

PARTS LIST AND DESCRIPTION (CONTINUED)

RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		REMARKS	ITEM No.	RATING	REPLACEMENT DATA		REMARKS
		IRC PART No.	WORKMAN PART No.				IRC PART No.	WORKMAN PART No.	
R14	220 3W	PW3-22	3G-22						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA		NOTES
	PRI.	SEC.	SYMPTONIC PART No.	THORDARSON PART No.	
T1	2800Ω	3-4Ω	TR-235	A-3332	24553
T2	2800Ω	3-4Ω	TR-235	A-3332	24553

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		SYMPTONIC PART No.	QUAM PART No.	
SP1	8" PM 3-4Ω	SP-831	8A21	
SP2	8" PM 3-4Ω	SP-831	8A21	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	SYMPTONIC PART No.	REPLACEMENT DATA
K1	Audio Coupling	250K, 500K, 250mmf, .01mfd	PC-81	Aerovox PA-112-4 Centralab PC-81 Mallory MS-108 Sprague T-2
K2	Audio Coupling	250K, 500K, 250mmf, .01mfd	PC-81	Aerovox PA-112-4 Centralab PC-81 Mallory MS-108 Sprague T-2

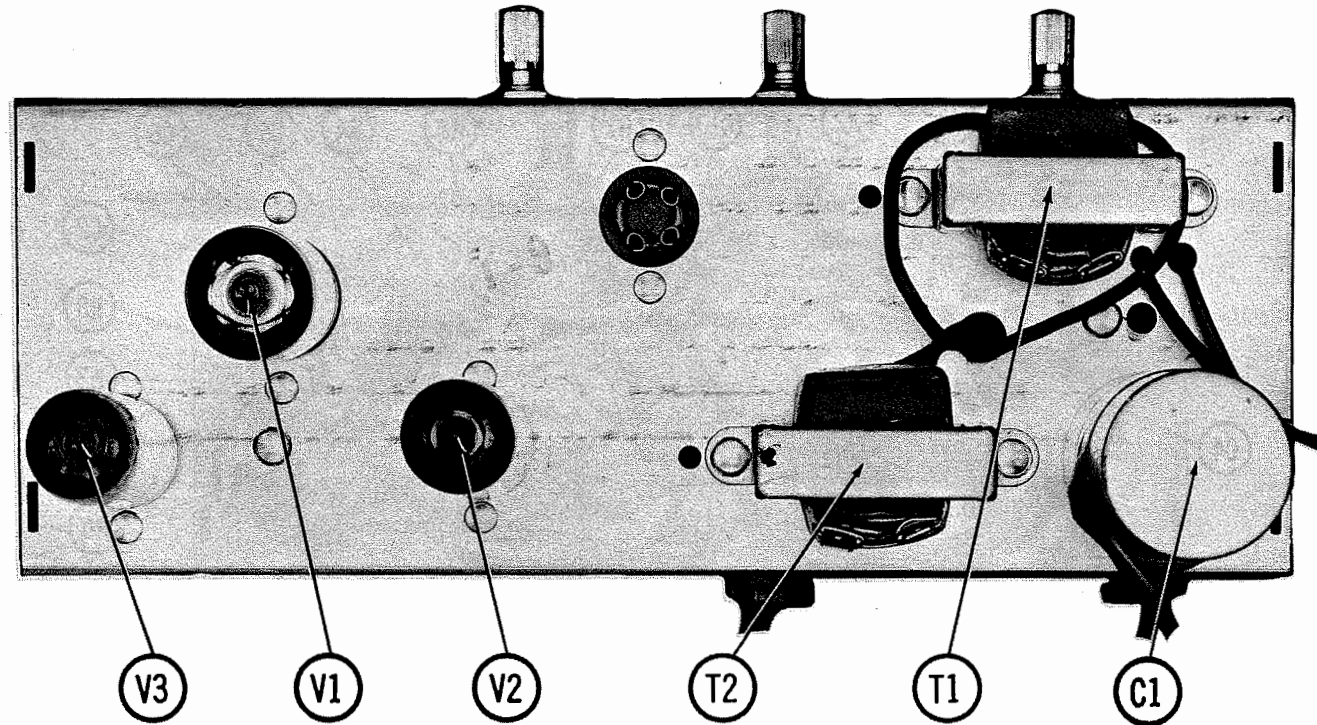
PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA				NOTES
	SYMPTONIC PART No.	ASTATIC CARTRIDGE	ELECTRO-VOICE CARTRIDGE	SONOTONE CARTRIDGE	
M1		80TS	97	187AS	
		NB-3a (7B) (LP)	NB-3a (7B) (LP)	N187AS *	
		NB-7a (7B) (LP)	NB-7a (7B) (LP)		
		NB-3a (7B) (LP)	3002 (7B) (LP)		
		NB-7a (7B) (LP)	3009 (7B) (LP)		
					Original needle replacement

