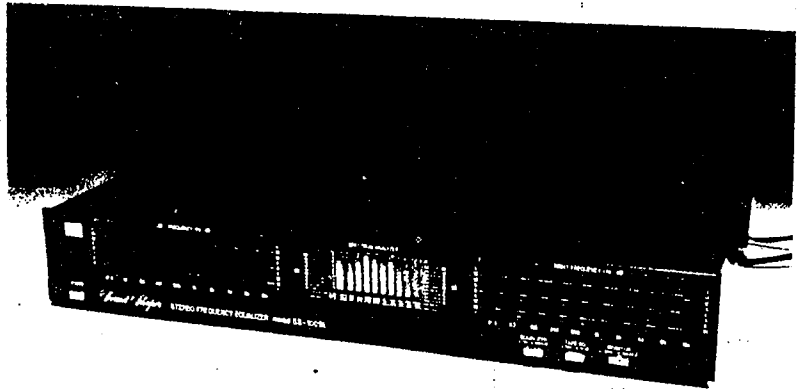




MODEL NO. : SS-100SL-UL/CSA

STEREO TONE EQUALIZER AND

SPECTRUM INDICATOR

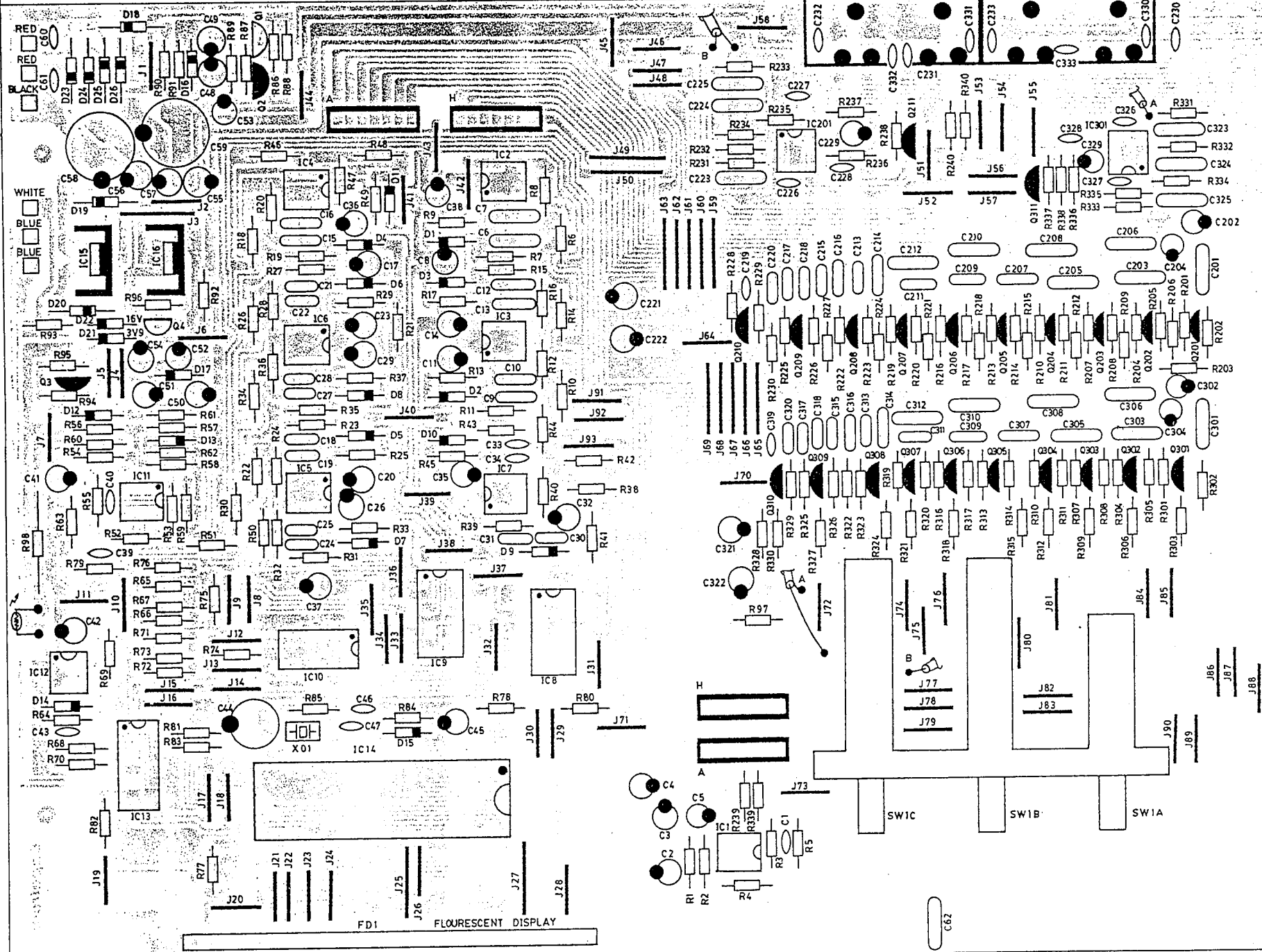


SPECIFICATION

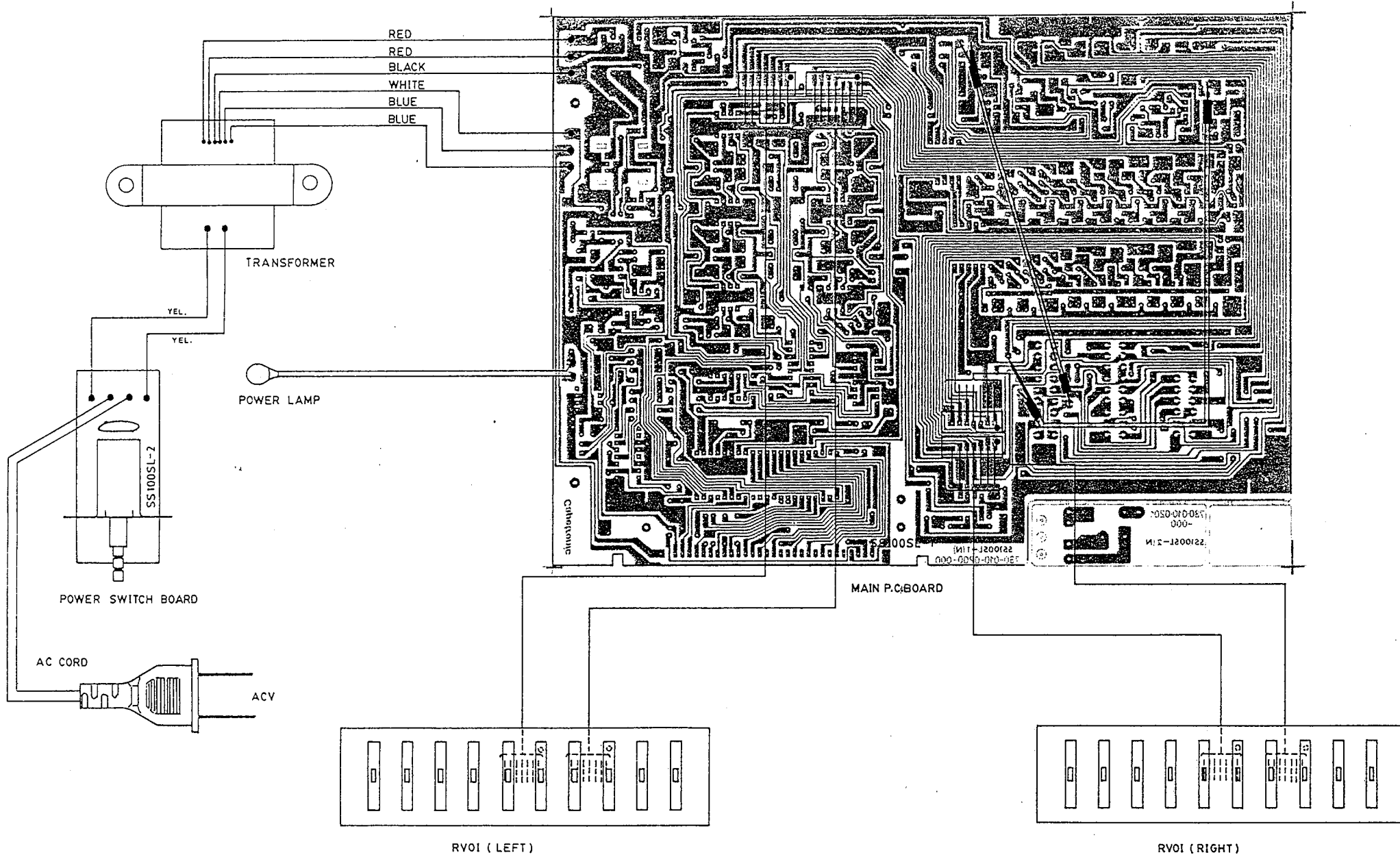
FREQUENCY RESPONSE W/ ALL CONTROLS CENTERED	20Hz-20kHz ± 0.5 dB
T.H.D. (20Hz-20kHz)	$< 0.03\%$
MAXIMUM OUTPUT (1kHz)	> 6.5 V
DISPLAY RANG PER DIGIT	2, ± 1 dB
GAIN W/ ALL CONTROLS CENTERED	± 1 dB
MAX. BOOST/CUT	14, ± 3 dB
POWER SUPPLY	AC 110/220V, 50Hz
POWER CONSUMPTION	20 WATT
DIMENSION	W17" X H2-1/2" X D8"
WEIGHT	3.6kg (7.92 lbs)

