

SHURE**MICROPHONES AND ELECTRONIC COMPONENTS**

AREA CODE 312/328-9000 • CABLE SHUREMICRO

MODEL M92G**DATA SHEET****HI-TRACK****STEREO DYNETIC®****EASY-MOUNT****PHONOGRAPH CARTRIDGE****SPECIFICATIONS****M91, M92 AND M93 CARTRIDGE SERIES
N91, N92, AND N93 STYLI SERIES**

Model Number	Diamond Stylus Replacement	Output Voltage (1,000 Hz. at 5 cm/sec.)	Stylus Color Grip	Tracking (Grams)
M91E	N91E Elliptical Side Contact Radius: .0002" (.005 mm) Frontal Radius: .0007" (.018 mm)	5.0 millivolts	Black	¾ to 1½
M92E	N92E Elliptical Side Contact Radius: .0002" (.005 mm) Frontal Radius: .0007" (.018 mm)	6.2 millivolts	Yellow	¾ to 1½
M93E	N93E Elliptical Side Contact Radius: .0004" (.010 mm) Frontal Radius: .0007" (.018 mm)	6.2 millivolts	Light Green	1½ to 3
M92G	N92G Radius .0006" (.015 mm)	6.2 millivolts	Gray	¾ to 1½
	N75-3,* Radius: .0025" (.064 mm)	6.2 millivolts	Green	1½ to 3

* The N75-3 stylus may be used to reproduce the standard 78 rpm records. In this case, the amplifier should be set to "Monaural" or "A+B."

TRACKABILITY:

M91E at a stylus force of 1 gram

400 Hz. — 20 cm/sec.
1,000 Hz. — 28 cm/sec.
10,000 Hz. — 18 cm/sec.

M92E at a stylus force of 1 gram

400 Hz. — 18 cm/sec.
1,000 Hz. — 26 cm/sec.
10,000 Hz. — 15 cm/sec.

M93E at a stylus force of 2 grams

400 Hz. — 18 cm/sec.
1,000 Hz. — 25 cm/sec.
10,000 Hz. — 13 cm/sec.

M92G at a stylus force of 1 gram

400 Hz. — 18 cm/sec.
1,000 Hz. — 26 cm/sec.
10,000 Hz. — 15 cm/sec.

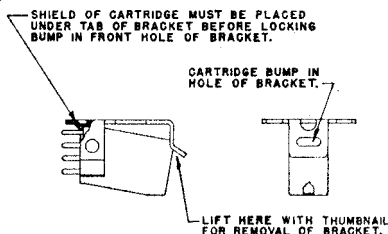
Higher stylus forces within specified range improve trackability.

FREQUENCY RESPONSE: From 20 to 20,000 Hz.**CHANNEL SEPARATION:** More than 25 db at 1,000 Hz.**RECOMMENDED LOAD IMPEDANCE:** 47,000 ohms per channel**INDUCTANCE:** 720 millihenries**D.C. RESISTANCE:** 630 ohms.**MOUNTING:** Standard ½" (12.7 mm) mounting center using new "Easy-Mount" snap-in bracket.**WEIGHT:** 5 grams**TERMINALS:** 4 terminals

GENERAL: The M91, M92, and M93 Series of High Trackability Dynetic phonograph cartridges has been developed for use with all high fidelity amplifiers having magnetic and constant velocity inputs.

MOUNTING: The cartridges have standard ½" mounting centers. Hardware is provided for mounting purposes. (The brass screws have British threads.)

1. Remove stylus guard and stylus from cartridge. (See paragraph on stylus replacement.)
2. Remove cartridge from "Easy-Mount" snap-in bracket. (See Figure 1)
3. Start mounting screws into tone arm head or plug-in shell.
4. Slip "Easy-Mount" bracket under heads of mounting screws and tighten screws securely.
5. Connect leads to phono-cartridge. Note color code for proper connection to terminal "L," "R," "LG" and "RG" as indicated in tone-arm instruction manual.
6. Insert cartridge into "Easy-Mount" snap-in bracket. (See Figure 1)



**CARTRIDGE AND BRACKET ASSEMBLY
FIGURE 1**

7. The top of the "Easy-Mount" bracket should be flush against the top of the tone arm head for proper playing position, unless other mounting instructions are supplied by the record changer/tone arm manufacturer.

