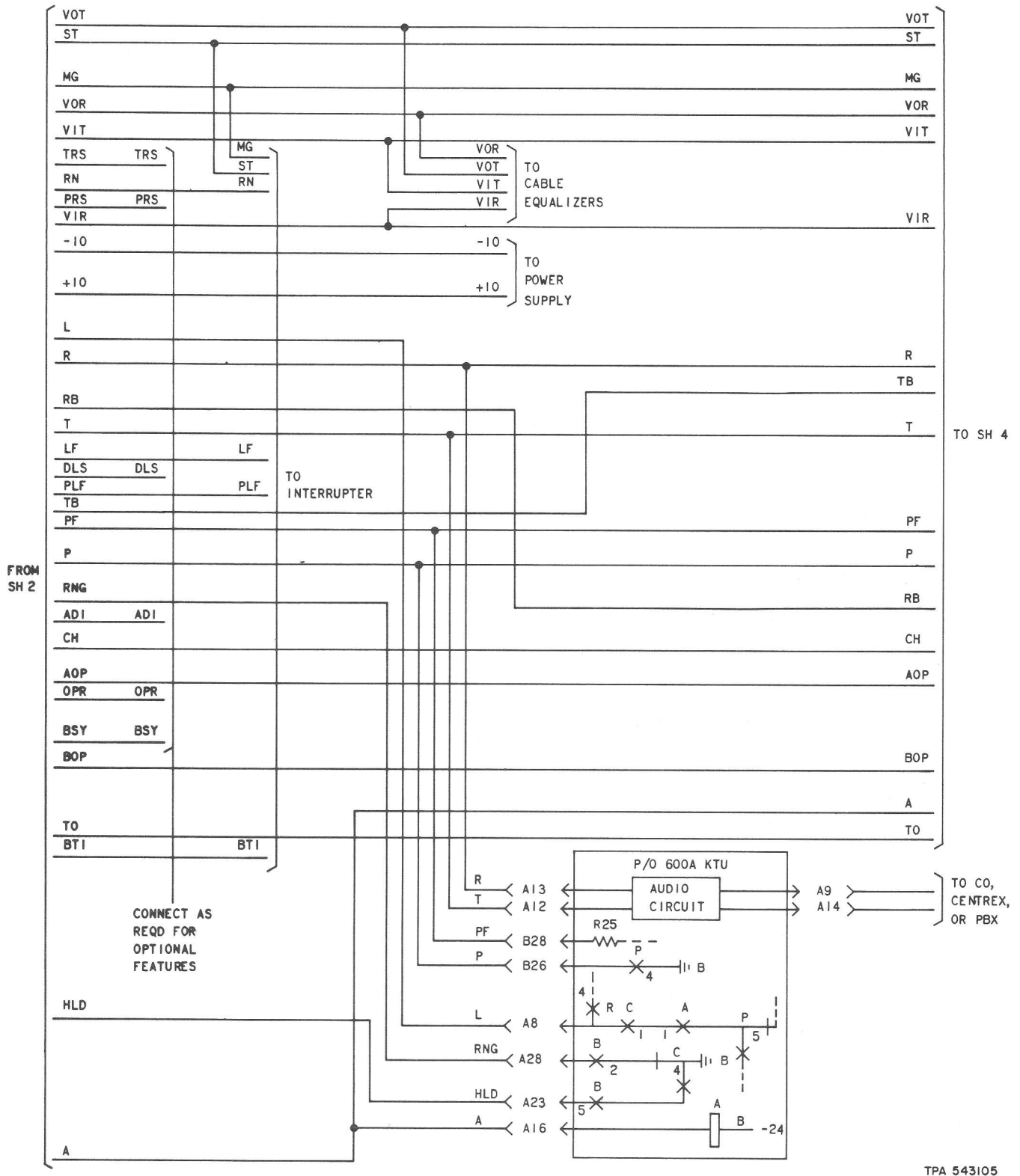


Fig. 7—Condensed Functional Schematic of 602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) and 603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) (Sheet 3 of 5)

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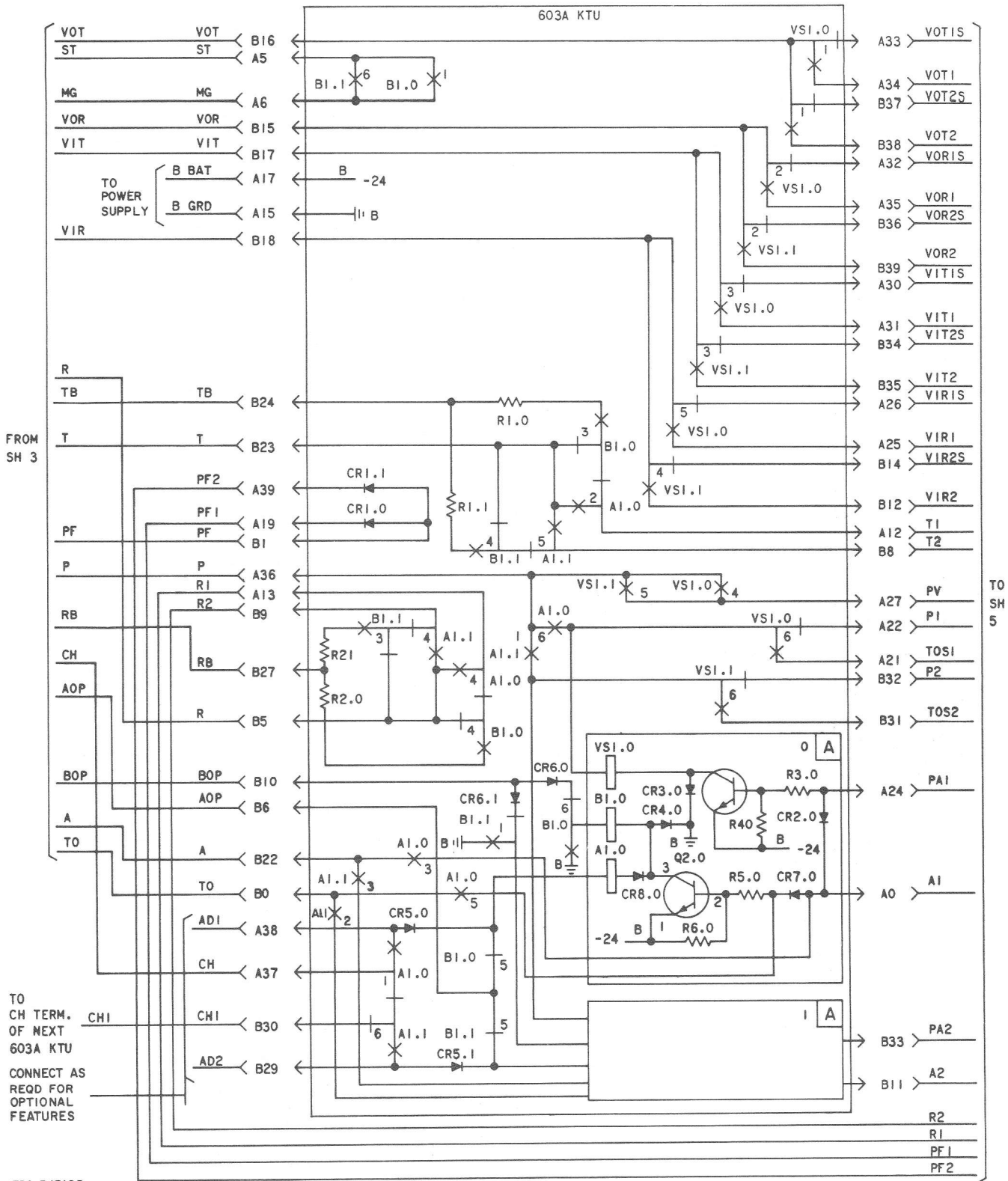


Fig. 7—Condensed Functional Schematic of 602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) and 603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) (Sheet 4 of 5)

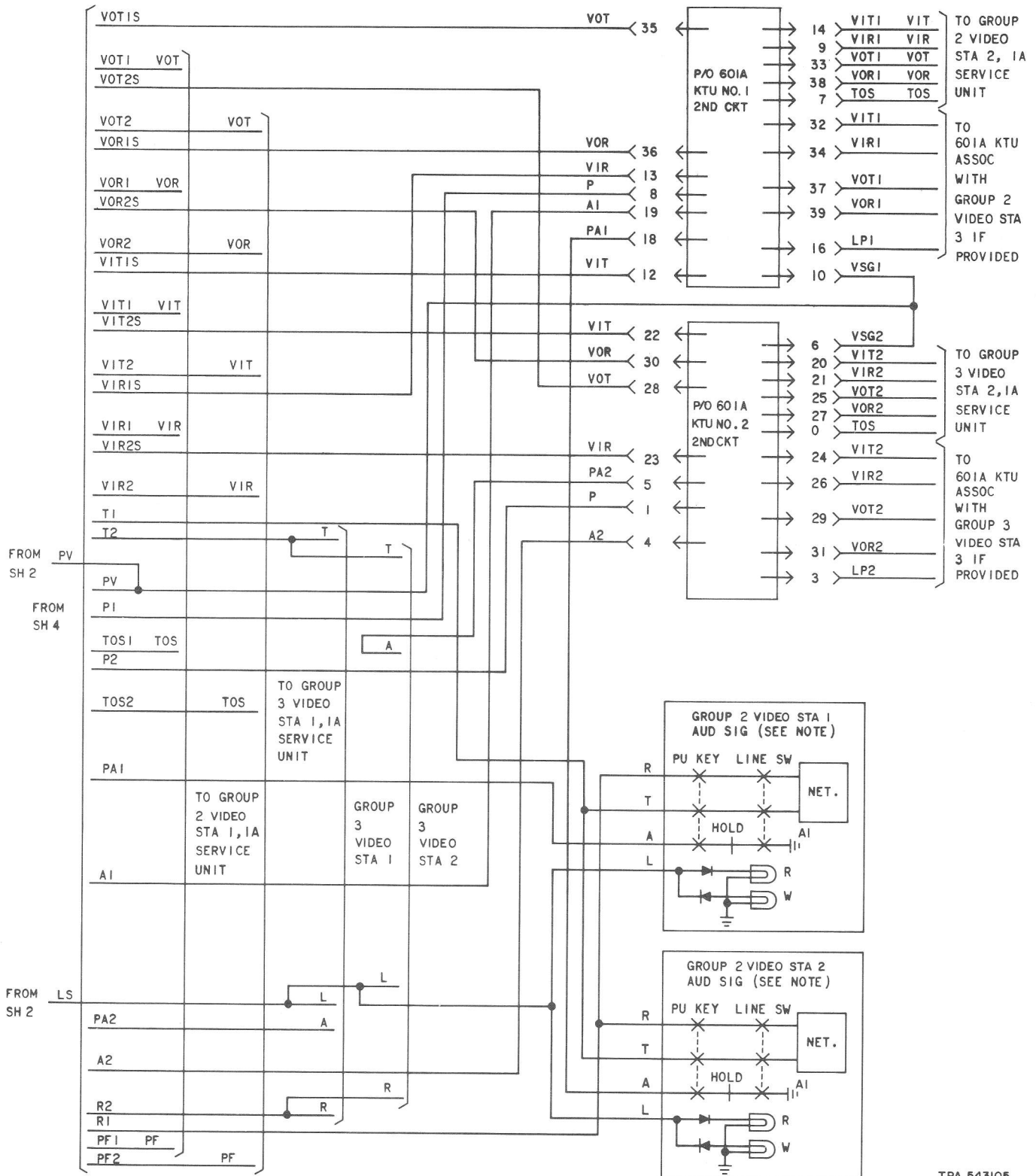


Fig. 7—Condensed Functional Schematic of 602A Key Telephone Unit (Common Control and Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) and 603A Key Telephone Unit (Group Switching Circuit for Multigroup CO, Centrex, or PBX Line) (Sheet 5 of 5)

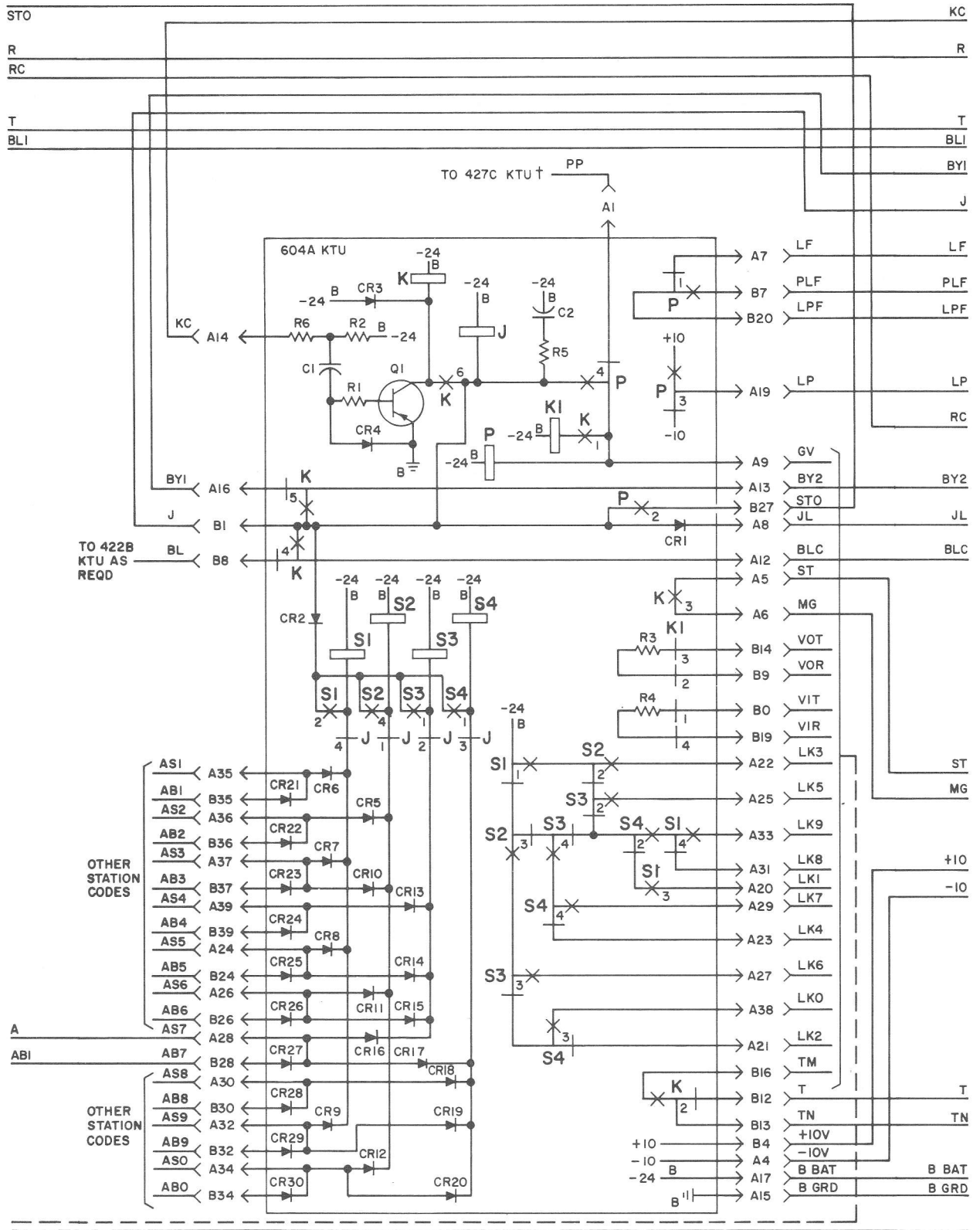
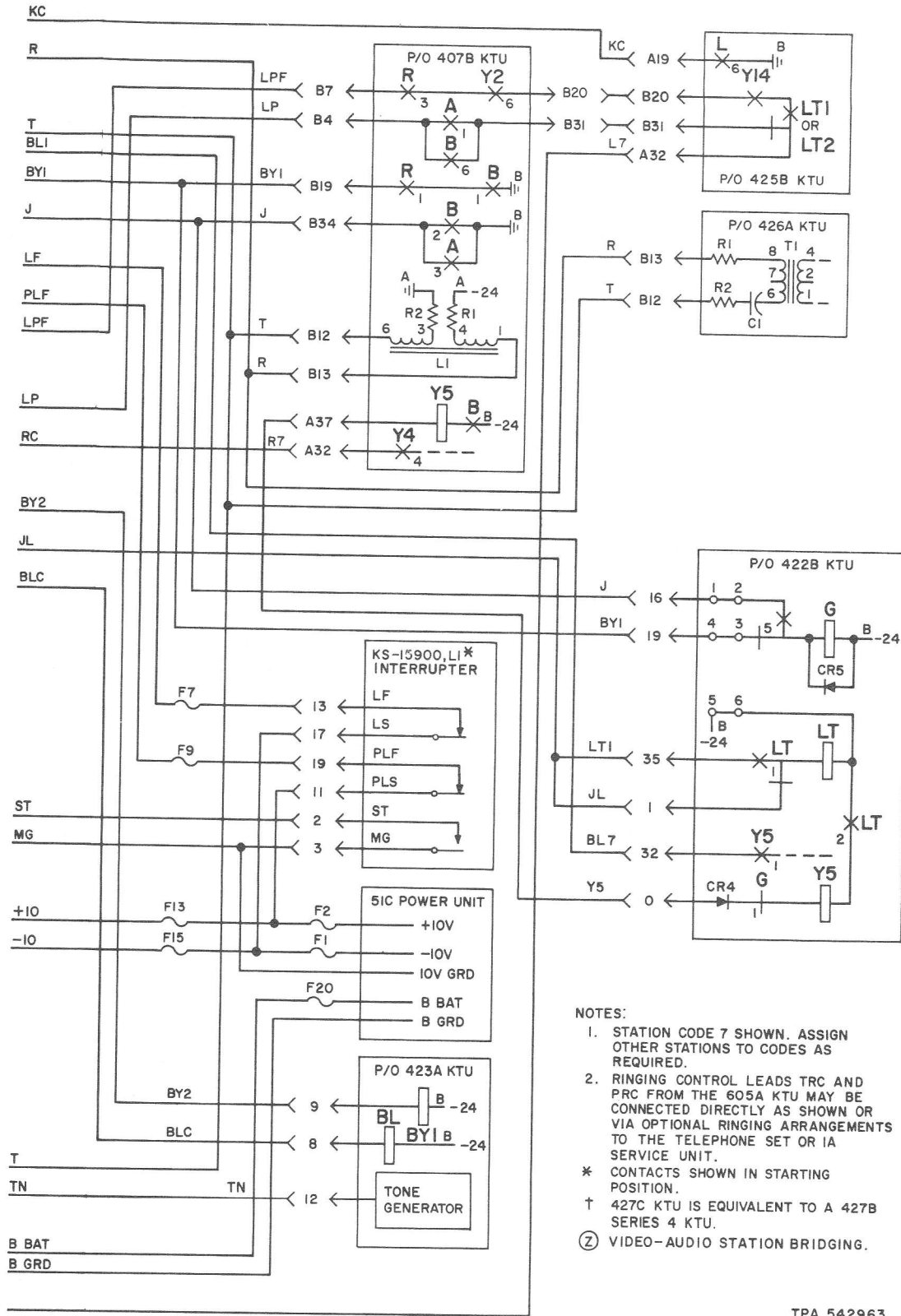