SERVICE PUBLICATION

Note: All the specifications and features are subject to change without notice



MODEL : SS100SL WIRING LAYOUT (UL/CSA)



REPLACEMENT PARTS LIST

Ref No.	Parts No.	Description
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Note : All resistors are carbon type, +-5% and 1/4W, unless otherwise noted.

R1	993-104-3200-039	100K ohm
R2	993-102-3200-039	1K ohm
R3,4	993-103-3200-039	10K ohm
R5	993-222-3200-039	2.2K ohm
R6	993-183-3200-039	18K ohm
R7	993-204-3200-039	200K ohm
R8	993-363-3200-039	36K ohm
R9	993-222-3200-039	2.2K ohm
R10	993-223-3200-039	22K ohm
R11	993-204-3200-039	200K ohm
R12	993-333-3200-039	33K ohm
R13	993-222-3200-039	2.2K ohm
R14	993-113-3200-039	11K ohm
R15	993-104-3200-039	100K ohm
R16	993-183-3200-039	18K ohm
R17	993-222-3200-039	2.2K ohm
R18	993-562-3200-039	5.6K ohm
R19	993-563-3200-039	56K ohm
R20	993-822-3200-039	8.2K ohm
R21	993-222-3200-039	2.2K ohm
R22	993-562-3200-039	5.6K ohm
R23	993-563-3200-039	56K ohm
R24	993-113-3200-039	11K ohm
R25	993-222-3200-039	2.2K ohm
R26	993-622-3200-039	6.2K ohm
R27	993-623-3200-039	62K ohm
R28	993-123-3200-039	12K ohm
R29	993-222-3200-039	2.2K ohm
R30	993-682-3200-039	6.8K ohm
R31	993-683-3200-039	68K ohm
R32	993-113-3200-039	11K ohm
R33	993-222-3200-039	2.2K ohm
R34	993-472-3200-039	4.7K ohm
R35	993-473-3200-039	47K ohm
R36	993-912-3200-039	9.1K ohm
R37	993-222-3200-039	2.2K ohm
R38	993-822-3200-039	8.2K ohm
R39	993-823-3200-039	82K ohm
R40	993-123-3200-039	12K ohm
R41	993-222-3200-039	2.2K ohm
R42	993-562-3200-039	5.6K Ohm
R43	993-563-3200-039	56K Ohm
R44	993-123-3200-039	12K Ohm
R45	993-222-3200-039	2.2K Ohm
R46	993-224-3200-039	220K Ohm

Please check your alternation notice before ordering parts.

