

# Technical Manual



# UREI LA-22

## SPECIFICATIONS

- Inputs: Active balanced bridging
- Input Impedance: 40k  $\Omega$  balanced input, 20k  $\Omega$  unbalanced (with detector normalised to input)
- Detector Input Impedance: 100k  $\Omega$  balanced input, 50k  $\Omega$  unbalanced
- Maximum Input Level: +24 dBu (12.3 V rms)
- Gain:  $\pm 20$  dB, adjustable with front panel output level controls
- Frequency Response: 20 Hz - 20 kHz  $\pm 0.2$  dB
- Dynamic Range: <115 dB
- Signal To Noise Ratio: 110 dBA, 22 kHz A weighted noise bandwidth
- THD: <0.006% typical @ 1 kHz, 0.02% maximum @ +14 dBu input

### Attack Times

- Average Detectors: 1 - 50 ms
- Peak Detectors:  $\leq 100 \mu s$
- Output Peak Limiters: 50  $\mu s$

### Release Times

- Average Detectors: 100 ms - 5 s for 10 dB of release
- Peak Detectors: 10 ms

- Output Peak Limiters: 40 ms
- Compression/Expansion Ratios: Adjustable from 1.5:1 to  $\infty$ :1
- Threshold of Limiting/Expansion: Adjustable from -40 dBu to Off
- Outputs: Transformer isolated, symmetrical floating
- Maximum Output Level: +24 dBm into 600  $\Omega$

### Connectors

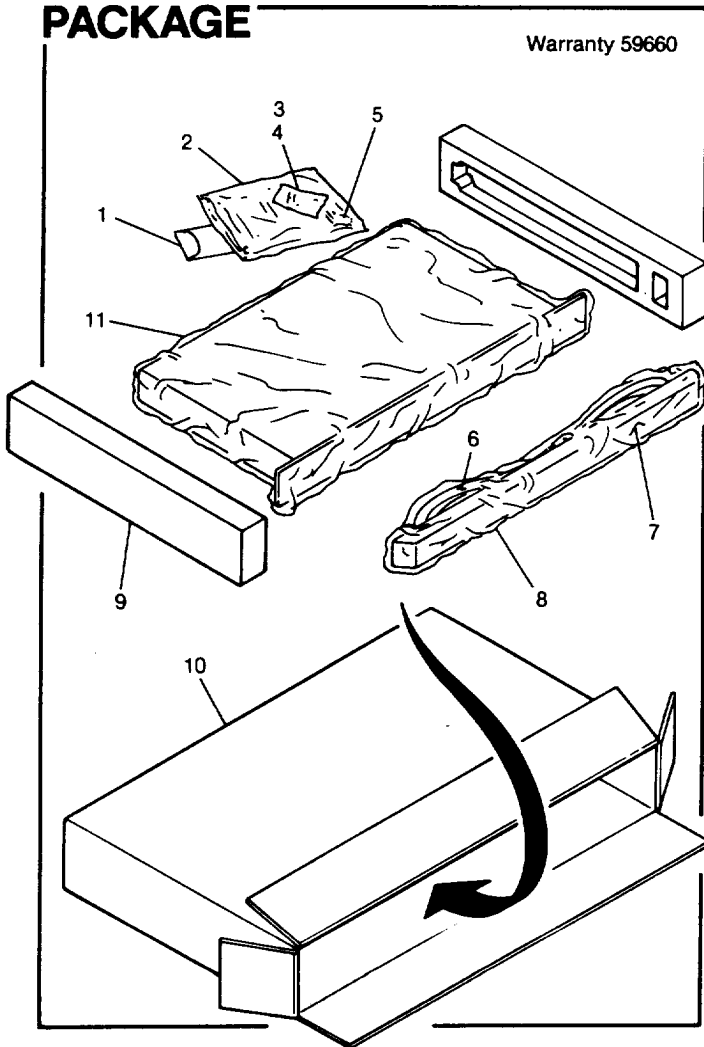
- Inputs and Outputs: XLR type 3 pin (pin 2 high), and barrier strip
- Limiting Detectors: Barrier strip
- Link: Barrier strip
- AC Power Requirements: 100-120/220-240 V AC, 50-60 Hz, 30 W maximum
- AC Line Cord: Detachable, IEC type
- Finish: Powdercoated black
- Enclosure Dimensions: See Below
- Net Weight: 14 lbs. (6.4 kg.)

### WARRANTY INFORMATION:

- Refer to the Warranty Statement packed with each product.

