

microphones

amplifiers

speakers

SPEAKER HOUSINGS • TRANSFORMERS
RE-ENTRANT HORNS AND DRIVERS
INTER-COMMUNICATION UNITS • ACCESSORIES



SPECIAL PRODUCTS DIVISION

STROMBERG-CARLSON COMPANY

A DIVISION OF GENERAL DYNAMICS CORPORATION

master component assemblies

ECONOMYMASTER I

Ideal for indoor use. The proper matching of the quality components used in assembling Economymaster I assures peak performance at low cost. These budget-priced, hard-working units will combine to serve many purposes with remarkable efficiency:

- AU-62—8 watt amplifier
- Phono input jack
- MR-34C—Controlled Reluctance Microphone
- MS-26—Microphone Stand with On-Off Switch
- RH-28-D—Speaker Housing in Desert Sand
- RC-27*—High-quality 8" Speaker

*Four speakers may be employed without line-matching transformers; up to twenty speakers with line-matching transformers.



ECONOMYMASTER II

For outdoor application, you will find Economymaster II an unbeatable matching of quality components in its price range. Its versatility and performance characteristics make this low cost, highly dependable ensemble worth many times the original cost. The Economymaster II features:

- AU-62—8 watt Amplifier
- Phono Input Jack
- MR-34C—Controlled Reluctance Microphone
- MS-26—Microphone Stand with On-Off Switch
- RS-14*—Weatherproof Re-Entrant Loudspeaker with Built-in Driver Unit

*Four speakers may be employed without line-matching transformers; up to twenty speakers with line-matching transformers.



MOBILMASTER

Truly mobile outdoor equipment which will provide excellent coverage over an extended area, The Mobilmaster will serve innumerable purposes with unmatched efficiency. Its rugged durability, flexibility and performance make the Mobilmaster outstanding in its field.

- AM-48**—6 watt Amplifier. Operates from 6 volt storage battery. The AM-49 Amplifier operates from a 12 volt storage battery.
- MD-33C Rugged Controlled Reluctance Microphone
- Phono Input
- RS-14*—12 watt, weatherproof Outdoor Loudspeaker with Built-in Driver Unit

*Additional RS-14 Speakers may be used.
**Specify 6 volt or 12 volt operation.



WORKMASTER I

The Workmaster I is ideally suited for any number of indoor applications. Featuring the perfect matching of highest quality components, the Workmaster I will give years of dependable, highly efficient service. True to its name, it will prove the master of any task assigned to it. The Workmaster I includes:

- AU-63—15 Watt Amplifier
- Phonograph Input
- MR-34C—Controlled Reluctance Microphone
- MS-26—Microphone Stand with Touch-to-Talk Locking Switch
- RC-27*—Two High Quality 10 Watt 8" Speakers
- RH-28D—Two Speaker Housings with Desert Sand Finish

*Will handle up to four RC-27 Speakers without Line-matching Transformers; up to 40 Speakers with Line-matching Transformers.



microphones

The first link in the golden chain of quality communications equipment. There is a microphone for every purpose in this wide selection to help start your transmission on its merry way.

Model MR-34C
RELUCTANCE



A high level, high impedance, controlled reluctance model for voice paging, etc.

Model MD-33C
RELUCTANCE



Rugged controlled reluctance model. Non-locking switch closes separate line for operating relays or similar application.

Model MD-43A
LAVALIER



For chest, desk or hand use—indoors or outdoors. Supplied with neck cord, support clips and 18" cord. Omnidirectional polar pattern. Either 30-50 ohm impedance.

Model MD-28CS
DYNAMIC



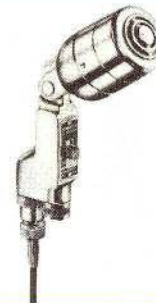
Multi-purpose close-talking, high impedance type. Can be hung, hand-held, or mounted on stand. Equipped with slide switch.

Model MD-36
DYNAMIC



General purpose model. Withstands high humidity, temperature extremes, mechanical shocks. Sliding contact switch. MD-36AS, low impedance. MD-36CS high impedance.

Model MD-37
DYNAMIC



Excellent for public address and similar uses. Non-directional pickup pattern at low frequencies becomes directional with increase in frequency. Sliding contact switch. MD-37AS, low impedance. MD-37CS, high impedance.

WORKMASTER II

The careful combining of just the right high-quality components assures you that the Workmaster II will master any of the many outdoor duties assigned to it. The quality construction of the components, the rugged dependability and outstanding performance of the Workmaster II make it an indispensable asset.

- AU-63—Powerful 15 Watt Amplifier
- Phonograph Input
- MR-34C—Controlled Reluctance Microphone
- MS-26—Microphone Stand
- RS-14*—Two 12 Watt, Weatherproof Re-entrant Loudspeakers with Built-in Driver Units

*Handles up to 4 Speakers without Line-matching Transformers; up to 40 Speakers with Line-matching Transformers.



BROADCASTER

Designed for true Full Fidelity indoor performance, the Broadcaster offers superior audio reproduction in the finest Stromberg-Carlson tradition. The careful matching of quality components gives the exact balance required for Full Fidelity operation. The versatile Broadcaster includes:

- AU-64—Amplifier—30 Watts of Power Plus!
- Phono Input
- MC-41—Broadcast-type Cardioid Microphone.
- MS-12—Microphone Floor Stand. Easily adjusted
- RF-473—Two 32 Watt High Fidelity Coaxial Diffuser Speakers
- RH-62—Two Speaker Enclosures



PERFORMER

Traditional Stromberg-Carlson quality, dependable, high-efficiency operation and functional versatility put the Performer in a class by itself for outdoor use. Perfectly matched components to assure proper balance guarantee the best performance possible. The powerful Performer features:

- AU-64—30 Watt Amplifier
- Phono Input
- MD-30C—Dynamic Microphone
- RP-34*—Four rugged outdoor Re-entrant Horns
- RD-24—Four driver units for RP-34 Horn

*Handles up to 40 Horns using RD-21 Driver Units.



