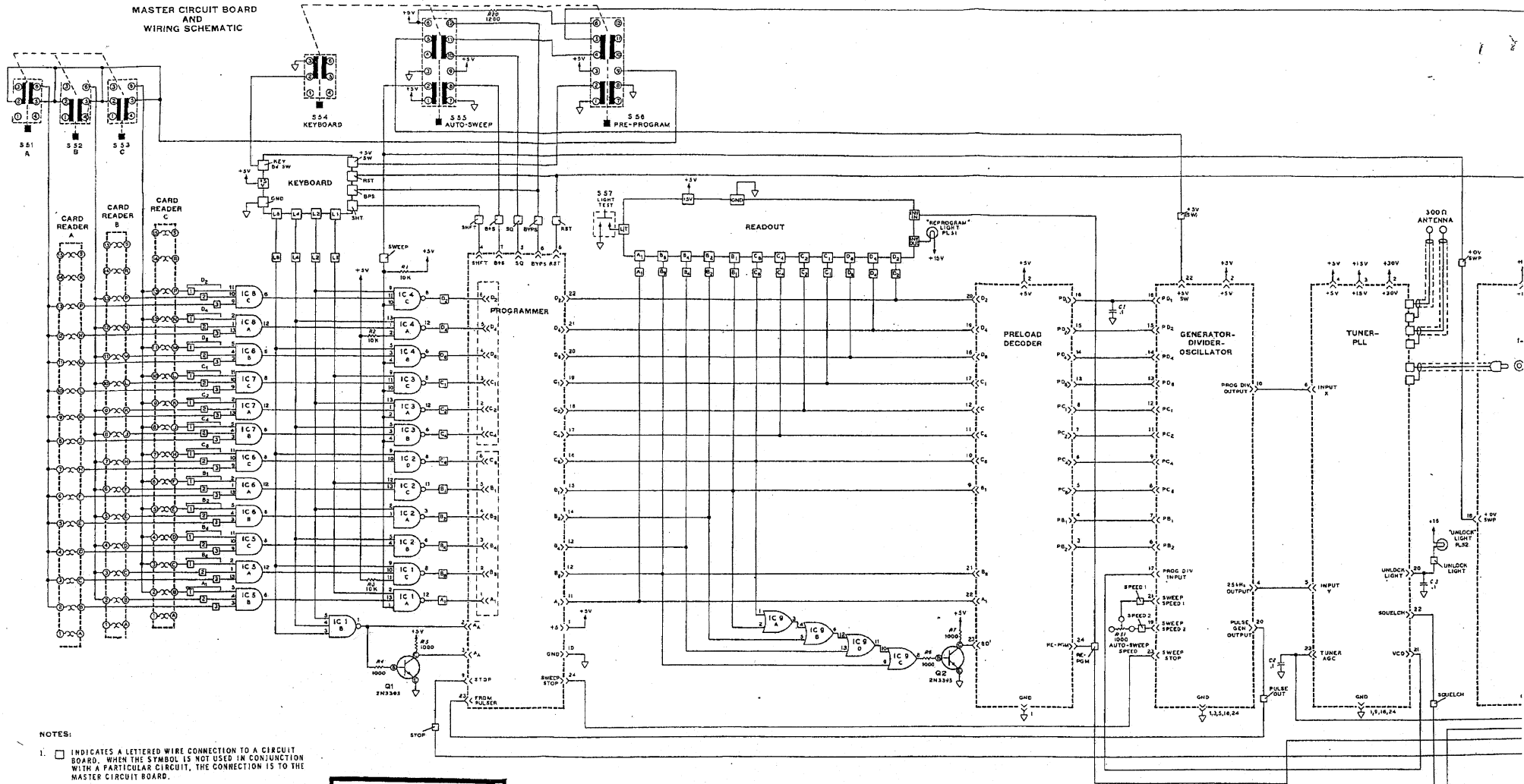
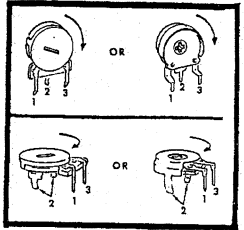


