MOTOROLA INC.
Communications
Sector

instruction manual revision

GENERAL:

This revision outlines changes that have occurred since the printing of your instruction manual. Use this information to correct your manual.

INSTRUCTION MANUALS AFFECTED:

68P81025E55-B ..... *Micor* Community Repeater 406–420 MHz and 450–512 MHz

68P81025E60-F ..... *Micor* Base & Repeater Stations Control and Applications

68P81031E95-A ..... *Micor* Community Repeater 851–866 MHz Tx, 806–821 MHz Rx

68P81034E25-C ..... *Securenet Digital Voice Protection* System–*Micor* Base and Repeater Stations, 406–420 MHz and 450–512 MHz

68P81036E40-C ..... *Securenet Digital Voice Protection* System–*Micor* Base and Repeater Stations, 132–174 MHz

68P81038E85-C ..... *Micor* Trunked Repeater 851–866 MHz Transmit, 806–821 MHz Receive

68P81077E20-O ..... *Micor Securenet* Capable Trunked Repeater 851–866 MHz Transmit, 806–821 MHz Receive

REVISION DETAILS:

The TRN6689A Squelch Gate Module described in instruction section 68P81015E33 or PEPS-27233 in the instruction manuals listed above, is replaced by the TRN6689B Squelch Gate Module described in attached instruction section 68P81030E08-B. The TRN6689B module is a direct replacement for the TRN6689A module.

The TRN6689B Squelch Gate Module also is a direct replacement for the TLN4662A Squelch Gate Module also described in the affected instruction manuals listed above.

ATTACHMENT:

TRN6689B Squelch Gate Module Instruction Section.....68P81030E08-B

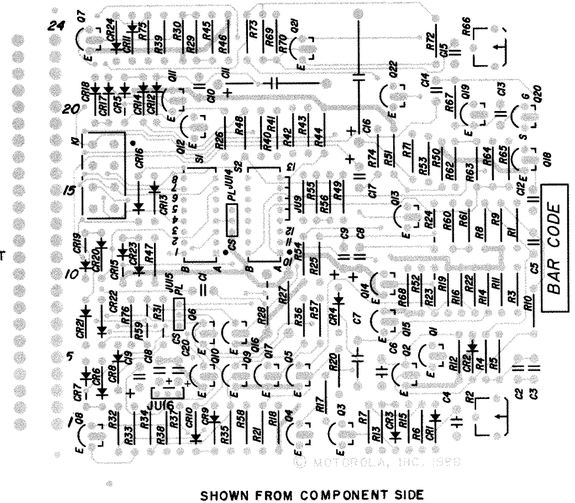
SQUELCH GATE MODULE

MODEL TRN6689B

CIRCUIT BOARD DETAIL and PARTS LIST

TRANSISTOR BASE DETAILS

NOTE:
Q6 AND Q14 ARE PNP TYPE, ALL OTHERS ARE NPN TYPE EXCEPT Q20 WHICH IS A FET.



