

Telecommunications Division

1978

KSP307A-00A PRACTICE

1979

Kellogg produced practice for the K307A dial intercom Key Telephone Unit. This practice can also be used for the Western Electric and Stromberg-Carlson versions of this KTU.

Scanned by Dennis Hock from the original document in his collection.

Adobe Document Produced by Mike Neale, Member of
Antique Telephone Collectors Association US
Telephone Collectors International US

www.kelloggtelephone.com

www.federaltelephoneradio.com

www.redbartelephone.com

www.selectophone.com

www.strombergcarlsontelephone.com

Adobe Document Contents Copyright 2008, Mike Neale, Midland, Texas, USA
Optimized for viewing with Adobe Reader 7.0 or better and web loading.



K307A KEY TELEPHONE UNIT
Rotary Dial Selective Intercom
(including information on Tel-Touch Adapter P/N 182666-101)

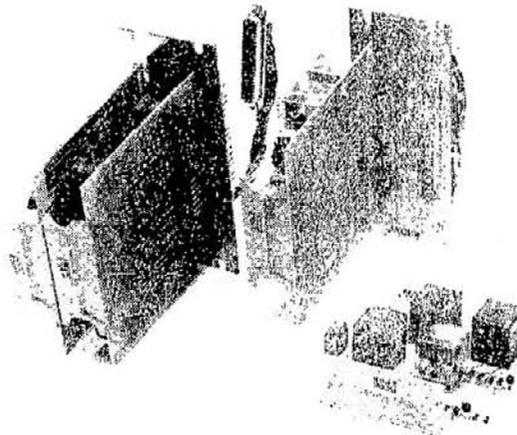


Fig. 1 - K307A Dial Intercom KTU And Tel-Touch Adapter P/N 182666-101

1.00 GENERAL INFORMATION

Scope

1.01 Section 1 of this Key System Practice (KSP) covers general information, identification, and installation for the K307A Dial Intercom Key Telephone Unit (KTU). Section II covers the Tel-Touch Adapter P/N 182666-101.

1.02 This KSP is re-issued to explain two applications of the TF, NC, and NO relay contacts on 160C card (Paragraphs 2.03 and 3.04, Tables C and D) and to revise Table D and Figures 4, 6, and 11).

1.03 The K307A KTU is designed for use in a K501 or K512 KTS to provide rotary dial selective intercom. It provides a single common talking path and a single spurt selective signaling for 9-stations but can be expanded to 18-station capacity by the addition of the K160B card. A connector is provided for the additional card.

1.04 The Tel-Touch Adapter, P/N 182666-101, is designed to be used with the K307A to provide a mixed rotary and Tel-Touch Dial Selective Intercom or pure Tel-Touch Dial Selective Intercom system.

2.00 IDENTIFICATION (See Table A)

2.01 The K307A KTU can be identified by code number K307A stamped on front of mounting panel. Approximate dimensions are 2 3/4" W x 7" H x 8" D.

2.02 The basic 9-station KTU consists of a mounting panel with two connectors, one plug-in printed circuit card (K160C), a card retaining bracket, and associated hardware.

Description of Components

2.03 K160C, Dial Intercom Card. One is used per system to provide rotary dial intercom for nine dial codes. The card includes a spare set of normally open (NO) contacts and a spare set of normally closed (NC) contacts. One side of the sets of contacts are common (Pin 21).

2.04 K160B, Dial Intercom Card. One is used for nine additional dial codes. Not furnished with the basic K307A unit but can be purchased separately to expand to eighteen stations as required.

2.05 The K307A Mounting Panel is designed to be mounted in a K501 or K512 KTS and is factory wired to accept the K160C Card and one K160B card. Connection to the KTS is by one 50-pin amphenol-type connector.

NOTE: If a cable harness is desired it must be ordered separately. (Table A.)

TABLE A. IDENTIFICATION, K307A KTU and Associated Equipment

Part Number	Description	No. Required
000307-00A	KTU, 9-Station Dial Intercom circuit (Basic Unit includes the following items):	1
KSP-307-00A-101	Key System Practice	1
182023-101	Screw, HWH 3/8" Self-Tapping	4
79400-102	Screw, RHM 3/8"	4
64127	Screw, RHM	2
182576-101	Card Retainer Assy.	1
182713-101	P. C. Assy. K160C KTU	1
182717-101	Mounting Panel Assy.	1
182481-101	P. C. Assy. K160B KTU (To add 9 dial codes) optional, order separately	1
182666-101	Pushbutton (Tone) Dial Adapter Kit	1
183044-101	Interconnect Cable for K501A (ITT System only) 9 stations	1
183045-101	Interconnect Cable for K512A (ITT System only) 9 stations	1

NOTE: Two types of 3/8" mounting screws will be shipped loose. Machine screws should be used in units with pre-tapped holes in mounting frame. Self-tapping screws should be used in the untapped holes.

3.00 INSTALLATION

CAUTION: Unplug KSU power cord before proceeding.

Mounting (See Figure 2)

3.01 Mount the K307A KTU in a K501A or K512A Key Service Unit (KSU), by installing unit to the front of the mounting frame using four 3/8" mounting screws supplied.

Connections

3.02 System connections to the K307A KTU are made via a 50-contact plug located on the back of the KTU. A connecting cable assembly must be ordered separately. (See Table A.)

3.03 Refer to Table C for connections to a Key Service Unit.

3.04 The NC Contacts of the 160C Card are intended to provide a "release control" for a paging adapter KTU. One side of the contacts must be connected to the 401PA A-lead and the other side to system ground.

