# Stromberg-Carlson SOUND EQUIPMENT

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STROMBERG-CARLSON COMPANY

SOUND EQUIPMENT DIVISION

ROCHESTER 3, N. Y.
Model AU-29 Amplifier

- Excellent Communication Amplifier
- High Quality Components
- Two Input Mixers
- Six Watt Output

The Model AU-29 Amplifier is a low power, high quality amplifier embodying the same design principles used in the higher power amplifiers. The same high quality components, copper plated base and standards of performance are used.

Microphone and phonograph inputs that can be blended or mixed, each individually controlled, and off-on switch combined with the treble control provide flexible operation.

While the Model AU-29 Amplifier has many individual uses as the only amplifier in a system, it may also be combined with other Straight-Line Communication equipment for larger system operation. It is successfully used as a driver or bridging amplifier, monitor amplifier and talk-back amplifier.

Model AU-29 Amplifier is sold less top cover. When required it should be ordered separately. (See brief specifications.)

Model AU-42 Amplifier

- Resistor Board Construction
- Fifteen Watt Output
- Complete with Top Cover

Economy must be considered for many sound and communication installations where dependability and quality performance cannot be sacrificed. Stromberg-Carlson builds amplifiers with one microphone and one phonograph input and with six, fifteen, twenty-five, or fifty watt outputs to satisfy this demand.

Model AU-42 Amplifier is the fifteen watt amplifier in this series. Circuit design permits independent control and mixing of the microphone and phonograph or equivalent level inputs.

Among the many applications for this series of amplifiers is in communication systems using the Model IM-3 or Model IM-20 Masters. Model AU-42 Amplifiers fifteen watt output will satisfy the audio power needs in many two-way communication systems. It is also suggested as the amplifier to select in small voice paging, public address and wired music installations.

Model AU-42 Amplifier is sold complete with top cover.
Model AU-34 Amplifier

- One Microphone Input
- One Treble Control
- 25 Watts Audio Power
- One Phonograph Input
- Underwriters Listing

There are many sound system installations requiring twenty-five or less watts of audio power. There are numerous occasions where only one microphone is connected to the amplifier at a time. Wired music systems may only require a phonograph input at the amplifier.

When multiple inputs and controls are not required, selection of the Model AU-34 Amplifier in a system results in a saving.

More than one microphone can be incorporated in this type of system provided only a single microphone is connected to the amplifier input at a time. The No. 13 Type Key Box is an excellent piece of equipment to use for this switching purpose.

All Stromberg-Carlson amplifiers are inspected before shipment using the standard set of tubes packed with the amplifier. Each amplifier must meet or exceed its specification ratings.

Model AU-36 Amplifier

Brief Specifications

- One Additional Amplifier Jack
- Fifty Watt Output
- Bass and Treble Controls

When high audio power is required and one microphone and one phonograph input are sufficient, the Model AU-36 Amplifier will be selected.

The Model AU-36 Amplifier will serve the same type of installations suggested for Model AU-34 Amplifier with the additional ability to drive more reproducers and operate them at higher levels. The separate variable bass and treble controls provide flexible adjustment to meet acoustical conditions encountered and for wired music adjustments. Its' use in a system requiring fifty watts of audio power results in a saving in the amplifier cost.

Another feature of the Model AU-36 Amplifier is the ability to tie two of these amplifiers together at the "additional amplifier" jacks. When this is done, 100 watts of audio power is available (50 watts at the output of each amplifier) and two microphone inputs and two phonograph inputs are provided.
Model AU-32 Amplifier

Brief Specifications
- Underwriters Listing
- Copper Plated Chassis
- Three Input Mixers
- New Styling
- Resistor Board Construction

One phonograph and two microphone high impedance inputs that can be blended or mixed, treble control and fifteen watts of audio power, make the Model AU-32 Amplifier the logical choice for many sound system installations. Like all Stromberg-Carlson Amplifiers, it is built on a rugged steel base, copper plated to withstand the elements and provide better electrical circuits. Model AU-32 Amplifier also incorporates resistor board construction in Stromberg-Carlson amplifiers. Proven in wartime communication equipment, resistor board construction provides greater freedom from vibration troubles and therefore more reliable operation is obtained. It helps prevent embarrassing equipment failures. Model AU-32 Amplifier will be selected as the amplifying equipment in many permanently installed public address systems. It will be found in service men's clubs, restaurants, night clubs, social halls, wholesale and retail establishments, wired music installations and a host of other locations to provide high quality amplification of voice and music programs.

Model AU-33 Amplifier

- Separate Treble and Bass Controls
- Four Input Mixers
- Underwriters Listing
- Multi-tapped Output Transformer
- Resistor Board Construction

Model AU-33 Amplifier, with one phonograph and three microphone inputs that can be blended or mixed, separate bass and treble controls and 25 watts of usable audio power, provides the flexibility of control and audio power desired in many sound system installations. It will be first choice in many permanent, portable and rental systems.

Features that appeal in the Model AU-33 Amplifier are: rigid, copper-plated base for durability and best electrical circuits; resistor board construction for reliability in operation; six operating controls for flexibility; multi-tapped output transformer for good matching of reproducer loads; plus quality performance and good appearance for pride of ownership.

Low impedance input transformers are available so that low impedance, balanced line microphones can be used to maintain high quality performance from remote microphone locations.

School and church auditoriums; hotels, bus, airport and railroad stations; and freight transfer terminals, are just a few suggestions for systems using the Model AU-33 Amplifier.

There is Nothing Finer Than a Stromberg-Carlson
Model AU-35 Amplifier

Model AU-35 Amplifier provides the flexibility of operation and high power desired in many Straight-Line Communication Systems.

One phonograph and three microphone input controls will meet most mixing needs. The excellent range of the separate bass and treble controls satisfies the requirement for frequency range adjustments. With these controls in normal position a broad flat frequency range (50-12,000 cps) is obtained.

Dual channel outputs with master volume controls increase the adaptability of the Model AU-35 Amplifier to sound system requirements. These output channels permit the operation of two groups of reproducers at different volume levels. Quick re-adjustment of the volume levels is possible by means of the master volume controls to meet changes in volume levels. Each output channel is rated at 25 watts providing ample audio power for many installations.

The sturdy chassis base, careful design, resistor board construction, expert workmanship, and rigid inspection are a few plus items that justify the confidence of sound system engineers in recommending the Model AU-35 Amplifier.

Specifications

- Size with Cover: 16" wide, 12" deep, 11" high. Allow 1" front for knobs, 2" back and side for connectors.
- Weight: Net 41 lbs., packed for shipment 50 lbs.
- Tubes Supplied: 3-6SJ7, 3-6SC7, 2-6N7, 4-6L6G, 2-5U4G.
- Power Supply: 105-125 volts, 50-60 cycles.
- Power Consumed: 250 watts maximum at 117 volts.
- Inputs: Three microphone, one phonograph, all high impedance.
- Input Controls: Three microphone, one phonograph.
- Bass Control: Maximum attenuation approximately 9 db at 50 cycles.
- Treble Control: Maximum attenuation approximately 16 db at 10,000 cycles.
- Output Controls: Two master volume controls.
- Power Gain: 118 db from microphone inputs, 90 db from phonograph input. Ratings based on 50,000 ohm input source impedance.
- Power Output: 50 watts, 25 watts each output channel with less than 0.5% total harmonic content, measured at 400 cycles with a supply voltage of 117 volts.
- Output Tap Impedances: 4, 8, 15, 250, and 500 ohms.
- Noise Level: 50 db below rated output.
- Output Regulation: Approximately 5 db variation from full load to no load.
- Frequency Response: 50 to 10,000 cycles within ±0 db, — 3 db. from 400 cps, value.
- Finish: Oiled Gray over copper plate.
- Underwriters' Listing: Listed under re-examination service of Underwriters' Laboratories, Inc.
Excellent Wired Music Bridging Amplifier
Maximum Results From Each Type of Recording
Low Level Bass Compensated Volume Control
Separate Gain Control
Bass Boost Control

Model AR-37 Record Amplifier

Model AR-37 Amplifier was designed to satisfy the demand for a high quality record amplifier. When associated with a record player and reproducer of equally high quality, excellent results can be obtained.

