

R SERIES

RSH-462



Operation Manual

Weather-Resistant Focused Horn Array with
Mounting Bracket Assembly



EC STATEMENT OF CONFORMITY

This document confirms that the range of products of Community Professional Loudspeakers bearing the CE label meet all of the requirements in the EMC directive 89/336/EEC laid down by the Member States Council for adjustment of legal requirements. Furthermore, the products comply with the rules and regulations referring to the electromagnetic compatibility of devices from 30-August-1995.

The Community Professional Loudspeaker products bearing the CE label comply with the following harmonized or national standards:

DIN EN 55013:08-1991

DIN EN 55020:05-1995

DIN EN 55082-1:03-1993

The authorized declaration and compatibility certification resides with the manufacturer and can be viewed upon request. The responsible manufacturer is the company:

Community Light & Sound
333 East 5th Street
Chester, PA 19013
USA

TEL: 1-610 876-3400

FAX: 1-610 874-0190

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R SERIES RSH-462 OPERATION MANUAL

1. INTRODUCTION

Welcome! You've joined the group of people who have chosen high quality Community loudspeaker systems and components for over 35 years. We're gratified that you did, and we will do our best to make sure you are satisfied with your Community products.

In order for you to get the most effective use of this product, please take a few minutes to read this manual. We have included a great deal of useful information that will help you to realize the best performance, operation, sound quality, and reliability from your new loudspeaker.

Community RSH-462 Focused-Array Loudspeaker

This manual contains information for the proper setup and operation of the Community RSH-462 Focused-Array Loudspeaker. While every attempt has been made to ensure this information is correct and up to date, Community continuously incorporates worthwhile improvements to each product which may include changes and/or modifications not contained in this manual.

2. IMPORTANT SAFETY INFORMATION

The terms "Caution," "Warning," and "Danger" are used throughout this manual to alert the reader to important safety considerations. If you have any questions about any aspects of these cautions, contact your local dealer, distributor or Community.



CAUTION: describes an operating condition or user action that may expose the equipment or user to potential damage or danger.



WARNING: describes an operating condition or user action that will cause damage to the equipment or injure the user.



DANGER: describes an operating condition or user action that will immediately damage the equipment or be extremely dangerous or possibly life-threatening to the user.

3. WEATHER-RESISTANT LOUDSPEAKERS

Weather-resistant is a relative term that refers to a loudspeaker's ability to resist the effects of weather in outdoor environments. Loudspeakers have been designed to be weather-resistant with varying degrees of success. Typical weather-related damage problems encountered in many such designs, in general order of significance, concern damage or degradation to the enclosure, the drivers, hardware, and internal components such as crossovers.

The RSH-462 has been designed to be highly weather-resistant. The RSH-462 enclosure is fabricated entirely of hand-laminated fiberglass, making it virtually impervious to weather-related effects. It is gel-coated with a light gray color to help keep the loudspeaker cooler in sunlight. The drivers and their diaphragms are made of highly weather-resistant materials, treated to repel moisture. All external hardware on the loudspeaker is made of stainless steel. A weather-tight gland nut provides a seal for the input cable. The input cable is type SJOW with neoprene insulation, resistant to weather and UV effects. The RSH-462 has an exposure rating of IP65 in accordance with the guidelines set forth under BS EN 60529:1992 by The Electrical Installation Equipment Manufacturer's Association (EIEMA).

4. UNPACKING AND INSPECTION

The Community RSH-462 loudspeaker is inherently rugged and is carefully packed in a well-designed carton. It is a good idea to carefully inspect the unit after it has been removed from the packaging, as sometimes there is hidden damage from shipping.

Please note that once the shipment has left Community or your Community dealer, the responsibility for damage is borne by the freight company. This means that if there is damage, you must file a claim with the freight company. Each freight company has its own set of regulations that must be followed and forms that must be filled out. It is important to contact the freight company as soon as damage is discovered, as most freight companies will investigate damage claims for only a very short period of time following delivery. Save the carton and packing material, because most freight companies will not investigate or settle a damage claim if the packing materials are not available for inspection. The Community dealer and the factory will try to help in any way possible. However, it is the responsibility of the party who receives the shipment to file a damage claim.

