

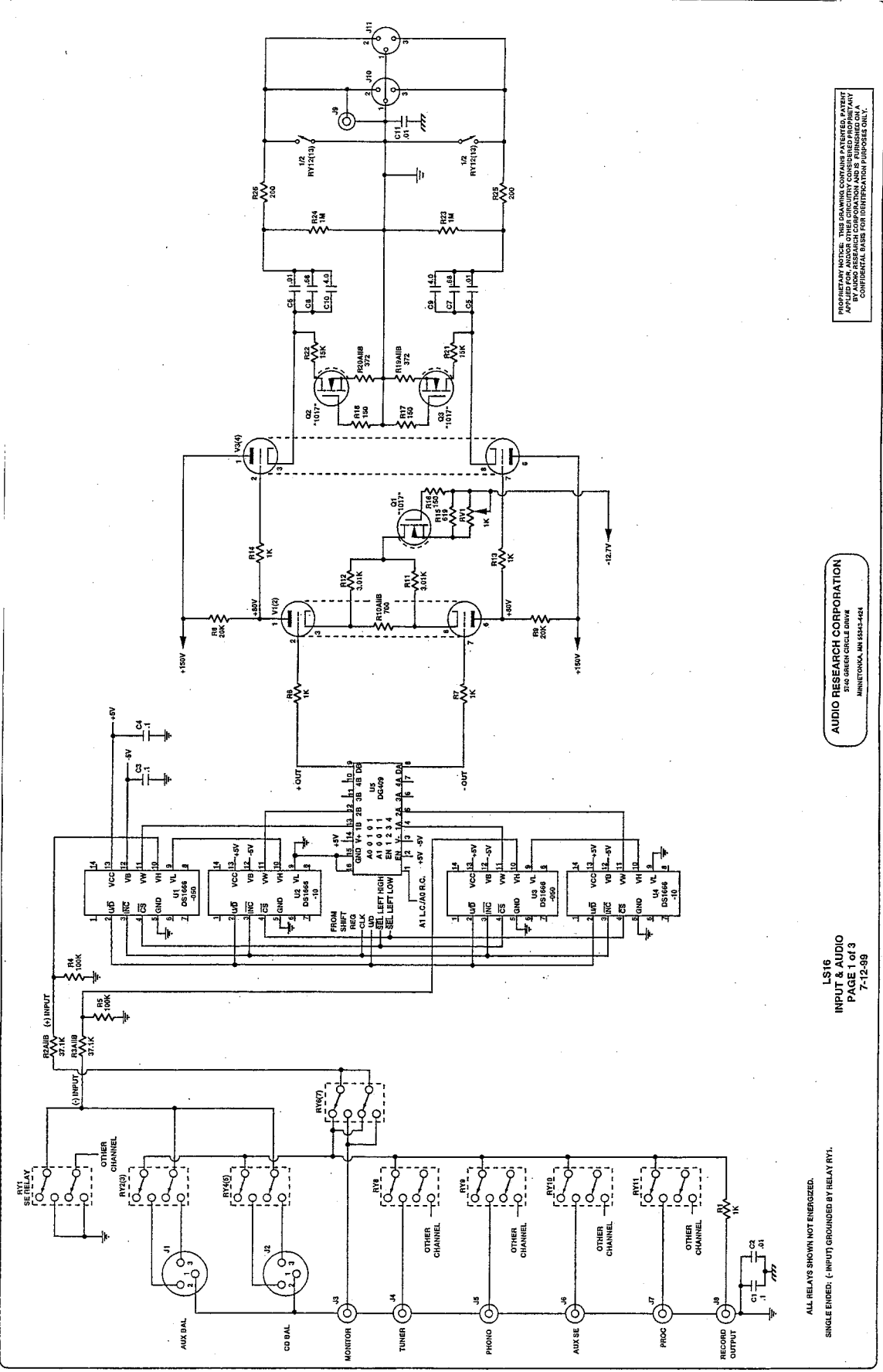
audio research

H I G H D E F I N I T I O N[®]