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 9530 (Solid) Available in 12 Colors
Power Cord Use BELDEN No. 17006 (Stranded) Available in 12 Colors
Power Cord (Interlock Type) Use BELDEN No. 8874 (Plastic) or 17126 (Rubber) - 8 Ft.
Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 17009 (Plastic) or 17126 (Rubber) - 9 Ft.
Phone Pick-up Arm Cable Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)
..... Use BELDEN No. 8401 or 8421
..... Use BELDEN No. 8430 (Two Conductor-Unshielded)
..... Use BELDEN No. 8428 (Two Conductor-Shielded)
..... Use BELDEN No. 8419 (Three Conductor-Shielded)



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed.

MS341

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1963 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U. S. of America

DATE 11 -63

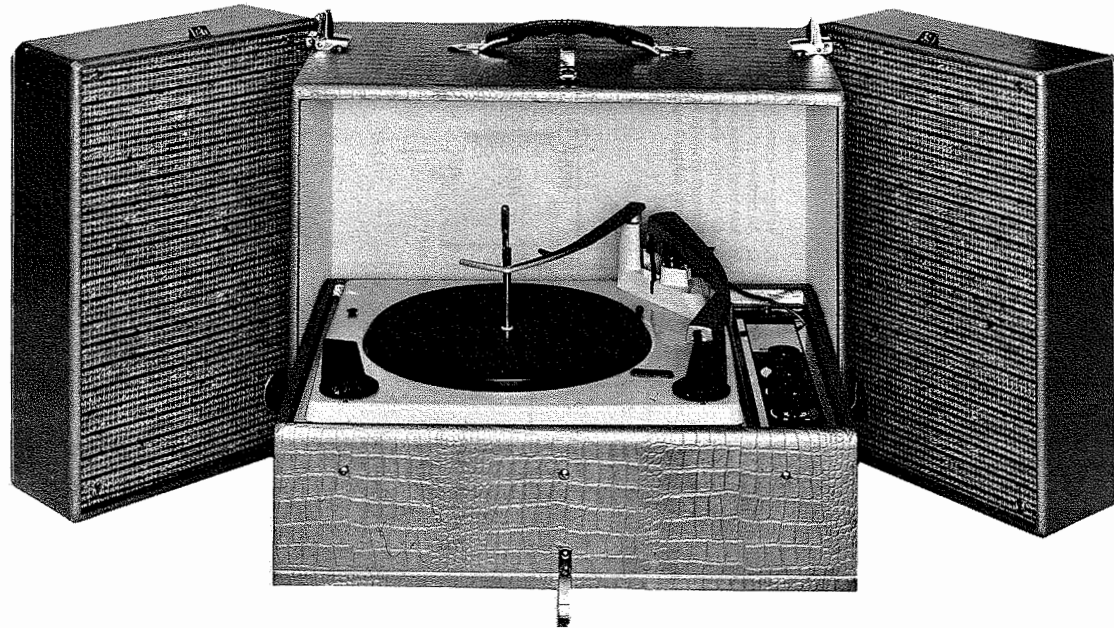