Ref. No.	Parts No.	Description
R47	993-103-3200-039	10K Ohm
R48, 49	993-222-3200-039	2.2K Ohm
R50	993-184-3200-039	180K Ohm
R51, 52	993-223-3200-039	22K Ohm
R53	993-363-3200-039	36K Ohm
R54	993-103-3200-039	10K Ohm
R55	993-391-3200-039	390 Ohm
R56	993-273-3200-039	27K Ohm
R57	993-753-3200-039	75K Ohm
R58	993-184-3200-039	180K Ohm
R59	993-183-3200-039	18K Ohm
R60	993-682-3200-039	6.8K Ohm
R61	993-821-3200-039	820 Ohm
R62	993-751-3200-039	750 Ohm
R63	993-182-3200-039	1.8K Ohm
R64	993-333-3200-039	33K Ohm
R65	993-182-3200-039	1.8K Ohm
R66	993-363-3200-039	36K Ohm
R67	993-183-3200-039	18K Ohm
R68	993-363-3200-039	36K Ohm
R69	993-183-3200-039	18K Ohm
R70	993-363-3200-039	36K Ohm
R71	993-183-3200-039	18K Ohm
R72, 73	993-363-3200-039	36K Ohm
R74-83	993-103-3200-039	10K Ohm
R84	993-563-3200-039	56K Ohm
R85	993-105-3200-039	1M Ohm
R86	993-223-3200-039	22K Ohm
R87	993-124-3200-039	120K Ohm
R88	993-274-3200-039	270K Ohm
R89	993-823-3200-039	82K Ohm
R90	993-821-3200-039	820 Ohm
R91	993-333-3200-039	33K Ohm
R92	993-102-3200-039	1K Ohm
R93	993-222-3200-039	2.2K Ohm
R94	993-392-3200-039	3.9K Ohm
R95	993-103-3200-039	10K Ohm
R96	993-681-3200-039	680 Ohm
R97	993-102-3200-039	1K Ohm
R98	993-470-6200-039	47 Ohm 1W
R201	993-223-3200-039	22K Ohm
R202	993-102-3200-039	1K Ohm
R203	993-123-3200-039	12K Ohm
R204	993-243-3200-039	24K Ohm
R205	993-821-3200-039	820 Ohm
R206	993-123-3200-039	12K Ohm
R207	993-393-3200-039	39K Ohm
R208	993-621-3200-039	620 Ohm
R209	993-123-3200-039	12K Ohm
R210	993-333-3200-039	33K Ohm

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description
R211	993-561-3200-039	560 Ohm
R212	993-123-3200-039	12K Ohm
R213	993-363-3200-039	36K Ohm
R214	993-561-3200-039	560 Ohm
R215	993-123-3200-039	12K Ohm
R216	993-393-3200-039	39K Ohm
R217	993-621-3200-039	620 Ohm
R218	993-123-3200-039	12K Ohm
R219	993-363-3200-039	36K Ohm
R220	993-561-3200-039	560 Ohm
R221	993-123-3200-039	12K Ohm
R222	993-333-3200-039	33K Ohm
R223	993-561-3200-039	560 Ohm
R224	993-123-3200-039	12K Ohm
R225	993-433-3200-039	43K Ohm
R226	993-681-3200-039	680 Ohm
R227	993-123-3200-039	12K Ohm
R228	993-363-3200-039	36K Ohm
R229	993-621-3200-039	620 Ohm
R230	993-123-3200-039	12K Ohm
R231	993-154-3200-039	150K Ohm
R232	993-823-3200-039	82K Ohm
R233	993-754-3200-039	750K Ohm
R234	993-273-3200-039	27K Ohm
R235, 236	993-123-3200-039	12K Ohm
R237	993-104-3200-039	100K Ohm
R238	993-391-3200-039	390 Ohm
R239	993-104-3200-039	100K Ohm
R240	993-472-3200-039	4.7K Ohm
R301	993-223-3200-039	22K Ohm
R302	993-102-3200-039	1K Ohm
R303	993-123-3200-039	12K Ohm
R304	993-243-3200-039	24K Ohm
R305	993-821-3200-039	820 Ohm
R306	993-123-3200-039	12K Ohm
R307	993-393-3200-039	39K Ohm
R308	993-621-3200-039	620 Ohm
R309	993-123-3200-039	12K Ohm
R310	993-333-3200-039	33K Ohm
R311	993-561-3200-039	560 Ohm
R312	993-123-3200-039	12K Ohm
R313	993-363-3200-039	36K Ohm
R314	993-561-3200-039	560 Ohm
R315	993-123-3200-039	12K Ohm
R316	993-393-3200-039	39K Ohm
R317	993-621-3200-039	620 Ohm
R318	993-123-3200-039	12K Ohm
R319	993-363-3200-039	36K Ohm
R320	993-561-3200-039	560 Ohm