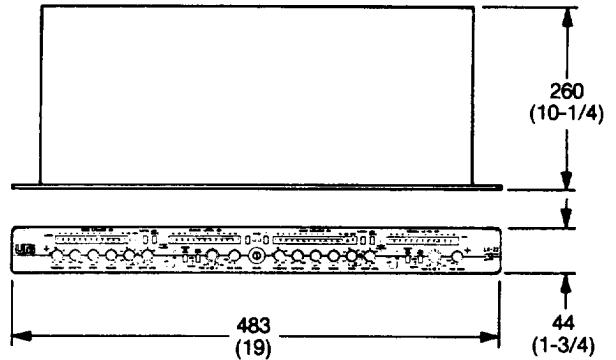
## PACKAGE

Warranty 59660



## COMPONENT VIEW

OVERALL DIMENSIONS  
DIMENSIONS ARE mm AND ( in.)



## COMPONENT PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
1	10-13788	1	KIT, RACK, SCR, BLK
2	259267	1	MNL, USER, LA-22
3	276193-001	2	FUSE, SB, 1/2A, 250V, 5 x 20, UL
4	255236	1	FUSE, SB, 1/4A, 250V, 5 x 20
5	33-0147	1	BAG, POLY, 12" x 16"
6	36-0543	1	CORD, PWR, DETCH, 3COND, 18GA
7	267151-001	1	COVR, SCRPTY, LA-XX
8	33-0074	1	BAG, POLY, 5" x 22"

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## COMPONENT PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
9	33-16828	2	END, PAD, FOAM
10	33-16827	1	CRTN, LA-XX/79XX
11	33-0071	1	BAG, POLY, 18" x 24"
12	25-16774	2	COVR, PNL, FAB
13	25-14284	1	LBL, WARN, ELEC-SHOCK
14	259192	1	PNL, REAR, FAB, LA-22
15	264036	1	TAPE, DBL-SIDED, ADH, 3/16 x 2
16	263437	1	CONN, PWR, W/FUHLR, LA-12
17	261108	1	SCR, 6-32 x 3/4, TRXPNH, BZ
18	274608-001	1	LBL, SER#, LA-XX
19	28-0057	2	WSHR, #6, EXT, TTH
20	H100-15199	3	NUT, 6-32, KEP
21	255104	1	WSHR, 8, 1-7/16 x .032, ALUM
22	30-0216	1	SCR, 8-32 x 1-1/4, PPH, SEMS
23			
24	25-16772	2	PNL, SIDE, FAB
25	267116-001	1	PNL, FRNT, LA-22
26	30-0057	12	SCR, 6-32 x 3/8, PPH
27	25-16781-001	6	SPCR, BSHG
28	25-12993	1	NAMEPL
29	29-17000	12	NUT, SPANNER, 7MM
30	269753-001	2	KNOB, OUTER, LA22
31	264278-001	2	KNOB, INR, 7122, BLK
32	24-16780	1	KNOB, PWR, SW
33	24-16999-001	10	KNOB, INR
34	24-16999-002	4	KNOB, INR
35			
36			

### CIRCUIT BOARDS

1	13-0746	1	LED, T1, YEL
2	259815	4	LED, T1, RED, FLT-HD
3	259256	2	MASK, LED, LA-22
4			
5	15-0494	6	SW, DPDT, ALT-ACT, PCMT
6	13-0712	2	LED, GRN/RED, DICHRO
7	13-0710	2	LED, BAR-GRPHC, 12P
8	13-0744	3	LED, T1, RED
9	275009-001	12	IC, LM339AN, E-CMPRIIR
10	HM14-0582	12	CAP-SF, .1UF, 5%, 50V
11	HM13-0413	12	XSTR, TO-92, NPN, 2N3904
12	13-0304	2	IC, TL072CP, OP-AMP, DUAL
13	14-0505	4	CAP-EL, 10UF, 50V, RD
14	HM14-0576	4	CAP-EL, 22, 25V, 85C
15	50911-001	2	CAP-EL, .47UF, 10%, 50V
16	27-0634	3	HDR, STR, 9POS, .1" CTR
17	15-0517	2	POT, TRIM, CF, 500K, LIN
18	13-0711	2	LED, BAR-GRAPHIC, RED, 12P
19	50901-004	6	CAP-PF, 470PF, 5%, 50V, R