SET 663 FOLDER 12

SYMPHONIC MODEL 4PN22V

SET 663 FOLDER 12



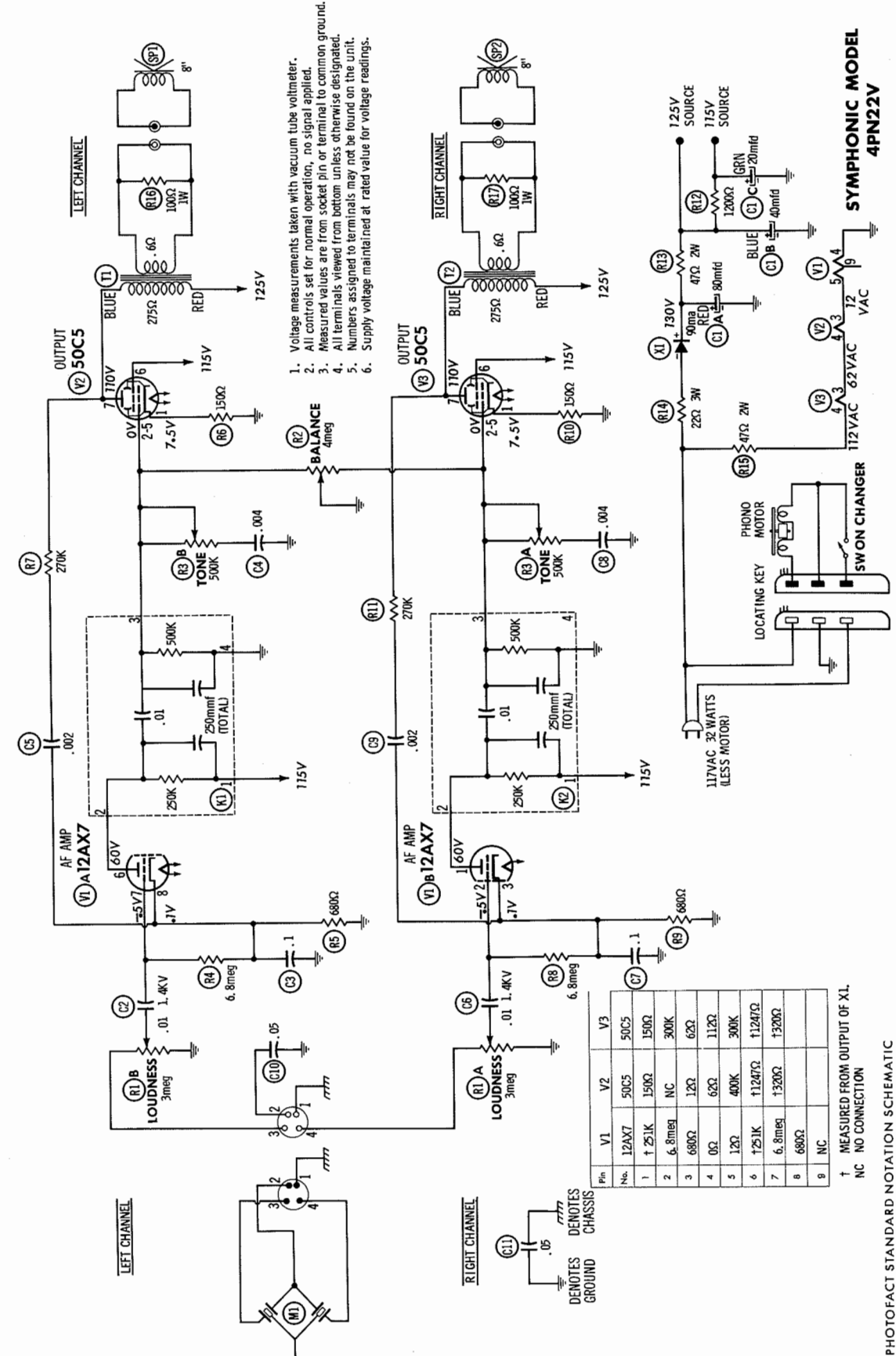
PHOTOFACT® Folder



SYMPHONIC MODEL 4PN22V

SET 663 FOLDER 12

SYMPHONIC MODEL 4PN22V



PARTS LIST AND DESCRIPTION

TUBES

ITEM No.	USE	GENERAL ELECTRIC	RCA	RAYTHEON	SYLVANIA	TYPE
V1	AF Amp. Output	12AX7	50C5			50C5
V2						

POWER RECTIFIERS

ITEM No.	ORIGINAL Part or Type No.	MALLORY PART No.	RCA PART No.	RECTIFIERS
X1	E125C200	A300 or D300	1N2862	SARKES TARZIAN PART No. F-4 or 40H

When replacing selenium rectifier with silicon type, add series resistance to obtain original output voltage.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	SYMPHONIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	80 150 150	CE-141	PR53800	B8RT64215	Q73-6	TDLT-7	TCT3117	TVA-3455
C1B	40 150 150							
C1C	20 150 150							

