

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

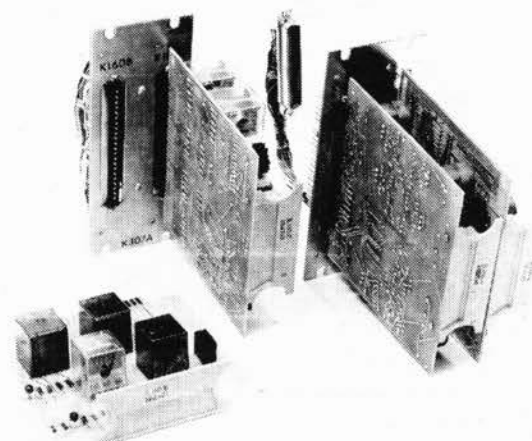


Fig. 1 - K307A Dial Intercom KTU And Tel-Touch Adapter P/N 182666-101

SECTION I. K307A DIAL INTERCOM KTU

1.00 GENERAL INFORMATION

Scope

1.01 Section I 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 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 single spurt selective signaling for 9-stations but can be expanded to 18-station capacity by the addition of one K160B card. A connector is provided for the additional card.

1.03 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 a 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 $\frac{3}{4}$ " 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 permit dial selection of nine signal paths.

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 and the K160B cards. Connections 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 pretapped 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 K501 Key Service Unit.

3.04 Refer to Table C for connections to a K512 Key Service Unit.

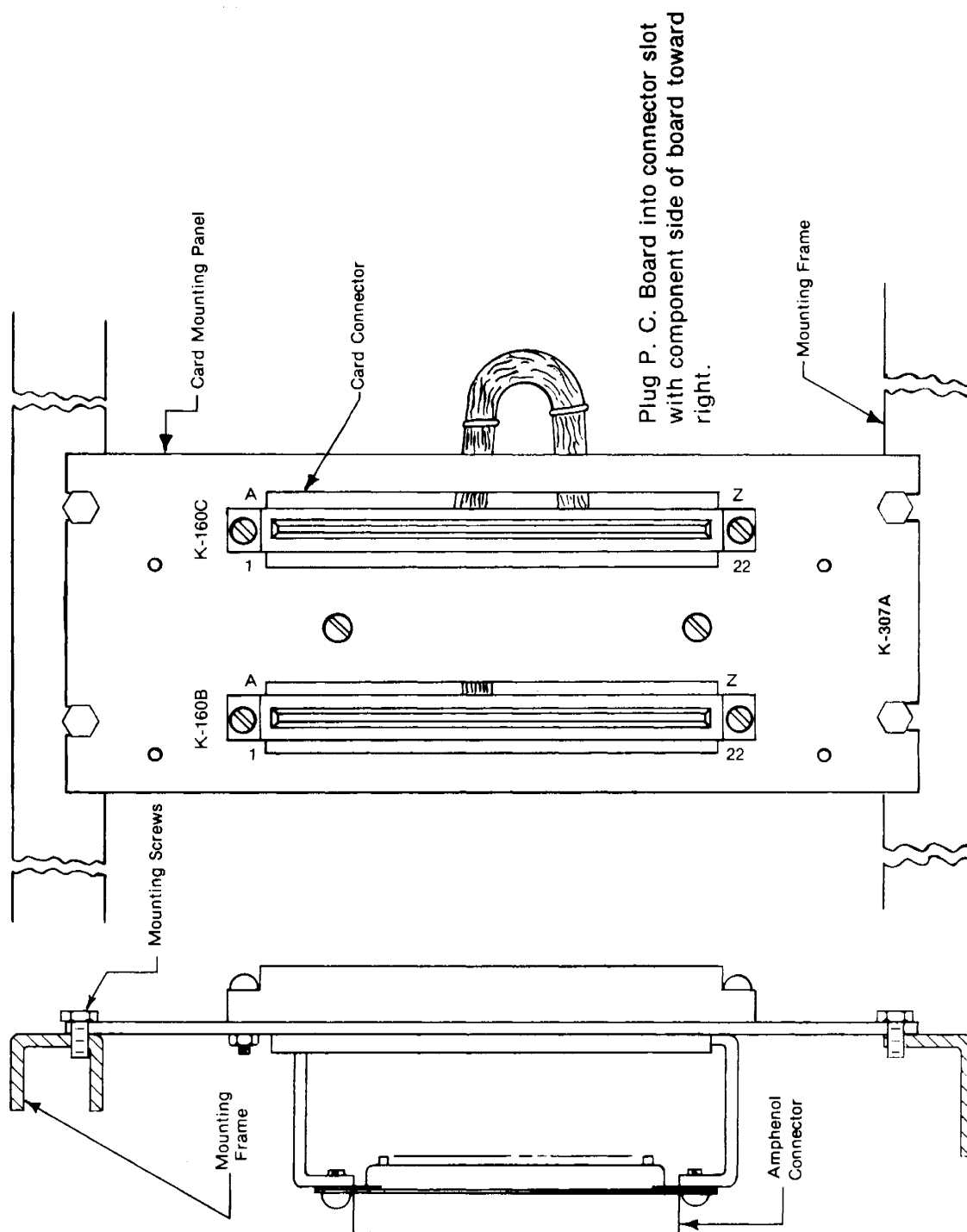


Fig. 2 - Install K307A Mounting Panel to front of KSU mounting frame.