MASTER CIRCUIT BOARD AND WIRING SCHEMATIC



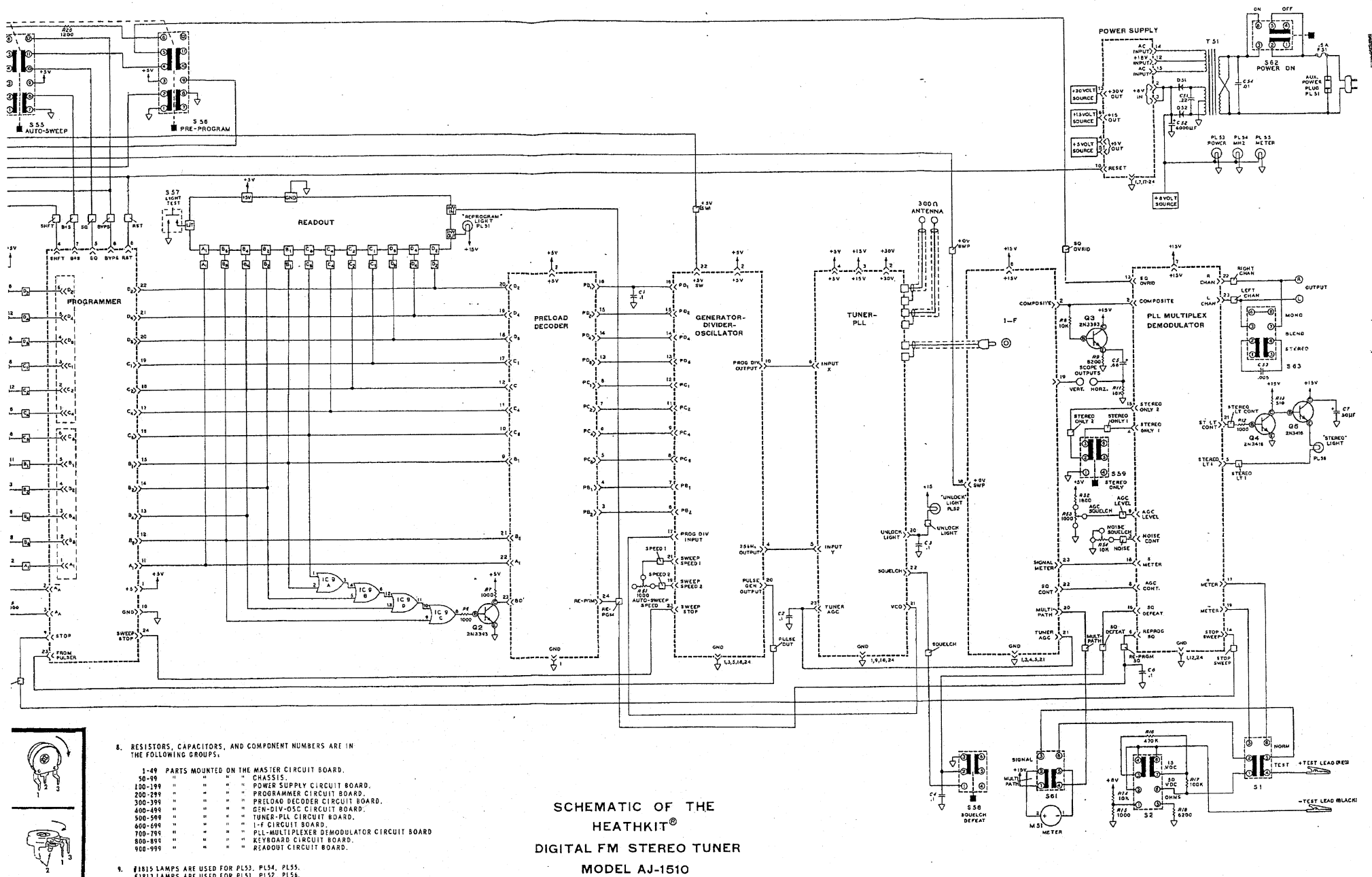
- NOTES:
- INDICATES A LETTERED WIRE CONNECTION TO A CIRCUIT BOARD. WHEN THE SYMBOL IS NOT USED IN CONJUNCTION WITH A PARTICULAR CIRCUIT, THE CONNECTION IS TO THE MASTER CIRCUIT BOARD.
 - ▽ INDICATES A CIRCUIT BOARD GROUND.
 - ≡ INDICATES A CHASSIS GROUND.
 - ALL RESISTORS ARE 1/2-WATT 5% UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITOR VALUES LARGER THAN 1.0 ARE IN pF UNLESS OTHERWISE SPECIFIED. CAPACITOR VALUES LESS THAN 1.0 ARE IN μF.
 - REFER TO THE "CHASSIS PHOTOGRAPHS" AND "CIRCUIT BOARD X-RAY VIEWS" FOR THE PHYSICAL LOCATION OF PARTS.
 - THE ARROW INDICATES CLOCKWISE ROTATION OF A CONTROL OR SWITCH, AS VIEWED FROM THE KNOB END OR AS SHOWN FOR CIRCUIT BOARD CONTROLS. THE CIRCUIT BOARD CONTROL LOG NUMBERS CORRESPOND TO THOSE SHOWN ON THE SCHEMATIC AND X-RAY VIEWS.

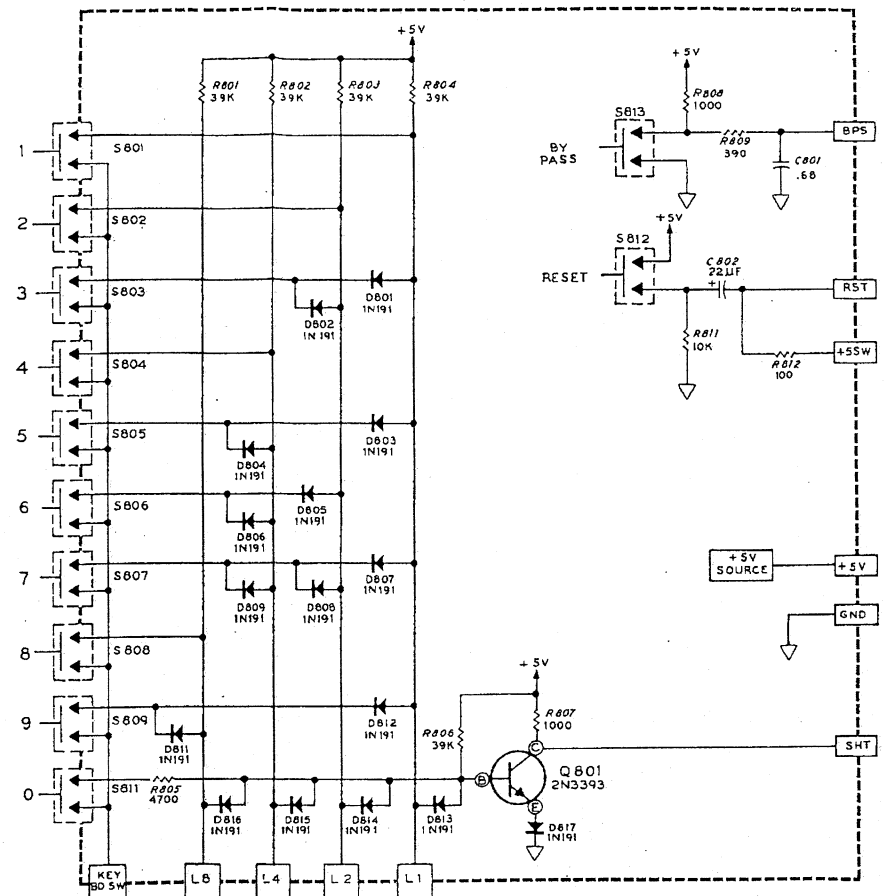


- RESISTORS, CAPACITORS, AND COMPONENT NUMBERS ARE IN THE FOLLOWING GROUPS:

1-49	PARTS MOUNTED ON THE MASTER CIRCUIT BOARD.
50-99	" " " " CHASSIS.
100-199	" " " " POWER SUPPLY CIRCUIT BOARD.
200-299	" " " " PROGRAMMER CIRCUIT BOARD.
300-399	" " " " PRELOAD DECODER CIRCUIT BOARD.
400-499	" " " " GEN-DIV-DSC CIRCUIT BOARD.
500-599	" " " " TUNER-PLL CIRCUIT BOARD.
600-699	" " " " I-F CIRCUIT BOARD.
700-749	" " " " PLL-MULTIPLXER DEMODULATOR CIRCUIT BOARD
800-899	" " " " KEYBOARD CIRCUIT BOARD.
900-999	" " " " READOUT CIRCUIT BOARD.
- #1815 LAMPS ARE USED FOR PL53, PL54, PL55.
#1813 LAMPS ARE USED FOR PL51, PL52, PL56.