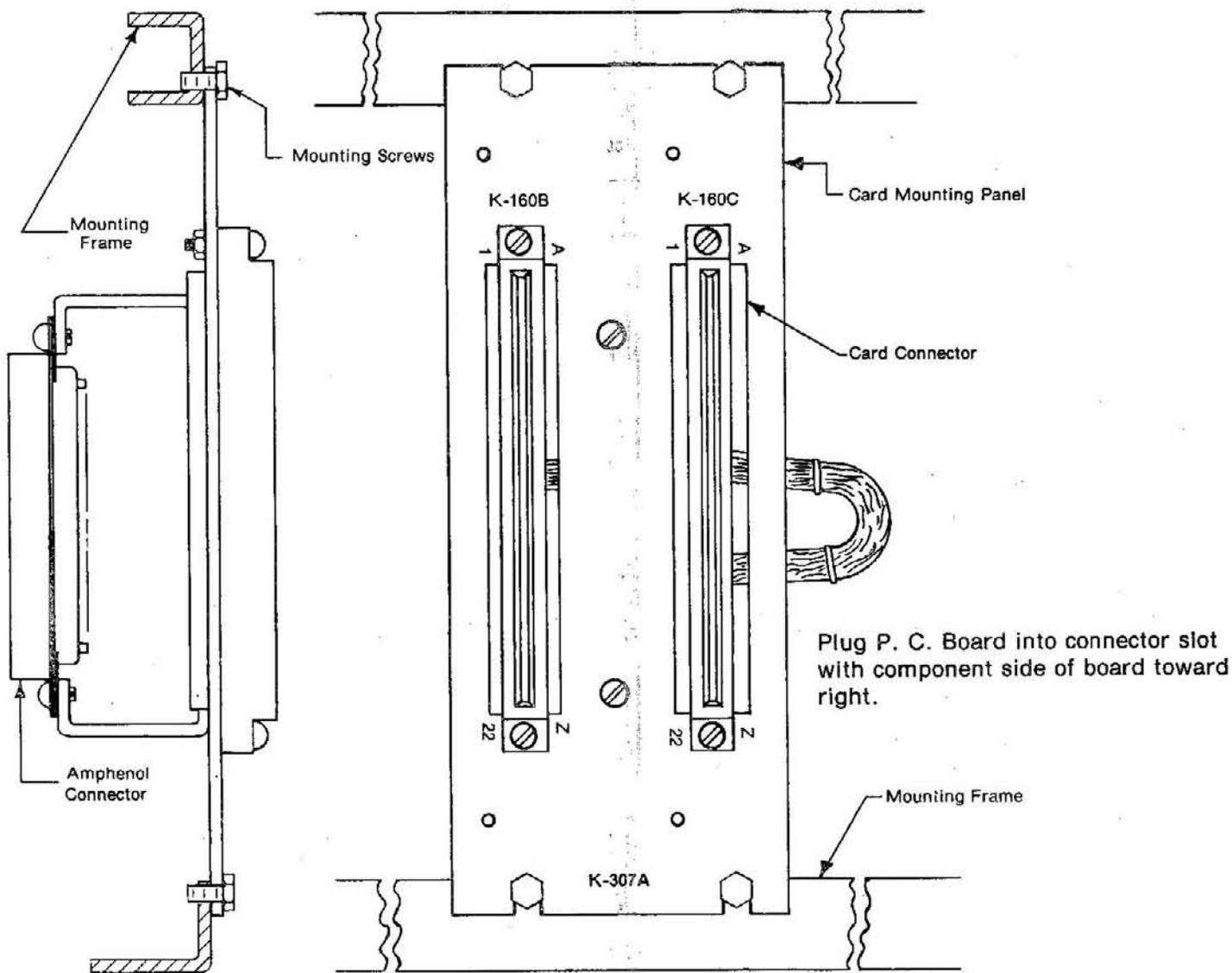


Fig. 2 - Install K307A Mounting Panel to front of KSU mounting frame.

18-Station Connections

3.05 To expand the K307A to 18-station dial intercom, order separately a K160B card and plug into the vacant prewired connector of the K307A.

3.06 Cut the ten red strap wires on back of K160B card connector between terminals 3 to 4, 5 to 6, 8 to 9, 10 to 11, 13 to 14, 15 to 16, E to F, H to J, M to N, and P to R.

NOTE: When the K307A is applied in a K501 or K512 KSU, use ringers for CO/PBX lines and buzzers for intercom signals or vice-versa with proper voltage.

3.07 Plug the K160C card into the properly marked connector slot with the component side toward the right.

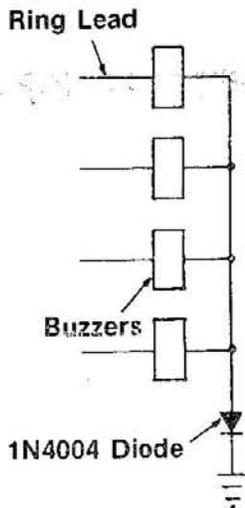


Fig. 3 - Use of Low Voltage Buzzers for Intercom Signaling.

NOTES:

- (1) If Low Voltage Buzzers are going to be used for signaling, all buzzer leads will have to be returned to GRD through one common diode such as 1N4004 in manner shown in fig. 3.
- (2) Diode is not required for high impedance Buzzers (110V 30HZ ringing voltage) or for ringers.

3.08 After completing the installation of the K307A KTU, plug the power cord into a 110VAC wall outlet and test all ring signals for proper code and ringing.

3.09 The K160C KTU contains a set of spare relay contacts; one normally open contact and one normally closed contact. One use for these spare contacts is in the installation of the 401-OPA Paging Adapter KTU, which requires that a lead (Pin 16) must be returned to ground through a normally closed relay contact. (K160C not in use.) To accomplish this TF (Pin 21) of K160C KTU is grounded and NC normally closed contact (Pin 20) is connected to Pin 16 of the 401-OPA KTU.

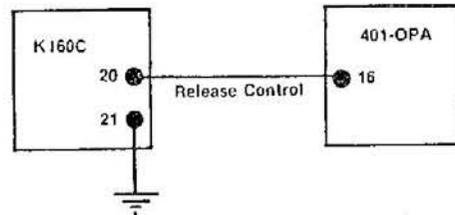


Diagram for connecting spare contacts to 401-OPA KTU.

TABLE B. Abbreviations

Designation	Definition
T	Tip
R	Ring
AB	A Batt
AG	A Grd
L	Lamp
LG	Lamp Grd
RB	Ring Batt
RG	Ring Grd
LB	Lamp Batt
LF	Lamp Flash
CGC	Counter Grd Control
TFGC	Transfer Grd. Control
RH	Tel-Touch Control Lead
TFG	Transfer Grd
LK	Link Control
J	Controlled Grd
TTG	Tel-Touch Grd
Y1	Y1 Relay Control
↓	↓
Y4	Y4 Relay Control
Y5	Y5 Relay Control
R2	Signal Leads
↓	↓
R20	Signal Leads
NO	Normal Open Contact
TF	Transfer Contact
NC	Normal Closed Contact
RS1	Ground
BV	Controlled Batt.
TFR	Trans. Input