The shipping container contains the following items:

- (1) RSH-462 Loudspeaker System
- (1) 1 Swivel Yoke Bracket Assembly (factory installed on the enclosure)
- (1) Operation Manual
- (1) Warranty Card

QUICK START-UP

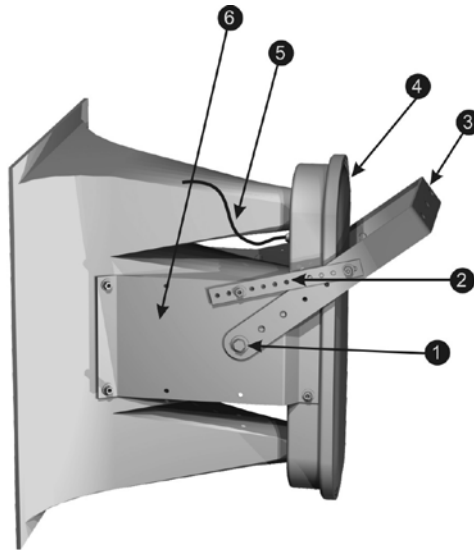


Figure 1: Physical Features of the RSH-462

5. PHYSICAL FEATURES

Table 1: Physical Features of the RSH-462

FEATURES	DESCRIPTION	
1	YOKE PIVOT BOLTS (Stainless steel)	M12x1.75x55mm; one per side.
2	LOCKING STRAP (Stainless steel)	Locks the Yoke Angle to avoid slippage.
3	YOKE BRACKET (Stainless steel)	Attaches to a pole, wall or ceiling. Allows the angle of the RSH-462 to be easily adjusted. Provided with three mounting holes.
4	DRIVER CHAMBER	Encloses the four FocusedArray™ drivers. Remove this cover for servicing.
5	INPUT CABLE	For signal connections to the loudspeaker. Approximately 4 feet of 16-2 SJOW retained by a factory-sealed gland-nut. White: + (plus) Black: - (minus).
6	SIDE PLATES (Stainless steel)	Attaches to the RSH-462, providing pivot points for the Yoke Bracket. Note: side plates, yoke, and locking strap are all factory-installed.

6. GENERAL DESCRIPTION

The RSH-462 is a FocusedArray™ complete horn/driver system designed for use in standalone voice-range sound reinforcement and announcement/signaling applications. In a typical acoustical environment such as a sports venue, it provides usable voice band energy from approximately 30 feet (9.1 m) to as great a distance as 768 feet (234 m).

The horn portion of the assembly is a handcrafted one-piece patented FocusedArray™ waveguide, precision molded in hand-laminated, multilayer glass composite construction for optimum performance. With multilayer glass composite layering and integral throat and driver flange construction, the horn is built to withstand substantial loads. The strength and rigidity of the construction enhances sonic efficiency by preventing sound energy loss, as well as providing an inherently weather-resistant installed loudspeaker system.

The four M200 compression drivers are high output, high sensitivity compression loudspeakers that are configured with the diaphragm facing forward. This isolates the voice coil and magnetic structure of each driver from the environment. The one-piece, non-metallic diaphragm and suspension system offers exceptional resistance to the effects of humidity, dust, and corrosive atmospheric conditions. The driver is treated with Ferrofluid™. Ferrofluid is a synthetic disaster fluid with magnetically attractive particles in suspension. The Ferrofluid provides radically improved conduction of heat from the voice coil to the large, natural heatsink of the magnetic structure. Additionally, the fluid helps to center the voice coil in the gap, and its dampening effect significantly reduces distortion that originates from edge resonance. Ferrofluid also controls short-term impedance rise, which aids the loudspeaker in faithfully reproducing transients.

The large area, low compression phase plug and oversized magnet structure also contribute to extremely low distortion at high outputs, while maintaining high efficiency and low power compression. A sealed fiberglass rear cover protects the drivers from the effects of weather and corrosion.

APPLICATIONS

The RSH-462 is an extremely high-efficiency loudspeaker system. It excels as an emergency voice alert loudspeaker, and as a public address system for large gatherings such as state fairs, rodeos, classic car shows, political rallies, etc. The unit is also suitable for routine or emergency industrial paging, as well as tone signaling alert systems. It can readily be used as a component of a high performance sports announcement system when augmented with additional low frequency devices.

DRIVERS

The RSH-462 loudspeaker features four 2" exit M200 midrange compression drivers treated with Ferrofluid for reduced distortion, increased thermal conductivity, weather resistance and control of short-term impedance rise.

MOUNTING ACCESSORY

The RSH-462 is provided with a Swivel Yoke Assembly as a convenient and robust mounting system. The Swivel Yoke provides a number of possible installation possibilities, as well as the capability of easily orienting the angle of focus of the loudspeaker.

RSH-462 COVERAGE PATTERN

The RSH-462 exhibits a 60° Horizontal x 20° Vertical nominal dispersion pattern and features Community's legendary linear pattern control.

7. CHOOSING POWER AMPLIFICATION

Selecting a power amplifier for an RSH-462 is straightforward. See SECTIONS 10.1 and 10.2 for additional considerations in choosing power amplification.

POWER RATING

The RSH-462 is rated at 300 watts continuous RMS and 750 watts peak program power. The recommended amplifier is one with a rated RMS output of 630 watts to 900 watts at 8 ohms. If two RSH-462 loudspeakers are to be connected to one amplifier channel, use an amplifier with a rated RMS output of at least 1200W at 4 ohms per channel.

Using an amplifier of less power than recommended can result in amplifier clipping, which can quickly damage the drivers.