SCHEMATIC OF THE
HEATHKIT®
DIGITAL FM STEREO TUNER
MODEL AJ-1510

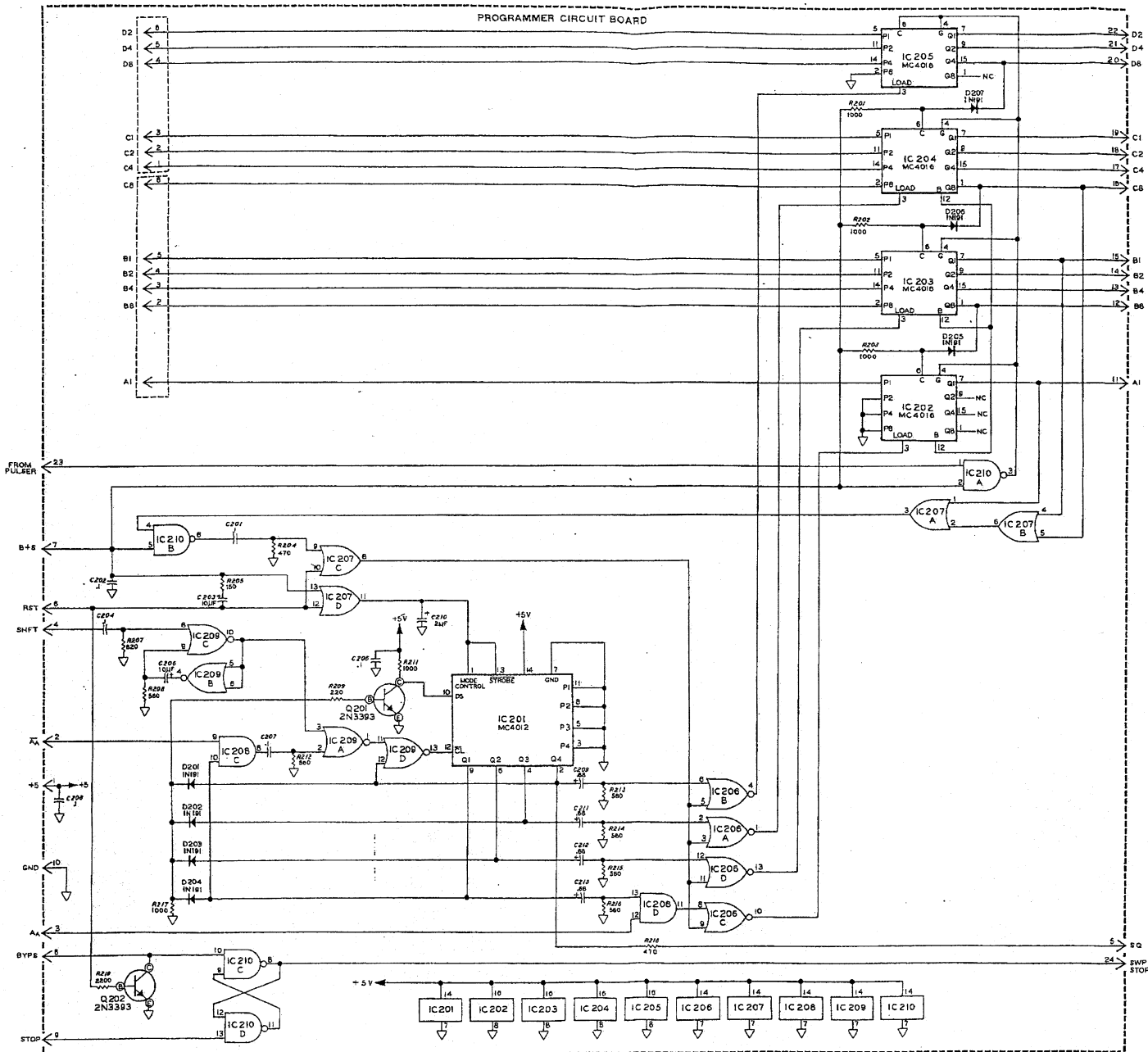




KEYBOARD CIRCUIT BOARD

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q801	417-118	2N33393	NPN TRANSISTOR	
D801-D809 D811-D817	56-26	1N191	CRYSTAL DIODE 90V, 45mA	