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.

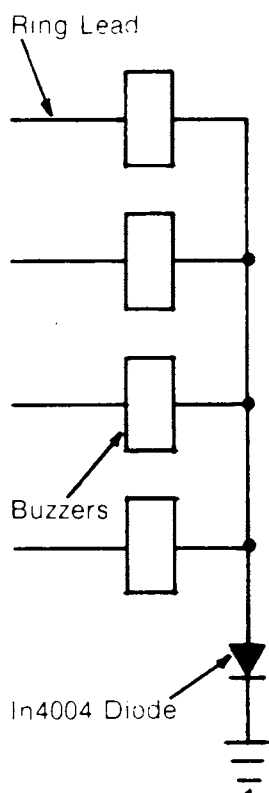


Fig. 3 - Use of Low Voltage Buzzers for Intercom Signaling.

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 IN4004 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.

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	
R	TBA-40	TBA-40	TBD-2	P5-1	BL-VH	P1-1	TB1-6
LG	TBA-43	TBA-43	TBD-21	P5-28	WH-GN		
L	TBA-44	TBA-44	TBD-22	P5-3	GN-WH	P1-3	
RG	TBC-49	TBA-49	TBC-47	P5-4	BN-WH		TB1-6
RT1		NC	NC	NC	OR-BK	P1-12	
RT2	TBB-2*	TBB-2*	TBE-4*	P5-38*	BK-GN	P1-38	
RT3	TBB-4		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		TBE-40	P5-47	VI-OR	P1-47	TB1-2**
LB	TBC-38	TBA-50	TBC-40		WH-SL	P1-30	
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**

* 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 R	W - BL BL - W	26 1	PLUG 1	17 E	- -
	AB AG	W - O O - W	27 2		22 1	- 1
	LG L	W - G G - W	28 3		M T	- -
	RB RG	W - BR BR - W	29 4		N -	- Y
	LB	W - SL	30		R S	- -
	LB	SL - W	5			
TEL-TOUCH CONTROL LEADS	CGC TFGC	R - BL BL - R	31 6		A B	U C
	RH TFG	R - O O - R	32 7		11 7	- A
	-5V LK	R - G G - R	33 8		D 15	- 22
	J TTG	R - BR BR - R	34 9		16 Z	19 1
	Y1 Y2	R - SL SL - R	35 10		13 14	- -
	Y3 Y4	BK - BL BL - BK	36 11		19 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 R5	BK - BR BR - BK	39 14		3 10	10-11 13-14
	R6 R7	BK - SL SL - BK	40 15		9 5	15-16 E-F
	R8 R9	Y - BL BL - Y	41 16		X Y	H-J M-N
	R0 R21	Y - O O - Y	42 17		4 -	P-P 2
	R22 R23	Y - G G - Y	43 18		- -	T 7
	R24 R25	Y - BR BR - Y	44 19		- -	12 18
SIGNAL LEADS FOR 18 STATIONS R3 THROUGH R20	R26 R27	Y - SL SL - Y	45 20		- -	17 D
	R28 R29	V - BL BL - V	46 21		- -	K L
	R20	V - O	47		-	S
	RELAY CONTACTS NO	O - V	22		U	-
	TF NC	V - G G - V	48 23		21 20	- -
	BV	V - BR BR - V	49 24		18	B
FACTORY DESIGNATIONS (WILL NOT APPEAR ON CONNECT- ING BLOCK)		V - SL SL - V	50 25			
	RT RB OUT				P W	- -
	BV RSI				18	B 1
					-	20

