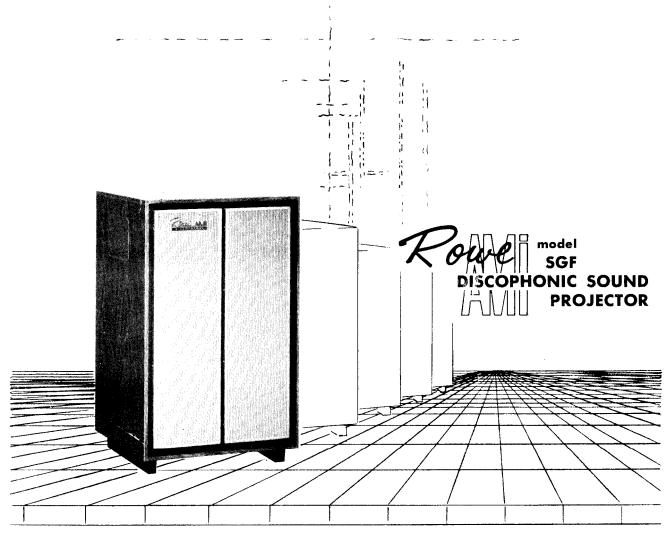
Model SGF Discophonic Sound Projector



installation-parts

Sales

ROWE AC MANUFACTURING Troy Hills Rd., Whippany, N.J. Manufacturing

1500 Union Avenue S.E., Grand Rapids, Michigan 49502 DIVISION OF AUTOMATIC CANTEEN COMPANY OF AMERICA



FOREWORD

As the title of this coverage states: DESCRIPTION, SPECIFICATIONS, ALL INSTALLATION VARIATIONS and REPLACEMENT PARTS coverage for the new Rowe AMI DISCOPHONIC SOUND PROJECTOR are included herein.

Study the description and specifications...then select the INSTALLATION Set-Up that will be most effective for the particular location you have in mind. Each location may have its own requirements and can be satisfied in one of the variety of set-ups and modes provided for with this BIG SOUND speaker system, separate volume control, amplifier, reverberator and cables mentioned in this book and offered by Rowe AMI.

Retain this manual for reference later — in the event of re-locating equipment and for any replacement, or stocking, of parts.

Since engineering part no's. have not been converted to SERVICE PART NUMBERS in their use in this coverage — the following will give you the proper SERVICE NUMBERS for use when ordering components and parts:

H-3491A	301-03491
L-2632A	401 - 02632
L-2633A	401-02633
L-2633B	402-02633
F-12166A	201 - 12166
F-12174A	201-12174
F-12179A	201-12179
Model SGF (R-2092)	600-02092
R-3390A	601-03390



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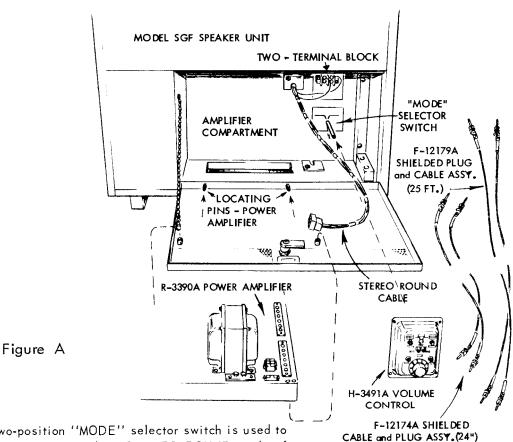
• DESCRIPTION

The Rowe AMI, Model SGF Speakers are specifically designed for DISCOTHEQUE application. They are capable of distributing sound over large areas at very high volume levels. These units may be used in pairs as left channel and right channel speakers, in the usual stereo set-up, or one SGF Speaker Unit can be used as a complete, self contained, STEREO ROUND speaker system similar to that of the Rowe AMI phonograph.

An integral compartment is provided for installation of the R-3390 A Power Amplifier and the H-3491 A Volume Control, Screw-Type feet are used on the rear corners of the cabinet to permit levelling of speaker regardless of floor surface.

The SGF Speaker is a three-channel system. The low frequencies are produced by two, twelve inch "woofers" in a 10.4 cu. ft., resistance controlled, vented enclosure. The mid-high frequencies are reproduced by four heavy duty, 6 x 9 speakers in individual, fibreglas damped enclosures. Two 6 x 9 speakers are located in the front of the cabinet and one in each side of the cabinet to give an effective angle of coverage of 240°. This speaker arrangement also permits operation of the speaker system as a STEREO ROUND System.

The very high frequencies are reproduced by a 3 1/2" "tweeter" having a wide angle dispersion characteristic. A dividing network provides optimum electrical crossover frequencies for both conventional and STEREO ROUND operation.