SEMICONDUCTOR CHART



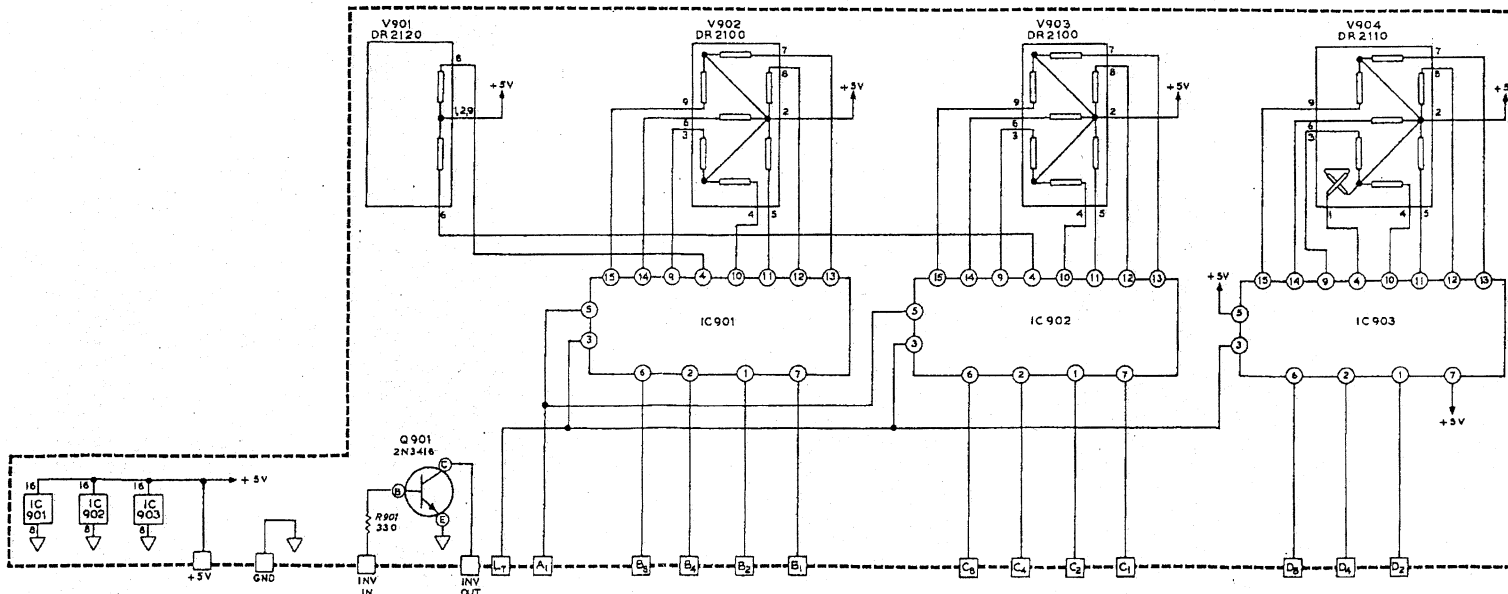
SEMICONDUCTOR CHART

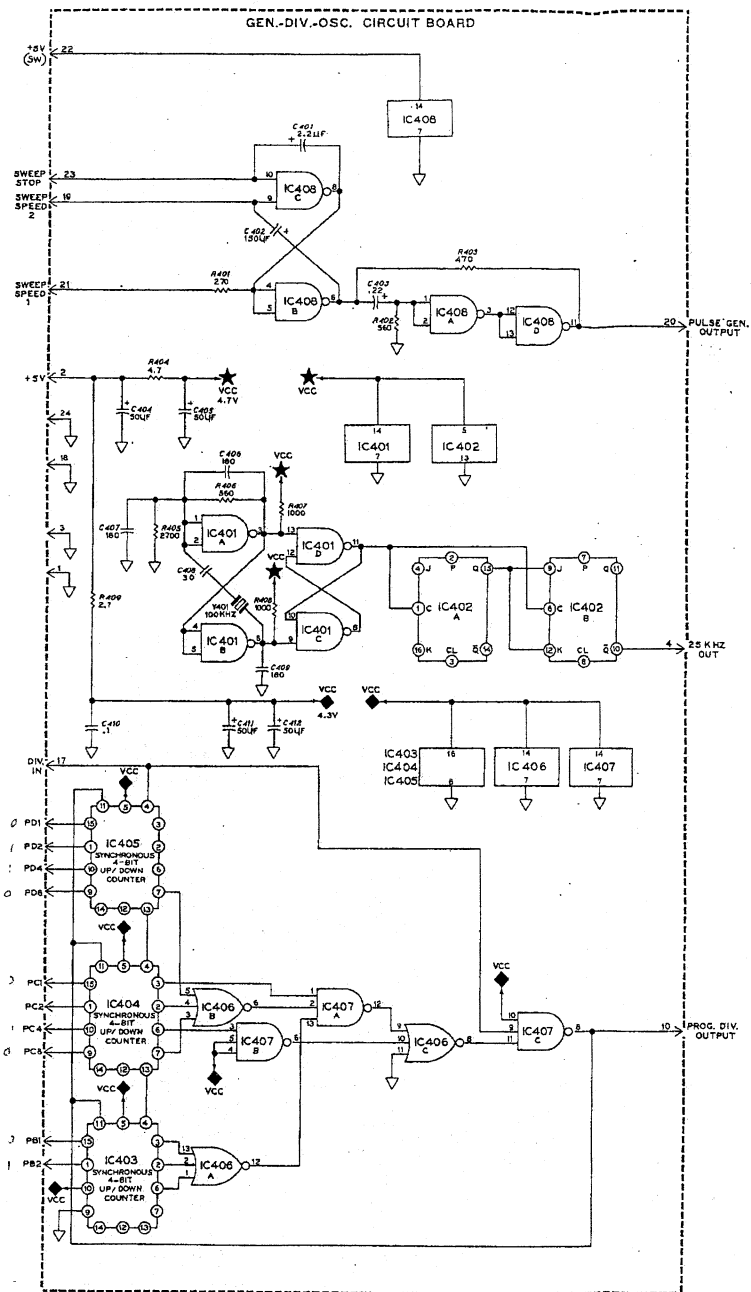
COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q201 Q202	437-118	2N3393	NPN TRANSISTOR	
D201-D203	56-26	1N91	CRYSTAL DIODE 90 V, .45 MA	
IC210	4431-1	SN7400N	QUADRUPLE 2-INPUT POSITIVE AND GATES	
IC206 IC209	443-45	SN7402N	QUADRUPLE 2-INPUT POSITIVE NOR GATES	
IC208	443-45	SN7400N	QUADRUPLE 2-INPUT POSITIVE AND GATES	
IC207	443-37	MC3003P	QUADRUPLE 2-INPUT POSITIVE OR GATES	
IC201	443-60	MC4012P	4-BIT SHIFT REGISTER	
IC202 IC203 IC204	443-61	MC4010P	PROGRAMMABLE DECADÉ COUNTER	

