

# PRESIDENT

## BILLY

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*thanks Homer*

*for sharing this file*



### SERVICE MANUAL

# 1. SPECIFICATIONS

## GENERAL

- |  |   |
|--|---|
| 1. Channels                            | : 40  |
| 2. Frequency Range                     | : 26.965 ~ 27.405MHz  |
| 3. IC's                                | : 2   |
| 4. Crystal Oscillator                  | : 1   |
| 5. Microphone                          | : Electret Condenser Type   |
| 6. Speaker                             | : 16 ohm , 5 Watts  |
| 7. Antenna Connector                   | : M-Type  |
| 8. Jacks & Connectors                  | : Microphone 4Pin Modular Jack<br>( 6Pin Size )   |
| 9. Controls                            | : Channel Selector Up/Down , Power Switch ,<br>Volume control , Squelch Control   |
| 10. Illuminations                      | : Channel Readout (LED Red) , TX Indicator (LED Red)  |
| 11. Size                               | : W : 120 mm.<br>H : 42 mm.<br>D : 170 mm.  |
| 12. Weight                             | : 0.45 Kg.  |
| 13. Accessories                        | : Microphone , Microphone Hanger ,<br>Mounting Bracket with Screws  |
| 14. Power Source                       | : 13.8V DC Negative Ground ,<br>Reverse Polarity Protection   |
| 15. Standard Operating Temp.           | : -30 ~ +50° C  |
| 16. Storage Temperature                | : -40 ~ +70° C  |
| 17. Electrostatic Discharge Protection | : All external case and component parts shall withstand<br>the application of 15kV ESD without causing failure or<br>malfunction to the unit. |
| 18. Channel Memory Backup Time         | : Nom. 48 Hrs   |
| <u>REMARK</u>                          | : Exclude Battery   |

## MEASUREMENT CONDITIONS

1. Power Source	: 13.8V ( DC )
2. Antenna Impedance	: 50Ω
3. Test Temperature	: 25° C
4. Modulation Frequency	: 1 KHz ( RX )
5. Mean Signal Input Level	: 1000μV
6. Reference Audio Output Power	: 0.5W
7. Reference Modulation Percentage	: 1 KHz , 30%
8. Audio Output Load	: 8Ω resistive ( connect to inside connector )
9. Measuring Channel	: 19
10. Standard Method of Measurement	: FCC PART 95/15 EIA RS-382
11. ESD Test Condition	: Probe 150pF with 500Ω in series Test Temperature 25° C

NOTE: Limit Specifications are for measurements on all channels.

## TRANSMITTER SECTION

<u>ITEM</u>	<u>UNIT</u>	<u>NOMINAL</u>	<u>LIMIT</u>
1. Frequency Tolerance at 25 °C ( 5 minutes after Switch on )	Hz	± 600	± 900
2. Carrier Power at No Modulation	W	4.0	3.6 to 4.4
3. Spurious Harmonic Emission	dB	-70	-60
4. Microphone sensitivity at 1KHz for 50% Mod	mV	10	20
5. Modulation Frequency Response ( 1KHz , 0dB Reference )			
Lower at 300Hz	dB	-3	0 to -15
Upper at 3.0KHz	dB	-3	0 to -12
6. AMC Range 50 to 100% Mod	dB	45	40
7. Hum and Noise in Transmit	dB	45	40
8. Battery Drain at No Modulation	mA	850	1300
80% Modulation	mA	1300	1700
9. Modulation Distortion	%	4.0	7.0
11. Output Protection		: Shall meet for 5 minutes for all VSWR's ( around the Smith Chart ) of 20:1 without damage.	
12. Output stability		at all VSWR's ( around the Smith Chart ) of up to 5: 1 under continuous operation of a duty cycle of 5 minutes transmitting, and 1 minute receiving.	

## RECEIVER SECTION

<u>ITEM</u>	<u>UNIT</u>	<u>NOMINAL</u>	<u>LIMIT</u>
1. Max. Sensitivity	$\mu\text{V}$	0.5	1
2. Sensitivity for 10dB S+N/	$\mu\text{V}$	0.5	1
3. AGC Figure of Merit 50mV for 10dB Change in Audio Output	dB	85	75
4. Overall Audio Fidelity at 6dB down ( refer to 1KHz )			
Upper Frequency	Hz	2500	2000 min.
Lower Frequency	Hz	300	500 max.
5. Adjacent Channel Selectivity ( Two Signal )	dB	55	45
6. Maximum Audio Output Power	W	4.0	2.0
7. Hum and Noise Ratio at 1mV	dB	40	30
8. Squelch Sensitivity at Threshold	$\mu\text{V}$	0.5	1
9. Squelch Sensitivity at Tight	$\mu\text{V}$	1000	250 to 4000
10. Image Rejection Ratio ( 900KHz )	dB	70	60
11. IF Rejection Ratio 1st and 2nd	dB	70	60
12. 1/2 IF Rejection Ratio	dB	70	60
13. Spurious response (22.73 MHz 40CH)	dB	50	40
14. Oscillator Dropout Voltage	V	9	11
15. Battery Drain ( at DC Power Jack + 13.8V )			
(a) No Signal	mA	100	200
(b) Max. Power	mA	800	1000
16. Distortion	%	4	7

## 2. ALIGNMENT PROCEDURE

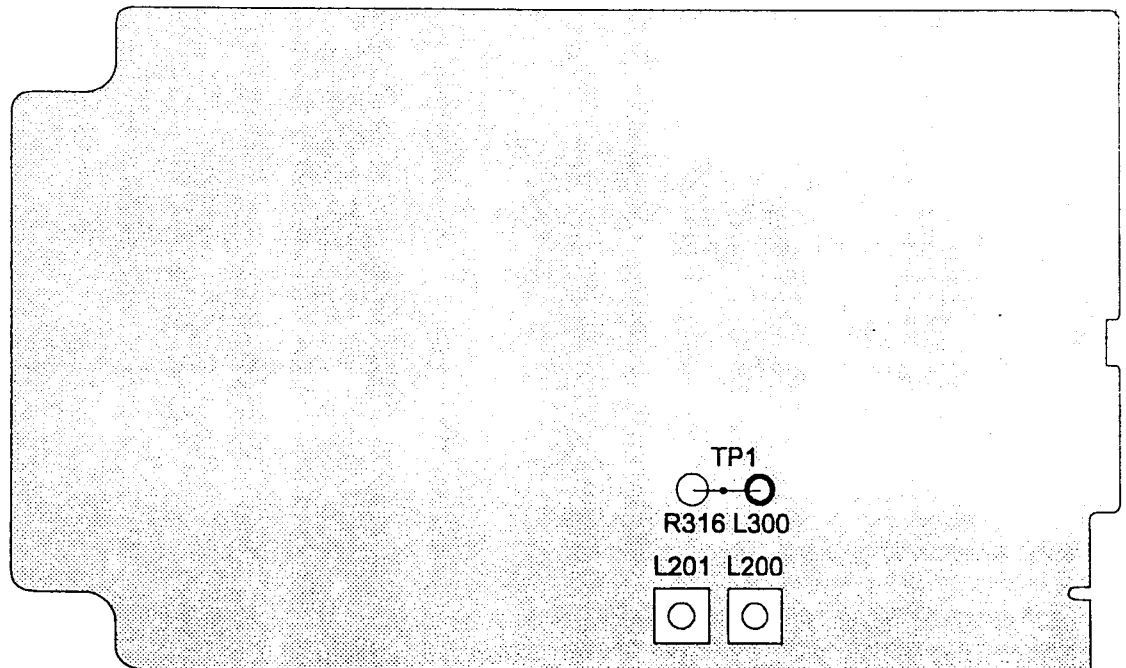
### 1. PLL PORTION

- |              |   |
|--------------|---|
| A) EQUIPMENT | STABILIZED DC POWER SUPPLY<br>DC VOLTMETER<br>RF POWER METER<br>OSCILLOSCOPE<br>FREQUENCY COUNTER<br>DUMMY LOAD ( 50Ω ) |
| B) CONDITION | SUPPLY VOLTAGE : 13.8V ( DC )   |
| C) ALIGNMENT |   |

STEP	CONDITION OF THE DEVICE	EQUIPMENT CONNECTION	ADJUSTMENT	PROCEDURE
1	TX 40CH	DC Voltmeter to TP1	L201	Adjust L201 for $1.5V \pm 0.1V$ as read on DC voltmeter.
2	RX 40CH	Ditto	L200	Similar to step 1
3	TX/RX 1~40 CH	Ditto	-	Check DC voltage of all channels for within 1.4V ~ 3.4V

NOTE 1) Frequency tolerance must meet with specification.

LOCATION OF ADJUSTMENT ( PLL )



## 2. TRANSMITTER PORTION

### A) CONDITION

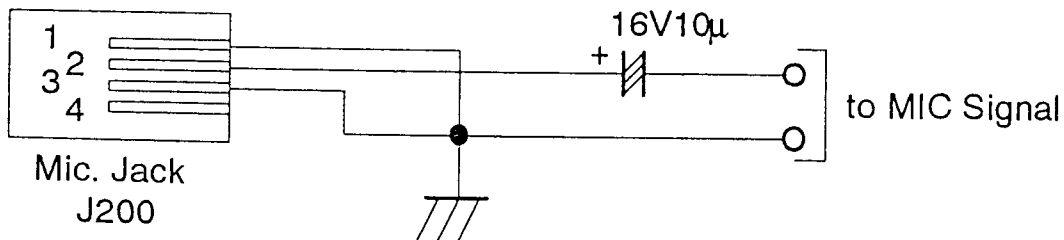
SUPPLY VOLTAGE : 13.8V ( DC )  
 LOAD RESISTANCE : 50  $\Omega$   
 INPUT SIG. FREQ. ( AF ) : 1 kHz  
 CHANNEL SET : 19 CH

Set controls and switches as follows unless otherwise specified.

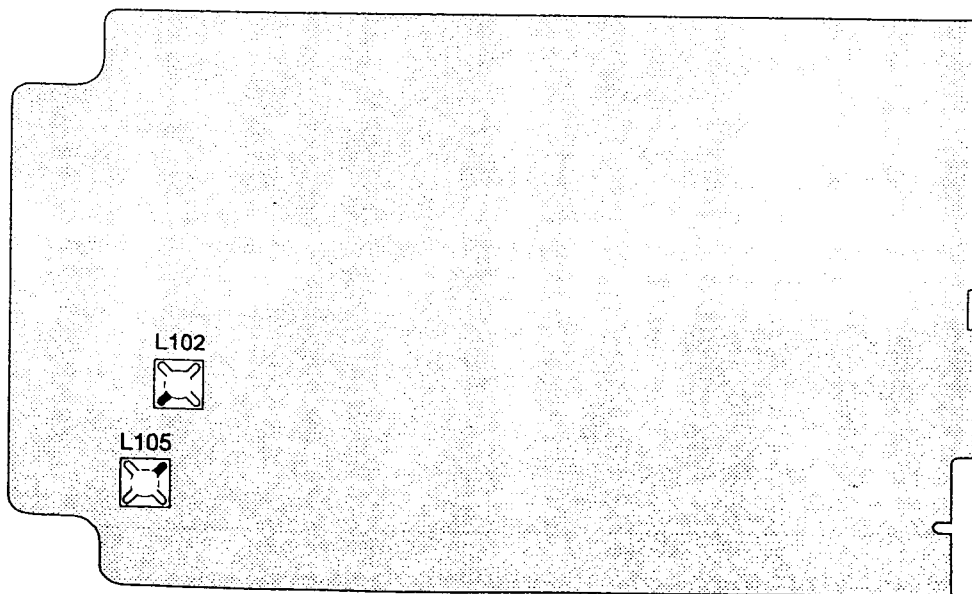
### B) ALIGNMENT

STEP	CONDITION OF THE DEVICE	EQUIPMENT CONNECTION	ADJUSTMENT	PROCEDURE
1	Input 500mV 19 CH	Connect RF PWR meter to ANT. JACK ( J600 )	L102 ( WHT ) L105 ( GRN )	Maximum reading of RF PWR meter.
2	No Input ( No Mod. )	Ditto	L102	Rotate the core of the L102 clockwise to read 4 Watts on RF PWR meter.
3	Ditto	Ditto	-	Confirm frequency of all channels within specification.

NOTE 2) DC stopping capacitor is required for MIC signal input line since DC current appears on Pin No. 2.