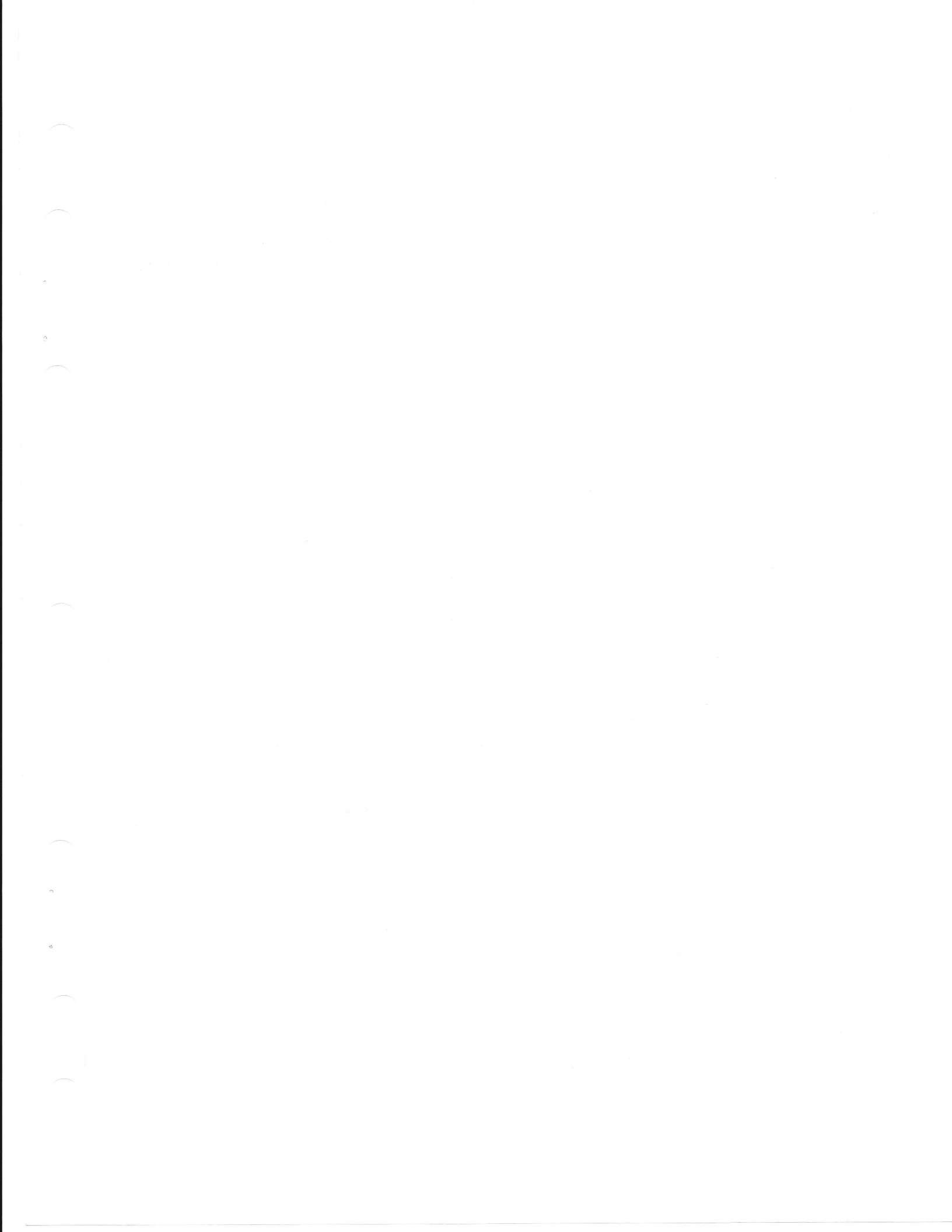
Fig. 8—Condensed Functional Schematic of 604A Key Telephone Unit (Station Lockout Circuit Single Link Intercom) (Sheet 2 of 3)



- NOTES:
1. STATION CODE 7 SHOWN. ASSIGN OTHER STATIONS TO CODES AS REQUIRED.
 2. RINGING CONTROL LEADS TRC AND PRC FROM THE 605A KTU MAY BE CONNECTED DIRECTLY AS SHOWN OR VIA OPTIONAL RINGING ARRANGEMENTS TO THE TELEPHONE SET OR IA SERVICE UNIT.
- * CONTACTS SHOWN IN STARTING POSITION.
- † 427C KTU IS EQUIVALENT TO A 427B SERIES 4 KTU.
- ② VIDEO-AUDIO STATION BRIDGING.

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Fig. 8—Condensed Functional Schematic of 604A Key Telephone Unit (Station Lockout Circuit Single Link Intercom) (Sheet 3 of 3)



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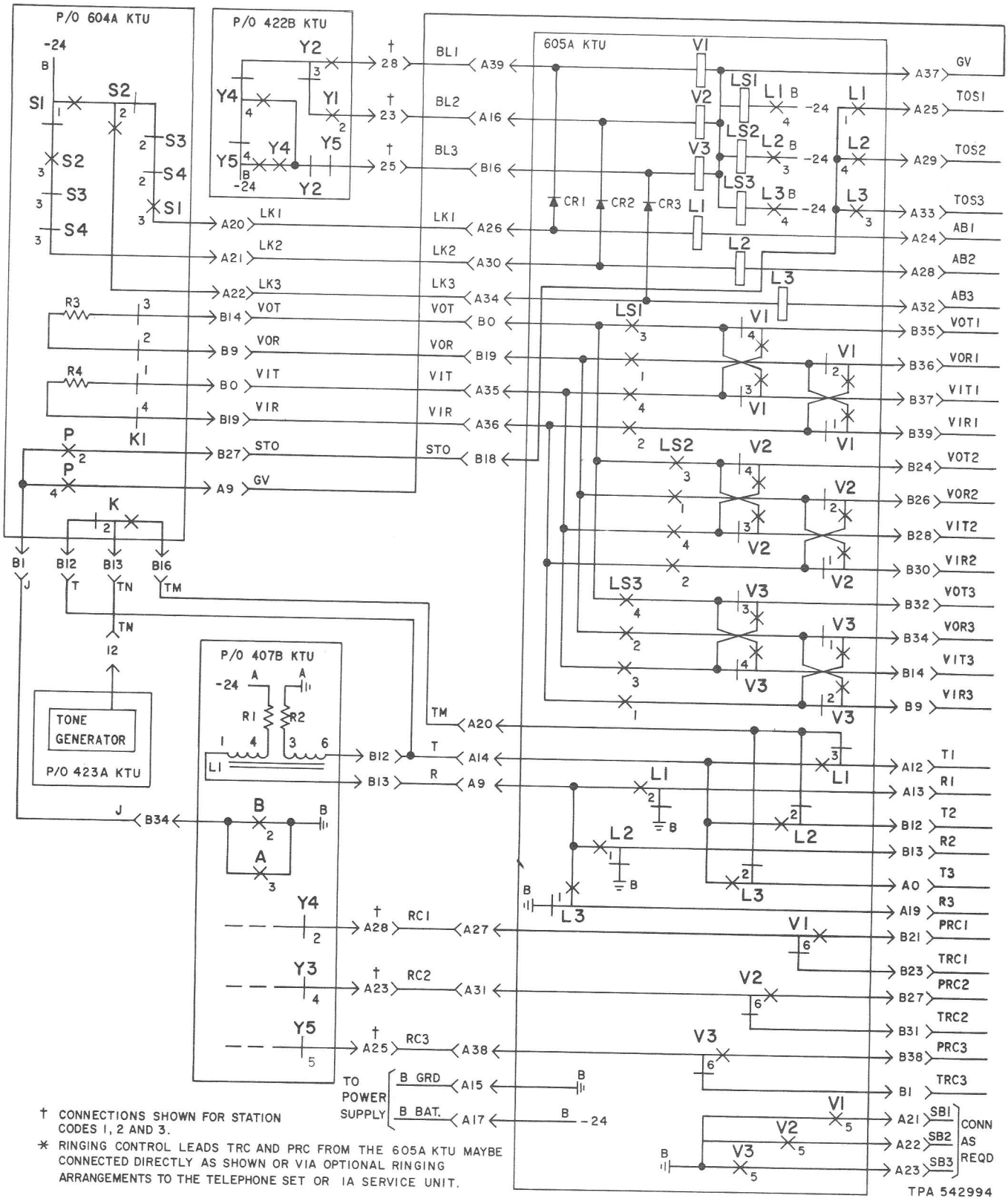
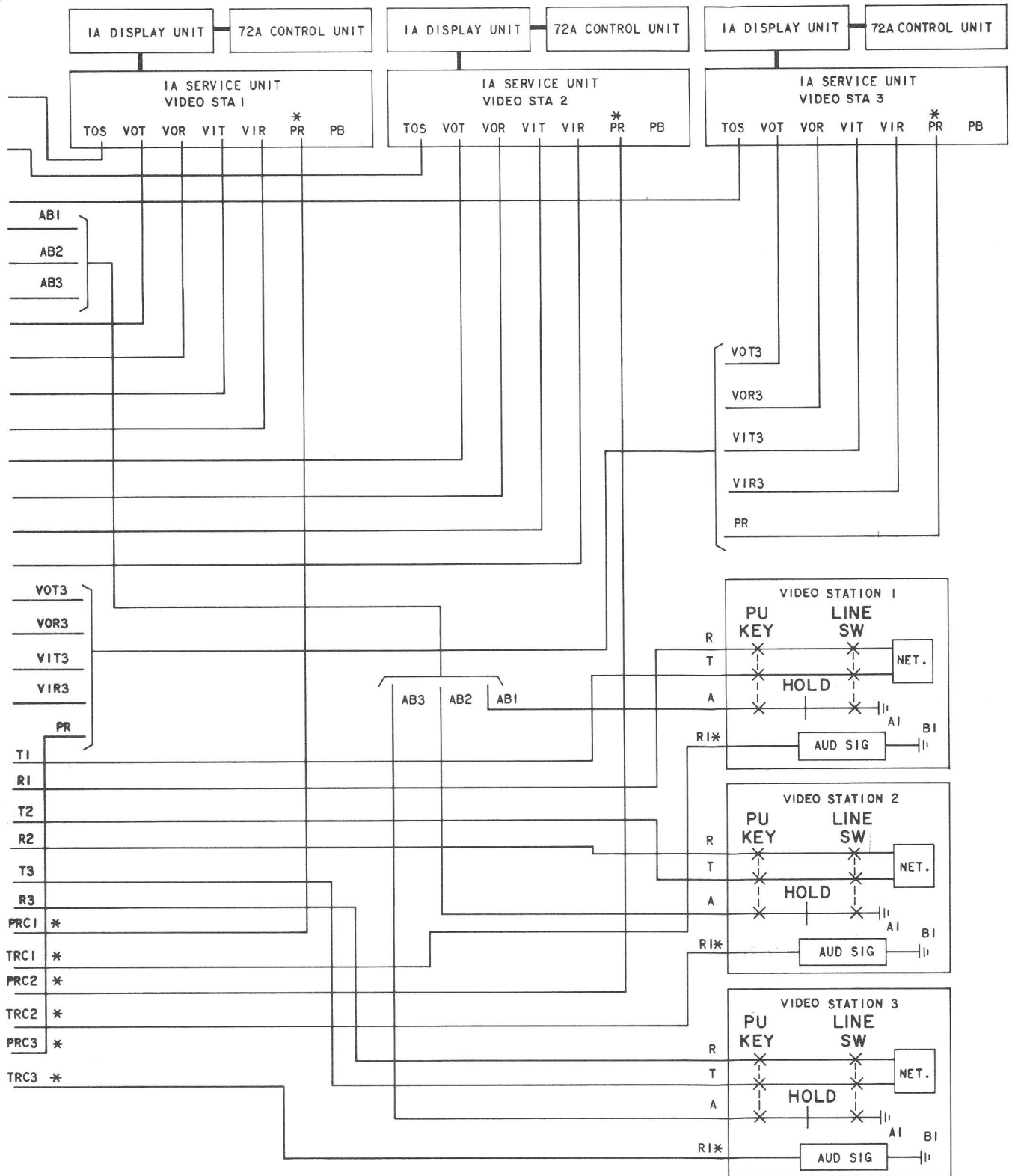
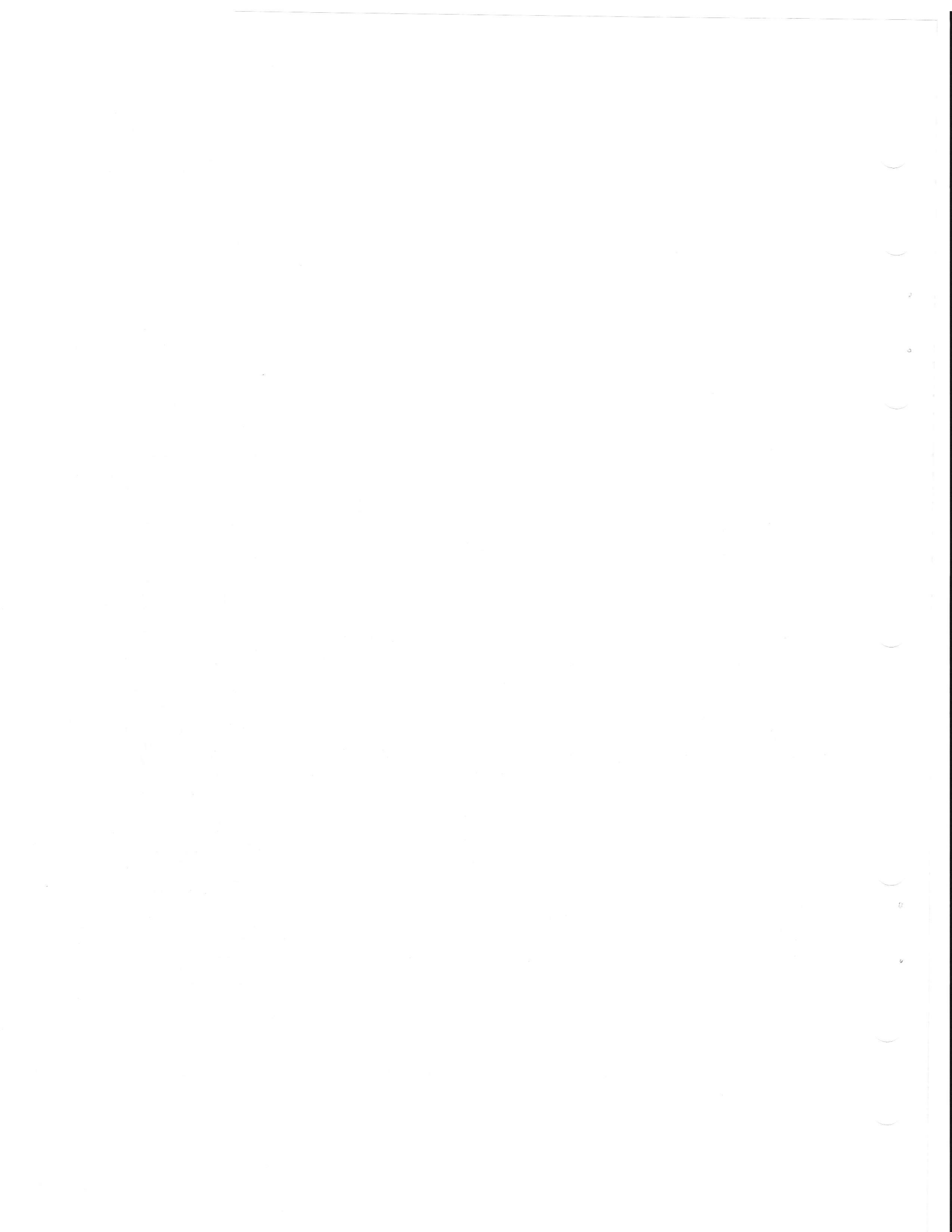


Fig. 9—Condensed Functional Schematic of 605A Key Telephone Unit (Audio/Video Link Circuit Single Link Intercom) (Sheet 1 of 2)



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Fig. 9—Condensed Functional Schematic of 605A Key Telephone Unit (Audio/Video Link Circuit Single Link Intercom) (Sheet 2 of 2)



