

Shure High Fidelity



high fidelity phono cartridges
replacement styli
tone arms
preamplifier
stylus force gauge

 **SHURE**®



The all-important source of sound

True high fidelity sound re-creation begins at the source of sound. Since the stylus is the only point of contact between the record and phonograph system, the sound can be no better than the cartridge. This breathtakingly precise miniaturized electric generator (that's really what it is) must carry the full burden of translating the 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.

Shure cartridges and the "U Factor"

In addition to its many other features, a Shure stylus offers a uniformity of performance that is singular among high fidelity components. We call it the "U" factor...U for uniformity. It assures you that your Shure cartridge and stylus not only conform precisely to their published specifications, but every other Shure cartridge and stylus with the same model number does as well!

This uniformity doesn't come easily. It requires infinite care in production along with a stringent, comprehensive quality control program.

As a result, when the stylus eventually wears out, the original sound performance of your cartridge can be restored no matter where you buy your genuine Shure replacement stylus — so don't jeopardize your valuable record collection by using imitation styli.

SPECIAL NOTE: The Dynetic® stylus assembly used in Shure 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:

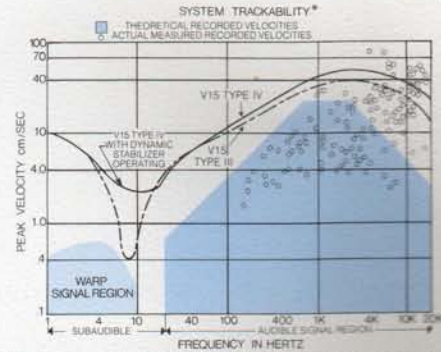
"This Stereo Dynetic® stylus is precision manufactured by Shure Brothers Inc."

AVOID INFERIOR IMITATIONS, THEY WILL SERIOUSLY DEGRADE THE PERFORMANCE OF YOUR CARTRIDGE. ALL GENUINE "DYNETIC" STYLI ARE MANUFACTURED BY SHURE BROTHERS INC. LOOK FOR THE NAME SHURE ON THE STYLUS GRIP.

PATENT NOTICE. ALL SHURE DYNETIC® CARTRIDGES, STYLI AND PROFESSIONAL TONE ARMS ARE MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 2,983,516; 3,055,988; 3,077,521; 3,077,522; 3,463,889; D183,366; D185,168; D187,229; D187,230; D189,144; D193,006; D193,007; D193,854; D193,934; D201,802; D201,803; D230,995; D235,070; D235,211; D235,351; D235,352; D235,661; AND D235,658. OTHER PATENTS PENDING.

about trackability

Trackability is the measure of a cartridge's total performance. High Trackability enables the stylus tip to follow the hyper-complex record groove up to and beyond the theoretical cutting limits of today's modern recordings — not only at a select and discrete frequency, but across the entire audible spectrum — at light tracking forces that are below both the threshold of audible record wear and excessive stylus tip wear.



* Trackability Curve for Shure V15 Type IV Cartridge (at 1 gram stylus tip force)

In the graph above, the shaded area represents recommended theoretical limits of record cutting velocities. The scattered points are the "hottest" recorded velocities actually measured on difficult-to-track records. Although a cartridge with moderate trackability will be able to track all the recorded velocities encompassed within the theoretical cutting stylus limits, substantially higher trackability is needed to track recorded velocities actually found on today's discs. The V15 Type IV tracks more of the "hottest" points at a low stylus force than any other cartridge. The curve shown is for 1 gram tracking force. By increasing the tracking force to 1-1/4 grams, even more of these points — virtually all records produced thus far — will be tracked.

the record groove



The above left photomicrograph shows a record of musical material cut at today's "hotter" velocities after only one play with a well-known competitive cartridge at its rated tracking force. This cartridge mistracked the record. Clearly, critical damage resulted. Notice the deep gouge marks on the groove walls.

The above right photo shows the same groove (on an identical record) played 50 times with a Shure High Trackability Cartridge, at a record- and stylus-saving force of only one gram. The stylus never lost contact with the groove, and never damaged the record.

A single mistrack can result in MORE damage than 25, 50 or even 100 plays of a record! Record wear is a gradual but constant phenomenon... like tire wear every time you drive. But a mistrack is like a blowout. Once your cartridge mistracks a record passage, the damage has been done and that passage will never sound the same.

TRACKABILITY is the single most meaningful yardstick by which to measure cartridge performance. TRACKABILITY encompasses the effects of virtually all the design factors (compliance, effective mass, resonances, damping, etc.) that ultimately determine cartridge performance. And unless the stylus maintains intimate contact with the record groove walls — the essence of TRACKABILITY — other performance factors are irrelevant.