The wide variation in recordings, makes more than the usual number of amplifier controls necessary to secure maximum results.

A bass compensated volume control circuit together with separate gain, bass boost, and treble controls, plus a scratch filter switch and two input jacks, one of which incorporates an input equalization network for crystal pickup cartridges, goes far toward achieving the ultimate in a record amplifier.

The design of the Model AR-37 Amplifier lends itself to other high fidelity applications. It is especially useful as a bridging amplifier in wired music installations.

When a higher than 8 ohm speaker line is needed with this amplifier, Stromberg-Carlson Line Transformers are available for matching purposes. Model TR-40 (see Page 21) is one economical line transformer to use. Connect the 6-8 ohm secondary to the amplifier terminals and using the 400 ohm tap on the primary will supply a nominal 400-500 ohm speaker line.

Specifications

- Ratings are based on actual production models and every amplifier will meet or exceed these specifications.
- Size: Width 10", depth 6", height 6%. Allow 1" front for knobs and 1" rear for connections.
- Weight: Net 125 lbs., packed for shipment 15 lbs.
- Tubes Supplied: 2-6SN7GT, 2-6FG6, 1-SY3G.
- Power Supply: 105-125 volts, 50-60 cycles.
- Power Consumption: 85 Watts at 117 volts.
- Inputs: Jack marked "Phono" is a 5 megohm impedance input providing equalization for crystal phonograph pickups. Jack marked "Input" provides a 220,000 ohm impedance input without equalization.
- Controls: Gain, volume, treble, bass, fidelity.
- Power Gains: Phone jack provides 56 db. gain of 400 cps. which is equivalent to an input sensitivity of 1.83 volts for rated output. Input jack provides 76 db. gain of 400 cps. which is equivalent to an input sensitivity of 0.15 volts for rated output. These gain measurements are based on an input source impedance of 50,000 ohms.
- Power Output: 10 Watts with less than 3% total harmonic content, measured at 400 cps. with a supply voltage of 117 volts.
- Output Impedance: 8 ohms.
- Noise Levels: At least 30 db. below rated output at any setting of the volume, tone, and fidelity controls.
- Frequency Response: With volume control—maximum, treble—normal, bass—minimum, fidelity—high, and using "Phono" jack, frequency response will vary less than + 0 db. – 3 db. from 100 to 15,000 cps. The use of bass boost extends the low-frequency response to 55 cps. within –3 db. of the 400 cps. value. Using "Phono" jack, frequency response is equalized for phonograph crystal pickup. Approximately 15 db. of equalization is provided from turn-over point of 2,500 cps.
- Bass Control: Provides continuously variable bass boost up to a maximum of 11 db. at 90 cps.
- Treble Control: Provides continuously variable control of the high frequencies up to a maximum of 12 db. boost and 18 db. attenuation of 10,000 cps.
- Fidelity Control: In "normal" position a low-pass filter is inserted providing a sharp cutoff starting at 4000 cps. and an attenuation of approximately 30 db. at 7500 cps. In "high" position this filter is shunted out.
- Output Regulation: Less than 7 dB. variation from full output load to no load.
- Finish: Glauber Gray over copper plate.
- Underwriters' Listing: Listed under re-examination service of Underwriters' Laboratories, Inc.
Model AM-43C Amplifier

This amplifier has been carefully designed to provide good performance from a six volt battery or a 105-125 volt 60 cycle power source.

The phonograph pickup arm is delicately counterbalanced permitting the arm to track on recordings even in a nearly vertical position. The pickup head tilts back for quick and easy changing of the needle.

Two microphone input controls, plus phonograph and separate bass and treble controls provide the flexibility of operation so important in this type of amplifier.

Model AM-48 or AM-49 Amplifier

Here is a compact, ruggedly constructed Mobile amplifier having six watts of audio power. Both Models have one microphone and one phonograph input (high impedance). The AM-48 is designed to operate from a six volt storage battery, while the AM-49 operates from a twelve volt battery. A special mounting bracket supplied with the amplifier can be permanently mounted in a car and the amplifier quickly and firmly secured to the bracket by the locking type clips.

When Model MD-33C microphone or a microphone having the proper switch is used with these amplifiers, the switch can control the standby and operating conditions of the amplifiers.

SPECIFICATIONS

**MODEL AM-43C**
- Overall Size: 14½" wide, 12" deep, 12" high. Allow 1" front for knobs, 2" side and 3" back for connectors.
- Weight: 35 lbs, packed for shipment 45 lbs.
- Inputs: Two microphones, one phonograph, all high-impedance.
- Controls: Two microphones, one phonograph, treble and bass attenuators, on-off switch, standby switch.
- Power Supply: 105-125 volts, 60 cycles, 120 watts or 6 volts dc 20 amperes, 3.5 amperes is standby position.
- Power Output: 55 watts, less than 3% harmonic content.
- Power Gain: 114 db from microphone inputs; based on 50,000 ohm input source. Phonograph input gain ample for pickup supplied.
- Tap Covers: 78 rpm self-starting motor, 3 rpm 78 rpm pickup, crystal cartridge.
- Output Impedance Taps: 4, 8, 15, 250, and 500 ohms.
- Frequency Response: 50 to 10,000 cycles within +0 db - 3 db.
- Finish: Ombre gray over copper plate.
- Underwriter’s Listings: Listed under re-examination service of Underwriter’s Laboratories, Inc.

**MODELS AM-48 AND AM-49**
- Overall Size: 4½" wide, 5½" deep, 7½" high. Allow space for microphone, phonograph, speaker and battery connections.
- Weight: 7 lbs.
- Tubas Supplied: 1-6AV6, 1-12AX7, 2-6AQ5, 1-6X4.
- Inputs: One microphone, one phonograph, both high impedance.
- Controls: One combined volume and power switch.
- Power Supply: Model AM-48: 6 volts dc
- Model AM-49: 12 volts dc
- Gain: 100 db from microphone input based on 50,000 ohm input source. 64 db from phonograph input based on 50,000 ohm input source.
- Output Impedance Taps: 4, 8, 16 ohms.
- Frequency Response: 100 to 10,000 cps within +0 db - 2 db.
- Standby Features: Wired to terminals 3 and 4 of microphone receptacle. Connect with jumper if switch on microphone is not used for control.
- Mounting Bracket: Supplied.
- Finish: Maroon.
- Underwriter’s Listings: Not required or provided by Underwriters for equipment of this type.

Natural Voice Sound Equipment
Models AV-38 and AV-39 Pre-Amplifiers

Separate Bass Controls for Microphone and Phonograph

A. C. Power Supply Built-in

Combines Functions of Pre-Amplifier and Line Amplifier

Models AV-38 and AV-39 Pre-Amplifiers are multi-purpose line or voltage amplifiers especially designed for sound system installations. These pre-amplifiers are ideal for remote program pick-up. Their gain is adequate to amplify a microphone signal to as much as 18 V. U. across a telephone line.