SEMICONDUCTOR CHART

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q901	417-94	2N3416	NPN TRANSISTOR	
IC901 IC902 IC903	443-64	CO2500E	BCD TO 7-SEGMENT DECODER-DRIVER	 L/T - LIGHT TEST DPo - DECIMAL POINT OUTPUT DPi - DECIMAL POINT INPUT A B C D BCD INPUTS

READOUT CIRCUIT BOARD

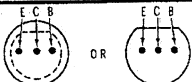



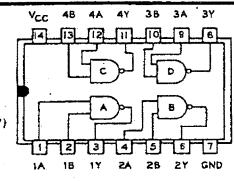
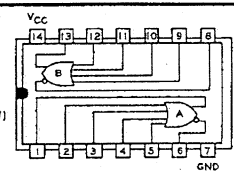
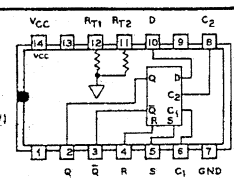
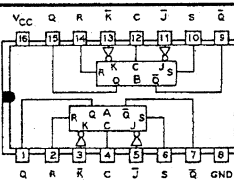
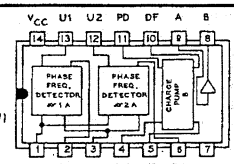


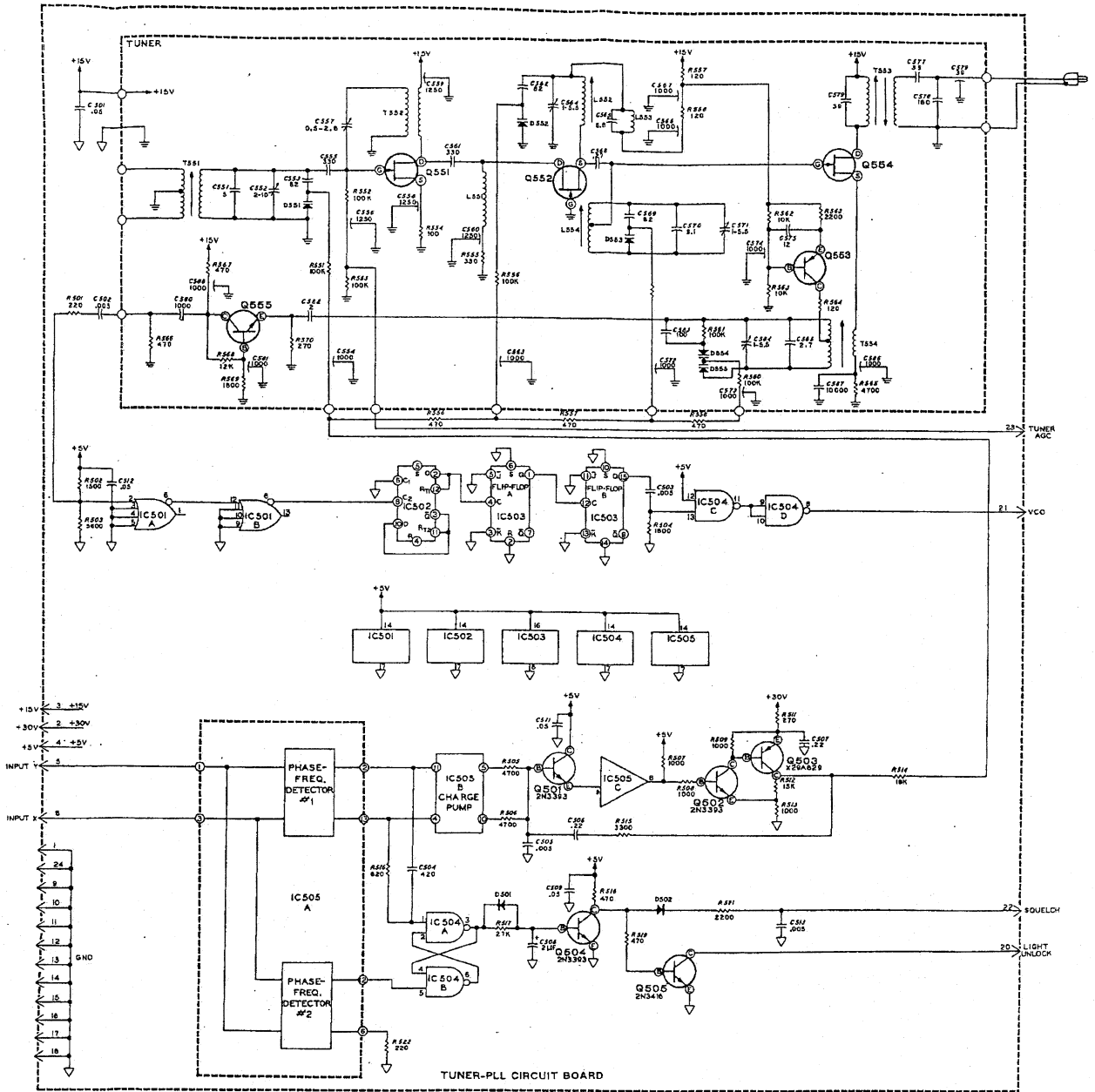


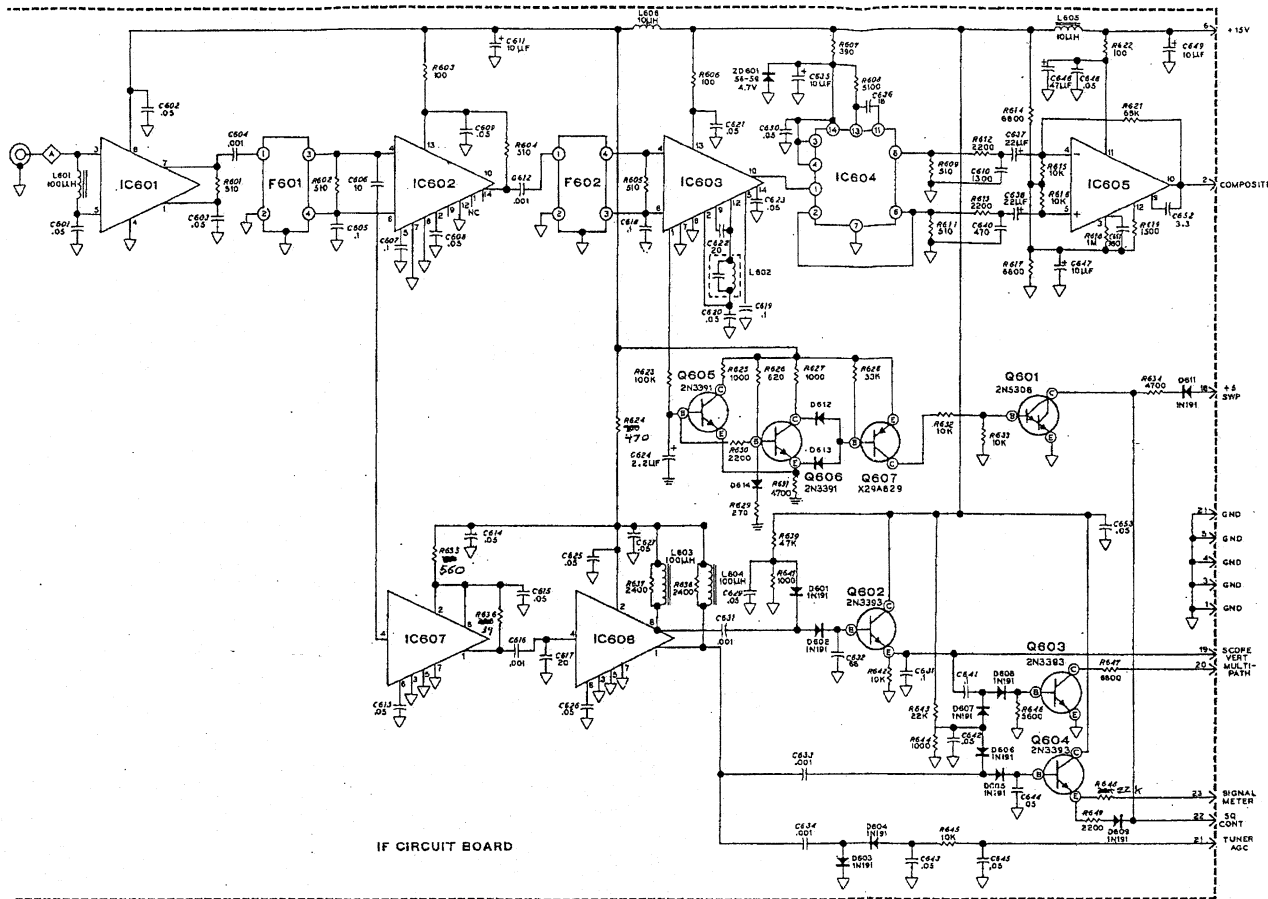
SEMICONDUCTOR CHART

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
IC401 IC408	443-1	SN7400N	QUADRUPLE 2-INPUT POSITIVE NAND GATES	<p style="text-align: center;">TOP VIEW</p>
