

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

AREA CODE 312/328-9000 • CABLE SHUREMICRO

**DATA SHEET****MODEL M80E-D****GARD-A-MATIC®  
15° STEREO DYNETIC  
PHONOGRAPH CARTRIDGE  
HEAD ASSEMBLY****SPECIFICATIONS****MODELS M80E, M80E-D, AND M80E-D19****TRACKING ANGLE:** 15 degrees**FREQUENCY  
RESPONSE:** From 20 to 20,000 cps**OUTPUT VOLTAGE:** 6.6 millivolts per channel at 1,000 cps at 5  
cm/sec.**CHANNEL  
SEPARATION:** Nominally over 25 db at 1,000 cps**CHANNEL  
BALANCE:** Within 2 db of each other**RECOMMENDED  
LOAD IMPEDANCE:** 47,000 ohm (per channel)**INDUCTANCE:** 720 millihenries**D.C. RESISTANCE:** 630 ohms**STYLUS MODEL** Replacement: Grip Color—yellow  
**N55E:** **ELLIPTICAL SHAPED DIAMOND TIP**  
.0007 inch (17.8 microns) frontal radius  
.0010 inch (25.4 microns) between points  
of contact with groove.  
.0002 inch (5 microns) side contact radii**COMPLIANCE:** Vertical { 25.0 x 10<sup>-6</sup> cm/dyne at 26.7° C.  
Horizontal }**TRACKING FORCE:** 1½ grams maximum**REPLACEMENT STYLUS:** N55E

Models M80E, M80E-D and M80E-D19 are high quality elliptical-stylus stereo phono cartridges mounted in a retractile safety suspension system to provide a scratch-proof, bounce-proof, feature to the operation of an automatic turntable. The Model M80E is designed specifically for the Garrard Lab 80 and type A70 series automatic turntables. The Model M80E-D is designed specifically for the Dual 1009 Automatic Turntable. The Model M80E-D19 is designed specifically for The Dual 1019 Automatic Turntable and other Dual models utilizing the 1019 arm and shell.

The new elliptical stylus cartridges are spring mounted in pickup heads in such a manner that permit a maximum needle force of 1½ grams to be exerted on the face of the record. Forces in excess of approximately 2 grams will cause either the plastic safety bumper at the rear of the cartridge or the plastic bumper in the stylus grip to come in contact with the record surface and thereby protect the record from needle scratches and protect the needle itself from damage.

Perhaps the most desirable advantage of all is the fact that the M80 Series makes it possible to operate the turntable in situations where a changer normally will not work well. These include such adverse conditions as aboard a ship during a storm; in rooms where modern dancing is done; and, in general, in any area in which shaky floors or unstable phonograph supports have caused the changer cartridge to mistrack.

OBS

## INSTALLATION

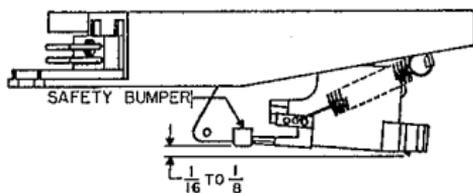
For Automatic and Manual Play:

1. Remove present pickup head and insert Shure Model into phono arm. Care must be taken in removal and inserting of the pickup heads not to cause damage to the stylus, or to disturb the position of the leads.
2. Set stylus force indicator to "0."
3. Balance arm as per Garrard or Dual instructions and set stylus force indicator in the range of  $1\frac{1}{4}$  to  $1\frac{1}{2}$  grams.

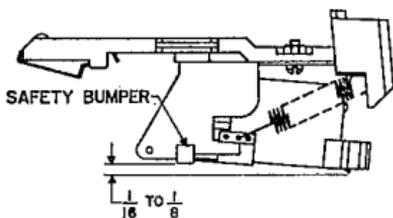
In this case, the clearance from the record surface to the plastic safety bumper at the rear of the cartridge will be between  $\frac{1}{16}$ " to  $\frac{1}{8}$ ". This range in recommended playing position should be maintained even if it is necessary to adjust the  $1\frac{1}{4}$  gram setting on the arm indicator slightly. This may be necessary due to the tolerance buildup in certain arms plus slight inaccuracies in the arm-balancing process.

**NOTE:** If it is desired to play a stack of six records, the clearance of the safety bumper should be measured with THREE records on the turntable.

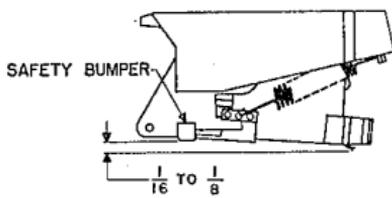
**CAUTION:** The position of the leads inside the pickup head shell is extremely important in maintaining proper tracking force and proper operation of the cartridge-head assembly. The leads have been positioned at the factory for optimum performance and the leads should not be disturbed.



MODEL M80E



MODEL M80E-D



MODEL M80E-D19

### RECOMMENDED PLAYING POSITIONS

### Guarantee

The Stereo Dynetic Head Assemblies 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.

### Service Protection—Accidental Damage

Shure Dynetic Styli will withstand long, continued usage. However, if stylus assembly should be damaged due to accidental mishandling, and diamond tip is still intact, return the stylus assembly to the factory for servicing and testing to original performance standards at a nominal service charge of \$6.00. (Please enclose a check for the service charge with the returned assembly.)

Return Stylus to:

Service Department  
SHURE BROTHERS, INC.  
222 Hartrey Avenue  
EVANSTON, ILLINOIS 60204 U.S.A.

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