TABLE C. Connections Between KSU and K-307A KTU

K-307A LEAD DESIGNATION	K-501 KSU	K-501A KSU	K-512 KSU	K-512A KSU	CABLE COLOR	K-307A TERMINAL	POWER SUPPLY TERMINAL		
T	TBA-39	TBA-39	TBD-1	P5-26	WH-BL	P1-26	TB1-6		
R	TBA-40	TBA-40	TBD-2	P5-1	BL-WH	P1-1			
LG	TBA-43	TBA-43	TBD-21	P5-28	WH-GN	P1-3			
L	TBA-44	TBA-44	TBD-22	P5-3	GN-WH				
RG	TBC-49	TBA-49	TBC-47	P5-4	BN-WH	P1-12		TB1-6	
RT1		NC	NC	NC	OR-BK				
RT2	TBB-2*	TBB-2*	TBE-4*	P5-38*	BK-GN	P1-38			
RT3	TBB-4	Same as K-501 ↑ ↓	TBE-6	P5-13	GN-BK	P1-13			
RT4	TBB-6		TBE-8	P5-39	BK-BN	P1-39			
RT5	TBB-8		TBE-10	P5-14	BN-BK	P1-14			
RT6	TBB-10		TBE-12	P5-40	BK-SL	P1-40			
RT7	TBB-12		TBE-14	P5-15	SL-BK	P1-15			
RT8	TBB-14		TBE-16	P5-41	YL-BL	P1-41			
RT9	TBB-16		TBE-18	P5-16	BL-YL	P1-16			
RT0	TBB-18		TBE-20	P5-42	YL-OR	P1-42			
RT21	TBB-38		TBE-22	P5-17	OR-YL	P1-17			
RT22	TBB-40		TBE-24	P5-43	YL-GN	P1-43			
RT23	TBB-42		TBE-26	P5-18	GN-YL	P1-18			
RT24	TBB-44		TBE-28	P5-44	YL-BN	P1-44			
RT25	TBB-46		TBE-30	P5-19	BN-YL	P1-19			
RT26	TBB-48		TBE-32	P5-45	YL-SL	P1-45			
RT27	TBB-50		TBE-34	P5-20	SL-YL	P1-20			
RT28	TBA-46		TBE-36	P5-46	VI-BL	P1-46			
RT29	TBA-48		TBE-38	P5-21	BL-VI	P1-21			
RT20	TBA-50		TBA-50	TBE-40	P5-47	VI-OR	P1-47		
LB	TBC-38		TBC-38	TBC-40		WH-SL	P1-30	TB1-2**	
LB	TBC-40		TBC-40	NA	NA	SL-WH	P1-5		
RB	TBC-48	TBC-48	TBC-48		WH-BN	P1-29	TB1-5**		
AB	TBC-44	TBC-44	TBC-44		WH-OR	P1-27	TB1-3**		
AG	TBC-43	TBC-43	TBC-43		OR-WH	P1-2	TB1-7**		
160C	NO TF NC					OR-VI	P1-22		
							VI-GN	P1-48	
							GN-VI	P1-23	

* 9-Station Only

** K-512A KSU Only

TABLE D. K307A Connector Lead Designations

CIRCUIT	AMPHENOL CONNECTOR PLUG ON BACK OF K 307A KTU				P.C. CONNECTOR	
	LEAD DESIG.	COLOR	TERMINAL	PLUG	J1	J2
K 307A CONNECTIONS FOR 9 STATIONS (INPUT FROM POWER SUPPLY)	T	W - BL	26	PLUG 1	17	-
	R	BL - W	1		E	-
	AB	W - O	27		22	-
	AG	O - W	2		I	1
	LG	W - G	28		M	-
L	G - W	3	T		-	
RB	W - BR	29	N		-	
RG	BR - W	4	-		Y	
LB	W - SL	30	R		-	
LF	SL - W	5	S		-	
TEL-TOUCH CONTROL LEADS	CGC	R - BL	31		A	U
	TFGC	BL - R	6		B	C
	RH	R - O	32		11	-
	TFG	O - R	7		7	A
	-5V	R - G	33		D	-
	LK	G - R	8		15	22
	J	R - BR	34		16	19
	TTG/RS 1	BR - R	9		Z	1
Y1	R - SL	35	13		-	
Y2	SL - R	10	14		-	
Y3	BK - BL	36	19		-	
Y4	BL - BK	11	6		-	
Y5	BK - O	37	C		-	
NOT RECOM. FOR RD INTERCOM.	R1	O - BK	12		2	3-4
TRANSFER DIGIT FOR 18 STATIONS	R2	BK - G	38		12	5-6
	R3	G - BK	13	8	8-9	
SIGNAL LEADS FOR 9 STATIONS R2 THROUGH R0	R4	BK - BR	39	3	10-11	
	R5	BR - BK	14	10	13-14	
	R6	BK - SL	40	9	15-16	
	R7	SL - BK	15	5	E-F	
	R8	Y - BL	41	X	H-J	
	R9	BL - Y	16	Y	M-N	
SIGNAL LEADS FOR 18 STATIONS R3 THROUGH R20	R0	Y - O	42	4	P-P	
	R21	O - Y	17	-	2	
	R22	Y - G	43	-	T	
	R23	G - Y	18	-	7	
	R24	Y - BR	44	-	12	
	R25	BR - Y	19	-	18	
	R26	Y - SL	45	-	17	
	R27	SL - Y	20	-	D	
R28	V - BL	46	-	K		
R29	BL - V	21	-	L		
R20	V - O	47	-	S		
RELAY CONTACTS ON 160C	NO	O - V	22	U	-	
	TF	V - G	48	21	-	
	NC	G - V	23	20	-	
	BV	V - BR	49	18	B	
		BR - V	24			
		V - SL	50			
		SL - V	25			
FACTORY DESIGNATIONS (WILL NOT APPEAR ON CONNECT- ING BLOCK)	RB OUT			P	-	
	RT			W	-	
	BV			18	B	
RSI				1		
					20	

