BOSS®
AUDIO SYSTEMS

CHAOS AMPLIFIERS
Service Manual

MODEL: CH700

SPECIFICATIONS

Maximum power output (2 Ohms): 600W x 2ch
RMS power Output: 200W x 2ch
Bridged Power Output: 1200W x 1ch
Frequency response: 9 - 50KHz
Harmonic distortion: 0.01%
S/N Ratio: 130dB
Power Source Voltage: 14.4V
Ground: Negative
Power consumption: 25A(with 125Wx2 rated output)
External dimensions: 300(W)x65(H)x356(D)mm

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them. The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

2. Place the parts and wiring back in their original positions after replacement or re-wiring. For proper circuit construction, use of insulation tubes, bonding, gaps to PCB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection. If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair. Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots. If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

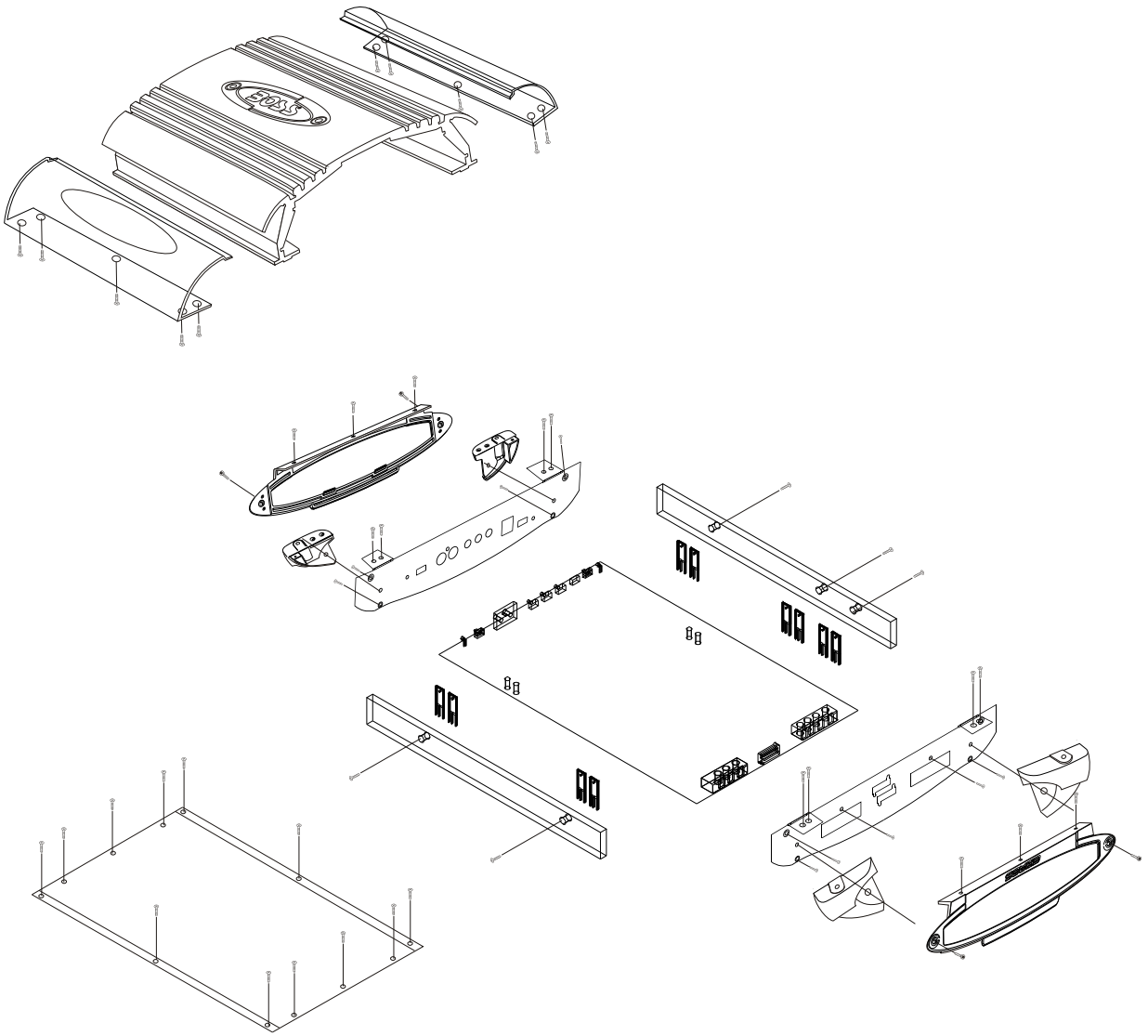
4. Caution in removal and making wiring connection to the parts for the automobile. Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.
Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