IC407	443-68	SN7410	TRIPLE 3-INPUT POSITIVE NAND GATES	<p style="text-align: center;">TOP VIEW</p>
IC402	443-16	SN7416N	DUAL J-K FLIP-FLOPS	<p style="text-align: center;">TOP VIEW</p>
IC406	443-65	SN7427N	TRIPLE 3-INPUT POSITIVE NOR GATES	<p style="text-align: center;">TOP VIEW</p>
IC403 IC404 IC405	443-66	SN74192	SYNCHRONOUS 4-BIT UP/DOWN COUNTER	<p style="text-align: center;">TOP VIEW</p>

SEMICONDUCTOR CHART

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q501 Q502 Q504	417-118	2N3393	NPN TRANSISTOR	 OR 
Q505	417-94	2N3416	NPN TRANSISTOR	BOTTOM VIEW
Q503	417-201	X29A829	PNP TRANSISTOR	
D501 D502	56-26	1N191	CRYSTAL DIODE 90V, 45mA	
IC504	443-1	SN7400N	QUADRUPLE 2-INPUT POSITIVE NAND GATES	
IC501	443-38	MC1023P	DUAL 4-INPUT OR/NOR GATES	
IC502	443-39	MC1034 P	TYPE D FLIP-FLOP	
IC503	443-56	MC1032	DUAL J-K FLIP-FLOP	
IC505	443-62	MC4044 P	PHASE/ FREQUENCY DETECTOR	