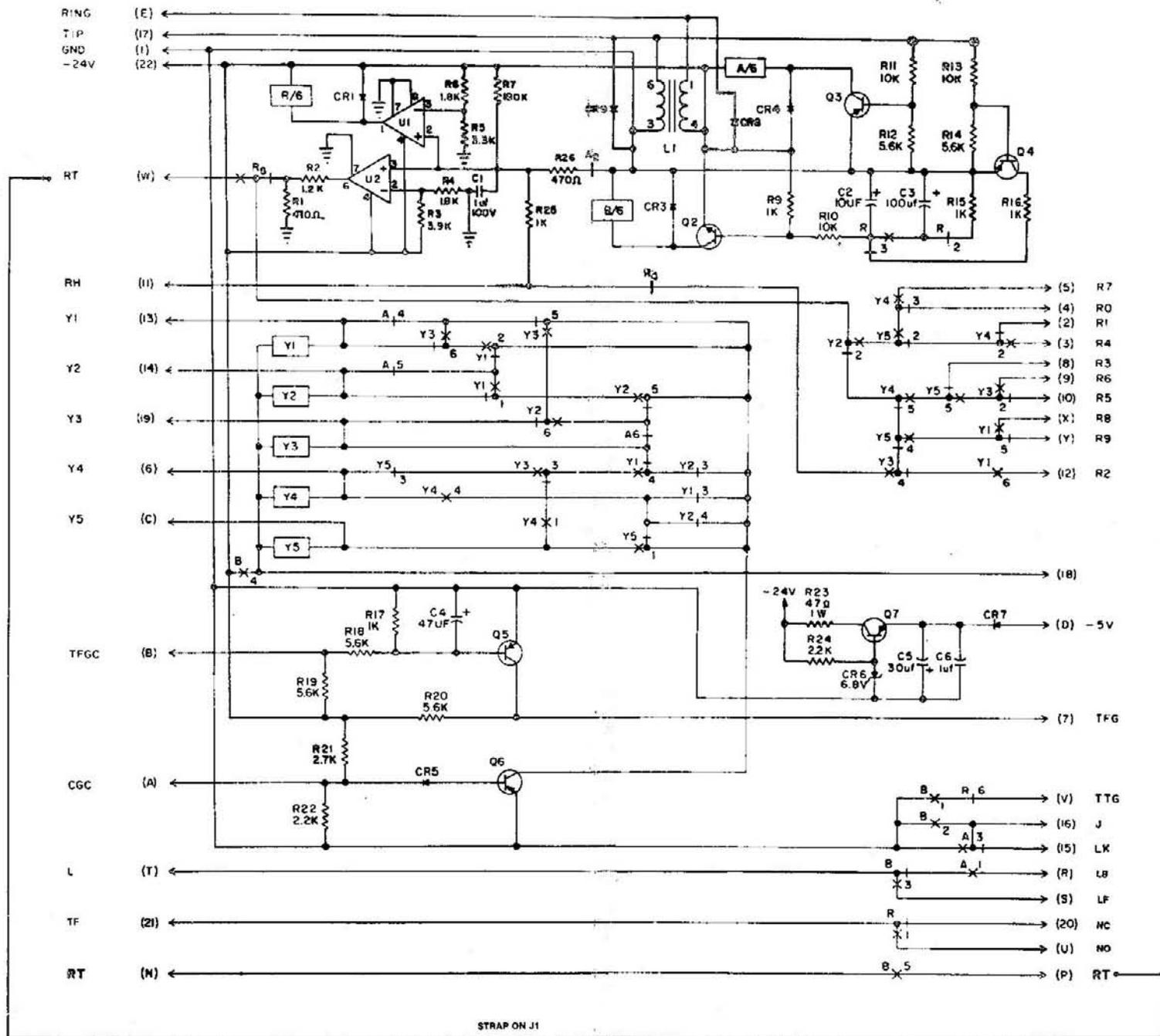


Fig. 4 - Circuit Diagram, K160C KTU

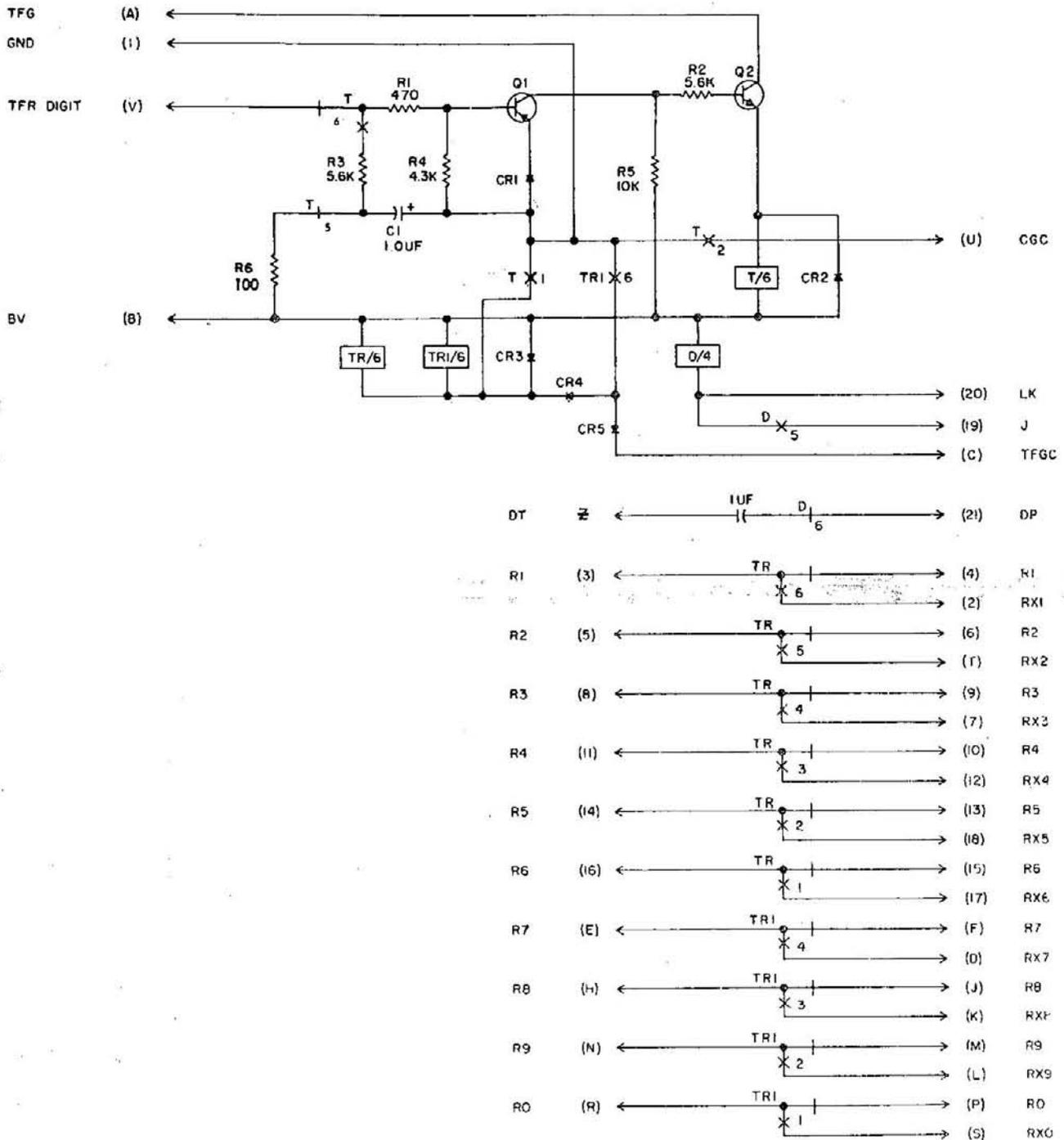


Fig. 5 - Circuit Diagram, K160B KTU

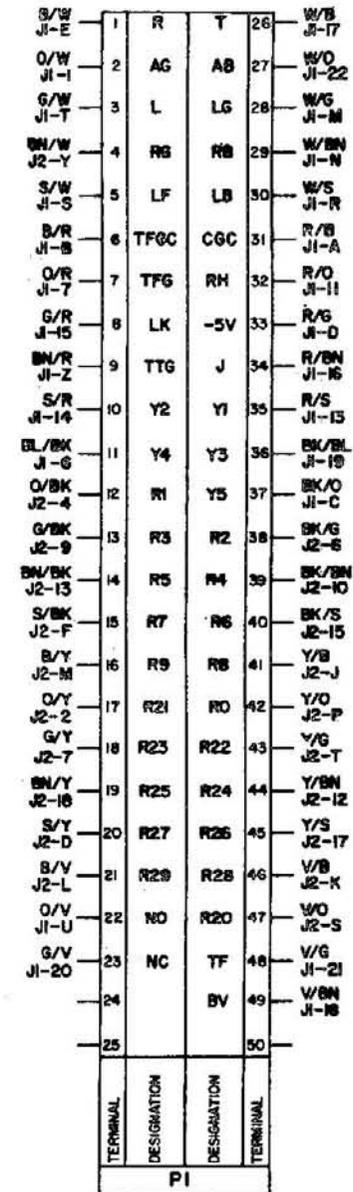
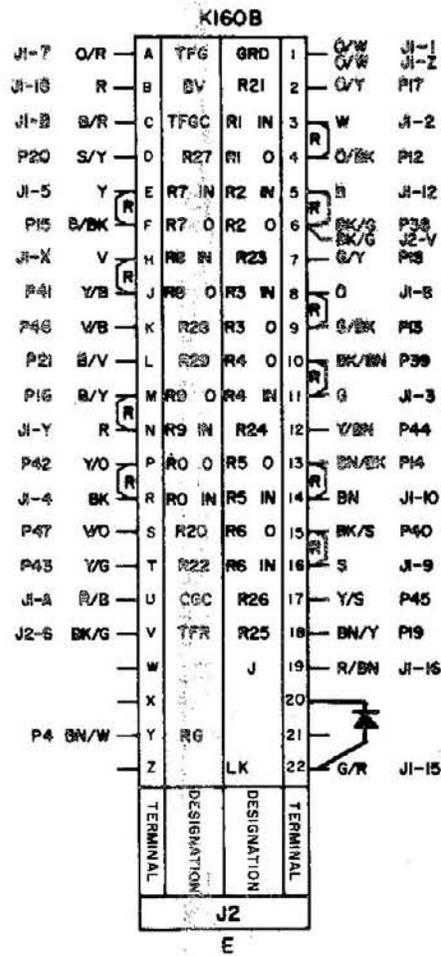
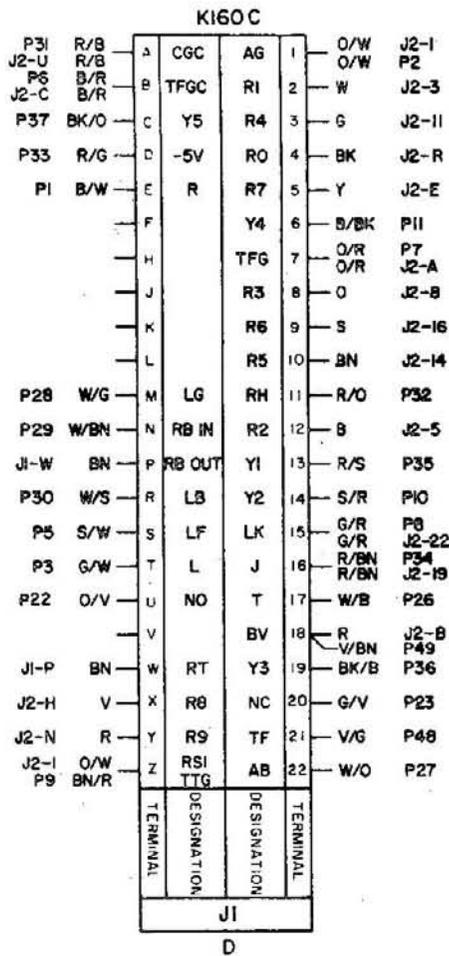


Fig. 6 - K307A Interconnections J1, J2, and P1

SECTION II. TEL-TOUCH ADAPTER P/N 182666-101

(For use with K307A Dial Intercom KTU)

1.00 GENERAL INFORMATION

1.01 The Tel-Touch Adapter is designed to work with the K307A KTU as a plug-in option to convert a rotary dial intercom to a pushbutton dial intercom system or a mixed rotary and pushbutton dial intercom system.