POWER KING

King of Kings is an apt description of the Power King. Virtually unlimited in its possible applications and with power to spare, the Power King stands alone in its field. The careful selection of the right components assures the ultimate in power plus long life and efficient performance from the Power King, which includes:

- AU-65—60 Watt Amplifier with Phone Input
- MD-30C—Dynamic Microphone with Grip-to-Talk Locking Switch
- RC-28—Four High Quality 8", 12 Watt Speakers
- TR-13—Four Line-matching Transformers
- RH-28D—Four Speaker Housings
- RP-27—Four Re-entrant Horns
- RD-21—Four 30 Watt Driver Units

The Power King will handle up to 100 speakers.



Model MD-22AS
DYNAMIC



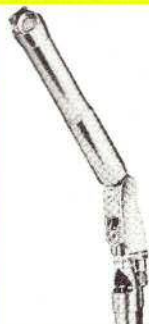
Close-talking, noise-cancelling, low impedance model for high noise-level areas. Ideal for marine, railroad, factory, power plant and similar installations. Press-to-talk switch.

Model MD-30
DYNAMIC



Especially suited for voice frequency applications. Grip-to-talk stand with sliding clip to hold switch in "on" position. MD-30A low impedance. MD-30C, high impedance

Model MD-38S
DYNAMIC

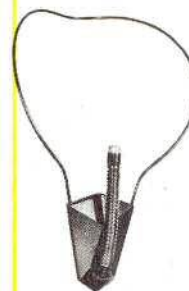


For finest installations. Can be used on stand, or suspended overhead, or in hand. Acoustical treatment prevents wind and breath blasts. Sliding contact switch. Vertical tilt swivel.

Model MC-41
CARDIOID



Uni-directional dynamic type, with sharper pickup pattern. Multi-impedance switch allows working directly into low, medium or high inputs.



Model MS-41
SHOULDER
HOLDER

Provides free movement of hands and body. Fine for demonstrators, lecturers.

Model MS-32A
DESK STAND



Adjustable model. Heavy, non-tilt base.

Model MS-26
DESK STAND

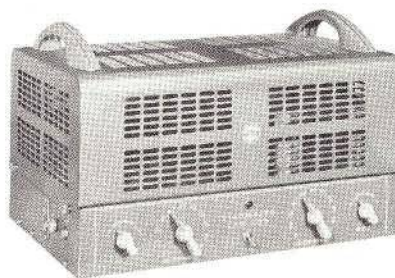


Has touch-to-talk, locking switch for relay operation or microphone "on-off."

The careful selection of the right amplifier for the right job completes the second phase in the achievement of audio perfection. For dependability, quality and economy, "There is Nothing Finer Than a Stromberg-Carlson."



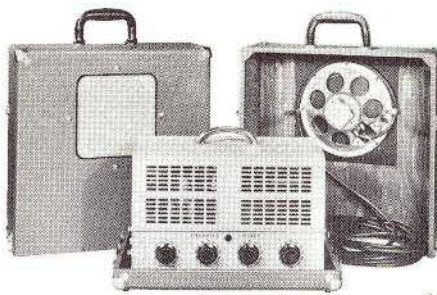
**Model AU-35
UNIVERSAL
AMPLIFIER**
50 watt output. Two 25-watt output channels, with separate volume controls. Three microphone and one phono input. Interconnecting jack. Treble and bass controls.



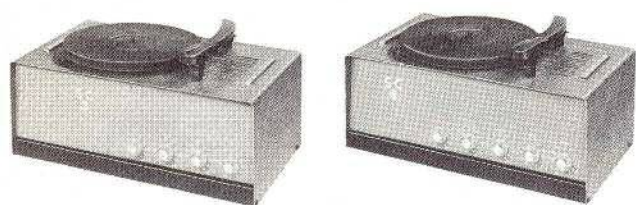
**Model AU-36
UNIVERSAL
AMPLIFIER**
50 watt output. One microphone and one phonograph input. Has "additional amplifier" jack. Treble and bass controls.



**Model AU-62
UNIVERSAL
AMPLIFIER**
8 Watt Output. One microphone and one phono input. Treble control. Complete with Top Cover.



**MODEL PC-17
PORTABLE CASE**
Equipped with 2 high-quality 8" speakers, 25 feet heavy-duty cable, and plugs wired to each speaker. Takes any amplifier not over 14" wide by 8" deep. Drilled to permit fastening AU-57 or AU-58 amplifier. Fabrikoid finish.