LOCATION OF ADJUSTMENT ( TX )



### 3. RECEIVER PORTION

#### A) CONDITION

SUPPLY VOLTAGE : 13.8V ( DC )      CHANNEL SET : 19 CH  
 ANT. LOAD IMPEDANCE: 50  $\Omega$       RF SIGNAL FREQ. : 27.185MHz  
 MOD. SIGNAL : 1 kHz, 30% Mod.      RF SIG. OUTPUT : 0dB = 0.5 $\mu$ V  
 STANDARD OUTPUT : 500 mW (2.0V)      LOAD IMPEDANCE : 8  $\Omega$

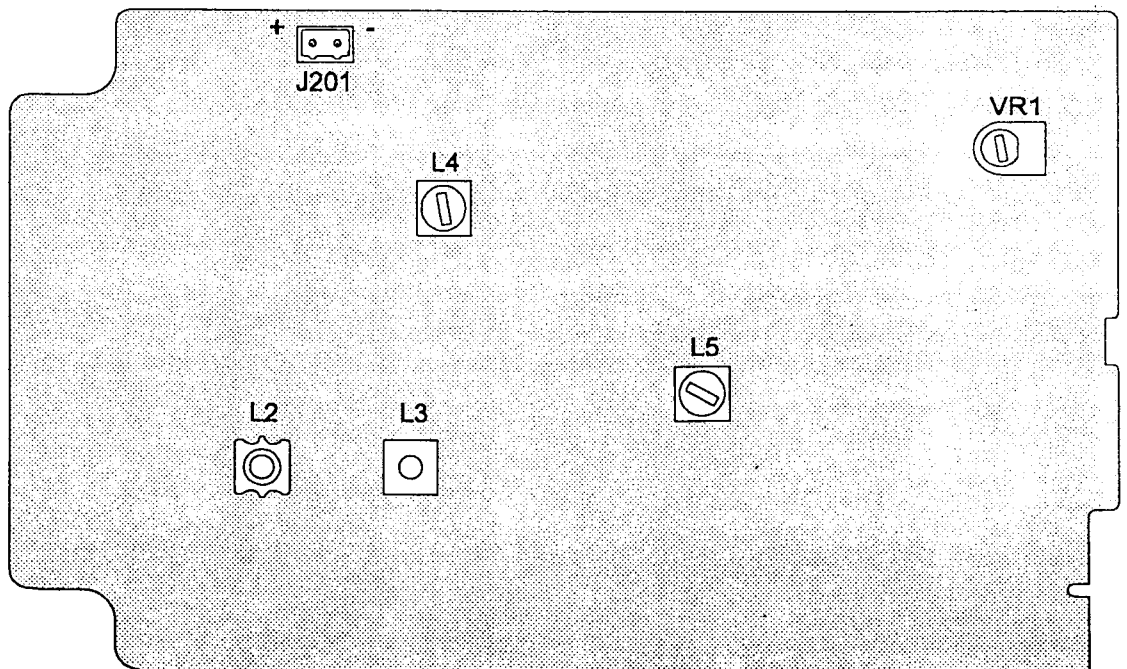
Set all controls and switches as follows unless otherwise specified.

SQUELCH : MIN. ( FULLY CCW )

#### B) ALIGNMENT

STEP	CONDITION OF THE DEVICE	EQUIPMENT CONNECTION	ADJUSTMENT	PROCEDURE
1	19 CH Volume=Max ( fully CW )	Signal Generator to J600.  AC voltmeter to J201.	L2 to L5	Adjust coils to maximum reading of the AC Voltmeter. Keep RF signal level of the sign gen. to meet standard output level slightly less level during this alignme STD output at -2dB input.
2	Volume=Max SQ = Max ( fully CW )	Ditto	VR1	Set RF Signal ouput level of the sign. generator to 66dB, then adjust VR1 t to just "open" squelch.

#### LOCATION OF ADJUSTMENT ( RX )

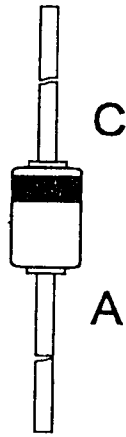


### 3. SEMICONDUCTOR LEAD IDENTIFICATION

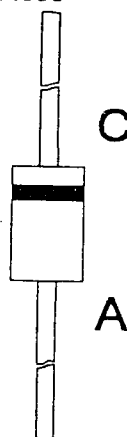
DIODES  
1SV68



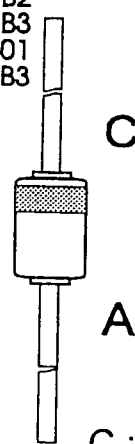
IN4148



IN4003

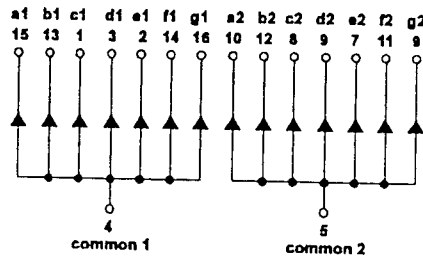
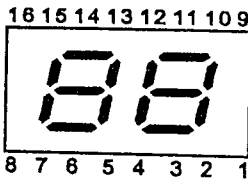


HZ3B2  
HZ5B3  
HZ601  
HZ9B3

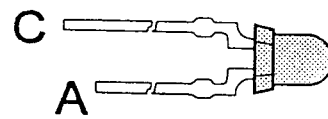


C : Cathode  
A : Anode

LDR-204ALD

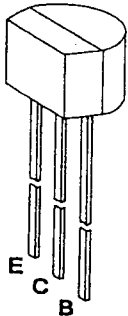


TLR-124

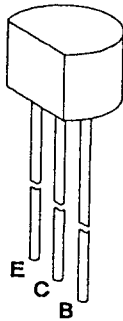


TRANSISTORS

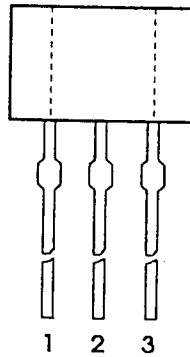
2SC2001  
2SC1675  
2SA733



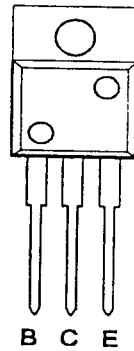
2SC945A  
2SC1674



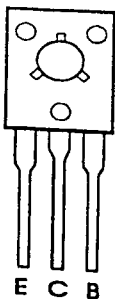
DTC144WS



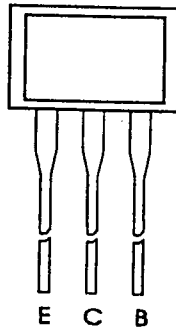
2SC2078



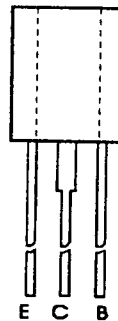
2SC2314



2SC941TM



2SC3242



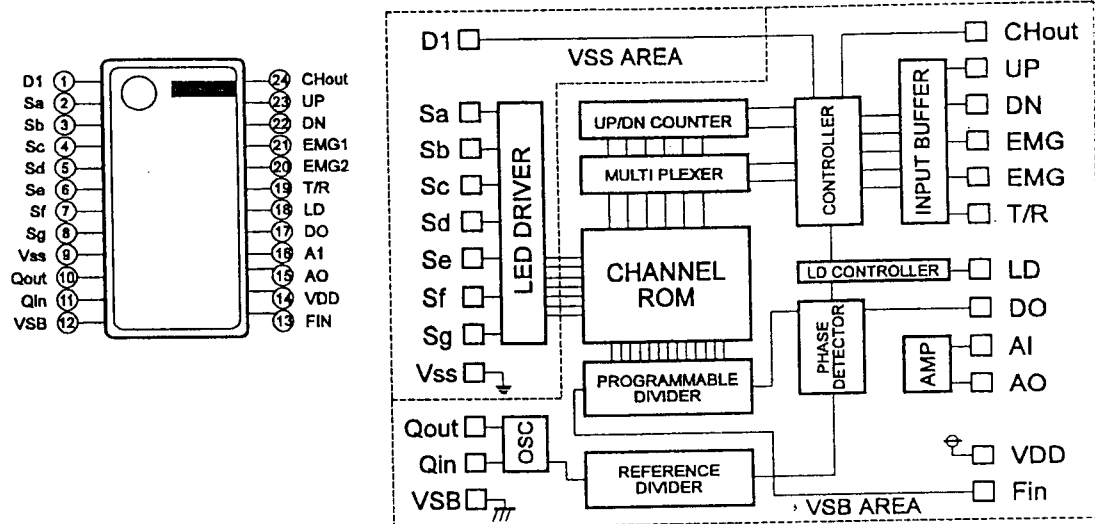
B : BASE  
C : COLLECTOR  
E : EMITTER

1 GND  
2 OUT  
3 IN

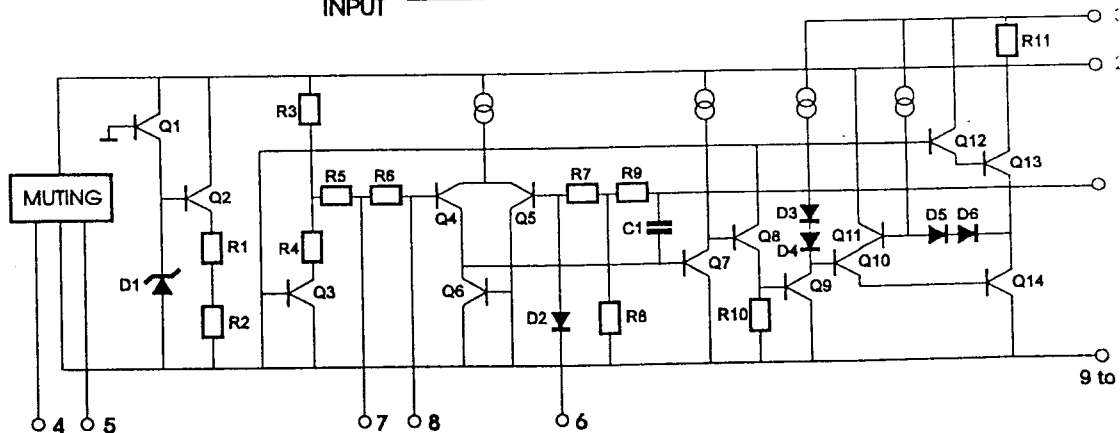
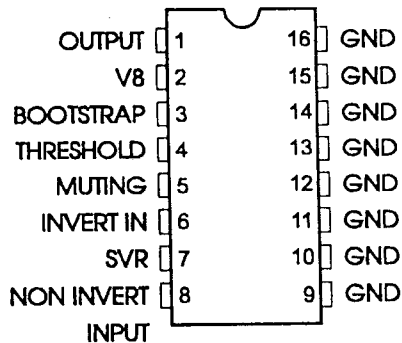


## 4. IC INTERNAL DIAGRAMS

SM5125AM



TDA1905



GYM...

# 5. PARTS LIST

Parts are subject to change without prior notice.

(MODEL)

UT348ZP  
(SYMBOL)

PRO501XL  
(PARTS CODE)

(DESCRIPTION)

	GCMB130377Z	CASE:BOTTOM	ABS,BLACK
	GCMT130376Z	CASE:TOP	ABS,BLACK,SILK
	GHDL330378Z	HOLDER:LED	ABS,BLACK
	GMSC480407Z	SCREW:MOUNTING	ABS,BLACK
	GNBP330379Z	BUTTON:PUSH	ABS,BLACK
	GNBY330380Z	KNOB	ABS,BLACK
	HBCT430384Z	MOUNTING BRACKET	SPCC,1.2T,MFZN3
	HCSR330381Z	CHASSIS:REAR	SECC,1.0T
	HHDE430382Z	HOLDER:IC	SECC,1.0T
	HHDP430876Z	HOLDER:PCB	SPTE,0.5T
	HHDZ430383Z	HOLDER:BUTTON	SUS304 OR C7701R,0.2T
	HHSK418924B	HEAT SINK	C5191R, 0.5T
	HMHG402919Z	HANGER:MICROPHONE	SPCC,1.0T,NI
	HSDC431235Z	SHIELD CASE	SPTE 0.3T
	HSDP430877Z	SHIELD PLATE	SPTE,0.3T
	KDPT430385Z	WINDOW	PC,1.0T,SILK
	PLBC482147Z	LABEL:WARNING,DC CORD	PAPER,PRINT
	PLBS431081Z	LABEL:SERIAL NO	PAPER
	PLBZ431181Z	INDY 800 LABEL	POLYESTER FILM,0.05T
	RCUN405417Z	CUSHION	NEOPRENE SP 2T
	RCUN412259Z	SPACER	NEOPRENE SP 6T
	RETC330714Z	PROTECTION COVER	COATED BOARD
	SSCW430050N	HEX NUT	M5 NI
	UBUD429900Z	INDY 800 CARD	PAPER
	UTUD01348ZA	OWNER'S MANUAL	**
	UTYY58000ZB	FCC RULES PART 95	**
	VNYL2323758	VINYL BAG	320X370X580X0.07T
	VNYL3101500	VINYL BAG	100X150X0.1T
	VNYL3102500	VINYL BAG	100X250X0.1T
	VNYL3203000	VINYL BAG	200X300X0.1T
	WBXC330424Z	DISPLAY BOX	**
	WCTZ430425Z	SHIPPING CARTON BOX	**
	WSFC330426Z	STYROFOAM PAD	**
	WSLV418706Z	SLEEVE	**
	SSCW193008N	SCREW:BIND HD +	M3X8 NI
	SSCW295010N	SCREW:TAPPING ROUND HD +	D5X10 NI
	SSCW343006N	SCREW:TAPTIGHT BIND HD +	M3X6 NI
	SSCW540050N	WASHER:STAR	D5 NI
	SSCW803006N	SCREW:P TIGHT BIND HD +	D3X6 NI
	SSCW803008N	SCREW:P TIGHT BIND HD +	D3X8 NI
	SSCW803014N	SCREW:P TIGHT BIND HD +	D3X14 NI
C001	BCHR811804Z	CAPACITOR:CERAMIC TS 2.5 S	18PF 50V J RH TAPING
C002	BCKM811026Z	CAPACITOR:CERAMIC TS 2.5 S	0.001UF 50V M YD(D) TAPING
C003	BCKQ811030Z	CAPACITOR:CERAMIC TS 5.0 S	0.01UF 50V Z YF TAPING
C004	BCKM811026Z	CAPACITOR:CERAMIC TS 2.5 S	0.001UF 50V M YD(D) TAPING
C005	BCAB811006Z	C:ELCT TS2.5C+ (D5*11)	10UF 50V M TAPE
C007	BCKQ811030Z	CAPACITOR:CERAMIC TS 5.0 S	0.01UF 50V Z YF TAPING
C008	BCHG812214Z	CAPACITOR:CERAMIC TS 5.0 S	220PF 50V J SL TAPING
C009	BCKM811026Z	CAPACITOR:CERAMIC TS 2.5 S	0.001UF 50V M YD(D) TAPING
C010	BCKQ812230Z	CAPACITOR:CERAMIC TS 5.0 S	0.022UF 50V Z YF TAPING
C011	BCKQ811030Z	CAPACITOR:CERAMIC TS 5.0 S	0.01UF 50V Z YF TAPING