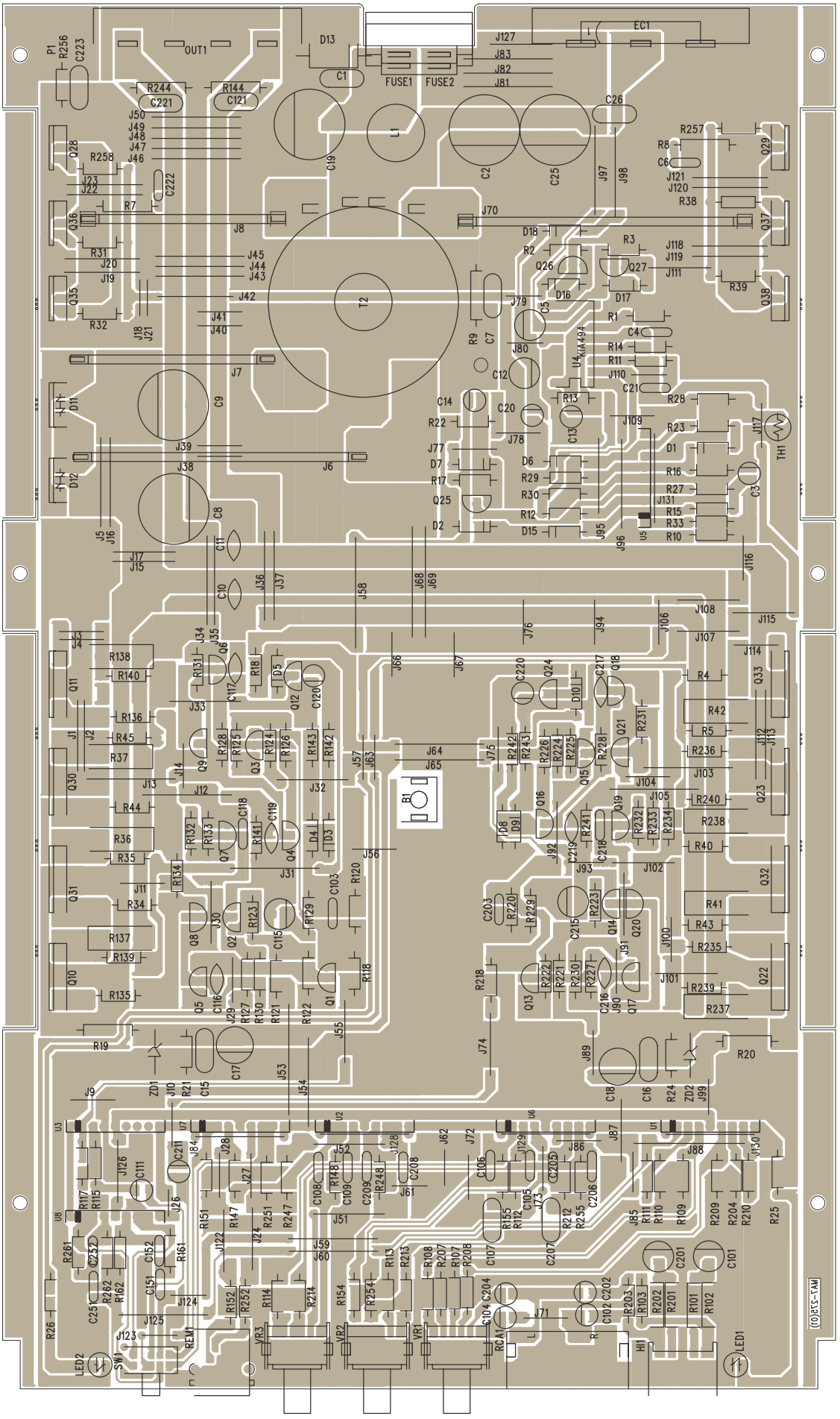
6. Cautions in handling flexible PCB
Before working with a soldering iron, make sure that the iron tip temperature is around 270... Take care not to apply the iron tip repeatedly(more than three times) to the same patterns. Also take care not to apply the tip with force.

