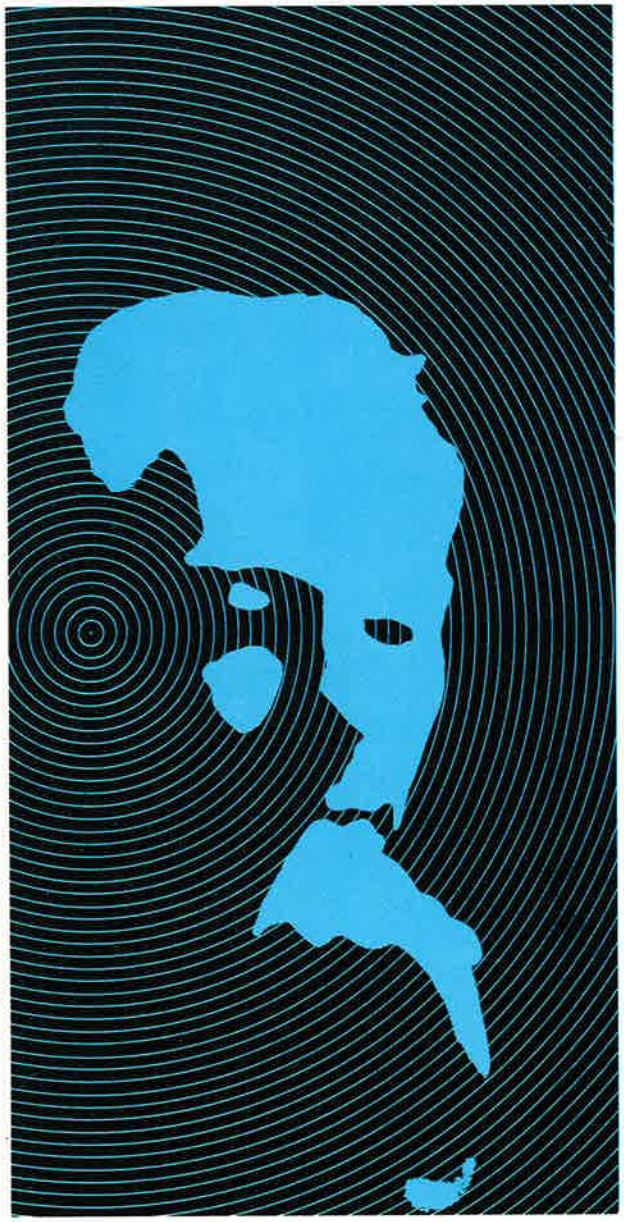
THE PREMIER FAMILY OF STEREO SOUND REPRODUCERS



SHURE

STEREO DYNETIC®

HIGH FIDELITY PHONO CARTRIDGES

TONE ARMS

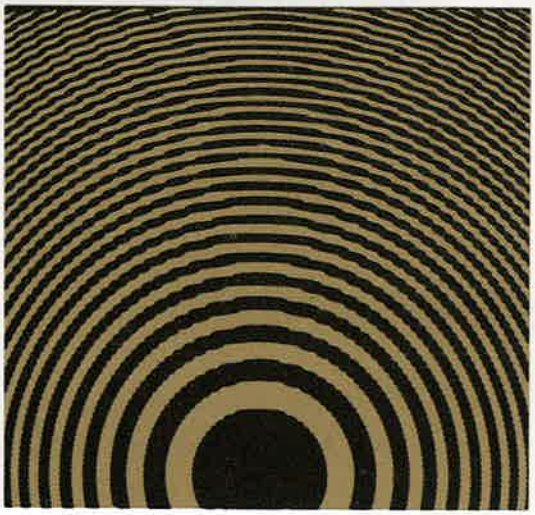
STYLI

HEADPHONE AMPLIFIERS

SHURE

OVERWHELMING CHOICE OF CRITICS

AND INDEPENDENT HIGH FIDELITY AUTHORITIES . . . THE WORLD'S STANDARD OF PERFECTION



The all-important source of sound

True high fidelity sound re-creation begins at the *source of sound*. Just as a camera is no better than its lens, a phonograph system is no better than its cartridge. This breath-takingly precise miniaturized electric generator (that's really what it is) must carry the full burden of translating the miles-long stereo record groove into usable electrical impulses . . . and should do this without adding or subtracting from what is on the recording. Knowing this, Shure quality standards are rigidly maintained at the highest levels.

the most important advance
in phono cartridges
since the advent of stereo

THE SHURE V-15 TYPE II

. . . A NEW GENRE OF CARTRIDGE, ANALOG-COMPUTER DESIGNED, AND MEASURED AGAINST A NEW AND MEANINGFUL INDICATOR OF TOTAL PERFORMANCE:

TRACKABILITY

The radically different V-15 Type II heralded a new epoch in high performance cartridges and in the measurement of their performance. We call it the era of high **Trackability.** Because of it, all your records will sound better and, in fact, you will hear some recordings tracked at light forces for the first time without distortion.