8. Reinsert stylus.

SHURE-SME MOUNTING INSTRUCTIONS: To mount the cartridge in the Shure-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.

OPERATION: Recommended needle forces for optimum results are listed under "Specifications." Forces greater than the indicated "maximum" should not be used.

CONNECTIONS

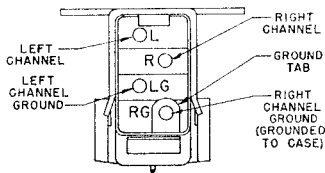
4-LEAD STEREO CONNECTION: Connect "hot" lead of right channel to terminal "R" and shield or ground lead of right channel to terminal "RG." Connect "hot" lead of left channel to terminal "L" and shield or ground lead of left channel to "LG." To prevent "ground loops" and hum, no common connection should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

MONAURAL CONNECTION: For single channel reproduction of Monaural or Stereo recordings, connect "hot" lead to both "R" and "L" terminals and connect ground or shield lead to both ground terminals marked "RG" and "LG."

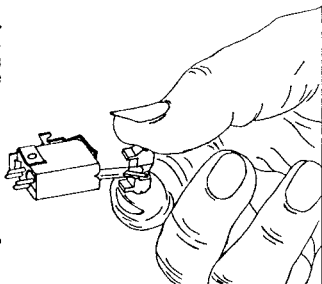
Suggestions for Cleaning Your Stylus

To clean the stylus, use a camel's-hair brush (No. 2 size or smaller) dipped lightly in alcohol. The alcohol will remove any sludge deposits which may have coated the stylus tip. The brush bristles should be trimmed to a length no longer than $\frac{1}{4}$ inch. Always brush the stylus with a forward movement from the rear (terminal end of the cartridge) to the front. Never brush or wipe the stylus from front to back or side to side.

CAUTION: Do not make solder connections to cartridge terminals. Make all solder connections to terminal jacks provided before slipping them over the terminals.



TERMINAL DIAGRAM
FIGURE 2



STYLUS REPLACEMENT
FIGURE 3

EASY STYLUS REPLACEMENT

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.

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 Stereo Dynetic stylus is precision manufactured by Shure Brothers, Inc."

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

LABORATORY TEST FINDINGS: (Note: The following stylus test findings of the Shure N3D stylus are an example of the close scrutiny Shure pays to all imitation Shure Dynetic Styli.) Shure laboratory tests show that the imitation stylus assemblies labeled as replacements for the Shure Model N3D Stylus Assembly vary drastically in important performance characteristics. For example, the compliance varied from a low of 0.9 to a high of 11.5, requiring 9.0 grams to track a record with a low compliance stylus, and 2 grams with a high compliance stylus. The high compliance stylus retracted at 4 grams needle force, allowing the cartridge case to drag on the record surface, thereby becoming inoperative. Response at high frequency (relative to the 1kc level) ranged from a 5.5db peak to a drop of 7.5db. Separation varied from "good" (27db) to "poor" (16.5db), at 1 kc. These figures reveal that there is very little consistency in performance characteristics of the imitation Dynetic Styli.

In each of the categories shown above the results ranged from good to poor. As a matter of fact, only 10% of the samples met the Shure performance standards for the Shure N3D Stereo Dynetic Stylus. In addition to our test findings, our Service Department records show that an increasing number of Dynetic Phono Cartridges are being returned because of poor performance—and our examination has disclosed that most of these returned cartridges are using imitation Dynetic Styli.

CONCLUSION: Obviously, if any imitation Dynetic Stylus is used, we cannot guarantee that the performance of Shure Dynetic cartridges will meet the published Shure specifications. Accept no substitute.

Guarantee

The Stereo Dynetic Cartridges and Stereo Dynetic Styli are guaranteed to be free from electrical and mechanical defects for one year from the date of shipment from the 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.