Model AV-38 Pre-Amplifier is equipped with an output level meter and three low-impedance microphone input transformers. Model AV-39 Pre-Amplifier is identical except the meter and input transformers are omitted. A meter kit is available that can be installed in the Model AV-39 without the necessity of drilling any holes. TM-2 Input Transformers can also be added when a combination of low and high-impedance microphone inputs are desired.

Many uses will be found for these pre-amplifiers. They will be used to drive power amplifiers in large systems and also used for remote program pick-up amplifiers in school auditoriums, hotels, banquet halls, stadiums, sports arenas, and churches. They will be connected to the main system by a telephone line.

**SPECIFICATIONS**

Source Impedance: Phonograph: high-gain connection 44 db at 400 cycles based on 600 ohm input source impedance or 62 db based on 60,000 ohm source impedance. Low-gain connection 42 db based on 50,000 ohm source impedance.

Power Outputs: +18 dbm (db above 1 milliwatt).

Output Impedance: 600 ohms, center-tapped at 150 ohms.

Frequency Response: 60 to 12,000 cps within + 0 db — 3 db.

Tone Controls: Treble control provides up to 34 db attenuation at 10,000 cps on phonograph and up to 17 db attenuation on microphone. Microphone bass control provides up to 17 db attenuation at 30 cps. Phonograph bass control provides up to 12 db boost at 90 cps.

Hum Level: 50 db below rated output.

Output Regulation: Approximately 6 db from full output load to no load.

Finish: Glossy Gray over copper plate.

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

There is Nothing Finer Than a Stromberg-Carlson
The use of small pre-amplifiers are required in the assembly of many different sound systems.

**MODEL AV-44 PRE-AMPLIFIER**

The Model AV-44 Pre-Amplifier is designed primarily for use with a Stromberg-Carlson Radio Tuner to raise the level of a Stromberg-Carlson 30 ohm microphone to drive the radio tuner through the phonograph input connections. Power to operate it can be obtained from connections in the radio chassis or from a PA-1 Power Supply.

**Specifications**

- **Size:** 73/4" deep, 33/4" wide, 33/4" high.
- **Weight:** 1/2 lb.
- **Tubes Supplied:** 1 — 6SJ7.
- **Input:** 30 ohms.
- **Output Voltage:** .1 volt less than 1% of 1% distortion measured at 400 cps.
- **Output Impedance:** 50,000 ohms.
- **Power Gain:** 24.9 db based on 30 ohm input source and 50,000 ohm output impedance.
- **Noise Level:** 50 db below rated output.
- **Frequency Response:** 50 db to 10,000 cps within ± 3 db.
- **Finish:** Cadmium.

**MODEL AV-45 PRE-AMPLIFIER**

Model AV-45 Pre-Amplifier provides a means of mixing and feeding a number of 30 ohm microphones into a high impedance microphone input of any Stromberg-Carlson Universal Amplifier. This pre-amplifier requires Model PA-1 as its power source.

**Specifications**

- **Size:** 113/4" deep, 33/4" wide, 33/4" high.
- **Weight:** 2 lbs.
- **Tubes Supplied:** 2 — 6SJ7.
- **Input:** 30 ohms.
- **Output Voltage:** .1 volt less than 1% distortion measured at 400 cps.
- **Output Impedance:** 10,000 ohms.
- **Power Gain:** 67 db based on 30 ohm input source and 10,000 ohm output impedance.
- **Noise Level:** 50 db below rated output.
- **Frequency Response:** 50 db to 12,000 cps within ± 1 db.
- **Finish:** Cadmium.

**MODEL AV-46 PRE-AMPLIFIER**

The Model AV-46 provides a means of controlling and mixing the output of a high impedance phonograph, or transcription player in a system. It is powered by the Model PA-1 Power Supply.

**Specifications**

- **Size:** 123/4" deep, 33/4" wide, 33/4" high.
- **Weight:** 2 lbs.
- **Tubes Supplied:** 2 — 6SJ7.
- **Input:** 50,000 ohms.
- **Output Voltage:** .5 volts, less than 1% distortion measured at 1000 cps.
- **Output Impedance:** 10,000 ohms.
- **Power Gain:** 6 db at 1000 cps, based on 50,000 ohm input source and 10,000 ohm output impedance.
- **Noise Level:** 50 db below rated output.
- **Frequency Response:** Equalized for use with light-weight crystal pick-up cartridge to provide the conjugate of the recording response curve in general use for phonograph records and lateral transcription.
- **Finish:** Cadmium.

**MODEL PA-1**

Model PA-1 is a conventional power supply for Models AV-45 and AV-46 Pre-Amplifiers. It can be used with as many as six pre-amplifiers.
Model AP-25 Power Amplifier

- Bridging Transformer
- Multi-tapped Output Transformer
- Potted Choke

The bridging transformer of this amplifier is provided with two input connections. The 16,500 ohm (full primary) impedance of the transformer or the 4,125 ohm (half primary) can be used, depending on the gain required for full output.

A terminal board with screw type terminals provides all the necessary input and output connections including terminals for a plate supply relay, if incorporated in the amplifier by an installing engineer. In many systems the plate supply relay is not only included to reduce current consumption and prolong tube life, but also to control the reproducer circuit connected to the amplifier output.

Model AP-25 Power Amplifiers are designed to be driven by a Stromberg-Carlson Pre-Amplifier, or a telephone line. They can also be driven by a universal amplifier such as Model AU-29. Information concerning the proper method for using a universal amplifier to drive one or more power amplifiers can be obtained from the Sound Equipment Division or from your local Stromberg-Carlson Sound Distributor.

AMPLIFIER COMBINATIONS

100 WATT COMBINATIONS

Two Model AU-35 Universal Amplifiers provide six microphone and two phonograph inputs. Output is 100 watts divided into four 25 watt channels, each channel with separate volume control.

Two Model AU-36 Universal Amplifiers provide two microphone and two phonograph inputs. Output is 100 watts in two 50 watt channels.

150 WATT COMBINATION

Model AV-39 Pre-Amplifier and three Model AP-25 Power Amplifiers provide three microphone and one phonograph inputs. Output is 150 watts divided into three 50 watt channels, each channel with separate volume control.

Higher Power Combinations

When more audio power is required, it can be supplied in steps of 50 watts each by using Model AP-25 Amplifiers and either a Model AV-38 or AV-39 Pre-amplifier.

It is also possible to use a Stromberg-Carlson universal amplifier as the driver amplifier and an almost unlimited quantity of Model AP-25 Power Amplifiers.

Universal Amplifiers can also be used as power amplifiers where less than 50 watts is required. Consult the Sound Equipment Division for the proper networks when using a universal amplifier as either a driver or power amplifier.

There is Nothing Finer Than a Stromberg-Carlson
Model PR-1 Transcription Player

- 12" Professional Type Curved Arm
- Heavy-Duty Motor
- Quiet-Talk Crystal Cartridge

The Model PR-1 Portable Transcription Player plays lateral recordings and transcriptions up to 16" in diameter at 33 1/3 or 78 rpm.

The pickup is a low-pressure professional type curved arm to provide moderate off-set for low tracking error and balanced side-wall pressure in the record groove. The "Quiet-talk" crystal cartridge uses a precious-metal-tipped stylus.