8. ELECTRICAL INSTALLATION

CONNECTING THE LOUDSPEAKER

The RSH-462 has an approximately 12 ft (4m) SJOW-type jacketed cable rated for outdoor use, attached to the enclosure with a weather-tight gland-nut inlet. This cable may be terminated to the amplifier cabling using solder, a terminal block, or wire-nuts. Be sure that the connections are weather-resistant, or treated with a weather-resistant coating, if the product is to be used outdoors.

Connector Cable Polarity:

The WHITE conductor is the positive or + wire and the BLACK is the negative or – wire (see *Quick Start-up*).

LOUDSPEAKER CABLE

The resistance of the cable between the loudspeaker and the amplifier will affect the performance of the loudspeaker. Cable with too high a resistance will cause unacceptable power losses, impairing the loudspeaker's performance. To minimize such losses it is desirable to keep the total cable resistance under 0.2 ohm. For lengths over 100 feet the wire gauges needed to meet this requirement are usually not practical to use for both physical and cost reasons. Therefore #10 AWG is recommended as the most practical gauge for such situations. Use TABLE 1 to select the proper wire gauge. Either stranded or solid conductors are acceptable, although cable with stranded conductors is usually easier to work with. In the table below, the length for both conductors has been figured into the total resistance. Note the lower the gauge number, the larger the wire size.

Note: For distances in excess of 100' (30m), the installer/designer should consider employing a 70V 'constant voltage' system to drive the loudspeakers. By raising the voltage at the amplifier's output, using either a step-up transformer or by bridging the amplifier channels, and reducing the voltage at each RSH-462 loudspeaker with a step-down transformer, the effect of the cable resistance is substantially minimized due to the higher transmission voltage. Community manufactures the TRC400 transformer, which can be mounted externally in a NEMA box adjacent to each RSH-462 loudspeaker.

For very large systems with unusually long cable runs, such as in a large auto racetrack, please contact Community's Technical Applications Group for assistance. Special transformers can be built to operate at 140V or higher, thereby radically reducing the need for costly lengths of large gauge wire.

Table 2: Wire Gauge Selection

Run Length	Minimum Gauge (AWG)	Total Resistance
10 ft. (3 m)	#16	0.08 Ohm
25 ft. (8 m)	#14	0.13 Ohm
50 ft. (15 m)	#12	0.16 Ohm
75 ft. (25 m)	#10	0.15 Ohm
100 ft. (30 m)	#10	0.20 Ohm
200 ft. (60 m)	#10	0.40 Ohm
300 ft. (90 m)	#10	0.60 Ohm
400 ft. (120 m)	#10	0.80 Ohm
500 ft. (150 m)	#10	1.00 Ohm

Note: Metric length conversions are approximate.

INSULATION TYPES

If installed outdoors, the insulation of the cabling should be resistant to water, the effects of temperature, and the effects of ultraviolet radiation from the sun. Recommended insulations include polyethylene, neoprene, Teflon™, Silicon™, and Hypalon™. Insulations that are not recommended: rubber, PVC (polyvinylchloride), polypropylene, polyurethane, and nylon.

SIGNAL PROCESSING / HIGH-PASS FILTER

The RSH-462 uses fully horn-loaded mid-frequency drivers. The specified low frequency response is 400 Hz. Any attempt to reproduce significant levels below this frequency can result in damage to the drivers. For this reason an electronic high-pass filter, adjusted to 400 Hz or higher, must be used with the RSH-462. The slope should be a minimum of 24 dB per octave. This will protect the drivers from the low frequency content found on most CDs and other program sources. It will also protect against unwanted low frequency energy that can come from such things as microphone wind noise - an important consideration for outdoor applications.

Many power amplifier manufacturers offer plug-in high-pass filter input modules. This is an excellent method to provide the necessary filter in a relatively tamperproof manner.



WARNING: Operating an RSH-462 loudspeaker without the recommended high pass filter will radically reduce its power handling and can lead to early failure.

9. PHYSICAL INSTALLATION

MOUNTING INSTRUCTIONS

The RSH-462 Swivel Yoke Bracket Assembly is designed to provide an easy method of installing an RSH-462 horn-type loudspeaker to a fixed mounting surface.

The assembly consists of two factory-installed stainless steel plates that attach to the enclosure and a stainless steel yoke-style swivel bracket reinforced with two locking straps. The assembly is capable of providing two axes of motion, rotation and tilt, if installed using a single center attachment bolt on the rear of the swivel yoke.

All parts are engineered to provide a high margin of safety when used in accordance with these instructions. The brackets and fasteners are manufactured of stainless steel grade 304, in order to resist rust and degradation from inclement weather when installed in outdoor environments.

No hardware is provided to attach the yoke bracket to the mounting surface. Such hardware must be supplied by the installer and should be sized and rated for the weight load of the RSH-462 and yoke assembly (~75 lbs / 34 kg). Graded stainless steel threaded machine bolts and nuts are recommended for outdoor use.