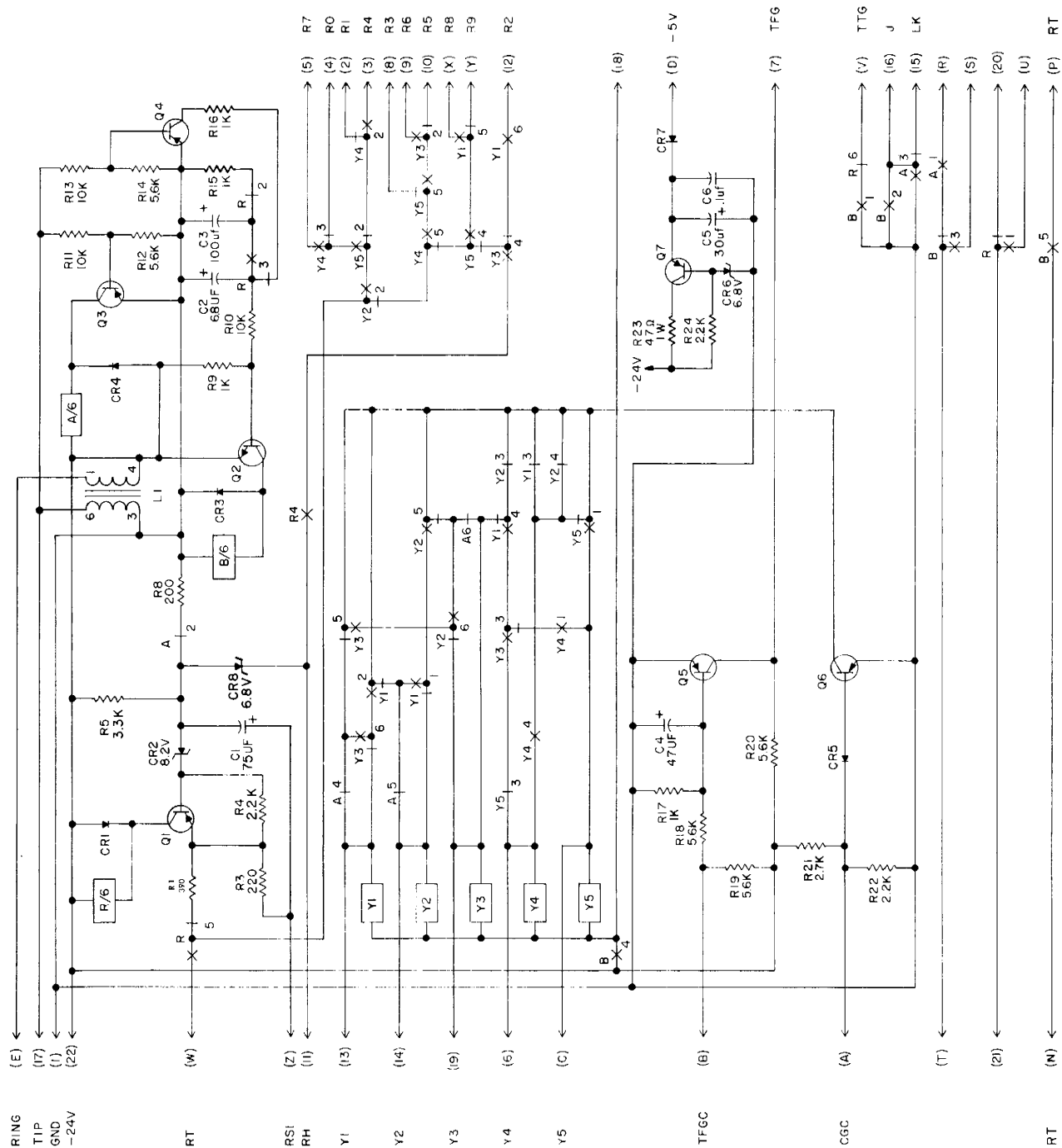


Fig. 4 - Circuit Diagram, K160C KTU

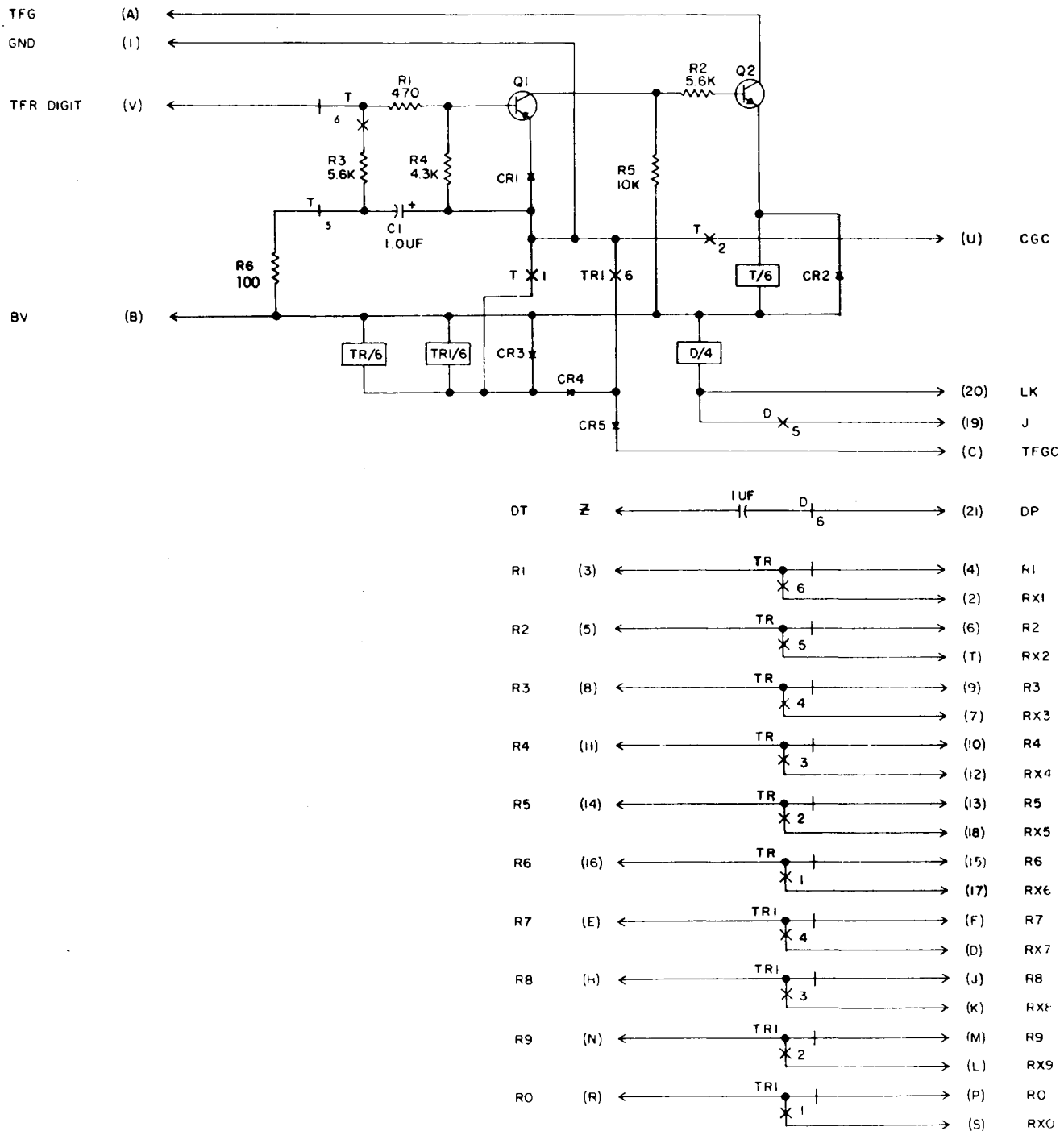


Fig. 5 - Circuit Diagram, K160B KTU

K160C		K160B		K160A	
P34 J2-U	R/B	1	GRD	1	B/W
P6 J2-3	R/B	2	TFG	2	O/W
P37 J2-C	B/R	3	BV	3	J1-1
P33 J2-R	BK/O	4	TFGC	4	O/W
P1	R/G	5	R1 IN	5	J1-2
	B/W	6	R2 IN	6	J1-2
		7	R7 IN	7	J1-2
		8	R8 IN	8	J1-2
		9	R9 IN	9	J1-2
		10	R10 IN	10	J1-2
		11	R11 IN	11	J1-2
		12	R12 IN	12	J1-2
		13	R13 IN	13	J1-2
		14	R14 IN	14	J1-2
		15	R15 IN	15	J1-2
		16	R16 IN	16	J1-2
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		20	R20 IN	20	J1-2
		21	R21 IN	21	J1-2
		22	R22 IN	22	J1-2
		23	R23 IN	23	J1-2
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		25	R25 IN	25	J1-2
		26	R26 IN	26	J1-2
		27	R27 IN	27	J1-2
		28	R28 IN	28	J1-2
		29	R29 IN	29	J1-2
		30	R30 IN	30	J1-2
		31	R31 IN	31	J1-2
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		37	R37 IN	37	J1-2
		38	R38 IN	38	J1-2
		39	R39 IN	39	J1-2
		40	R40 IN	40	J1-2
		41	R41 IN	41	J1-2
		42	R42 IN	42	J1-2
		43	R43 IN	43	J1-2
		44	R44 IN	44	J1-2
		45	R45 IN	45	J1-2
		46	R46 IN	46	J1-2
		47	R47 IN	47	J1-2
		48	R48 IN	48	J1-2
		49	R49 IN	49	J1-2
		50	R50 IN	50	J1-2
		51	R51 IN	51	J1-2
		52	R52 IN	52	J1-2
		53	R53 IN	53	J1-2
		54	R54 IN	54	J1-2
		55	R55 IN	55	J1-2
		56	R56 IN	56	J1-2