(SYMBOL)	(PARTS CODE)	(DESCRIPTION)	
C012	BCKQ814730Z	CAPACITOR:CERAMIC	TS 5.0 S 0.047UF 50V Z YF TAPI
C014	BCGG514735Z	C:SEMI-CONDUCTOR(SR)	TS 5.0 S 0.047UF 25V K TAPING
C015	BCAB814796Z	C:ELCT TS2.5C+ (D5*11)	4.7UF 50V M TAPE
C016	BCKQ814730Z	CAPACITOR:CERAMIC	TS 5.0 S 0.047UF 50V Z YF TAP
C017	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C018	BCAB811006Z	C:ELCT TS2.5C+ (D5*11)	10UF 50V M TAPE
C019	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C020	BCAB811096Z	C:ELCT TS2.5C+ (D5*11)	1UF 50V M TAPE
C021	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C022	BCKQ814720Z	CAPACITOR:CERAMIC	TS 2.5 S 0.0047UF 50V Z YF TAF
C023	BCGG514725Z	C:SEMI CONDUCTOR(SR)	TS 2.5 S 0.0047UF 25V K TAPING
C024	BCAB812296Z	C:ELCT TS2.5C+ (D5*11)	2.2UF 50V M TAPE
C030	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C031	BCAB514706Z	C:ELCT TS2.5C+ (D5*11)	47UF 25V M TAPE
C032	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C033	BCHC816804Z	CAPACITOR:CERAMIC	TS 5.0 S 68PF 50V J CH TAPIN
C101	BCHC812214Z	CAPACITOR:CERAMIC	TS 5.0 S 220PF 50V J CH TAPE
C102	BCHC815604Z	CAPACITOR:CERAMIC	TS 5.0 S 56PF 50V J CH TAPIN
C103	BCHC812214Z	CAPACITOR:CERAMIC	TS 5.0 S 220PF 50V J CH TAPE
C104	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C105	BCKM811036Z	CAPACITOR:CERAMIC	TS 5.0S 0.01UF 50V M YD(D)TA
C106	BCHU812704Z	CAPACITOR:CERAMIC	TS 2.5 S 27PF 50V J UJ TAPIN
C108	BCHU812214Z	CAPACITOR:CERAMIC	TS 5.0 S 220PF 50V J UJ TAPIN
C109	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C110	BCKQ814720Z	CAPACITOR:CERAMIC	TS 2.5 S 0.0047UF 50V Z YF TAF
C111	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C112	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C113	BCHU814714Z	CAPACITOR:CERAMIC	TS 5.0 S 470PF 50V J UJ
C114	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C115	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TA
C116	BCHU811804Z	CAPACITOR:CERAMIC	TS 2.5 S 18PF 50V J UJ TAPING
C200	BCAW514716Z	C:ELCT TS5.0S+ (D5*11)	470UF 25V M TAPE
C201	BCGG511045Z	C:SEMI-CONDUCTOR(SR)	TS 5.0 S 0.1UF 25V K TAPING
C202	BCAV112216Z	C:ELCT TS2.5S+ (D5*11)	220UF 10V M TAPE
C203	BCAB812296Z	C:ELCT TS2.5C+ (D5*11)	2.2UF 50V M TAPE
C204	BCAP511026Z	CAPACITOR:ELECTROLYTIC	1000UF 25V M C-130
C205	BCAB811096Z	C:ELCT TS2.5C+ (D5*11)	1UF 50V M TAPE
C207	BCGG511045Z	C:SEMI-CONDUCTOR(SR)	TS 5.0 S 0.1UF 25V K TAPING
C208	BCGG514725Z	C:SEMI CONDUCTOR(SR) T	S 2.5 S 0.0047UF 25V K TAPING
C209	BCGG514735Z	C:SEMI-CONDUCTOR(SR)	TS 5.0 S 0.047UF 25V K TAPING
C210	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)T
C212	BCAB513306Z	C:ELCT TS2.5C+ (D5*11)	33UF 25V M TAPE
C213	BCGG512225Z	C:SEMI CONDUCTOR(SR)	TS 2.5 S 0.0022UF 25V K TAPINC
C214	BCGG513325Z	C:SEMI CONDUCTOR(SR)	TS 2.5 S 0.0033UF 25V K TAPING
C215	BCKQ814720Z	CAPACITOR:CERAMIC	TS 2.5 S 0.0047UF 50V Z YF TAF
C217	BCAB514706Z	C:ELCT TS2.5C+ (D5*11)	47UF 25V M TAPE
C218	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPI
C219	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)T
C220	"	"	"
C300	B CKQ814720Z	CAPACITOR:CERAMIC	TS 2.5 S 0.0047UF 50V Z YF TAI
C301	BCHC813304Z	CAPACITOR:CERAMIC	TS 2.5 S 33PF 50V J CH TAPIN
C302	BCAB812296Z	C:ELCT TS2.5C+ (D5*11)	2.2UF 50V M TAPE
C303	"	"	"
C304	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)T
C305	BCHC812714Z	CAPACITOR:CERAMIC	TS 5.0 S 270PF 50V J CH TAPE
C306	BCHG813314Z	CAPACITOR:CERAMIC	TS 5.0 S 330PF 50V J SL TAPIN
C307	BCKQ814730Z	CAPACITOR:CERAMIC	TS 5.0 S 0.047UF 50V Z YF TAF
C308	BCGG514735Z	C:SEMI-CONDUCTOR(SR)	TS 5.0 S 0.047UF 25V K TAPING

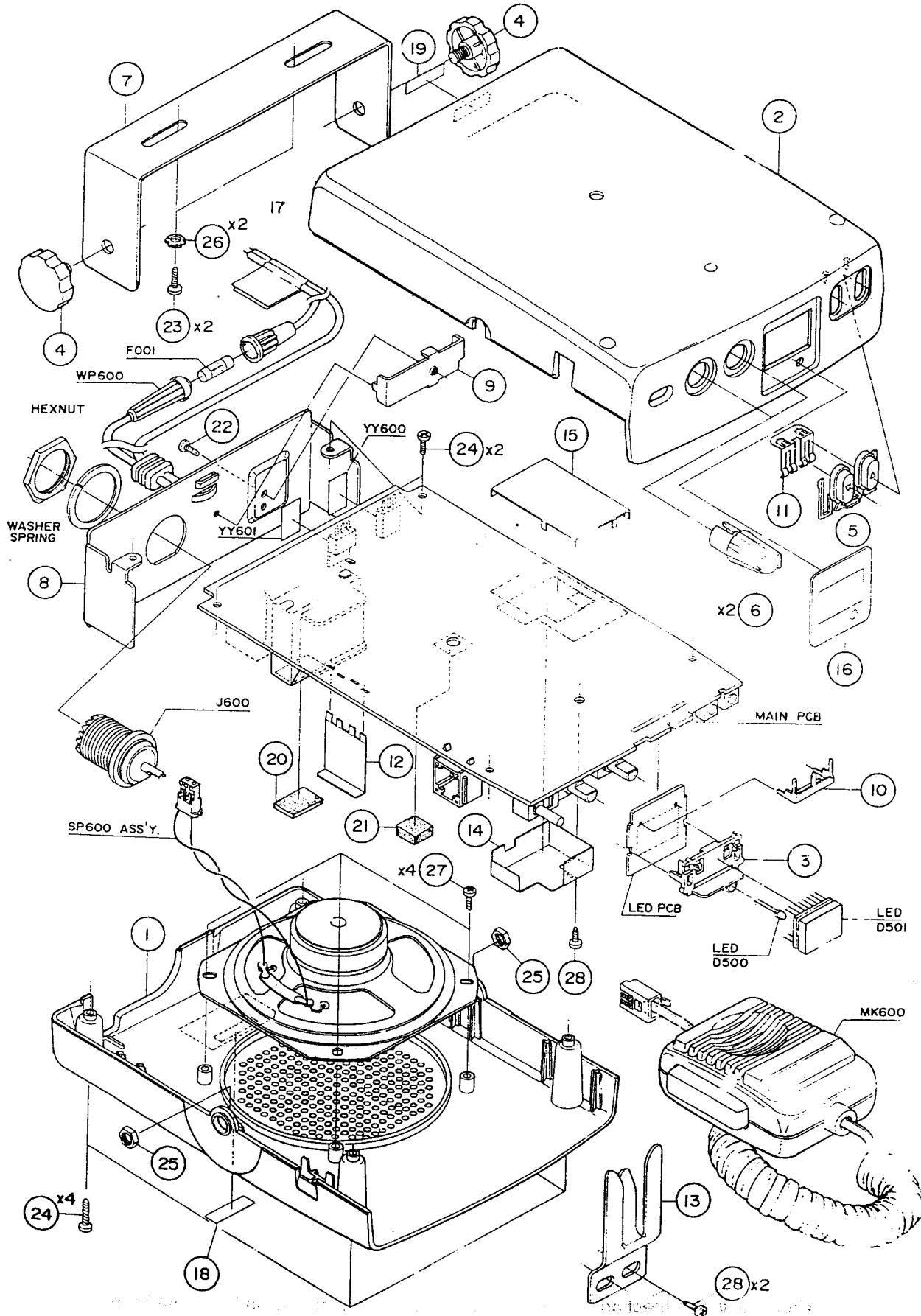
(SYMBOL)	(PARTS CODE)	(DESCRIPTION)	
C309	BCAV903316Z	C:ELCT TS2.5S+ (D5*11)	330UF 6.3V M TAPE
C310	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPING
C311			
C312	BCHU814704Z	CAPACITOR:CERAMIC	TS 2.5 S 47PF 50V J UJ TAPE
C313	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPING
C314	BCHU813904Z	CAPACITOR:CERAMIC	TS 2.5 S 39PF 50V J UJ TAPING
C315	BCHU813314Z	CAPACITOR:CERAMIC	TS 5.0 S 330PF 50V J UJ TAPING
C316	BCHU811014Z	CAPACITOR:CERAMIC	TS 5.0 S 100PF 50V J UJ TAPING
C317	BCHG816804Z	CAPACITOR:CERAMIC	TS 2.5 S 68PF 50V J SL TAPE
C318	BCHC811504Z	CAPACITOR:CERAMIC	TS 2.5 S 15PF 50V J CH TAPING
C319	BCHG813904Z	CAPACITOR:CERAMIC	TS 2.5 S 39PF 50V J SL TAPING
C320	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPING
C322	BCAV112216Z	C:ELCT TS2.5S+ (D5*11)	220UF 10V M TAPE
C400	BCKQ814720Z	CAPACITOR:CERAMIC	TS 2.5 S 0.0047UF 50V Z YF TAPING
C401	BCAB514706Z	C:ELCT TS2.5C+ (D5*11)	47UF 25V M TAPE
C402			
C403	BCAV311016Z	C:ELCT TS2.5S+ (D5*11)	100UF 16V M TAPE
C404	BCKQ811030Z	CAPACITOR:CERAMIC	TS 5.0 S 0.01UF 50V Z YF TAPING
C405	BCKM811026Z	CAPACITOR:CERAMIC	TS 2.5 S 0.001UF 50V M YD(D)TAPING
C600	BCCU811514Z	CAPACITOR:CERAMIC	150PF 50V J UJ
D001	BDAY0246003	DIODE:AXIAL TAPING 26MM	1N4148 T-77
D002			
D005			
D100			
D101			
D200	BDAY0060003	DIODE	1N4003
D201	BDAY0246003	DIODE:AXIAL TAPING 26MM	1N4148 T-77
D301			
D302	BDAY0492019	DIODE:ZENER AX TS 26+	HZ-6C1 TD
D303	BDAY0333001	DIODE:VARICAP	1SV68
D304	BDAY0492001	DIODE:ZENER AX TS 26 +	HZ5B3 TAPING
D305	BDAY0246002	DIODE:AXIAL TAPING 52MM	1N4148 T-72
D400	BDAY0492010	DIODE:ZENER AX TS 26 +	HZ9B3 TD
D401	BDAY0060003	DIODE	1N4003
D500	BDAY0100001	DIODE:LED	TLR-124
D501	BDAY0202001	DIODE:LED	LDR-204ALD
J200	BJKY0458004	JACK:TEL	JK-458 CSK290-623-04-235
J201	BJKY0571002	JACK	JK-571 2P
J600	BJKY0425001	JACK:ANT	JK-425 M-RM-L 102
L002	BLBY1027001	COIL	LB-1027
L003	BLBY1030001	COIL	LB-1030
L004	BLBY1029001	COIL	LB-1029
L005	BLBY1028001	COIL	LB-1028
L100	BLEY0419001	COIL	LE-419 11 1/2T
L101	BLEY0435001	COIL	LE-435 10 1/2T
L102	BLCY0228001	COIL	LC-228 L-1S7-T(R12-J840X)
L103	BLDY0237001	COIL	LD-237 L-2R4W(R22-E563)
L104	BLDY0087001	COIL	LD-087 BF04-3*5*1
L105	BLCY0199001	COIL	LC-199 L-2S7-T(R12E831X)
L106	BLEY0286001	COIL	LE-286 D4 6 1/2T
L107	BLDY0087001	COIL	LD-087 BF04-3*5*1
L200	BLBY0724001	COIL	LB-724 L-2M7-D3
L201	BLBY0723001	COIL	LB-723 L-2M7-D3
L202	BLDY0087001	COIL	LD-087 BF04-3*5*1
L203			
L300			
L301	BLZY0041100	INDUCTOR:MOLDED	LZ-041:10UH
L400	BLDY0087001	COIL	LD-087 BF04-3*5*1