"Shure Cartridges at a Glance"

	Model No.	Page No.	Trackability (cm/sec Peak Recorded Velocity)				Trackability Measured at (Grams)	Tracking Force Range	Stylus Configuration	Type	Net Price
			400 Hz	1000 Hz	5000 Hz	10,000 Hz					
SUPER TRACK IV™ V15 TYPE IV SERIES	V15 Type IV	4-5	29	42	47	37	1 Gram	3/4 to 1-1/4	Hyperelliptical	Standard Mount with Dynamic Stabilizer	\$165.00
	V15 IV-G	4-5	29	42	47	37	1 Gram	3/4 to 1-1/4	15 microns (.0006") Spherical	Standard Mount with Dynamic Stabilizer	\$159.00
SUPER TRACK PLUS V15 TYPE III SERIES	V15 Type III	6	26	38	35	26	1 Gram	3/4 to 1-1/4	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard	\$103.00
	V15 III-G	6	26	38	35	26	1 Gram	3/4 to 1-1/4	15 microns (.0006") Spherical	Standard Mount with Snap-Down Stylus Guard	\$96.75
DELUXE HIGH TRACKABILITY SERIES	M95ED	7	24	33	28	19	1 Gram	3/4 to 1-1/2	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard	\$84.50
	M91ED	8	22	33	28	19	1 Gram	3/4 to 1-1/2	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Standard Mount	\$72.95
	M91GD	8	22	33	28	19	1 Gram	3/4 to 1-1/2	15 microns (.0006") Spherical	Standard Mount	\$61.50
	M75ED Type 2	8	22	33	28	19	1 Gram	3/4 to 1-1/2	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard	\$72.95
CUSTOM HIGH TRACKABILITY SERIES	M95EJ	7	28	35	30	20	2 Grams	1-1/2 to 3	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard	\$67.50
	M91E	9	20	28	25	18	1 Gram	3/4 to 1-1/2	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Snap-In Easy-Mount	\$66.95
	M75G Type 2	9	20	28	25	18	1 Gram	3/4 to 1-1/2	15 microns (.0006") Spherical	Standard Mount with Snap-Down Stylus Guard	\$54.50
	M75EJ Type 2	9	28	35	30	20	2 Grams	1-1/2 to 3	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard	\$61.50
	M75B Type 2 (Formerly M75-6 Type 2)	9	28	35	30	20	2 Grams	1-1/2 to 3	15 microns (.0006") Spherical	Standard Mount with Snap-Down Stylus Guard	\$48.95
EXTRA DURABILITY HIGH-TRACK SERIES	M93E	10	18	25	24	13	2 Grams	1-1/2 to 3	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Snap-In Easy-Mount	\$55.95
	M70EJ	10	19	26	23	12	2 Grams	1-1/2 to 3	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Standard Mount	\$48.95
	M70B	10	19	26	23	12	2 Grams	1-1/2 to 3	15 microns (.0006") Spherical	Standard Mount	\$43.50
	M75-6S	10	18	25	24	14	2 Grams	1-1/2 to 3	15 microns (.0006") Spherical	Snap-In Easy-Mount	\$41.95
	M75ECS	10	26	37	21	12	3 Grams	2 to 4	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Snap-in Easy-Mount	\$44.50
	M75CS	10	25	39	25	15	4 Grams	3 to 5	15 microns (.0006") Spherical	Snap-In Easy-Mount	\$32.95
PROFESSIONAL SERIES	SC35C	11	14	27	33	20	4 Grams	4 to 5	15 microns (.0006") Spherical	Standard Mount	\$30.25
STEREO + QUADRIPHONIC	M24H	6	20	28	47	50	1-1/4 Grams	1 to 1-1/2	"Long-Contact Hyperbolic"	Standard Mount with Snap-Down Stylus Guard	\$96.50
THE SHURE CARTRIDGES LISTED ABOVE ARE COMPATIBLE WITH ALL FOUR-CHANNEL MATRIX SYSTEMS											
STANDARD STEREO DYNETIC® SERIES	M55E	11	These cartridges were designed prior to the development of trackability measurement techniques. They are intended for economy systems; however, the trackability of these cartridges is good, and will generally exceed the trackability potential of the associated equipment with which they are used.					3/4 to 2	5 microns x 18 microns (.0002" x .0007") Biradial Elliptical	Standard Mount	\$45.95
	M44E	11						1-3/4 to 4	10 microns x 18 microns (.0004" x .0007") Biradial Elliptical	Standard Mount	\$39.95
	M44G	11						3/4 to 1-1/2	15 microns (.0006") Spherical	Standard Mount	\$34.95
	M44-7	11						1-1/2 to 3	18 microns (.0007") Spherical	Standard Mount	\$34.95
	M44C	11						3 to 5	18 microns (.0007") Spherical	Standard Mount	\$32.50
	M3D	11						3 to 6	18 microns (.0007") Spherical	Standard Mount	\$25.95



ERA IV BEGINS!