A two-position "MODE" selector switch is used to select conventional or STEREO ROUND mode of operation.

A two-terminal block is provided for conventional input; a six circuit connector and cable, for insertion in the speaker socket of the R-3390-A Amplifier, is provided for STEREO ROUND operation.

The cabinet is in a wood finish high pressure laminate on exterior surfaces with the same hardwood glue-block construction as the Rowe AMI phonograph.



• SPECIFICATIONS

SINGLE CHANNEL (Conventional) OPERATION:

Impedance: 15 ohms

Power Input: 50 watts max. program

material

STEREO ROUND OPERATION:

Power Input: as indicated by speaker level power switch on R-3390-A Amplifier. Power Requirement with R-3390-A Amplifier Installed: 115 V.A.C., 180 watts,

1.7 amps. Signal Input for Max. Output; R-3390-A

Amplifier: 1 volt r.m.s. each channel.

DIMENSIONS: 19" deep, 25 5/8" wide and 45 11 16" high. WEIGHT: 152

FINISH: Walnut wood grain, high pressure laminate on top and sides of cabinet. Grille is floating, epoxy coated special expanded steel.

INSTALLATION . . .

An objective of all DISCOTHEQUE installations is the reproduction of music at a considerably higher than normal sound level.

Primary factors, affecting the sound level, are:
room volume
speaker efficiency
amplifier power

Secondary factors are:

accoustical absorption of the room directivity of speakers

An acoustically "live" room will require less power than will an acoustically "dead" room. Speaker systems, with a wide angle of sound dispersion, such as the SGF, are less affected by room characteristics than are highly directional speakers, because a larger area is covered by direct sound from the speaker so that less dependence upon room reflection is required.

To simplify the estimation of amplifier power required for a given size of location; a chart relating room size to amplifier power is shown in Fig. B. The curve is for a room of medium sound absorption. The amplifier power, in the chart, refers to the total amplifier power used to drive the SGF Speaker Units. This chart can be used for the JAN Phonograph, if the power rating selected, at the speaker power level switch on the R-3390A Amplifiers is multiplied by a factor of 0.7. Thus, the 22 watt level would become 15.5 watts; the 5.5 watts level would become 3.8 watts, etc. It is important, to keep in mind, that the power rating of an amplifier is the power obtainable at maximum power output of the amplifier. This would

occur with all of the volume controls, in the system, set at maximum volume. The amplifier power rating, in the chart, if for this condition of operation. It is always good practice to choose a higher power than required, and to operate with the phonograph control amplifier volume control BELOW the maximum volume position. Therefore, where economically feasible, a power reserve of 2 to 10 times the indicated chart power is desirable.

As the phonograph volume control is backed off, from the maximum volume position, the bass boost increases up to the half way point of rotation. When the phonograph is operated at maximum volume, there is no bass boost regardless of the position of the bass boost switches on the R-3389 Control Amplifier.

The USE OF REVERBERATION is another factor that affects the installation. Reverberation is the "room echo" or "room reflected" part of the sound from an orchestra that a listener hears when listening to music performed in a large hall. Most records have a certain amount of artificial reverberation added to compensate for the lack of reverberation in "dead" recording studios.

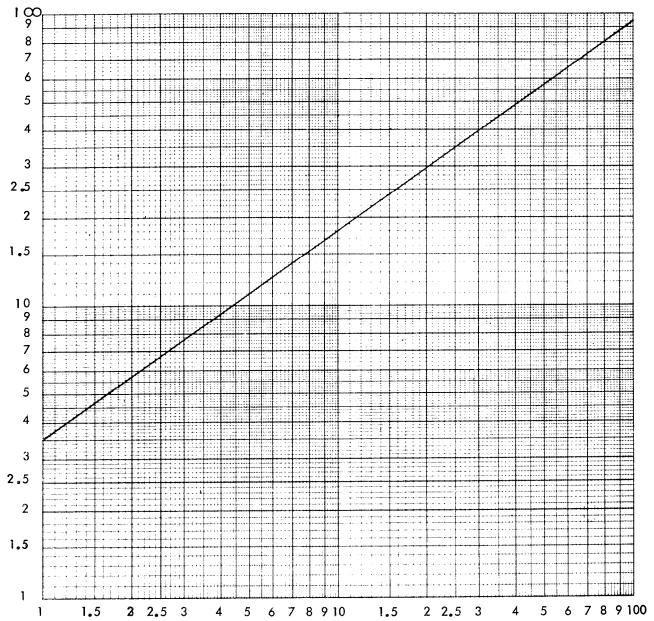
Artificial reverberation is also used with electric guitars, etc., to produce unusual sound effects. Discotheque installations in small, acoustically "dead" locations can be enlarged by use of the proper amount of reverberation. Reverberation is much less effective in large, acoustically "live" locations where a considerable amount of natural reverberation is present.