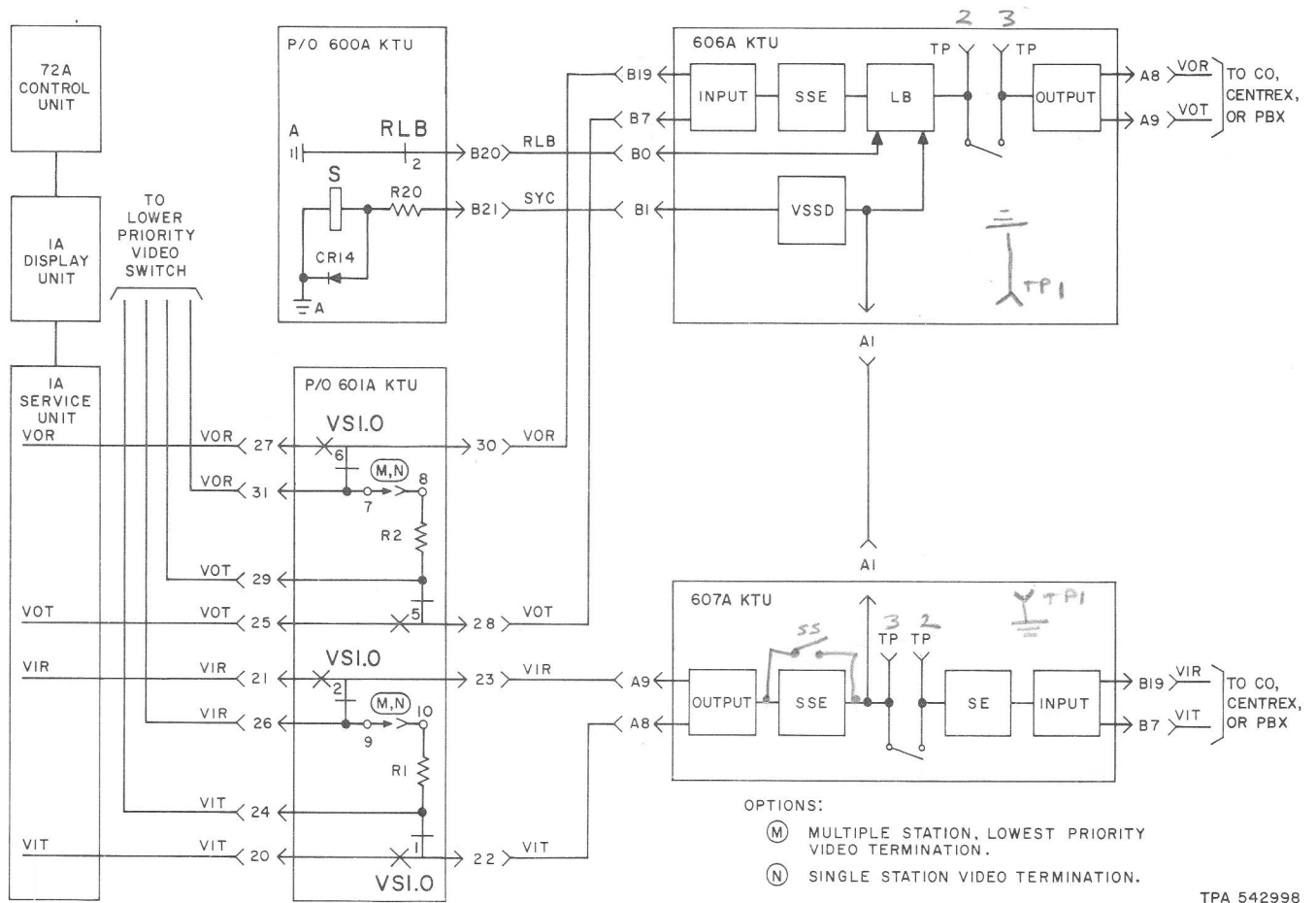
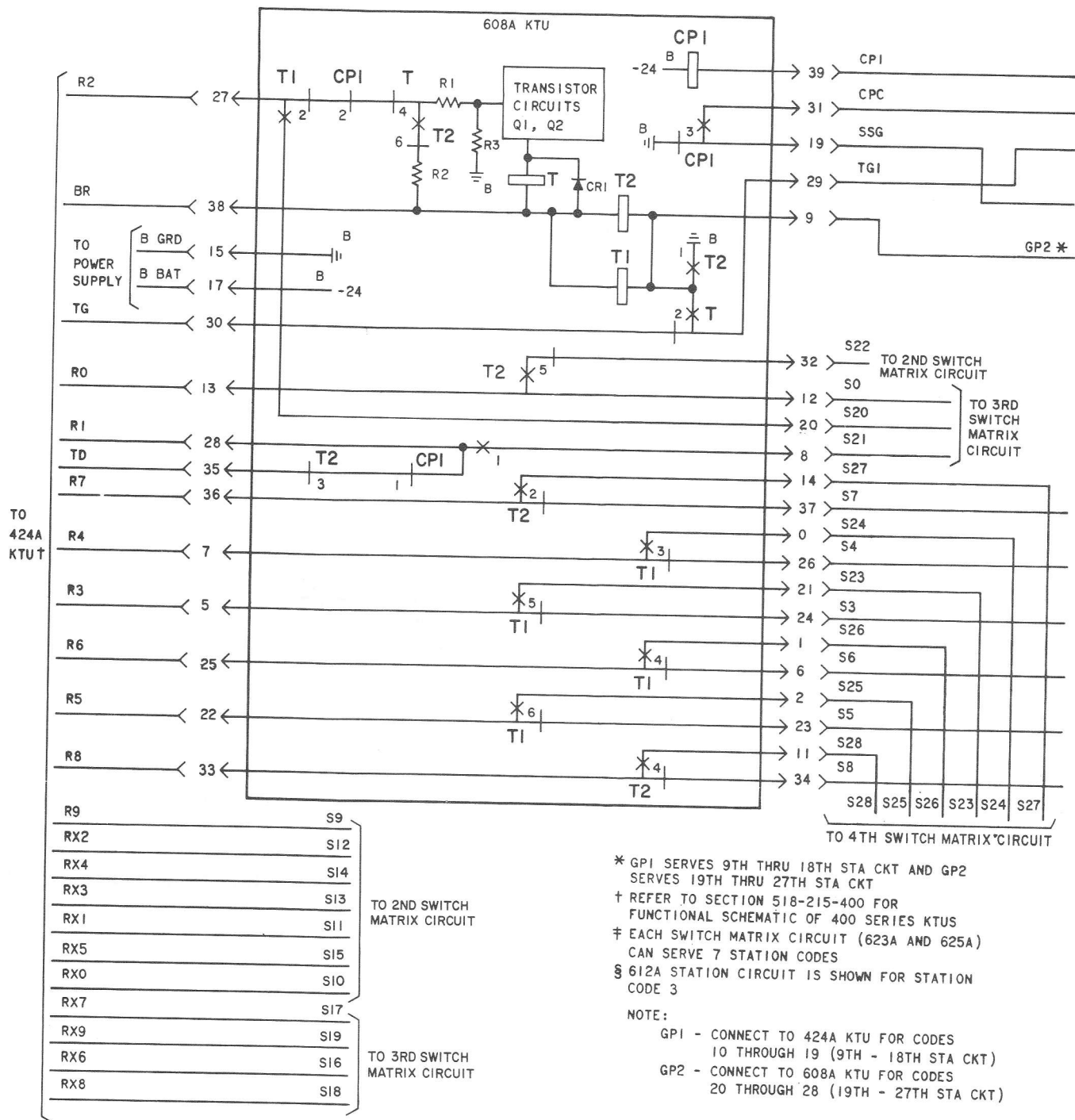
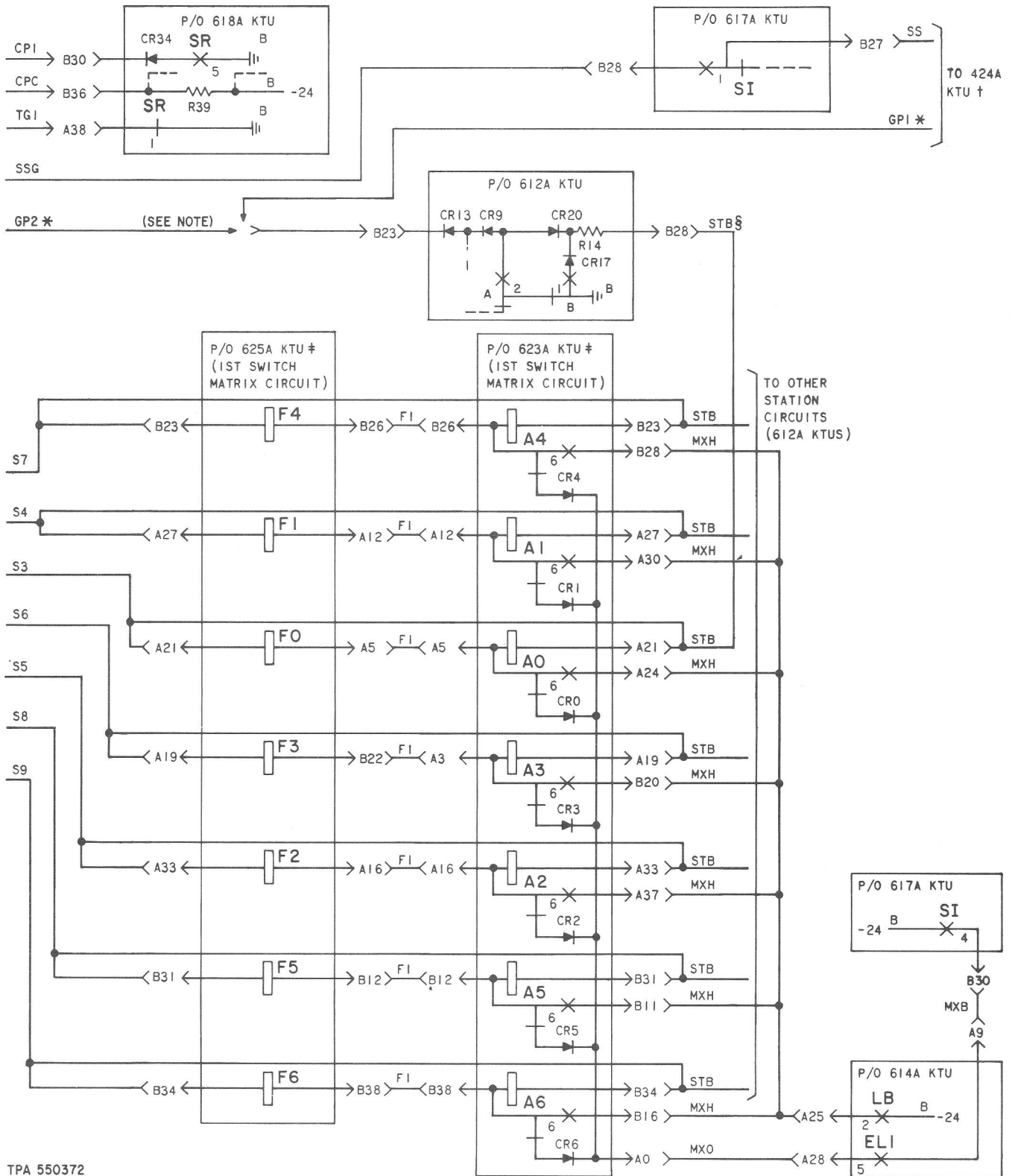


Fig. 10—Condensed Functional Schematic of 606A Key Telephone Unit (Common-Half Cable Equalizer) and 607A Key Telephone Unit (Control-Half Cable Equalizer)



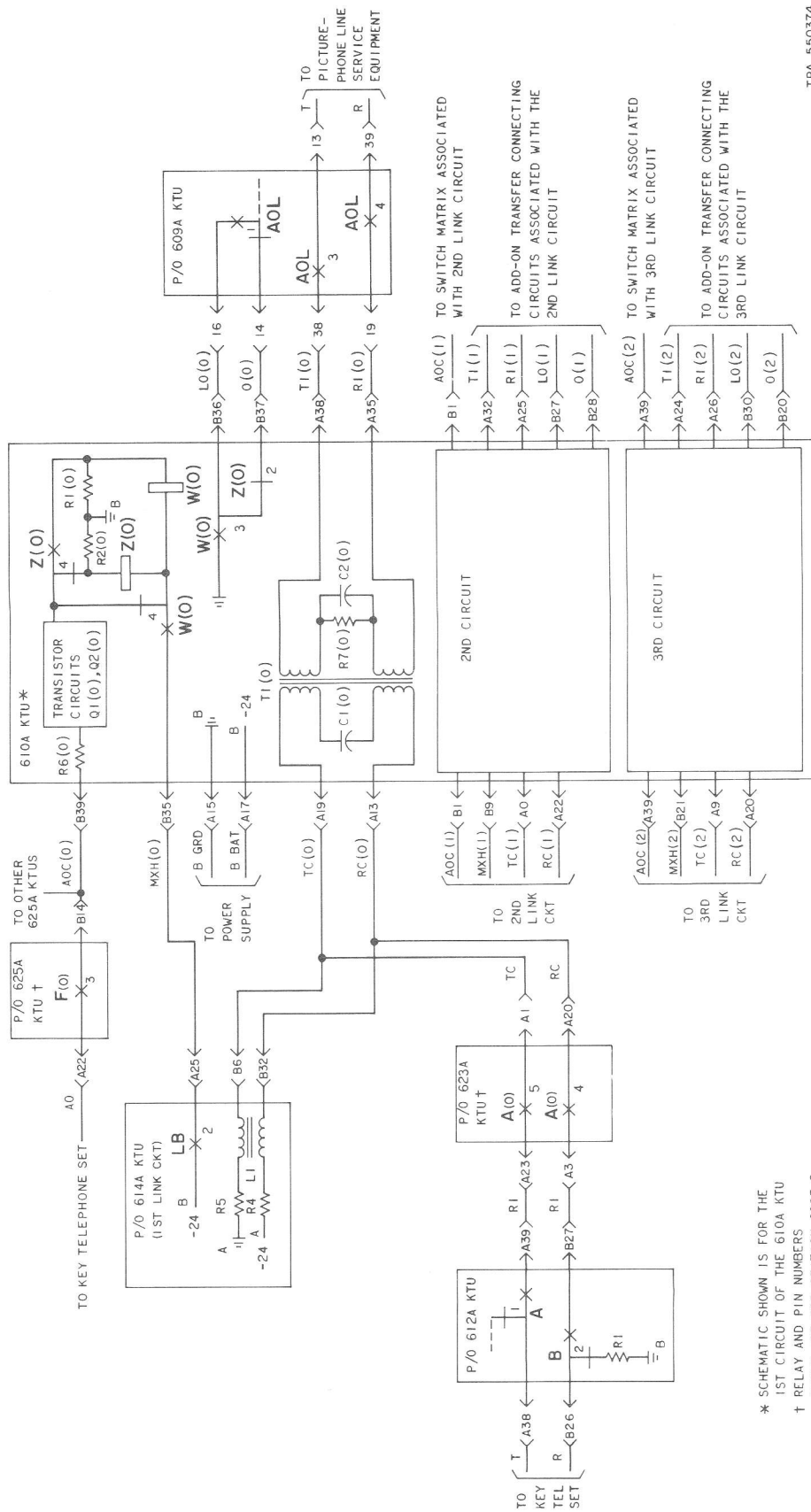
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Fig. 11—Condensed Functional Schematic of 608A Key Telephone Unit (Transfer Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)



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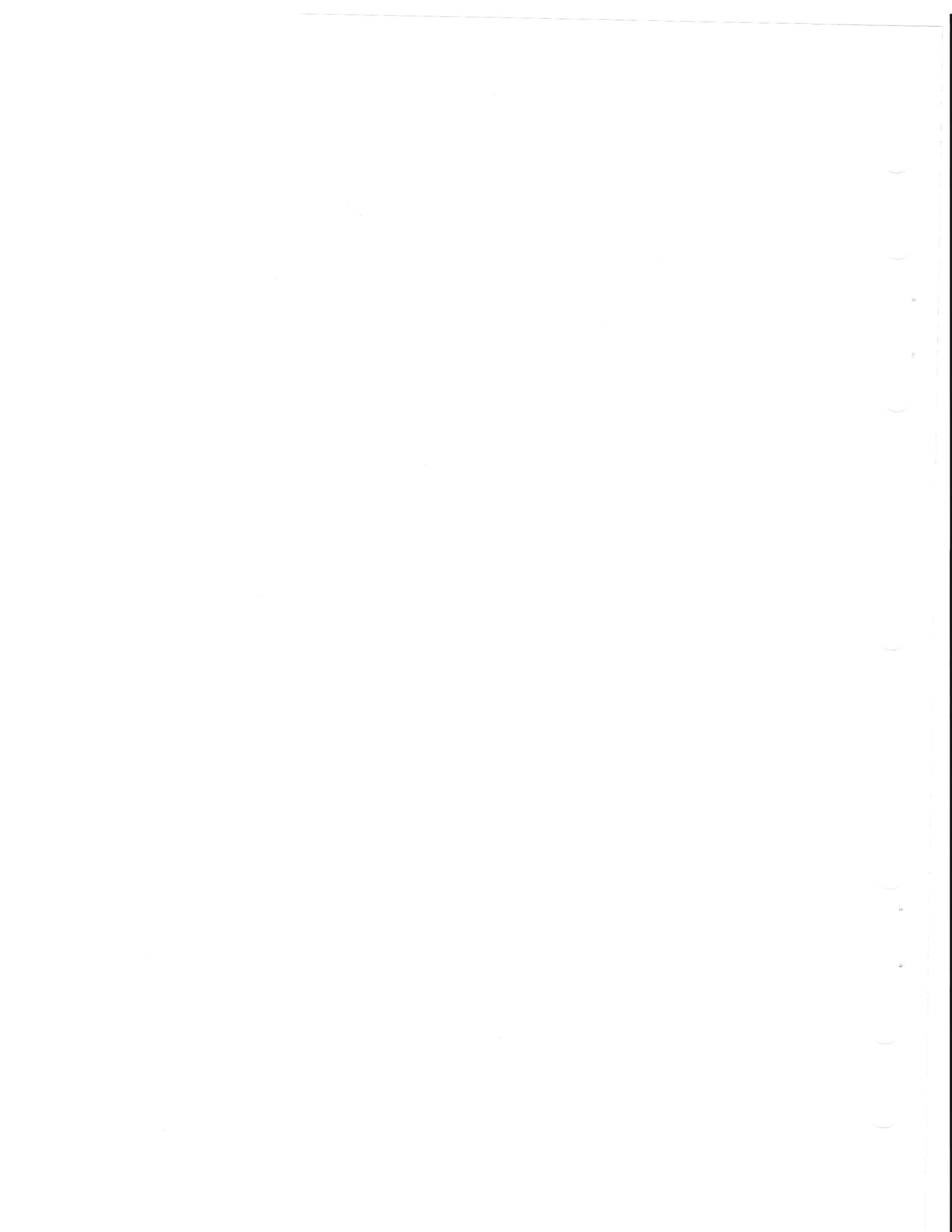
◆ Fig. 11—Condensed Functional Schematic of 608A Key Telephone Unit (Transfer Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2) ◆