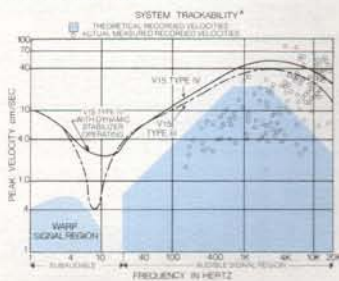
Fact: the IV does more!
Shure® V15 Type IV

**SUPER
TRACK IV™**
Stereo Dynetic® Phono Cartridge

Era IV begins! The Shure V15 Type IV phonograph cartridge is an altogether new pickup system that exceeds previous cartridge performance levels by a significant degree. It systematically attacks not one, but several problems prevalent in modern disc sound reproduction:

Demonstrably improved trackability across the audible and subaudible range at ultra-light tracking forces

The V15 Type IV has a new stylus assembly design for dramatically increased trackability. The effective stylus mass of the moving system has been lowered significantly by utilizing a telescoped shank structure and a new lightweight high-energy magnet. The reduced effective mass of the new structure helps improve trackability in the critical mid and high frequencies. A newly designed two-function bearing system has been independently optimized for low frequencies and for high frequencies so that trackability is enhanced across the entire audio spectrum.



*Cartridge-tone arm system trackability as mounted in SME 3009 tone arm at 1 gram tracking force.

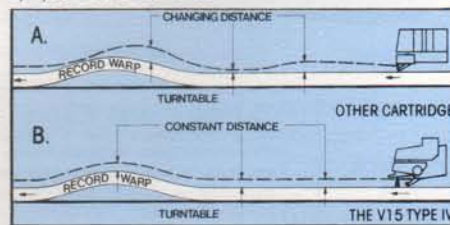
The shaded area at right in this chart represents recommended theoretical limits of record cutting velocities. However, the scattered points are the "hottest" recorded velocities actually measured on today's difficult-to-track records. The V15 Type IV tracks far more of the "hottest" points at a low stylus force than any other existing cartridge! (The curve shown is for 1 gram tracking force. By increasing this to 1-1/4 grams, even more of these points — which encompass virtually all records produced thus far — will be tracked.)

Dynamically stabilized tracking that overcomes record warp problems

THE WARP PROBLEM: On the preceding Trackability Chart, the shaded-area at the bottom left represents actual warp signals found on records. Reactions of the playback system to these very low frequency warps (between 0.5 and 8 Hz) that exist on virtually all records can result in gross changes in the distance between the cartridge and the record as shown in drawing A. The distance change alters the stylus tracking force and the vertical tracking

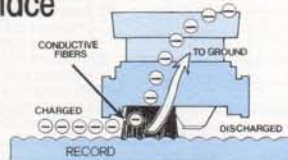
angle. These changes can cause groove skipping, cartridge bottoming, signal wow, and even amplifier and/or speaker overload. Trackability at all frequencies is severely diminished by these warp-caused changes in tracking force.

In addition, at some very low frequency between 5 and 15 Hz, the tone arm-cartridge combination has a resonance frequency. When the resonance frequency is near the warp frequency, all the above symptoms are intensified.



THE SUPER TRACK IV™ TOTAL DESIGN SOLUTION: A viscous-damped Dynamic Stabilizer on the V15 Type IV combines with a new stylus assembly to minimize or completely eliminate warp-related problems. The combination raises the arm-cartridge resonance frequency and attenuates the arm-cartridge resonance effect. Note the vastly increased tracking margin in the subaudible warp signal range trackability characteristics of the V15 Type IV shown on the Trackability Chart and the remarkable maintenance of a constant cartridge-to-record distance shown in drawing B.

An electrostatically neutralized record surface

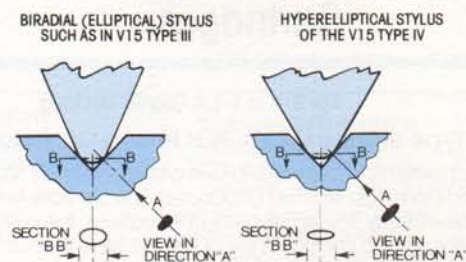


THE STATIC PROBLEM: Static charges are omnipresent and unevenly distributed on all records. These charges attract the cartridge unevenly and change the arm-to-record distance, the vertical tracking angle, and stylus tracking force. The result is wow and flutter. Also, static discharge through the stylus and amplifying system can cause annoying pops and clicks.

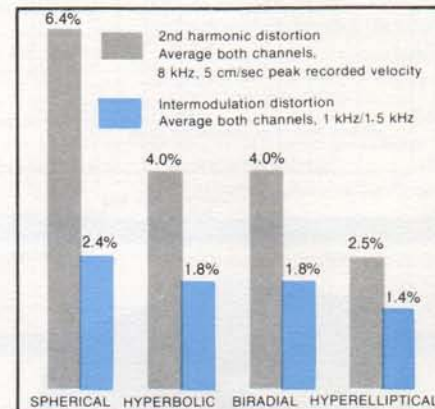
THE SUPER TRACK IV TOTAL DESIGN SOLUTION: Electrically conductive fibers in the Dynamic Stabilizer of the V15 Type IV ride on the surface of the record and continuously sweep the grooves just ahead of the stylus. The fibers pick up the static electricity, discharge it to ground, much like a miniature lightning rod, and the record surface is electrically neutralized. The static charge is thus

prevented from affecting the arm-to-record distance, or from causing static noise in the system. Tracking force is stabilized during the entire record playing process. Also, electrostatic attraction of dust to the record surface is minimized. And, the conductive fibers act as an effective record surface sweeper which removes loose dust and lint.