ROOM SIZE versus AMPLIFIER POWER...

Rowe AMI Model SGF DISCOTHEQUE SPEAKER SYSTEM

Sound Pressure Level: 90 DB



ROOM VOLUME - CUBIC FEET IN THOUSANDS

Figure B



The amount of reverberation used will have to be carefully chosen if records with vocals are to be played. Too much reverberation will make the vocals unintelligible. A compromise setting usually has to be arrived at where the vocals are not distorted too much and yet enough "reverb" is present to create the desired effect on instrumentals. Large amounts of "reverb" are used where unusual effects on instrumentals are desired.

A. DISCOTHEQUE INSTALLATIONS . . .

A-1. Rowe AMI PHONO. Plus TWO Model SGF SOUND PROJECTORS at 25 watts each PLUS REVERBERATION . . .

In this installation a R-3390 A Power Amplifier is used as a "slave" amplifier to drive the two SGF Speaker Units, thus providing 25 watts of audio power to each SGF Speaker Unit. Connections are shown in Fig. A-1. In addition to the power amplifier, a H-3491-A Volume Control is used so that the volume level of the SGF Units may be adjusted relative to the phonograph.

The FISHER K-10 Reverberator is connected between the phono. and the SGF Speaker Units. Neither the reverb. unit or the electronic unit should be mounted in, or on, the SGF units due to the possibility of microphonic pick-up. The electronic unit can be mounted on the phonobut the reverb. unit cannot unless the phonograph is operated at a moderate volume level. The reverb. unit should not be separated from the electronic unit by more than 20' of cable (each cable).

The connections between the electronic unit and the phono. should not exceed 100 ft. (each cable) and the connections between the electronic unit and the power amplifiers in the SGF Speaker Units should not exceed 100 ft. (each cable). This assumes use of low capacity cable of approx. 30 mmfd. per foot capacity. The re-

verberation unit must be shock-mounted to a vertical surface that is relatively free of vibration. The electronic unit may be mounted in any position as long as adequate ventilation is provided and strong hum fields are avoided.

The "MODE" selector switch, on the speaker units, must be in the "SINGLE CH. INPUT" position.

The slide switch, on the H-3491 A volume Control, must be in the "RVRB" position.

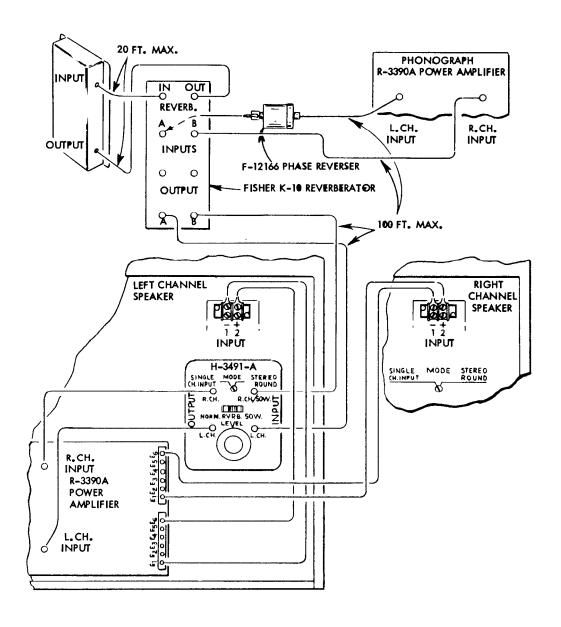
The mode selector switch, on the electronic unit part of the FISHER K-10 Reverberator, must be in the "NORMAL" position.

The signal into the reverberator should be kept as high as possible — to prevent noticeable hum and tube 'hiss' from the reverberator. The best way to insure this is to keep the phonograph volume control in the upper Third (clockwise) of its rotation.

Rowe AMI Kit no. L-2633 A contains the necessary components in addition to the phonograph, to make this installation. (The L-2633 Kit includes installation instructions).

See Figure A-1 . . . next page . . .