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description
R321	993-123-3200-039	12K Ohm
R322	993-333-3200-039	33K Ohm
R323	993-561-3200-039	560 Ohm
R324	993-123-3200-039	12K Ohm
R325	993-433-3200-039	43K Ohm
R326	993-681-3200-039	680 Ohm
R327	993-123-3200-039	12K Ohm
R328	993-363-3200-039	36K Ohm
R329	993-621-3200-039	620 Ohm
R330	993-123-3200-039	12K Ohm
R331	993-154-3200-039	150K Ohm
R332	993-823-3200-039	82K Ohm
R333	993-754-3200-039	750K Ohm
R334	993-273-3200-039	27K Ohm
R335,336	993-123-3200-039	12K Ohm
R337	993-104-3200-039	100K Ohm
R338	993-391-3200-039	390 Ohm
R339	993-104-3200-039	100K Ohm
R340	993-472-3200-039	4.7K Ohm

CAPACITOR

Note : All capacitors are electrolytic type, unless otherwise noted.
J=+-5%, K=+-10%, M=+-20%, Z=+80%-20% VT=Venting Type

C1	955-390-4280-217	39pF/50V	(J) Ceramic
C2	940-047-1600-067	4.7uF/50V	(M)
C3-5	940-100-1600-067	10uF/50V	(M)
C6,7	931-104-4000-047	0.1uF/50V	(K) Mylar
C8	940-220-1600-067	22uF/50V	(M)
C9,10	931-473-4000-047	0.047uF/50V	(K) Mylar
C11	940-100-1600-067	10uF/50V	(M)
C12,13	931-473-4000-047	0.047uF/50V	(K) Mylar
C14	940-100-1600-067	10uF/50V	(M)
C15,16	931-473-4000-047	0.047uF/50V	(K) Mylar
C17	940-047-1600-067	4.7uF/50V	(M)
C18,19	931-223-4000-047	0.022uF/50V	(K) Mylar
C20	940-047-1600-067	4.7uF/50V	(M)
C21,22	931-103-4000-047	0.01uF/50V	(K)
C23	940-047-1600-067	4.7uF/50V	(M)
C24,25	931-472-4000-047	0.0047uF/50V	(K) Mylar
C26	940-047-1600-067	4.7uF/50V	(M)
C27,28	931-332-4000-047	0.0033uF/50V	(K) Mylar
C29	940-047-1600-067	4.7uF/50V	(M)
C30,31	931-102-4000-047	0.001uF/50V	(K) Mylar
C32	940-047-1600-067	4.7uF/50V	(M)
C33,34	955-681-5280-217	680pF/50V	(K) Ceramic
C35,36	940-047-1600-067	4.7uF/50V	(M)
C37,38	940-101-1400-067	100uF/25V	(M)