The installer is solely responsible for determining if the mounting hardware is adequately sized and rated, and if the structure that the RSH-462 is attached to is capable of safely supporting the weight of the horn/driver/yoke assembly, as well as wind loads and any additional torsional forces that may result from adjusting the focus angle of the horn during installation.

RSH-462 Swivel Yoke Bracket Parts List

- Yoke bracket (1)
- Side plates (2)
- Locking straps (2)
- M12x1.75x55mm hex head stainless steel bolt (2)
- M12 stainless steel flat washer (4)
- M12 stainless steel split lock washer (2)
- M12 x 1.75 stainless steel hex nut (2)
- M8 stainless steel truss head screw (16)
- M8 stainless steel flat washer (16)
- M8 stainless steel split lock washer (8)
- M8 x 1.5 stainless steel hex nut (8)

The installer must supply all other hardware for the installation.

ASSEMBLY DRAWINGS

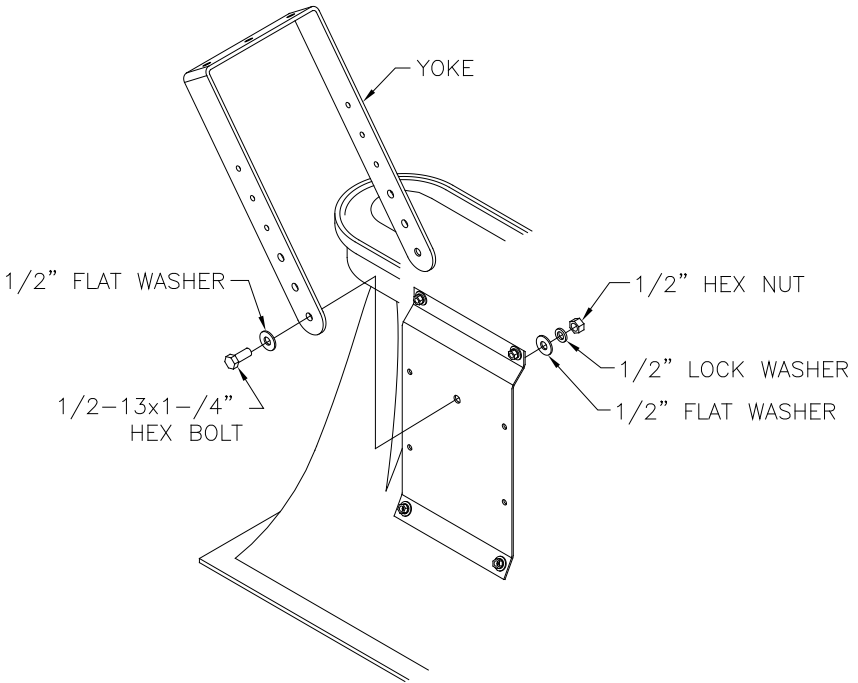
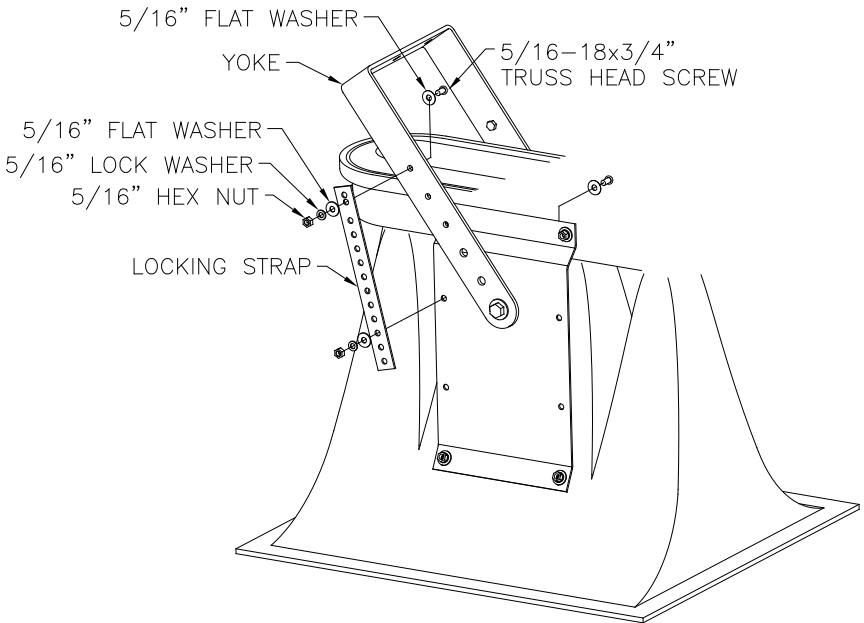
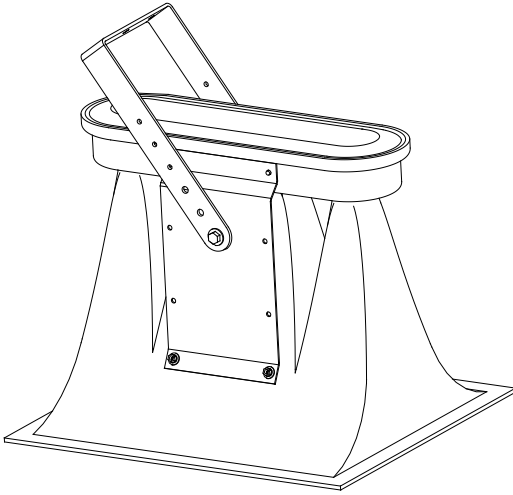