SHOWN FROM COMPONENT SIDE

COMPONENT SIDE AEPS-48327-O
OVERLAY AEPS-48329-O

Motorola No. **68P81030E08-B**
(Sheet 1 of 2)
2/22/91

TRN6689B Squelch Gate Module PL-11768-O

REF. SYMBOL	PART NO.	DESCRIPTION
		capacitor, fixed: uF ±5%; 63V unless otherwise stated
C1	0811051A15	0.22
C2,3	0811017A08	.01; 50V
C4	2100859943	250pF; 500V
C5	0811051A09	.022
C6	2100850510	470pF ±10%; 300V
C7	2100850994	3000pF; 500V
C8,9	2311054H04	4.7 ±10%; 25V
C10	2111015D13	1000pF ±10%; 100V
C11	2300865594	68 ±10%; 15V
C12	2111015B17	2200pF ±10%; 100V
C13	0811017A06	.0047; 50V
C14,15	0811051A15	0.22
C16	2382783B04	100 ±20%; 25V
C17	2311054H04	4.7 ±10%; 25V
C18	2311054H08	10 ±10%; 25V
C19	2311019A40	47 ±20%; 25V
C20	2182428B62	.01 +80-20%; 200V
CR1 thru 24	4883654H01	diode: (see note) silicon
JU9	0611009D23	jumper: resistor, 0 ohm
JU14,15,16	2880001R03	connector, plug: 3-contact
		transistor; (see note)
Q1	4800869594	NPN
Q2 thru 5	4800869642	NPN
Q6	4800869643	PNP
Q7	4800869642	NPN
Q8	4800869567	NPN
Q9 thru 13	4800869642	NPN
Q14	4800869643	PNP
Q15	4800869642	NPN
Q16,17	4800869568	NPN
Q18,19	4800869642	NPN
Q20	4800869660	JFET type
Q21,22	4800869642	NPN
		resistor, fixed: ±5%; 1/4W unless otherwise stated
R1	0611009C61	3300
R2	1883083G03	variable: 25K ±30%
R3	0611009C83	27K
R4	0611009D02	150K
R5	0611009C11	27
R6	0611009C13	33
R7	0611009C05	15
R8	0611009C49	1000
R9	0611009C89	47K
R10	0611009C65	4700
R11	0611009C57	2200
R12	0611009C69	6800
R13	0611009C85	33K
R14	0611009C53	1500
R15	0611009C81	22K
R16	0611009C85	33K
R17,18	0611009C81	22K
R19	0611009C59	2700
R20	0611009C73	10K
R21	0611009C81	22K
R22,23	0611009C61	3300
R24	0611009C81	22K
R25,26	0611009C73	10K
R27	0611045A37	330; 1/2W
R28	0611045A42	510; 1/2W
R29	0611009C79	18K
R30	0611009C63	3900

TRN6689B Squelch Gate Module (cont.)

REF. SYMBOL	PART NO.	DESCRIPTION
		resistor, fixed: ±5%; 1/4W (cont.) unless otherwise stated
R31	0611009C71	8200
R32	0611009C53	1500
R33	0611009C61	3300
R34	0611009C73	10K
R35	0611009C83	27K
R36	0611009C73	10K
R37	0611009C71	8200
R38	0611009C75	12K
R39	0611009C65	4700
R40	0611009C95	82K
R41	0611009C87	39K
R42	0611009C79	18K
R43	0611009C71	8200
R44	0611009C73	10K
R45	0611009C37	330
R46	0611009C89	47K
R47,48	0611009C73	10K
R49	0611009C89	47K
R50	0611009C49	1000
R51	0611009C63	3900
R52,53	0611009C81	22K
R54	0611009C89	47K
R55	0611009C53	1500
R56	0611009C73	10K
R57	0611009C53	1500
R58	0611009C73	10K
R59	0611009C87	5600
R60	0611009C83	3900
R61	0611009C53	1500
R62	0611009C73	10K
R63	0611009C65	4700
R64	0611009C91	56K
R65	0611009D22	1meg
R66	1883083G02	variable: 500K ±30%
R67	0611009D22	1meg
R68	0611009C25	100
R69	0611009D06	220K
R70	0611009D18	680K
R71	0611009C83	27K
R72	0611009C47	820
R73	0611009C49	1000
R74	0611009C45	680
R75,76	0611009C89	47K
S1,2	4083849F02	switch, rocker: spst, 8-position
		non-referenced items:
	0384256M01	SCREW, tapping (2 used)
	0983697M01	CONTACT, receptacle (24 used)
	4382721C01	BUSHING, snap-on (2 used)
	5483865R01	LABEL, bar code (white)
	5484246T01	LABEL, bar code
	6483926G01	PANEL
	0984728L01	SHORTING JUMPER (used with JU14,15,16)

NOTE: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part number.