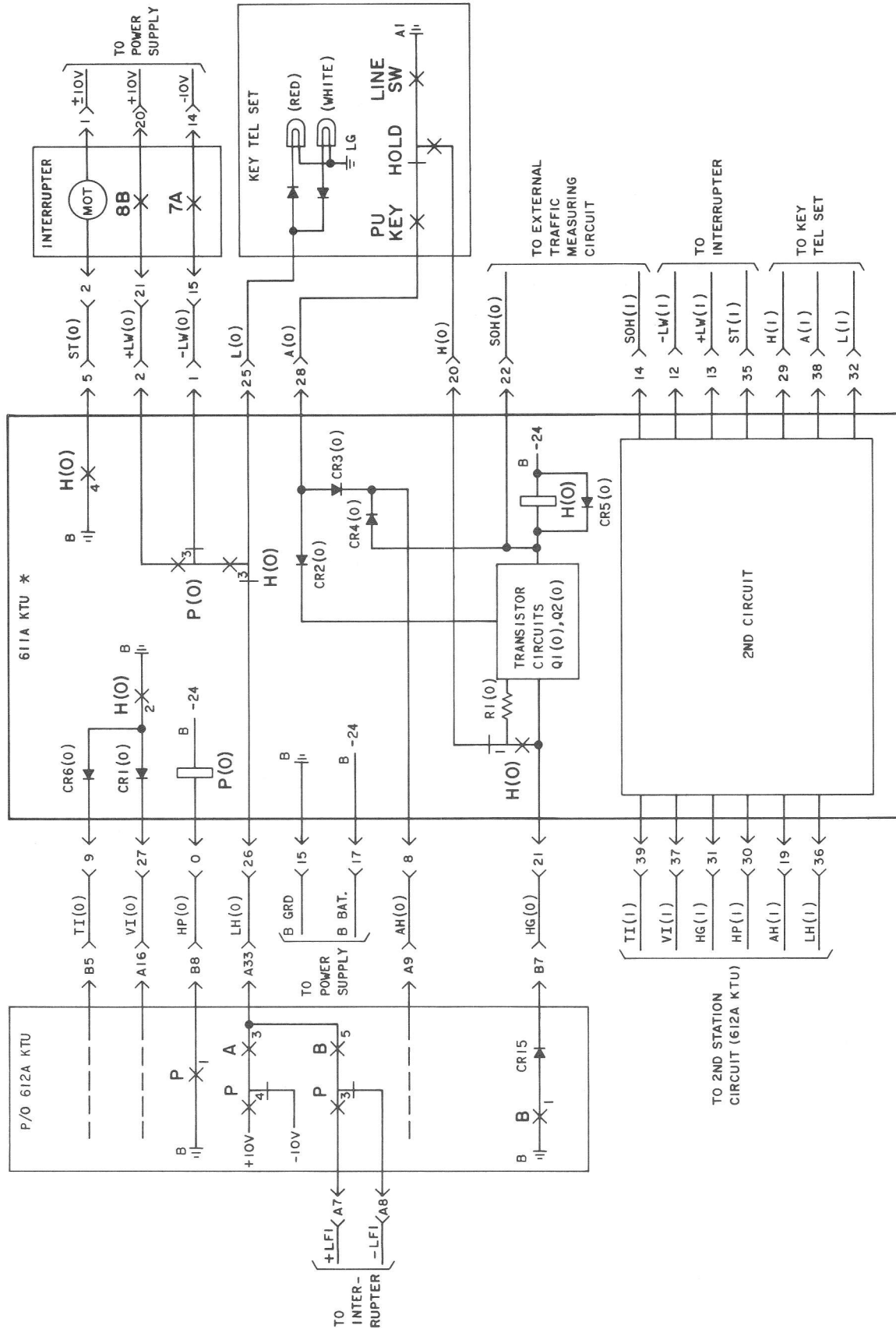


* SCHEMATIC SHOWN IS FOR THE 1ST CIRCUIT OF THE 610A KTU † RELAY AND PIN NUMBERS SHOWN ARE FOR STATION CODE 3

◆ Fig. 13—Condensed Functional Schematic of 610A Key Telephone Unit (Add-on Transfer Control Circuit for 2- or 3-Link Intercom) ◆

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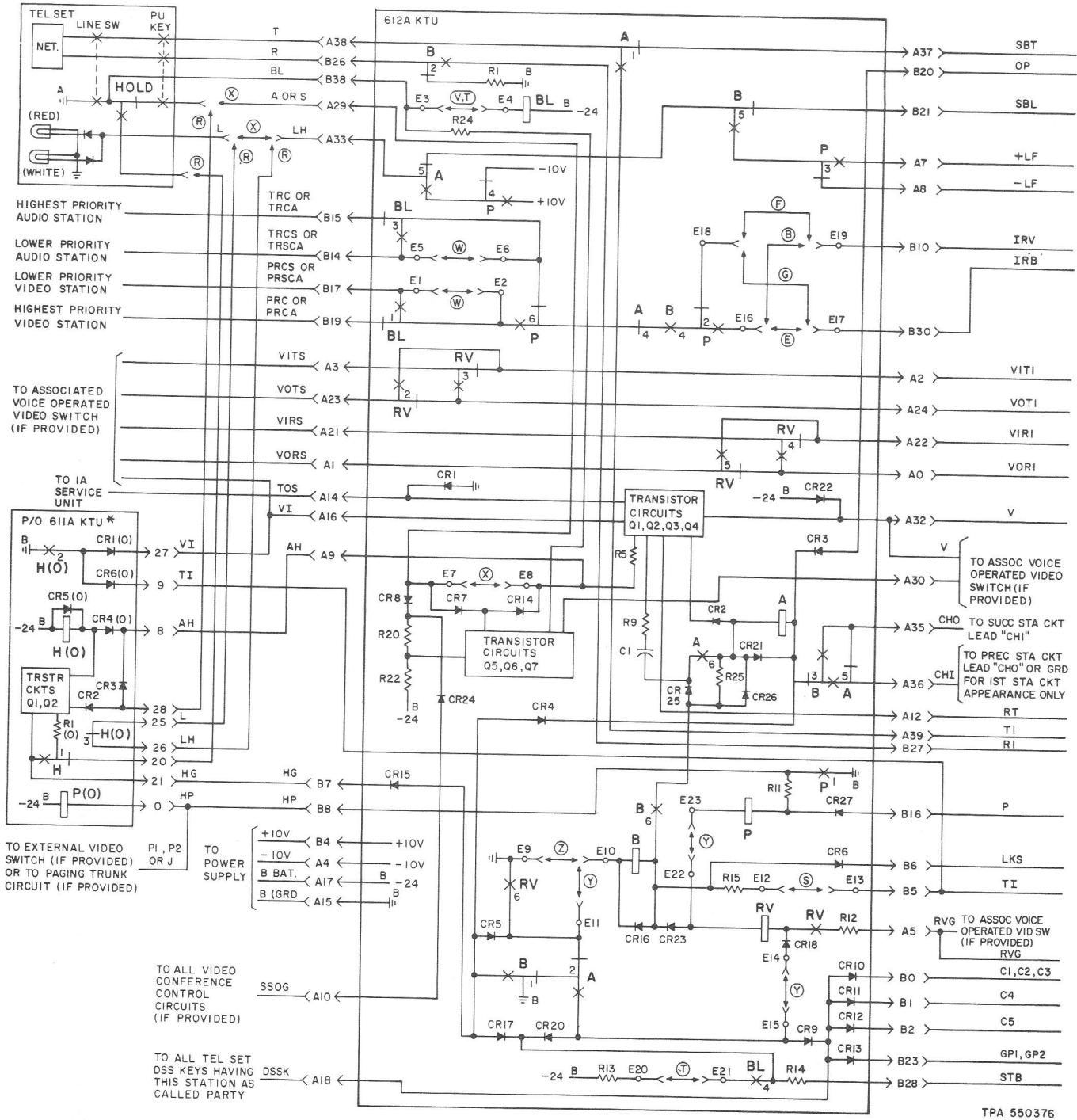


* SCHEMATIC SHOWN IS FOR THE 1ST CIRCUIT OF THE 611A KTU.

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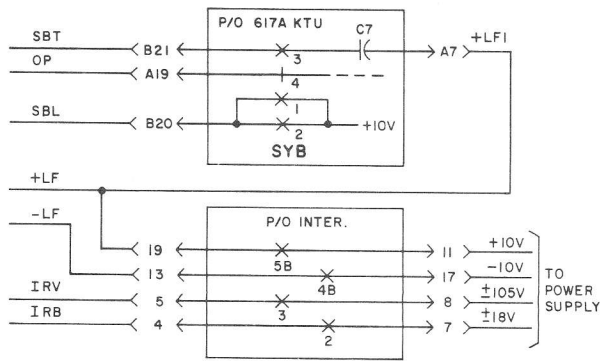
Fig. 14—Condensed Functional Schematic of 611A Key Telephone Unit (Hold Circuit for 2- or 3-Link Intercom)

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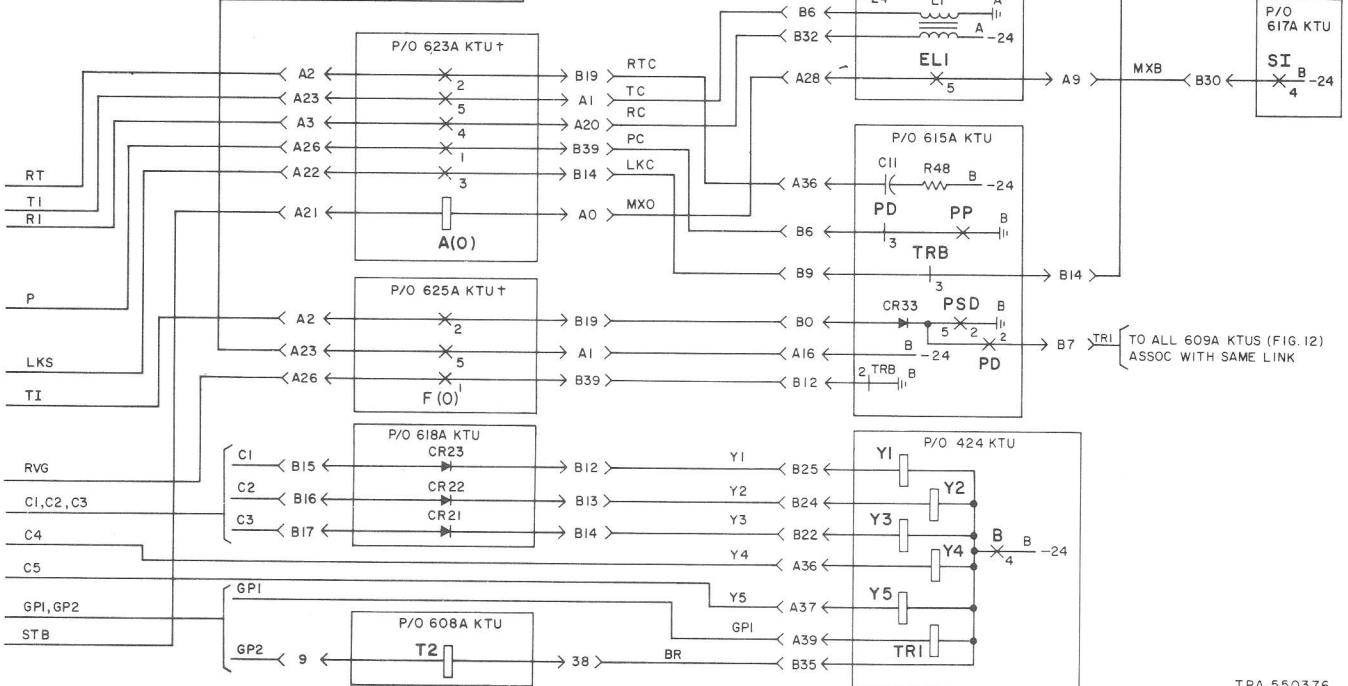
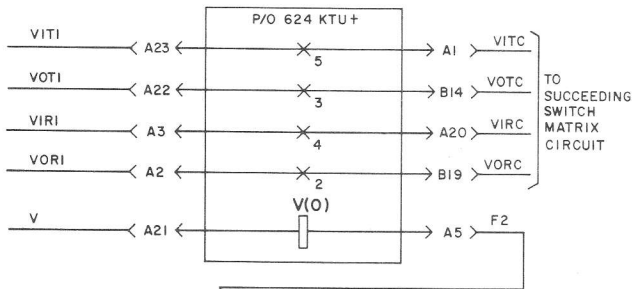
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Fig. 15—Condensed Functional Schematic of 612A Key Telephone Unit (Station Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)



* SCHEMATIC SHOWN IS FOR THE 1ST CIRCUIT OF THE 611A KTU.
 † RELAY AND PIN NUMBERS SHOWN ARE FOR STATION CODE 3.

OPTIONS		FEATURE	WIRING
SIGNALING OPTIONS	VIDEO CALLS	BELL OR TONE RINGER	B
		BUZZER (AC OR DC)	E
	AUDIO CALLS	BELL OR TONE RINGER	F
		BUZZER (AC OR DC)	G
STATION OPTIONS	HOLD	PROVIDED	R
		NOT PROVIDED	X
	VIDEO		Y
	AUDIO ONLY		Z
	ACCESS TO PAGING CIRCUIT		S
STATION CIRCUIT ALERTING OPTIONS	VIDEO STATION IS IDLE	VIDEO AND AUDIO STATIONS ARE ALERTED	W
	VIDEO STATION IS BUSY ON ANOTHER LINE		
		RETURN BUSY TONE	T
		AUDIO STATION ONLY ALERTED	V



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◆ Fig. 15—Condensed Functional Schematic of 612A Key Telephone Unit (Station Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2) ◆