3900 ANNAPOLIS LANE NORTH / PLYMOUTH, MINNESOTA 55447-5447 / PHONE: 763-577-9700 FAX 763-577 0323

LS16 SCHEMATIC AND PARTS LIST

8-11-99

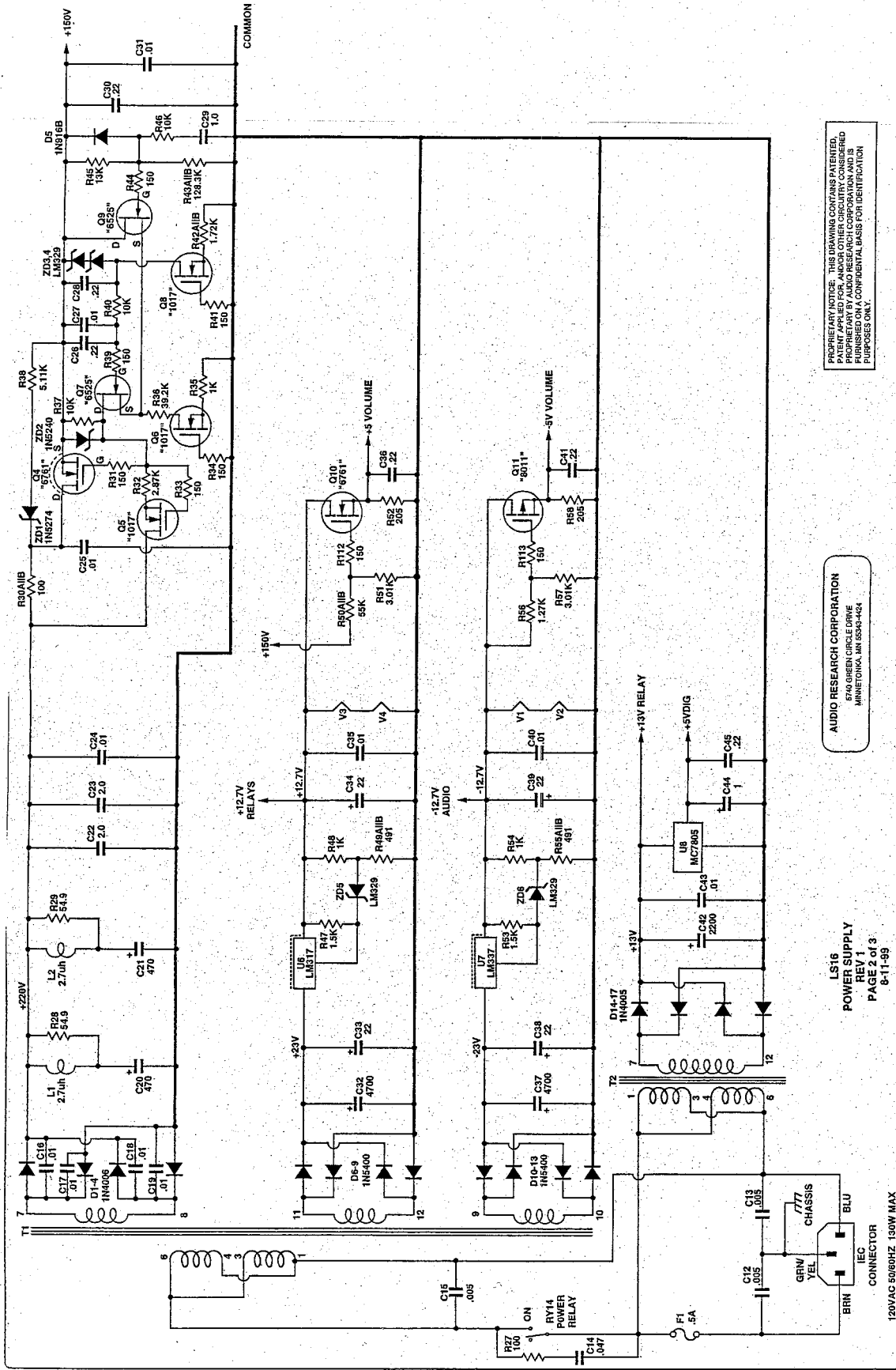


ALL RELAYS SHOWN NOT ENERGIZED.
 SINGLE ENDED; (-INPUT) GROUNDED BY RELAY RY1.