Dramatically reduced distortion



The Hyperelliptical nude diamond tip configuration of the V15 Type IV represents a significant advance in tip design for stereo sound reproduction. As the above figures show, its "footprint" (represented by a black oval) is longer and narrower than the traditional Biradial (Elliptical) and long-contact shapes (such as the Hyperbolic) tip-groove contact area. This results in an optimized contact area which dramatically reduces both harmonic distortion (gray bars in graph) and intermodulation distortion (blue bars).



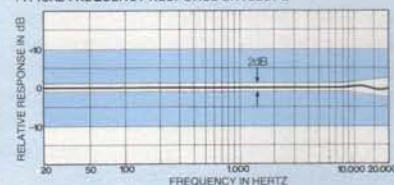
HARMONIC AND INTERMODULATION DISTORTION FOR VARIOUS TIP SHAPES

Ultra-flat response

Each V15 Type IV cartridge is individually tested for frequency response that is well within the 2 dB envelope shown below.

Shure V15 Type IV and V15 IV-G Specifications

TYPICAL FREQUENCY RESPONSE ENVELOPE



Frequency Response: 10 to 25,000 Hz

Typical Trackability (in SME Tone Arm at 1 gram tip tracking force, in cm/sec peak recorded velocity):

400 Hz — 29 cm/sec

1,000 Hz — 42 cm/sec

5,000 Hz — 47 cm/sec

10,000 Hz — 37 cm/sec

Output Voltage (at 1,000 Hz, 5 cm/sec peak recorded velocity): 4.0 mV per channel

Channel Balance: Within 2 dB

Channel Separation (minimum): 25 dB at 1,000 Hz, 15 dB at 10,000 Hz

Optimum Load: 47,000 ohms resistance in parallel with 200 to 300 picofarads 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.

Inductance: 500 millihenries

DC Resistance: 1,380 ohms

Tracking Force:

Force at the stylus tip	Total tone arm setting with Dynamic Stabilizer "operating"
Minimum 0.75 grams	1.25 grams
1.0 gram	1.5 grams
Maximum 1.25 grams	1.75 grams

Force Exerted by Dynamic Stabilizer: 0.5 grams

Output Terminals: 4 terminals

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

Net Weight: 6.4 grams

V15 Type IV Stylus Available:

VN45HE Hyperelliptical Nude Diamond Tip, (as supplied in V15 Type IV Cartridge).

VN4G Spherical Nude Diamond Tip, 15 microns (.0006 in.) radius, (as supplied in V15 IV-G Cartridge).

VN47BE Biradial (Elliptical) Nude Diamond Tip. For monophonic 78 rpm records. Tip Tracking Force Range: 3/4 to 1-1/4 grams. 13 x 63 microns (.0005 in. x .0025 in.). Available July, 1978.

MODEL V15 Type IV SUPER TRACK IV cartridge with Hyperelliptical stylus	\$165.00
MODEL V15 IV-G SUPER TRACK IV cartridge with 15 micron (.0006 inch) Spherical stylus	\$159.00
MODEL VN45HE Hyperelliptical stylus fits V15 Type IV and V15 IV-G cartridges	\$ 60.00
MODEL VN4G, 15 microns (.0006 inch) Spherical stylus fits V15 Type IV and V15 IV-G cartridges	\$ 56.00
MODEL VN47BE Biradial Elliptical stylus designed for monophonic 78 rpm recordings. Fits V15 Type IV and V15 IV-G cartridges	\$ 58.00

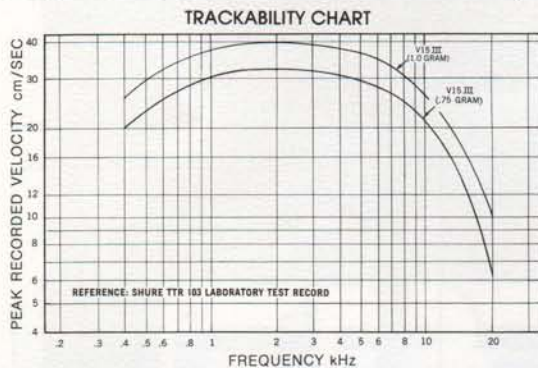
Super Track Plus Cartridges



For 3/4 to 1-1/4 Grams Tracking

V15 Type III Super Track Plus Phono Cartridge

Critics were most generous in their praise when the Shure V15 Type III phono cartridge was first introduced. The ultimate test, however, has been **time**. The engineering innovations, the uniform quality and the superb performance of the V15 Type III have led to its continuing popularity among discriminating music lovers, critics and collectors. Since the V15 Type III was introduced, a multitude of audiophiles (as well as numerous critics) both here and abroad have chosen it as the source of sound for their refined music systems.