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description	
C39,40	955-103-7280-217	0.01uF/50V	(Z) Ceramic
C41,42	940-100-1600-067	10uF/50V	(M)
C43	955-101-5280-217	100pF/50V	(K) Ceramic
C44	940-471-4300-067	470uF/16V	(Z)
C45	940-109-1600-067	1uF/50V	(M)
C46,47	955-221-5280-217	220pF/50V	(K) Ceramic
C48,49	948-220-1500-041	22uF/35V	(M) VT
C50-55	940-220-1600-067	22uF/50V	(M)
C56,57	940-109-1600-067	1uF/50V	(M)
C58,59	940-471-4500-067	470uF/35V	(Z)
C60,61	955-103-7380-047	0.01uF/100V	(Z) Ceramic
C62	959-472-1111-036	4700pF/AC250V	(M) Spark
C201	931-334-4000-047	0.33uF/50V	(K) Mylar
C202	940-339-1600-067	3.3uF/50V	(M) Mylar
C203	931-154-4000-047	0.15uF/50V	(K) Mylar
C204	940-229-1600-067	2.2uF/50V	(M)
C205	931-823-4000-047	0.082uF/50V	(K) Mylar
C206	933-824-3000-263	0.82uF/50V	(J) Metallized Film
C207	931-473-4000-047	0.047uF/50V	(K) Mylar
C208	931-474-4000-047	0.47uF/50V	(K) Mylar
C209	931-223-4000-047	0.022uF/50V	(K) Mylar
C210	931-224-4000-047	0.22uF/50V	(K) Mylar
C211	931-103-4000-047	0.01uF/50V	(K) Mylar
C212	931-104-4000-047	0.1uF/50V	(K) Mylar
C213	931-562-4000-047	0.0056uF/50V	(K) Mylar
C214	931-563-4000-047	0.056uF/50V	(K) Mylar
C215	931-272-4000-047	0.0027uF/50V	(K) Mylar
C216	931-333-4000-047	0.033uF/50V	(K) Mylar
C217	931-122-4000-047	0.0012uF/50V	(K) Mylar
C218	931-123-4000-047	0.012uF/50V	(K) Mylar
C219	955-681-5280-217	680pF/50V	(K) Ceramic
C220	931-682-4000-047	0.0068uF/50V	(K) Mylar
C221,222	940-101-1400-067	100uF/25V	(M)
C223-225	931-104-4000-047	0.1uF/50V	(K) Mylar
C226,227	956-103-5180-215	0.01uF/25V	(K) Semi-Conductor
C228	955-101-5280-217	100pF/50V	(K) Ceramic
C229	940-100-1600-067	10uF/50V	(M)
C230-233	955-101-5280-217	100pF/50V	(K) Ceramic
C301	931-334-4000-047	0.33uF/50V	(K) Mylar
C302	940-339-1600-067	3.3uF/50V	(M)
C303	931-154-4000-047	0.15uF/50V	(K) Mylar
C304	940-229-1600-067	2.2uF/50V	(M)
C305	931-823-4000-047	0.082uF/50V	(K) Mylar
C306	933-824-3000-263	0.82uF/50V	(J) Metallized Film
C307	931-473-4000-047	0.047uF/50V	(K) Mylar
C308	931-474-4000-047	0.47uF/50V	(K) Mylar
C309	931-223-4000-047	0.022uF/50V	(K) Mylar
C310	931-224-4000-047	0.22uF/50V	(K) Mylar
C311	931-103-4000-047	0.01uF/50V	(K) Mylar
C312	931-104-4000-047	0.1uF/50V	(K) Mylar

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description	
C313	931-562-4000-047	0.0056uF/50V	(K) Mylar
C314	931-563-4000-047	0.056uF/50V	(K) Mylar
C315	931-272-4000-047	0.0027uF/50V	(K) Mylar
C316	931-333-4000-047	0.033uF/50V	(K) Mylar
C317	931-122-4000-047	0.0012uF/50V	(K) Mylar
C318	931-123-4000-047	0.012uF/50V	(K) Mylar
C319	955-681-5280-217	680pF/50V	(K) Ceramic
C320	931-682-4000-047	0.0068uF/50V	(K) Mylar
C321,322	940-101-1400-067	100uF/25V	(M)
C323-325	931-104-4000-047	0.1uF/50V	(K) Mylar
C326,327	956-103-5180-215	0.01uF/25V	(K) Semi-Conductor
C328	955-101-5280-217	100pF/50V	(K) Ceramic
C329	940-100-1600-067	10uF/50V	(M)
C330-333	955-101-5280-217	100pF/50V	(K) Ceramic