The oversize self-lubricating bearings of the motor assure absolute uniformity of speed. It is governor-controlled, permitting a range five per cent above and below the rated speed by adjusting the regulator lever.

Inside the carrying case is a pocket for storing the power and output cords supplied. Four rubber bumpers are on the bottom of the case (operating position) and four metal gliders on the end opposite the sturdy suitcase type handle (carrying position).

Model PR-3
Record Playing Top Cover

- Designed for Model AU-34 Amplifier
- Self-Starting Motor
- Curved Pickup Arm

Model PR-3 is a record playing top cover for Model AU-34 Universal Amplifier. When installed on the amplifier it provides a record playing amplifier having a twenty-five watt output and one high impedance microphone input.

The pickup is a curved, low-pressure arm with crystal quiet-talk cartridge for use on lateral recordings up to 12" in diameter.

Model PR-4
Record Playing Top Cover

- Low-Pressure Arm
- Quiet-Talk Crystal
- Designed for Model AU-36 Amplifier

When fifty watts of audio power is desired in a record player amplifier, the Model PR-4 Top Cover and Model AU-36 Amplifier should be used.

Model PR-4 Record Playing Top Cover employs the same rugged design and quality equipment as the Model PR-3 except it is made to fit the Model AU-36 Amplifier.

Many sound equipment operators prefer a record player on an amplifier to a separate phonograph. Model PR-3 or PR-4 will satisfy the demand for this type of equipment in dance halls, skating rinks, drill fields, carnivals or any location where a 105-125 volt 60 cycle power source is available.
Model PS-29 Portable

- Easily Carried
- Attractive Appearance
- High Quality Reproduction

Model PS-29 Portable fills many portable system requirements where one reproducer is adequate for sound coverage.

Industrial and commercial houses will use it for group personnel training. Educational, institutional and religious organizations will find it invaluable for seminars, lectures and entertainment purposes. Hotels will find it profitable to provide it for group meetings. The applications filled by the Model PS-29 Portable for demonstrations, auctions, side-show ballyhoo, bingo games and similar requirements are well-known.

Under brief specifications will be found a description of the equipment comprising a Model PS-29 Portable.

Model PS-32 Portable

- Compact
- Two 8" Reproducers
- Rugged Construction

Dance bands, business men's clubs, lecturers, hotels, churches, schools, and many other organizations requiring a rugged, dependable, portable public address system will select Model PS-32 Portable.

This portable system is equipped with the Model AU-32 Amplifier that permits the mixing or fading of two microphones and one phonograph. The two rugged reproducer cases provide an excellent baffle for the heavy duty permanent magnet speakers. Each reproducer is connected to a 25 foot super-service cord with plug attached. One reproducer case contains a receptacle into which the other cord can be plugged for cascade connection or both reproducers can be connected at the amplifier.

The fifteen watts of audio power from the Model AU-32 Amplifier provides sufficient power to cover up to approximately 350,000 cu. ft. of area where the noise level is low.

Model PS-32 Portable is a fine choice for amplifying and reproducing both speech and music.
Model PS-37 Portable

Model PS-37 Portable fulfills the needs for a quality portable system to reproduce records. The system consists of Model AR-37 Record Amplifier with its variety of controls to obtain the ultimate from recordings, and the PC-29 Portable Case Assembly of the PS-29 Portable System.

For greater detail concerning the Model AR-37 Record Amplifier, see Page 6 of this Catalog.

The PR-1 Transcription Player is suggested as the portable record player for use with the PS-37 Portable. Here are two matched portable units for schools and others, who desire something finer in portable form for record reproduction.

Model PR-1 Transcription Player is described on Page 13.

Model PS-34 Portable

The Model PS-34 Portable consists of the PC-33 Portable Case Assembly of the PS-33 System and Model AU-34 Amplifier.

When one microphone input is sufficient, the PS-34 Portable makes a lower priced twenty-five watt system.

Model PS-33 Portable

- Two 12" Reproducers
- 25 Watt Output
- Cascade Connector
- Super Service Reproducer Cords

The Model PS-33 Portable incorporates the features desired by the discriminating sound engineer.

Fidelity of reproduction from voice or music, at high or low volume, together with the three microphone inputs and flexibility of controls provided by Model AU-33 Amplifier increases the popularity of this portable.

The two 12" heavy duty permanent magnet dynamic reproducers in their baffles provide large area coverage. The 25 foot super service cords are fitted with plugs to connect directly into the amplifier or in cascade. When connected in cascade the second reproducer case can be located fifty feet from the amplifier.

Wherever a portable system will satisfy the requirements, the Model PS-33 should be considered. Its dependable and satisfactory performance makes friends for the operator.

Performers and lecturers like the Model PS-33 Portable for the natural quality reproduction obtained that faithfully reflects their ability. Traveling dance bands also appreciate its rugged construction and dependable operation.

Model PS-42 Portable

Where cost is a determining factor, one microphone input sufficient and fifteen watts of audio power satisfactory, the Model PS-42 should be recommended.

This system consists of the AU-42 Amplifier and PC-32 Portable Case Assembly of the PS-32 Portable System.

Natural Voice Sound Equipment
The Stromberg-Carlson line of microphones has been carefully selected to provide suitable models for any sound system requirement. All microphones except Models ML-21, MD-22AS and MD-33C have 3/8"-27 standard thread. The output level in the specifications is the open circuit terminal voltage referred to one volt per dyne per square centimeter.

**MODEL MC-31—Cardioid**

Model MC-31 Cardioid Microphone incorporates a multi-impedance switch, whereby it can be used with amplifiers having low, medium, or high impedance microphone inputs.

The true unidirectional characteristic provides highly satisfactory operation under adverse conditions.

When an off-on switch is required, Model MX-2 is available.

**Brief Specifications**

- **Type**: Broadcast cardioid.
- **Impedance**: Multi-impedance switch, "L" position, 30-50 ohms; "H" position, 150-250 ohms; "M" position, high impedance (35,000 ohms).
- **Output Levels**: "L" position, -84 db, "H" position, -77 db, "M" position, -53 db.
- **Operation**: Balanced line.
- **Front to Back Ratio**: 15 db average.
- **Accessory**: Off-On Switch: Model MX-2.

**MODEL MC-32—Cardioid**

The wide-range frequency response, excellent unidirectional characteristics, multi-impedance switch, spring-suspended unit and shock-mounting are a few of the features that make the Model MC-32 Cardioid Microphone so popular.

Rugged construction, practical immunity to the effects of moisture, temperature and mechanical vibration are additional features that also appeal to broadcast, recording and sound equipment engineers.

**Brief Specifications**

- **Type**: Broadcast cardioid.
- **Impedance**: Multi-impedance switch, "L" position, 30-50 ohms; "H" position, 150-250 ohms; "M" position, high impedance (35,000 ohms).
- **Output Levels**: "L" position, -84 db, "H" position, -77 db, "M" position, -53 db.
- **Operation**: Balanced line.
- **Front to Back Ratio**: 15 db average.
- **Cord Supplied**: 7 ft. shielded cable with connector attached.
- **Frequency Response**: 40 to 10,000 cps.
- **Overall Size**: 7 13/32" high, 3 3/16" wide, 3 3/16" deep.
- **Weight**: 4 lbs. packaged.
- **Finish**: Chrome.