REVERBERATOR, STEREO, 25 WATTS PER CHANNEL

Figure A-1

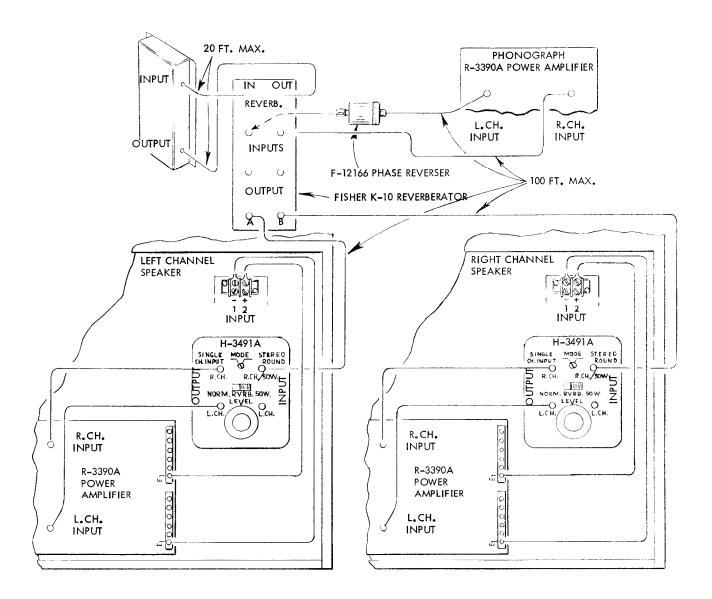


A-2. Rowe AMI PHONO. Plus TWO Model SGF SOUND PROJECTORS at 50 watts each-PLUS REVERBERATION...

This installation is similar to install. no. A-1, except that the power to the SGF Sound Projectors has been doubled. Connections are shown in Fig. A-2.

Note that the volume control slide switch is in the "R. CH/50 w." position.

The reverberator installation data, under installation no. A-1, apply to this set up. Kit no. L-2633 B (including install. instructions) contains the necessary components, other than the phonograph, to make this installation.



REVERBERATION, STEREO, 50 WATTS PER CHANNEL
Figure A-2

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B. SOUND REINFORCEMENT - STEREO

B-1. Rowe AMI Phonograph Plus TWO MODEL SGF SOUND PROJECTORS . . .

Where Stereo Speaker coverage in addition to the phonograph is required, two Model SGF Speakers can be connected to the phonograph amplifier. Connections are indicated in Fig. B-1. The connections shown at the top of the illustration are for operation of the Model SGF Units at a higher volume level than that of the phonograph.

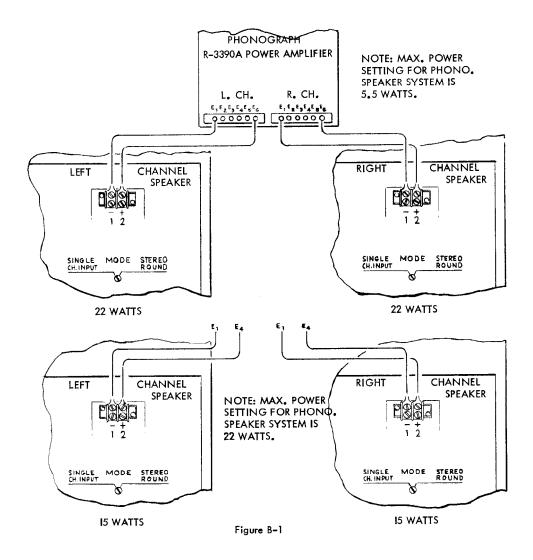
The connections at the bottom of Fig B-1 will produce approximately equal volume levels between the phono. and each SGF Unit.

Note that the polarity of connections to the left speaker unit is reversed from that to the right speaker unit. This phasing must be correct for normal stereo operation.

Also note that the "MODE" selector switch is in the "SINGLE CH." INPUT position.

Components required:

2-Rowe AMI Model SGF (R-2092) Sound Projectors





B-2. Rowe AMI PHONO. Plus TWO MODEL SGF SOUND PROJECTORS at 25 watts each . .

This installation provides greater power and flexibility since a R-3390-A Power Amplifier has been added as a "slave" amplifier to drive the two SGF Speaker Units thus providing 25 watts of audio power to each SGF Speaker Unit. Connections are shown in Fig. B-2. In addition to the power amplifier, a H-3491-A volume Control is used so that the volume level of the SGF Units may be adjusted relative to the phonograph. Again, correct phasing of the speaker leads is important for normal stereo operation.

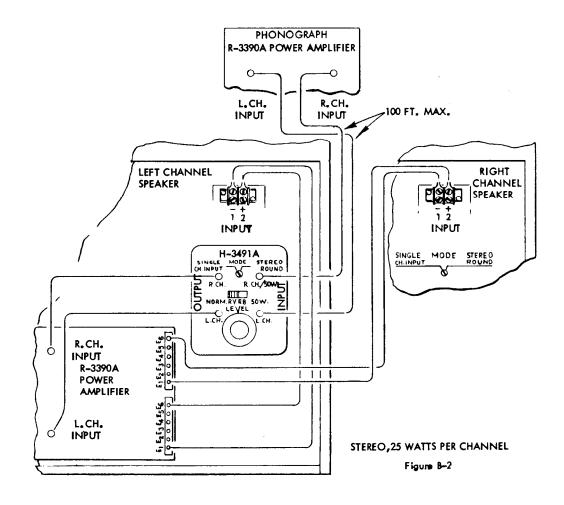
Note that the "MODE" selector switches are in the "SINGLE CH. INPUT" position.