7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

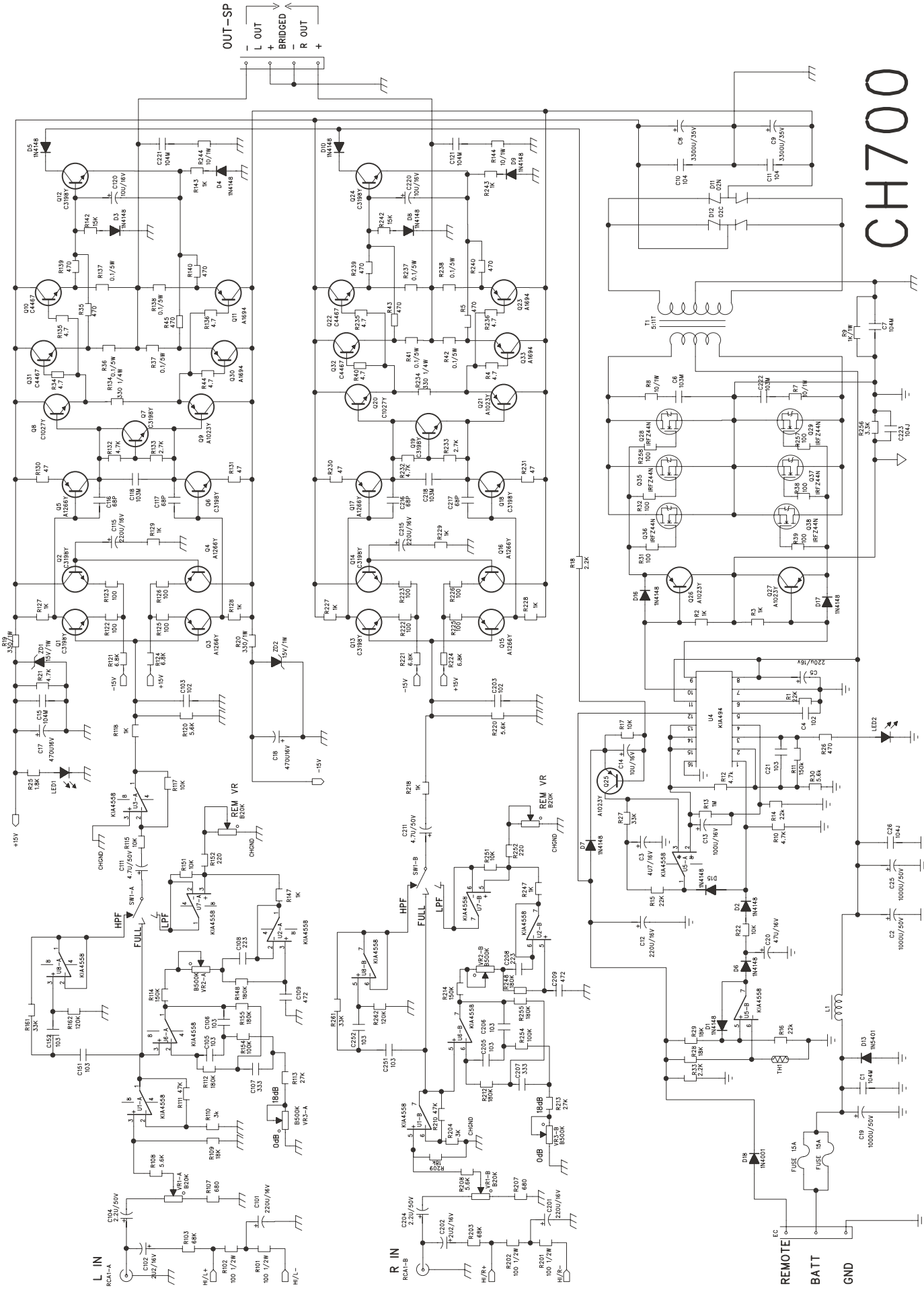
EXPLODED VEIW



PRINTED CIRCUIT BOARD



CIRCUIT DIAGRAM



PARTS LIST - 1

Part Number	desc	Location	qty
CR-2000-X1-VOS14	RCA Jack	RCA1	1
CT-SOCKET0-4MA17	Speaker terminal		1
CT-SOCKET1-3MA17	Power terminal		1
CW-50000X0-H0025	High input Jack		1
EC-C4104X0-Z6769	C Cap 0.1(Z)	C10,11	2
EC-C4220X0-D5050	C Cap 22PF(D)	C119,219	2
EC-C4680X0-J5050	C Cap 68PF(J)	C116,117,216,217	4
EC-E2107X0-M50A1	E Cap 100UF/16	C13	1
EC-E2227X0-M63A1	E Cap 220UF/16	C5,12,101,115,201,215	6
ER-OG683X0-H2526	Resistor 68K 1/4W	R103,203	2
EC-E2476X0-M50A1	E Cap 47UF/16V	C20	1
ER-OG824X0-H2526	Resistor 820K 1/4W	R23	1
EC-E2477X0-MA0A3	E Cap 470UF/16	C17,18	2
ER-HG153X0-HXXXX	THERMISTOR 150K	TH1	1
EC-E3106X0-M50A1	E Cap 10UF/25V	C14,120,220	3
ER-CS001X0-VE0I0	SLR0.1 5W J	R36,37,41,238	4
EC-E4108X0-MA3B5	E Cap 1000/50V	C2,19,25	3
EW-CS08XX0-05AA0	Bare Wire 8MM	J9~11,29,35,53,67,68,81,94,99,100,106~109,110	17
EC-E4225X0-M50A1	E Cap 2.2UF/50	C102,104,202,204	4
EW-CS10XX0-05AA0	Bare Wire 10MM	J13,16~18,24~26,28,36,37,46~49,51,52,54,55,58,59,	35
EC-E4475X0-M50A1	E Cap 4.7UF/50	C3,111,211	3
		63,64,71,74,75,82,83,86,89,90,97,101,102,104,105	
EC-E6338X0-MA6C0	E Cap 3300/35V	C8,9	2
EW-CS14XX0-05AA0	Bare Wire 14MM	J1,38,44,45,56,57,70,84,91,95	10
