

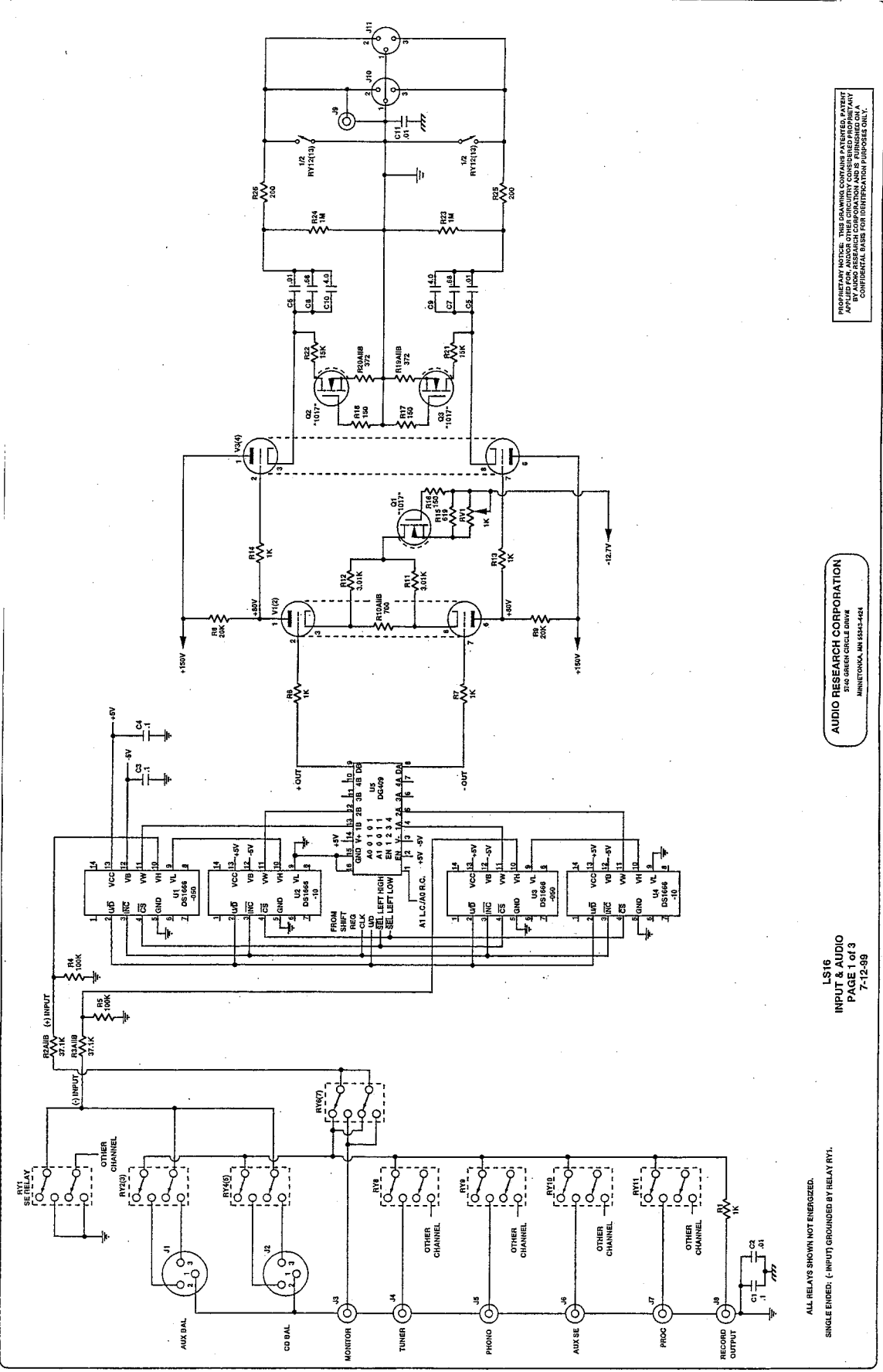
audio research

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

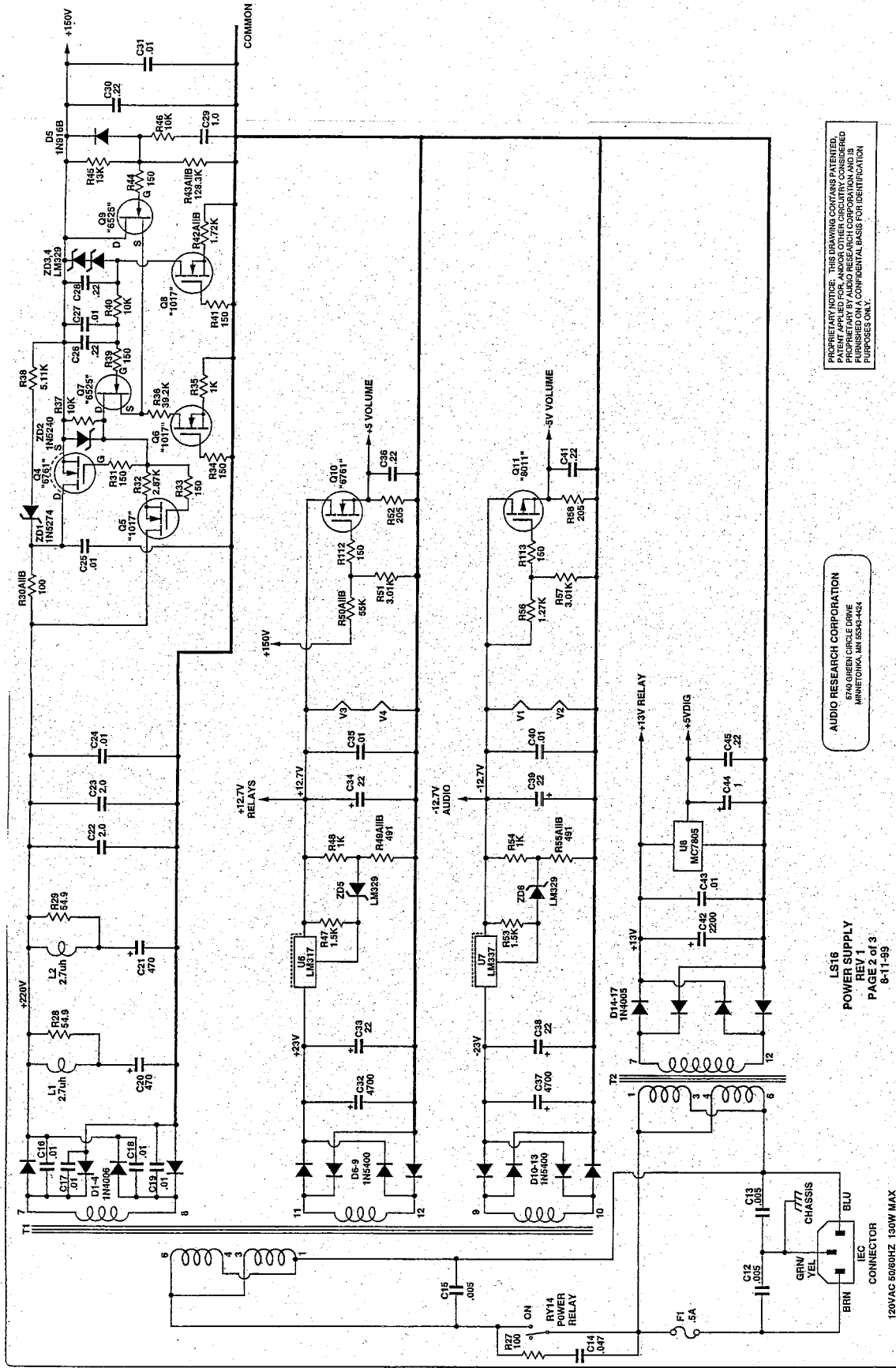


PROPRIETARY NOTICE: THIS DRAWING CONTAINS PATENTED MATTER APPLIED FOR AND/OR OTHER CIRCUITRY CONSIDERED PROPRIETARY INFORMATION. IT IS TO BE KEPT CONFIDENTIAL AND NOT REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF AUDIO RESEARCH CORPORATION.