**MODEL MC-35—Dynamic**

A broadcast high fidelity model having a wide flat frequency response. The small grille diameter makes it essentially omnidirectional for group pickup. It provides equally high performance in studio, pulpit, stage or stadium use.

**Brief Specifications**

- **Type**: Broadcast dynamic, balanced line.
- **Impedance**: Multi-impedance switch for 30 or 250 ohms.
- **Output Levels**: -75 db, -30 db (150 ohms), -82 db, -33 db (30-50 ohms).
- **Frequency Response**: 60 to 13,000 cps.

**MODEL MD-22AS—Dynamic**

A close-talking, noise-cancelling microphone for use in high noise-level areas. Especially suitable for marine, railroad, steel mill, maintenance base, power plant and similar installations.

**Brief Specifications**

- **Type**: Close talking.
- **Impedance**: 30-50 ohms.
- **Output Levels**: -82 db.
- **Frequency Response**: 100 to 6000 cps.
- **Cord Attached**: 5 ft. shielded cable.
- **Switch**: Press-to-talk, controls relay.
- **Crest**: High impact phonics.
- **Mounting Bracket**: 2 1/4" x 2 1/4" x 4".
- **Weight**: 1 lb. packaged.
- **Finish**: Black.

**MODEL ML-21—Crystal Lapel**

A light weight lapel microphone with moisture-sealed crystal. It is equipped with an alligator clip for securely fastening it to the clothing.

**Brief Specifications**

- **Type**: Unbalanced line.
- **Impedance**: High-impedance.
- **Output Levels**: -57 db.
- **Frequency Response**: 40 to 6000 cps.
- **Cord Attached**: 23 ft. flexible shielded cable.
- **Size**: 1 3/4" diameter, 1 3/4" deep including clip.
- **Weight**: Head only 1/2 oz. and cord 8 oz. packaged 1 lb.
- **Finish**: Biscuit Grey Chrome.

There is Nothing Finer Than a Stromberg-Carlson
MODEL MD-37 Dynamic
An excellent model to select for public address, educational and similar use where a compact and rugged microphone is desired. The non-directional pickup pattern at low frequencies becomes directional with increase in frequency.

Brief Specifications
- Type: Broadcast Dynamic
- Order Code: MD-37AS, 30-50 ohms; MD-37CS, High Impedance (25000 ohms).
- Switch: Sliding contact, shorting type, accessible for reconnecting or relay control.
- Operation: Low-impedance Model (MD-37AS) balanced line, High-impedance Model (MD-37CS) unbalanced line.
- Output Levels: MD-37AS — 62 db, MD-37CS — 55 db.
- Frequency Response: 40 to 11,000 cps.
- Cord Supplied: 20 feet shielded cable with connector attached.
- Sizes: 1 3/4" dia., fac; 4 1/4" high, face vertical, 3 1/4" deep, face vertical.
- Weight: 3 lb. packaged.
- Finish: Satin Chrome.

MODEL MD-36
A rugged high quality general purpose microphone that withstands high humidity, temperature extremes, salt air and mechanical shocks.

Brief Specifications
- Type: Broadcast dynamic
- Order Code: MD-36AS, 30-50 ohms; MD-36CS, High Impedance (25000 ohms).
- Switch: Sliding contact, shorting type, accessible for reconnecting or relay control.
- Operation: Low-impedance Model (MD-36AS) balanced line, High-impedance Model (MD-36CS) unbalanced line.
- Output Levels: MD-36AS — 62 db, MD-36CS — 55 db.
- Frequency Response: 50 to 8000 cps.
- Cord Supplied: 20 feet shielded cable with connector attached.
- Sizes: 2 1/4" deep, 3 3/4" wide, 6 1/4" high.
- Weight: 3 lb. packaged.
- Finish: Satin Chrome.

MODEL MR-34C
A high level, high impedance, controlled reluctance model suitable for voice paging and other uses.

Brief Specifications
- Type: Unbalanced line.
- Order Code: Model MR-34C.
- Output Levels — 32.5 db.
- Impedance: 16,000 ohms.
- Frequency Response: 100 to 7000 cps.
- Cord Supplied: 15 feet shielded cable.
- Sizes: 2 1/4" dia., 3 3/4" length overall.
- Weight: 1 1/2 lb. packaged.
- Finish: Metallic Green and Chrome.

MODEL MD-33C
A rugged dynamic model. Non-locking switch closes separate line for operating relays or similar applications.

Brief Specifications
- Type: Balanced line, close talking, dynamic.
- Impedance: High Impedance (20,000 ohms).
- Frequency Response: 300 to 10,000 cps.
- Output Levels — 54db.
- Cord Attached: 6 ft. 4 conductor, one pair shielded.
- Sizes: 3" wide, 4" high, 2" deep.
- Weight: 2 lbs. packaged.
- Finish: Grey.
- Mounting Brackets Supplied.

MODEL MX-2 Microphone Switch
An easy action, grip-to-talk, slide-to-lock switch. It is quickly assembled between microphone and stand. Switch is single-pole double-throw, wired for microphone but easily rewired for relay operation.
MODEL MD-19AS — Dynamic
A close-talking, rugged, dynamic model treated against moisture, and the case sealed. It is designed to withstand severe climatic conditions at sea or ashore.

Brief Specifications
Type: Balanced line, close-talking dynamic.
Impedance: 30-50 ohms.
Output Levels: 79 db.
Frequency Response: 70 to 7,000 cps.
Switch: Non-locking, make contacts.
Cord Attached: 30 ft. four conductor shielded cable.
Size: 4½" high, 2½" wide, 2½" deep.
Weight: 4 lbs. packaged.
Finish: Gunmetal Gray.

MODEL MD-27 — Dynamic
This microphone is a close-talking dynamic model, obtainable in high or low impedance.

Brief Specifications
Type: Close talking dynamic.
Ordering Code: MD-27A, 30-50 ohms; MD-27AS, 50-50 ohms with shorting switch; MD-27C, high-impedance (45,000 ohms) with shorting switch.
Switch: Shorting type.
Frequency Response: 30 to 8,000 cps.
Operation: Low-impedance models, balanced line, high-impedance models, unbalanced line.
Cord Supplied: 25 ft. shielded cable with connector attached.
Size: 2 7/16" diameter, 3½" deep, 4½" high.
Weight: 3½ lbs. packaged.
Finish: Satin Chrome.

MODEL MD-28 — Dynamic
A hand-type microphone that can also be mounted on a stand.

Brief Specifications
Type: Close-talking dynamic.
Ordering Code: MD-28AS, 30-50 ohms; MD-28CS high-impedance (45,000 ohms).
Switch: Shorting type.
Output Level: MD-28AS, — 79 db, MD-28CS, — 35 db.
Frequency Response: 30 to 8,000 cps.
Operation: Low-impedance, balanced line, high-impedance, unbalanced line.
Cord Supplied: 25 ft. shielded cable with connector attached.
Size: 5½" high, 2½" wide, 2" deep.
Weight: 3½ lbs. packaged.
Finish: Brushed Chrome.

MODEL MD-30 — Dynamic
Here is a dynamic microphone with grip-to-talk stand that is especially suited for voice frequency applications.

The grip-to-talk stand has a sliding clip to hold the switch in the "on" position for long announcements.

Brief Specifications
Type: Unbalanced line, close-talking dynamic.
Ordering Code: MD-30A, 30-50 ohms; MD-30C, high-impedance.
Output Level: Model MD-30A, — 76 db, Model MD-30C, — 55 db.
Frequency Response: 50 to 7,000 cps.