V15 Type III and V15 III-G Specifications

Typical Trackability at 1 gram in Shure-SME Tone Arm in cm/sec peak recorded velocity.

Reference: Shure TTR103 Laboratory Test Record.
400 Hz — 26 cm/sec 5,000 Hz — 35 cm/sec
1,000 Hz — 38 cm/sec 10,000 Hz — 26 cm/sec

Frequency Response (using Optimum Load): 10 to 25,000 Hz

Output Voltage: 3.5 mV per channel at 1000 Hz. 5 cm/sec peak recorded velocity. Output from each channel within 2 dB.

Channel Separation: Minimum 25 dB at 1000 Hz. Minimum 15 dB at 10,000 Hz.

Tracking Force Range: 3/4 to 1-1/4 grams.

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.

Inductance: 500 millihenries nominal
DC Resistance: 1350 ohms nominal

V15 Type III Stylus Available:
VN35E Biradial Elliptical Stylus (as supplied in V15 Type III Cartridge) Diamond Tip
18 microns (.0007 inch) frontal radius
5 microns (.0002 inch) side contact radii
25 microns (.0010 inch) between record contact points
VN3-G Spherical Stylus (as supplied in V15 III-G Cartridge) Diamond Tip (15 microns (.0006 inch) radius)

VN78E Biradial Elliptical Stylus, Diamond Tip for monophonic 78 rpm records.

Tracking Force Range: 1-1/2 to 3 grams
63 microns (.0025 inch) frontal radius
13 microns (.0005 inch) side contact radii
89 microns (.0035 inch) between record contact points.

NOTE: A small .8 gram weight on the molded grip of the VN78E Stylus Assembly allows it to be substituted for a VN35E or VN3-G. This .8 gram weight achieves the proper tracking force for 78 rpm records automatically and normally requires no manual adjustment of the tone arm's tracking force setting.

Mounting: Standard 12.7 mm (1/2 inch) mounting centers.

Weight: Net Weight — 6.3 grams

MODEL V15 Type III Super Track cartridge \$103.00
MODEL V15 III-G Super Track cartridge with .0006 inch Spherical stylus \$96.75

MODEL VN35E Biradial Elliptical stylus fits V15 Type III and V15 III-G cartridges \$34.00
MODEL VN3-G, 15 microns (.0006 inch) Spherical stylus fits V15 Type III and V15 III-G cartridges \$32.00
MODEL VN78E Biradial Elliptical stylus designed for monophonic 78 rpm recordings. Fits V15 Type III and V15 III-G cartridges \$33.00



2+4 UNCOMPROMISED STEREO & 4-CHANNEL

M24H Specifications

Frequency Response: 20 to 50,000 Hz
Output Voltage: 3.0 mV per channel (at 1,000 Hz, 5 cm/sec peak recorded velocity)

Channel Balance: Within 2 dB

Channel Separation (Minimum): 22 dB at 1 kHz

Inductance: 160 millihenries

DC Resistance: 510 ohms

Optimum Load: Discrete Four-Channel: 100 kilohms resistance in parallel with 100 picofarads total capacitance per channel.

Stereo and Four-Channel Matrix: 20,000 to 100,000 ohms resistance in parallel with 100 to 250 picofarads total capacitance per channel. Total capacitance includes the capacitances of the tone arm wiring, phono cables, and amplifier input circuit.

Tracking Force Range:

Minimum: 1 gram

Optimum: 1-1/4 grams

Maximum: 1-1/2 grams

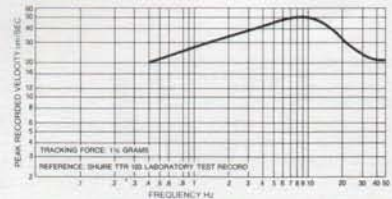
(Tracking forces greater than maximum indicated should not be used.)

Trackability: Trackability indicates how well a stylus can follow or track the recorded signals in a record groove without losing contact. To provide an uninterrupted flow of information from the record, the phono stylus must be able to track the grooves. Mistracking causes the most objectionable form of distortion. Signals recorded at high levels (peak recorded velocity, measured in cm/sec) are more difficult to track. The Model M24H provides high trackability to meet the stereo

requirements as well as the high-frequency carrier requirements imposed by discrete four-channel playback.

Trackability at 1-1/4 gram tracking force (in cm/sec peak recorded velocity) using a Shure/SME Arm:

400 Hz	20 cm/sec
1,000 Hz	28 cm/sec
5,000 Hz	47 cm/sec
10,000 Hz	50 cm/sec
30,000 Hz	25 cm/sec



TRACKABILITY CHART (at 1-1/4 Grams)

Weight: 5.8 grams

Replacement Stylus: Model N24H, Hyperbolic nude diamond tip.