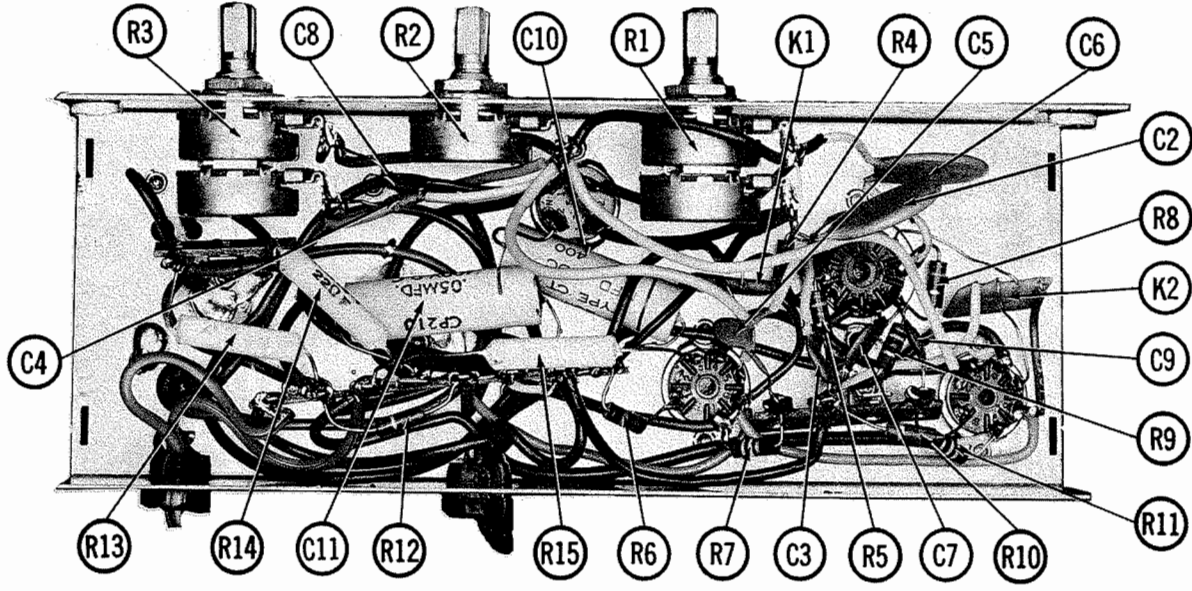
FIXED CAPACITORS

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELIMCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	0.01 1.4KV		DAC-27	DD18-103	HYF1681	16DP-3-103	BL-S10
C3	0.01 1.4KV		TTD-1	UK10-104	HCC10104Z	UAC-110	HY320
C4	0.004 1.4KV		BPD-004	DD-402	BYA10D4	CCD-392	5HK-D40
C5	0.002 1.4KV		BPD-002	DD-202	BYA10D2	CCD-202	5HK-D20
C6	0.01 1.4KV		DAC-27	DD18-103	HYF1681	16DP-3-103	BL-S10
C7	0.01 1.4KV		TTD-1	UK10-104	HCC10104Z	UAC-110	HY320
C8	0.004 400V		BPD-004	DD-402	BYA10D4	CCD-302	5HK-D40
C9	0.002 400V		BPD-002	DD-202	BYA10D2	CCD-202	5HK-D20
C10	0.05 400V		P488N-05	DF-503	P4885	GEM-415	4TM-550
C11	0.06 400V		P488N-05	DF-503	P4885	GEM-415	4TM-550

CONTROLS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	USE	RESISTANCE	SYMPHONIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Loudness, Right	3meg	VC-268	B-85, SR-85 or (F2-3meg, TU304)		MB13-340, SK1, QCM or (BU1, SC17, SS1, DC1)*	FA38A, RU36A, CS3500
R2	Balance	4meg	VC-330	B-86 or (F1-4meg, SU204)	A47-4meg-S, KSS-3	B11-240, SK1	UA58L, SK1000 or (RU40L, SL36, SK1000) or (U67) FASAA, RU55A, CS3500
R3A	Tone, Right	500K	VC-270	B-80, SR-80 or (F2-500K, R2-500K, TU304)	AD47-500K-Z, KSS-3	MB13-133, SK1, QCM or (BU1, SC4, SS1, DC1)*	
R3B	Tone, Left	500K					



SYMPHONIC MODEL
4PN22V