THE PROBLEM:

While audiophiles prefer minimum tracking forces to minimize record wear and preserve fidelity, record makers prefer to cut recordings at maximum levels with maximum cutting velocities to maximize signal-to-noise ratios. Unfortunately, some "loud" records are cut at velocities so great that nominally superior styli have been unable to track some passages: notably the high and midrange transients. Hence, high level recordings of orchestral bells, harpsichords, pianos, etc., cause the stylus to part company with the wildly undulating groove (the stylus actually ceases to track). At best, this produces an audible click; at worst, sustained gross distortion and outright noise. The "obvious" solution of increasing tracking force is impractical because this calls for a stiffer, less compliant stylus system to support the greater weight—and a stiffer stylus system will not track these transients or heavy low-frequency modulations, to say nothing of the heavier force accelerating record and stylus wear to an intolerable degree.

Shure has collected scores of these demanding high level recordings and painstakingly and thoroughly analyzed them. It was found that in some cases (after only a few playings) the high velocity high or mid-range groove undulations were "shaved" off or gouged out by the stylus . . . thus eliminating the high fidelity. Other records, which were off-handedly dismissed as unplayable or poor pressings were found to be neither. They were simply too high in recorded velocity and, therefore, untrackable by existing styli.

Most significantly, as a result of these analyses, Shure engineers established the maximum recorded velocities of various frequencies on quality records and set about designing a cartridge that would track the entire audible spectrum of these maximum velocities at tracking forces of less than 1½ grams.

ENTER THE COMPUTER:

The solution to the problem of true trackability proved so complex that Shure engineers designed an analog-computer that closely duplicated the mechanical variables and characteristics of a phono cartridge. With this unique device they were able to observe precisely what happened when you varied the many factors which affect trackability: inertia of tip end of the stylus or the magnet end of the stylus; the compliance between the record and the needle tip, or the compliance of the stylus shank, or the compliance of the bearing; the viscous damping of the bearing; the tracking force; the recorded velocity of the record, etc., etc. The number of permutations and combinations of these elements, normally staggering, became manageable. Time-consuming trial-and-error prototypes were eliminated. Years of work were compressed into months. After examining innumerable possibilities, new design parameters evolved. Working with new materials in new configurations, theory was made fact.

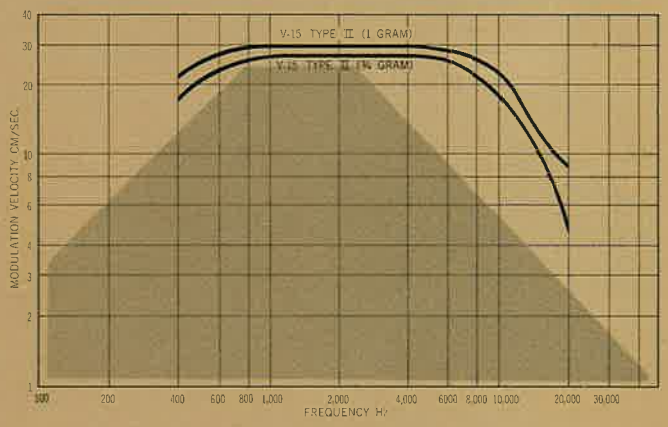
Thus, the first analog-computer-designed, superior trackability cartridge was born: the Shure "SUPER-TRACK" V-15 TYPE II. It maintains contact between the stylus and record groove at tracking forces from ¾ to 1½ grams, throughout and beyond the audible spectrum (20-25,000 Hz), at the highest velocities encountered in quality recordings. It embodies a bi-radial elliptical stylus (.0002 inch x .0007 inch).

It also features an ingenious "flip-action" built-in stylus guard.

It is clean as the proverbial hound's tooth and musical as the storied nightingale.

