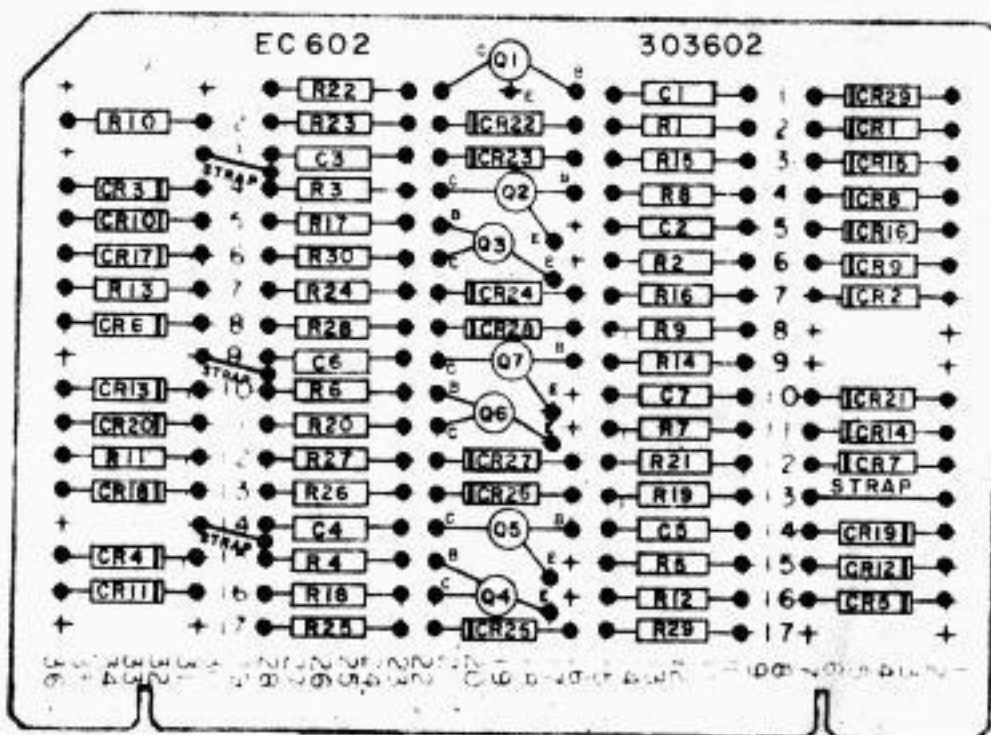


EC602  
303602

"NOR" GATES (7)

CIRCUIT BOARD EC602

REV. SIONS



300003

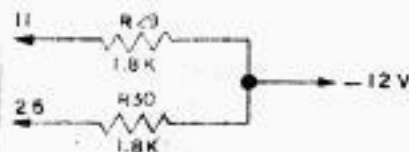
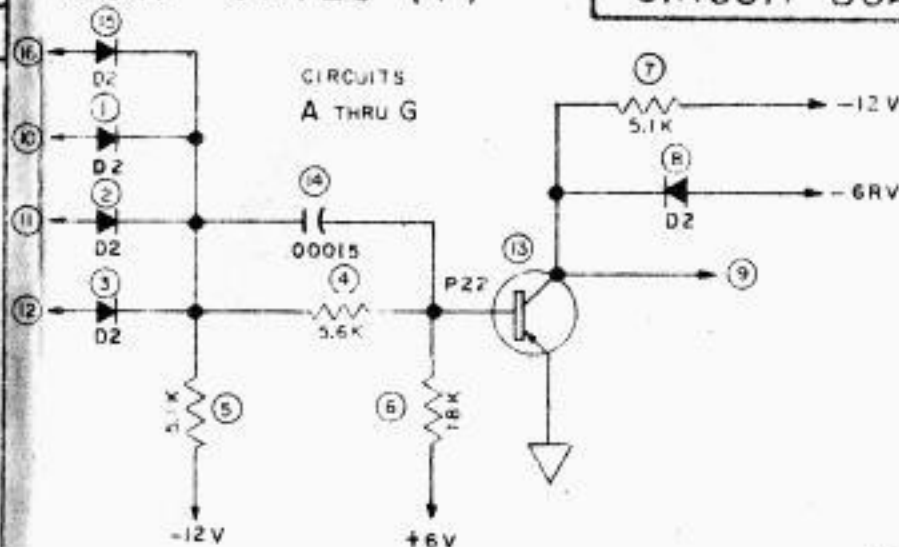
NOTE. REFER TO 300003 FOR SPECIAL DRILLING  
REFER TO 6050 WD FOR BASIC MARKING INFORMATION



THIS CARD CONSISTS OF SEVEN "NOR" GATES. CIRCUIT "A" IS A FOUR INPUT "NOR" GATE AND CIRCUITS "B" THRU "G" ARE THREE INPUT "NOR" GATES. A "NOR" GATE IS AN "OR" GATE (COMPONENTS ①, ②, ③, ⑤, AND ⑥) FOLLOWED BY AN INVERTER (COMPONENTS ④, ⑥, ⑦, ⑧, ⑬, AND ⑭).