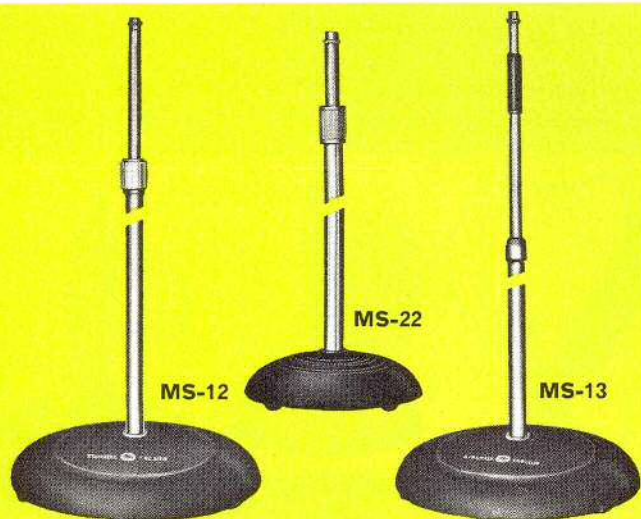


Top covers with 3-speed record players are available for the AU-64 (Model PR-5) and AU-65 (Model PR-6).

AU-64 Model (PR-5) and AU-65 (Model PR-6)



**Model AU-65
UNIVERSAL
AMPLIFIER**
60 Watts Output. Two Microphone and one Phono Input. Treble and Bass Controls. Top Cover with Self-Retractable Handles included.



Model MS-22 BANQUET STAND

Adjustable 18" to 32" for table use; 8" base.

Model MS-12 FLOOR STAND

Adjustable 34" to 64". Positive locking position. Heavy base.

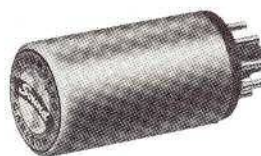
Model MS-13 FLOOR STAND

Deluxe model with automatic positive clutch. One hand operation. No creeping. Adjustable 34" to 64". 12" Base.



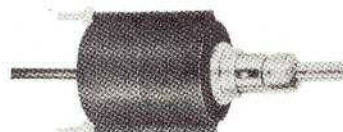
**Model AK-13 REMOTE
VOLUME CONTROL**

Provides individual control of volume of each of four input sources. Supplied with connector plug. Designed for use with Model AU-57 amplifier which is equipped with remote volume control socket.



**Model TM-8A PLUG-IN
INPUT TRANSFORMER**

Designed for Model AU-57 amplifier, this plug-in unit provides means of converting high impedance microphone input to low impedance.



**Model TM-10
INPUT TRANSFORMER**

Microphone line input transformer designed for easy conversion of high impedance input to low impedance.



**Model AU-57
UNIVERSAL
AMPLIFIER**

25 watt output. Four microphone inputs, one with magnetic crystal phono selector switch. Treble and bass controls. Provision for remote volume control.



**Model AU-58
UNIVERSAL
AMPLIFIER**

25 watt output. Two microphone inputs, one with magnetic crystal phono selector switch. Treble control. Bass control.



**Model AU-63
UNIVERSAL
AMPLIFIER**

16 Watts Output. One Microphone and one Phono Input. Treble Control. Includes Top Cover with Self-Retractable Handles.



**Model AU-64
UNIVERSAL
AMPLIFIER**

30 Watts Output. Two Microphones and one Phono Input. Treble Control. Includes Top Cover with Self-Retractable Handles.



**Model AV-38
PRE-AMPLIFIER**

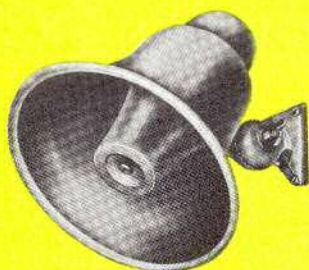
Multi-purpose line or voltage amplifier, ideal for remote program pickup. Three low-impedance microphone and one high-impedance phono input. Treble control. Bass control on microphone. Bass boost control on phono. Monitor headphone jack. Output level meter. Built-in AC power supply.



**Models AM-48
and AM-49
MOBILE
AMPLIFIERS**

6 watt output. One microphone and one phono input. Volume control. Model AM-48 is for 6-volt storage battery operation. Model AM-49 operates from 12-volt battery.

complete re-entrant speakers



Models RS-5 and RS-6

Small re-entrant speakers, with built-in driver units, for paging, etc. Ideal for loading platforms and exposed location. 6" bell, air column equivalent of 14". Input capacity: 3 watts RS-5, voice coil impedance of 8 ohms; RS-6, 45 ohm impedance.



Model RS-14

Re-entrant, with built-in driver, handles up to 12 watts of program material. Particularly effective in noisy locations. Suitable also for outdoor installation. 9" bell, air column equivalent of 18". Voice coil impedance of 8 ohms.



**Model HS-101
HEADPHONE SET**

Famous Stromberg-Carlson telephone quality throughout. These headphones are furnished complete with cord and are VA-approved. Plastic covered, adjustable headband; nickel plated exposed parts. Permanent magnets of Alnico metal. 2000 ohm DC resistance.

speakers

Stromberg-Carlson's years of world leadership guarantee the very finest in sound-engineered speakers—an extremely vital element in optimum audio reproduction. "There is Nothing Finer Than a Stromberg-Carlson" speaker for smooth frequency response and top performance.



Model RF-460 HI-FI SPEAKER

Ideal for smooth, wide-range reproduction for small-size enclosures and hard-to-fit locations. 8" cone with ¾" voice coil. 6.8 oz. Alnico V Magnet. Flux density 13,000 gauss. 8 ohm impedance. Handles 12 watts of program material. Frequency response 45-14,000 cps. Moisture-resistant cone.



Model RF-473 HI-FI COAXIAL SPEAKER

Combines high-power-handling capacity, wide tonal range, smooth frequency response and exceptional durability. 12" curvilinear, moisture-resistant cone and coaxially located, exponentially shaped, high-frequency diffuser. Handles 32 watts of program material. Better than 75 degrees angle of coverage. Frequency response: 30 to 14,000 cps. Back and front dust covers protect against dust and other foreign materials.