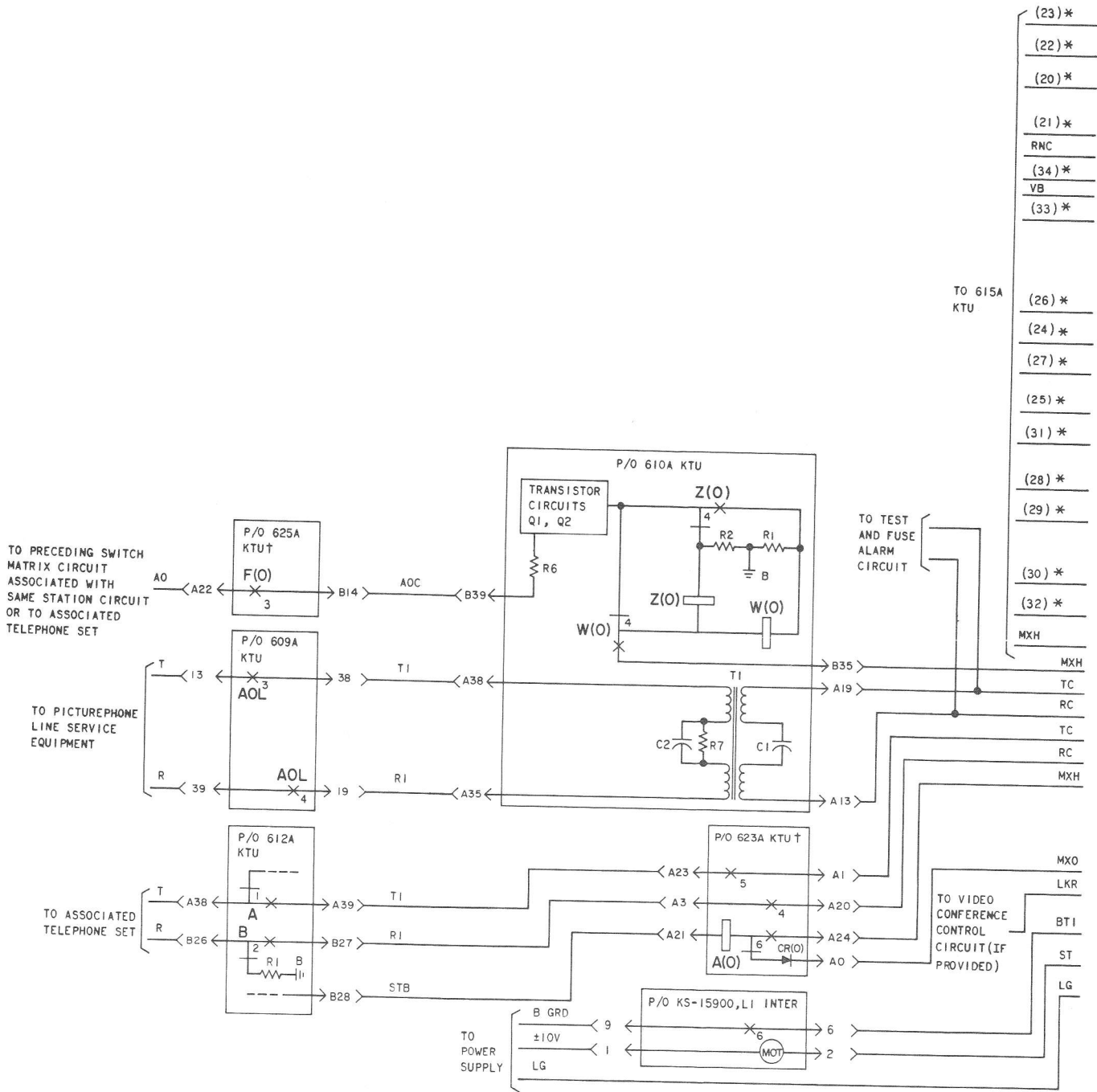
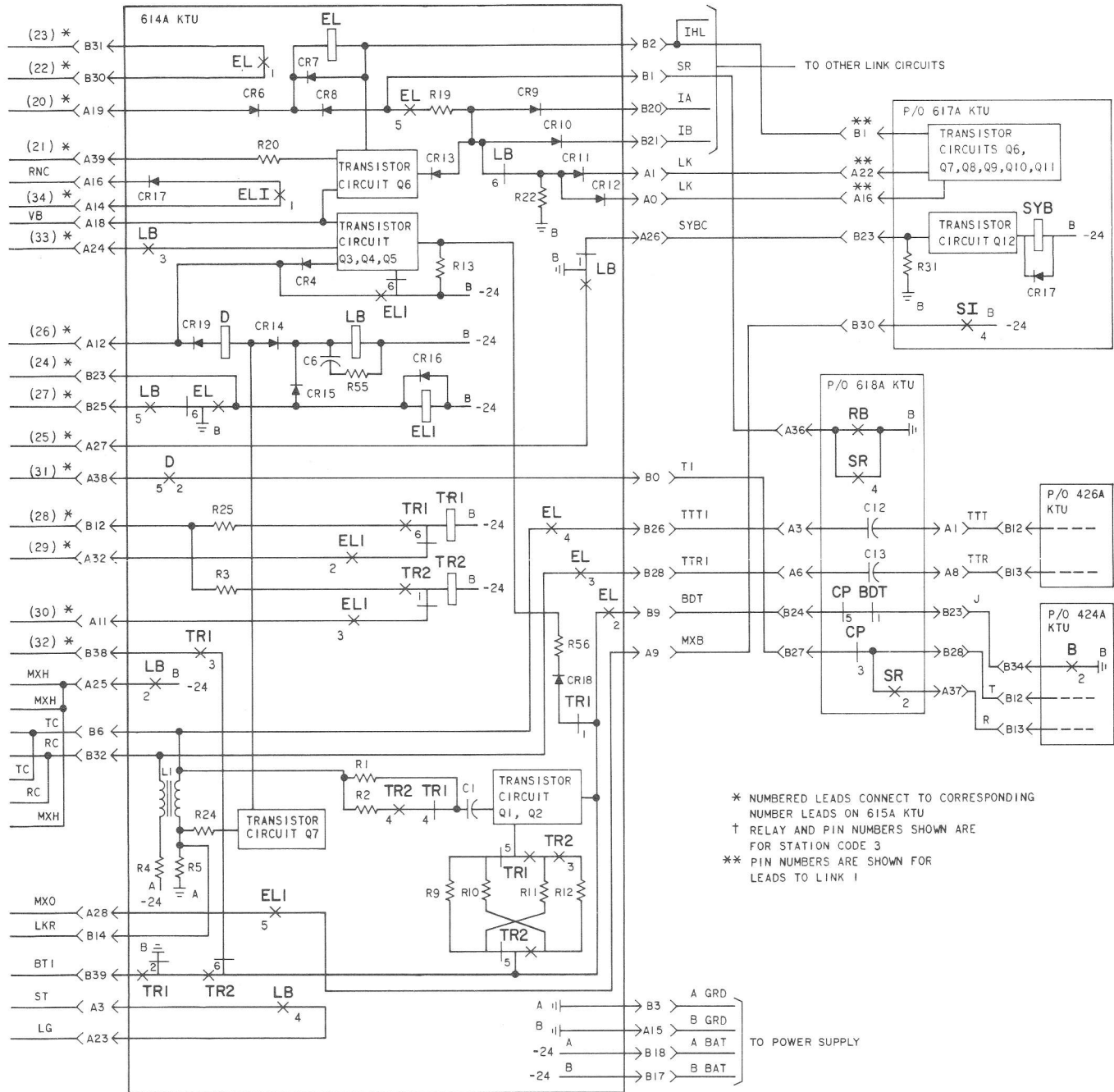
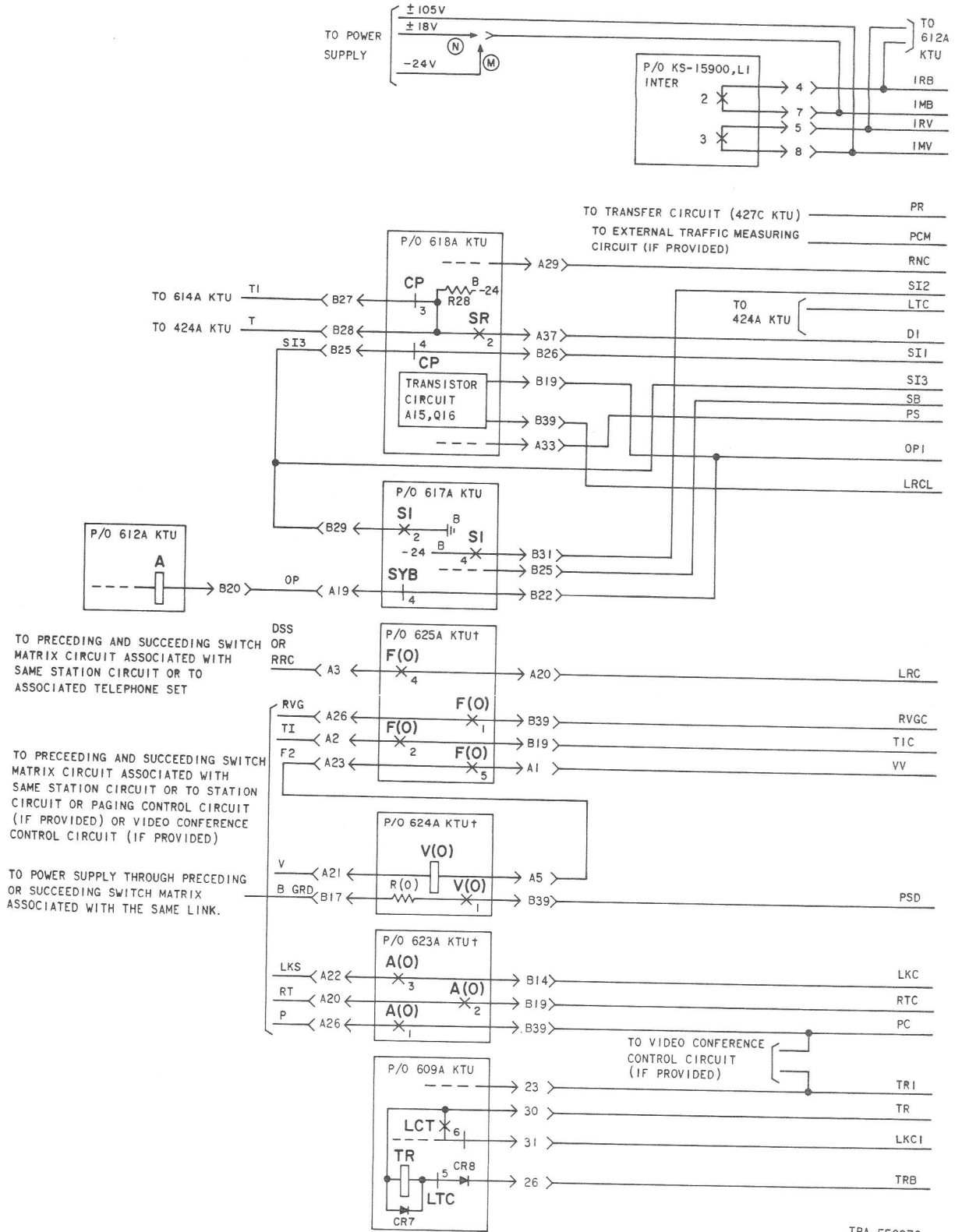


Fig. 16—Condensed Functional Schematic of 614A Key Telephone Unit (Link Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)



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Fig. 16—Condensed Functional Schematic of 614A Key Telephone Unit (Link Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2)



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Fig. 17—Condensed Functional Schematic of 615A Key Telephone Unit (Link Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)

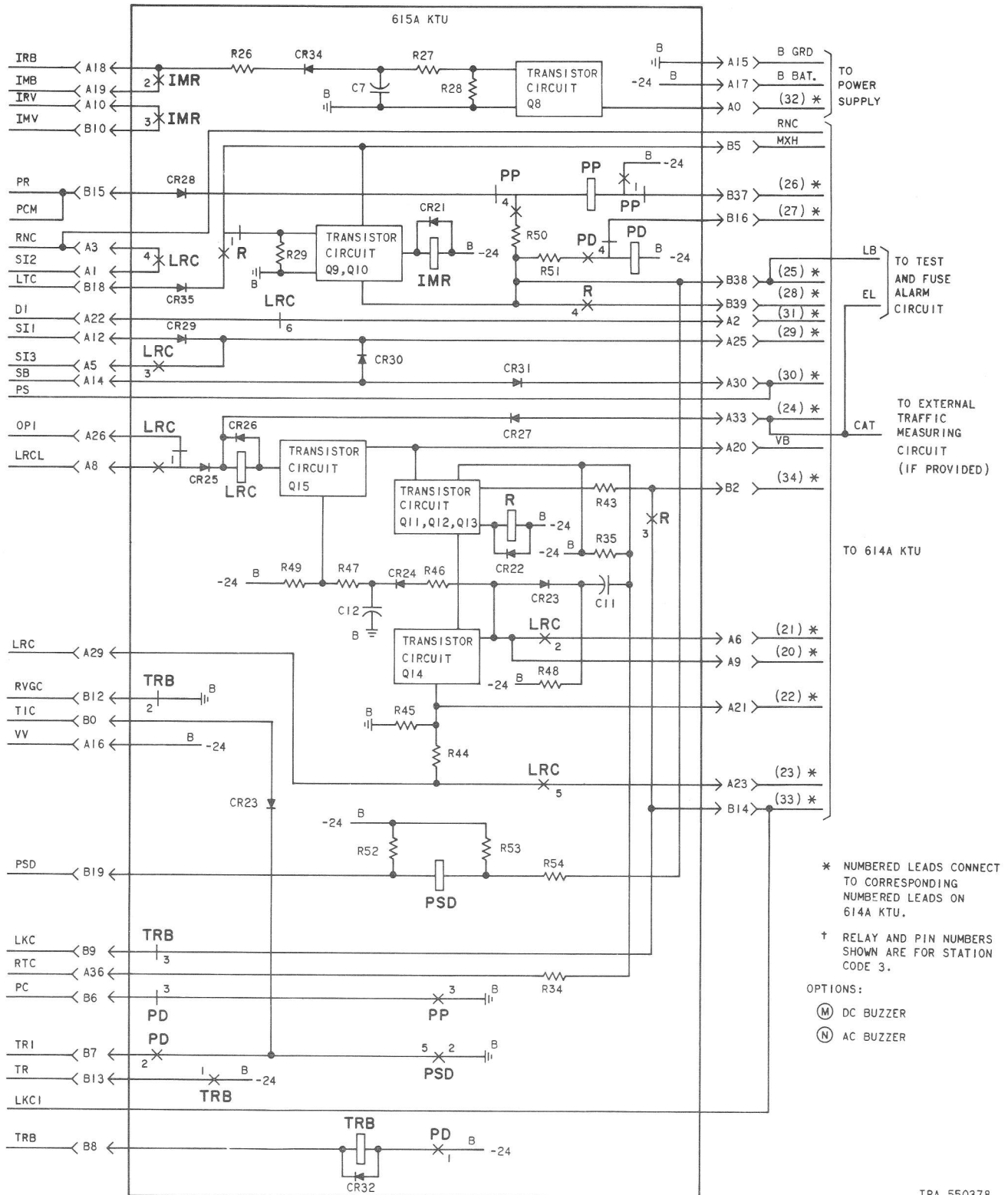
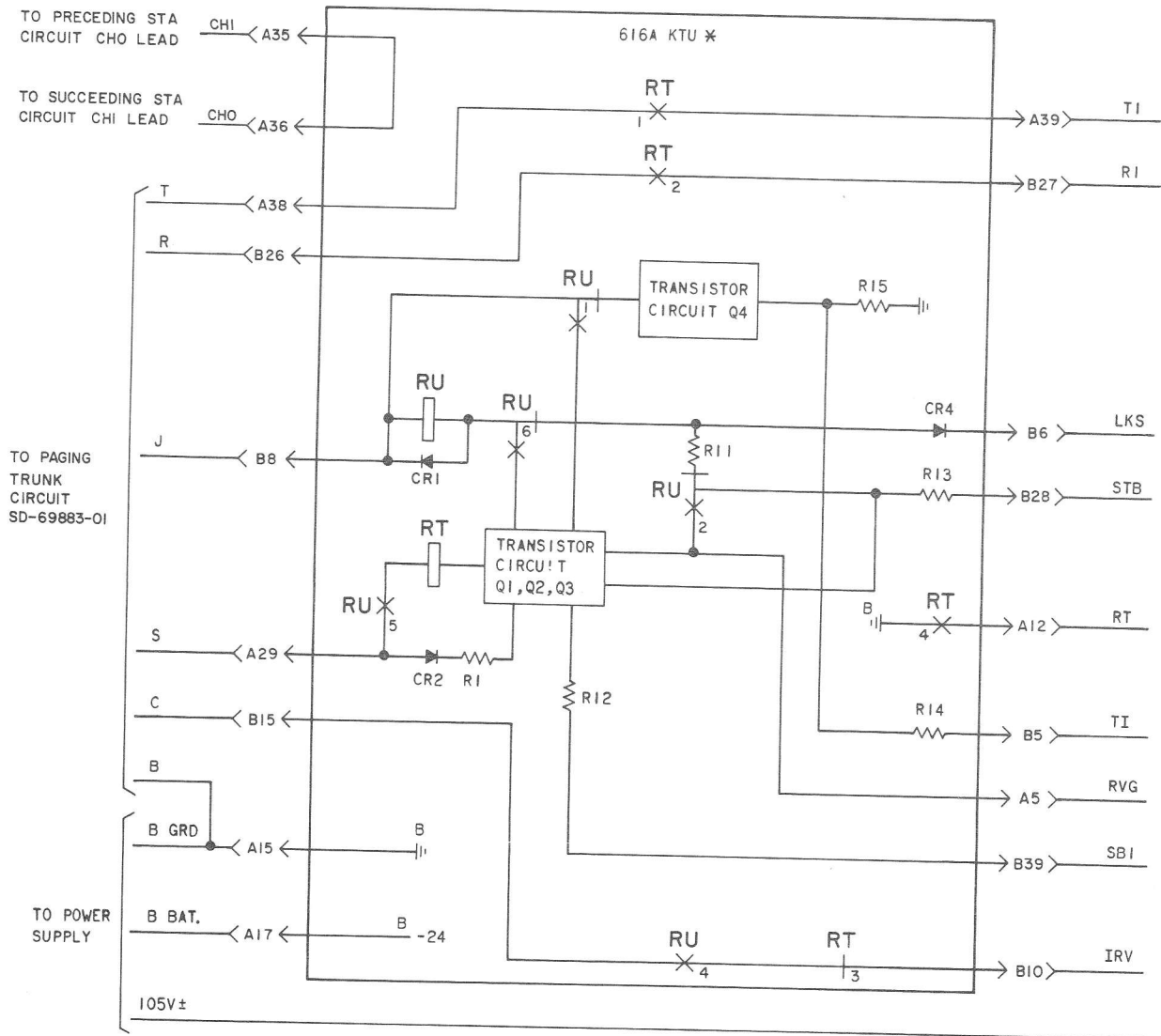