(SYMBOL)	(PARTS CODE)	(DESCRIPTION)	
Q001	BDBX1674111	TRANSISTOR:RH TS +	DB-6009 2SC1674-L TAPIN
Q002	BDBX1675111	TRANSISTOR:RH TS +	DB-259 2SC1675-L TAPINC
Q003	"	"	"
Q005	"	"	"
Q006	BDBX0945507	TRANSISTOR:RH TS +	DB-6008 2SC945A-Q TAPIN
Q007	"	"	"
Q100	BDBC2078105	TRANSISTOR	DB-791 2SC2078E
Q101	BDBC2314106	TRANSISTOR	DB-792 2SC2314F
Q102	BDBX0941523	TRANSISTOR:RH TS +	DB-301 2SC941TM-O TAPI
Q103	BDBX1675111	TRANSISTOR:RH TS +	DB-259 2SC1675-L TAPINC
Q200	BDBX2001111	TRANSISTOR	DB-822 2SC2001-L TAPINC
Q300	BDBX1675111	TRANSISTOR:RH TS +	DB-259 2SC1675-L TAPINC
Q301	"	"	"
Q302	"	"	"
Q303	BDBV0733115	TRANSISTOR:RH TS +	DB-6007 2SA733-P TAPINC
Q304	"	"	"
Q305	BDBX0945507	TRANSISTOR:RH TS +	DB-6008 2SC945A-Q TAPII
Q306	BDBZ0668001	TRANSISTOR	DB-668 DTC144WS TAPE
Q400	BDBV0733115	TRANSISTOR:RH TS +	DB-6007 2SA733-P TAPINC
Q401	BDBC3242536	TRANSISTOR	DB-383 2SC3242A-E
R001	BRFT144714Z	R:CARBON AXIAL LEAD(TAPE)	470 1/4W J
R002	BRPA615624Z	RESISTOR:CARBON AX TS 26	5.6K 1/6W J TAPING
R003	BRPA613324Z	RESISTOR:CARBON AX TS 26	3.3K 1/6W J TAPING
R004	BRPA615614Z	RESISTOR:CARBON AX TS 26	560.1/6W J TAPING
R005	BRFT142214Z	R:CARBON AXIAL LEAD(TAPE)	220 1/4W J
R006	BRPA611024Z	RESISTOR:CARBON AX TS 26	1K 1/6W J TAPING
R007	BRPA613324Z	RESISTOR:CARBON AX TS 26	3.3K 1/6W J TAPING
R008	BRPA613394Z	RESISTOR:CARBON AX TS 26	3.3 1/6W J TAPING
R009	BRPA611024Z	RESISTOR:CARBON AX TS 26	1K 1/6W J TAPING
R010	BRPA614714Z	RESISTOR:CARBON AX TS 26	470 1/6W J TAPING
R011	"	"	"
R012	BRPA613314Z	RESISTOR:CARBON AX TS 26	330 1/6W J TAPING
R013	BRPA611844Z	RESISTOR:CARBON AX TS 26	180K 1/6W J TAPING
R014	BRPA616804Z	RESISTOR:CARBON AX TS 26	68 1/6W J TAPING
R015	BRPA616814Z	RESISTOR:CARBON AX TS 26	680 1/6W J TAPING
R016	BRPA611024Z	RESISTOR:CARBON AX TS 26	1K 1/6W J TAPING
R017	BRPA611834Z	RESISTOR:CARBON AX TS 26	18K 1/6W J TAPING
R018	BRPA612224Z	RESISTOR:CARBON AX TS 26	2.2K 1/6W J TAPING
R019	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R020	BRPA613314Z	RESISTOR:CARBON AX TS 26	330 1/6W J TAPING
R021	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R022	BRPA611834Z	RESISTOR:CARBON AX TS 26	18K 1/6W J TAPING
R023	BRPA612234Z	RESISTOR:CARBON AX TS 26	22K 1/6W J TAPING
R024	BRFT141034Z	R:CARBON AXIAL LEAD(TAPE)	10K 1/4W J
R025	BRPA613334Z	RESISTOR:CARBON AX TS 26	33K 1/6W J TAPING
R026	BRPA616834Z	RESISTOR:CARBON AX TS 26	68K 1/6W J TAPING
R027	BRPA615634Z	RESISTOR:CARBON AX TS 26	56K 1/6W J TAPING
R028	"	"	"
R029	"	"	"
R030	BRPA616834Z	RESISTOR:CARBON AX TS 26	68K 1/6W J TAPING
R031	BRPA618244Z	RESISTOR:CARBON AX TS 26	820K 1/6W J TAPING
R032	BRPA613314Z	RESISTOR:CARBON AX TS 26	330 1/6W J TAPING
R033	BRPA611524Z	RESISTOR:CARBON AX TS 26	1.5K 1/6W J TAPING
R034	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R035	"	"	"
R036	BRPA612734Z	RESISTOR:CARBON AX TS 26	27K 1/6W J TAPING
R037	BRPA614734Z	RESISTOR:CARBON AX TS 26	47K 1/6W J TAPING

(SYMBOL)	(PARTS CODE)	(DESCRIPTION)	
R038	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R040	BRFT143314Z	R:CARBON AXIAL LEAD(TAPE)	330 1/4W J
R041	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R042	BRPA614744Z	RESISTOR:CARBON AX TS 26	470K 1/6W J TAPING
R100	BRPA612224Z	RESISTOR:CARBON AX TS 26	2.2K 1/6W J TAPING
R101	BRSJ002214Z	RESISTOR:METAL OXIDE	220 1WS J
R102	BRPA611804Z	RESISTOR:CARBON AX TS 26	18 1/6W J TAPING
R103	BRPA612294Z	RESISTOR:CARBON AX TS 26	2.2 1/6W J TAPING
R104	BRPA614794Z	RESISTOR:CARBON AX TS 26	4.7 1/6W J TAPING
R105	BRPA612214Z	RESISTOR:CARBON AX TS 26	220 1/6W J TAPING
R106	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R107	BRPA613304Z	RESISTOR:CARBON AX TS 26	33 1/6W J TAPING
R108	BRPA618224Z	RESISTOR:CARBON AX TS 26	8.2K 1/6W J TAPING
R109	BRPA611534Z	RESISTOR:CARBON AX TS 26	15K 1/6W J TAPING
R110	BRPA611814Z	RESISTOR:CARBON AX TS 26	180 1/6W J TAPING
R111	"	"	"
R112	BRPA615624Z	RESISTOR:CARBON AX TS 26	5.6K 1/6W J TAPING
R113	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R114	BRPA611534Z	RESISTOR:CARBON AX TS 26	15K 1/6W J TAPING
R116	BRPA611514Z	RESISTOR:CARBON AX TS 26	150 1/6W J TAPING
R200	BRPA611594Z	RESISTOR:CARBON AX TS 26	1.5 1/6W J TAPING
R201	BRPA611044Z	RESISTOR:CARBON AX TS 26	100K 1/6W J TAPING
R202	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R204	BRPA615634Z	RESISTOR:CARBON AX TS 26	56K 1/6W J TAPING
R205	BRPA613324Z	RESISTOR:CARBON AX TS 26	3.3K 1/6W J TAPING
R206	BRPA612244Z	RESISTOR:CARBON AX TS 26	220K 1/6W J TAPING
R207	BRPA611834Z	RESISTOR:CARBON AX TS 26	18K 1/6W J TAPING
R208	BRPA612224Z	RESISTOR:CARBON AX TS 26	2.2K 1/6W J TAPING
R209	"	"	"
R210	BRFT142234Z	R:CARBON AXIAL LEAD(TAPE)	22K 1/4W J
R211	BRPA616824Z	RESISTOR:CARBON AX TS 26	6.8K 1/6W J TAPING
R212	BRPA611524Z	RESISTOR:CARBON AX TS 26	1.5K 1/6W J TAPING
R213	BRPA612224Z	RESISTOR:CARBON AX TS 26	2.2K 1/6W J TAPING
R220	BRPA613954Z	RESISTOR:CARBON AX TS 26	3.9M 1/6W J TAPING
R300	BRPA612224Z	RESISTOR:CARBON AX TS 26	2.2K 1/6W J TAPING
R301	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R302	BRPA615614Z	RESISTOR:CARBON AX TS 26	560 1/6W J TAPING
R303	"	"	"
R309	BRPA611514Z	RESISTOR:CARBON AX TS 26	150 1/6W J TAPING
R310	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R311	BRPA611514Z	RESISTOR:CARBON AX TS 26	150 1/6W J TAPING
R312	BRPA616824Z	RESISTOR:CARBON AX TS 26	6.8K 1/6W J TAPING
R313	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R315	BRPA615634Z	RESISTOR:CARBON AX TS 26	56K 1/6W J TAPING
R316	BRFT141034Z	R:CARBON AXIAL LEAD(TAPE)	10K 1/4W J
R317	BRPA613314Z	RESISTOR:CARBON AX TS 26	330 1/6W J TAPING
R318	BRPA611534Z	RESISTOR:CARBON AX TS 26	15K 1/6W J TAPING
R319	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R320	BRPA613914Z	RESISTOR:CARBON AX TS 26	390 1/6W J TAPING
R321	BRPA613934Z	RESISTOR:CARBON AX TS 26	39K 1/6W J TAPING
R322	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R324	BRPA611024Z	RESISTOR:CARBON AX TS 26	1K 1/6W J TAPING
R325	BRPA611034Z	RESISTOR:CARBON AX TS 26	10K 1/6W J TAPING
R326	BRPA611024Z	RESISTOR:CARBON AX TS 26	1K 1/6W J TAPING
R400	BRPA611014Z	RESISTOR:CARBON AX TS 26	100 1/6W J TAPING
R401	BRPA613324Z	RESISTOR:CARBON AX TS 26	3.3K 1/6W J TAPING
R402	BRPA615614Z	RESISTOR:CARBON AX TS 26	560 1/6W J TAPING
R403	BRPA612214Z	RESISTOR:CARBON AX TS 26	220 1/6W J TAPING

(SYMBOL)	(PARTS CODE)	(DESCRIPTION)	
R404	BRPA611034Z	RESISTOR:CARBON	AX TS 26 10K 1/6W J TAF
S300	BSWY0599001	SWITCH:TACT	SW-599 KHH-905
S301	"	"	"
S400	BSWY0769001	SWITCH:SLIDE	SW-769
T200	BTFY0375001	TRANSFORMER:OUTPUT	TF-375
T400	BTFY0374001	TRANSFORMER	TF-374
	CUFJ003041Z	WIRE	UL 1430 #24 10- 30- 3 WHT
X300	BQXY0308001	CRYSTAL	QX-308 10.2419M
FT001	BFLY0048001	FILTER:CERAMIC	FL-048 SFE10.7MS2-M
FT002	BFLY0231001	FILTER:CERAMIC	FL-231 CFU450HT 450KHZ
IC200	BDEY0603001	INTEGRATED CIRCUIT	TDA1905
IC300	BDEY2519003	INTEGRATED CIRCUIT	SM5125AM-E2
MK600	BMKY0466001	MICROPHONE	MK-466 EMC 556-Z001
PC001	BPAY0362AA1	PC BOARD:MAIN	PA-362AA 1/2
SP600	BSPY0312001	SPEAKER	SP-312 UN-S08F03
VR001	BRTY0552503	RESISTOR:SEMI-FIXED	RT-552 50KB
VR002	BRVY0823001	VOLUME	RV-823 50KA
VR003	BRVY0822001	VOLUME	RV-822 50KB
	CZDZ072028Z	WIRES:ASSEMBLED	W-072028
WP600	BWZY1105001	CORD:DC	WZ-1105 1500 W/P
YY600	BYDY0042001	INSULATION SHEET	YD-042
YY601	BYDY0010003	INSULATION SHEET	YD-010 P101KD