Model RF-465 HI-FI COAXIAL SPEAKER

True coaxial speaker system with "Omega M Voice Ring" horn loaded 2½" tweeter and separate 15" low-frequency woofer. Moisture-resistant cone. Frequency response: 30 to 20,000 cps. Handles 35 watts of program material. Better than 90 degrees angle of coverage. Engineered to match perfectly any type of enclosure suitable for use with a 15" speaker.



Model RC-61

There are many applications for this 4" speaker. Handles 4 watts of program material. Voice coil impedance of 3.2 ohms. Alnico V magnet, .82 oz.



Model RC-59

Powerful 6" x 9" oval cone speaker with voice coil impedance of 3.2 ohms. Has 1.7 oz. Alnico V magnet. Handles 7 watts of program material.



Model RC-27

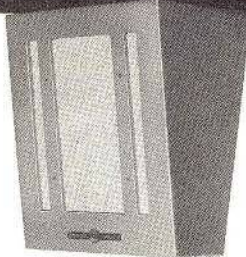
A popular 8" cone speaker that handles 10 watts of program material. Voice coil impedance: 8 ohms. Alnico V magnet. Flux density 8,500 gauss. Freq. response 55-13,000 cps.

speaker housings



Model RH-29

Two-way metal projection housing for 8" cone speaker. Brackets permit versatile mounting. Desert Sand finish.



Models RH-34 and RH-54

Ruggedly constructed tilt-type wall mounting cabinets in Desert Sand finish. 7½° angle tilt on each side. RH-34 designed for 8" speaker. RH-54 designed for 12" speaker. Housings easily converted to two-way use by addition of RA-8 or RA-12 back panel.



Models RA-8 and RA-12

Back panels with matching finish and grille cloth, permitting open mounting. RA-8 for RH-34 housing; RA-12 for RH-54 cabinet.



Models RH-28 and RH-28D

Attractive plastic cabinet for 5½" or 8" cone speakers. Model RH-28 finished in Mottled Brown; RH-28D in Desert Sand enamel.



Model RH-62

Larger size tilt-type wood cabinet for 12" speaker such as RF-471. Directs sound downward at 15° angle. Desert Sand finish.



**Model RF-471 HI-FI
COAXIAL SPEAKER**

Features exclusive carpinchoe-leather suspended tweeter. 12" low frequency cone with 1½" voice coil, 20 oz. Alnico V magnet, flux density 11,000 gauss; 2" high frequency unit with ¾" voice coil, aluminum spider, protective lens, 2.15 oz. Alnico V magnet, flux density 8,500 gauss. 8 ohm impedance. Handles 32 watts of program material. Frequency response 30-14,000 cps. Moisture-resistant cone.



**Model RF-475 HI-FI
COAXIAL SPEAKER**

A "power-plus" system with exceptionally heavy magnet. Finest reproduction at all volume levels. 15" low frequency cone with 3" voice coil. 10½ lb. Alnico V magnet, flux density 11,500 gauss; 5" high frequency parametric horn with 10-element acoustic lens, flux density 15,500 gauss. 16 ohm impedance. Handles 40 watts of program material. Frequency response 30-16,500 cps. Moisture-resistant cone.



**Model RF-466 HI-FI
COAXIAL SPEAKER**

Precision engineered, budget priced coaxial speaker with frequency response of 30-15,000 cps. Handles 32 Watts of program material. More than 100 degrees angle of coverage. 15" low frequency cone with 2" voice coil, 20 oz. Alnico V Magnet, flux density 11,000 gauss. 2¾" high frequency unit with ¾" voice coil, 1.75 oz. Alnico V Magnet, flux density 8,500 gauss. Voice coil impedance: 16 ohms. Moisture resistant cone. Magnet completely enclosed for full protection.



Model RC-58

This 12" permanent-magnet type cone speaker has voice coil impedance of 8 ohms. Alnico V magnet. Flux density 8,500 gauss. Handles 16 watts of program material. Frequency response 55-13,000 cps.



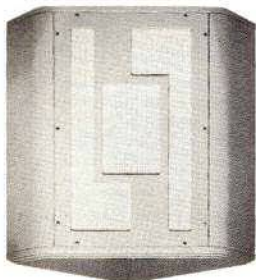
Model RC-62

Dynamic 12" permanent-magnet type cone speaker with frequency response of 50-13,500 cps. 6.8 oz. Alnico V Magnet. Flux density 13,000 gauss. Voice coil impedance: 8 ohms. Handles 20 Watts program material.



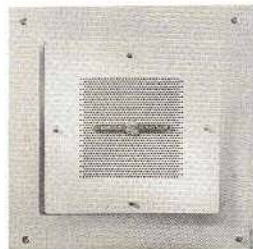
Model RC-28

High quality 8" Cone Speaker. Famous Alnico V Magnet. Handles 12 Watts of program material. Frequency response 50-13,500 cps. Voice coil impedance: 8 ohms, flux density 13,000 gauss.



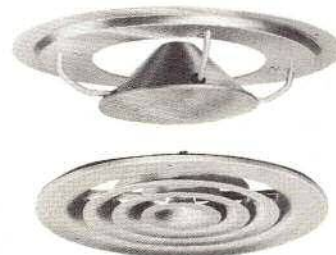
Model RH-31A

Handsome, triangular (corner) wood cabinet for 8" cone speaker. Desert Sand finish.