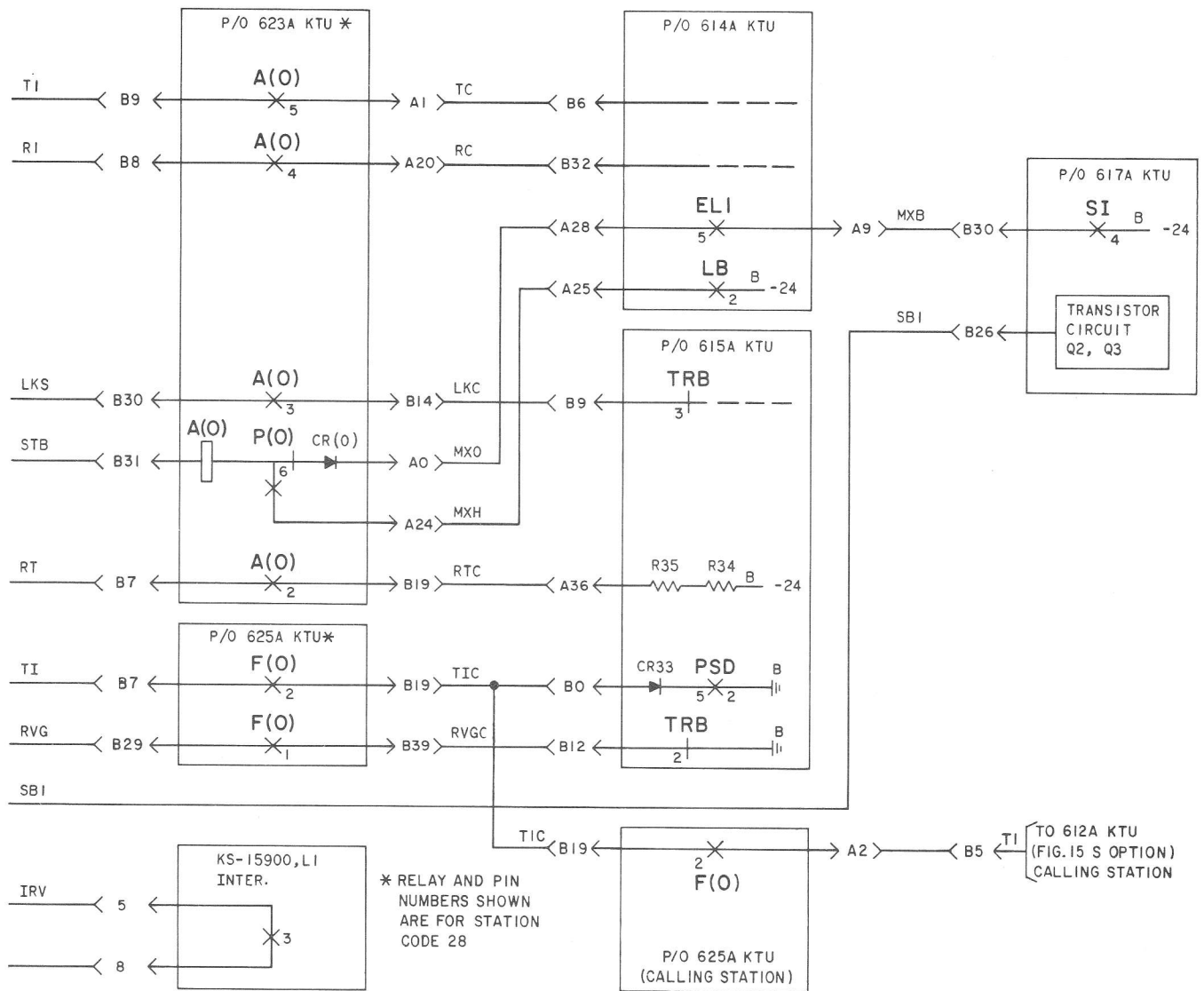
Fig. 17—Condensed Functional Schematic of 615A Key Telephone Unit (Link Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2)

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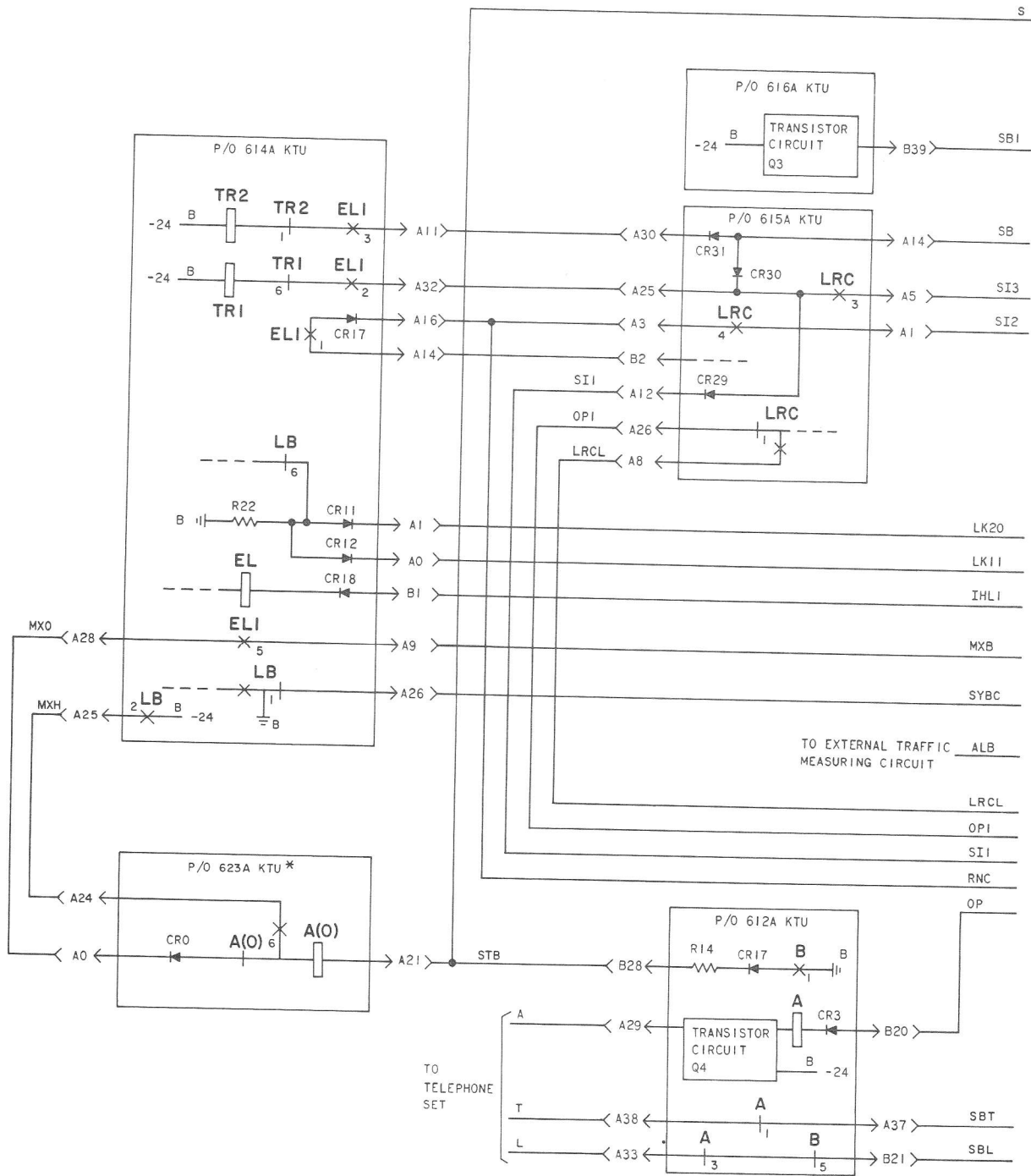
TPA 550379

Fig. 18—Condensed Functional Schematic of 616A Key Telephone Unit (Paging Control Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)



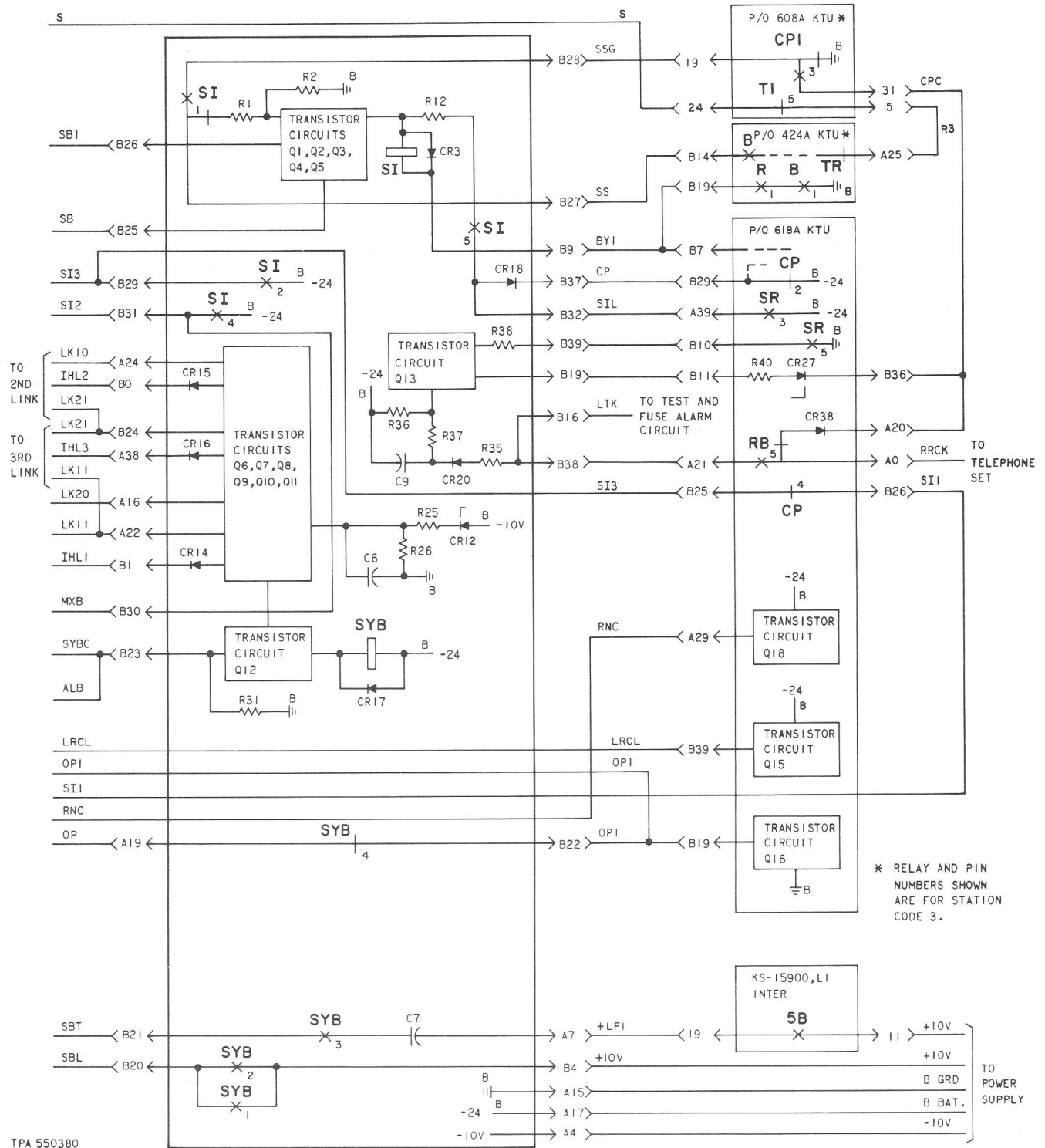
TPA 550379

◆ Fig. 18—Condensed Functional Schematic of 616A Key Telephone Unit (Paging Control Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2) ◆

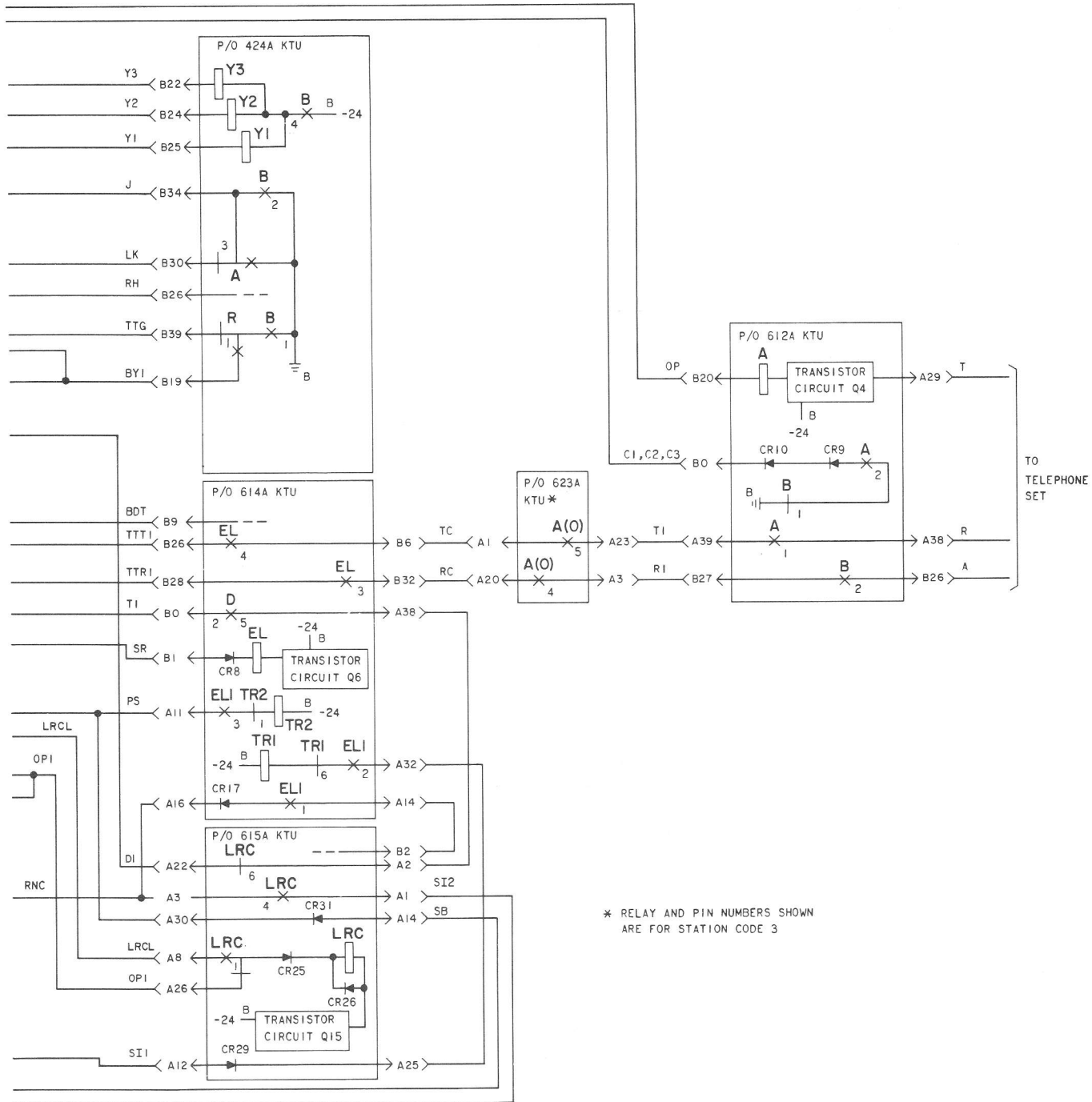


TPA 550380

Fig. 19—Condensed Functional Schematic of 617A Key Telephone Unit (Register Circuit for 2- or 3-Link Intercom) (Sheet 1 of 2)



◆ Fig. 19—Condensed Functional Schematic of 617A Key Telephone Unit (Register Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2)◆



* RELAY AND PIN NUMBERS SHOWN ARE FOR STATION CODE 3

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◆ Fig. 20—Condensed Functional Schematic of 618A Key Telephone Unit (Register Circuit for 2- or 3-Link Intercom) (Sheet 2 of 2)◆