EC-M5102X0-J5590	Mylar Cap 0.001	C4,103,203	3
EW-CS16XX0-05AA0	Bare Wire 16MM	J2,3,19~23,27,30~34,40~43	17
EC-M5103X0-J5590	Mylar Cap 0.01	C6,21,105,106,118,151,152,205,206,218,222,251,252	13
EW-CS20XX0-05AA0	Bare Wire 20MM	J8,14,15,39,50,60,61,72,76~79,85,87,92,93,98,103	18
EC-M5104X0-JA0A3	Mylar Cap 0.1	C1,7,15,16,26,121,221,223	8
EW-CS25XX0-05AA0	Bare Wire 25MM	J12,96	2
EC-M5223X0-J66A3	Mylar Cap 0.022	C108,208	2
ER-OG273X0-H2526	Resistor 27K 1/4W	R113,213	2
EC-M5333X0-J82A1	Mylar Cap 0.033	C107,207	2
ER-OG184X0-H2526	Resistor 180K 1/4W	R112,148,155,212,248,255	6
EC-M5472X0-J5090	Mylar Cap 0.0047	C109,209	2
ER-OG124X0-H2526	Resistor 120K 1/4W	R162,262	2
ED-R2502C0-H0000	ESAC25-02C	D12	1
ER-OG681X0-H2526	Resistor 680 1/4W	R107,207	2
ED-R2502N0-H0000	ESAC25-02N	D11	1
ER-OG102X0-HA04C	Resistor 1K 1W	R9	1
ED-R4001X0-H0000	Diode IN-4001	D18	1
ER-OG331X0-HA04C	Resistor 330 1W	R19,20	2
ED-R5401X0-H0000	Diode IN-5401	D13	1
ED-Z15VXX0-H4744	ZENER IN4744	ZD1,2	2
EE-C23X5X0-10302	LED Red 3MM	LED2	1
EE-C53X5X0-10302	LED Green 3MM	LED1	1
EO-IMA7275-VXXX6	Transformer	T1	1
EO-VMA924X-V8025	coil	L1	1
ER-CS001X0-VE0I0	SLR0.1Ω5W J	R36,37,41,42,137,138,237,238,	8
ER-CS001X0-VE0I0	SLR0.1Ω5W J	R36,37,41,42,137,138,237,238,	8
ER-HG153X0-HXXXX	THERMISTOR 150K	TH1	1
ER-HG153X0-HXXXX	THERMISTOR 150K	TH1	1
ER-OG047X0-T2526	Resistor 4.7Ω 1/4W	R4,34,40,44,135~6,235~6	8