2.00 IDENTIFICATION (See Table E)

2.01 The Tel-Touch Adapter should be ordered separately by P/N 182666-101. Approximate dimensions of the Tel-Touch Adapter are 2 1/4" W x 7" H x 8" D.

2.02 Contents of the kit are a mounting panel, one K166A KTU plug-in printed circuit card, one K166B KTU plug-in printed circuit card, one prewired cable harness, and associated hardware.

Description of Components

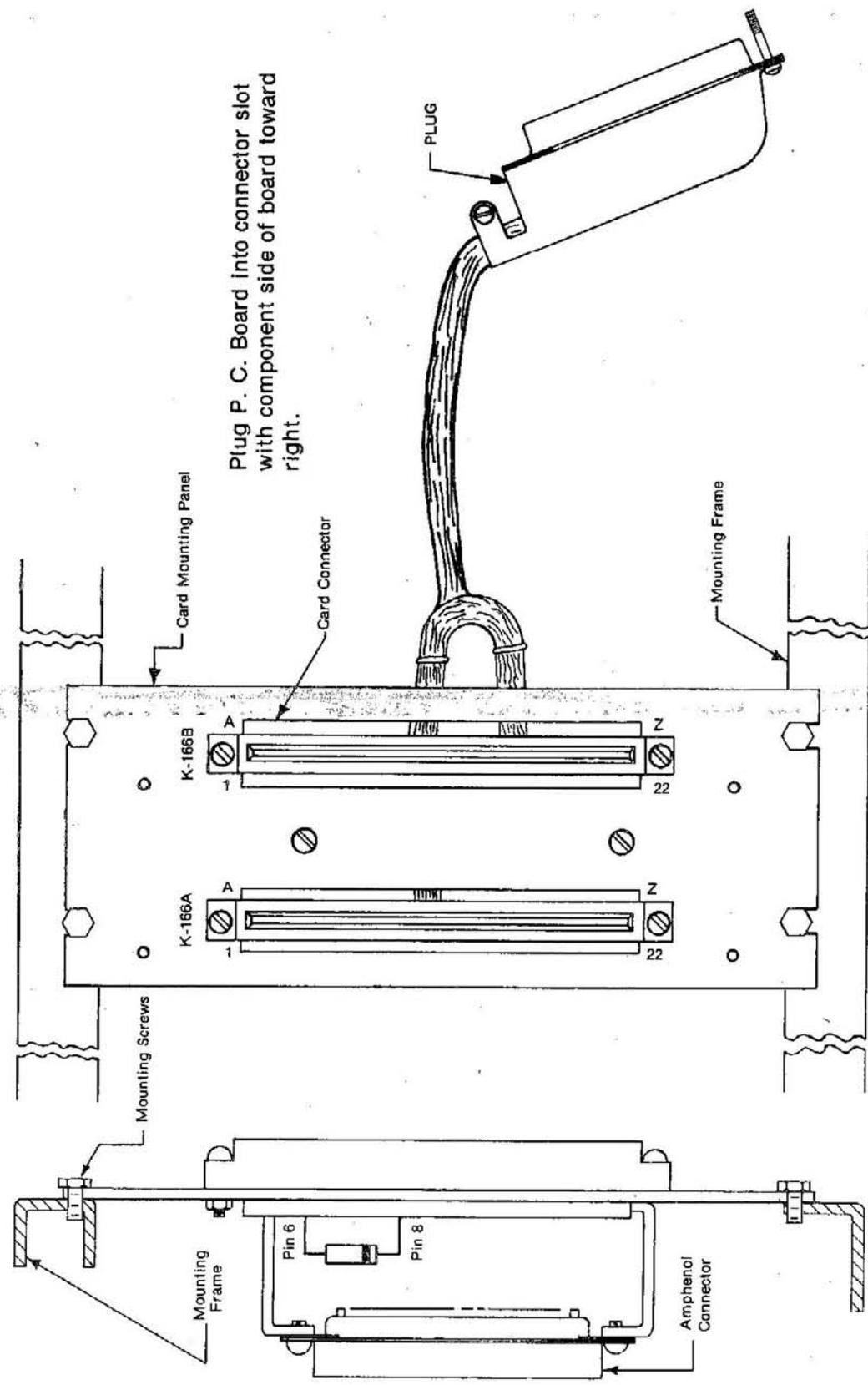
2.03 The Mounting Panel is designed to be mounted in a K501A or K512A KTS and is factory wired to accept the K166A and the K166B cards. Connections to the KTS is by one 50-pin amphenol-type connector.