SECTION 518-800-105

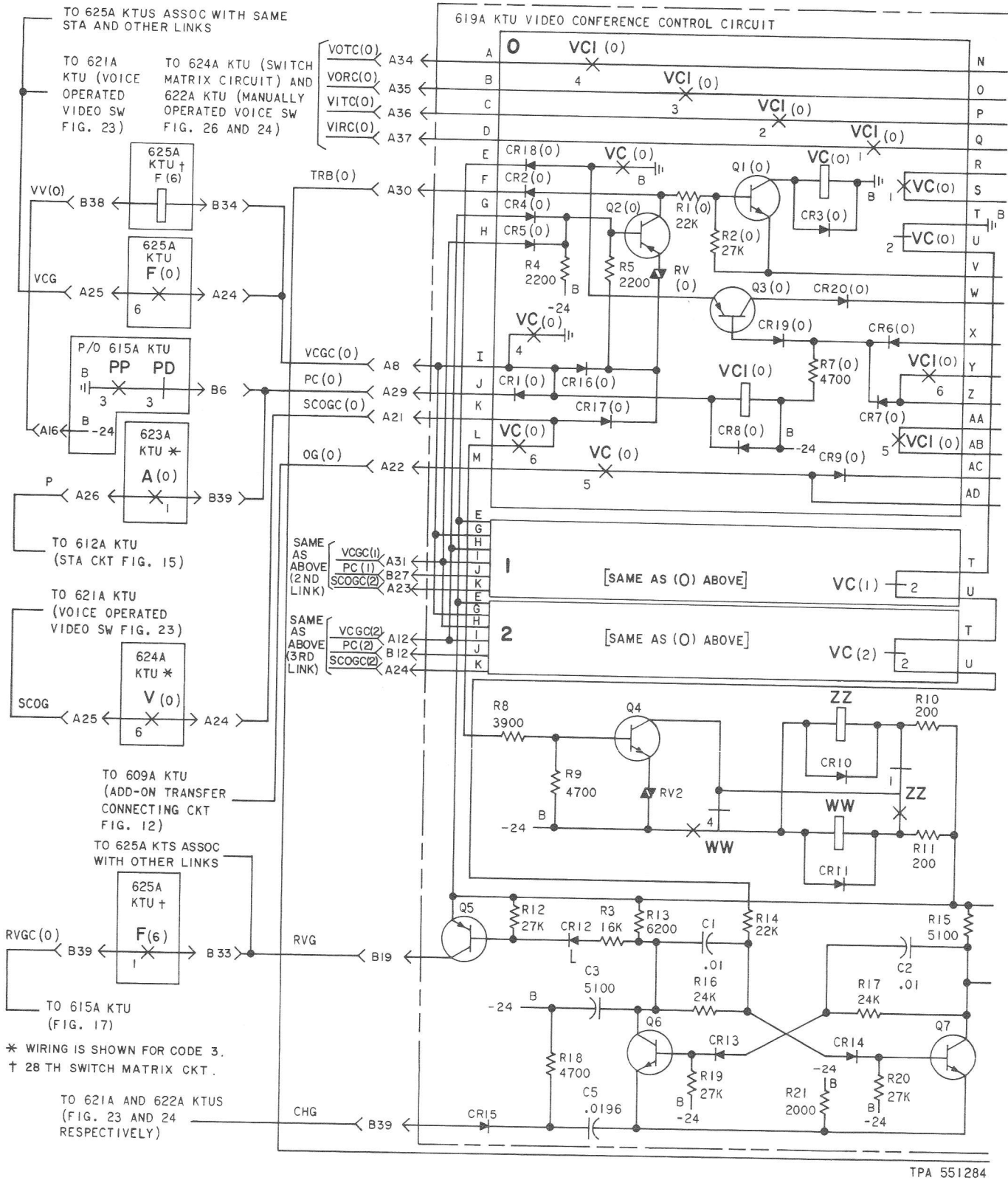
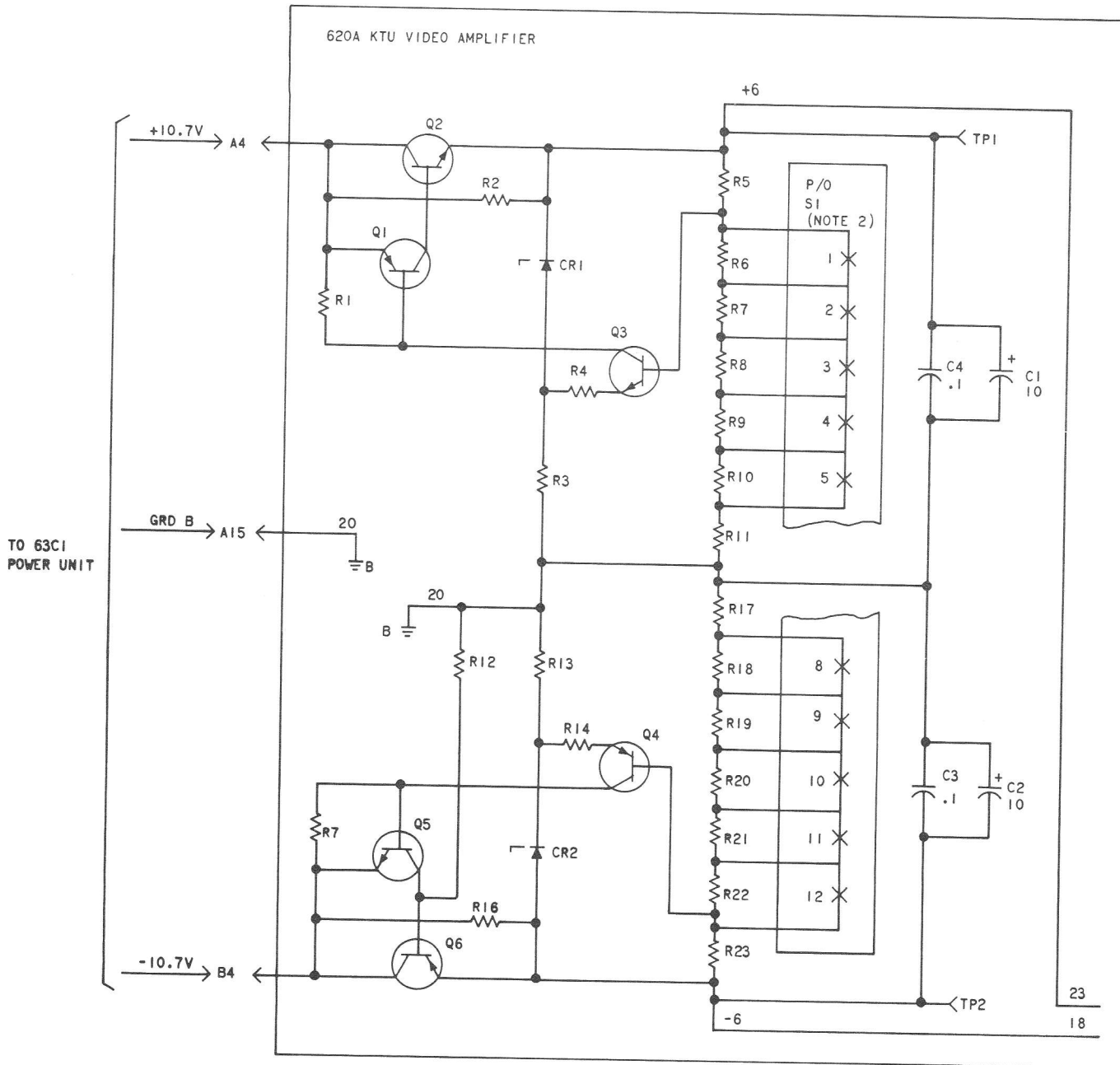


Fig. 21—Condensed Functional Schematic of 619A Key Telephone Unit (Video Conference Control Circuit for 2- or 3-Link Intercom (Sheet 1 of 2))



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Fig. 22—Condensed Functional Schematic of 620A Key Telephone Unit (Video Amplifier for 2- or 3-Link Intercom) (Sheet 1 of 2)

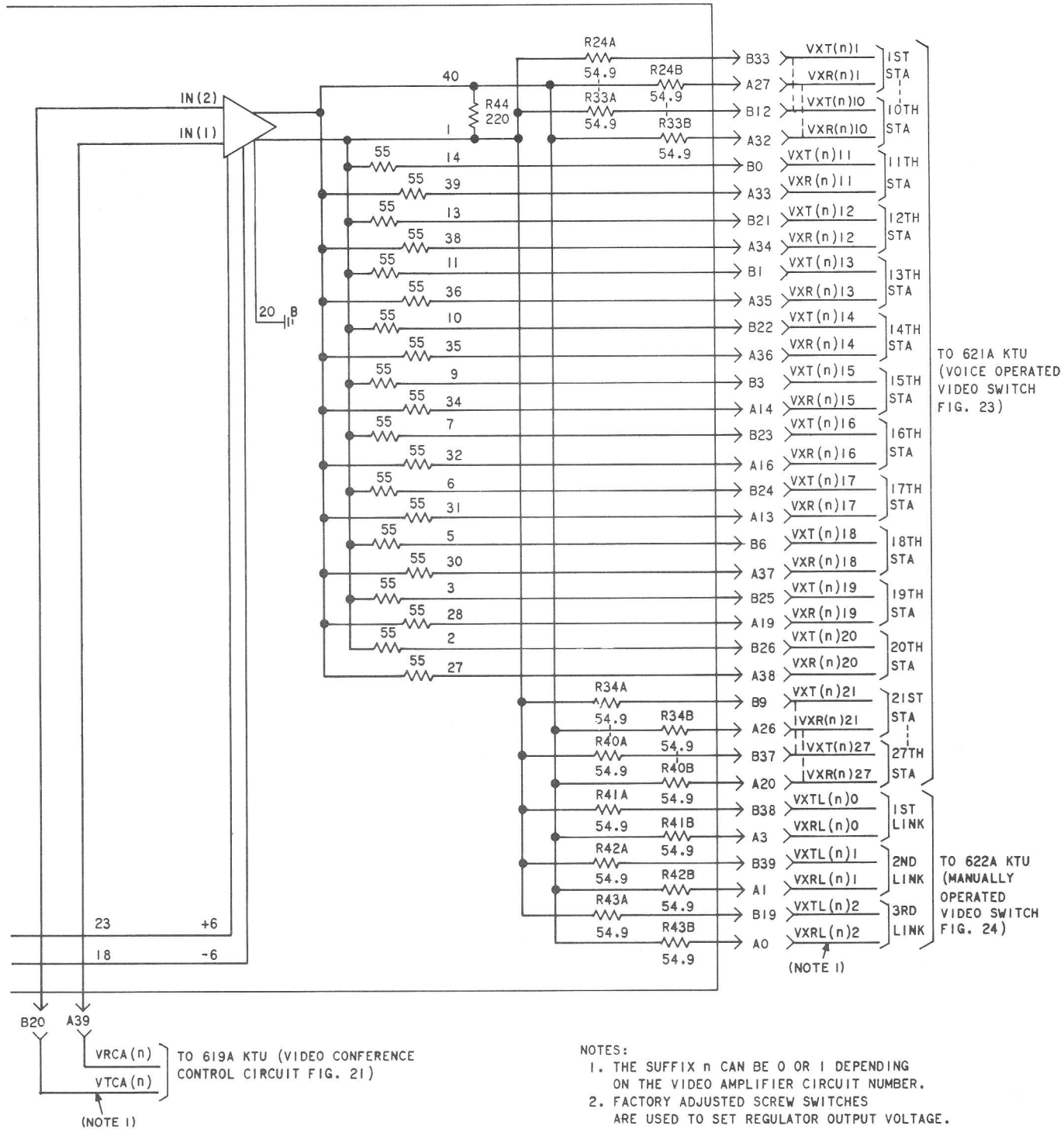


Fig. 22—Condensed Functional Schematic of 620A Key Telephone Unit (Video Amplifier for 2- or 3-Link Intercom) (Sheet 2 of 2)

SECTION 518-800-105

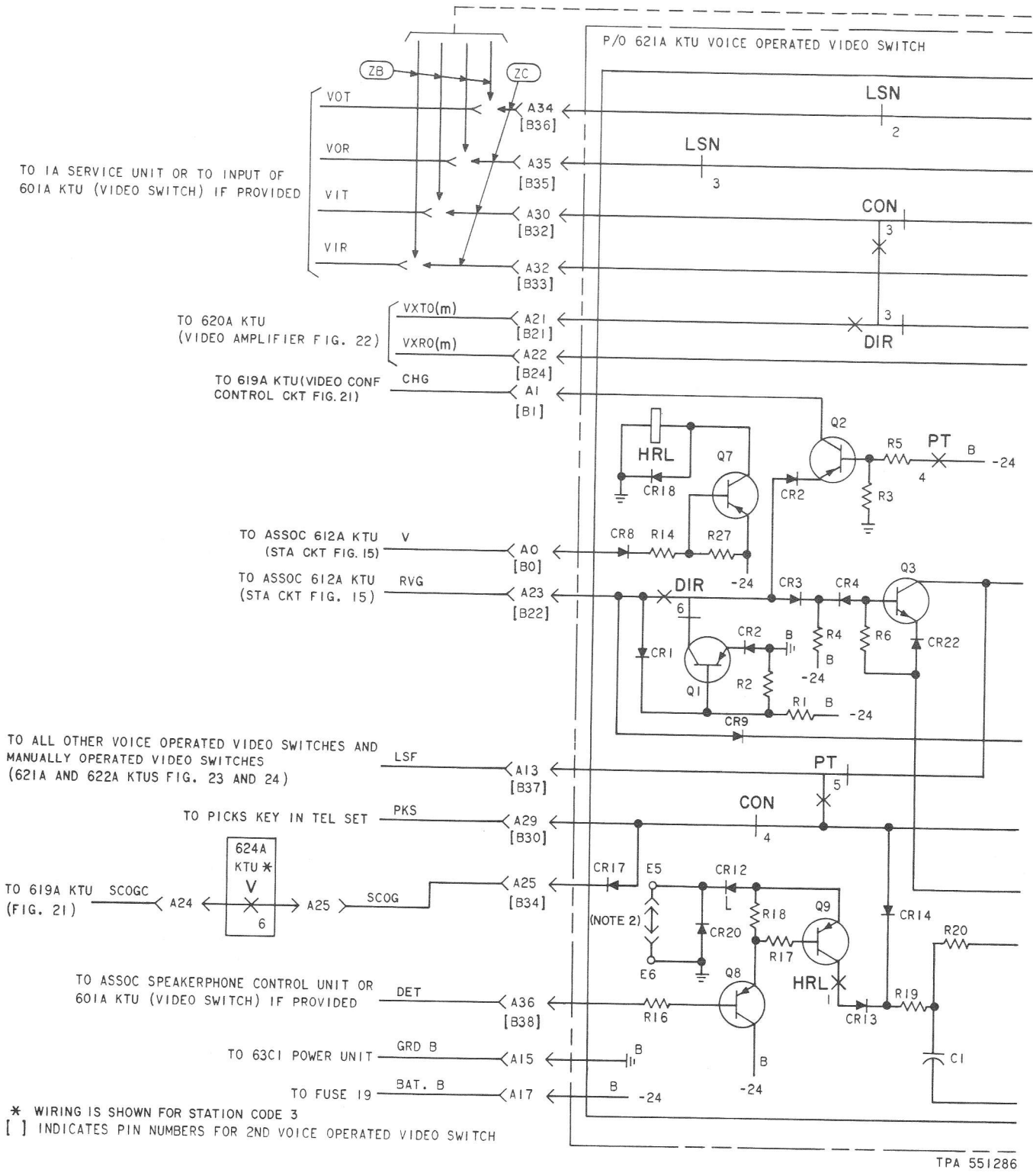
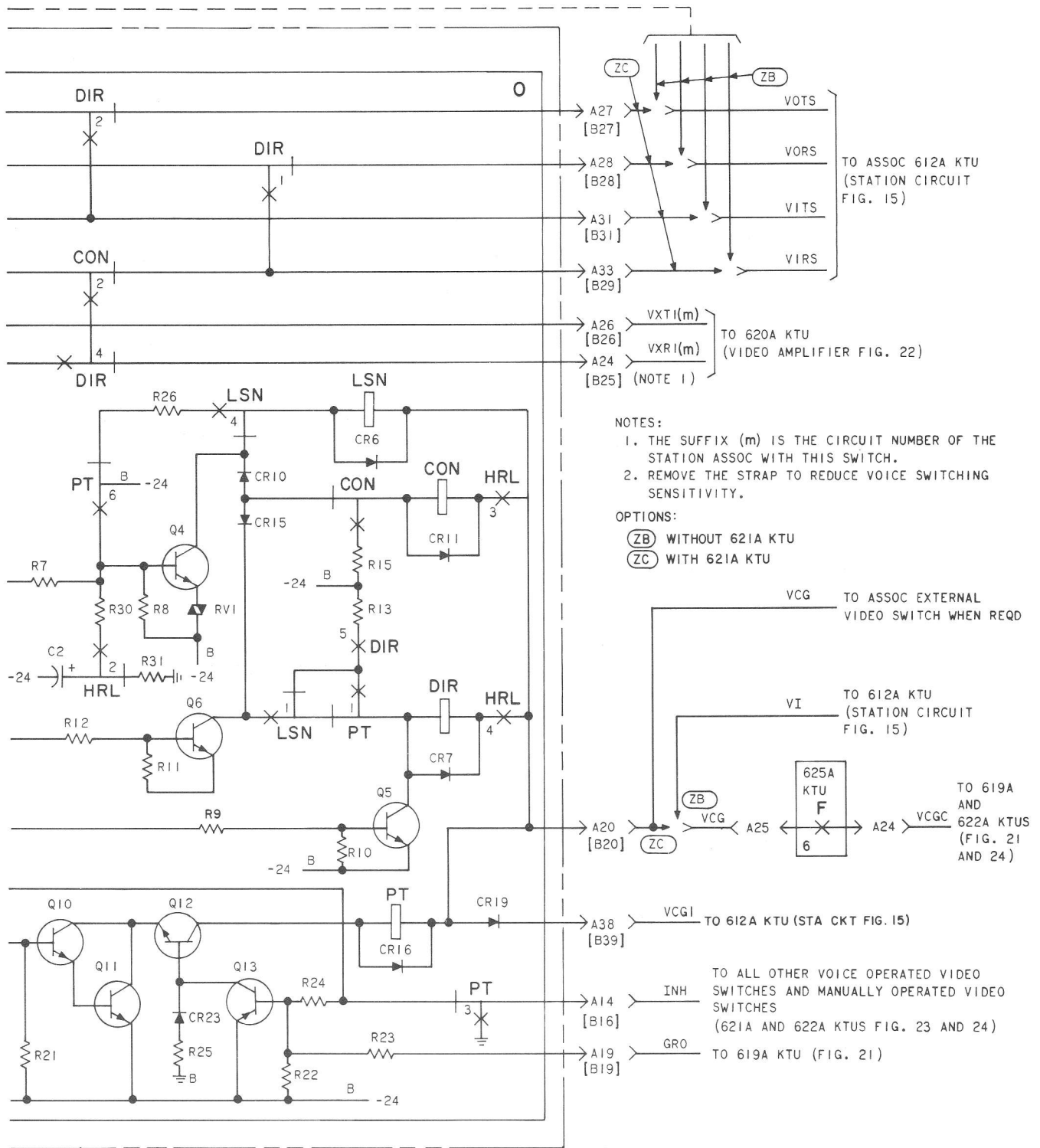


Fig. 23—Condensed Functional Schematic of 621A Key Telephone Unit (Voice Operated Video Switch for 2- or 3-Link Intercom) (Sheet 1 of 2)



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◆ Fig. 23—Condensed Functional Schematic of 621A Key Telephone Unit (Voice Operated Video Switch for 2- or 3-Link Intercom) (Sheet 2 of 2)◆