## 6. EXPLODED VIEW & MECHANICAL PARTS LIST





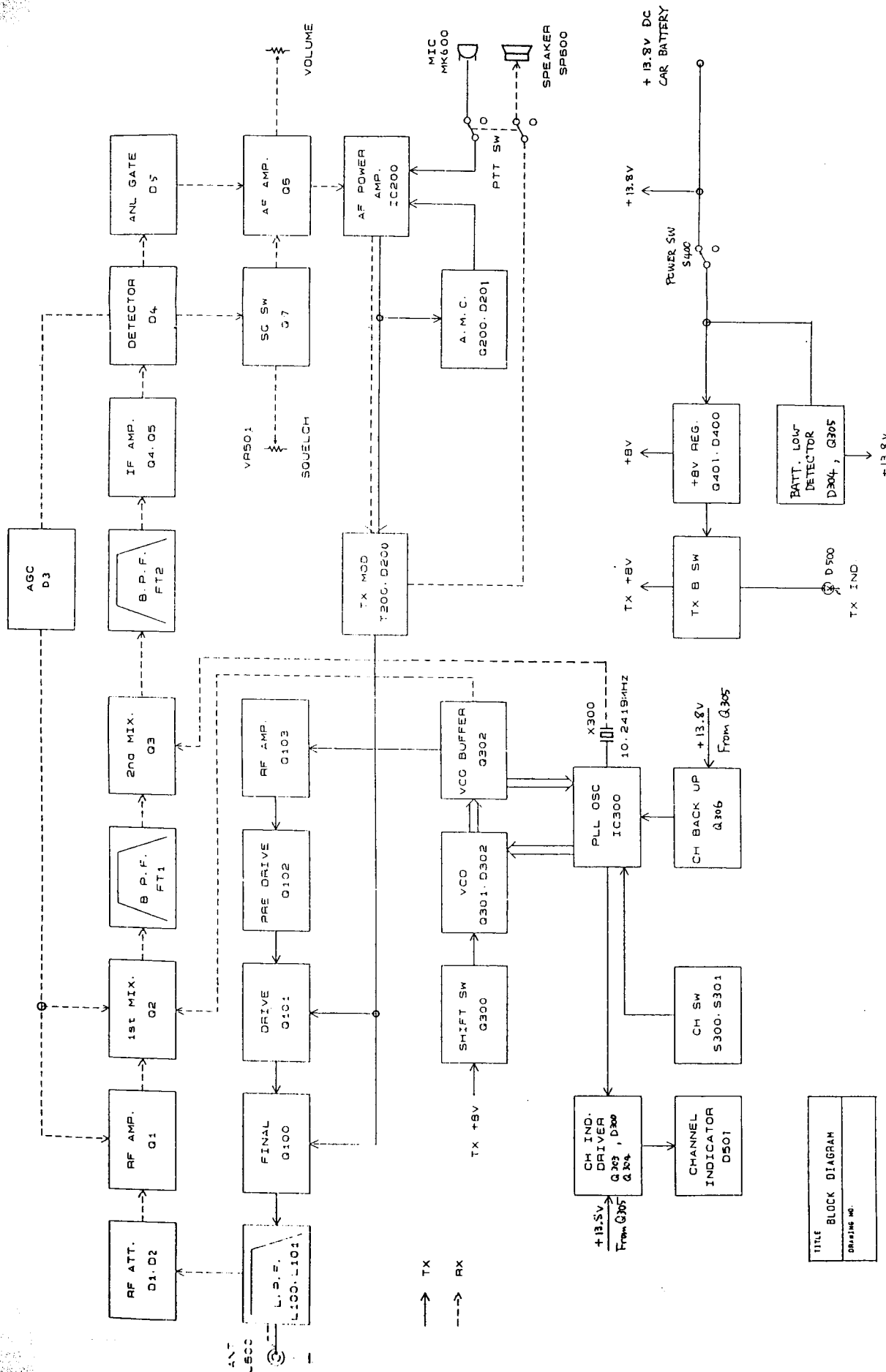
## MECHANICAL PARTS LIST

(REF #)	(PARTSCODE)	(DESCRIPTION)	
1	GCMB130377Z	CASE : BOTTOM	ABS, BLACK
2	GCMT130376Z	CASE : TOP	ABS, BLACK, SILK
3	GHDL330378Z	HOLDER : LED	ABS, BLACK
4	GMSC480407Z	SCREW : MOUNTING	ABS, BLACK
5	GNBP330379Z	BUTTON, PUSH	ABS, BLACK
6	GNBY330380Z	KNOB	ABS, BLACK
7	HBCT430384Z	MOUNTING BRACKET	SPCC, 1.2T, MFZN3
8	HCSR330381Z	CHASSIS : REAR	SECC, 1.0T
9	HHDE430382Z	HOLDER : IC	SECC, 1.0T
10	HHDP430876Z	HOLDER : PCB	SPT, 0.5T
11	HHDZ430383Z	HOLDER : BUTTON	SUS304 ORC7701R, C
12	HHSK418924B	HEAT SINK	C5191R, 0.5T
13	HMHG402919Z	HANGER : MICROPHONE	SPCC, 1.0T, NI
14	HSDC431235Z	SHIELD CASE	SPT, 0.3T
15	HSDP430877Z	SHIELD PLATE	SPT, 0.3T
16	KDPT430385Z	WINDOW	PC, 1.0T, SILK
17	PLBC482147Z	LABEL : WARNING, DC CORD	PAPER, PRINT
18	PLBS431081Z	LABEL : SERIAL NO.	PAPER
19	PLBZ431181Z	INDY 800 LABEL	POLYESTER FILM, 0.
20	RCUN405417Z	CUSHION	NEOPRENE SP 2T
21	RCUN412259Z	SPACER	NEOPRENE SP 6T
22	SSCW193008N	SCREW : BIND HD +	M3x8 NI
23	SSCW295010N	SCREW : TAPPING ROUND HD +	D5x10 NI
24	SSCW343006N	SCREW : TAPTIGHT BIND HD +	M3x6 NI
25	SSCW430050N	HEX NUT	M5 NI
26	SSCW540050N	WASHER : STAR	D5 NI
27	SSCW803006N	SCREW : P TIGHT BIND HD +	D3x6 NI
28	SSCW803008N	SCREW : P TIGHT BIND HD +	D3x8 NI
29	SSCW803014N	SCREW : P TIGHT BIND HD +	D3x14 NI

(Ref. No. in this Mechanical Parts List corresponds with the no. in Exploded View)

# 7. TECHNICAL DRAWINGS

BLOCK DIAGRAM



J01 PA302 1/2

SCHEMATIC DIAGRAM

(B)

NOTES:  
 1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED.  
 2. RESISTOR VALUES ARE 1/4W UNLESS OTHERWISE NOTED.  
 3. PARTS ARE TO BE USED AS LISTED IN MICRO (PHOTO-COPYING PERMITTED).  
 4. ALL PARTS ARE TO BE IDENTIFIED BY PART NUMBER (UNLESS OTHERWISE NOTED).  
 5. ALL PARTS ARE TO BE IDENTIFIED BY PART NUMBER (UNLESS OTHERWISE NOTED).

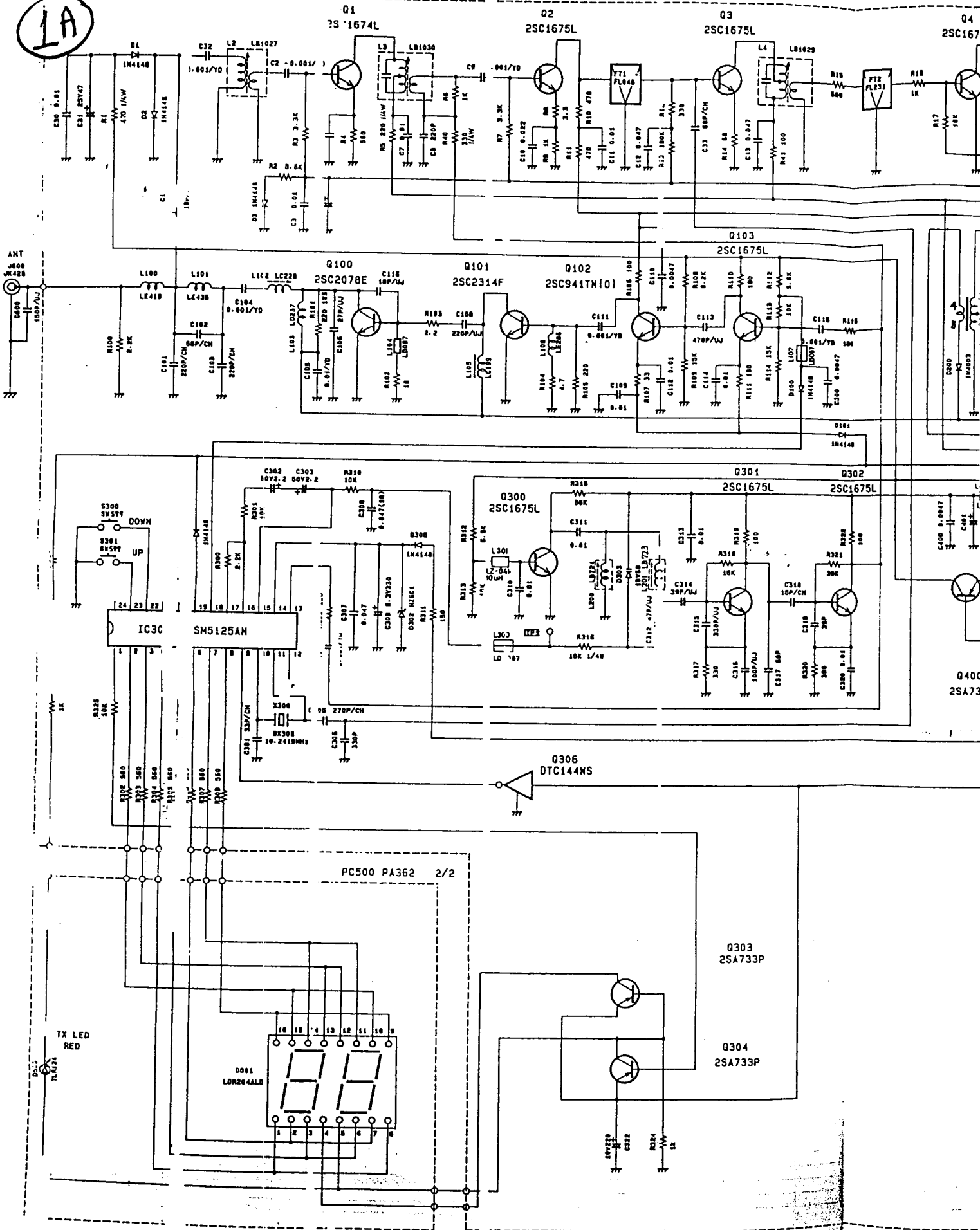
TVA SCHEMATIC DIAGRAM  
 PART NO. E12-3938