**Models RH-35
and RH-55**

Steel flush-mounting speaker baffles, in Desert Sand color, for mounting on standard Columbia box. Model RH-35 accommodates 8" speaker, is 13" square. Model RH-55 is 19" square and accommodates 12" speaker.



Model RH-32

For ceiling installations requiring 360° diffusion. Use with 8" speaker. Satin aluminum finish.

Model RH-24

Steel ceiling grille, 10" diameter, with rubber gasket. Beige enamel finish.



Model RA-6

Steel back box lined with plastic roughing compound—for 8" speaker. Equipped with plastic ring.

re-entrant horns and drivers



Models RP-27, RP-34, RP-44

Ruggedly constructed. For use with Stromberg-Carlson driver units. Model RP-27 bell 15½", air column equivalent of 30", frequency cut-off 200 cps. Model RP-34 bell 20", air column equivalent of 42", frequency cut-off 150 cps. Model RP-44 bell 25½", air column equivalent of 53"; frequency cut-off 120 cps.



Models RP-40, RP-50

360° projectors for indoors and outdoors. Use with Stromberg-Carlson driver units. Model RP-40 bell 24¾", air column equivalent of 48", frequency cut-off 150 cps. Model RP-50 bell 28¼", air column equivalent of 60", frequency cut-off 120 cps.



Model RP-48

Dual re-entrant horn with twin air columns. Covers wide areas. Ideal for fixed or mobile mounting locations. Mouth 9¼" x 18½", depth 10¼". Frequency cut-off 250 cps. Two driver units may be attached to single RP-48 by using RA-3 connector.



Model RD-21 DRIVER UNIT

Input capacity: 30 watts. Frequency range: 90-10,000 cps. Voice coil: 16 ohms. Built-in transformer.



Model RD-23 DRIVER UNIT

Input capacity: 25 watts. Frequency range: 90-10,000 cps. Voice coil: 16 ohms.



Model RD-24 DRIVER UNIT

Input capacity: 25 watts. Frequency range: 90-6,000 cps. Voice coil: 16 ohms.



Model RA-2
Mounting Bracket

Model RA-3
Two Driver Unit
Connector



inter-communication units



Model TD-18
Master Station
Desk Phone



Model TW-28
Master Station
Wall Phone



Model TW-31
Sub-Station
Side-Mounting
Phone



Model TD-11
Sub-station
Desk Phone

Stromberg-Carlson Telephone Inter-Communicating Systems are available in selective ringing-common talking combination; also in common ringing-common talking combinations.

Master Stations are the TD-18 for desk use and the TW-28 for wall mounting. Sub-Stations are the TD-11 for desk and the side-mounting TW-31, which may be mixed. The TD-11 can be converted easily to wall mounting by means of a simple Conversion Kit (TK-3).

LINE-MATCHING TRANSFORMERS



Model TR-54

Model TR-13

Models TR-20
TR-30

Good frequency response, minimum audio power loss, a wide range of usable tap values and power handling capacities mark these line-matching transformers. Model TR-13 is rated at 2.5 watts, incorporates a tapped secondary as well as three primary tap values. Model TR-20, power capacity of 12 watts, offers four primary tap values. Model TR-30, rated at 12 watts, has five primary tap values for voltage or impedance matching. Model TR-54, designed for outdoor use, has power capacity of 25 watts and offers three secondary as well as five primary tap values.

There is nothing finer than a Stromberg-Carlson

SPECIAL PRODUCTS DIVISION

STROMBERG-CARLSON COMPANY

A DIVISION OF GENERAL DYNAMICS CORPORATION
1700 UNIVERSITY AVE. • ROCHESTER 10, N. Y.

MODEL AU-42 AMPLIFIER

F I F T E E N W A T T O U T P U T



Model AU-42 Amplifier

Economy must be considered for many sound equipment applications where dependability and performance cannot be sacrificed. For this reason, Stromberg-Carlson builds a series of amplifiers with provision for one microphone and one phonograph input. Thus, without sacrifice of quality, reduced cost is obtained.

Stromberg-Carlson Model AU-42 is the 15 watt amplifier of this series. Circuit design permits independent regulation and mixing of the microphone and phonograph or equivalent level inputs. This makes possible such combinations as microphone program pickup with background music supplied from a phonograph or wired-line input.

Although this amplifier provides for the simultaneous use of only one microphone and one phonograph input, additional microphones can be

accommodated by connecting them to the amplifier one at a time. To accomplish this, the Stromberg-Carlson No. 13 Type Key Box provides the basis of an excellent switching device.

Push-pull beam-power tubes, multi-stage feedback, careful circuit design and high-quality materials, together with careful assembly and strict testing make the Model AU-42 Amplifier an excellent selection where audio power up to 15 watts is adequate.

The Model AU-42 Amplifier is also available as part of the Model PS-42 Portable System. Featuring a smartly-designed plywood case, neatly finished in Glacier Gray fabricoid and using two Model RC-24 eight-inch heavy-duty reproducers, this system should receive careful consideration where versatility and portability are important factors.

(over)

STROMBERG  CARLSON
 STRAIGHT-LINE COMMUNICATION

SPECIFICATIONS

Size with Cover: Width 13½", depth 7½", height 10¼". Allow 1" front for knobs, 2" side and back for connectors.

Weight: Net 19 lbs., packed for shipment 22½ lbs.

Tubes Supplied: 1-6SF5, 1-6J5 or 6C5, 1-6SC7, 2-6L6G, 1-5Y3GT/G.

Power Supply: 105-125 volts, 50-60 cycles.

Power Consumed: 90 watts at 117 volts.

Inputs: One microphone, one phonograph, both high impedance.