Figure 2: Swivel Yoke Assembly

Swivel Yoke Assembly (Continued)



ASSEMBLY INSTRUCTIONS

1. The RSH-462 swivel yoke comes fully assembled and attached to the RSH-462 loudspeaker from the factory. However, it is likely that you may wish to change the angle and/or the depth-position of the yoke during installation.
2. The swivel yoke is provided with six sets of holes on its side legs. This allows the installer to alter the distance between the rear of the yoke and the rear of the RSH-462. Note that only the first three sets of holes can be used as pivot points. Holes four, five, and six are reserved for use by the locking straps.
3. It is recommended that the swivel yoke be set to the minimum distance that permits an acceptable range of motion, in order to keep the mass of the RSH-462 as close to the mounting surface as possible. This will reduce the 'lever-arm' effect and add to the structural integrity of the installation, particularly important when encountering wind and/or seismic conditions.
4. When installing the RSH-462, it may be more convenient to first remove the swivel yoke bracket and mount it independently to the mounting surface (pole, wall, ceiling, etc.). For outdoor use, it is recommended that you use high grade stainless steel threaded fasteners to attach the yoke to the mounting surface.
5. If you find it necessary to remove the swivel yoke from the side plates, re-attach it using the same hardware, in the same order as installed at the factory. Each M12 hex head bolt should be fitted with a flat washer on each side of the yoke/plate assembly, then a lock washer and a hex nut.
6. The M8 stainless steel hex-head screws that retain the locking straps should also be fitted with a flat washer and one lock washer under each nut. Note that the head of the screw should pass through the yoke from the inside, to minimize interference with the side plate.
7. After installation, connect the RSH-462 to a suitable power amplifier. While listening to program material, adjust the horn angle until you obtain the desired acoustical coverage. When you are satisfied with the angle, tighten the M12x1.75 pivot bolts to a setting of approximately 30 to 35 foot-lbs using a torque wrench. It is recommended that a light coating of oil be applied to the threads. This will help to keep the threads from galling, which can be a common problem with stainless steel fasteners. It will also insure that the torque applied to the bolt is properly converted into compression force between the bolt and nut. Dirty or damaged threads can absorb much of the rotational torque without producing the intended design compression.
8. Lastly, attach the two locking straps, one per side.



IMPORTANT: The straps are intended to be used in tension, not in compression. The locking straps should be located at the **top** of the assembly so that the force through the straps is pulling on them, not compressing them.

The truss-head screws securing the locking straps should be tightened to a torque of approximately 8 to 10 foot-lbs, using a torque wrench. Do not overtighten, as too much torque could cause the screws to shear off. A light coating of machine oil on the threads will insure that they do not gall, and that the rotational torque is properly converted to compression force.

Often, installations are performed using only a single fastener in the center hole of the yoke bracket. This allows the installer to rotate the horn in addition to pivoting it. If you have installed the RSH-462 in this manner, after achieving the desired acoustical coverage angles, we strongly recommend adding two additional fasteners in the remaining two holes of the yoke bracket for safety.

SETTING THE ANGLE OF INCLINATION

The following drawing and table make it easy to set angles of inclination. To focus the RSH-462 at a specific angle, find the desired angle in the left column of the table, then attach the locking strap to the yoke and the side plate using the holes that are indicated in columns 2, 3, 4 and 5.

The truss-head screws used to fasten the locking strap to the yoke should be reversed so that the screw head is on the inside surface of the yoke whenever the 50° or 55° angles are selected. This is to avoid interference between the screw threads and the side plate (note: there may be some minor interference at either of these two angle settings, but it will neither prohibit the use of these angles, nor compromise the assembly in any way).