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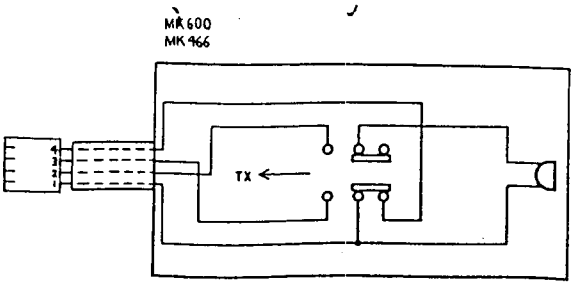
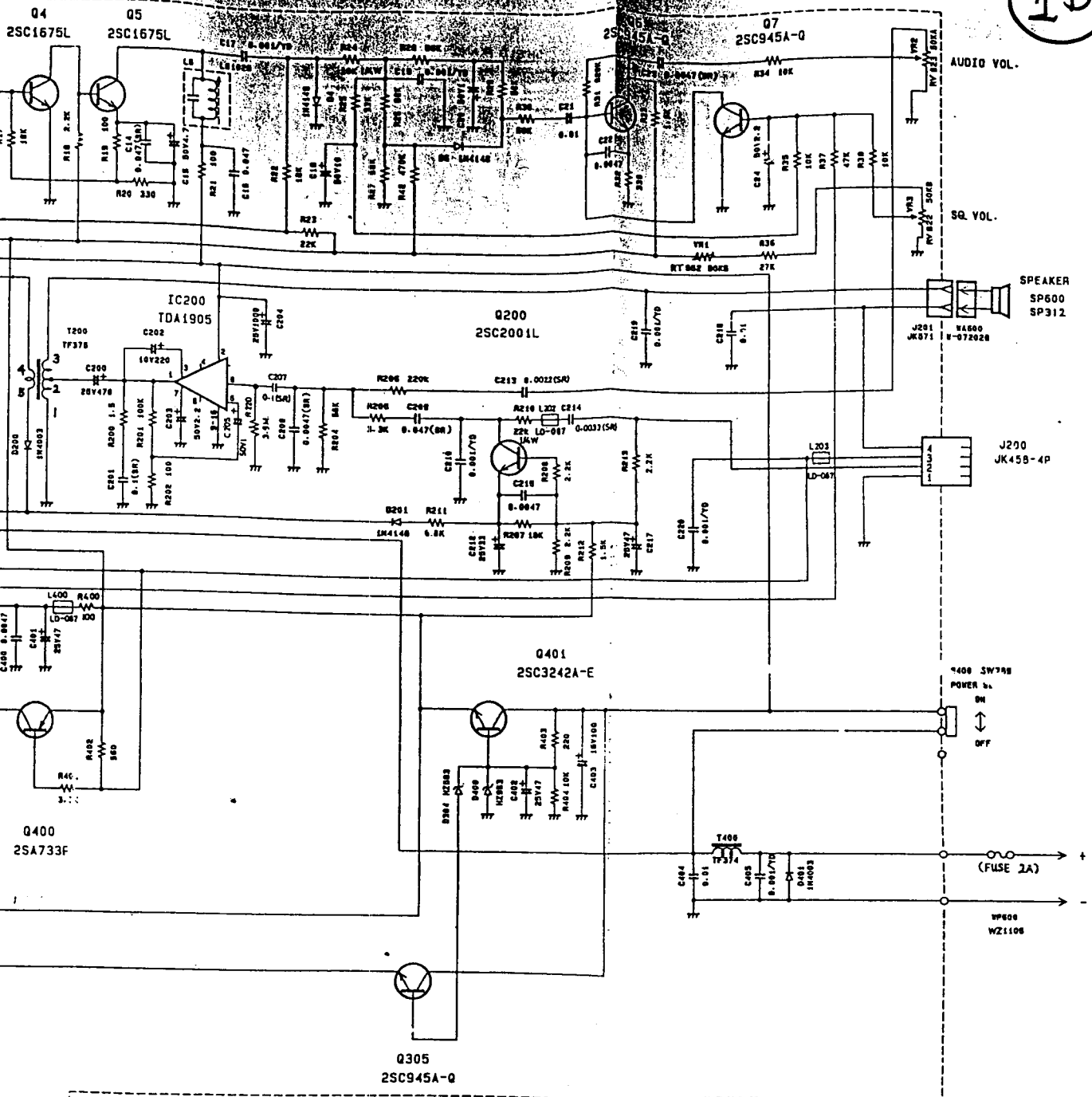
20

# SCHEMATIC DIAGRAM

LA



1B

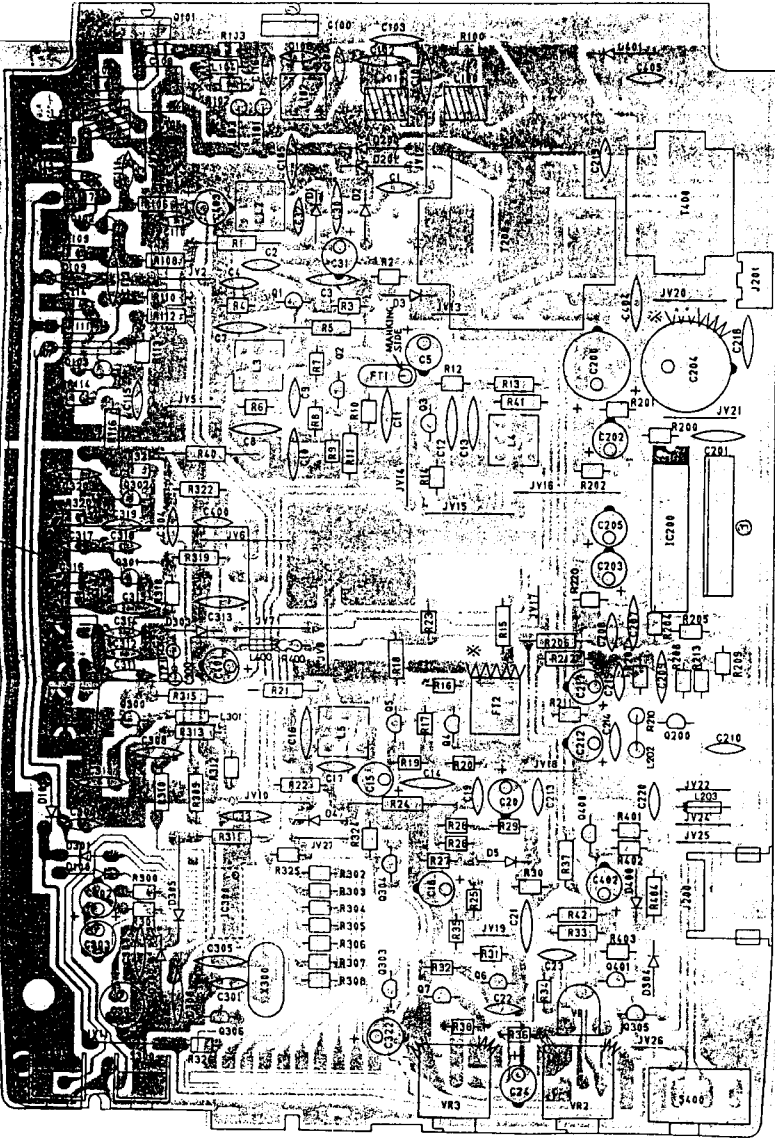


- NOTES:
1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED.
  2. RESISTOR WATTAGES ARE 1/6W UNLESS OTHERWISE NOTED.
  3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. (P=PICO-MICRO FARAD)
  4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE SP (LESS THAN 100PF) OR YF (MORE THAN 1000PF) UNLESS OTHERWISE NOTED.

TITLE SCHEMATIC DIAGRAM  
 DRAWING NO. E12-3938

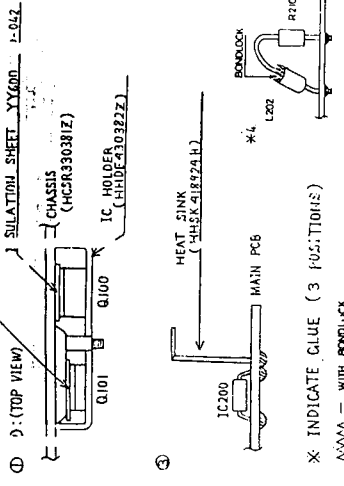
COMPONENT LAYOUT

PC001 PL-3624A-12 12" x 12" HIGH



2A

2B



\* INDICATE GLUE (3 POSITIONS)  
 N/A - WITH BONDLOCK  
 - SOLDERING  
 \* LOS MOUNTING REVERSE DO FOLLOW PCB SILK PRINT

D1	INCL18	JV1	7.5
D2	INCL18	JV2	7.5
D3	INCL18	JV5	7.5
D4	INCL18	JV6	12.5
D5	INCL18	JV7	7.0
D6	INCL18	JV8	7.5
D7	INCL18	JV9	7.5
D8	INCL18	JV10	7.5
D9	INCL18	JV11	7.5
D10	INCL18	JV12	7.5
D11	INCL18	JV13	7.5
D12	INCL18	JV14	7.5
D13	INCL18	JV15	7.5
D14	INCL18	JV16	7.5
D15	INCL18	JV17	7.5
D16	INCL18	JV18	7.5
D17	INCL18	JV19	7.5
D18	INCL18	JV20	7.5
D19	INCL18	JV21	7.5
D20	INCL18	JV22	7.5
D21	INCL18	JV23	7.5
D22	INCL18	JV24	7.5
D23	INCL18	JV25	7.5
D24	INCL18	JV26	7.5
D25	INCL18	JV27	7.5
D26	INCL18	JV28	7.5
D27	INCL18	JV29	7.5
D28	INCL18	JV30	7.5
D29	INCL18	JV31	7.5
D30	INCL18	JV32	7.5
D31	INCL18	JV33	7.5
D32	INCL18	JV34	7.5
D33	INCL18	JV35	7.5
D34	INCL18	JV36	7.5
D35	INCL18	JV37	7.5
D36	INCL18	JV38	7.5
D37	INCL18	JV39	7.5
D38	INCL18	JV40	7.5
D39	INCL18	JV41	7.5
D40	INCL18	JV42	7.5
D41	INCL18	JV43	7.5
D42	INCL18	JV44	7.5
D43	INCL18	JV45	7.5
D44	INCL18	JV46	7.5
D45	INCL18	JV47	7.5
D46	INCL18	JV48	7.5
D47	INCL18	JV49	7.5
D48	INCL18	JV50	7.5
D49	INCL18	JV51	7.5
D50	INCL18	JV52	7.5
D51	INCL18	JV53	7.5
D52	INCL18	JV54	7.5
D53	INCL18	JV55	7.5
D54	INCL18	JV56	7.5
D55	INCL18	JV57	7.5
D56	INCL18	JV58	7.5
D57	INCL18	JV59	7.5
D58	INCL18	JV60	7.5
D59	INCL18	JV61	7.5
D60	INCL18	JV62	7.5
D61	INCL18	JV63	7.5
D62	INCL18	JV64	7.5
D63	INCL18	JV65	7.5
D64	INCL18	JV66	7.5
D65	INCL18	JV67	7.5
D66	INCL18	JV68	7.5
D67	INCL18	JV69	7.5
D68	INCL18	JV70	7.5
D69	INCL18	JV71	7.5
D70	INCL18	JV72	7.5
D71	INCL18	JV73	7.5
D72	INCL18	JV74	7.5
D73	INCL18	JV75	7.5
D74	INCL18	JV76	7.5
D75	INCL18	JV77	7.5
D76	INCL18	JV78	7.5
D77	INCL18	JV79	7.5
D78	INCL18	JV80	7.5
D79	INCL18	JV81	7.5
D80	INCL18	JV82	7.5
D81	INCL18	JV83	7.5
D82	INCL18	JV84	7.5
D83	INCL18	JV85	7.5
D84	INCL18	JV86	7.5
D85	INCL18	JV87	7.5
D86	INCL18	JV88	7.5
D87	INCL18	JV89	7.5
D88	INCL18	JV90	7.5
D89	INCL18	JV91	7.5
D90	INCL18	JV92	7.5
D91	INCL18	JV93	7.5
D92	INCL18	JV94	7.5
D93	INCL18	JV95	7.5
D94	INCL18	JV96	7.5
D95	INCL18	JV97	7.5
D96	INCL18	JV98	7.5
D97	INCL18	JV99	7.5
D98	INCL18	JV100	7.5
D99	INCL18	JV101	7.5
D100	INCL18	JV102	7.5

NOTES:  
 1. DIMENSIONAL VALUES ARE GIVEN IN CMH UNLESS OTHERWISE NOTED.  
 2. RESISTOR VALUES ARE 1/4W UNLESS OTHERWISE NOTED.  
 3. CAPACITOR VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED.  
 4. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 5. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 6. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 7. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 8. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 9. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.  
 10. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.