		57	R57 IN	57	J1-2
		58	R58 IN	58	J1-2
		59	R59 IN	59	J1-2
		60	R60 IN	60	J1-2
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		62	R62 IN	62	J1-2
		63	R63 IN	63	J1-2
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		66	R66 IN	66	J1-2
		67	R67 IN	67	J1-2
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		69	R69 IN	69	J1-2
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		178	R178 IN	178	J1-2
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		180	R180 IN	180	J1-2
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		185	R185 IN	185	J1-2
		186	R186 IN	186	J1-2
		187	R187 IN	187	J1-2
		188	R188 IN	188	J1-2
		189	R189 IN	189	J1-2
		190	R190 IN	190	J1-2
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		203	R203 IN	203	J1-2
		204	R204 IN	204	J1-2
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		250	R250 IN	250	J1-2
		251	R251 IN	251	J1-2
		252	R252 IN	252	J1-2
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		254	R254 IN	254	J1-2
		255	R255 IN	255	J1-2
		256	R256 IN	256	J1-2
		257	R257 IN	257	J1-2
		258	R258 IN	258	J1-2
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		260	R260 IN	260	J1-2
		261	R261 IN	261	J1-2
		262	R262 IN	262	J1-2
		263	R263 IN	263	J1-2
		264	R264 IN	264	J1-2
		265	R265 IN	265	J1-2
		266	R266 IN	266	J1-2