Stylus Grip: Gold.

Mounting: Standard 12.7 mm (1/2 inch) mounting centers.

MODEL M24H cartridge \$96.50

MODEL N24H replacement stylus \$33.80

Stereo + Quadriphonic Cartridge

For 1 to 1-1/2 Grams Tracking

M24H Cartridge:

discrete quadriphonic records /
matrix quadriphonic records /
stereo records / mono LP records

Offers uncompromised stereo with state-of-the-art full quadriphonic capability for the audiophile in transition from stereo to quadriphony. Low effective stylus mass contributes to high frequency carrier and audio trackability at forces not possible before ... its optimized 20 to 50,000 Hz frequency response curve is essentially flat in the stereo range and rises smoothly to accommodate CD-4's supersonic FM carrier frequencies. Hyperbolic "long-contact" stylus tip geometry results in an improved groove-tip interface. "Dynetic® X" exotic high-energy magnet assembly and low-loss laminated electromagnetic structure.

Second only to the Super Track series for stereo



Deluxe series of high trackability cartridges

For 3/4 to 1-1/2 Grams Tracking

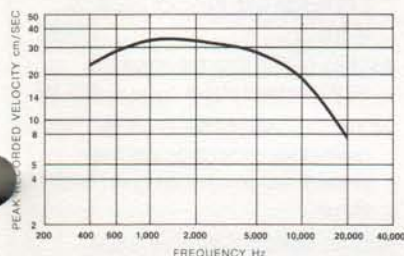
M95ED Deluxe high trackability cartridge with built-in snap-down stylus guard and Biradial Elliptical stylus.

The Shure M95ED combines several of the high-performance design features of the Shure V15 Type III with a special internal electromagnetic structure to deliver exceptional trackability and overall performance.

The M95ED incorporates a new, thinner, uninterrupted pole piece developed by Shure design engineers to optimize electromagnetic characteristics — especially at higher frequencies. As a result, magnetic losses have been minimized, and frequency response remains essentially flat across the entire frequency range. Dynamic range is significantly extended.

With its nude-mounted, Biradial Elliptical stylus tip, the M95ED has very low effective stylus tip mass. This provides higher trackability to maintain perfect groove contact through the "hottest," most heavily modulated passages encountered on modern recordings — all at extremely light tracking forces that cut record wear and increase stylus tip life. Its exceptional trackability makes the M95ED an outstanding choice for use in four-channel encoded (matrix) systems.

TRACKABILITY CHART
(at 1 Gram)



M95ED Specifications

Trackability at 1 gram tracking force (in cm/sec peak recorded velocity) using a Shure/SME Arm:

24 cm/sec at 400 Hz
33 cm/sec at 1,000 Hz
28 cm/sec at 5,000 Hz
19 cm/sec at 10,000 Hz

Tracking Force: 3/4 to 1-1/2 grams

Frequency Response: 20 to 20,000 Hz

Optimum Load: 47,000 ohms resistance in parallel with 400 to 500 picofarads total capacitance per channel. Load resistance can be as high as 100,000 ohms and total capacitance can be as low as 100 picofarads with only minor audible change. Total capacitance includes the capacitances of the tone arm wiring, phono cables, and amplifier input circuit.

Output Voltage: 4.7 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 25 dB at 1,000 Hz

Channel Balance: Output from each channel within 2 dB

Stylus: N95ED Biradial Elliptical nude diamond tip
17.8 microns (.0007 inch) frontal radius

5 microns (.0002 inch) side contact radii
25 microns (.0010 inch) wide between record contact points

Stylus: N95G Spherical stylus, (as supplied in M95G Cartridge)
diamond tip 15 microns (.0006 inch) stylus tip radius

Stylus: N95-3 Spherical for monophonic 78 rpm recordings — 63 microns (.0025 inch) stylus tip radius

Inductance: 650 millihenries

DC Resistance: 1550 ohms

Weight: 6.3 grams

Mounting: Standard 12.7mm (1/2 inch) mounting centers

MODEL M95ED Deluxe Hi-Track Cartridge with Biradial Elliptical stylus \$84.50

MODEL M95G Deluxe Hi-Track Cartridge with Spherical stylus \$64.95

MODEL N95ED Biradial Elliptical replacement stylus \$31.70

MODEL N95G Spherical replacement stylus \$17.55

MODEL N95-3 Spherical stylus designed for monophonic 78 rpm recordings \$12.30



M95EJ Custom high trackability cartridge with built-in snap-down stylus guard and Biradial Elliptical stylus

For 1-1/2 to 3 Grams Tracking

Designed specifically for owners of heavier tracking (1-1/2 to 3 grams) turntables and tone arms who want optimum cartridge performance. The M95EJ uses the same newly developed pole piece of the M95ED (above) and delivers a frequency response virtually identical in its flatness — but at slightly greater tracking forces.