MODEL MD-10 — Dynamic
A versatile model with screw driver rotary switch for operation at 50, 200, 500 ohms or high impedance.

Brief Specifications
Type: Balanced line, broadcast dynamic.
Ordering Code: MD-10A, 50 ohms; MD-10B, 200 ohms; MD-10C, 500 ohms; MD-10D, high-impedance (45,000 ohms) — 52 db.
Frequency Response: 40 to 9,000 cps.

MODEL ML-11—Crystal
A light weight lapel microphone using a high quality crystal unit for voice use.

Brief Specifications
Type: Unbalanced line, lapel crystal.
Impedance: High-impedance (45,000 ohms).
Output Level: — 48 db.
Frequency Response: 100 to 5,000 cps.
Cord Attached: 25 ft. flexible shielded cable.
Size: 3" diameter.
Weight: Head only 3 oz., head and cord 10 oz.
Finish: Brushed Chrome.
Model MS-40

MS-40 is a small adjustable boom stand for clamping to a telephone switchboard, pulpit, reception desk, shelf or similar object. It is adjustable on both horizontal and vertical planes. The free swivel movements permits it to be moved in or out of operating position as desired.

Specifications
Size: 12½" high.
Adjustments: 17½" on boom, 360 degrees horizontally, 180 degrees vertically.
Finish: Glacier Gray with chrome tubing.
Weight: 2½ lbs. packaged.
Microphone Coupler: 1/4" 27 thread.

Model MS-41

The MS-41 Microphone Holder is worn over the shoulders to provide free movement of hands and body for the microphone user. It is an excellent item for demonstrators and lecturers.

Specifications
Size: 14" x 9½" x 9".
Threads: 1/4"—27.
Finish: Black.
Weight: 1½ lbs. packaged.

Model MS-26 Stand

A businesslike desk-stand with light finger-tip action switch for relay operation or microphone on-off. Switch is single pole, double throw with locking button.

Specifications
Size: Base: 3½" disc; height: 7".
Thread: 5/8"—27.
Switch: Single pole, double throw; touch-to-talk, with locking button.
Weight: 1½ lbs. packaged.

Model MS-32

Model MS-32 Desk Stand is an adjustable model with heavy non-tilting base.

Specifications
Adjustment: 6½" to 10¾".
Thread: 5/8"—27.
Finish: Chromium plated tubing, base Chrome.
Weight: 3 lbs. packaged.

Model MS-22

Model MS-22 Banquet Stand provides the necessary microphone mounting when set upon a table.

Specifications
Size: 10" to 32" high, base 8" diameter.
Thread: 5/8"—27.
Finish: Chromium plated tubing, base, Glacier Gray.
Weight: 5 lbs.

Model MS-12

Model MS-12 is an adjustable floor stand with positive locking position, heavy base and chromium plated column that looks well with all Stromberg-Carlson Microphones.

Specifications
Size: 34" to 64", base 12" diameter.
Thread: 5/8"—27.
Finish: Chromium plated tubing, base, Glacier Gray.
Weight: 13 lbs.

Model MS-13

Model MS-13 is a de luxe adjustable floor stand with automatic positive clutch. It can be raised or lowered with one hand and will not creep or change position without deliberate pressure on the actuating sleeve control.

Specifications
Size: 34" to 64", base 12" diameter.
Thread: 5/8"—27.
Finish: Chromium plated tubing, base, Glacier Gray.
Weight: 12 lbs.
The quality of a sound system is judged by the reproduction. The speaker cabinets are frequently the only part of the installation seen by the public, your future prospects. The appearance of the S-C speaker cabinet and its baffled effect are very important considerations to the sound engineer.

Stromberg-Carlson has a wide variety of cone speaker cabinets to make the proper selection easier. Correctly designed to provide adequate baffle area for the intended use and sturdy construction to prevent cavity resonance, they also are finished to present a quality appearance to the eye.

**Model RH-28**

Quality performance and appearance dominate the Model RH-28 Plastic Cabinet. A tilted model for surface mounting, it will house either a 8" or 5½" cone speaker and line transformer. The size and shape makes an excellent baffle for music reproduction.

Space is provided for incorporating a selector switch and volume control when selected for multi-channel purposes. Mounting is simplified and a definite time saver. Complete instructions are packed with each Model RH-28 Cabinet.

**Specifications**
- **Size**: 15" wide, 12" high, 6" deep at top and 3½" at bottom.
- **Materials**: Mottled Brown, Thermo-setting plastic.
- **Cardboard Baffle**: Required with 5½" speaker for music reproduction. Order Part No. 102603.
- **Weight**: 7¼ lbs packaged.

**Model RH-32**

False ceiling installations requiring neat appearance and sound diffusion are solved by selecting Model RH-32.

The diffusing cone is fastened to the housing by four heavy metal rods set in hard rubber grommets to prevent metallic resonance. The ½" deep and ½" wide flange make it easy to secure Model RH-32 to the ceiling.

**Specifications**
- **Size**: 11½" diameter, 2½" below ceiling.
- **Speaker Required**: Models RC-23 or RC-28.
- **Finish**: Satin Aluminum.
- **Weight**: 1½ lbs packaged.

**Model RH-3**

Model RH-3 is a plastic speaker cabinet designed for inter-communicating and paging systems. It is an excellent table or desk model and also fastens to a wall with a single screw. Speaker required is a Stromberg-Carlson 5½" model with or without small line transformer.

Deliberately designed to attenuate the frequencies outside the useful voice range, the Model RH-3 minimizes noises picked up by the system, thus providing better clarity for speaker-microphone use.

**Specifications**
- **Size**: 6¾" wide, 6½" deep, 6½" high.
- **Materials**: Mottled Blue, Thermo-setting plastic.
- **Speaker Required**: Models RC-13, RC-14 or RC-15.
- **Weight**: 2½ lbs packaged.

**Model RA-5 Mounting**

Model RA-5 Cabinet Mounting has been designed to simplify and speed the installer's work. It is quickly fastened to a wall surface or to an outlet box. The horizontal flange is drilled to fit the mounting holes in Models RH-28, RH-50 and RH-51 Cabinets. Made of heavy gauge zinc-plated steel, the Model RA-5 Mounting is a real time saver.
Model RH-73
This handsome cabinet for housing a Model RF-71 or Model RF-72 speaker is made from carefully selected, unbleached light-colored mahogany-wood and finished in the natural-wood color.

Size: 32" high, 23\(\frac{3}{4}\)" wide, 16\(\frac{1}{8}\)" deep.

RH-31, RH-61
Sturdily constructed of wood and singularly free from cabinet resonance, these reproducer housings will be selected by sound equipment and wired music installation engineers, for locations where quality of reproduction and appearance are of prime importance.

Brief Specifications
Model RH-31
- Approximate Size: 19\(\frac{1}{4}\)" wide, 20" high, 17\(\frac{3}{4}\)" deep.
- Angle Tilt: 45 degrees when wall mounted.
- Reproducer Required: 8" cone, permanent magnet.
- Low Frequency Cut-Off: 80 cps.
- Finish: Desert Sand.
- Weight: 14 lbs. packaged.

Model RH-61
- Approximate Size: 20\(\frac{1}{2}\)" wide, 30" high, 16\(\frac{1}{8}\)" deep.
- Angle Tilt: 45 degrees when wall mounted.
- Reproducer Required: 12" cone, permanent magnet.
- Low Frequency Cut-Off: 70 cps.
- Finish: Desert Sand.
- Weight: 24 lbs. packaged.