TRACKABILITY AS A NEW SPECIFICATION

This chart depicts the new performance specification of **trackability.** Unlike the oversimplified and generally misunderstood design parameter specifications of compliance and mass, trackability is a measure



of total performance. The chart shows frequency across the bottom, and modulation velocities in CM/SEC up the side. The grey area represents the maximum **theoretical** limits for cutting recorded velocities; however, in actual practice many records are produced which exceed these theoretical limits. The trackability of the Shure V-15 Type II is shown by the top (solid black) lines.

SPECIFICATIONS

Trackability at 1 gram tracking force using a Shure/SME Arm:
22 CM/SEC at 400 Hz — 30 CM/SEC at 5,000 Hz
30 CM/SEC at 1,000 Hz — 22 CM/SEC at 10,000 Hz

Frequency Response: From 20 to 25,000 Hz

Output Voltage: 3.5 mv per channel at 1,000 Hz at 5 CM/SEC

Channel Separation: Over 25 db at 1,000 Hz
Over 17 db at 500 to 10,000 Hz

Channel Balance: Output from each channel within 2 db

Stylus: VN15E Bi-Radial Elliptical Stylus, Diamond Tip.
.0007 inch (17.8 microns) frontal radius;
.0002 inch (5 microns) side contact radii;
.0010 inch (25 microns) wide between record contact points
VN7—.0007 inch diameter, spherical stylus

Tracking Force: ¾ to 1½ grams

Input Impedance: Nominally 47,000 ohms (per channel). Can be used up to 70,000 ohms with almost inaudible change in frequency response.

Input Capacitance: 400-500 Pico-Farads per channel, including arm cable

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Terminals: 4 terminals (with loop pinjack for 3-terminal connection)

Weight: Net weight—6.8 grams

Mounting: Standard ½ inch (12.7 mm) mounting centers.

MODEL V-15 TYPE II SUPER-TRACK CARTRIDGE

MODEL VN15E ELLIPTICAL STYLUS fits V-15 Type II or V-15 II-7

MODEL V-15 II-7 SUPER-TRACK CARTRIDGE WITH .0007" SPHERICAL STYLUS.

MODEL VN7 STYLUS—.0007" DIAMOND STYLUS fits V-15 Type II or V-15 II-7 Cartridges

HIGH TRACKABILITY CARTRID

NEW

M75 TYPE 2
HI-TRACK SERIES
high trackability cartridges

New, improved models of the Shure M75 Series that give even greater trackability—yet priced surprisingly low. The trackability charts tell you that these cartridges will track even heavily modulated grooves at velocities that are well above the theoretical cutting limits of recordings! Manufactured under Shure's standard quality control program. Choice of tracking forces and Elliptical or Spherical styli.

FOR 3/4 TO 1½ GRAMS TRACKING

MODEL M75E TYPE 2 ELLIPTICAL STYLUS

Optimized design parameters for trackability second only to the incomparable V-15 Type II

MODEL M75E Type 2 Hi-Track Cartridge

MODEL N75E Type 2 Stylus

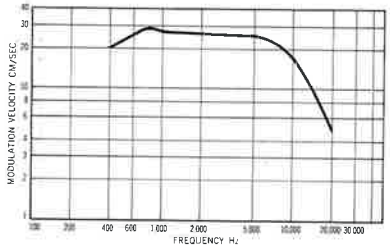
M75G TYPE 2 SPHERICAL STYLUS

A high trackability cartridge for those people who desire to have a spherical diamond stylus (.0006 inch radius), and prefer ¾ to 1½ grams tracking. The specifications are identical to the M75E Hi-Track as listed above.

MODEL M75G Type 2 Hi-Track Cartridge

MODEL N75G Type 2 Stylus

TRACKABILITY CHART*



* NOTE: For an explanation of how to read the trackability charts, and what they mean, please refer to page 3 of this brochure.

SPECIFICATIONS FOR M75E TYPE 2 AND M75G TYPE 2

Trackability at 1 gram tracking force using a Shure/SME Arm:
- 20 CM/SEC at 400 Hz
- 28 CM/SEC at 1,000 Hz
- 25 CM/SEC at 5,000 Hz
- 18 CM/SEC at 10,000 Hz

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 5.0 mv per channel at 1,000 Hz at 5 CM/SEC

Channel Separation: Over 25 db at 1,000 Hz

Channel Balance: Output from each channel within 2 db

Stylus N75E Type 2 Elliptical with diamond tip
- .0007 inch (17.8 microns) frontal radius
- .0002 inch (5 microns) side contact radii
- .0010 inch (25 microns) wide between record contact points

N75G—Spherical .0006 inch radius

Tracking Force: ¾ to 1½ grams

Input Impedance: Nominally 47,000 ohms (per channel). Can be used up to 70,000 ohms with almost inaudible change in frequency response.

