

**SHURE****MICROPHONES AND ELECTRONIC COMPONENTS**

EVANSTON PHONE DA 8-9000 • CHICAGO PHONE SH 3-1600

**PHONOGRAPH CARTRIDGES  
DATA SHEET MODELS M44-5, M44-7, M44C,  
and M44G 15° DYNETIC®****DYNETIC® PHONOGRAPH CARTRIDGES****SPECIFICATIONS:****FREQUENCY RESPONSE:** From 20 to 20,000 cps**OUTPUT VOLTAGE:** (1,000 cps at 5 cm/sec)

M44-5: 7 millivolts per channel

M44-7: 11 millivolts per channel

M44C: 9.3 millivolts per channel

M44G: 6.2 millivolts per channel

**CHANNEL SEPARATION:** More than 25 db at 1,000 cps**RECOMMENDED LOAD  
IMPEDANCE:**

47,000 ohms (per channel)

**\*STYLUS REPLACEMENT:** For Model M44-5: Stylus Model N44-5;  
Radius .0005" (.013 mm) diamond;  
Grip color—RedFor Model M44-7: Stylus Model N44-7;  
Radius .0007" (.018 mm) diamond;  
Grip color—WhiteFor Model M44C: Stylus Model N44C;  
Radius .0007" (.018 mm) diamond;  
Grip color—light blueFor Model M44G: Stylus Model N44G;  
Radius .0007" (.018 mm) diamond;  
Grip color—Gray**COMPLIANCE (Vertical, Horizontal):**M44-5 25.0 x 10<sup>-6</sup> cm per dyneM44-7 20.0 x 10<sup>-6</sup> cm per dyneM44C: 7.5 x 10<sup>-6</sup> cm per dyneM44G: 25.0 x 10<sup>-6</sup> cm per dyne**TRACKING:**

M44-5: ¾ gram to 1½ grams

M44-7: 1½ grams to 3 grams

M44C: 3 grams to 5 grams

M44G: ¾ gram to 1½ grams

**STYLUS:**

"No Scratch" Retractable Feature

**INDUCTANCE:**

720 millihenries

**D.C. RESISTANCE:**

630 ohms

**TERMINALS:**

4 terminals

**MOUNTING:**

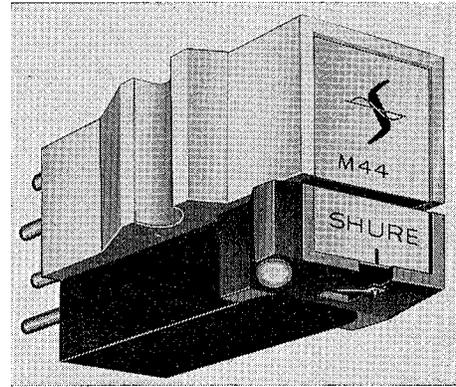
Standard ½" (12.7 mm) mounting center

**WEIGHT:**

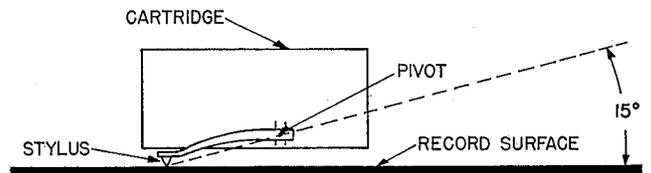
7 grams

**\*ACCESSORY STYLI:** The N44-3 Stylus (Radius: .0025", .064 mm, diamond grip color: green) may be used to reproduce the standard 78 rpm records. The N44-1 Stylus (Radius: .001", .026 mm, diamond; grip color: blue) may be used to reproduce older monophonic long play 33⅓ rpm records. In either of the preceding cases, the amplifier should be set to "Monaural" or "A + B." The N44-3 and N44-1 are designed for tracking forces of 1.5 to 3.0 grams.**GENERAL:** The M44 Series of Dynetic phonograph cartridges has been developed for use in all high fidelity applications. It has been designed to connect into magnetic and constant velocity inputs.

Major recording companies have begun to use the 15° effective cutting angle and it is the proposed EIA and RIAA standard in America and DIN and CCIR in Europe.