PARTS LIST - 2

ER-OG100X0-HA04C	Resistor 10Ω 1W	R7,8,144,244,	4
ER-OG100X0-HA04C	Resistor 10Ω 1W	R7,8,144,244,	4
ER-OG101X0-T2526	Resistor 100Ω 1/4W	R31,32,38,39,122,123,125,126,222,223,225,226,257,258	14
ER-OG101X0-T5039	Resistor 100Ω1/2W	R101,102,201,202,	4
ER-OG101X0-T5039	Resistor 100Ω1/2W	R101,102,201,202,	4
ER-OG102X0-HA04C	Resistor 1KΩ 1W	R9	1
ER-OG102X0-HA04C	Resistor 1KΩ 1W	R9	1
ER-OG102X0-T2526	Resistor 1K 1/4W	R2,3,118,127~129,143,147,218,227~229,243,247	14
ER-OG103X0-T2526	Resistor 10K 1/4W	R17,22,115,117,151,251	6
ER-OG104X0-T2526	Resistor 100K 1/4W	R154,254	2
ER-OG105X0-T2526	Resistor 1M 1/4W	R13	1
ER-OG124X0-T2526	Resistor 120K 1/4W	R162,262	2
ER-OG153X0-T2526	Resistor 15K 1/4W	R141,142,241~2	4
ER-OG154X0-T2526	Resistor 150K 1/4W	R11,114,214	3
ER-OG182X0-T2526	Resistor 1.8K 1/4W	R25	1
ER-OG183X0-T2526	Resistor 18K 1/4W	R28,29,109,209	4
ER-OG184X0-T2526	Resistor 180KΩ1/4W	R112,148,212,155,248,255,	6
ER-OG221X0-T2526	Resistor 220Ω 1/4W	R152,252	2
ER-OG222X0-T2526	Resistor 2.2K 1/4W	R18,33	2
ER-OG223X0-T2526	Resistor 22K 1/4W	R1,14,15,16	4
ER-OG272X0-T2526	Resistor 2.7K 1/4W	R133,233	2
ER-OG273X0-T2526	Resistor 27K 1/4W	R113,213	2
ER-OG302X0-T2526	Resistor 3K 1/4W	R110,204	2
ER-OG331X0-HA04C	Resistor 330Ω 1W	R19,20	2
ER-OG331X0-HA04C	Resistor 330Ω 1W	R19,20	2
ER-OG331X0-T2526	Resistor 330Ω 1/4W	R134,234	2
ER-OG333X0-T2526	Resistor 33K 1/4W	R27,161,261	3
ER-OG470X0-T2526	Resistor 47Ω 1/4W	R130,131,230,231	4
ER-OG471X0-T2526	Resistor 470Ω 1/4W	R5,26,35,43,45,139,140,239,240	9
ER-OG472X0-T2526	Resistor 4.7K 1/4W	R10,12,21,24,132,,232	6
ER-OG473X0-T2526	Resistor 47K 1/4W	R111,210	2
ER-OG562X0-T2526	Resistor 5.6K 1/4W	R30,108,208,120,220	5
ER-OG681X0-T2526	Resistor 680Ω 1/4W	R107,207	2
ER-OG682X0-T2526	Resistor 6.8K 1/4W	R121,124,221,224	4
ER-OG683X0-T2526	Resistor 68K 1/4W	R103,203	2
ES-S23D29X-V0098	Switch SK23D39	SW1	1
ET-C1023X0-PY000	Transistor KTA1023-Y	Q9,21,25~27	5

PARTS LIST - 3

ET-C1027X0-NY000	Transistor KTC1027-Y	Q8,20	2
ET-C1266X0-PY000	Transistor A1266Y	Q3~5,15~17	6
ET-C3198K0-NY000	Transistor KTC3198-Y	Q1,2,6,7,12~14,18,19,24	10
ET-CB688X0-P0000	Transistor KTB688-O	Q11,23,30,33	4
ET-CD718X0-N0000	Transistor KTD718-O	Q10,22,31,32	4
ET-FFZ48N0-X0000	Mosfet IRFZ 48N	Q28,29,35,36,37,38	6
EW-CS08XX0-05AA0	Bare wire 8MM	J18,21,61,62,79,80,93,99,110,111	10
EW-CS10XX0-05AA0	Bare wire 10MM	J3,4,9~11,14,27~29,38~41,56,57,63,66,67,71~73,75~78,85, 86,89,90~94,100,104,106,109,114,116,117	37
EW-CS14XX0-05AA0	Bare wire 14MM	J15,17,24~26,30,55,74,87,91,92,101,102,107,108,115	16
EW-CS16XX0-05AA0	Bare wire 16MM	J1,2,32,33,51,52	6
EW-CS17XX0-05AA0	Bare wire 17MM	J19,20,22,23,42,95	10
EW-CS20XX0-05AA0	Bare wire 20MM	J5,12,13,16,31~37,43~50,54,59,60,64,65,81~84,96~98,103,105,112,113	33
EW-CS25XX0-05AA0	Bare wire 25MM	J53,58,68,69,88,	5
EW-CS25XX0-05AA0	Bare wire 25MM	J53,58,68,69,88,	5
II-4558SX0-V0009	IC KA4558S	U1~3,5~8	7
II-DBL494X-H0016	IC S-494P	U4	1
VR-BN203X0-V0A06	VR 20KB T10	VR1	1
VR-BN504X0-V0A06	VR 500KB T10	VR2,3	2