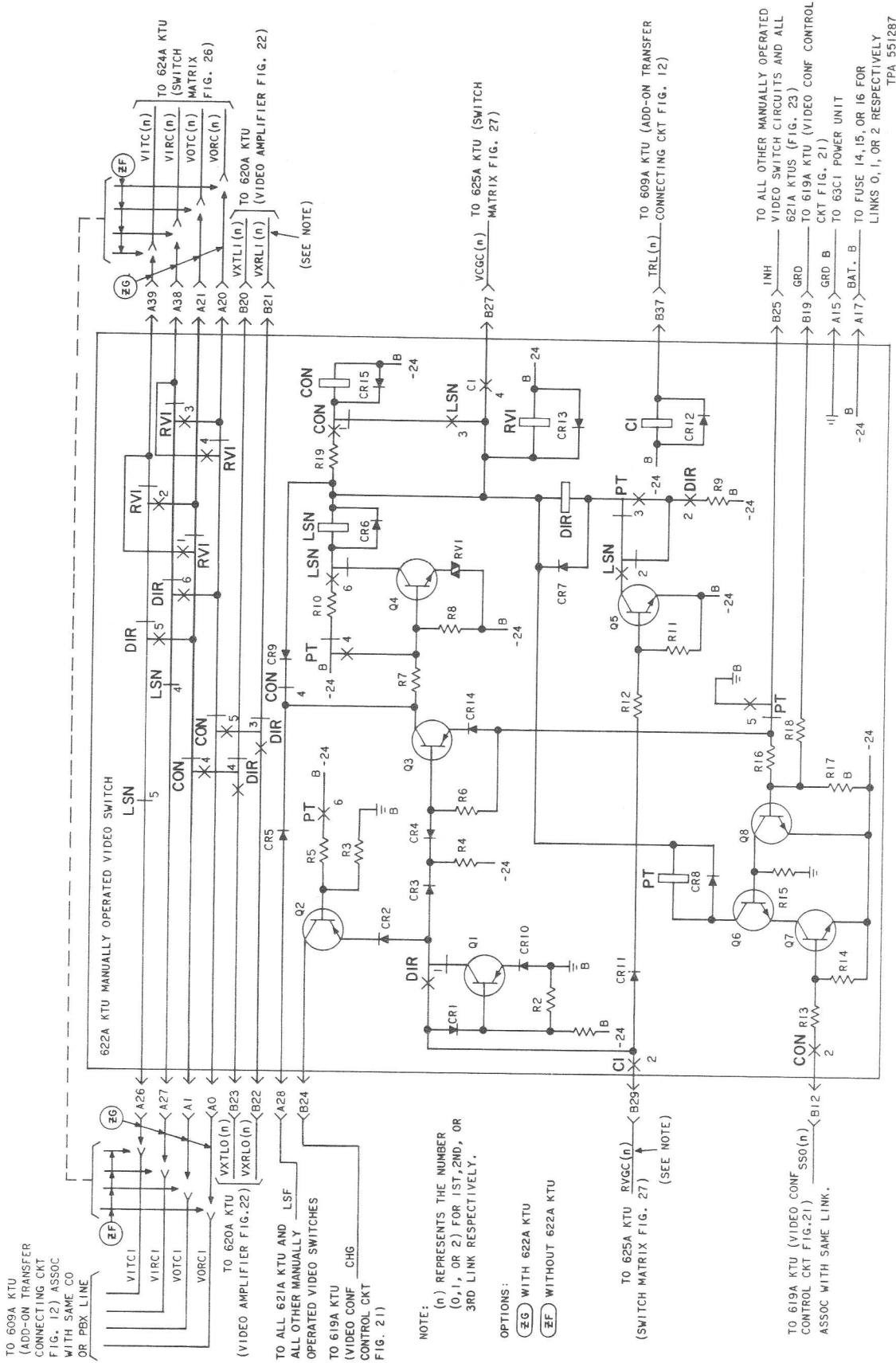


Fig. 24—Condensed Functional Schematic of 622A Key Telephone Unit (Manually Operated Video Switch for 2- or 3-Link Intercom)

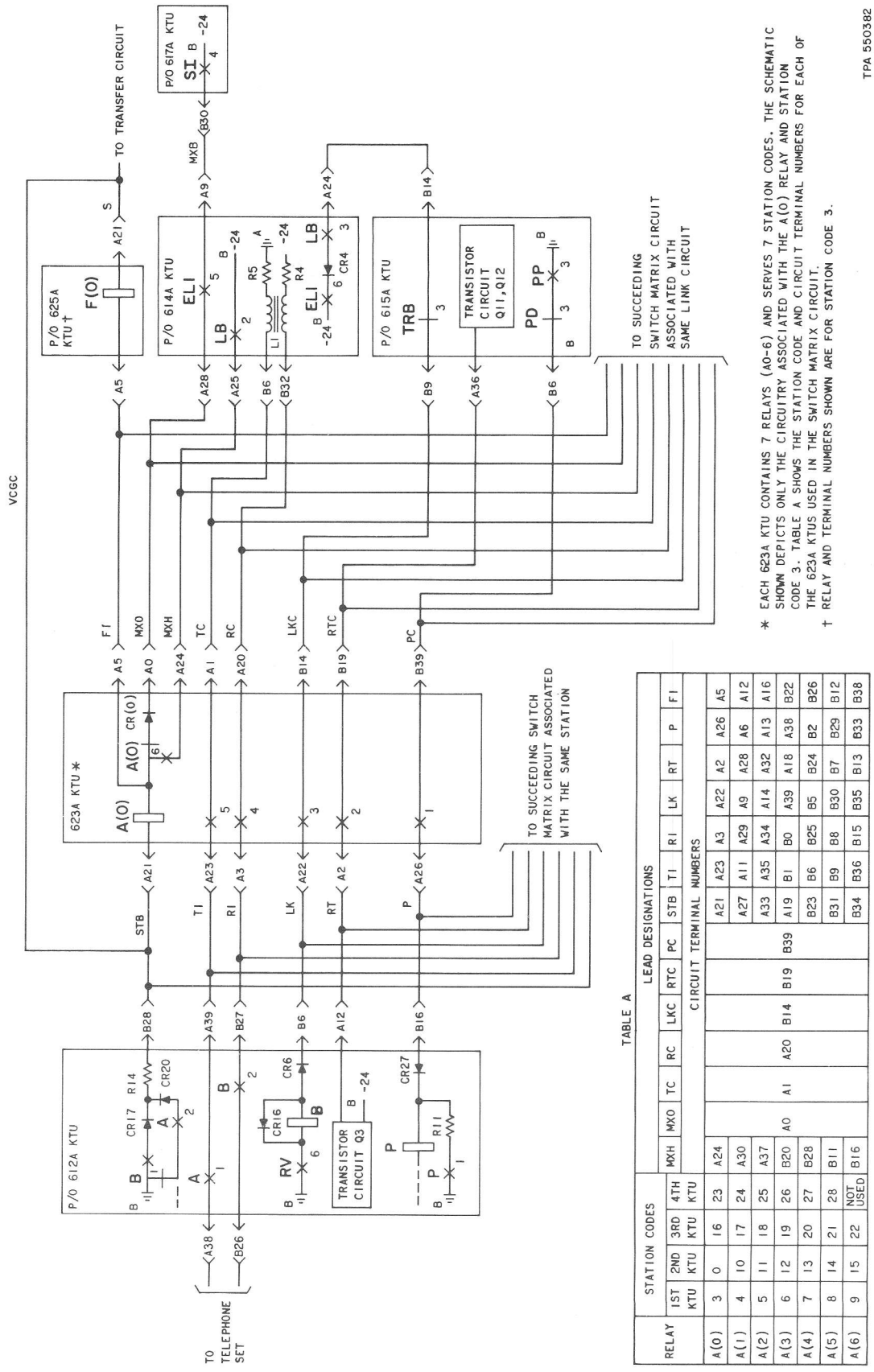


TABLE A

RELAY	STATION CODES		LEAD DESIGNATIONS															
	1ST KTU	2ND KTU	3RD KTU	4TH KTU	MXH	MXO	TC	RC	LKC	RTC	PC	STB	TI	RI	LK	RT	P	FI
	CIRCUIT TERMINAL NUMBERS																	
A(0)	3	0	16	23	A24							A21	A23	A3	A22	A2	A26	A5
A(1)	4	10	17	24	A30							A27	A11	A29	A9	A28	A6	A12
A(2)	5	11	18	25	A37							A33	A35	A34	A14	A32	A13	A16
A(3)	6	12	19	26	B20	A0	A1	A20	B14	B19	B39	A19	B1	B0	A39	A18	A38	B22
A(4)	7	13	20	27	B28							B23	B6	B25	B5	B24	B2	B26
A(5)	8	14	21	28	B11							B31	B9	B8	B30	B7	B29	B12
A(6)	9	15	22	NOT USED	B16							B34	B36	B15	B35	B13	B33	B38

Fig. 25—Condensed Functional Schematic of 623A Key Telephone Unit (Switch Matrix for 2- or 3-Link Intercom)

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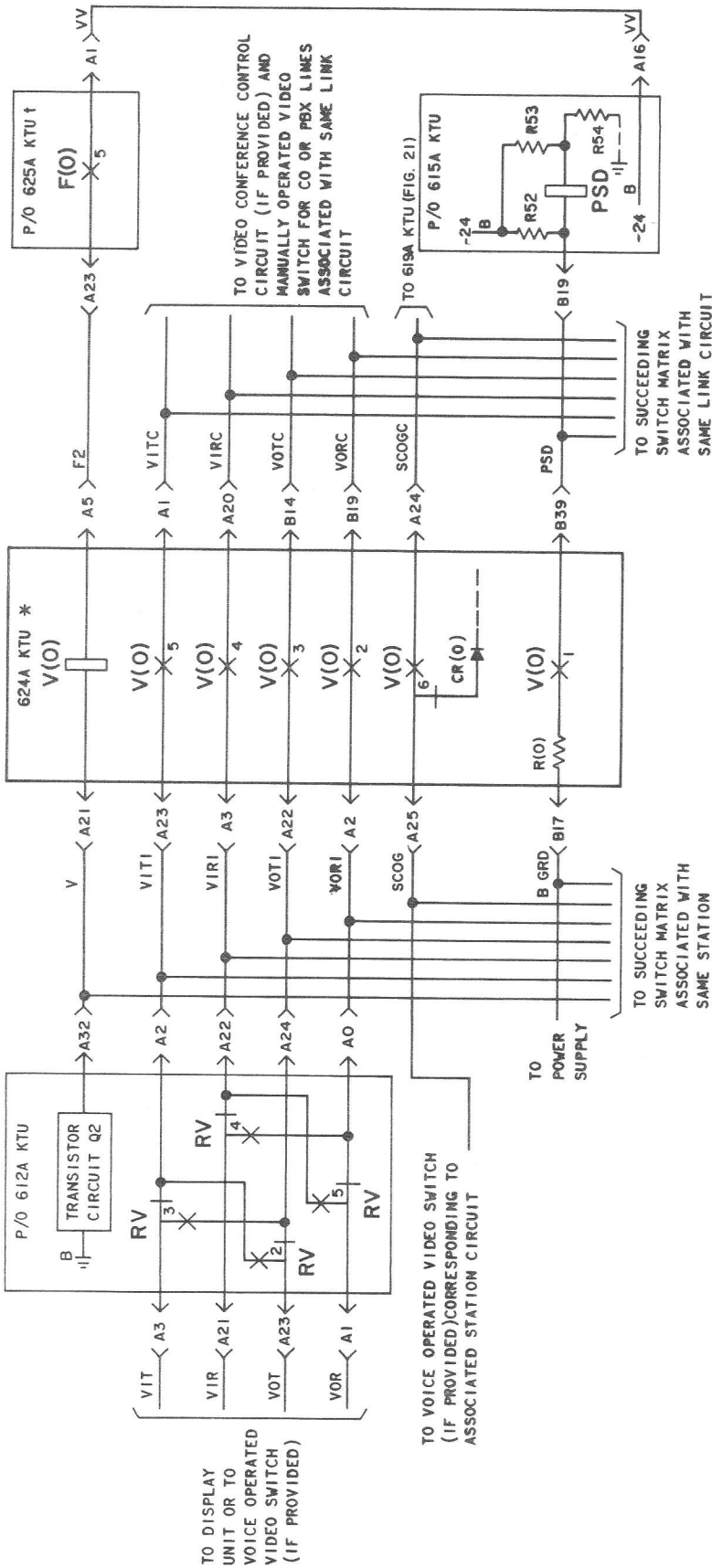


TABLE A

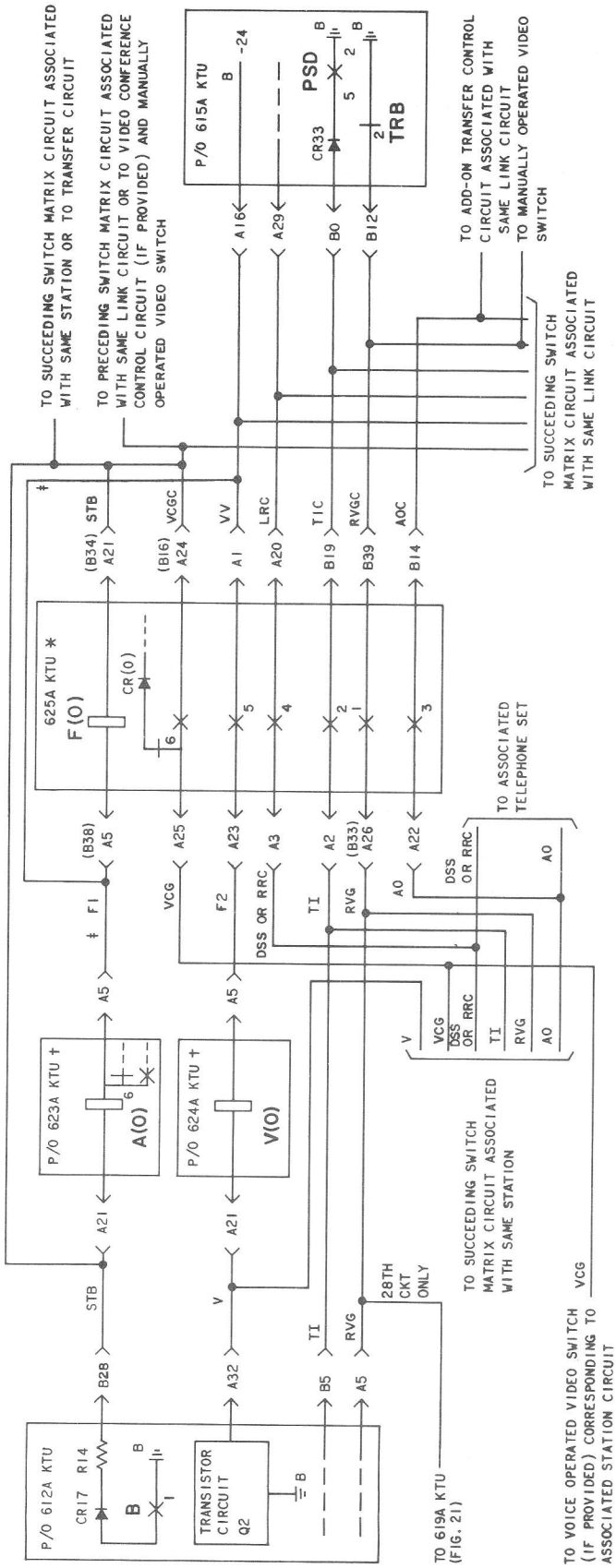
RELAY	STATION CODES				LEAD DESIGNATIONS											
	1ST KTU	2ND KTU	3RD KTU	4TH KTU	SCOGC	VITC	VIRC	VOTC	VORC	VORC	VITC	VIRI	VOTI	VORI	SCOG	F2
V(0)	3	0	16	23	A24	A1	A20	B14	B19	B39	B17	A21	A23	A2	A2	A5
V(1)	4	10	17	24	A30							A27	A11	A9	A28	A12
V(2)	5	11	18	25	A37							A33	A35	A34	A32	A16
V(3)	6	12	19	26	B20							A19	B1	B0	A39	B22
V(4)	7	13	20	27	B28							B23	B6	B25	B5	B26
V(5)	8	14	21	28	B11							B31	B9	B8	B30	B12
V(6)	9	15	22	NOT USED	B16							B34	B36	B15	B35	B38

* EACH 624A KTU CONTAINS 7 RELAYS (VO-6) AND SERVES 7 STATION CODES. THE SCHEMATIC SHOWN DEPICTS ONLY THE CIRCUITRY ASSOCIATED WITH THE V(O) RELAY AND STATION CODE 3. TABLE A SHOWS THE STATION CODE AND CIRCUIT TERMINAL NUMBERS FOR EACH OF THE 624A KTUS USED IN THE SWITCH MATRIX CIRCUIT.

† RELAY AND TERMINAL NUMBERS SHOWN ARE FOR STATION CODE 3.

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Fig. 26—Condensed Functional Schematic of 624A KTU (Switch Matrix for 2- or 3-Link Intercom)



* EACH 625A KTU CONTAINS 7 RELAYS (FO-6) AND SERVES 7 STATION CODES. THE SCHEMATIC SHOWN DEPICTS ONLY THE CIRCUITRY ASSOCIATED WITH THE F(O) RELAY AND STATION CODE 3. TABLE A SHOWS THE STATION CODE AND CIRCUIT TERMINAL NUMBERS FOR EACH OF THE 625A KTUS USED IN THE SWITCH MATRIX CIRCUIT.

† RELAY AND TERMINAL NUMBERS SHOWN ARE FOR STATION CODE 3.

‡ DO NOT RUN LEAD F1 ON 28TH CIRCUIT. ADD STRAPS BETWEEN LEAD VCGC AND STB AND BETWEEN LEAD VV AND THE WINDING OF RELAY F(6) ONLY ON THE 28TH CIRCUIT. TERMINALS CORRESPONDING TO THE 28TH CIRCUIT ARE SHOWN IN PARENTHESIS.

TABLE A

RELAY	STATION CODES									LEAD DESIGNATIONS															
	1ST KTU	2ND KTU	3RD KTU	4TH KTU	F1	VCG	F2	DSS OR RRC	A0	TI	RVG	STB	VCGC	VV	LRC	AOC	TIC	RVGC							
F(0)	3	0	16	23	A5	A25	A23	A3	A22	A2	A26	A21	A24												
F(1)	4	10	17	24	A12	A31	A11	A29	A9	A28	A6	A27	A30												
F(2)	5	11	18	25	A16	A36	A35	A34	A14	A32	A13	A33	A37												
F(3)	6	12	19	26	B22	B21	B1	B0	A39	A18	A38	A19	B20	A1	A20	B14	B19	B39							
F(4)	7	13	20	27	B26	B27	B6	B25	B5	B24	B2	B23	B28												
F(5)	8	14	21	28	B12	B32	B9	B8	B30	B7	B29	B31	B11												
F(6)	9	15	22	†	338	B37	B36	B15	B35	B13	B33	B34	B16												

Fig. 27—Condensed Functional Schematic of 625A Key Telephone Unit (Switch Matrix Circuit for 2- or 3-Link Intercom)

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