The slide switch on the volume control box should be in the "NORM" position. CAUTION: do not plug in the six circuit plug and cable into

the speaker socket on the R-3390-A Amplifier, when the other input terminals of the speaker unit are connected. The six circuit plug and cable is used for STEREO ROUND operation only. The shielded cable connecting the phonograph to the slave amplifier should be of the low capacity type, i.e. approximately 30 mmfd. per ft.

Components required:

- 2-Model SGF (R-2092) Sound Projectors
- 1-R-3390-A Power Amplifier
- 1-H-3491-A Volume Control
- 2-F-12174-A Shielded Cable and Plug Ass'y. (24'')





B-3. Rowe AMI PHONOGRAPH Plus TWO MODEL SGF SOUND PROJECTORS at 50 watts each . . .

This installation is similar to that of type B-2, except that the power has been increased to 50 watts for each speaker unit.

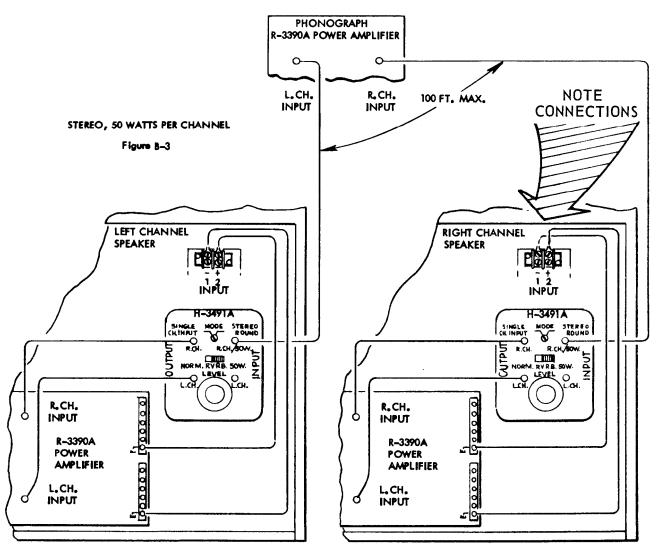
A H-3491-A Volume Control MUST be used with each R-3390-A Power Amplifier. Note that the volume control slide switch is in the R. CH./50 w. position.

IMPORTANT . . .

NOTE SPEAKER CONNECTIONS
IN ALL OF THESE SYSTEMS
FOR CORRECT SPEAKER
PHASING.

Components required:

- 2-Model SGF (R-2092) Sound Projectors
- 2-R-3390 A Power Amplifiers
- 2-H-3491 A Volume Controls
- 4-F-12174 A Shielded Cable and Plug Assy's. (24")
- 2-F-12179 A Shielded Cable and Plug Assy's. (25')





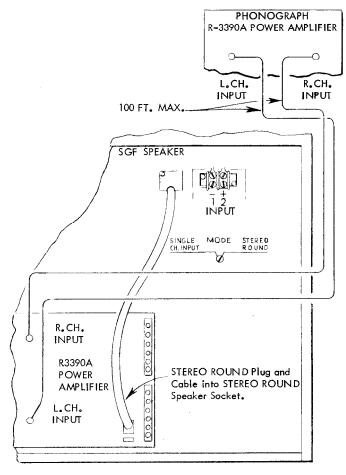
B-4. STEREO ROUND Operation-With Rowe AMI PHONO. and ONE Model SGF SOUND PROJECTOR...

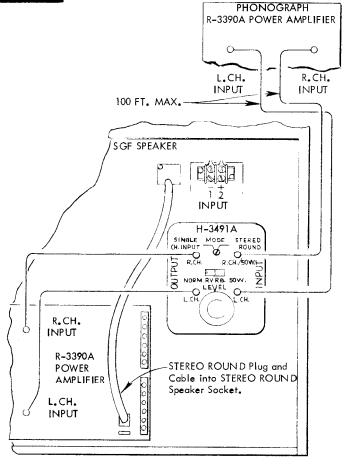
A single SGF Speaker Unit can be operated as a self-contained STEREO ROUND system similar to that of the Rowe AMI Phonograph. Fig. B-4 will show you how. The six-circuit connector and cable must be plugged into the speaker socket on the R-3390 A Power Amplifier. No connections are to be made to the two-terminal input block.

The "MODE" switch must be in the "STEREO ROUND" position.