LS16
 INPUT & AUDIO
 PAGE 1 of 3
 7-12-99

AUDIO RESEARCH CORPORATION
 216 GREEN CIRCLE DRIVE
 MINNETONKA, MN 55345-1464

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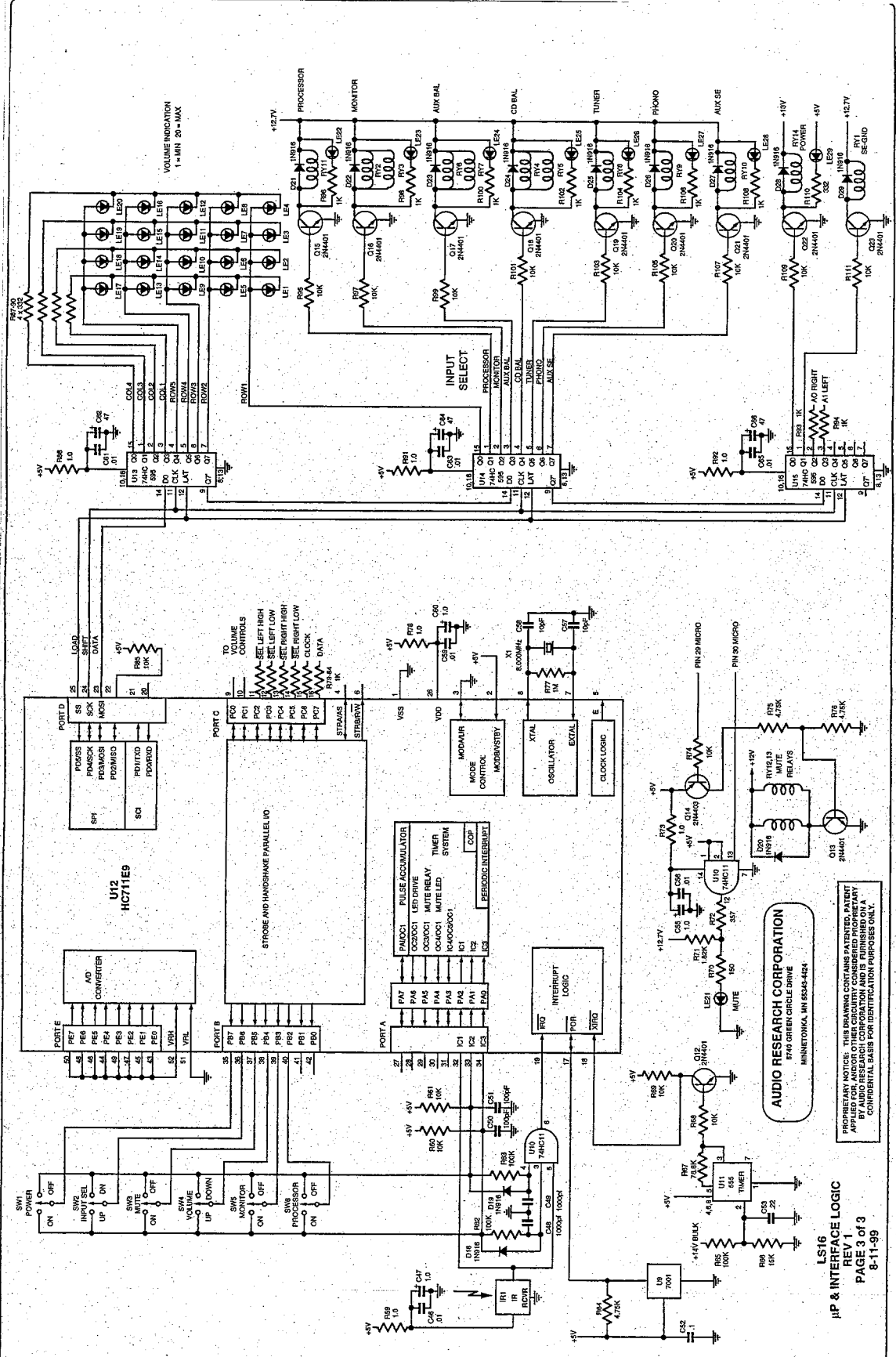


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AUDIO RESEARCH CORPORATION
 5740 GREEN CIRCLE DRIVE
 MINNETONKA, MN 55343-4421

LS16
 POWER SUPPLY
 REV 1
 PAGE 2 of 3
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120VAC 50/60HZ 150W MAX



VOLUME INDICATION
1 = MIN 20 = MAX

AUDIO RESEARCH CORPORATION
MINNETONKA, MN 55345-4224

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LS16
µP & INTERFACE LOGIC
REV 1
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PARTS LIST