Input Capacitance: 400-500 Pico-Farads per channel, including arm cable

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Terminals: 4 terminals

Weight: 6 grams

Mounting: Standard ½" (12.7 mm) Mounting centers

FOR 1½ TO 3 GRAMS TRACKING

MODEL M75EJ TYPE 2 ELLIPTICAL STYLUS

Ideal for use in upgrading systems with older turntables that track at heavier forces (1½ to 3 grams).

MODEL M75EJ Type 2 Hi-Track Cartridge

MODEL N75EJ Type 2 Stylus

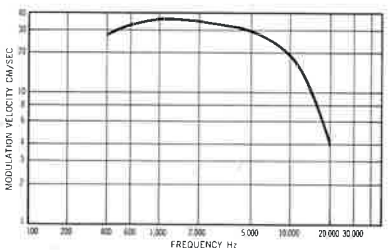
M75-6 TYPE 2 SPHERICAL STYLUS

Specifications and trackability same as M75EJ Type 2 except that M75-6 Type 2 has a spherical diamond stylus (.0006 inch Radius).

MODEL M75-6 Type 2 Hi- Track Cartridge

MODEL N75-6 Type 2 Stylus

TRACKABILITY CHART*



SPECIFICATIONS FOR M75EJ TYPE 2 AND M75-6 TYPE 2

Trackability at 2 grams tracking force using a Shure/SME Arm:
- 28 CM/SEC at 400 Hz
- 35 CM/SEC at 1,000 Hz
- 30 CM/SEC at 5,000 Hz
- 20 CM/SEC at 10,000 Hz

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 5.0 mv per channel at 1,000 Hz at 5 CM/SEC

Channel Separation: More than 25 db at 1,000 Hz

Channel Balance: Output from each channel within 2 db

Stylus: N75EJ Type 2 Elliptical with diamond tip
- .0007 inch (17.8 microns) frontal radius
- .0004 inch (10 microns) side contact radii
- .0010 inch (25 microns) wide between record contact points

N75-6—Spherical .0006 inch radius

Tracking Force: 1½ to 3 grams

Input Impedance: Nominally 47,000 ohms (per channel). Can be used up to 70,000 ohms with almost inaudible change in frequency response.

Input Capacitance: 400-500 Pico-Farads per channel, including arm cable.

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Terminals: 4 terminals

Weight: 6 grams

Mounting: Standard ½" (12.7 mm) Mounting centers

GES AT MODERATE PRICES

FOR DUAL

FOR PERPETUUM-EBNER

FOR GARRARD

HIGH TRACKABILITY IN A GARD-A-MATIC®

FOR DUAL, GARRARD AND PERPETUUM-EBNER

ELLIPTICAL STYLUS CARTRIDGE/HEAD ASSEMBLIES FOR ¾ TO 1½ GRAMS TRACKING

The newest members of both the High Trackability and the Gard-A-Matic series. These units combine the advantages of the M75E Type 2 Hi-Track cartridge with the Gard-A-Matic floating cartridge head/assembly which prevents the stylus from jumping out of the groove in installations where floor vibration is a problem. All are pre-mounted in shells for ease of installation and feature the same impressive specifications as the M75E Type 2 cartridge as shown on the preceding page. Replacement stylus for all units listed below is model N75E Type 2. For additional information on Gard-A-Matic assemblies, see page 7.

FOR DUAL TURNTABLES

MODEL M75E-D19 TYPE 2

Fits Dual 1019, 1009F, 1009SK, 1015F, 1015, and 1016 automatic turntables.

FOR GARRARD TURNTABLES

MODEL M75E-95G TYPE 2

Fits Garrard SL95 automatic turntable.

FOR PERPETUUM-EBNER TURNTABLES

MODEL M75E-P20 TYPE 2

Fits Perpetuum-Ebner 2020 automatic turntable.

MODEL N75E TYPE 2 STYLUS for above.