Components required:

- 1-Model SGF (R-2092) Sound Projector
- 1-R-3390 A Power Amplifier
- 1-H-3491 A Volume Control
- 2-F-12174 A Shielded Cable and Plug Assembly (24")
- 2-F-12179 A Shielded Cable and Plug Assembly (25')





STEREO ROUND OPERATION OF SGF SPEAKER

Figure B-4

B-5. STEREO ROUND Operation . . . With Rowe
AMI PHONOGRAPH Plus ONE SGF SOUND

PROJECTOR - Less Volume Control . . .

The H-3491 A Volume Control may be omitted where fine adjustment of the slave amplifier level is not necessary. See Fig. B-5 for connections.

Course adjustment, of the level, can be made by setting the speaker power switch, on the slave amplifier, to the desired level.

STEREO ROUND OPERATION OF SGF SPEAKER - Less VOLUME CONTROL

Figure B-5

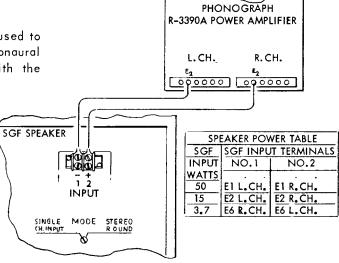


C. SOUND REINFORCEMENT - MONAURAL

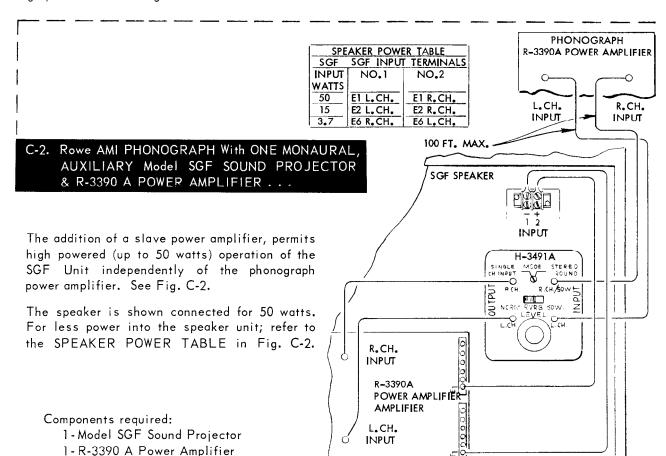
The Model SGF Sound Projector can be used to provide high quality, high power monaural sound reinforcement, in conjunction with the phonograph.

C-1. Rowe AMI PHONOGRAPH With ONE MONAU RAL AUXILIARY Model SGF SOUND PROJECTOR . . .

This speaker can be used as a 15 ohm extension speaker. It is connected across both channels of the R-3390 A Power Amplifier in the phonograph as shown in Fig. C-1.



MONAURAL OPERATION OF MODEL SGF SPEAKER UNIT Figure C-1

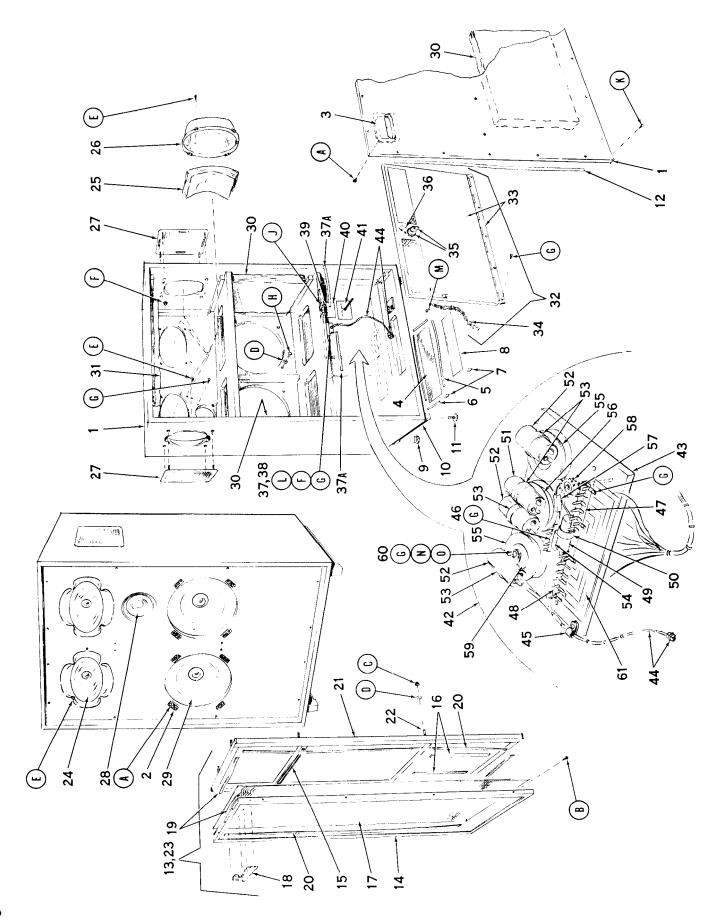


MONAURAL OPERATION OF MODEL SGF SPEAKER UNIT
WITH SLAVE AMPLIFIER

Figure C-2

- 2-F-12174 A Shielded Cable and Plug Assembly (24")
- 2-F-12179 A Shielded Cable and Plug Assembly (25')