As of SEP 20 99

PRODUCT: LS16

NOTES: CHANGED REV. 1 PER ECN#99027 ON 8/11/99

Schematic Symbol	Quantity	ARC Part #	Description
LE PANEL INDICATOR			
LE1-29	29	34300300	L.E.D., GREEN SPOT LTL-1234A
Q TRANSISTORS			
Q1,2,3,5,6,8	9	30011017	FET, GREEN/WHITE/VIOLET
Q4,10	2	30006761	FET, ORANGE YELLOW BROWN
Q7,9	2	30006525	FET, WHITE RED GREEN
Q11	1	30008011	FET, GREEN GREEN
Q12,13,15-23	11	30002800	TRANSISTOR, 2N4401
Q14	1	30002900	TRANSISTOR, 2N4403
R RESISTORS			
R1,10A,48,54	6	42100303	RES., 1K Ω MK-3 1% 50PPM
R2A,3A	4	42590403	RES., 59K Ω MK-3 1% 50PPM
R2B,3B,4,5	8	42100503	RES., 100K Ω MK-3 1% 50PPM
R6,7,13,14	8	42100314	RES., 1K Ω MK-5 1% 50PPM
R8,9	4	42200414	RES., 20K Ω MK-5 1% 50PPM
R10B	2	42237303	RES., 2.37K Ω MK-3 1% 50PPM
R11A,11B,12A,12B	8	42619303	RES., 6.19K Ω MK-3 1% 50 PPM
R15	2	42619202	RES., 619 Ω MK-2 1% 50PPM
R16-18,31,33,34,39,41,44,70,112,113	15	42150202	RES., 150 Ω MK-2 1% 50PPM
R19A,20A	4	42562202	RES., 562 Ω MK-2 1% 50 PPM
R19B,20B	4	42110302	RES., 1.1K Ω MK-2 1% 50PPM
R21,22	4	42150405	RES., 15K Ω MK-8 1% 50PPM
R23,24	4	42100603	RES., 1 MEG MK-3 1% 50PPM
R25,26,30A,30B	6	42200205	RES., 200 Ω MK8 1% 50PPM
R27	1	42100203	RES., 100 Ω MK-3 1% 50PPM
R28,29	2	42549103	RES., 54.9 Ω MK-3 1% 50PPM
R32	1	42287302	RES., 2.87K Ω MK-2 1% 50PPM
R35,79-84,93,94,96,98,100,102,104,106	16	42100302	RES., 1K Ω MK-2 1% 50 PPM
R 108			
R36	1	42392402	RES., 39.2K Ω MK-2 1% 50PPM
R37,40,46	3	42100403	RES., 10K Ω MK-3 1% 50PPM
R38	1	42511303	RES., 5.11K Ω MK-3 1% 50PPM
R42A,71	2	42182302	RES., 1.82K Ω MK-2 1% 50 PPM
R42B	1	42324403	RES., 32.4K Ω MK-3 1% 50PPM
R43A	1	42143503	RES., 143K Ω MK-3 1% 50PPM
R43B	1	42124603	RES., 1.24 MEG MK-3 1% 50PPM
R45	1	42130403	RES., 13K Ω MK-3 1% 50PPM
R47,53	2	42150303	RES., 1.50K Ω MK-3 1% 50PPM
R49A,55A	2	42499203	RES., 499 Ω MK-3 1% 50PPM
R49B,55B	2	42301403	RES., 30.1K Ω MK3 1% 50PPM
R50A,B	2	42110503	RES., 110K Ω MK3 1% 50PPM
R51,57	2	42301303	RES., 3.01K Ω MK-3 1% 50PPM
R52,58	2	42205203	RES., 205 Ω MK-3 1% 50PPM
R56	1	42127303	RES., 1.27K Ω MK-3 1% 50PPM
R59,73,78,86,91,92	7	42100002	RES., 1 Ω MK-2 1% 50 PPM
R60,61,68,69,74,85,95,97,99,101,103	15	42100402	RES., 10K Ω MK-2 1% 50 PPM
R 105,107,109,111			
R62,63,65	3	42100502	RES., 100K Ω MK-2 1% 50PPM
R64,75,76	3	42475302	RES., 4.75K Ω MK-2 1% 50 PPM
R66	1	42150402	RES., 15.0K Ω MK-2 1% 50 PPM
R67	1	42768402	RES., 76.8K Ω MK-2 1% 50PPM
R72	1	42357202	RES., 357 OHM MK-2
R77	1	42100602	RES., 1 MEG MK2 1% 50PPM
R87-90,110	5	42332202	RES., 332 Ω MK-2 1% 50PPM