FOR DUAL

FOR GARRARD

PRE-MOUNTED CARTRIDGES FEATURING HIGH TRACKABILITY

M75E Type 2 Hi-Track cartridges (see specifications on preceding page) pre-mounted in slides for instant installation without need for any tools or mechanical aptitude. (Not to be confused with Gard-A-Matic assemblies listed at left and on page 7.) Take it home, plug it in, and you're in business. Both pre-mounted cartridges use Model N75E Type 2 stylus.

FOR DUAL TURNTABLES

MODEL DU10-M75E TYPE 2 Pre-mounted M75E Type 2 cartridge fits Dual 1019, 1009F, 1009SK, 1015F, 1015, and 1016 automatic turntables.

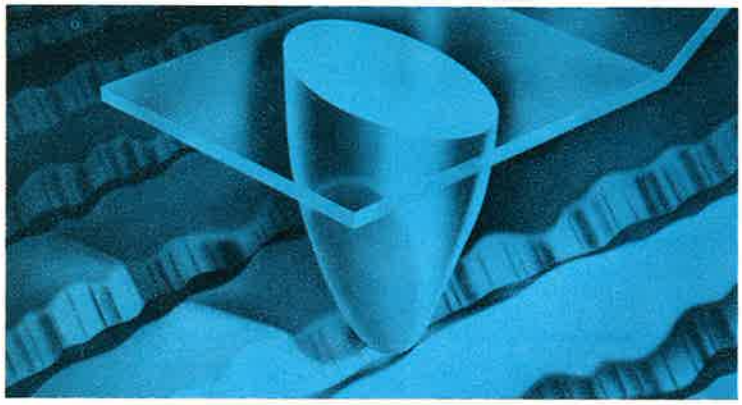
FOR GARRARD TURNTABLES

MODEL SL95-M75E TYPE 2 Pre-mounted M75E Type 2 cartridge fits Garrard SL95 automatic turntable.

SHURE PROFESSIONAL TONE ARM

A quality arm at an unexpectedly low price. Full range of adjustments for static and dynamic balance, cartridge overhang, arm height, etc. Exceptionally easy to install from the top of the motorboard. Not recommended for cartridges tracking below 2 grams.

MODEL M232 for 12″ recordings
MODEL M236 for 16″ recordings
MODEL A23H extra plug in head



BI-RADIAL ELLIPTICAL STYLUS CARTRIDGES

about the bi-radial stylus

One of the most dramatic improvements in cartridge stylus design in years. The Bi-Radial elliptical stylus closely matches the shape of the cutter stylus that cuts the master record. Actual side contact radius is only .0002 inch (5 microns) or .0004 inch (10 microns). Frontal radius is .0007 inch (17.8 microns) so stylus cannot "bottom" in record groove. Lowers IM, harmonic and tracing distortion to virtual insignificance. In addition to audible improvement of stereo recordings, gives monophonic records a new vitality and clarity. Standard on V-15 Type II, M75E Type 2, M75EJ Type 2, M75E-D19 Type 2, M75E-95G Type 2, M75E-P20 Type 2, DU10-75E Type 2, SL95-M75E Type 2, M55E, M44E, M32E, M31E cartridges and M80E-D19, Gard-A-Matic cartridge assemblies.

for ¾ to 1½ grams tracking

SHURE M55E

Stereo Dynetic

A popular cartridge that gives professional performance within a moderate budget. Incorporates Bi-Radial elliptical stylus. Note the wide variety of features and impressive specifications:

SPECIFICATIONS

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 6.6 millivolts per channel at 1,000 Hz at 5 CM/SEC

Channel Separation: Nominally over 25 db at 1,000 Hz

Channel Balance: Output from each channel within 2 db

Compliance:

Horizontal } 25.0 x 10^{-6} CM/dyne
Vertical }

Effective Stylus Tip Mass: 1.2 milligrams

Tracking Force: ¾ to 1½ grams

Stylus N55E: Elliptical shaped diamond tip
- .0007 inch (17.8 microns) frontal radius
- .0002 inch (5 microns) side contact radii
- .0010 inch (25 microns) between points of contact with groove

Input Impedance: 47,000 ohms (per channel)

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Terminals: 4 terminals

Weight: 7 grams

Mounting: Standard ½" (12.7 mm) mounting centers

MODEL M55E Cartridge
MODEL N55E Stylus

for heavier tracking forces: 1¾ to 4 grams

SHURE M44E

Stereo Dynetic

All the advantages of a Bi-Radial elliptical stylus (.0004 inch side contact radii, .0007 inch frontal radius) for older turntables that track at heavier weights. Specifications similar to above, except compliance is 15.0 x 10^{-6}. Effective stylus tip mass is 1.4 milligrams. Output is 9.3 mv per channel at 1,000 Hz at 5 CM/SEC, and tracking force is 1¾ to 4 grams.