INTERGRATED CIRCUIT & TRANSISTORS

IC1-7	851-045-5803-128	NJM4558D
or	851-052-1803-243	M5218P
or	851-045-5823-307	MC4558C
IC8,9	852-040-5107-044	HD14051BP
or	852-040-5107-066	HCF4051BE
or	852-040-5107-128	NJM4051BD
or	852-040-5107-043	MC14051BCP
IC10	852-040-1306-243	M4013BP
or	852-040-1306-066	HCF4013BE
or	852-040-1306-128	NJM4013B
or	852-040-1306-043	MC14013B
IC11	851-045-5803-128	NJM4558D
or	851-052-1803-243	M5218P
or	851-045-5803-307	MC4558C
IC12	851-029-0303-128	NJM2903D
IC13	852-040-5007-243	M4050BP
or	852-040-5007-066	HCF4050BE
or	852-040-5007-043	MC14050BP
or	852-040-5007-128	NJM4050BP
IC14	840-387-5542-044	HD38755-A72
IC15	843-078-1530-128	NJM7815A
or	843-178-1530-052	uPC78M15H
IC16	843-079-1530-128	NJM7915A
or	843-079-1530-052	uPC7915H
IC201,301	851-052-1803-243	M5218P
or	851-045-5803-128	NJM4558D
Q1	880-073-3200-052	2SA733Q
Q2	880-094-5200-052	2SC945Q
or	880-094-5300-052	2SC945P
Q3	881-078-9101-044	2SD789B
or	881-078-9201-044	2SD789C
or	881-161-6200-052	2SD1616L
or	881-161-6300-052	2SD1616K

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description
Q4	881-074-0101-044	2SB740B
	or 881-074-0201-044	2SB740C
	or 881-111-6200-052	2SB1116L
	or 881-111-6300-052	2SB1116K
Q201-210	880-263-4200-089	2SC634S
	or 880-263-4300-089	2SC2634T
	or 880-184-2200-052	2SC1842F
Q211	880-184-1100-052	2SC1841F
Q301-310	880-263-4200-089	2SC2634S
	or 880-263-4300-089	2SC2634T
	or 880-184-2200-052	2SC1842F
Q311	880-184-1100-052	2SC2634S

DIODES & POWER TRANSFORMER

D1-16	860-414-8002-037	IN4148
D17	861-006-2122-052	6.2V 0.5W, Zener
D18-20	864-400-2003-088	IN4002
D21	861-003-7122-052	3.9V 0.5W, Zener
D22	861-016-0122-052	16V 0.5W, Zener
D23-26	864-400-2003-088	IN4002
PT1	790-148-0012-072	Power Transformer EI-48
	OR 790-148-0013-252	2-6032-2 EFU4821-22N UL/CSA
		Power Transformer EI-48
		k-0829C UL/CSA

DISPLAY & PHONE JACK & SWITCHES

FD1	610-000-0001-203	FLD Display DG-130Z
J01,02	678-000-0002-010	4 pin Phone Jack SQ3475
S1	890-103-6000-122	Push Switch SPUF31AE3B-CP
S2	891-105-1002-122	Power Switch SDLB1P027U-CP

LAMP & RESONATOR

PL1	611-012-0002-256	Pilot Lamp 12V 60mA w/280mm
		AWG26 UL Lead Wire
X01	760-004-0000-216	R400C Ceramic Resonator 400KHz +-2KHz
	or 760-004-0100-127	Ceramic Resonator
		PRF-0400RC05-00 400KHz +-0.5%

OTHERS

E1	730-010-0300-134	Main PCB
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Model No. : SS-100SL-UL/CSA
P.8/8

Ref. No.	Part No.	Description
E2	730-010-0301-134	Sub PCB
E3	671-070-0010-209	7P Connector Base
E4	690-215-0000-314	AC Cord UL/CSA 7F Blk STP-1
E5	702-020-0095-223	RCA Cable Length 95cm +0.5 -0
E6	986-503-1008-055	VR Ass'y B50KX10 140mm Flat Wire
E7	986-503-1002-055	VR Ass'y B50KX10 260mm Flat Wire

Please check your alternation notice before ordering parts.

Ref. No.	Part No.	Description
E2	730-010-0301-134	Sub PCB
E3	671-070-0010-209	7P Connector Base
E4	690-215-0000-314	AC Cord UL/CSA 7F Blk STP-1
E5	702-020-0095-223	RCA Cable Length 95cm +0.5 -0
E6	986-503-1008-055	VR Ass'y B50KX10 140mm Flat Wire
E7	986-503-1002-055	VR Ass'y B50KX10 260mm Flat Wire