2.04 K166A Pushbutton (Tone) Dial Detector Card. One card is used per system in conjunction with a K166B Translator card to adapt the K307A intercom KTU to accommodate pushbutton dialing.

2.05 K166B Pushbutton (Tone) Dial Translator Card. One used per system in conjunction with a K166A Detector card to adapt the K307A intercom KTU to accommodate pushbutton dialing.

TABLE E. IDENTIFICATION, TEL-TOUCH ADAPTER

Part Number	Description	No. Required
182666-101	Tel-Touch Adapter (Basic unit contains the following items)	1
182667-101	Instruction Sheet	1
79400-102	Screw, RHM 3/8"	4
182023-101	Screw, HWH 3/8" Self-Tapping	4
64127	Screw, RHM	4
182576-101	Card Retainer Assy.	2
182520-101	P. C. Assy. K166B	1
182516-101	P. C. Assy. K166A	1
182665-101	Mounting Panel Assy.	1



Plug P. C. Board into connector slot with component side of board toward right.

Fig. 7 - Install Tel-Touch Adapter Panel to Front of KSU Mounting Frame.

3.00 INSTALLATION

CAUTION: Unplug KSU power cord before proceeding.

Mounting (See Figure 7.)

3.01 Mount the Tel-Touch Adapter Mounting Panel in a K501A or K512A Key Service Unit (KSU), by installing the unit to the front of the mounting frame using four 3/8" mounting screws supplied. The Mounting Panel should be mounted to the left side of the K307A Dial Intercom Mounting Panel.

NOTE: Two types of 3/8" mounting screws will be shipped loose. Machine screws should be used in units with pretapped holes in mounting frame. Self-tapping screws should be used in the untapped holes.

Connections Between Tel-Touch Adapter and K307A.

3.02 When a K307A KTU has been previously installed, it will be necessary to unplug the connector on back of the K307A and plug it to the plug on back of the Tel-Touch Adapter.

3.03 Take the loose cable from the Tel-Touch Adapter and plug it into the connector on back of the K307A.

3.04 Plug the K166A and K166B Tel-Touch cards into their appropriate connectors with the component side of card to the right.

3.05 After completing the installation of the Tel-Touch Adapter, plug the power cord into a 110VAC wall outlet and test all ring signals for proper code and ringing.

TABLE F. Abbreviations

Designation	Definition
TT1	Outputs from Tel-Touch Rec.
↓	↓
TT5	Outputs from Tel-Touch Rec.
L1	Filter outputs low group
↓	↓
L4	Filter outputs low group
H1	Filter outputs high group
↓	↓
H3	Filter outputs high group
HG	High band filter
LG	Low band filter
TT	Tel-Touch input
AB	A Batt.
AG	A GRD
CG	Counter GRD Control
LK	Link Control
Y1	Y1 Relay Control
↓	↓
Y5	Y5 Relay Control