TLN4151A Relay Kit PL-11765-O

REF. SYMBOL	PART NO.	DESCRIPTION
		diode: (see note)
CR15	4882392B03	silicon relay:
K1	8084201A01	1A, 115VAC
		non-referenced item:
	4384920H01	SPACER, relay

NOTE: For optimum performance, diodes, transistors, and integrated circuits must be ordered by Motorola part number.

SQUELCH GATE MODULE
MODEL TRN6689B
SCHEMATIC DIAGRAM

NOTES:
1. UNLESS OTHERWISE STATED:
   RESISTOR VALUES ARE IN OHMS (K = 1000).
   CAPACITOR VALUES ARE IN MICROFARADS.
2. RELAY KIT IS AN OPTIONAL ACCESSORY ITEM. REFER TO RELAY APPLICATION CHART FOR CK15, JU8 AND JU9 USAGE WITH RELAY.
3. USE OF THIS RESISTOR AND CAPACITOR IS DETERMINED AT FACTORY.
4. REFER TO JUMPER TABLE.

JUMPER TABLE

APPLICATION	JU1	JU2	JU3	JU4	JU5	JU6	JU7	JU8	JU9	JU10	JU11	JU12	JU13	JU14	JU15	JU16
LINE CONTROL BASE	OUT	OUT	IN	OUT	OUT	OUT	IN	IN	IN	OUT	OUT	OUT	SELECTED DELAY	IN	OUT	
REPEATER (RT) STATION WITHOUT WIRELINE CONTROL	OUT	OUT	IN	IN "PL"	IN	IN	IN	IN	IN	IN	IN	IN	SELECTED DELAY	IN "CS"	IN "PL"	
REPEATER (RT) STATION WITH WIRELINE CONTROL	OUT	OUT	IN	IN "PL"	NOTE 6	NOTE 6	IN	IN	IN	OUT	OUT	IN	SELECTED DELAY	IN "CS"	IN "PL"	
BASE (RA) STATION	IN	OUT	IN	IN "PL"	IN	IN	IN	*	*	OUT	OUT	OUT	SELECTED DELAY	IN "CS"	IN "PL"	
REPEATER (RA) STATION	OUT	OUT	IN	IN "PL"	IN	IN	OUT	*	*	OUT	OUT	OUT	SELECTED DELAY	IN "CS"	IN "PL"	

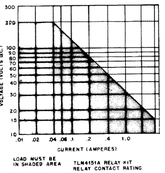
5. VOLTAGE READINGS SHOWN ARE FOR TWO CONDITIONS:
   USO - UNSQUELCHED
   FSO - FULLY SQUELCHED
6. JUMPERS JU5 & JU6 ARE USED IN DC-CONTROLLED "PL" REPEATER STATIONS WHEN SUCH STATIONS CONTAIN AN UNSUPPLIED DC TRANSFER MODULE.