Models RH-27 and RH-52
Two-way sound projection in low or medium noise level areas can be met by using the proper cone type reproducers in these wood cabinets.

Specifications
Model RH-27
- Size: 13\(\frac{3}{4}\)" high, 11" wide, 5\(\frac{3}{4}\)" deep.
- Mounts: 6" cone reproducer.
- Finish: Desert Sand.
- Weight: 6 lbs. packaged.

Model RH-52
- Size: 17\(\frac{1}{4}\)" high, 14\(\frac{1}{4}\)" wide, 8\(\frac{3}{4}\)" deep.
- Mounts: 12" cone reproducers.
- Finish: Desert Sand.
- Weight: 10 lbs. packaged.

RH-25, RH-26, RH-50, RH-51
These one-way projection housings are made of wood and direct sound downward at a 15 degree angle. Finished in either English Brown or Desert Sand color, presents a pleasing appearance in any location.

Specifications
Models RH-25 and RH-26
- Size: 13\(\frac{3}{4}\)" high, 11" wide, 7\(\frac{3}{4}\)" deep.
- Mounts: 8" cone reproducer.
- Weight: 4\(\frac{1}{4}\) lbs. packaged.

Models RH-50 and RH-51
- Size: 17\(\frac{1}{4}\)" high, 14\(\frac{1}{4}\)" wide, 9\(\frac{3}{4}\)" deep.
- Mounts: 12" cone reproducers.
- Weight: 7\(\frac{1}{8}\) lbs. packaged.

Model RH-29
Model RH-29 is a small, metal two-way projection housing, for an 8" cone reproducer, finished in a Desert Sand color. The mounting brackets permit installation in almost any conceivable location.

Specifications
- Size: 9" diameter, 4" deep.
- Mounts: 6" cone reproducer.
- Finish: Desert Sand.
- Weight: 3\(\frac{1}{4}\) lbs. packaged.

Model RH-2
Model RH-2 is a small wood speaker-cabinet designed to house a 5\(\frac{1}{2}\)" cone speaker.

Specifications
- Size: 6\(\frac{7}{8}\)" high, 6\(\frac{1}{4}\)" wide, 4\(\frac{3}{4}\)" deep.
- Mounts: 5\(\frac{1}{2}\)" cone reproducer.
- Finish: English Brown.
- Weight: 1 lb. packaged.
Model RF-71 Wide Range Speaker

- 100 Degree Angle of Sound Distribution Over Entire Frequency Range
- Handles 32 Watts of Program Material
- Carpinchoe-Leather Suspended Tweeter
- Co-Axial Units
- Smooth Frequency Response Over Entire Range
- Excellent Broadcast Monitor
- Splendid Auditorium Reproducer

Model RF-71 Wide Range Co-Axial Speaker has been carefully designed to provide a smooth, wide-range response that results in complete clarity and realism. It is ideal for monitoring purposes and for auditorium, music room, church, chapel and home installations where listeners are likely to be located "off" as well as "on" the speaker axis.

Cone Type Speakers

A more efficient magnetic structure allowing a smaller Alnico V magnet; a closed back and solid front dust-dome for protection against dust and magnetic chips are just a few features of the Stromberg-Carlson cone-type speakers.

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Voice Coil Impedance</th>
<th>Voice Coil</th>
<th>Frequency Response CPS</th>
<th>*Watts</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC-13</td>
<td>5½&quot;</td>
<td>8 ohms</td>
<td>1½&quot;</td>
<td>130-6000</td>
<td>4</td>
<td>1 lb.</td>
</tr>
<tr>
<td>RC-14</td>
<td>5½&quot;</td>
<td>3.2 ohms</td>
<td>1½&quot;</td>
<td>130-6000</td>
<td>4</td>
<td>1 lb.</td>
</tr>
<tr>
<td>RC-15</td>
<td>5½&quot;</td>
<td>45 ohms</td>
<td>½&quot;</td>
<td>130-6000</td>
<td>2</td>
<td>2 lbs.</td>
</tr>
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<td>8&quot;</td>
<td>3.2 ohms</td>
<td>1½&quot;</td>
<td>90-7000</td>
<td>8</td>
<td>2 lbs.</td>
</tr>
<tr>
<td>RC-25</td>
<td>8&quot;</td>
<td>8 ohms</td>
<td>1&quot;</td>
<td>60-7000</td>
<td>12</td>
<td>2 lbs.</td>
</tr>
<tr>
<td>RC-55</td>
<td>12&quot;</td>
<td>8 ohms</td>
<td>1&quot;</td>
<td>60-7000</td>
<td>16</td>
<td>4 lbs.</td>
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<tr>
<td>RC-57</td>
<td>12&quot;</td>
<td>8 ohms</td>
<td>1¼&quot;</td>
<td>50-6000</td>
<td>20</td>
<td>4 lbs.</td>
</tr>
</tbody>
</table>

*Power handling capacity (watts) of program material.
Selecting the proper line-to-speaker transformers is an important part of a sound system that sometimes is overlooked by the installing engineer.

The quality of the transformer must be equal to the other components in the system for maximum results.

Good frequency response, minimum audio power loss and a wide variety of primary tap values and power handling capacities make the Stromberg-Carlson line attractive. There is a model for almost any application.

Models TR-11 and TR-12 with single primary tap values provide quality with economy for multi-speaker installations such as schools, hotels, etc. Models TR-51 and TR-52 in weatherproof cases meet the outdoor requirements while Models TR-10, TR-20, TR-30, and TR-40 meet the need for a wide range of primary taps and power handling ability. Model TR-53 will be selected for use with the Model RF-71 Co-axial Speaker.

It is important to remember that 8 ohm secondary transformers can be used with 16 ohm voice coil driver units. When so used the primary tap values are doubled.

### Model TR-10
- **Primary:** 625, 1250, 2500 and 5000 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 2.5 watts.
- **Weight:** 3/4 lb. packaged.

### Model TR-11
- **Primary:** 2500 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 2.5 watts.
- **Weight:** 3/4 lb. packaged.

### Model TR-12
- **Primary:** 1250 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 2.5 watts.
- **Weight:** 3/4 lb. packaged.

### Model TR-20
- **Primary:** 78, 136, 312, and 625 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 12 watts.
- **Weight:** 3 lb. packaged.

### Model TR-30
- **Primary:** 625, 1250, 2500, 5000 and 10,000 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 12 watts.
- **Weight:** 3 lb. packaged.

### Model TR-40
- **Primary:** 200, 400, 800 and 1600 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 70 to 10,000 cps.
- **Power Capacity:** 25 watts.
- **Weight:** 7 lb. packaged.

### Model TR-51
- **Case:** Weatherproof.
- **Primary:** 500, 1000, 1500 and 2000 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 60 to 7000 cps.
- **Power Capacity:** 12 watts.
- **Weight:** 21/2 lbs. packaged.

### Model TR-52
- **Case:** Weatherproof.
- **Primary:** 250, 500, 1000, 1500 and 2000 ohms.
- **Secondary:** 4, 8, and 16 ohms.
- **Frequency Response:** Within 3 db from 80 to 7000 cps.
- **Power Capacity:** 25 watts.
- **Weight:** 3 lbs. packaged.