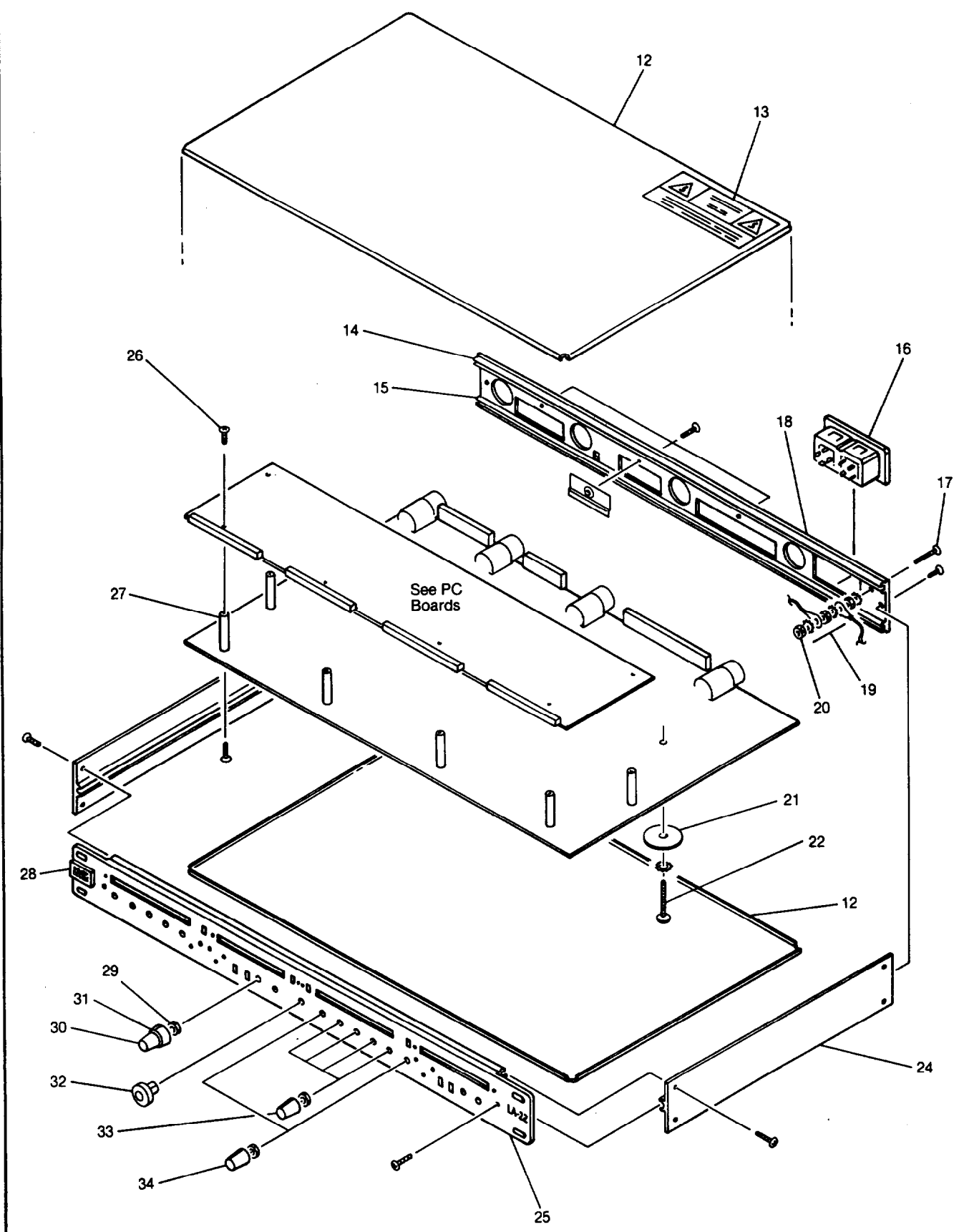
ITEM	PART NO.	QTY	DESCRIPTION
20	263065	4	BARR, STR, JMPR, A104210-NL-
21	14-0753	6	CAP-MP, 1UF, 10%, 63V
22	15-0400	2	RLY, 24V, DPDT
23	14-0767	4	CAP-CD, 22PF, 5%, 1KV
24	S500-1513	4	IC, LM833N
25	27-0420	2	CONN, PCMT, 3P, MALE
26	15-0494	1	SW, DPDT, ALT-ACT, PCMT
27	HM14-0582	25	CAP-SF, .1UF, 5%, 50V
28	13-0207	1	IC, 7918CT, RGLTR, 1A
29	14-0603	2	CAP-EL, 100UF, 20%, 25V, RD
30	36-0552	2	HTSK, TO220, W/MNTG, TAB
31	27-0625	1	BAR-STP, 5POS, .325" CTR
32	16-16825	2	XFMR, OUT
33	C035-2200	2	CAP, 2200UF, 35V, RL
34	27-0419	2	CONN, PCMT, 3P, FEM
35	52919-001	1	CAP, EL, 33UF, M, 35V, RD
36	278344-001	2	FUSE
37	14-0505	7	CAP-EL, 10UF, 50V, RD
38	14-0632	4	CAP-CD, 10PF, 10%, 500V
39	27-0218	3	TERM, SPADE, .250, PCMNT
40	27-0627	2	BAR-STP, 10POS, .325" CTR
41	13-0148	5	XSTR, 2N6716, NPN, 60V
42	13-0424	5	XSTR, 2N6728, PNP, 60V