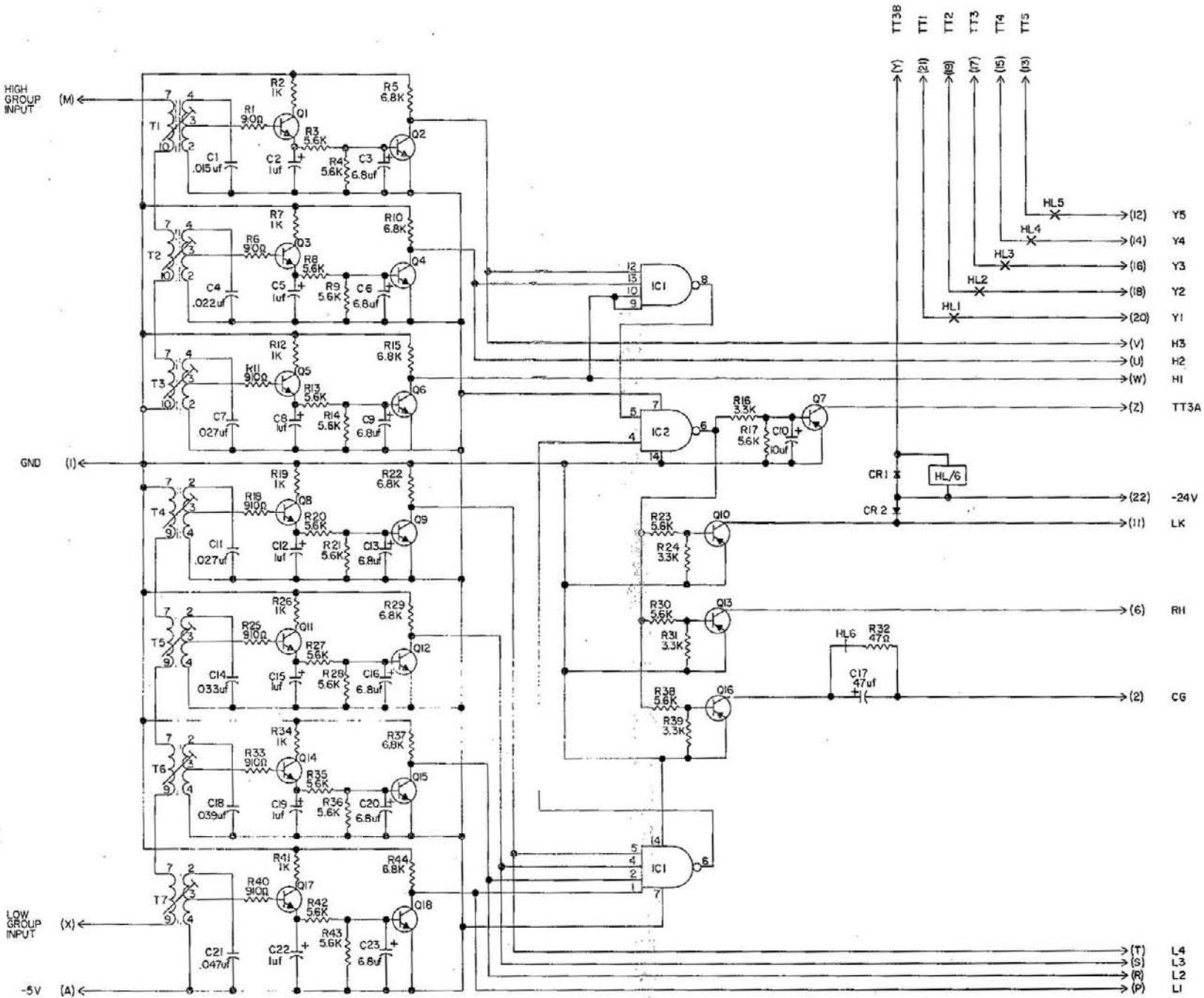


Fig. 8 - Circuit Diagram, K166A KTU

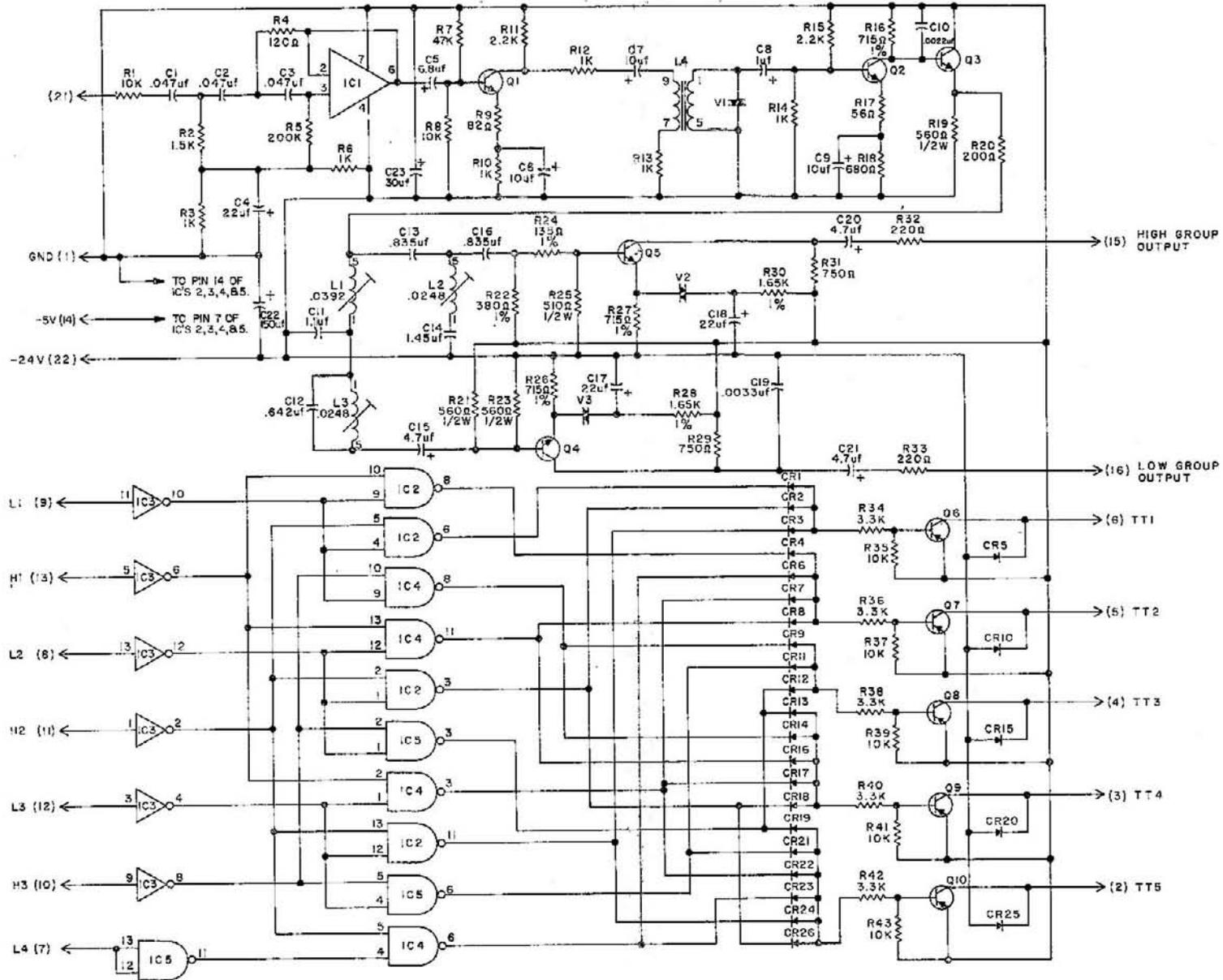


Fig. 9 - Circuit Diagram, K166B KTU

