

OPERADIO MODEL 1A140

TRADE NAME	Operadio, Model 1A140		
MANUFACTURER	Operadio Mfg. Co., St. Charles, Ill.		
TYPE SET	AC Operated Audio Amplifier		
TUBES (SIX)	Types, 6J7 Mic. Amp., 6J7 AF Amp., 6SL7GT AF-Phase Inv., (2) 6V6GT Power Output, 5Y3GT Rectifier.		
POWER SUPPLY	110-120 Volts AC	RATING	.68 Amp. @ 117 Volts AC

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Cap
1	6J7	0V.	3.2VAC	80VDC	25VDC	0V.	240VDC	3.2VAC	0V.	-.4VDC
2	6J7	0V.	3.2VAC	55VDC	55VDC	55VDC	2VDC	3.2VAC	2VDC	0V.
3	6SL7GT	0V.	130VDC	1VDC	0V.	140VDC	1.4VDC	3.2VAC	3.2VAC	-
4	6V6GT	0V.	3.2VAC	340VDC	345VDC	0V.	0V.	3.2VAC	23VDC	-
5	6V6GT	0V.	3.2VAC	340VDC	345VDC	0V.	0V.	3.2VAC	23VDC	-
6	5Y3GT	0V.	360VDC	0V.	340VAC	0V.	340VAC	0V.	360VDC	-

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Cap
1	6J7	0Ω	.05Ω	40KΩ	1.7 Meg.	0Ω	190KΩ	.05Ω	0Ω	10 MΩ.
2	6J7	0Ω	.05Ω	420KΩ	420KΩ	420KΩ	2.7KΩ	.05Ω	2.7KΩ	470KΩ
3	6SL7GT	470KΩ	240KΩ	650Ω	10KΩ	240KΩ	1KΩ	.05Ω	.05Ω	-
4	6V6GT	0Ω	.05Ω	130KΩ	130KΩ	280KΩ	INF.	.05Ω	250Ω	-
5	6V6GT	0Ω	.05Ω	130KΩ	130KΩ	270KΩ	INF.	.05Ω	250Ω	-
6	5Y3GT	INF.	130KΩ	INF.	85Ω	INF.	90Ω	INF.	130KΩ	-

RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY
ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

- 1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Line voltage maintained at 117 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
- 6 - All controls at minimum, proper output load connected.

HOWARD W. SAMS & CO., INC. • 2924 East Washington Street • Indianapolis 7, Indiana

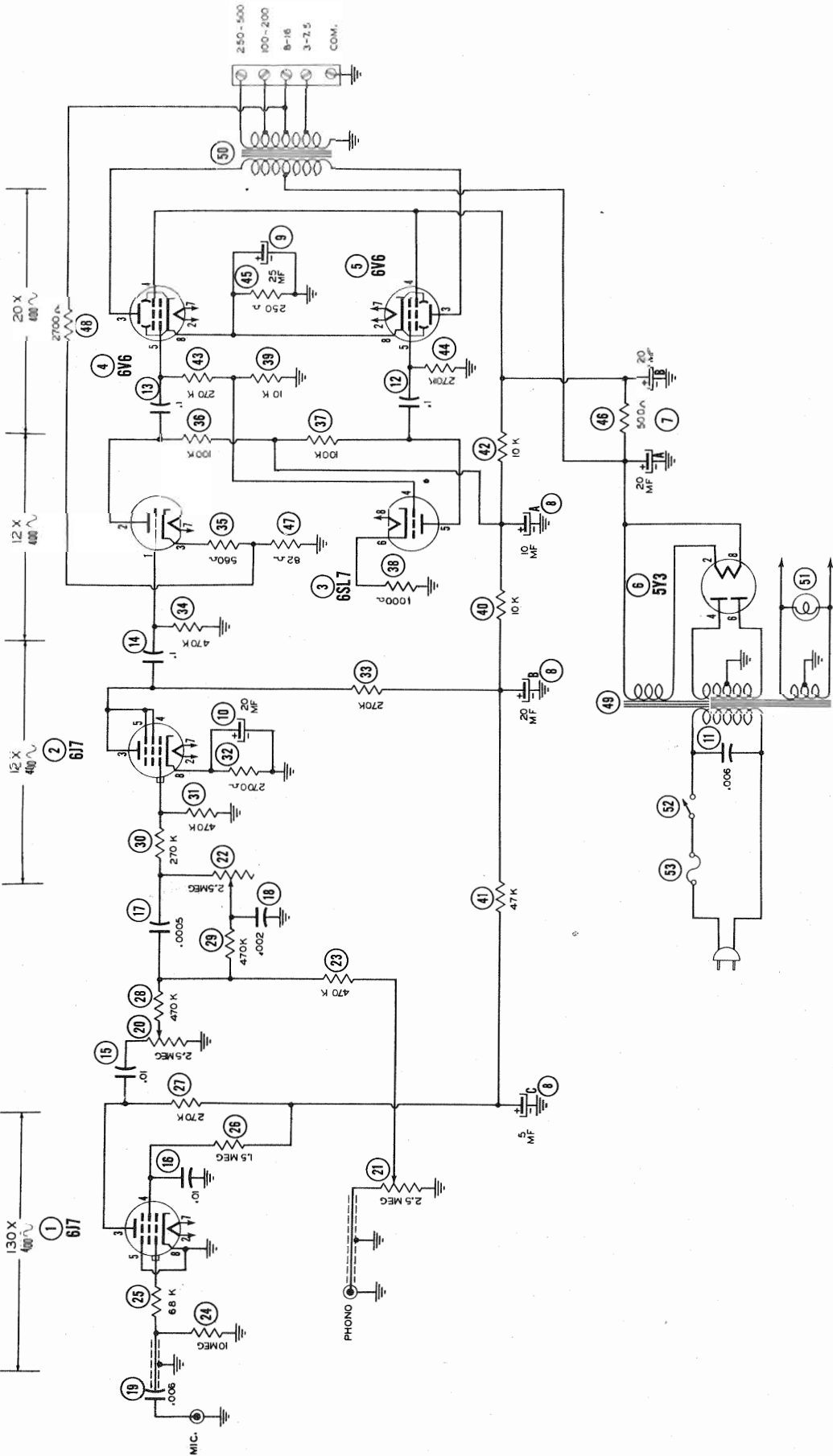
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DATE 9/48-#4816-17 SET #46-FOLDER #17