MODEL M44E Cartridge
MODEL N44E Elliptical Stylus

LOWEST COST ELLIPTICAL STYLUS CARTRIDGES

for 1 to 2 grams tracking

SHURE M31E

for 2½ to 5 grams tracking

SHURE M32E

Stereo Dynetic

Now . . . the Bi-Radial elliptical stylus in a new series of moderately priced cartridges. The M31E is specifically designed for light tracking turntables and changers—the M32E for moderately priced changers.

SPECIFICATIONS

Frequency Response:
Model M31E from 20 to 18,500 Hz
Model M32E from 20 to 17,500 Hz

Output Voltage:
Model M31E 10.0 millivolts per channel at 1,000 Hz at 5 CM/SEC
Model M32E 9.0 millivolts per channel at 1,000 Hz at 5 CM/SEC

Channel Separation: More than 25 db at 1,000 Hz

Compliance:

Horizontal } 15.0 x 10^{-6} CM/dyne For M31E
Vertical } 10.0 x 10^{-6} CM/dyne For M32E

Stylus: Model N31E. For cartridge M31E. Elliptical shaped diamond tip:
- .0007 inch (17.8 microns) frontal radius
- .0002 inch (5 microns) side contact radii
- .0010 inch (25 microns) between points of contact with groove

Stylus: Model N32E. For cartridge M32E. Elliptical shaped diamond tip:
- .0007 inch (17.8 microns) frontal radius
- .0004 inch (10 microns) side contact radii
- .0010 inch (25 microns) between points of contact with groove

Tracking Force:
Model M31E: 1 to 2 grams
Model M32E: 2½ to 5 grams

Input Impedance: 47,000 ohms (per channel)

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Weight: 6 grams

Mounting: Standard ½" (12.7 mm) mounting centers

MODEL M31E Cartridge
MODEL N31E Stylus
MODEL M32E Cartridge
MODEL N32E Stylus

Spherical Stylus Cartridges

combines quality and economy

SHURE M44 SERIES

Four cartridges in the modest price range to fill the needs of the hi-fi hobbyist who wants the most for his money. All have received ample critical acclaim as the best in their price class. Note: All M44 series styli are interchangeable.

SPECIFICATIONS

Frequency Response: From 20 to 20,000 Hz
Output Voltage: At 1,000 Hz at 5 CM/SEC
Model M44-5, 7 millivolts per channel,
Model M44G, 6.2 millivolts per channel,
Model M44-7, 11 millivolts per channel,
Model M44C, 9.3 millivolts per channel
Channel Separation: More than 25 db at 1,000 Hz
Input Impedance: 47,000 ohms per channel
Inductance: 720 millihenries
D.C. Resistance: 630 ohms
Terminals: 4 terminals
Terminals: 4 terminals
Weight: 7 grams
Mounting: Standard ½" (12.7 mm) mounting centers

For Light Tracking ¾ to 1½ Grams

MODEL M44-5 Cartridge. With .0005-inch radius spherical diamond stylus MODEL N44-5

MODEL M44 G Cartridge. With .0006 inch radius spherical diamond stylus MODEL N44 G

For Heavier Tracking 1½ to 3 Grams

MODEL M44-7 Cartridge. With .0007-inch radius spherical diamond stylus MODEL N44-7

For Heaviest Tracking 3 to 5 Grams

MODEL M44 C Cartridge. With .0007-inch radius spherical diamond stylus MODEL N44 C

all-time
best seller
MODEL M3D

Where cost is the dominant factor, the M3D provides extremely musical and transparent sound at a rock-bottom price. The original famous Shure Stereo Dynetic Cartridge . . . with almost universal application. Tracks at forces from 3 to 6 grams. For any changer.

MODEL M3D Cartridge
MODEL N3D Stylus

musical
best buy
MODEL
M7/N21D

Top-rated cartridge featuring the highly compliant N21D tubular stylus. Because of unusually clean mid-range (where most music really "happens") it is especially recommended if your present system sounds "muddy." For 2-gram optimum tracking (not to be used over 2½ grams).
MODEL M7/N21D Cartridge
MODEL N21D Stylus
(Also, if you own an M3D or M7D, you can upgrade it for higher compliance, if tracking force does not exceed 2½ grams, with the N21D stylus.)