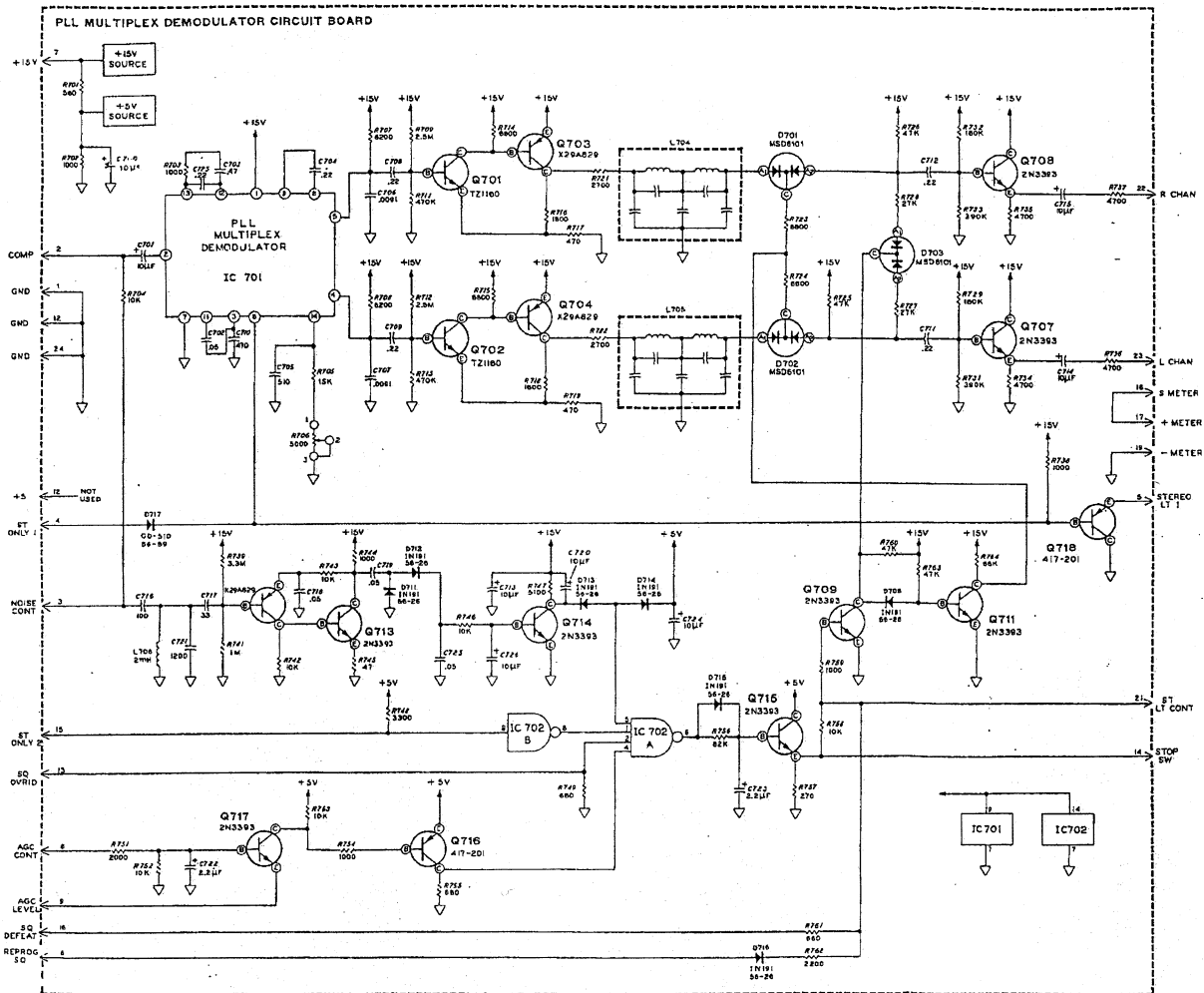




IF CIRCUIT BOARD

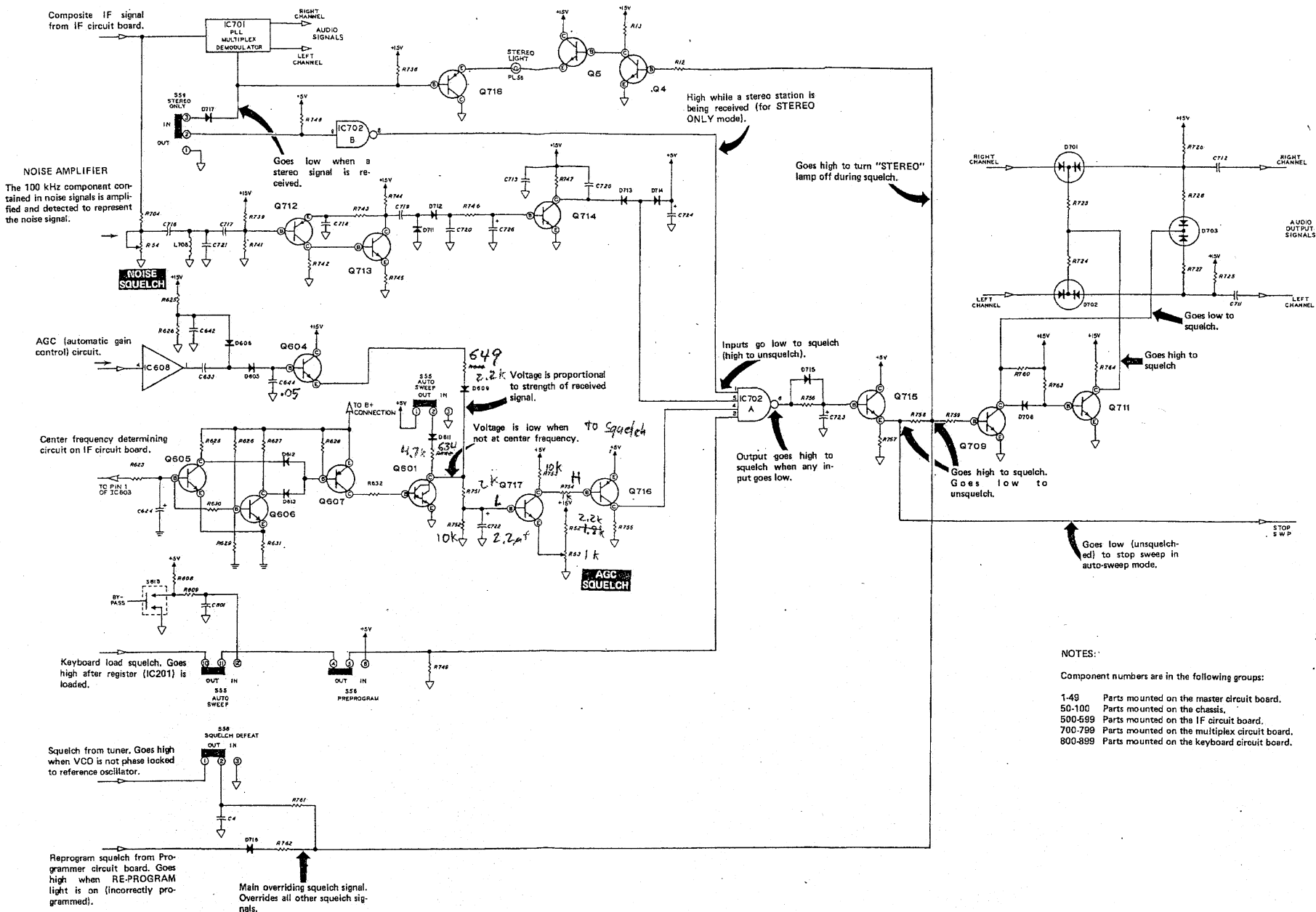
SEMICONDUCTOR CHART

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q602, Q603, Q604	417-118	2N3393	NPN TRANSISTOR	<p>BOTTOM VIEW</p>
Q601	417-222	2N5308	NPN TRANSISTOR	
Q605, Q606	417-91	2N3391	PNP TRANSISTOR	
Q607	417-201	X29A829	TRANSISTOR	<p>BANDS</p>
D601, D609, D611	56-26	1N191	CRYSTAL DIODE 90V, 45mA	
ZD601	56-59	1N750A	ZENER DIODE 4.7V, 20mA	
D614	56-74	M22362	DIODE	
IC605	442-2	SN72709	OPERATIONAL AMPLIFIER	<p>TOP VIEW</p>
IC607 IC608	442-18	MC1350P	IF AMPLIFIER	<p>TOP VIEW</p>
IC601	442-20	μA703	RF-IF AMPLIFIER	<p>TOP VIEW</p>
IC602 IC603	442-28	MC1357P	FM DETECTOR AND LIMITER	<p>TOP VIEW</p>