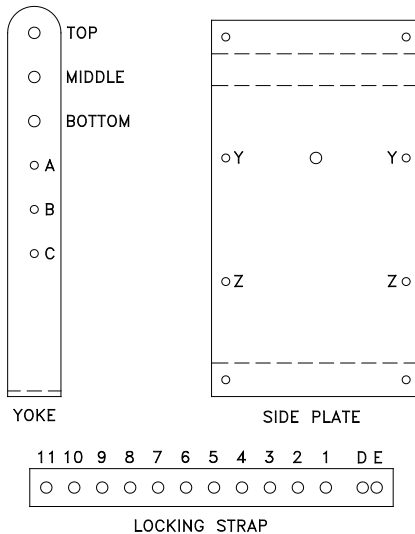


Figure 3: Yoke, Side Plate and Locking Strap

Table 3: Angle Inclination Adjustments

Inclination Adjustments When Using Top Pivot Hole				
Angle in Degrees	Yoke Hole	Locking Strap Hole (attach to yoke)	Locking Strap Hole (attach to side plate)	Side Plate Hole
0°	A	8	D	Y
5°	A	7	E	Y
10°	A	7	D	Y
20°	A	6	E	Y
25°	A	6	D	Y
30°	A	5	E	Y
35°	A	11	E	Z
45°	A	11	D	Z
50°	A	10	E	Z
55°	A	10	D	Z
60°	A	9	E	Z
65°	A	9	D	Z
70°	A	8	E	Z
75°	A	8	D	Z
80°	A	7	E	Z
85°	A	7	D	Z
90°	A	6	E	Z

Important Note: The settings in the table above are correct only when using the TOP pivot hole of the yoke. If the yoke is repositioned to the MIDDLE pivot hole, the locking strap should be changed from the hole marked "A" to the hole marked "B." Similarly, if the yoke is repositioned to the BOTTOM hole, the locking strap should be changed from the hole marked "A" to the hole marked "C."

Note that only the TOP yoke hole permits a 90 degree range of motion. If the yoke is attached to a planar surface, such as a wall or ceiling (as opposed to a pole), the MIDDLE yoke hole permits an approximate 50 degree range of motion, while the BOTTOM hole permits approximately a 30 degree range of motion.



CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

WEATHER-RESISTANCE

The RSH-462 is highly weather-resistant by design, with a rating of IP65 in accordance with the guidelines set forth under BS EN 60529:1992 by the Electrical Installation Equipment Manufacturer's Association (EIEMA). The all-fiberglass enclosure is virtually impervious to the effects of weather, and the non-metallic driver diaphragms are minimally affected by adverse climatic conditions. All external hardware is made of grade 304 stainless steel. The speaker cable gland-nut inlet is made of polypropylene, and is appropriate for outdoor electrical installation.

MAINTAINING WEATHER RESISTANCE

There are several things that must be observed when installing an RSH-462 in order to maintain its weather-resistant integrity for outdoor use.

Always orient the loudspeaker so the mouth of the horn is, at a minimum, pointing slightly downward. Failure to do so will result in water collecting inside the bell of the horn.

The gland-nut securing the loudspeaker cable to the enclosure is sealed at the factory. Do not attempt to remove this nut or the weather-tight seal will be broken.

If you use hardware to replace any of the stainless steel screws, bolts, nuts, and washers supplied, they should also be made of stainless steel.



CAUTION: If the above instructions are not observed, the weather-resistant integrity of an RSH-462 can be compromised. This can result in damage to, or failure of, the hardware or internal components.

10. OPERATING PRECAUTIONS

LIMITING

When used at very high power levels, electronic limiting is strongly recommended. This is especially true if an RSH-462 is installed in a relatively inaccessible location (making servicing difficult), or is being operated by personnel who are not trained operators.

For reliable protection, the limiter should be used as a hard-line device to prevent amplifier clipping and to prevent output voltages in excess of 49V RMS and 110V peak. Set the limiter threshold to actively limit the audio signal if the average output voltage of the amplifier rises above 49V. The measurement should be taken as close to the loudspeaker as possible, in order to compensate for voltage drop across the line. Use a high grade digital multimeter with a peak-hold function capable of measuring RMS voltage at audio frequencies, and/or a high-grade oscilloscope. Measurements and limiter settings should be made by an experienced sound technician.

If time-constant adjustments are available on the limiter, set the attack time to a moderate setting (10 msec is a good starting point), and the release time to fast (1 msec is a good starting point). This will allow most peak (dynamic) information to pass. The limiting ratio should be high, at least 20:1 or higher. Although this may compromise audio quality when limiting, the goal is to protect the drivers, and therefore audio quality should be a secondary consideration.

NOTE: In no case should the limiter be set in such a manner as to allow amplifier clipping.

AMPLIFIERS WITH BUILT-IN LIMITING

Many power amplifier manufacturers have introduced models with either built-in limiting or accessory limiting modules, usually designed to prevent the amplifier from clipping. These types of limiters are acceptable to use in lieu of a standalone limiter. Typically they are easy to set up, they are specifically designed for the amplifier, and in most cases, they are tamper-resistant. Note that the amplifier power output capability must still be sized as recommended in Section 7 of this manual. Use of a protective limiter does not negate the need to provide an amplifier with enough power output capability to properly match the requirements of the loudspeaker.