TITLE: MAIN PCB  
 PART: ASSEMBLY TOP VIEW  
 DRAW: E-10612

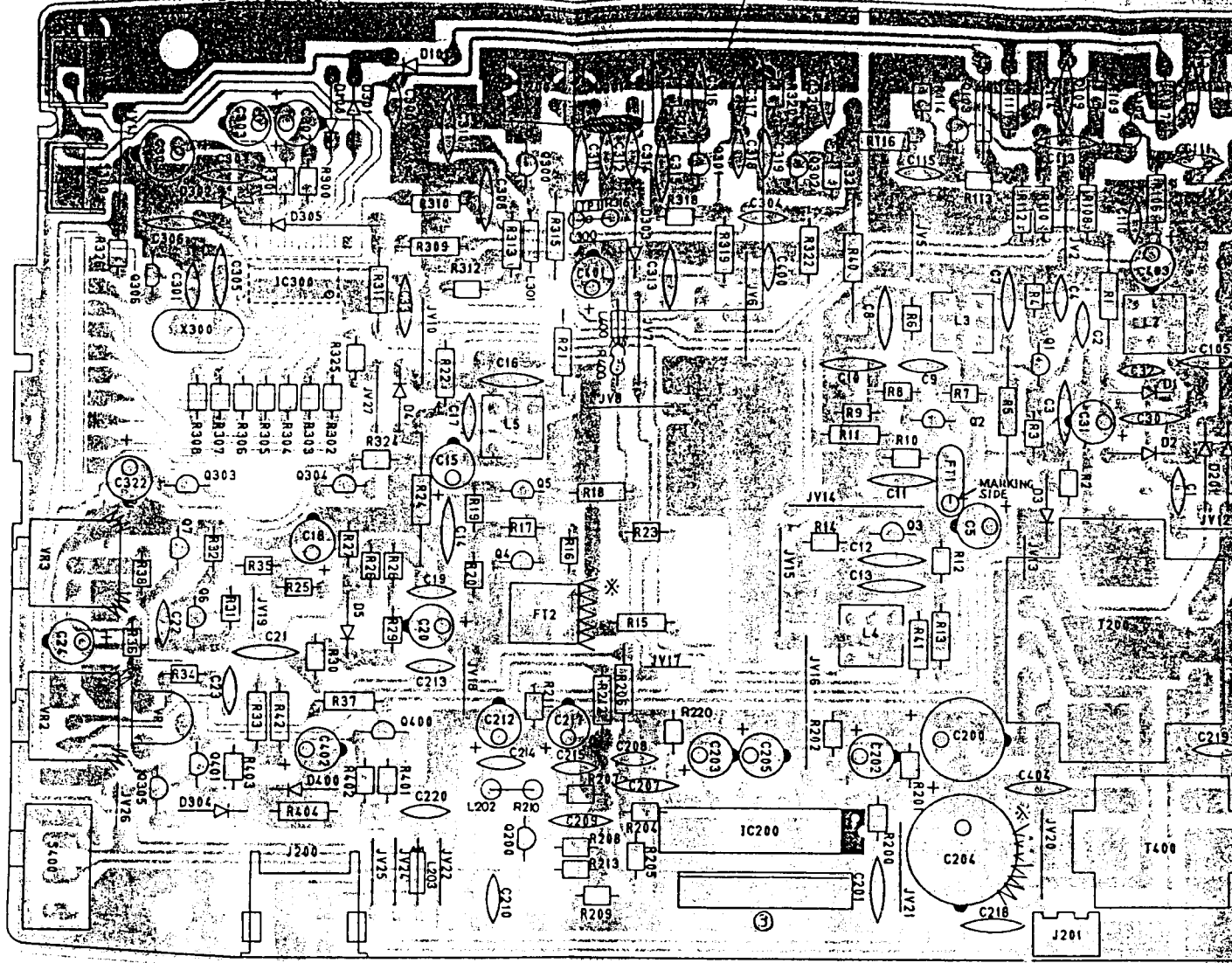
C1	100K	JV1	7.5
C2	100K	JV2	7.5
C3	100K	JV3	7.5
C4	100K	JV4	7.5
C5	100K	JV5	7.5
C6	100K	JV6	12.5
C7	100K	JV7	7.0
C8	100K	JV8	7.5
C9	100K	JV9	7.5
C10	100K	JV10	7.5
C11	100K	JV11	7.5
C12	100K	JV12	7.5
C13	100K	JV13	7.5
C14	100K	JV14	7.5
C15	100K	JV15	7.5
C16	100K	JV16	7.5
C17	100K	JV17	7.5
C18	100K	JV18	7.5
C19	100K	JV19	7.5
C20	100K	JV20	7.5
C21	100K	JV21	7.5
C22	100K	JV22	7.5
C23	100K	JV23	7.5
C24	100K	JV24	7.5
C25	100K	JV25	7.5
C26	100K	JV26	7.5
C27	100K	JV27	7.5
C28	100K	JV28	7.5
C29	100K	JV29	7.5
C30	100K	JV30	7.5
C31	100K	JV31	7.5
C32	100K	JV32	7.5
C33	100K	JV33	7.5
C34	100K	JV34	7.5
C35	100K	JV35	7.5
C36	100K	JV36	7.5
C37	100K	JV37	7.5
C38	100K	JV38	7.5
C39	100K	JV39	7.5
C40	100K	JV40	7.5
C41	100K	JV41	7.5
C42	100K	JV42	7.5
C43	100K	JV43	7.5
C44	100K	JV44	7.5
C45	100K	JV45	7.5
C46	100K	JV46	7.5
C47	100K	JV47	7.5
C48	100K	JV48	7.5
C49	100K	JV49	7.5
C50	100K	JV50	7.5
C51	100K	JV51	7.5
C52	100K	JV52	7.5
C53	100K	JV53	7.5
C54	100K	JV54	7.5
C55	100K	JV55	7.5
C56	100K	JV56	7.5
C57	100K	JV57	7.5
C58	100K	JV58	7.5
C59	100K	JV59	7.5
C60	100K	JV60	7.5
C61	100K	JV61	7.5
C62	100K	JV62	7.5
C63	100K	JV63	7.5
C64	100K	JV64	7.5
C65	100K	JV65	7.5
C66	100K	JV66	7.5
C67	100K	JV67	7.5
C68	100K	JV68	7.5
C69	100K	JV69	7.5
C70	100K	JV70	7.5
C71	100K	JV71	7.5
C72	100K	JV72	7.5
C73	100K	JV73	7.5
C74	100K	JV74	7.5
C75	100K	JV75	7.5
C76	100K	JV76	7.5
C77	100K	JV77	7.5
C78	100K	JV78	7.5
C79	100K	JV79	7.5
C80	100K	JV80	7.5
C81	100K	JV81	7.5
C82	100K	JV82	7.5
C83	100K	JV83	7.5
C84	100K	JV84	7.5
C85	100K	JV85	7.5
C86	100K	JV86	7.5
C87	100K	JV87	7.5
C88	100K	JV88	7.5
C89	100K	JV89	7.5
C90	100K	JV90	7.5
C91	100K	JV91	7.5
C92	100K	JV92	7.5
C93	100K	JV93	7.5
C94	100K	JV94	7.5
C95	100K	JV95	7.5
C96	100K	JV96	7.5
C97	100K	JV97	7.5
C98	100K	JV98	7.5
C99	100K	JV99	7.5
C100	100K	JV100	7.5

2A

# COMPONENT LAYOUT

PC001 PA-362AA 1/2 (TOP VIEW)

SHIELD PLATE



C1	18P/RH
C2	0.001/YD
C3	0.01
C4	0.001/YD
C5	50V 10
C7	0.01
C8	220P
C9	0.001/YD
C10	0.022
C11	0.01
C12	0.047
C13	0.047
C14	0.047(SR)
C15	50V 4.7
C16	0.047
C17	0.001/YD
C18	50V 10
C19	0.001/YD
C20	50V 1
C21	0.01
C22	0.0047
C23	0.0047(SR)
C24	50V 2.2
C30	0.01
C31	25V 47
C32	0.001/YD
C33	68P/CH
C101	220P/CH
C102	56P/CH
C103	220P/CH

C104	0.001/YD
C105	0.01/YD
C106	27P/UJ
C108	220P/UJ
C109	0.01
C110	0.0047
C111	0.001/YD
C112	0.01
C113	470P/UJ
C114	0.01
C115	0.001/YD
C116	18P/UJ
C200	25V 470
C201	0.1(SR)
C202	10V 220
C203	50V 2.2
C204	25V 1000
C205	50V 1
C207	0.1(SR)
C208	0.0047(SR)
C209	0.047(SR)
C210	0.001/YD
C212	25V 33
C213	0.0022(SR)
C214	0.0033(SR)
C215	0.0047
C217	25V 47
C218	0.01
C219	0.001/YD
C220	0.001/YD

C300	0.0047
C301	33P/CH
C302	50V 2.2
C303	50V 2.2
C304	0.001/YD
C305	270P/CH
C306	330P
C307	0.047
C308	0.047(SR)
C309	6.3V 330
C310	0.01
C311	0.01
C312	47P/UJ
C313	0.01
C314	39P/UJ
C315	330P/UJ
C316	100P/UJ
C317	68P
C318	15P/CH
C319	39P
C320	0.01
C322	10V 220
C400	0.0047
C401	25V 47
C402	25V 47
C403	16V 100
C404	0.01
C405	0.001/YD


R1	470	1/4W
R2	5.6K	
R3	3.3K	
R4	560	
R5	220	1/4W
R6	1K	
R7	3.3K	
R8	3.3	
R9	1K	
R10	470	
R11	470	
R12	330	
R13	180K	
R14	68	
R15	680	
R16	1K	
R17	18K	
R18	2.2K	
R19	100	
R20	330	
R21	100	
R22	18K	
R23	22K	
R24	10K	1/4W
R25	33K	
R26	68K	
R27	56K	
R28	56K	
R29	56K	
R30	68K	

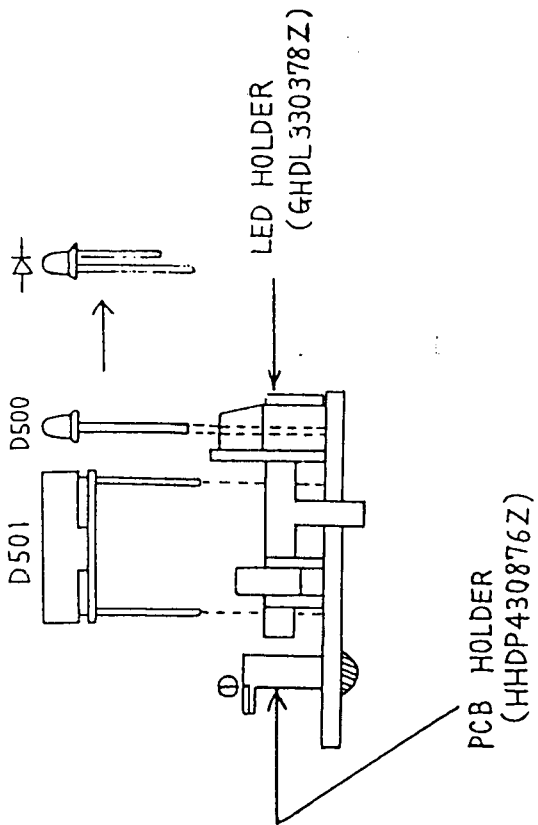
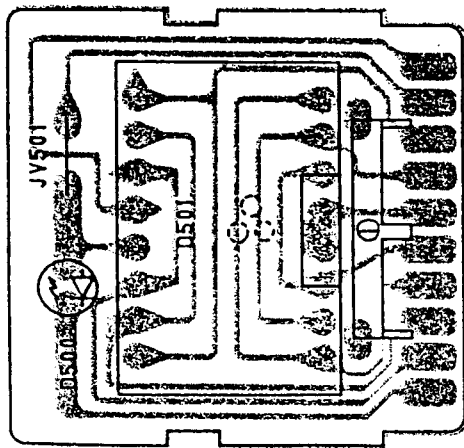
R31	8 0K	
R32	3 0	
R33	1.5K	
R34	1.5K	
R35	10K	
R36	27K	
R37	47K	
R38	10K	
R40	330	1/4W
R41	100	
R42	470K	
R100	2.2K	
R101	220 1WS	
R102	18	
R103	2.2	
R104	4.7	
R105	220	
R106	100	
R107	33	
R108	8.2K	
R109	15K	
R110	180	
R111	180	
R112	5.6K	
R113	10K	
R114	15K	
R116	150	
R200	1.5	
R201	100K	

R202
R204
R205
R206
R207
R208
R209
R210
R211
R212
R213
R300
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
R312
R313
R315
R316
R317





PC500 PA-362AA 2/2 (TOP VIEW)