The M44 Series has been specifically designed to complement the 15° effective cutting angle now being used in newest recordings. It also serves to significantly improve the sound obtained from older discs. The cartridge geometry is as shown below.



The M44 is completely compatible. It will play stereo discs stereophonically, monaural discs monaurally, and stereo discs monaurally, without excessive wear and distortion. The M44 utilizes the moving magnet principle and features high needle compliance, low needle talk, low tracking force, wide range frequency response, improved shielding for maximum reduction of hum pickup, exceptional ease in changing stylus assembly, and no magnetic attraction to steel turntables.

**MOUNTING:** The M44 Dynetic Cartridge has standard ½" (12.7 mm) mounting centers. Hardware is supplied with each cartridge for mounting purposes. In some tone arms and plug-in shells, the cartridge sits so deep that the stylus cannot be conveniently replaced. For these applications, spacers are provided to insure adequate clearance for stylus removal.

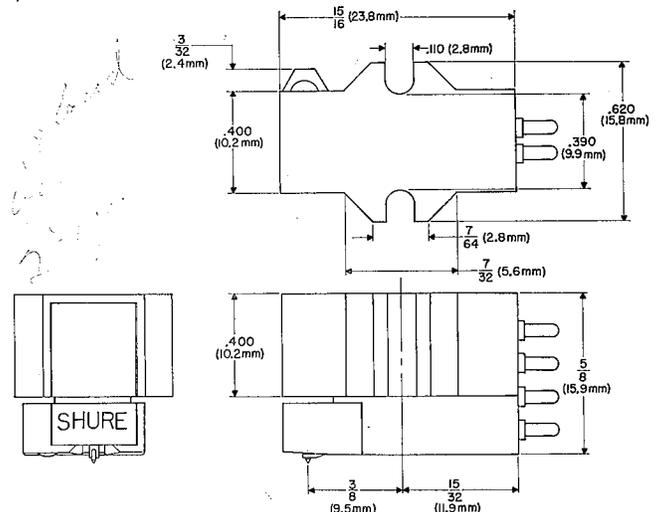


FIGURE 1

DIMENSIONAL DRAWING

### SHURE-SME MOUNTING INSTRUCTIONS:

To mount the M44 in the Shure-SME or the SME Precision Pickup Arm, Model 3009 and 3012, refer to the paragraphs on Cartridge Installation and Balancing in the Instruction Manual supplied with the pickup arms.

### GARRARD LAB 80 AND A70 MOUNTING INSTRUCTIONS:

The Garrard Lab 80 and A70 Pickup Head Shells have special British threads. In order to mount the Shure M44 Cartridge, use the two special brass screws and tubular aluminum spacers supplied with the cartridge. Put one tubular spacer between each screw head and the cartridge body.

**OPERATION:** The recommended needle forces for optimum results are listed under "Specifications." Forces greater than the indicated "maximum" should not be used. The M44 should be installed in any arm especially designed for low tracking forces and having low friction at all bearing surfaces.

The N44-1, N44-3, N44-5, and N44-7 Styli incorporate a new retractable design that prevents audible record-scratch or stylus damage. When excessive force is exerted on the stylus, it momentarily retracts and a soft plastic bumper comes in contact with the record. This bumper is incorporated into the stylus finger-grip and is pre-set and adjusted at the factory to accommodate the minute differences between styli. Do not attempt to re-adjust or, in any way tamper with this precise adjustment.

The N44C and N44G styli do not incorporate a bumper, but the retractability of the stylus itself provides a good measure of tip protection.

**CONNECTIONS:** Model M44 Series Cartridges utilize a 4-terminal arrangement for connections having a separate ground terminal for each channel. (See Figure 2).

For Stereo reproduction terminal "R" and its ground terminal "RG" represent the right channel (outside groove wall). Terminal "L" and its ground terminal "LG" represent the left channel (inside groove wall).

**NOTE:** Before making any connections, refer to the arm or changer instructions to properly identify the right and left channel arm leads. **CAUTION:** Do not make any solder connections directly to the cartridge terminals, nor to the terminal pin jacks while they are attached to the cartridge terminals. Solder the leads to the pin jacks before slipping them over the terminals. If hum is experienced when cartridge is installed in a metal head shell, removal of the ground tab from the right ground terminal will probably correct the condition. (See Figure 2).