AUDIO RESEARCH CORPORATION
 216 GREEN CIRCLE DRIVE
 MINNETONKA, MN 55345-1448

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

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

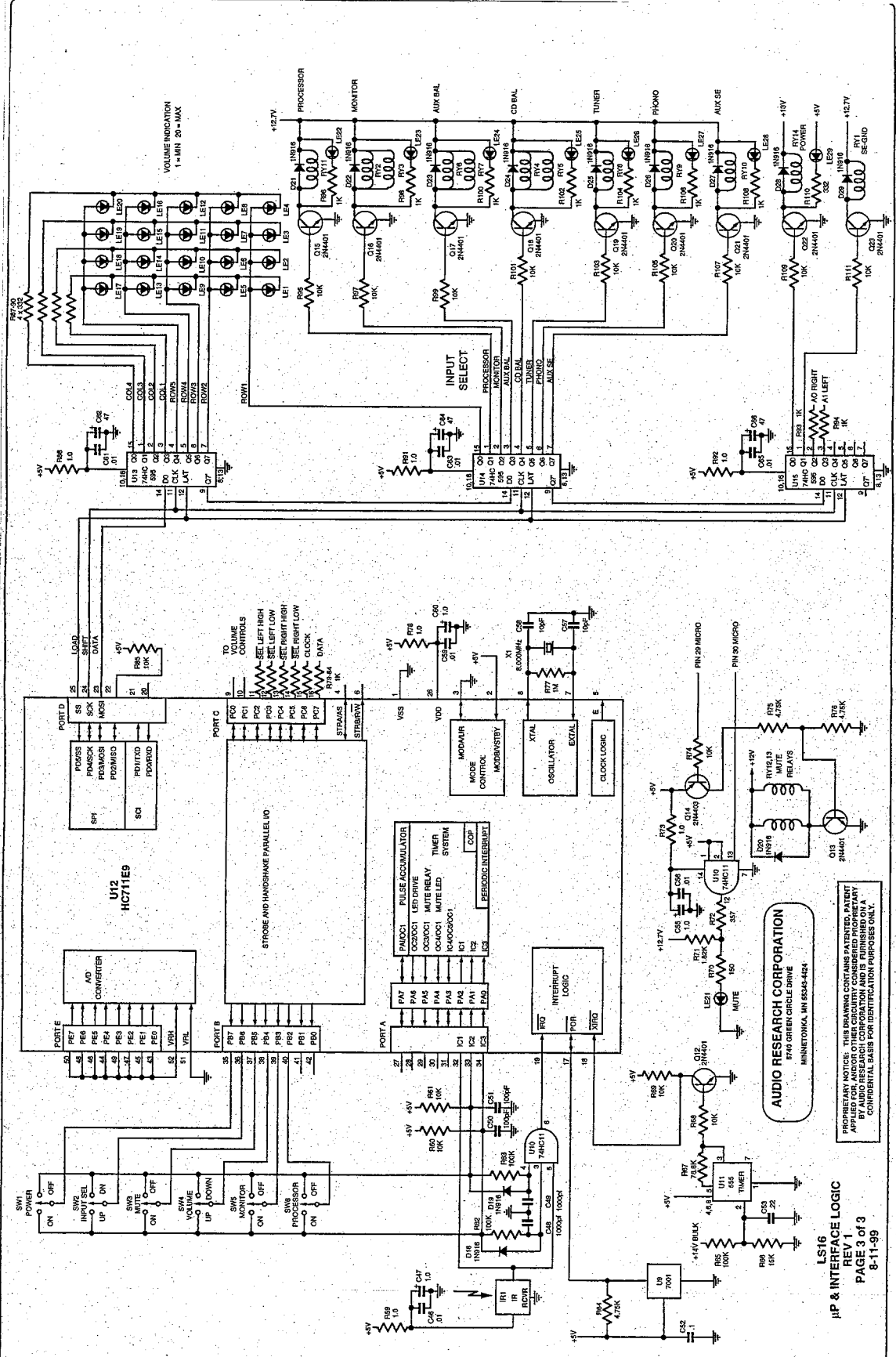


PROPRIETARY NOTICE: THIS DRAWING CONTAINS UNPUBLISHED PATENT APPLIED FOR, AND/OR OTHER CONFIDENTIAL AND PROPRIETARY INFORMATION OF AUDIO RESEARCH CORPORATION AND IS FURNISHED ON A CONFIDENTIAL BASIS FOR IDENTIFICATION PURPOSES ONLY.

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

LS16
 POWER SUPPLY
 REV 1
 PAGE 2 of 3
 8-11-99

120VAC 50/60HZ 150W MAX
 CONNECTOR
 IEC
 BRN
 CHASSIS
 7/77
 GRN/YEL
 C12 .005
 C13 .005
 F1 .5A
 RV14 POWER RELAY
 ON



AUDIO RESEARCH CORPORATION
 MINNETONKA, MN 55345-4224

PROPRIETARY NOTICE: THIS DRAWING CONTAINS A TRADE SECRET AND IS THE PROPERTY OF AUDIO RESEARCH CORPORATION AND IS FURNISHED ON A CONFIDENTIAL BASIS FOR IDENTIFICATION PURPOSES ONLY.

LS16
μP & INTERFACE LOGIC
REV 1
PAGE 3 of 3
8-11-89

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