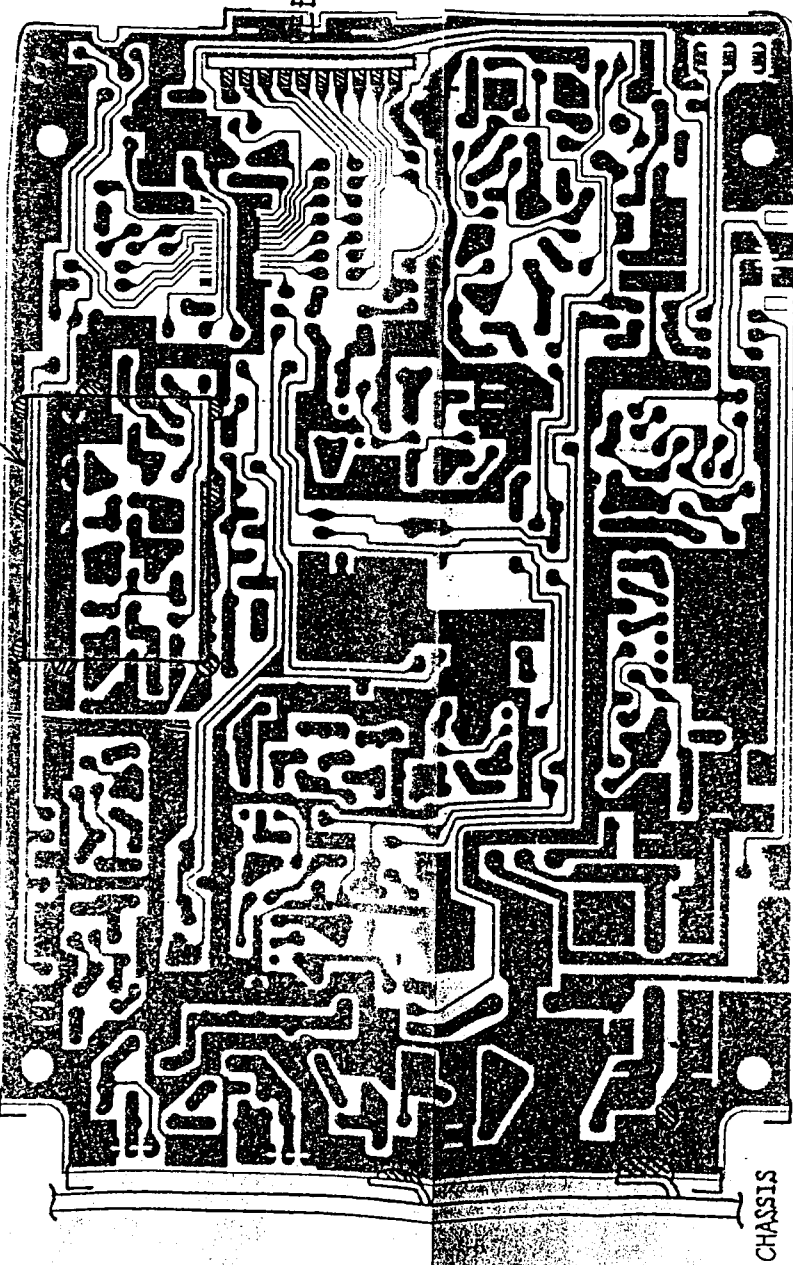
D500	TLR124	
D501	LDR204ALD	

JV501	5.0

TITLE LED PCB  
 PARTS ASSEMBLY TOP VIEW  
 DRAWING NO. E24-10614

SHIELD PLATE : HSDP430877Z

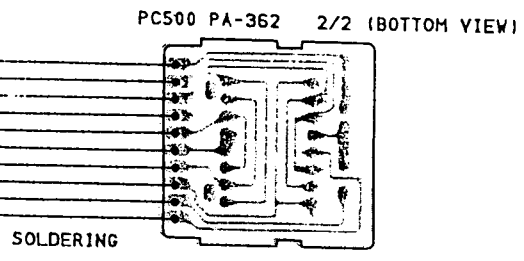
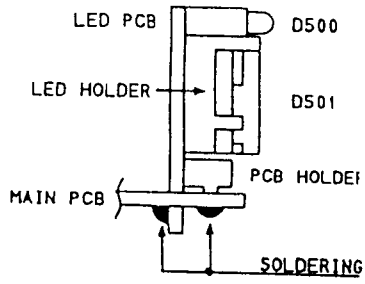
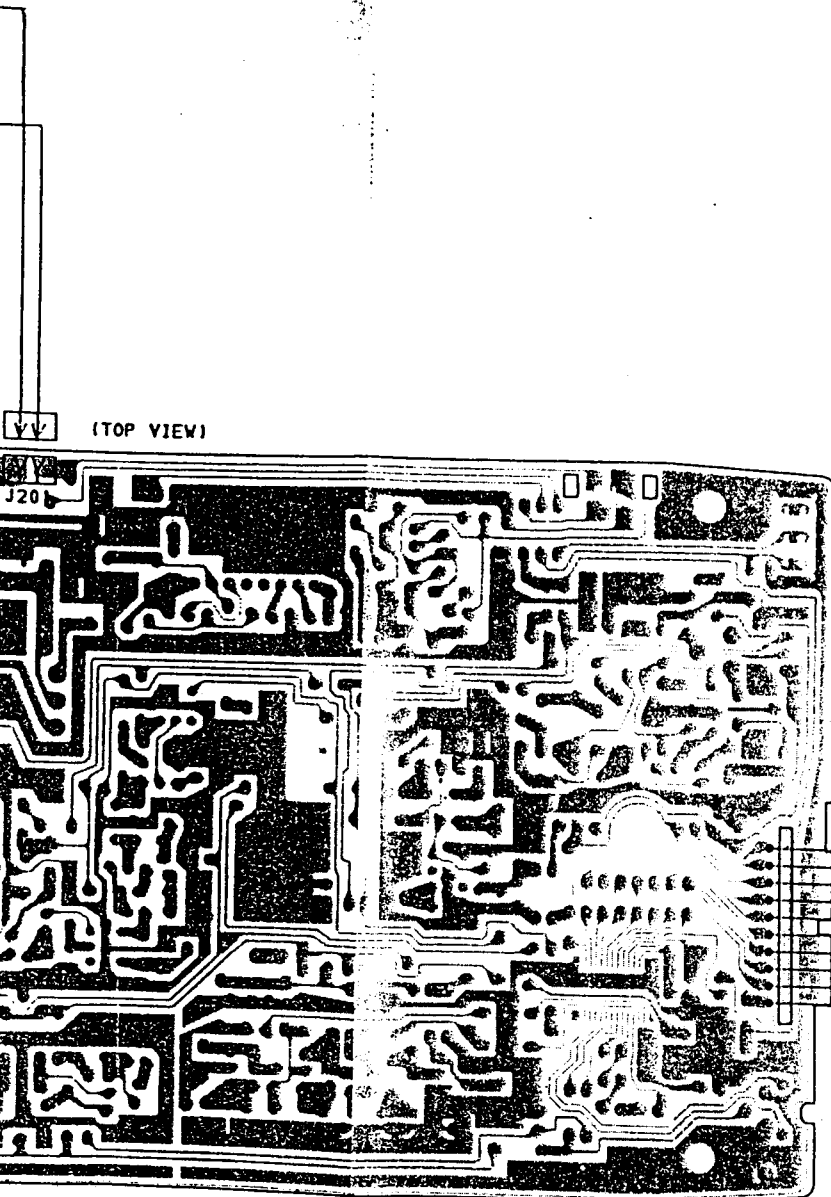
PC001 PA-362 1/2 (BOTTOM VIEW)



⊘ SOLDERING  
// - PATTERN CUT

TITLE	MAIN PCB
PARTS ASSY BOTTOM	
DRAWING NO.	E24-10613

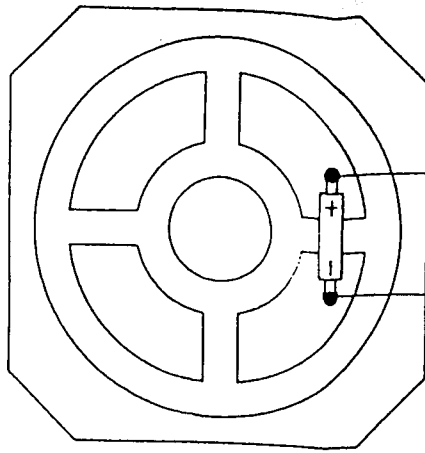
3B



TITLE	WIRING DIAGRAM
DRAWING NO.	E33-3484

3A

SPEAKER  
SP600 SP-312



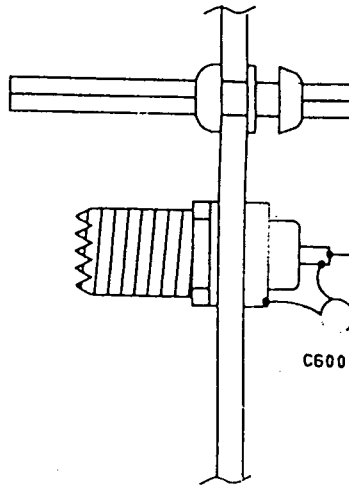
WA600 W-072028 GRY

GRY

PC001 PA-362 1/2 J20 (TOP VIEW)

DC CODE  
WP600 WZ-1105

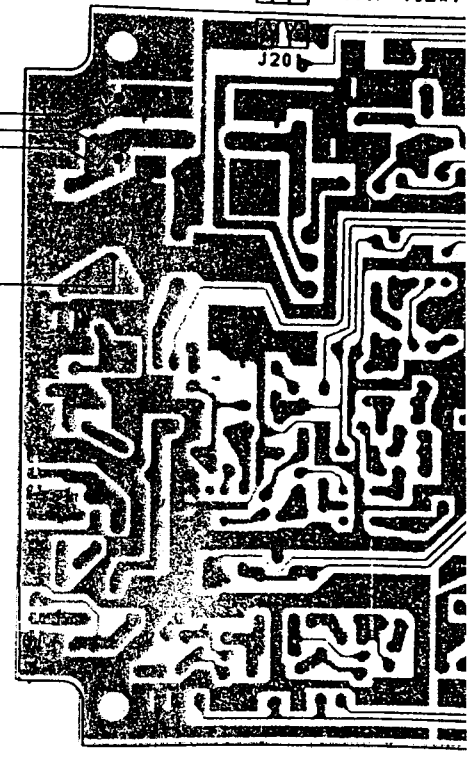
ANT. JACK  
J600 JK-425



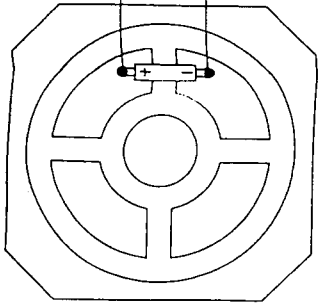
W600 3-30-10 WHT

C600 150P/UJ

CHASSIS



3B

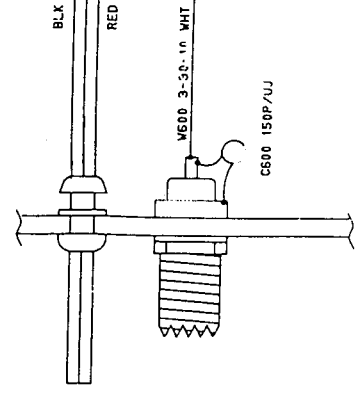
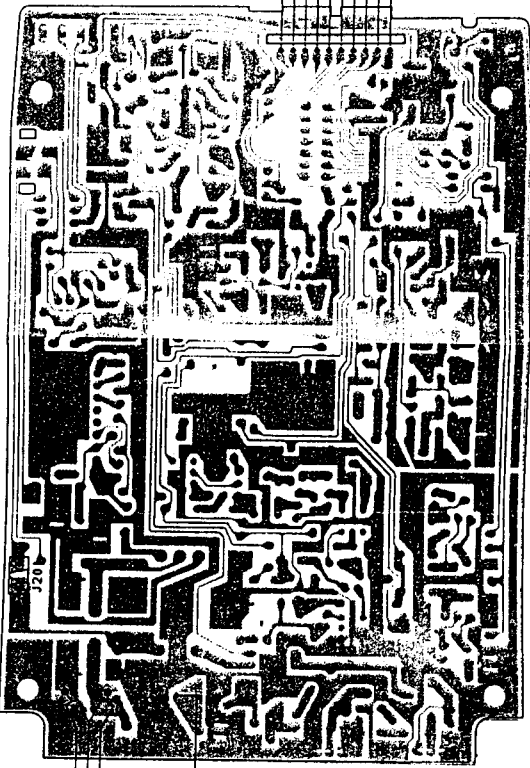


SPEAKER  
 SP600 SP-312

W600 V-072028 GRY

GRY

PC001 PA-362 1/2 (TOP VIEW)



DC CODE  
 W600 WZ-1105

ANT. JACK  
 J600 JK-425

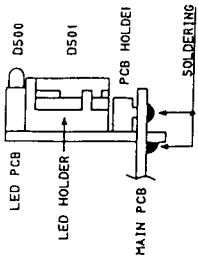
BLK

RED

W600 3-90-10 WHT

C600 150P/UJ

CHASSIS



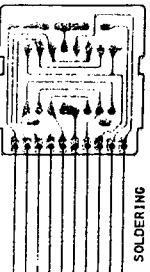
LED PCB

LED HOLDER

MAIN PCB

SOLDERING

PC500 PA-362 2/2 (BOTTOM VIEW)

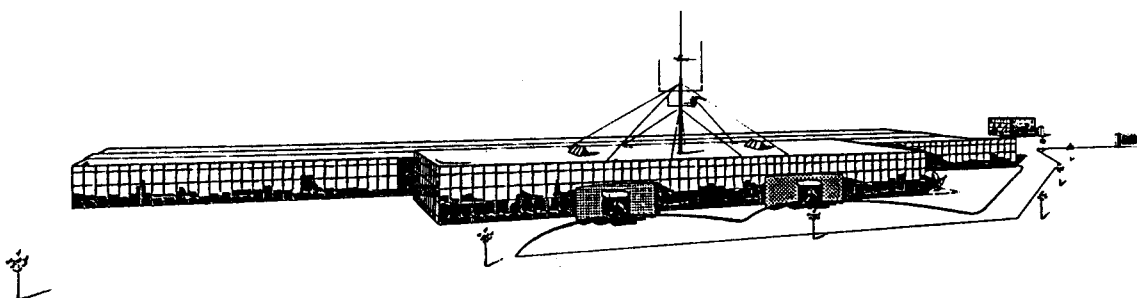


SOLDERING

TITLE	WIRING DIAGRAM
DRAWING NO.	E33-3484

3A

Groupe  
**PRESIDENT**  
E L E C T R O N I C S



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