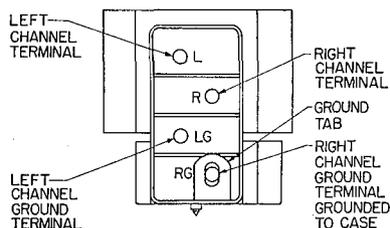


FIGURE 2  
TERMINAL DIAGRAM

**4-LEAD STEREO CONNECTION:** To use a 4-lead arrangement, connect the "hot" lead of the right channel to terminal "R" and the shield or ground lead of the right channel to terminal "RG". Connect the "hot" lead of the left channel to terminal "L" and the shield or ground lead of the left channel to "LG". To prevent "ground loops and hums", no common connection should be used at the cartridge terminals.

**3-LEAD STEREO CONNECTION:** When a 3-lead stereo input system is used, the "RG" and "LG" ground terminals must be connected together. To do this, simply slide one of the brass "double loop" wire connectors over those terminals, and then push the common

ground lead pin jack onto either the "RG" or "LG" terminal pin. The right and left channel leads are connected in the same manner described in the preceding paragraph.

**MONAURAL CONNECTION:** If only single channel reproduction is required, slip one of the brass double-loop wire connectors provided over the "R" and "L" terminals, and slip the other over the "RG" and "LG" terminals. Then attach the one "hot" lead to either the "R" or "L" pin terminal, and attach the ground lead to either the "RG" or the "LG" pin terminal.

**SPECIAL NOTE:** The Dynetic stylus assembly used in these cartridges is the most critical component. To maintain the original performance standards of your cartridge, be certain that any replacement stylus you buy bears the following certification on the package: "This Dynetic stylus is precision manufactured by Shure Brothers, Inc."

Avoid inferior imitations. They will seriously degrade the performance of our cartridge. All genuine "Dynetic" styli are manufactured by Shure Brothers, Inc.

The stylus assembly, when installed in the cartridge, is practically immune to damage during normal usage. However, care should be taken to avoid bending or distorting the stylus assembly when it is installed or removed.

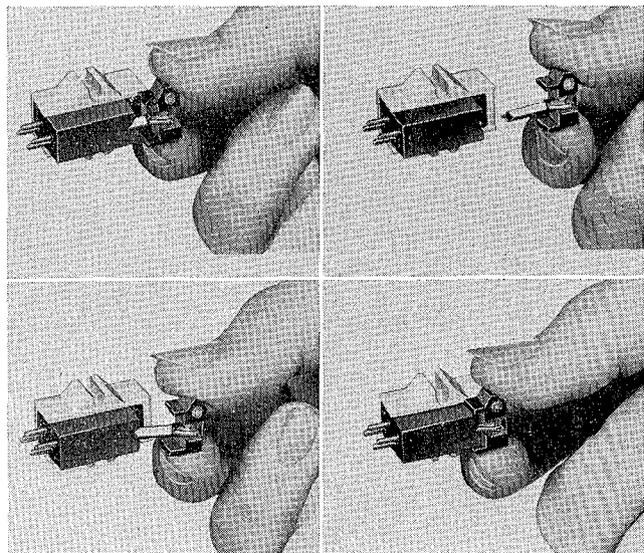


FIGURE 3

### STYLUS REPLACEMENT      REMPLACER L'AIGUILLE REEMPLAZO DE LA AGUJA      ERSATZ-ABTASTSTIFT-EINSCHUB

Stylus replacement is very simple and fast. To replace—grasp molded housing of stylus between thumb and forefinger. Gently withdraw stylus by pulling forward out of cartridge. Grasp replacement stylus between thumb and forefinger and insert into stylus socket. Press stylus into socket until the molded housing of the stylus mates with the cartridge case. Care must be taken not to allow the finger to slip off the molded housing of the stylus, resulting in damage to the stylus tip or shank.

### GUARANTEE

The M44 Stereo Dynetic Cartridge is guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from factory, provided all instructions are complied with fully. The Guarantee does not cover stylus wear, nor does it cover damage to the stylus assembly from abuse or mishandling.

**PATENT NOTICE:** Manufactured under U.S. Patents 3,055,988; 3,077,521; and 3,077,522. Other patents pending.