7. FOR SPECTRA-TAC APPLICATIONS, JU16 IS IN THE C20 POSITION. FOR ALL OTHER APPLICATIONS, JU16 IS IN THE C20 POSITION.

8. JUMPER LOCATIONS.

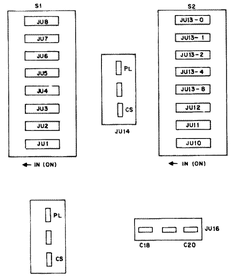
*RELAY APPLICATION CHART

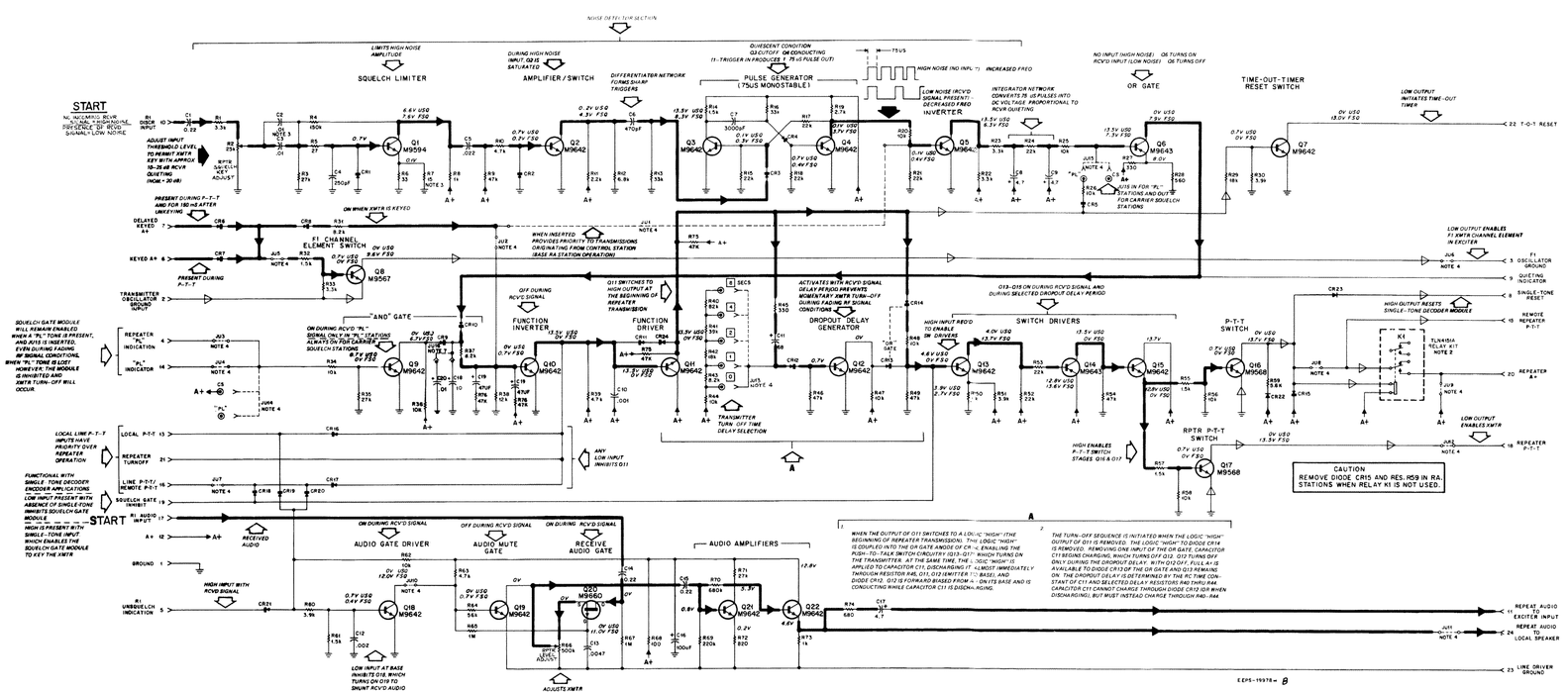
TLN4161A RELAY KIT	DIODE CR15	JU8	JU9
NOT USED	OUT	IN	OUT
USED	IN	OUT	OUT



LOAD MUST BE IN SHADED AREA

TLN4151A RELAY KIT
RELAY CONTACT RATING





LEGEND:
START - CIRCUIT THEORY MOST EASILY UNDERSTOOD BY BEGINNING AT THIS POINT AND FOLLOWING SIGNAL FLOW.
- THEORY OF OPERATION DATA
- MAINTENANCE DATA
- PRIMARY SIGNAL FLOW
- SECONDARY SIGNAL FLOW

FUNCTION

Measure received noise levels and controls transmitter keying.

END OF DOCUMENT

Motorola No. **68P81038E08-B**
(Sheet 2 of 2)
2/22/91