Controls: One microphone, one phonograph, one treble attenuation control with combined on-off switch. Treble control provides up to 18 db. attenuation at 10,000 c.p.s.

Power Gain: 108 db. from microphone input, 75 db. from phonograph input, ratings based on 50,000 ohm input source impedance.

Power Output: 15 watts with less than 5% total harmonic content, measured at 400 c.p.s. with a supply voltage of 117 volts.

Output Tap Impedances: 4, 8, 15 and 500 ohms.

Other Useful Output Impedance Values: 350, 385, and 415 ohms. Obtained by connecting between taps. (See Output Line Matching of this data sheet.)

Noise Level: 55 db. below rated output.

Frequency Response: 75 to 10,000 c.p.s. Variation less than +0 db. -3 db. from the 400 c.p.s. value.

Output Regulation: Approximately 3 db. variation from full load to no load.

Finish: Glacier Gray.

Underwriters' Listing: Listed under re-examination service by Underwriters' Laboratories, Inc.

ADDITIONAL PARTS

In addition to the components shown on the schematic, it will be helpful to consult the following list of parts that might be required to properly service this amplifier.

Part No.	Description	Part No.	Description
27958	Fuse Holder	39844	Pilot Light Assembly
32643	External Microphone Connector	39847	Handle for Top Cover
32657	Speaker Line Connector	46306	Bottom Cover
39840	Knob	46310	Thumb Screw

VOLTAGE CHART

Tube			Terminal							
No.	Tube	Purpose	1	2	3	4	5	6	7	8
1	6SF5	First Stage Voltage Amplifier	0	1.2	0	0	145	..	*6.3	*6.3
1	6J5 or 6C5	Second Stage Voltage Amplifier	0	*6.3	45	..	0	..	*6.3	1.6
1	6SC7	Driver-Inverter	0	100	0	0	100	1.1	*6.3	*6.3
2	6L6G	Push-Pull Power Output	0	*6.3	310	280	0	..	*6.3	21
1	5Y3GT/G	Rectifier	..	320	‡	†327	..	†327	..	320

No signal input. Power supply 117 volt, 60 cycles.

D.C. voltages measured to chassis using vacuum-tube voltmeter.

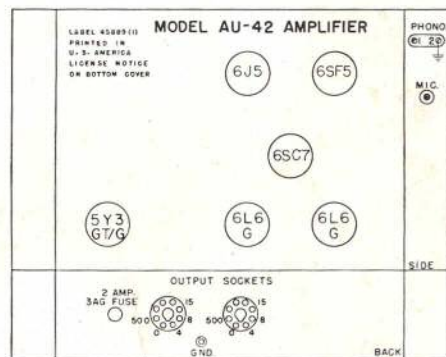
†A.C. voltages measured to chassis. Rectifier filament voltage 5.0 measured between terminals 4 and 6.

*A.C. heater voltage measured between terminals indicated.

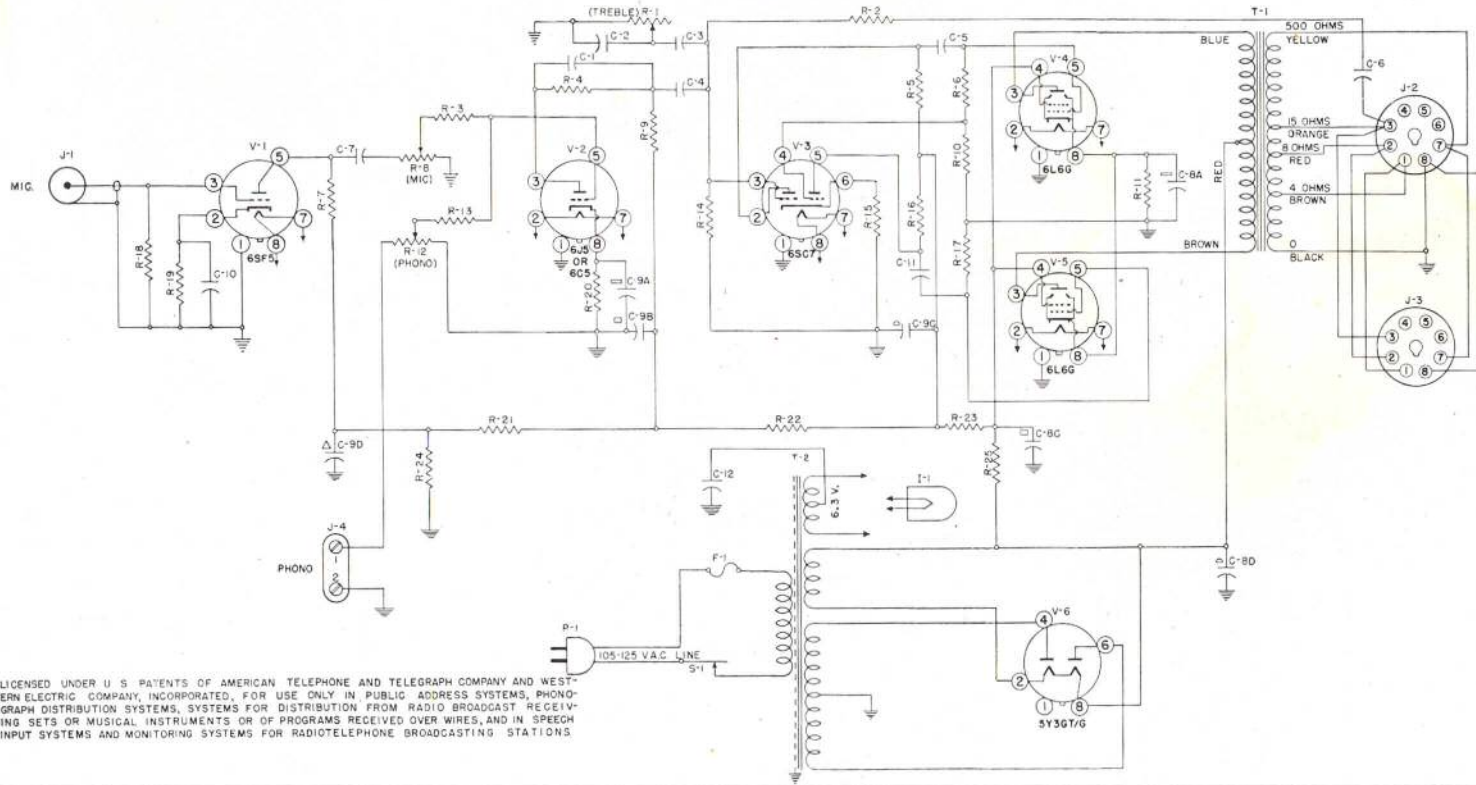
Variations of ±10% from above values may be obtained due to variations in tubes, resistors, etc.