WHEN ANY OR ALL OF THE INPUTS AT TERMINALS ⑩, ⑪, ⑫, AND ⑮ IS 0 VOLTS, TRANSISTOR ⑬ IS CUT-OFF CAUSING OUTPUT TERMINAL ⑨ TO BE CLAMPED AT -6 VOLTS. WHEN ALL INPUTS TERMINALS ARE AT -6 VOLTS, RESISTOR ⑤ SUPPLIES BASE CURRENT TO SATURATE TRANSISTOR ⑬ CAUSING OUTPUT TERMINAL ⑨ TO BE AT APPROXIMATELY -0.3 VOLTS. SPEED-UP CAPACITOR ⑭ IMPROVES OUTPUT SIGNAL RISE TIME.

RESISTORS R29 AND R30 ARE OPTIONAL COLLECTOR LOADS. WHEN IT IS DESIRED TO HAVE A LOWER OUTPUT IMPEDANCE AT THE -6 VOLT LEVEL, CONNECT TERMINALS 11 OR 25 TO OUTPUT TERMINAL ⑨.



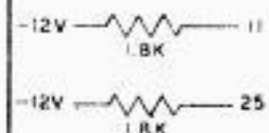
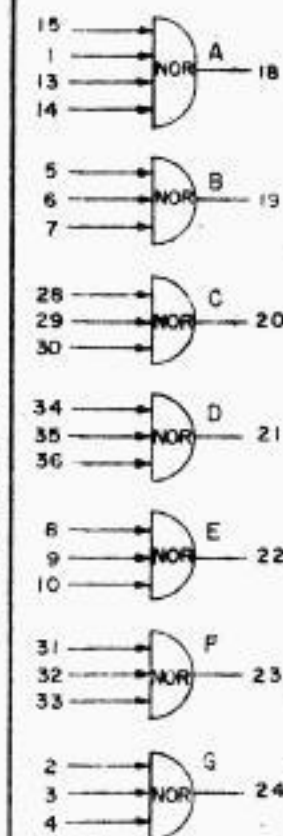
NOTE:  
CIRCLED NUMBERS DESIGNATE COMPONENTS OR INPUT AND OUTPUT TERMINALS OF MULTIPLE CIRCUITS.

TABLE

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑬	⑭	⑮	⑯
A	CR1	CR8	CR15	R1	R8	R15	R22	CR22	18	14	1	13	Q1
B	CR2	CR9	CR16	R2	R9	R16	R23	CR23	19	6	6	7	Q2
C	CR3	CR10	CR17	R3	R10	R17	R24	CR24	20	28	29	30	Q3
D	CR4	CR11	CR18	R4	R11	R18	R25	CR25	21	34	35	36	Q4
E	CR5	CR12	CR19	R5	R12	R19	R26	CR26	22	8	9	10	Q5
F	CR6	CR13	CR20	R6	R13	R20	R27	CR27	23	31	32	33	Q6
G	CR7	CR14	CR21	R7	R14	R21	R28	CR28	24	2	3	4	Q7

	⑮	⑯
A	CR29	15
B		
C		
D		
E		
F		
G		

SYMBOLS



R & D USE ONLY

REF DESIGN	TELETYPE PART NO	TOTAL QTY	NAME AND DESCRIPTION	LOCATING PIN TYP	REF SIGN	TELETYPE PART NO	TOTAL QTY	NAME AND DESCRIPTION	LOCATING FUNCTION
C1-C7	300010	7	CAPACITOR, .00015 MFD	SPEED UP					
CR1-CR21	177108	29	DIODE, D-2	GATE					
CR22-CR28			SAME AS CR1	CLAMP					
CR29			SAME AS CR1	GATE					
Q1-Q7	177105	7	TRANSISTOR, P-22	AMPLIFIER					
R1-R7	118186	7	RESISTOR, 5.6K OHMS	LIMITING					
R8-R14	143665	14	RESISTOR, 5.1K OHMS	BIAS					
R15-R21	118151	7	RESISTOR, 18K OHMS	BIAS					
R22-R28			SAME AS R8	COLLECTOR LOAD					
R29-R30	118143	2	RESISTOR, 1.8K OHMS	OPTIONAL COLLECTOR LOAD					
EC	300003	1	CIRCUIT BOARD, ETCHED						
	144495	7	PAD, TRANSISTOR						
		4	STRAP, 24 ANG BARE						

R & D USE ONLY

APPROVALS

AND FORM

NUMBER

303602

9-9-63

6-355,210A

RAW/RWV WEB

J.M.G. APP. *JMG*

TELETYPE

APPROVALS