OPERADIO MODEL
1A140



THE COOPERATION OF THE MANUFACTURER OF THIS
EQUIPMENT MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMA 'C'
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4816-17

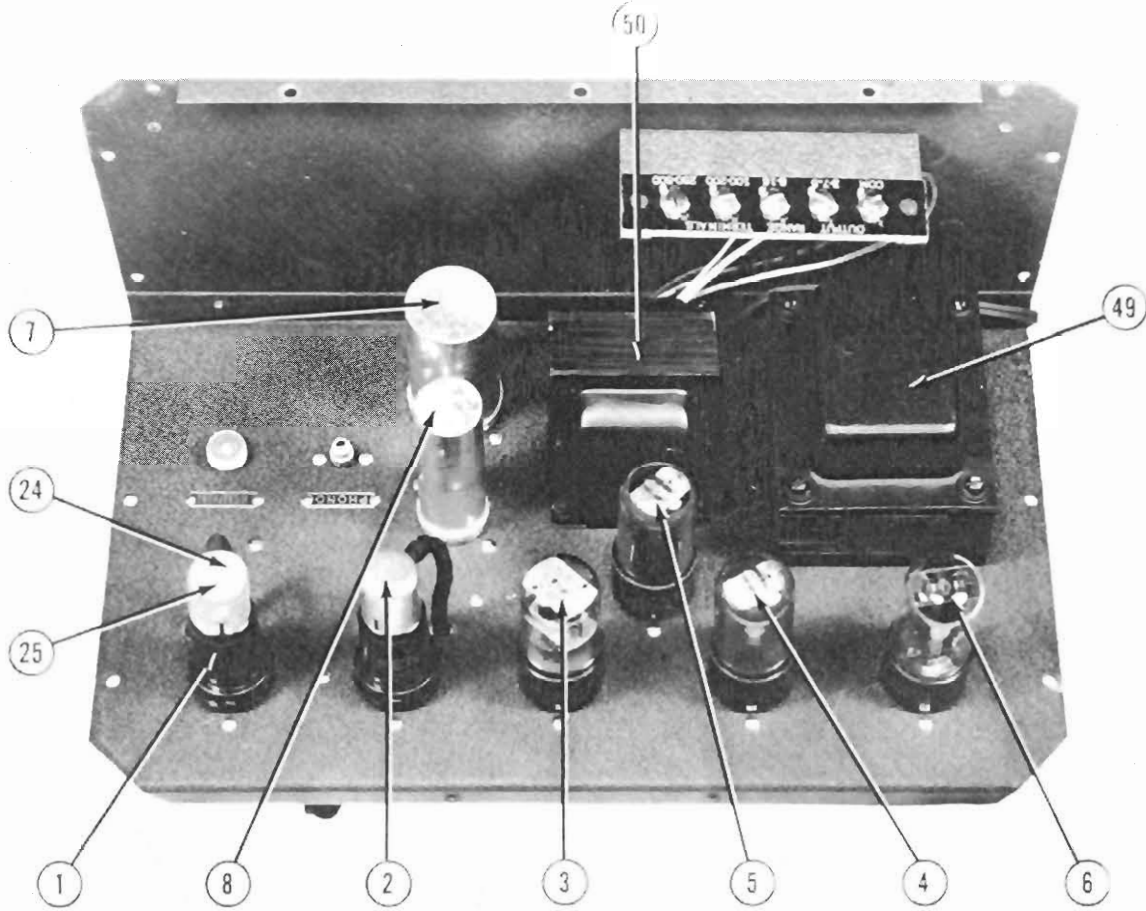
OPERADIO MODEL
1A140

OPERADIO
MODEL 1A14A

PARTS LIST AND DESCRIPTIONS
TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA			INSTALLATION NOTES
		OPERADIO PART No.	STANDARD REPLACEMENT	RMA BASE TYPE	
1	Mic. Amp.	6J7	6J7	7R	
2	AF Amp.	6J7	6J7	7R	
3	AF-Phase Inv.	6SL7GT	6SL7GT	8DD	
4	Power Output	6V6GT	6V6GT	7AC	
5	Rectifier	6X3GT	6X3GT	5T	

CHASSIS—TOP VIEW



CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		OPERADIO PART No.	AEROVOX PART No.	CORNEIL DURILOR PART No.	SOLAR PART No.	
7A	500 CAP. 100-2914	AF44J	UP2250	UP2250	EL-220	▲ Filter
8A	10 100-4904	AF2221*	UP6C120	UP6C120	EL-260	▲ Decoupling
9	25 25 190-2001-206	PR325/25	PR325/25	PR325/25	TA-25	Output Cathode Bypass
10	25 25 190-4030-402	PR325/25	PR325/25	PR325/25	TA-25	AF Cathode Bypass
11	1 1 190-4021-104	484-1	484-1	484-1	TC-26	Line Filter
12	1 1 190-4021-104	484-1	484-1	484-1	TC-26	Audio Coupling
13	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
14	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
15	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
16	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
17	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
18	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
19	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
20	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
21	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
22	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
23	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
24	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
25	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
26	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
27	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
28	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
29	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
30	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
31	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
32	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
33	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
34	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
35	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
36	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
37	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
38	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
39	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
40	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
41	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
42	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
43	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
44	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
45	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
46	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
47	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
48	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
49	1 1 190-4021-104	484-1	484-1	484-1	TC-1	
50	1 1 190-4021-104	484-1	484-1	484-1	TC-1	

CONTROLS

ITEM No.	RATING	REPLACEMENT DATA			INSTALLATION NOTES
		OPERADIO PART No.	IRC PART No.	CLAROSTAT PART No.	
20A	2.5 Watts	601-3580	D13-140	M-66-2	Mike Control
21B	2.5 Watts	601-3580	D13-140	M-66-2	Phone Control
22A	2.5 Watts	601-3580	D13-140	M-66-2	Attach to 22A per instructions
22B	2.5 Watts	601-3580	D13-140	M-66-2	Attach to 22A per instructions
23	2.5 Watts	601-3580	D13-140	M-66-2	Attach to 22A per instructions