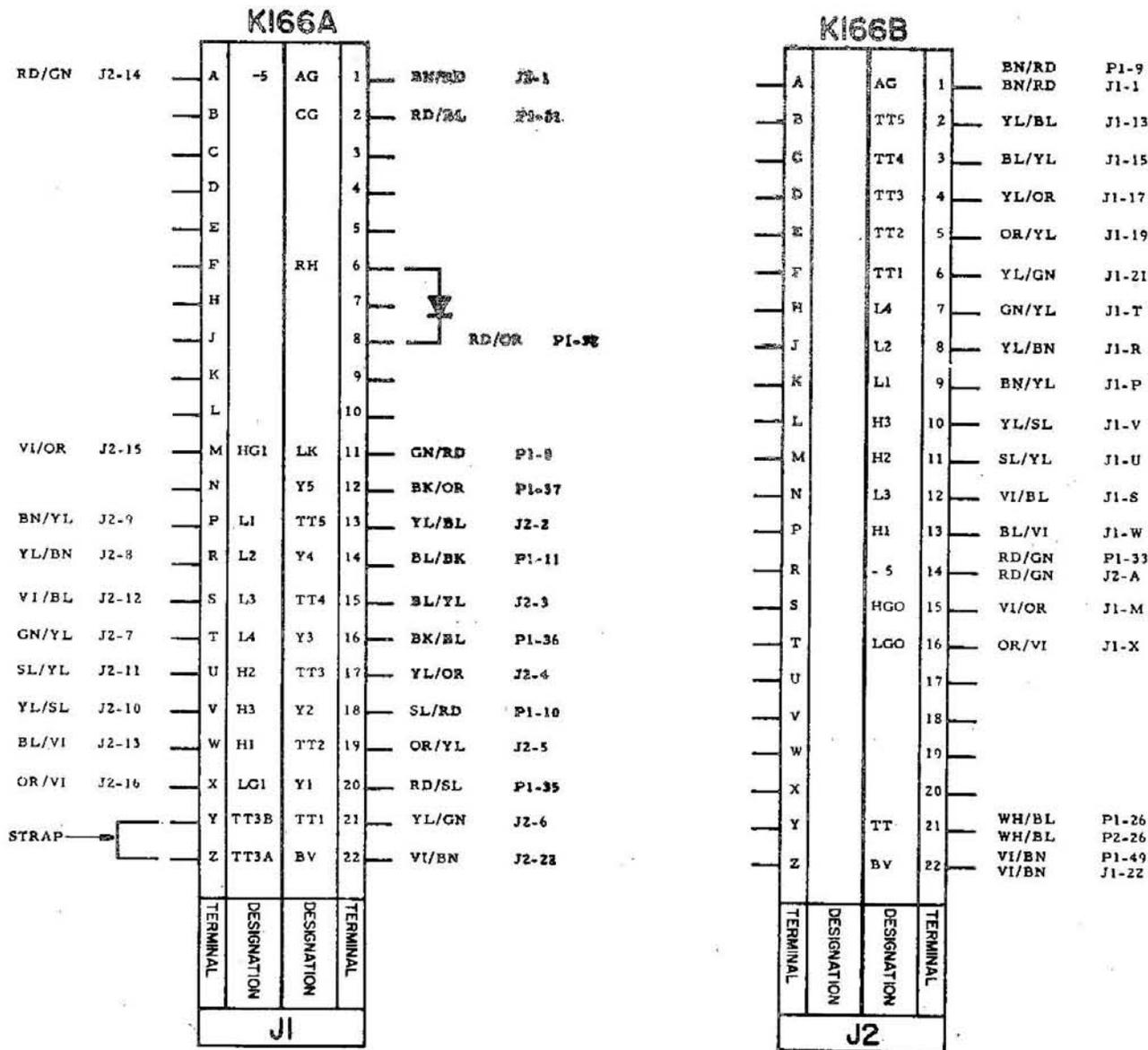


Fig. 10 - Tel-Touch Adapter Interconnections J1 and J2

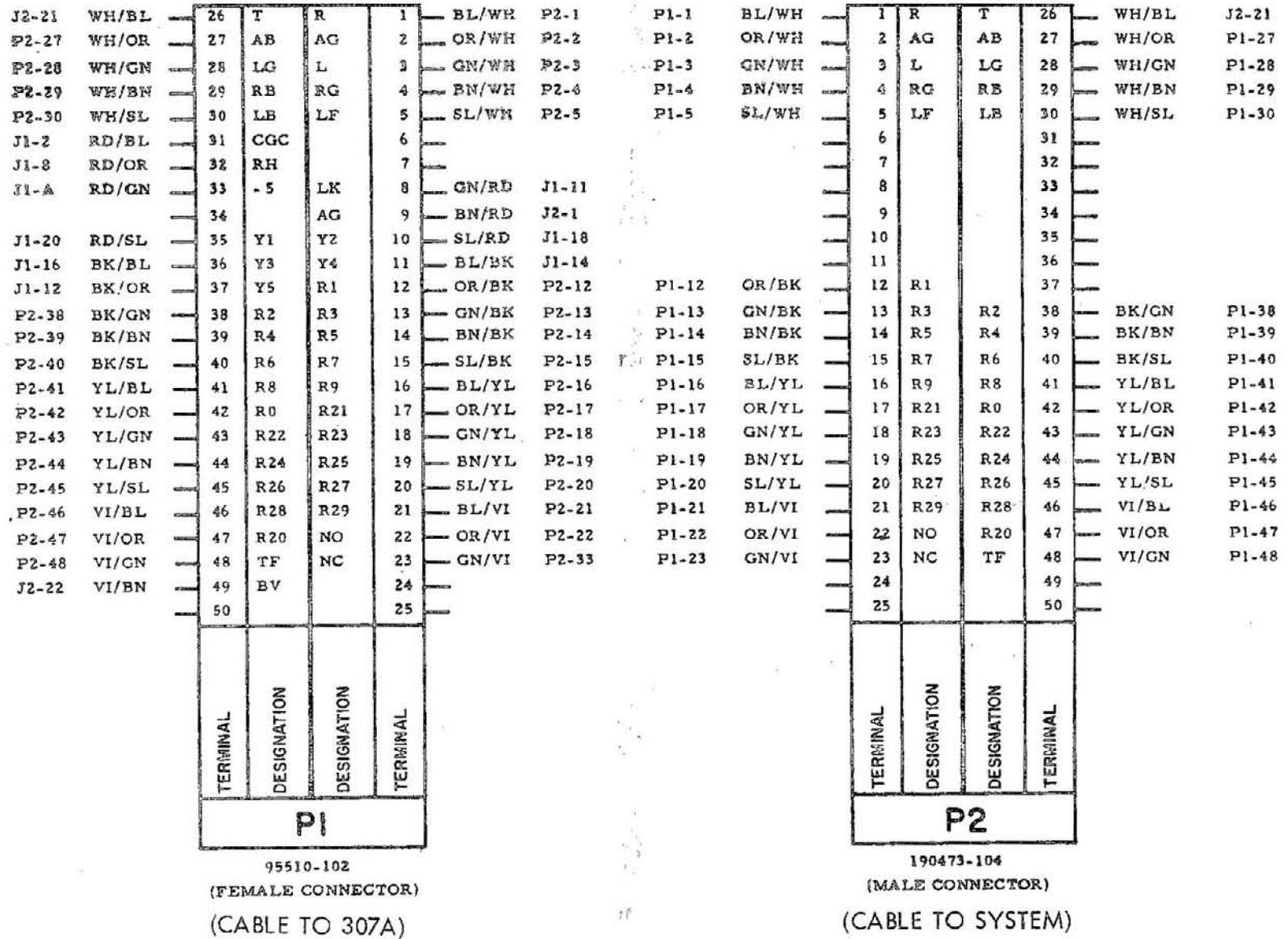


Fig. 11 - Tel-Touch Adapter Interconnections P1 and P2