11. SERVICING

Servicing the RSH-462 is simple and straightforward. Each of the four M200 drivers is accessible from the rear of the unit.

If a driver or diaphragm needs to be accessed, first remove the ten 10-24 x 1" stainless steel Philips drive screws, flat washers, lock washers, and hex nuts that retain the driver housing cover. Next, remove the fiberglass driver housing cover itself. This will expose the four M200 compression drivers.

To remove one or more of the M200 drivers, loosen and remove the four ¼-20 hex nuts, lock washers, and flat washers that secure the driver to the throat of the horn. These can be found *underneath* the driver housing on the surface facing towards the front of the horn. The driver can then be taken out of the driver housing. Be sure to note the wiring configuration of the removed device.

The M200 driver can be disassembled and its diaphragm can be replaced.

12. REPLACEMENT PARTS LIST

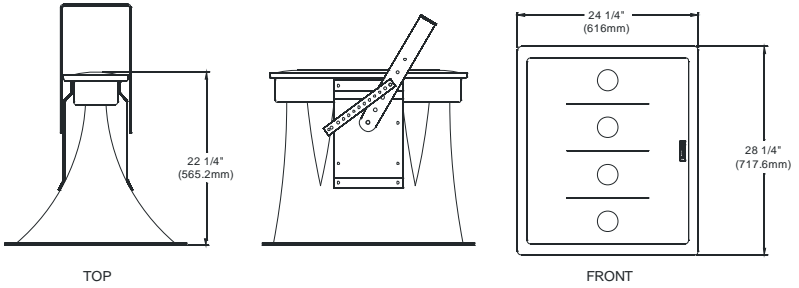
M200 MF Driver

M200RD Replacement Diaphragm

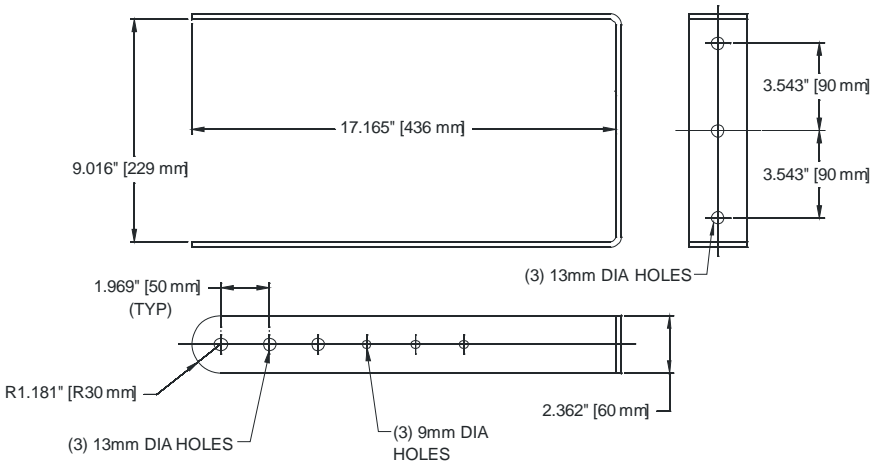
Wire Harness

13. TECHNICAL DRAWINGS

RSH-462 ENCLOSURE DIMENSIONS



RSH-462 YOKE BRACKET DIMENSIONS



14. IN CASE OF DIFFICULTY

Should you have a problem with your Community RSH-462 loudspeaker, find the symptom and follow the associated "What To Do" instructions. Be aware that a particular symptom may have several possible causes. Please refer to the appropriate section in this manual if you need more detailed information.

SYMPTOM	PROBABLE CAUSE	WHAT TO DO
No sound.	Equipment is turned off.	Check and make sure that all equipment in the audio signal path is turned on. When turning on any piece of equipment, the amplifier should not be turned on until all equipment before it is turned on.
No sound.	Bad or open connection.	Make sure the signal and input wire connections for all connectors in the system and to all terminal screws are properly connected or soldered. Make sure all wire and cables are intact and not severed or damaged.
No sound.	Drivers have completely failed.	This would be an unusual cause but could occur with severe abuse or an adverse amplifier failure. All other possibilities should be explored before assuming this is the cause. If it is, replace or repair the failed components.
No sound or very low volume.	System control is turned down.	Check to make sure that the audio signal to the amplifier is high enough to drive it properly. Check all volume/level controls and gain switches in the system including the amplifier input attenuator.
Low volume level.	System electronic gain is too low.	Check to make sure that the audio signal to the amplifier is high enough to drive it properly. Check all volume/level controls and gain switches in the system including the amplifier input attenuator.
Low volume level.	Signal or speaker wire connection is shorted.	Make sure the signal and input wire connections inside all system connectors are not shorted. Even one small wire strand shorting the +/- terminals either before or after the amplifier can cause this problem.
Volume level drops and comes back.	The electronic limiter has been activated or is improperly adjusted.	This usually means that the loudspeaker is being constantly overdriven and the electronic limiter is reducing the power to the loudspeaker as a protective measure, which is normal. Reduce the volume level to the loudspeaker and/or readjust the attack, delay and threshold setting of the protective limiter.