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA			IDENTIFICATION CODES
		OPERADIO PART No.	IRC PART No.	IRC PART No.	
23	470KΩ	600-0116-474	600-0116-474	600-0116-474	Y1-V1-V1. Phone Isolation
24	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 1st AF Grid
25	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Grid
26	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
27	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
28	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
29	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
30	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
31	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
32	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
33	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
34	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
35	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
36	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
37	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
38	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
39	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
40	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
41	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
42	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
43	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
44	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
45	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
46	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
47	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
48	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode
49	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Plate Load
50	10KΩ	600-0116-102	600-0116-102	600-0116-102	Y1-V1-V1. 2nd AF Cathode

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING	REPLACEMENT DATA			IDENTIFICATION CODES
		OPERADIO PART No.	IRC PART No.	IRC PART No.	
32	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
33	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
34	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
35	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
36	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
37	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
38	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
39	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
40	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
41	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
42	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
43	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
44	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
45	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
46	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
47	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
48	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode
49	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Plate Load
50	2700Ω	600-0116-272	600-0116-272	600-0116-272	Red-V1-V1. 1st AF Cathode

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			INSTALLATION NOTES
		OPERADIO PART No.	STANCOR PART No.	THORADYN PART No.	
49	110V AC 60W CT 0.25A 2.0A 1.0A	710-4041	P-8013	T22805	P-2053

TRANSFORMER (OUTPUT)

ITEM No.	RATING	REPLACEMENT DATA			INSTALLATION NOTES
		OPERADIO PART No.	STANCOR PART No.	THORADYN PART No.	
50	IMPEDANCE 10KΩ 3-7.5 40KΩ 42 100-200 CT 17Q 23Q	710-2017	A-30113	T228044	A-31284

DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS	REPLACEMENT DATA		INSTALLATION NOTES
				OPERADIO PART No.	THORADYN PART No.	
51	450000T	6-8	0.25	10108	450-102	1275-44

MISCELLANEOUS

ITEM No.	PART NAME	NOTES
52	Switch	CR-OFF (CRST)
53	Probe	2-ANG. (240) 440-17