43			
44			(See Item 3 or 4 on 1st page)
45	27-0641	5	TER, TAB, MALE, .187"
46	29-0081	1	NUT, 8, KEPS
47	255126	1	WSHR, 8, 1/2 x .03, STL
48	52921-001	1	XFMR, PWR, LA-12/22
49	269401-001	1	RING, XFMR, SHIELD, LA22
50	27-0632	3	SKT, STR, 9POS, .1" CTR
51			
52	269412-001	1	CABL, AUDIO, LA22
53	15-16766	2	SW, RTRY, 2P3T
54	263076	2	POT, 9MM, MULT, 100K/10K
55	15-16767	2	POT, TRIM, 50K, M, REVD, LOG
56	15-16769	2	POT, TRIM, 20K, M, LIN
57	50173-010	2	CAP-SF, .0015UF, 5%, 50V
58	HM14-0714	2	CAP-SF, .18UF, 5%, 50V
59	HM14-0591	2	CAP-SF, .015UF, 5%, 50V
60	HM14-0724	2	CAP-CD, 180PF, 5%, 50V
61	15-0500	1	SW, PWR, DPST, 6A, 250V
62	HM14-0681	2	CAP-SF, .039UF, 5%, 50V
63	HM14-0697	2	CAP-PF, .0039UF, 50V TEST E
64	14-0760	2	CAP-CD, 27PF, 5%, 50V
65	50901-003	2	CAP-PE, 390PF, 5%, 50V, R
66	13-0206	1	IC, 7818CT, RGLTR, 1A
67	31-0067	2	RVT, POP, .125 x .345 RADS 41