### Model TR-53
- **Primary:** 156, 312 and 500 ohms.
- **Secondary:** 8 ohms.
- **Frequency Response:** Within 3 db from 40 to 12,000 cps.
- **Power Capacity:** 32 watts.
- **Weight:** 2 lbs. packaged.
Projectors

The Stromberg-Carlson line of re-entrant projectors and driver units incorporate models of various sizes, distribution angles and low-frequency cut-offs. They provide, with the re-entrant type speakers described on another page, a complete line of reproducers to meet the requirements for this type of speaker.

Specifications

**Model RP-27**
- Size: Bell 13/8", length 12 1/4"
- Air Column Equivalent: 30".
- Cut-off Frequency: 200 cps
- Dispersion Angle: 90°
- Mounting Bracket: U shaped
- Weight: 5 lbs.
- Finish: Grey

**Model RP-44**
- Size: Bell 2 5/8", length 19"
- Air Column Equivalent: 53"
- Cut-off Frequency: 120 cps
- Dispersion Angle: 75°
- Mounting Bracket: U shaped
- Weight: 15 lbs.
- Finish: Grey

**Model RP-40**
- Size: Bell 2 3/4", height 20"
- Air Column Equivalent: 48"
- Cut-off Frequency: 150 cps.
- Dispersion Angle: 360°
- Mounting Bracket: U shaped
- Weight: 18 lbs.
- Finish: Grey

Driver Units

Driver units have been carefully selected to provide the finest in construction, maximum conversion efficiency and a choice in response. Model RD-22 incorporates a built-in line transformer and 30 watt power handling capacity. Model RA-3 Connector permits using two driver units with one projector. Model RA-2 Mounting Bracket is attachable to the "U" bracket for mounting a horn on pipe fittings.

Specifications

**Model RD-24**
- Size: 4 1/2" diameter, 3 1/4" long.
- Input Capacity: 25 watts.
- Frequency Range: 90 to 6000 cps.
- Voice Coil: 16 ohms.
- Thread: 1 1/4"—18
- Weight: 3 lbs.
- Finish: Grey

**Model RD-34**
- Size: 4 1/2" diameter, 4 1/4" long.
- Input Capacity: 35 watts.
- Frequency Range: 90 to 10,000 cps.
- Voice Coil: 16 ohms.
- Weight: 4 1/2 lbs.
- Finish: Grey

**Model RD-22 Driver Unit**
- Size: 4 1/2" diameter, 4 1/4" long.
- Input Capacity: 30 watts.
- Frequency Range: 80 to 10,000 cps.
- Voice Coil: 16 ohms.
- Matching Transformer: Self-contained with transonic cover, primary tap 165.
- Thread: 1 1/4"—18
- Weight: 6 lbs.
- Finish: Grey painted metal front, black plastic case.

### Sound Pressure Level Guidance Chart

On center of Horn Axis*, at 1000 cps. Free Field. Input Power 1 Watt. Output in Decibels. (Reference Level 0.002 Dynes per sq. cm.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Distance from Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td>RP-27 with RD-22 Unit</td>
<td>91</td>
</tr>
<tr>
<td>RP-27 with RD-23 Unit</td>
<td>91</td>
</tr>
<tr>
<td>RP-27 with RD-24 Unit</td>
<td>90</td>
</tr>
<tr>
<td>RP-24 or RP-44 with RD-22 Unit</td>
<td>93</td>
</tr>
<tr>
<td>RP-34 or RP-44 with RD-23 Unit</td>
<td>92</td>
</tr>
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<td>91</td>
</tr>
<tr>
<td>RP-40 or RP-50 with RD-22 Unit</td>
<td>83</td>
</tr>
<tr>
<td>RP-40 or RP-50 with RD-23 Unit</td>
<td>82</td>
</tr>
<tr>
<td>RP-40 or RP-50 with RD-24 Unit</td>
<td>81</td>
</tr>
</tbody>
</table>

*360° projector, 30° below horizontal. To increase the sound pressure 3 db, double the input power. To increase it to 6 db, quadruple the input power.

There is Nothing Finer Than a Stromberg-Carlson
Stromberg-Carlson re-entrant reproducers provide a wide selection of models. All models incorporate special construction features and built-in, hermetically sealed driver units that offer protection against moisture, salt spray and vibration. Corrosion resisting finishes are used.

**MODELS RS-50 and RS-51**

**Explosion-Proof Loudspeakers**

The requirement for explosion-proof loudspeakers in sound system installations can now be met by either Stromberg-Carlson Models RS-50 or RS-51 Loudspeakers.

Both models have successfully met Underwriters' Laboratories, Inc. requirements for hazardous locations. Model RS-51 is listed by Underwriters for Class I, Group C and D Locations and Class I, Group E, F, and G Locations. Model RS-50 is listed for Class I, Group C and D Locations of National Electric Code.

Class I Locations broadly cover inflammable volatile liquids and gases, while Class II Locations broadly cover explosive dust hazards. See our Sales Engineering Data Sheet for Underwriters definitions.

**Specifications**

- **Model RS-50**: Meets requirements of Class I, Group C and D.
- **Model RS-51**: Meets requirements of Class I, Group C and D, Class E, Groups E, F, and G.
- **Both Models**:
  - Size: 19" length, 16" high.
  - Air Column Equivalent: 30°.
  - Input Capacity: 25 watts.
  - Voice Coil Impedance: 16 ohms.
  - Frequency Range: 200 to 10,000 cps.
  - Distribution Angle: 95 degrees.
  - Cable Entrances: Tapped for standard 1/4" pipe conduit.
  - Mountings: 1/2" bracket. Holes provided for 3 bolts.
  - Weight: 23 lbs.

**MODEL RS-18**

This complete speaker with special built-in and hermetically sealed driver unit suggests its use in railroad, marine and other high humidity areas.

**Specifications**

- **Size**: 63/4" overall diameter, 33/4" deep.
- **Air Column Equivalent**: 5/16".
- **Input Capacity**: 12 watts.
- **Voice Coil Impedance**: 16 ohms.
- **Distribution Angle**: 120 degrees.
- **Frequency Range**: 300 to 6000 cps.

**MODEL RS-16**

Model RS-16 is constructed of heavy castings with weather-proof space for the line transformer. Its use in marine, power plant and tough locations is apparent.

**Specifications**

- **Size**: 10" high, 51/4" deep, 71/2" wide.
- **Air Column Equivalent**: 7/8".
- **Input Capacity**: 15 watts.
- **Voice Coil Impedance**: 15 ohms.
- **Frequency Range**: 300 to 6000 cps.

**MODEL RS-14**

Model RS-14 is a small re-entrant speaker for noisy locations as it will handle up to 12 watts of program material.

**Specifications**

- **Size**: 8" dia., over-all length 9 1/2".
- **Air Column Equivalent**: 10".
- **Input Capacity**: 12 watts.
- **Voice Coil Impedance**: 8 ohms.
- **Frequency Range**: 300 to 6000 cps.

**Models RS-5 and RS-6**

These small re-entrant speakers with built-in driver units are designed for voice paging purposes. Their use on loading platforms and in corridors, food processing and cold storage plants is suggested.

**Specifications**

- **Frequency Range**: 400 to 9000 cps.
- **Mountings**: Ratchet bracket.
- **Weight**: 3 lbs.
- **Finish**: Gray.

*NOTE: 45 ohm voice coil speakers can be used in a highly satisfactory operating system where low cost is of prime importance. Up to eleven 45 ohm voice coil speakers can be connected in parallel to the four ohm output tap of any amplifier. Speaker line transformers are not required.*