‡Used as tie post.

TUBE LOCATION CHART



SCHEMATIC CIRCUIT - AU-42 AMPLIFIER



SYMBOL	DESCRIPTION	SC. NO.
C-1, C-2	CAPACITOR 500 MMF	29371
C-3	CAPACITOR .01 MF. 600DCW.V.	25485
C-4, C-5, C-7, C-11	CAPACITOR .05 MF. 400 D.C.W.V.	40632
C-6	CAPACITOR .003 MF. 400 D.C.W.V.	46315
C-8	CAPACITOR (A) 50 MF. 50 D.C.W.V. (B) 5 MF. 300 D.C.W.V. (C) 30 MF. 350 D.C.W.V. (D) 40 MF. 450 D.C.W.V.	35590
C-9	CAPACITOR (A) 20 MF. 50 D.C.W.V. (B) 10 MF. 300 D.C.W.V. (C) 10 MF. 350 D.C.W.V. (D) 10 MF. 250 D.C.W.V.	34698
C-10	CAPACITOR 50 MF. 25 D.C.W.V.	41157
C-12	CAPACITOR .1 MF. 400 D.C.W.V.	25483
F-1	FUSE - 2 AMP. TYPE 3AG	23150
I-1	PILOT LAMP (BAYONET TYPE)	28025
J-1	CONNECTOR (MIG)	32644
J-2, J-3	RECEPTACLE (OUTPUT)	32417
J-4	BINDING POST (PHONO)	35421
P-1	A.C. CORD & PLUG	46302
R-1	POTENTIOMETER 1 MEG. (TREBLE)	39836
R-2, R-3, R-13, R-14, R-18	RESISTOR 1 MEG. ±10%, 1/2 WATT	28191
R-4, R-7	RESISTOR 68,000 OHMS ±10%, 1/2 WATT	28179
R-5, R-6, R-17	RESISTOR .33 MEG. ±10%, 1/2 WATT	28185
R-8, R-12	POTENTIOMETER 1 MEG. (VOLUME)	46315
R-9	RESISTOR .1 MEG. ±10%, 1/2 WATT	28006
R-10	RESISTOR 10,000 OHMS ±10%, 1/2 WATT	28170
R-11	RESISTOR 200 OHMS ±5%, 10 WATT	46357
R-15	RESISTOR 1500 OHMS ±10%, 1/2 WATT	28160
R-19	RESISTOR 3900 OHMS ±10%, 1/2 WATT	28165
R-20	RESISTOR 2200 OHMS ±10%, 1/2 WATT	28162
R-21	RESISTOR 2200 OHMS ±10%, 1 WATT	30616
R-22, R-23	RESISTOR 10,000 OHMS ±10%, 1 WATT	30417
R-24	RESISTOR 47,000 OHMS ±10%, 2 WATT	149060
R-25	RESISTOR 3500 OHMS ±5%, 10 WATT	46360
S-1	SWITCH (ON TREBLE CONTROL)	
T-1	TRANSFORMER (MIG)	46317
T-2	TRANSFORMER (OUTPUT)	46316
V-1	VACUUM TUBE 6SF5	41486
V-2	VACUUM TUBE 6J5	41132
V-3	VACUUM TUBE 6S7	46713
V-4, V-5	VACUUM TUBE 6L6G	35756
V-6	VACUUM TUBE 5Y3GT/G	35836

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INSTALLATION AND OPERATING INSTRUCTIONS

DESCRIPTION

INPUT CONNECTIONS—A single-contact microphone connector is provided for the microphone or other low-level, high-impedance input. A screw-type terminal strip is provided for a phonograph or equivalent level high-impedance input.

OUTPUT CONNECTIONS—Two, parallel-connected, octal sockets on the rear of the amplifier base provide connection to the various taps of the output transformer.

CONTROLS—Independent microphone and phonograph controls permit regulation of volume and mixing of the input signals. Any change in setting of one control has no effect on the operation of the others.

The tone control, when rotated clockwise, decreases the response of the amplifier on the higher audio frequencies. The A.C. off-on switch is combined with the tone control.