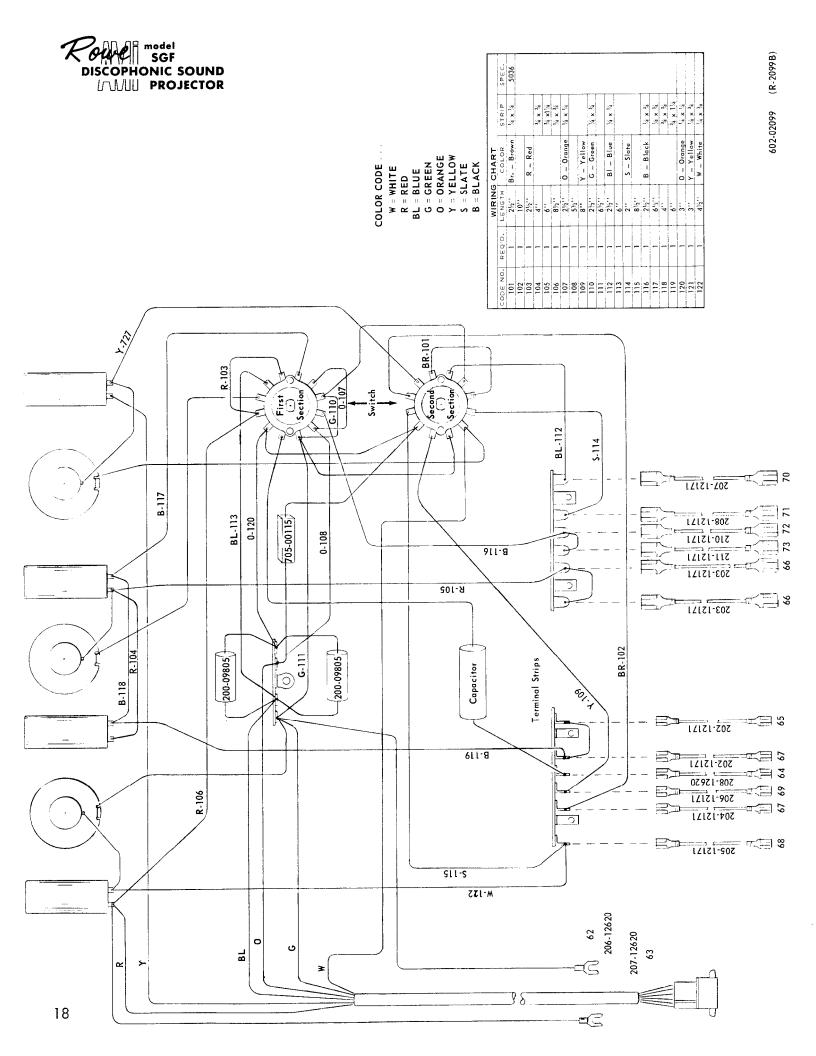






600-02092 (R-2092) Model SGF Discophonic Sound Projector

	QTY. PER ASSY	- CC -		7	— <i>·</i>					_				-			- ~	s m	7	7			സ്	ი –	the																	
	DESCRIPTION	Strike Plate (for door lock)	Lock Spring	Sponge Rubber		Name Plate (back panel * not shown)	Cwitch Chart	Dividing Network Assembly*	Includes:			Terminal Atria	Terming Strip		Capacitor	L	Capacitor - AC Electrolytic) ;	Capacitor • AC Electrolytic	Inductor	Resistor - Wire Wound 7 Watt	7000	Spacer (not visible • under washer)	Vasher washer Connection Chart	igram) a	es. Balance of parts listing - page 19.	STANDARD HARDWARE	5/8 P.R.H.S., Type 17	1/2 P.O.H.S., Type "A" (Chrome)	Keps Hex.	Washer	3/4 P.R. Wr. H.S., Type 17	32 Keps Hex., M.S. Nut	5/8 P. R. Wr. H.S., Type 17	2 x 1-1/4 Sems P.R.H.S., Type 23	32 x 3/8 Sems Sl. Hex. H.S., Type 23	P.R.H.S., Type 17	x 1-1/2 P.F.H.S. Type 17 (Black Oxide - for Rear Panel)	. Hex. Wr. H.M.S.	- 32 x 3/8 Sems SI. Hex. Wr. H.S., Type 23	1-1/2 P.R.H.W.S. (Alum.)	3/8 P.R.H.S., Type "A"
	PART NO.	200-12416			200-02218	200-12158	200-12175	602-02089		300-03495	301-03496	703-00211	200-03064	200-12165	702-00211	721-00931	200-09780	710-00931	200-09805	201-10586	201-10641	200-12161	710-01211	704-0 200 300-03492	TE: Wiring			$A = \#6 \times 5$	x 9# ==	\overline{C} = #10 - 24	_	E = #8 × 3,	$\vec{F} = \#8 - 32$	G = #8 × 5,	H = #10 - 32	() = #10 • 3) = #8 - 3/	8# = (80 # 	(W) = #10 • 3	× 01# = N	(i) = #6 × 3
	INDEX NO.	37	38	37A	39	•	2 4 5	42		43	44	45	47	48	49	50		53 53	54	55	36 7.7	58 58	59	90 91	ON			<u> </u>	_				<u> </u>	<u> </u>	<u> </u>		, _					
2	QTY. PER ASSY	A331.	_	8	2	1 1	2	7		12	2	2	7	4				2	7		2 5	w	7	c			Grille	No. 18,		20 ed.		4 4	r) 4	4	1 1 1 1	2	33	70			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	. DESCRIPTION	Onbine + Assembly			Hand Hole	<u>с</u> .		Cent Strip					Leg Leveler	Foamed tape (screw area-rear panel)	The Assembly (William)	includes:			Colla					Inc	ا	Grille Assembly (WITHOUT Rov Discotheque Medallion) -	Includes: same parts as 602-02094 Grille	201-12159, 1 req'd. and Index 1	Is not used.	les are attached with the following parts: Standard Hardware item Camaraaaaa	Standard Hardware item D	Speaker - Mid Range		Speaker Cover			Acoustical Pad			E —	Chain - Rear Door	Lock Bolt - Straight
