



By



**MODEL RM900E  
CUSTOM MAGNETIC  
CARTRIDGE WITH  
HIGH TRACKABILITY  
ELLIPTICAL STYLUS**

**DATA SHEET**



# **SPECIFICATIONS**

## **RM900E CARTRIDGE**

### **FREQUENCY RESPONSE:**

From 20 to 20,000 Hz

### **OUTPUT VOLTAGE:**

5.0 millivolts per channel at 1,000 Hz at 5 cm/sec

### **STYLUS:** Elliptical

Side contact Radius: 5 microns (.0002 in.)

Frontal Radius: 18 microns (.0007 in.)

Grip Color: Black

Replacement: N91E

## TRACKABILITY:

This indicates how well a stylus can follow or track the signals in a record groove without losing contact. To provide an unbroken flow of signals from the record, the phonograph cartridge must be able to track the grooves. Signals recorded at a higher level (measured in cm/sec) are more difficult to track.

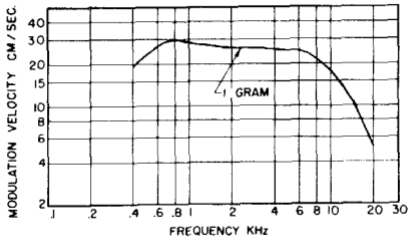
RM900E at a stylus force of 1 gram:

400 Hz — 20 cm/sec

1,000 Hz — 28 cm/sec

10,000 Hz — 18 cm/sec

(Higher stylus forces within specified range improve trackability.)



**TRACKABILITY CHART**

### TRACKING FORCE RANGE:

3/4 to 1-1/2 grams

This is the amount of force required of the stylus tip to properly play a record. The lighter the tracking force, the longer the life of the stylus and records, provided that tracking is maintained.

### OPTIMUM LOAD:

47,000 ohms resistance in parallel with 400 to 500 picofarads total capacitance per channel. Load resistance can be up to 70,000 ohms with almost no audible change in frequency response. Total capacitance includes both the tone arm wiring and amplifier input circuit.

**CHANNEL SEPARATION (minimum):**

25 dB at 1,000 Hz

**INDUCTANCE:**

720 millihenries

**D.C. RESISTANCE:**

630 ohms

**MOUNTING:**

12.7 mm (standard 1/2 in.) mounting centers

**WEIGHT:**

6 grams

**TERMINALS:**

4 terminals

**OPERATION:**

The RM900E Dynetic phonograph cartridges have been developed for use with all high fidelity amplifiers having magnetic and constant velocity inputs. Recommended needle force is  $3/4$  to  $1-1/2$  grams for optimum results. Forces greater than  $1-1/2$  grams should not be used.



## **Mounting**

The RM900E Dynetic Cartridge has 12.7 mm (standard 1/2 in.) 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.

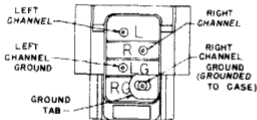
For optimum vertical tracking angle, the cartridge should be mounted so the top of the mounting block is parallel to the record playing surface.

## **Connections**

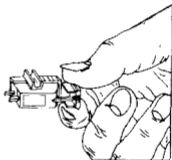
**4-LEAD STEREO CONNECTION:** Connect "hot" lead of right channel to terminal "R" and shield or ground lead of right channel to terminal "RG." Connect "hot" lead of left channel to terminal "L" and shield or ground lead of left channel to "LG." To prevent "ground loops" and hum, no common connection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

**MONOPHONIC OPERATION:** For monophonic playback of recordings, the left and right channels should be connected in parallel. This is accomplished most conveniently by setting the function switch on the associated amplifier to "A+B" or "MONO."

**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 1**



**STYLUS REPLACEMENT  
FIGURE 2**

## **Recommended Stylus Cleaning**

Use a camel's hair brush (No. 2 size or smaller), trimmed to approximately 6 mm (1/4 in.), dipped in alcohol or an alcohol-distilled water solution. Commercial cleaning solutions may cause stylus damage or corrosion. The alcohol will remove any sludge deposit coating the stylus tip. Always brush stylus from back to front; never brush or wipe from front to back or side to side.

## **Easy Stylus Replacement (see Figure 2)**

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."

**GUARANTEE:** This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee does not include stylus wear.

**SHIPPING INSTRUCTIONS:** Carefully repack the unit and return it prepaid to the factory. If outside the United States, return the unit to your dealer or authorized Shure Service Center for repair. The unit will be returned to you prepaid.

PATENT NOTICE: Cartridge and stylus manufactured under one or more of the following U.S. Patents 3,055,988, 3,077,521, 3,077,522 and 3,463,889.

Available exclusively through  
**ROYAL ELECTRONIC DIST.**

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