LOCATING THE EQUIPMENT

AMPLIFIER—Proper placement is important. By locating the amplifier close to the microphone location, wiring cost and noise pickup are reduced; by locating it close to the reproducers, output power loss as well as wiring costs are reduced. Equipment should be readily accessible to facilitate proper maintenance. When mounting the amplifier in a cabinet or on a shelf, care must be taken to provide sufficient ventilation for adequate cooling.

MICROPHONE—This amplifier is designed for use with a Stromberg-Carlson high-impedance microphone. For best results the microphone cable should not exceed fifty feet in length. When a longer microphone line (up to 5000 ft.) is required, a Stromberg-Carlson low-impedance microphone may be used by employing a well-shielded input transformer at the amplifier input. Complete information and schematic diagram is given in the data sheet packed with each Stromberg-Carlson microphone or see Sales Engineers' Manual, Section 6. Data sheets can be obtained from your Stromberg-Carlson distributor.

REPRODUCERS—Locate the reproducers so that the space between the reproducer and the area to be covered is clear of obstructions. Direct the reproducer so that sound is projected toward the center of the area to be covered.

When a reproducer and microphone must be located in the same general area, they must be placed so that a minimum of sound from the reproducer will re-enter the microphone. If sufficient sound, either direct or reflected from hard surfaces returns to the microphone, acoustic feedback will result. Acoustic feedback is caused by amplified sound being picked up by the microphone and fed back through the amplifier where it adds to the original sound, building up until a continuous whistle or howl is produced.

WIRING

SYSTEM WIRING—Sound system wiring should be protected against mechanical injury and moisture particularly where it passes through walls or floors. Even a small amount of moisture may affect the insulation of poorly protected wiring to such an extent as to impair the efficiency of the system.

MICROPHONE LINES—Keep microphone lines at least six inches away from other electric circuits including amplifier output lines. If it is necessary to run microphone lines parallel to other electric circuits, keep at least two feet separation.

When enclosed in conduit, microphone lines may be run together but never run any other type of wiring in the same conduit.

If the shield on the microphone line is used as the return conductor, it must be insulated throughout its length from contact with conduits, etc., and grounded only at the amplifier where the ground is supplied by the amplifier, through the microphone chassis connector.

If a shielded-twisted pair is used for a microphone line, it is preferable to insulate the shield from contact with conduits, etc., although it may not be necessary on short runs.

AMPLIFIER GROUND—A good building ground, such as a connection from a cold water pipe or

the frame of a steel building, should be terminated under the knurled nut located on the rear of the amplifier.

REPRODUCER LINES—When supplied as the Model PS-42 Portable, two speakers each with 25 feet of cable and plug are provided correctly-wired for insertion in the output sockets of the amplifier. One speaker case has a socket installed, into which the speaker cord plug of the second speaker can be inserted for cascade connection.

When reproducers are to be located at a distance from the amplifier, care must be taken to see that line loss is not excessive. Line loss can be reduced by increasing the size of the wire or by using transformers at each reproducer location to raise the impedance of the line. Additional information is given in Sales Engineers' Manual, Section 24, which may be obtained from your Stromberg-Carlson distributor.

OUTPUT LINE MATCHING—The following chart lists the amplifier output taps provided to accommodate various reproducer loads. The audio voltage present when the amplifier is delivering rated output, is also listed:

<i>Terminal</i>	<i>Impedance</i>	<i>Output (at 15 watts)</i>
8-1	4 ohms	8 volts
8-2	8 ohms	11 volts
8-3	16 ohms	15 volts
7-3	350 ohms	72 volts
7-2	385 ohms	76 volts
7-1	415 ohms	79 volts
8-7	500 ohms	87 volts

To determine the power into any reproducer, divide the impedance of the amplifier output tap by the impedance of the reproducer to be used (or the tap on the reproducer transformer). This is the fraction of the total power output of the amplifier delivered to that reproducer. For example, if a 2,500 ohm reproducer is connected to a 500 ohm output tap, that reproducer will draw one-fifth of the power delivered by the amplifier. Thus, by proper selection of loudspeaker impedance, different amounts of power can be delivered to a number of speakers, all connected in parallel to the same amplifier. The rule applies equally well whether the reproducers are all connected to

the same output tap, or if connected to several different-impedance taps. The sum of all these fractions of total amplifier output power should be equal to one for the best matching. If the impedances of available taps do not permit perfect matching, the sum should be less than one.

OPERATION

Adjust the volume controls to give the desired amplifier output. A successful installation permits everyone to hear comfortably. Loudness is not necessarily essential. To keep hum and noise at a minimum, it is important that any volume control be set at zero when that input is not being used.

If after precautions mentioned under "Location of Equipment" have been observed and acoustical feedback is still encountered, the following should be tried:

1. Relocate the reproducers and/or microphone in relation to each other.
2. Reduce frequency response of amplifier by adjustment of treble control.
3. Reduce setting of microphone volume control.
4. Speak closer to the microphone to obtain increased volume.

The amplifier can readily be adapted to the program being reproduced or to the acoustics of the room by means of the tone control.

Treble attenuation largely eliminates the effect of needle scratch when recordings are used and is useful on microphone reproduction in reducing shrillness and acoustical feedback.

SERVICE

FUSE REPLACEMENT—When replacing a blown fuse use only a 2 amp. 250 volt, type 3AG. To use a fuse of higher rating will needlessly endanger the windings of the power transformer.

MAINTENANCE—The values and part number of the various components are given in the list of parts on the schematic diagram. The voltages present at the various socket terminals of a normal operating amplifier are given in the voltage chart. Always use Stromberg-Carlson replacement parts for Straight-Line Communication equipment performance.

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Exterior and Interior View, Model PS-42 Portable



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