PARTS LIST

As of SEP 20 99

PRODUCT: LS16

NOTES: CHANGED REV. 1 PER ECN#99027 ON 8/11/99

Schematic Symbol	Quantity	ARC Part #	Description
C CAPACITORS			
C1,3,4,52	7	52100500	CAP., 0.1µf 100V ±20%
C2,11,46,56,59,61,63,65	10	52100400	CAP., .01µf 200V ±10%
C5,6,31	5	53100414	CAP., .01µF 630V. INFINI GRN
C7,8	4	53680505	CAP., .68µF 425V INFINICAP GRN
C9,10	4	53400602	CAP., 4.0µF 20% 425V INFINIGRN
C12,13,15	3	52500300	CAP., .005µF 300VAC/2000V ±20%
C14	1	53470404	CAP., .047µf ±20% 250V
C16-19	4	53100407	CAP., .01µf ±20% 250V
C20,21	2	50470809	CAP., 470µF 250V
C22,23	2	53200603	CAP., 2µF ±10% 250V
C24,27,35,40,43	5	53100410	CAP., .01uf ±10% 400V
C25	1	53100412	CAP., .01µF ±10% 600V RTX
C26,28,36,41,45,53	6	53220507	CAP., .22µf ±10% 160V
C29	1	53100606	CAP., 1.0µf ±10% 250V
C30	1	53220509	CAP., .22µf ±10% 400V
C32,37	2	50470901	CAP., 4700µF 35V
C33,34,38,39	4	50220702	CAP., 22µF 50V "LYTIC"
C42	1	50220903	CAP., 2200µF 35V ELECTROLYTIC
C44,47,55,60	4	50100601	CAP., 1µF 50V "LYTIC"
C48,49	2	52100301	CAP., 1000pf 200V ±10% CER RAD
C50,51	2	52100200	CAP., 100pf 200V ±10%
C57,58	2	52100100	CAP., 10pf 200V ±10% CER. RAD.
C62,64,66	3	50470701	CAP., 47µF 35V ±20%
D DIODES			
D1-4	4	30502200	IN4006
D5,18-29	13	30500910	1N916B
D6-13	8	30501500	IN5400
D14-17	4	30500400	IN4005
F FUSES			
F1	1	34500203	(B)FUSE, 1/2 AMP MDQ BUSSMAN
IR IR RECEIVERS			
IR1	1	34100300	RECEIVER, IR MODULE GP1U581X
J CONNECTORS			
J1,2	4	23201960	CONNECTOR, XLR FEM. #NC3FD-V-B
J3-9	7	23201509	JACK, CHASSIS RED
J3-9	7	23201510	JACK, CHASSIS WHITE
J10,11	4	23201965	CONNECTOR, XLR MALE #NC3MD-V-B
L INDUCTORS			
L1,2	2	61000160	CHOKE, 2.7µH ±10%

PARTS LIST

As of SEP 20 99

PRODUCT: LS16

NOTES: CHANGED REV. 1 PER ECN#99027 ON 8/11/99

Schematic Symbol	Quantity	ARC Part #	Description
			RV CONTROLS
RV1	2	45100301	POT., TRIM 1KΩ
			RY RELAYS
RY1-13	13	64101600	RELAY, 12VDC
RY14	1	64101320	RELAY, STANDBY REFFPHONO
			SW SWITCHES
SW1,3,5,6	4	24102600	SWITCH, MOMENTARY REF1/2/LS25
SW2,4	2	24003600	SWITCH, ROTARY UP-DOWN LS15
			T TRANSFORMERS
T1	1	60016614	XFR., POWER LS16
T2	1	60013614	XFR., LS15 10V (115/130V.)
			U INTEGRATED CIRCUITS
U1,3	4	31008121	POT., DIGITAL DS1666-050
U2,4	4	31008111	POT., DIGITAL 10KΩ DS1666-10
U5	2	31003820	DUAL ANALOG SWITCH DG409DJ
U6	1	31004000	REGULATOR, VOLTAGE ADJ. POS.
U7	1	31004700	REGULATOR, VOLTAGE ADJ. NEG.
U8	1	31002910	REGULATOR, IC 5V
U9	1	31008400	LX7001CLP, LINFINITY
U10	1	31007400	TRIPLE 3-INPUT & GATE, 74HC11N
U11	1	31000801	TIMER, MC1455P1 OR NE555V
U12	1	31006950	MICROPROCESSOR, LS16
U13,14,15	3	31006800	REGISTER, LATCH
			V VACUUM TUBES
V1-4	4	32001162	(B)TUBE, 6922 SILVER TESTED
			X CRYSTALS
X1	1	27000060	CRYSTAL, 8MHZ #CTX082ND
			ZD ZENER DIODES
ZD1	1	30503800	DIODE, ZENER IN5274B
ZD2	1	30504400	IN5240B
ZD3-6	4	31000705	FET, GREEN