Gard-A-Matic®

CARTRIDGE/HEAD ASSEMBLY

SHURE M80E-D19

FOR BOUNCE-PROOF SCRATCH-PROOF RECORD PROTECTION
For Dual 1019, 1009 SK and 1009 F

Model M80E-D19 Gard-A-Matic assembly is a high quality Bi-Radial elliptical stylus stereo cartridge mounted in a retractile safety suspension system to prevent stylus scratch and bounce in high quality turntables. When the maximum force of 1½ grams is exceeded, the cartridge retracts and a plastic safety bumper comes in contact with the surface of the record, protecting the record from the needle, and the needle itself from damage.

SPECIFICATIONS

Frequency Response: From 20 to 20,000 Hz
Output Voltage: 6.6 millivolts per channel at 1,000 Hz at 5 CM/SEC
Channel Separation: Nominally over 25 db at 1,000 Hz
Compliance: 25 x 10^{-6} cm/dyne
Effective Stylus Tip Mass: 1.2 miligrams
Stylus: Elliptically shaped diamond tip:
.0007 inch (17.8 microns) frontal radius
.0002 inch (5 microns) side contact radii
.0010 inch (25 microns) between points of contact with groove
Stylus Replacement: Model N55E
Tracking Force: ¾ to 1½ grams
Input Impedance: 47,000 ohms
Inductance: 720 millihenries
D.C. Resistance: 630 ohms
MODEL M80E-D19

GENUINE SHURE REPLACEMENT STYLI

CHECK YOUR SHURE STYLUS PERIODICALLY

True, it's unfortunate . . . and unfortunately, it's true: the diamond tip of ANY high fidelity stylus eventually wears out. Some sooner, some later. The new ultra-lightweight tracking force cartridges (¾ to 1½ grams) extend diamond tip life many times. But even they need periodic inspection. Depending upon the degree of wear, a worn stylus will (at the very least) appreciably accelerate record wear—or it can actually damage a record beyond redemption, in a single playing!

SHURE PERFORMANCE DEPENDS ON A GENUINE SHURE STYLUS

The superior performance of all Shure cartridges depends upon the Shure Stereo Dynetic Stylus Assembly. An inferior stylus replacement will audibly detract from and significantly reduce the cartridge's performance and increase record wear. Obviously, if an imitation Shure Stereo Dynetic Stylus is used, we cannot guarantee that the cartridge will perform to published specifications. Accept no substitute. Look for this wording:

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

HOW TO UPGRADE OLDER SHURE CARTRIDGES WITH A NEW STYLUS

It is possible to actually upgrade your cartridge by using a higher compliance stylus assembly which tracks at lighter force, or by using an elliptical stylus in place of a conical stylus for reduction of IM, harmonic and tracing distortion. Here are some examples of improvements: M3D or M7D . . . Substitute N21D stylus for greater compliance, lighter tracking (2½ grams maximum).

Any M44 Cartridge . . . Substitute N55E stylus for greater compliance and lighter tracking (at ¾ to 1½ grams). For tracking at 1¾ to 4 grams use the N44E stylus.

REPLACEMENT DIAMOND STYLI FOR OLDER SHURE CARTRIDGES

MODEL N1 Stylus.
.0007" spherical tip radius. Fits M1 cartridge

MODEL N2 Stylus.
.0027" spherical tip radius. Fits M2 cartridge

MODEL N22D Stylus. .0005" spherical tip radius. Fits M22, M7/N21D, M3D/N21D, M3D and M7D cartridges

MODEL N33-1 Stylus. .001" spherical tip radius. For mono L.P.'s. Fits M33 and M77 cartridges

MODEL N33-5 Stylus.
.0005" spherical tip radius. Fits M33-5 cartridge

MODEL N33-7 Stylus.
.0007" spherical tip radius. Fits M33-7 cartridge

MODEL N44-1 Stylus. .001" spherical tip radius. For mono L.P.'s. Fits M44 series, M55E and V-15 Type 1 cartridges

MODEL N77 Stylus.
.0007" spherical tip radius. Fits M77 cartridge

MODEL N78 Stylus. .0027" spherical tip radius. For 78 RPM recording. Fits M77 and M33 series cartridges

MODEL VN2E Stylus.
Bi-radial elliptical tip. Fits V-15 Type I.