use 13-0423JBL

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## COMPONENT EXPLODED VIEW

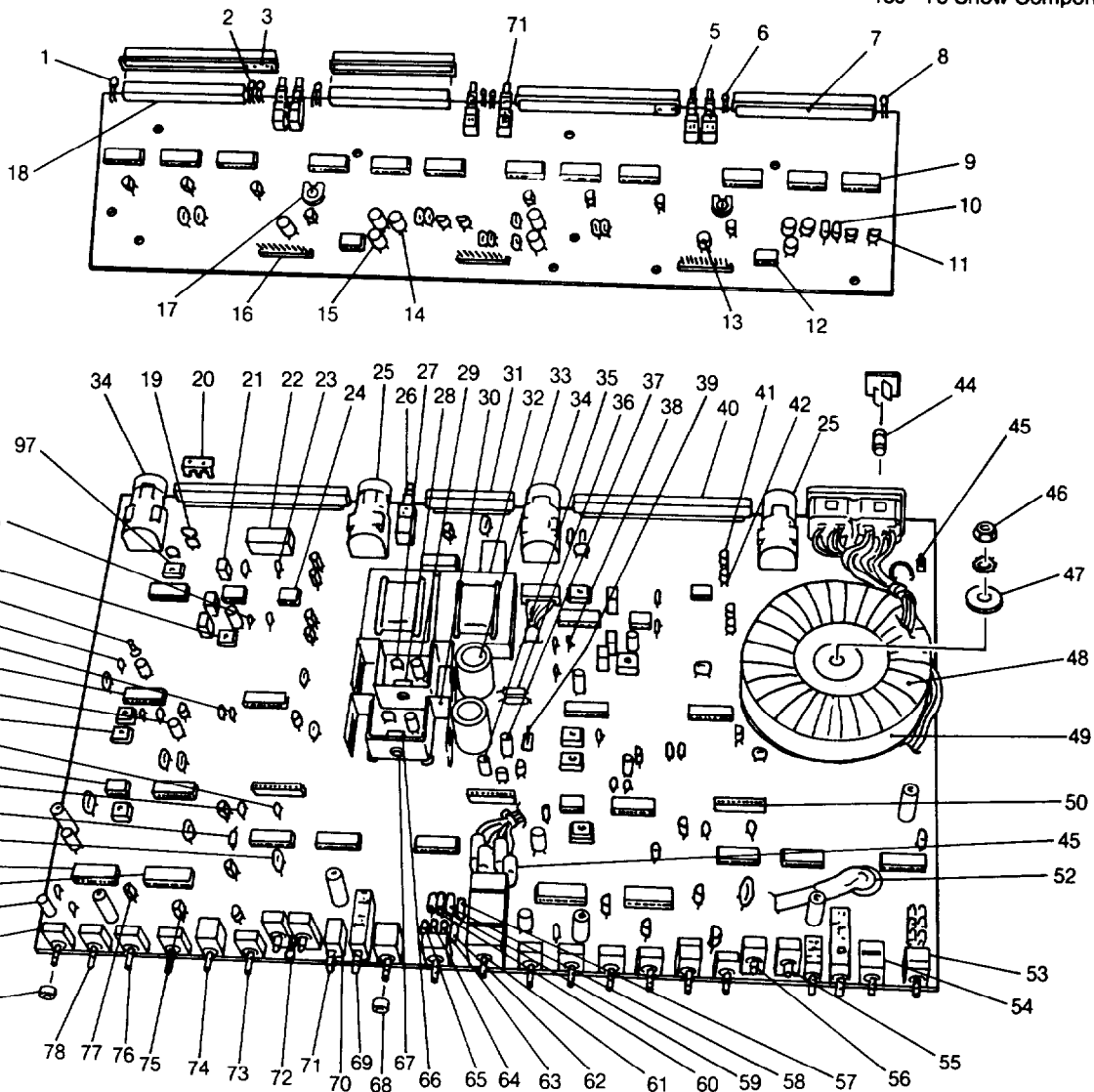


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## CIRCUIT BOARDS

Top PC Board Rotated  
180° To Show Components



ITEM	PART NO.	QTY	DESCRIPTION
68	25-16781-002	2	SPCR, BSHG
69	15-0446	2	SW, MTK, 6U-EE
70	15-0495	2	SW, DPDT, MOM, PCMT
71	24-16779	11	KNOB, PBTN
72	13-0744	4	LED, T1, RED
73	259751	2	POT, 9MM, 10K, 10%, LOG, D
74	15-16763	2	POT, 9MM, W/SW, 50K, 10%, LIN
75	HM13-0414	5	XSTR, T092, PNP, 2N3906
76	15-16761	4	POT, 9MM, 100K, 10%, LIN
77	HM13-0413	10	XSTR, T0-92, NPN, 2N3904
78	15-16760	2	POT, 9MM, 10K, 10%, LIN
79	25-16781-001	14	SPCR, BSHG
80	52920-001	2	POT, 9MM, 50K, 10%, REV'D, D
81	14-0576	2	CAP-EL, 22UF, 25V
82	13-0348	3	IC, MC14066BCP

ITEM	PART NO.	QTY	DESCRIPTION
83	13-0217	14	IC, TL074, QUAD, OP-AMP
84	HM14-0752	2	CAP-SF, .47UF, 5%, 50V
85	13-0190	2	DIOD, ZR, 1N4735A, 6.2V, 5%, 1
86	14-0756	2	CAP-CD, 120PF, 10%, 100V
87	13-0514	2	XSTR, LM394CN, DUAL
88	14-0633	2	CAP-CD, 33PF, 10%, 500V
89	15-0491	4	POT, TRIM, 100K, M, HZL, MT
90	14-0863	2	CAP-EL, 10UF, 20%, 25V, RD, NP
91	13-0737	2	IC, VCA, SSM-2018
92	14-0635	4	CAP-CD, 100PF, 10%, 500V
93	HM14-0585	6	CAP-CD, 47PF, 5%, 500V, NPO
94	52924-001	4	TEST-POINT, PCMT
95	15-0481	2	POT, TRIM, 2K, M, 5W, HZ
96	14-0636	2	CAP-CD, 470PF, 10%, 500V
97	15-0496	4	POT, TRIM, 500, M, HZMT, CRMT