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 2¼" 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

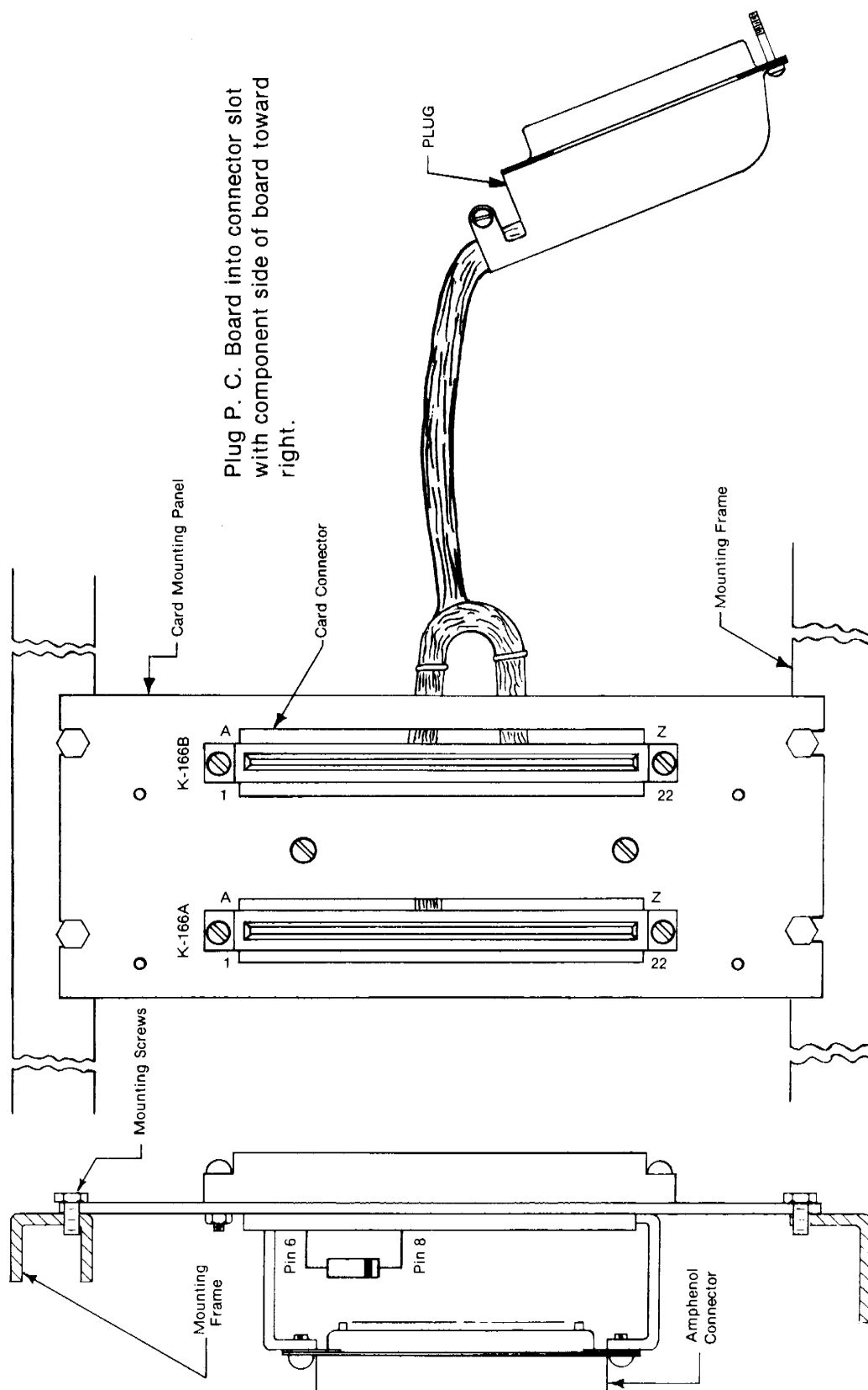


Fig. 7 - Install Tel-Touch Adapter Panel to Front of KSU Mounting Frame.