	PART NO.	601-02093 Cabinet Assembly		200-09558	300-00422 Hand Hole Cover (in removable, rear	704-02412 Perforated	705-02125	703-00003	718-02401	703-00903	200-12167	200-12158	700*1215/ Leg Leveler	/05-02129 Foamed tape (screw area-rear panet)	The Assembly (William)		Trim - Frame Assembly	Foamed Tape		300-03484 Medallion • Discothe que		706-02129 Foamed Tape		Inc	ا	601-02094 Grille Assembly (WITHOUT Rowe AMI Discotheque Medallion)	Includes: same parts as 602-02094	201-12159, I req'd. and Index I	Is not used.	Both Grilles are attached with the following parts: Standard Hardware item Cameral	Standard Hardware item D		Acoustical Pad (each mid-range sp	400-05393 Speaker Cover			200-12593 Acoustical Pad			Door and Hinge Assembly		Lock Bolt - Straight
		601-02093 Cabinet Assembly	0.020	200-09558	300-00422 Hand Hole Cover (in removable, rear	704-02412 Perforated	705-02125		718-02401	703-00903	200-12167	200-12158	700*1215/ Leg Leveler	Crilla Assambly (with Rowa AMID	(medallion)		401-02631 Trim - Frame Assembly -	706-02129 Foamed Tape	707-02129		200-5024	706-02129		lnc	70171-007	Grille Assembly (WITHOUT Rov Discotheque Medallion) -	Includes: same parts as 602-02094	201-12159, 1 req'd, and Index 1	Is not used.	Both Grilles are attached with the following parts: Standard Hardware item C	Standard Hardware item D	400-05290 Speaker - Mid Range	200-09827 Acoustical Pad (each mid-range sp		300-03485	400-02628	200-12593	704-00903		33 402-05392 Door and Hinge Assembly	200-12418 Chain - Rear Door	Lock Bolt - Straight





602-02099 Dividing Network Assembly (con't.)

. Wiring Parts and Connections

QTY. PER ASSY.	1 Total 19" Total 19" Total 19" Jeach 20 Feach 11" color 11" used 19" for each 11" for each 11" for each 11" for each
DESCRIPTION	Jumper Assembly
INDEX PART NO.	206-12620 207-12620 208-12620 202-12171 203-12171 203-12171 204-12171 206-12171 206-12171 206-12171 210-12171 Code No. 001-05036 003-05036 004-05036 004-05036 006-05036 007-05036
NDEX NO.	62 63 64 65 72 73 73 73

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Sales
ROWE AC MANUFACTURING Troy Hills Rd., Whippany, N.J.
Manufacturing

1500 Union Avenue S.E., Grand Rapids, Michigan 49502
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SGF - S/M - P/C
Litho. in U.S.A.