STYLI FOR 78 RPM CARTRIDGES

If you have a large collection of 78 RPM records, you can equip the M31E, M32E, any M44 series cartridge, M55E, M75, M75 Type 2 series or V-15 Type II cartridges with a special stylus for 78 RPM records.

MODEL N32-3 Stylus. .0025" spherical tip radius. Fits the M31E and the M32E cartridges.

MODEL N44-3 Stylus. .0025" spherical tip radius. Fits any M44 series, and the M55E cartridge.

MODEL N75-3 Stylus. .0025" spherical tip radius. Fits the M75, M75 Type 2 series and V-15 Type II cartridges.

SHURE SOLO-PHONE® HEADPHONE AMPLIFIERS

BASIC SOLO-PHONE UNITS FOR USE WITH THE SOUND SOURCE OF YOUR CHOICE

SHURE MODEL SA-1 SOLO-PHONE STEREO HEADPHONE AMPLIFIER

FOR DESK OR TABLE TOP

The SA-1 was specifically designed for private headphone listening. The Solo-Phone (Model SA-1) is a small, all-transistor pre-amplifier/amplifier that will deliver the depth and "presence" of high fidelity stereo—in private—from whichever sound source to which you connect it; record player, tape recorder or AM/FM tuner. True-to-performance sound is assured by its broad frequency response and exceptionally low distortion, including the difficult low frequencies. Handsome walnut finish with beige face plate.

VERSATILE . . .

Tape, record changer or tuner . . . you can easily vary the sound source. You also can use the Solo-Phone amplifier with one or two sets of headphones, or even with small, high efficiency speakers, for low-volume background music. Each stereo channel can be adjusted separately to achieve proper balance. Weighs just 2 lbs.

MODEL SA-1 SOLO-PHONE AMPLIFIER: 105-125 V. A.C. 10¼″ x 3½″ x 3″.

MODEL SA-2. For 110/220 V., A.C.

MODEL PK-1 PLUG ACCESSORY KIT. Includes 2 phone plugs, 4 phono plugs.

MODEL SA-1F PANEL-MOUNTED SOLO-PHONE STEREO HEADPHONE AMPLIFIER

FOR PANEL MOUNTING

Ideal for school music libraries, classrooms, business and institutional libraries, music instruction schools, hospitals, etc. Same high fidelity performance as Model SA-1 (above). Can also be used for monitoring while tape recording, transcribing disc recordings using a tape recorder, ceramic microphone amplifier, special installations for hard-of-hearing, monitoring electric organs. Underwriters Laboratory approval for commercial installations. Three-wire, 3-prong plug outlet meets building code requirements. Requires panel opening of 10⅛″ x 4⅝″, behind-panel depth of 3⅛″. 105-125 V. A. C.

MODEL SA-1F SOLO-PHONE.

MODEL SA-2FE SOLO-PHONE. For 110/220 V., A. C.

SPECIFICATIONS FOR SA-1, SA-2, SA-1F, SA-2FE Solo-Phones

Gain and Frequency Response:

Frequency	Phono Function*	Tape or Tuner Function
100 Hertz	+13 db ±2 db re: 1,000 Hertz level	±2 db re: 1,000 Hertz level
1,000 Hertz	34 db ±3 db 6 mv input produces 300 mv output	7 db ±3 db 150 mv input produces 340 mv output
10,000 Hertz	−14 db ±2 db re: 1,000 Hertz level	±2 db re: 1,000 Hertz level

*Standard RIAA Equalization

Input Impedance: Phono—47K ohms. Tuner—250K ohms.

Range of Load: The unit shall operate satisfactorily using any headphones with impedances of 4 to 200 ohms. For optimum results, use headphones of 4 to 16 ohm impedance.

Output Level: 20 milliwatts per channel.

Channel Separation: 40 db minimum from 50 to 20,000 Hertz.

Total Harmonic Distortion: Less than 1%—driving both channels simultaneously to 8 ohm resistive load at 100 mv level.

Clipping Level: 400 mv—at 1,000 Hertz and 8 ohm load.

SHURE BROTHERS, INC.
International Sales
222 Hartrey Avenue
Evanston, Illinois 60204 U.S.A.

PRINTED IN U.S.A.

AL124C-E