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

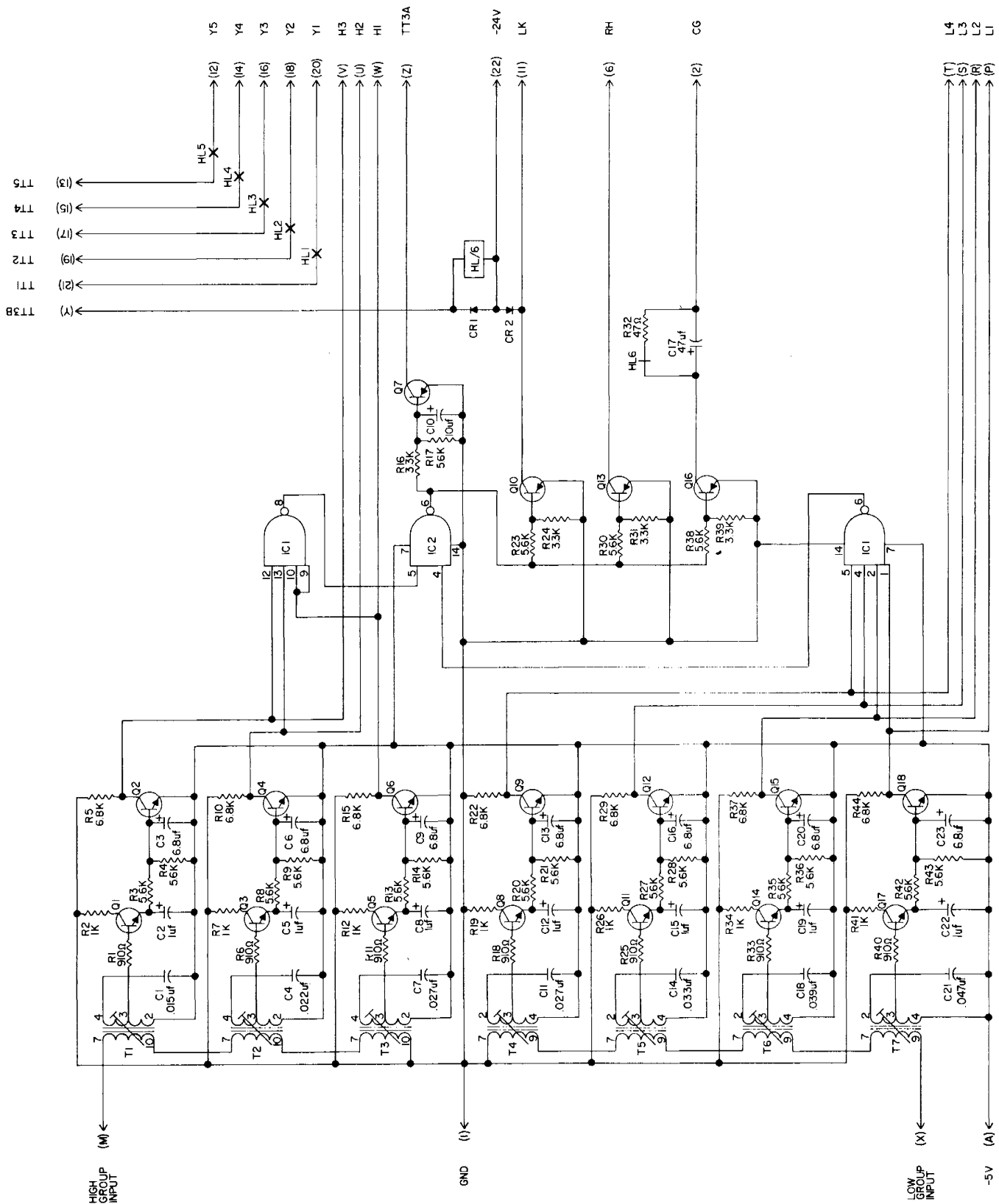


Fig. 8 - Circuit Diagram, K166A KTU

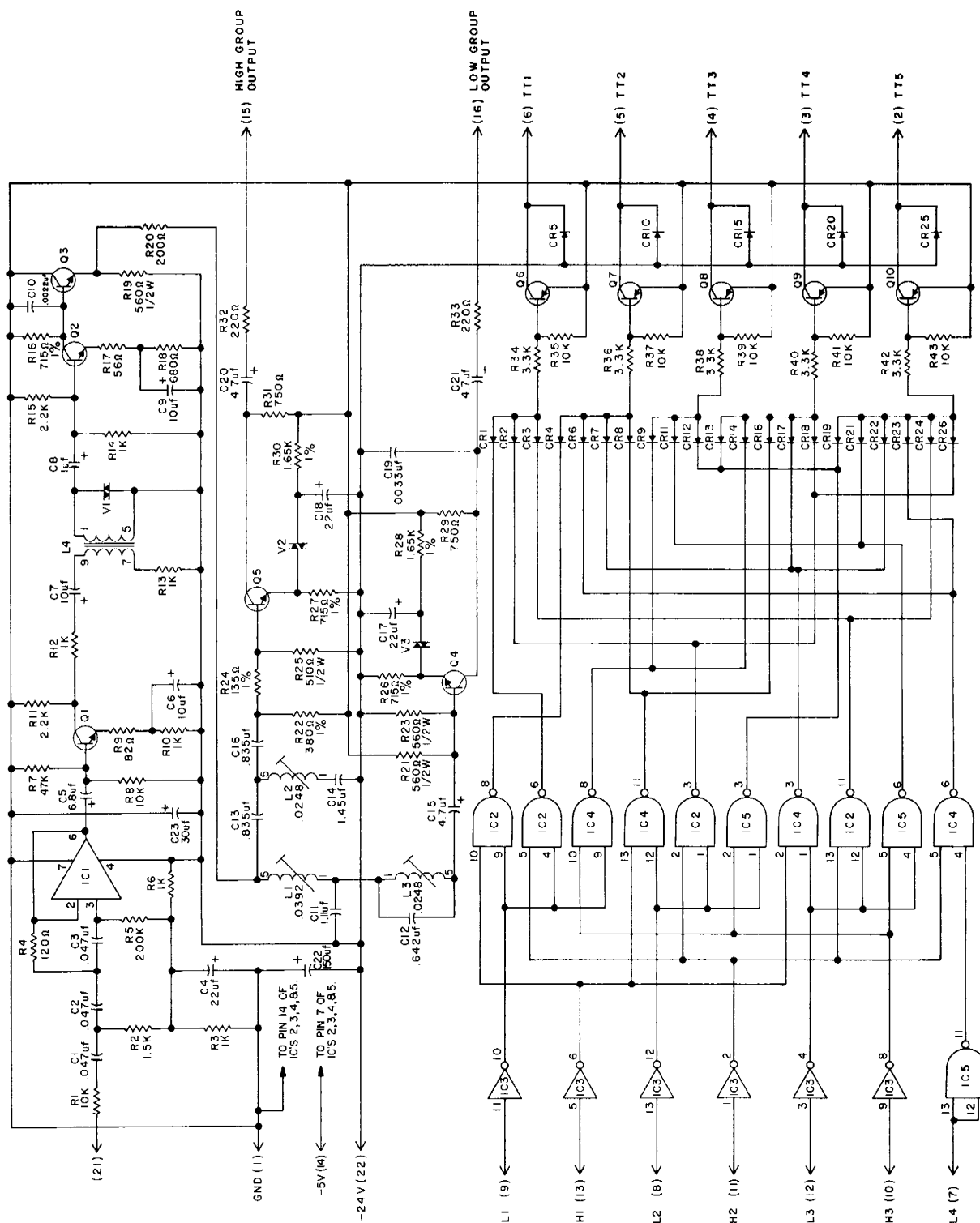


Fig. 9 - Circuit Diagram, K166B KTU

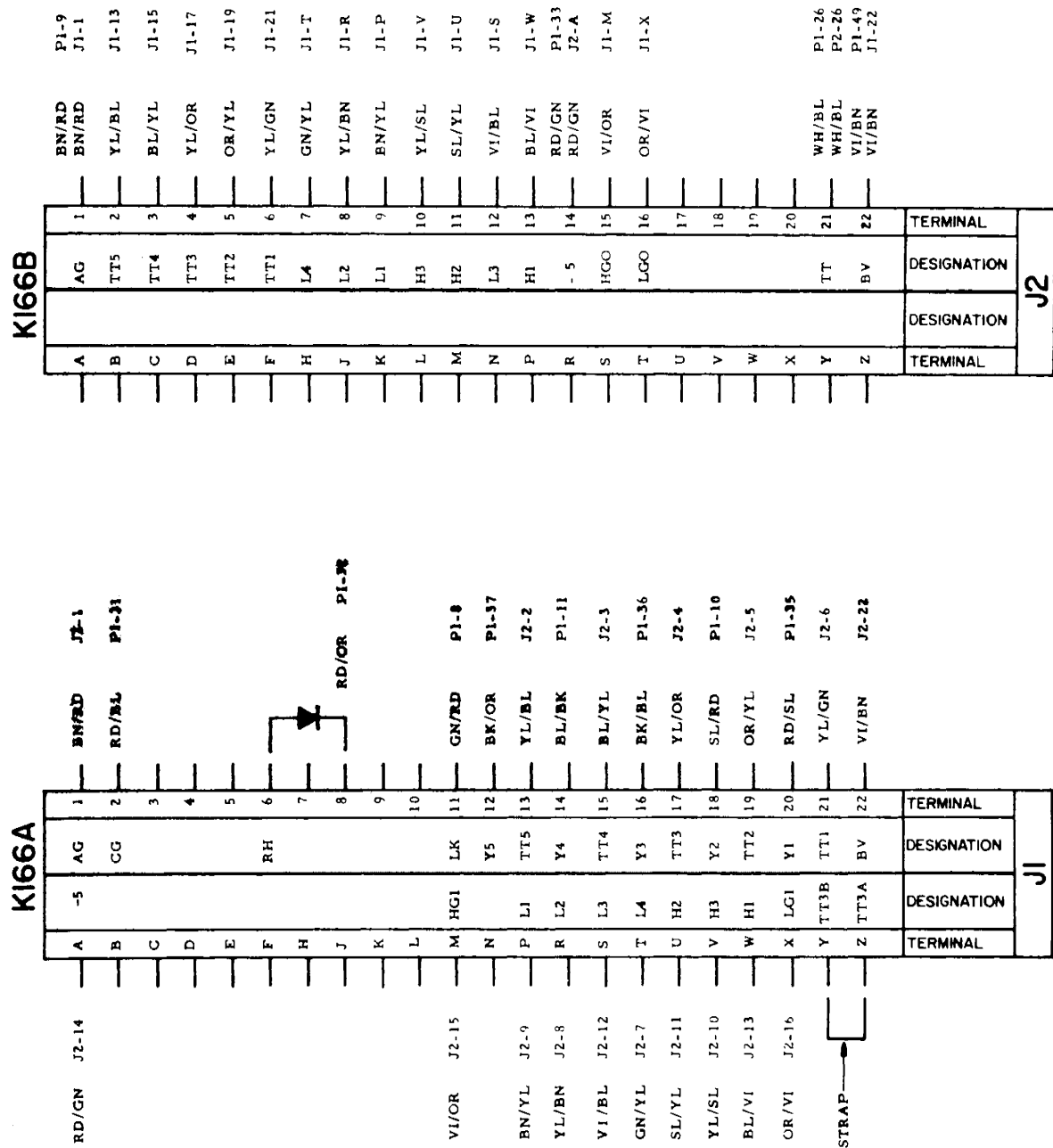


Fig. 10 - Tel-Touch Adapter Interconnections J1 and J2

J2-21	WH/BL	1	T	R	1	BL/WH	P1-1	26
P2-27	WH/OR	2	AB	AG	2	OR/WH	P1-2	27
P2-28	WH/GN	3	LG	L	3	GN/WH	P1-3	28
P2-29	WH/BN	4	RB	RG	4	BN/WH	P1-4	29
P2-30	WH/SL	5	LB	LF	5	SL/WH	P1-5	30
J1-2	RD/BL	6			6			31
J1-8	RD/OR	7			7			32
J1-A	RD/GN	8			8			33
		9			9			34
J1-20	RD/SL	10			10			35
J1-16	BK/BL	11			11			36
J1-12	BK/OR	12			12			37