SYMPTOM	PROBABLE CAUSE	WHAT TO DO
Sound cuts in and out.	Bad connection.	Check all connections and cabling for shorts or loose connections.
Distortion, low volume, or no volume from any or all drivers.	Cold or open solder joint(s) or faulty connection(s).	Using an ohmmeter, check the continuity of all external wiring and connectors. If no problems are found, disassemble the loudspeaker and check all internal wiring to the drivers. Also visually inspect solder joints as cold joints may only malfunction with higher current than an ohmmeter supplies. Repair as needed.
Distortion from the loudspeaker at higher volume levels.	Too little amplifier power.	If the power rating of the amplifier being used is too low, it will clip at higher volume levels. Reduce the volume level or use a more powerful amplifier equal to the loudspeaker's "Program" power rating.
Distortion from the loudspeaker at higher volume levels.	One or more drivers are malfunctioning.	Using a sine wave oscillator or wide range program at moderate levels, listen to each driver to isolate the problem. Repair or replace as needed.
Noises from the loudspeaker (buzzes or rattles).	Loose driver or damaged driver.	Using a sine wave oscillator or wide range program at moderate levels, listen to each driver to isolate the problem. Repair or replace as needed.
Noises from the loudspeaker (buzzes or rattles).	Driver is malfunctioning.	Repair or replace as needed

15. WARRANTY INFORMATION

TRANSFERABLE WARRANTY (LIMITED)

– Valid in the USA only

Community loudspeaker systems are warranted in the USA to be free from defects in materials and workmanship for a period of five years, as determined by one of the following two methods, whichever is longer:

Starting from the date of retail purchase, as noted on the sales receipt from an authorized Community dealer or,

Starting from the date of manufacture, determined by the serial number, if the sales receipt is not available.

This warranty applies to the product; therefore, the remainder of the warranty period will be automatically transferred to any subsequent owner.

This warranty applies only to failure of a Community loudspeaker caused by defects in materials and workmanship during the stated warranty period. It does not apply to a unit that has been subjected to abuse, accident, modification, improper handling/installation, or repairs made without factory authorization or by anyone other than authorized Community Field Service Stations. This warranty is void if the serial number has been defaced, altered or removed.

Products covered by this warranty will be repaired or replaced at the option of Community, without charge for materials or labor, provided all the terms of this warranty have been met.

OBTAINING WARRANTY SERVICE

Warranty service may be obtained from the factory, or from an authorized Field Service Station.

To obtain factory or field warranty service for products purchased in the United States, return the product for inspection to the address below, freight prepaid, in the original packaging. If the original packaging is not available, call or write Community Warranty Service to obtain proper packaging materials or hand carry the product to the nearest Field Service Station.

Factory Service Center:

Community Warranty Service
333 East 5th Street
Chester, PA. 19013-4511

Field Service Center:

Call 1-610-876-3400 for the location of the nearest Field Service Center

For factory service, please call 1-610-876-3400 for a Return Authorization (R/A) number before shipping. If the product is shipped, the following information must be included in the package:

Owner's complete name, daytime phone number, return street address and return authorization number.

The serial number of the product being returned and copy of the retail sales receipt, if possible.

A complete description of the problem(s) experienced, including a brief description of how the equipment is being used and with what brand, model and output power of amplifier.

Upon receipt, the service center will determine if the problem is covered under warranty. If covered under this warranty, the product will be repaired or replaced, at Community's option, and returned to the owner freight prepaid. If the problem is not covered under this warranty, the owner will be notified of the problem with an estimate of the repair costs.

Consequential and Incidental Damages: Community shall not be liable for any consequential or incidental damages including, without limitation, injury to persons, property, or loss of use. Some states do not allow the exclusion or limitations of consequential or incidental damages, so the above limitations and exclusions may not apply.

This Community warranty is not extended by the length of time which an owner is deprived of the use of the product. Repairs and replacement parts provided under the terms of this warranty shall carry only the remaining portion of the warranty.

Community reserves the right to change the design of any product from time to time, without notice and with no obligation to make corresponding changes in products previously manufactured.

While this warranty gives specific legal rights, there may also be other rights that vary from state to state. No action to enforce this warranty shall be permitted ninety days after expiration of the warranty period.

Warranty Information and Service for Countries Other Than the USA

To obtain specific warranty information and available service locations for countries other than the United States of America, contact the authorized Community Distributor for your specific country or region.



Community Professional Loudspeakers

333 East Fifth Street, Chester, PA 19013-4511 USA

Phone (610) 876-3400 | Fax (610) 874-0190

www.communitypro.com

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