IC604	443-67	MC8601P	RETRIGGERABLE MONOSTABLE MULTIVIBRATOR	<p>TOP VIEW</p>



SEMICONDUCTOR CHART

COMPONENT NUMBER	HEATH PART NUMBER	MAY BE REPLACED BY	DESCRIPTION	LEAD CONFIGURATION
Q707, Q708 Q709, Q711 Q713, Q714 Q715, Q717	417-118	2N3393	NPN TRANSISTOR	OR BOTTOM VIEW
Q703, Q704 Q712, Q716 Q718	417-201	X29A829	PNP TRANSISTOR	 BOTTOM VIEW
Q701, Q702	417-218	T2160	NPN TRANSISTOR	 BOTTOM VIEW
D701 D702 D703	56-164	MSD6101	DUAL DIODE	 BOTTOM VIEW
D704, D705 D706, D707 D708, D711 D712, D713 D714, D715 D716	56-26	1N91	CRYSTAL DIODE 90V, 45mA	 BANDS
D717	56-89	GD-510	25V, 100mA	
IC 701	442-46	MC1310	FM PLL MULTIPLEX STEREO DEMODULATOR	 TOP VIEW
IC 702	443-2	SN7420N	DUAL 4-INPUT POSITIVE NAND GATE	 TOP VIEW



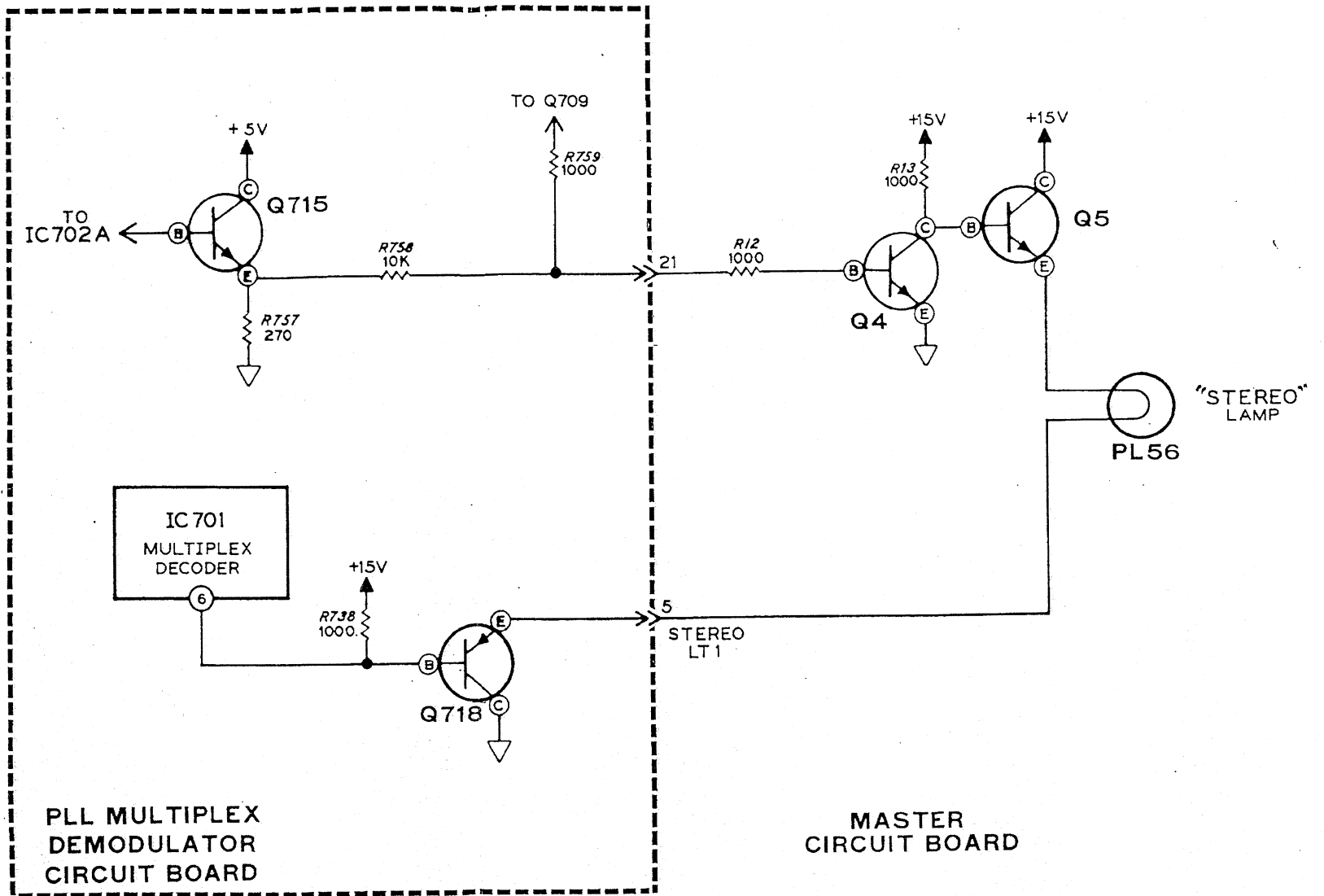


Figure 6-8