P2-38	BK/GN	13			13			38
P2-39	BK/BN	14			14			39
P2-40	BK/SL	15			15			40
P2-41	YL/BL	16			16			41
P2-42	YL/OR	17			17			42
P2-43	YL/GN	18			18			43
P2-44	YL/BN	19			19			44
P2-45	YL/SL	20			20			45
P2-46	VI/BL	21			21			46
P2-47	VI/OR	22			22			47
P2-48	VI/GN	23			23			48
J2-22	VI/BN	24			24			49
		25			25			50
				DESIGNATION		DESIGNATION		DESIGNATION
				TERMINAL		TERMINAL		TERMINAL
				P2				
				190473-104				
				(MALE CONNECTOR)				

J2-21	WH/BL	1	T	R	1	BL/WH	P1-1	26
P2-27	WH/OR	2	AB	AG	2	OR/WH	P1-2	27
P2-28	WH/GN	3	LG	L	3	GN/WH	P1-3	28
P2-29	WH/BN	4	RB	RG	4	BN/WH	P1-4	29
P2-30	WH/SL	5	LB	LF	5	SL/WH	P1-5	30
J1-2	RD/BL	6			6			31
J1-8	RD/OR	7			7			32
J1-A	RD/GN	8			8			33
		9			9			34
J1-20	RD/SL	10			10			35
J1-16	BK/BL	11			11			36
J1-12	BK/OR	12			12			37
P2-38	BK/GN	13			13			38
P2-39	BK/BN	14			14			39
P2-40	BK/SL	15			15			40
P2-41	YL/BL	16			16			41
P2-42	YL/OR	17			17			42
P2-43	YL/GN	18			18			43
P2-44	YL/BN	19			19			44
P2-45	YL/SL	20			20			45
P2-46	VI/BL	21			21			46
P2-47	VI/OR	22			22			47
P2-48	VI/GN	23			23			48
J2-22	VI/BN	24			24			49
		25			25			50
				DESIGNATION		DESIGNATION		DESIGNATION
				TERMINAL		TERMINAL		TERMINAL
				P1				
				95510-102				
				(FEMALE CONNECTOR)				

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