MECHANICAL COMPONENT PART LIST

Ref. No.	Part No.	Part Name	Remarks	Qty.
M1	100-301-0000-291	Front Panel		1
M2	300-701-0022-004	Felt-Front Panel		2
M3	106-201-0085-291	Display Window		1
M4	301-101-0001-006	Double Tape	3 X 40	2
M5	301-101-0011-006	Double Tape	3 X 110	2
M6	106-401-0085-291	Indicator		1
M7	103-330-0041-291	Knob Slide		20
M8	110-003-0001-291	Button Joint (B)		3
M9	103-101-0011-269	Button Switch		3
M10	103-201-0011-269	Button Power		1
M11	110-003-0000-291	Button Joint (A)		1
M12	105-003-0008-076	Cord Stopper	2P4 Heyco	1
M13	115-001-0003-277	P-Rivet	3 X 4.5 Blk	4
M14	116-001-0028-212	Bind Type "A"		4
M15	115-101-0000-277	P-Rivet	Dia. 3 X 3.5 Blk	2
M16	106-003-0092-291	Filter Lens		1
M17	206-203-0054-288	Bottom Chassis		1
M18	206-203-0084-176	Top Cover		1
M19	204-301-0044-029	Lamp Bracket		1
M20	204-101-0044-283	Tube Bracket	Right	1
M21	204-201-0044-283	Tube Bracket	Left	1
M22	216-101-0000-213	Heatsink		2
M23				
M24	218-201-0084-176	Back Cover		1
M25	301-301-0011-007	Insulator		1
M26	301-701-0002-278	Leg		4
M27	301-801-0002-291	Lamp Holder		1
M28				
M29	300-501-0002-278	Tube Cushion		2
M30	300-501-0011-004	Cushion	18 X 18 X 9.5mm	5
M31				
M32	302-154-6312-210	UL Tube	Dia. 5 X 70mm	1
M33				
M34				
M35	300-103-0000-245	Filter Sheet		1
M36	311-701-0000-002	AC Cord Tag		1
M37	273-045-0808-024	Fibre Washer	Dia. 4.5 X Dia. 8 X 0.8	7
M38	273-004-0912-029	Fibre Washer	Dia. 4 X Dia. 9 X 1.2	2
M39	273-003-0808-024	Fibre Washer	Dia. 3.2 X Dia. 8 X 0.8	4
M40	270-004-1008-015	Metal Washer	Dia. 4.5 X Dia. 10 X 0.8	2
M41	280-000-3552-015	Nut	M3 X 0.5P	2
M42	240-013-0410-316	M. Screw	M4 X 10 CSK Blk	2
M43	240-013-0306-316	M. Screw	M3 X 6 CSK Blk	6
M44	240-020-0306-316	M. Screw	M3 X 6 BH	4
M45				
M46				
M47	241-300-0308-028	M. Screw	M3 X 8 PH Taptite Hard Steel	3
M48	241-303-0308-028	S. T. Screw	M3 X 8 PH Blk Taptite Hard Steel	9

Please check your alternation notice before ordering parts.

Ref. No.	Paart No.	Part Name	Remarks	Qty.
M49	241-363-0308-316	S. T. Screw	BT 3X8 WH Harded Steel	4
M50	240-220-0310-316	S. T. Screw	BT 3 X 10 BH	4
M51	240-223-0308-316	S. T. Screw	BT 3X8 BH Blk	4
M52	241-330-0406-015	S. T. Screw	M4 X 6 Taptite Hard Steel Zinc Plated	2

PACKING MATERIALS PART LIST

1	311-401-0002-080	Snow Box	Left	1
2	311-401-0003-080	Snow Box	Right	1
3	311-301-0005-167	Gift Box		1
4	311-501-0007-167	Master Carton		1/4
5	311-601-0004-179	Instruction Book		1
6	310-001-0000-196	Polybag	28X55cm w/ warning	1
7	310-001-0010-196	Polybag	3" X 10"L	2
8	310-001-0020-196	Polybag	IB 22X40cm w/ warning	1
9	311-001-0000-002	Serial No. Label		3
10	311-001-0001-002	Caution Label		2
11	311-754-6301-002	UL Safty Sheet		1
12	311-001-0002-002	CSA File No. Label		1
13	311-912-0200-006	Transparent Tape	2" X 24"L	2
14	311-701-0002-330	Warranty Sheet		1
15	311-912-0301-167	Pallet	40" X 48"	1/64
16	301-012-0202-015	Silica Gel		2
17	311-054-6302-002	UL Label		1
18	302-110-0002-306	Cotton Sleeve	Dia. 1 X 4mm	4