The M95EJ uses a Biradial Elliptical stylus tip, and delivers excellent trackability. It is the ideal cartridge choice for audiophiles who want to upgrade their record playback systems at moderate cost.

M95EJ Specifications

Trackability at 2 grams tracking force (in peak recorded velocity) 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

Tracking Force: 1-1/2 to 3 grams

Frequency Response: 20 to 20,000 Hz

Optimum Load: 47,000 ohms resistance in parallel with 400 to 500 picofarads total capacitance per channel. Load resistance can be up to 100,000 ohms and total capacitance can be as low as 100 picofarads with only minor audible change. Total capacitance includes the capacitances of the tone arm wiring, phono cables, and amplifier input circuit.

Output Voltage: 4.7 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 20 dB at 1,000 Hz

Channel Balance: Output from each

channel within 2 dB

Stylus: N95EJ Biradial Elliptical diamond tip

17.8 microns (.0007 inch) frontal radius
10 microns (.0004 inch) side contact radii
25 microns (.0010 inch) wide between record contact points

Stylus: N95-3 Spherical for monophonic 78 rpm recordings — 63 microns (.0025 inch) stylus tip radius

Inductance: 650 millihenries

DC Resistance: 1550 ohms

Weight: 6.3 grams

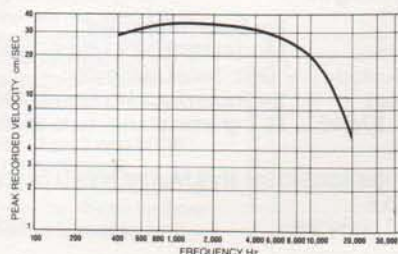
Mounting: Standard 12.7mm (1/2 inch) mounting centers

MODEL M95EJ Custom Hi-Track Cartridge with Biradial Elliptical stylus \$67.50

MODEL N95EJ Biradial Elliptical replacement stylus \$25.95

MODEL N95-3 Spherical stylus designed for monophonic 78 rpm recordings \$12.30

TRACKABILITY CHART
(at 2 Grams)



Deluxe series of high trackability cartridges

For 3/4 to 1-1/2 Grams Tracking

M91ED Biradial Elliptical Stylus
M91GD Spherical Stylus

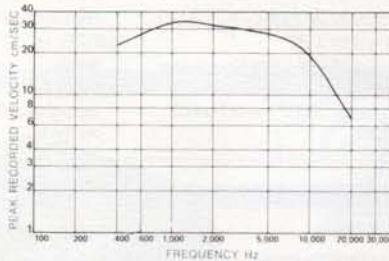
M75ED Type 2 Biradial Elliptical Stylus with Built-in Snap-down Stylus Guard

Optimized design parameters in the stylus assembly give these Deluxe Series cartridges superb high frequency trackability, and overall performance previously unavailable at this price level.

The ultra-light diamond stylus tip on these cartridges is nude-mounted directly on the stylus bar, reducing effective stylus tip mass and heightening its excellent tracking characteristics. The very high trackability levels reached by these cartridges make them suitable choices for use in four-channel encoded (matrix) playback systems.

The M91ED, M91GD and M75ED Type 2 have identical performance characteristics. The M75ED Type 2 is offered for those who prefer a built-in snap-down stylus guard. The M91GD is offered for those who prefer a Spherical stylus.

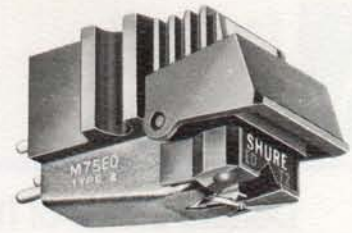
TRACKABILITY CHART
(at 1 Gram)



NOTE: To play 78 rpm records with the M91ED or M91GD cartridges, use a Model N91-3 63 microns (.0025 inch) Spherical stylus. To play 78 rpm records with an M75ED Type 2 cartridge, use a Model N75-3 63 microns (.0025 inch) Spherical stylus.



M91ED



M75ED Type 2

M91ED, M91GD and M75ED Type 2 Specifications

Trackability at 1 gram tracking force (in cm/sec peak recorded velocity) using a Shure/SME Arm:

- 22 cm/sec at 400 Hz
- 33 cm/sec at 1,000 Hz
- 28 cm/sec at 5,000 Hz
- 19 cm/sec at 10,000 Hz

Tracking Force: 3/4 to 1-1/2 grams

Frequency Response: From 20 to 20,000 Hz

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.

Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 25 dB at 1,000 Hz

Channel Balance: Output from each channel within 2 dB

Stylus: N91ED and N75ED Type 2 Biradial Elliptical with nude diamond tip

- 17.8 microns (.0007 inch) frontal radius
- 5 microns (.0002 inch) side contact radii

25 microns (.0010 inch) wide between record contact points

Stylus: N91GD Spherical—15 microns (.0006 inch) radius with nude diamond tip

Inductance: 720 millihenries

DC Resistance: 630 ohms

Weight: M91ED, M91GD 5.8 grams; M75ED Type 2, 6.2 grams

Mounting: Standard 12.7 mm (1/2 inch) mounting centers

MODEL M91ED Deluxe Hi-Track Cartridge with Biradial Elliptical stylus\$72.95

MODEL N91ED Biradial Elliptical replacement stylus\$28.50

NOTE: Owners of M91E or M92E cartridges may upgrade their present systems by using an N91ED stylus.

MODEL M91GD Deluxe Hi-Track Cartridge with Spherical stylus\$61.50

MODEL N91GD Spherical replacement stylus\$26.25

MODEL M75ED Type 2 Deluxe Hi-Track Cartridge with Biradial Elliptical stylus\$72.95

MODEL N75ED Type 2 Biradial Elliptical replacement stylus\$28.50



Premounted Deluxe M91ED High Trackability cartridges

For Garrard Zero 100 Turntables
Model M91ED-GZ Premounted M91ED cartridge fits Garrard Zero 100 turntables\$75.95

For Dual Turntables
Model M91ED-DL Fits all Dual "1200" Series automatic turntables tracking from 3/4 to 1-1/2 grams\$75.95

Premounted Cartridge Replacement Styli Model N91ED Biradial Elliptical replacement stylus. Fits all M91ED premounted cartridges\$28.50

M81CS and M81ECS Cartridges

Reduce hum pickup in two-pole record changers!

The Shure M81 Series cartridges are direct replacements for the original cartridges used in two-pole turntables. They compare in trackability and frequency response performance to the popular Shure M75 Series cartridges. In addition, the M81CS (with Spherical stylus tip) and the M81ECS (with Biradial Elliptical stylus tip) feature extremely high reduction of hum pickup. M81CS has a tracking force of 3 to 5 grams; the M81ECS has a 2 to 4 gram tracking force.

- MODEL M81CS with Spherical stylus\$36.95
- MODEL N75C Spherical replacement stylus\$ 11.00
- MODEL M81ECS with Biradial Elliptical stylus\$47.95
- MODEL N75EC Biradial Elliptical replacement stylus\$ 16.30

Custom series of high trackability cartridges

For 3/4 to 1-1/2 Grams Tracking

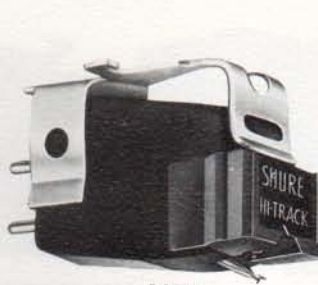
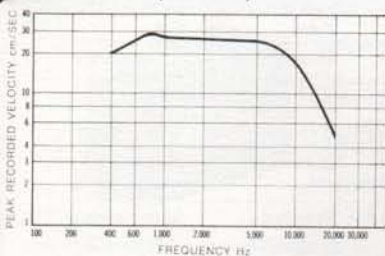
About the Custom Hi-Track Series

The trackability chart for the cartridges in this area tells you that these cartridges deliver high trackability at whisper-weight tracking forces — yet they are relatively modest in cost. Each also features a retractile stylus to prevent record damage, and is available in both Biradial Elliptical and Spherical stylus configurations. Manufactured and tested under the critical Shure quality control program.

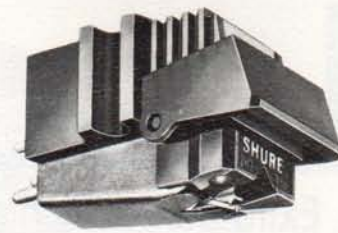
M91E Biradial Elliptical Stylus Easy-Mount Design M75G Type 2 Spherical Stylus with Built-in Snap-down Stylus Guard

Excellent trackability in the 3/4 to 1-1/2 gram range. Designed for use in high quality manual and automatic turntables. The M91E is available in standard cartridge configuration, or premounted in tone arm head for instant installation in Garrard, Miracord or Dual turntables. The M91E and M75G Type 2 have identical trackability characteristics. The M75G Type 2 is offered for those who prefer a Spherical stylus.

TRACKABILITY CHART
(at 1 Gram)



M91E



M75G Type 2

M91E and M75G Type 2 Specifications

Trackability at 1 gram tracking force (in cm/sec peak recorded velocity) 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

Tracking Force: 3/4 to 1-1/2 grams

Frequency Response: From 20 to 20,000 Hz

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.

Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 25 dB at 1,000 Hz

Channel Balance: Output from each channel within 2 dB

Stylus: M91E Biradial Elliptical diamond tip
17.8 microns (.0007 inch) frontal radius
5 microns (.0002 inch) side contact radii
25 microns (.0010 inch) wide between record contact points

Stylus: M75G Type 2 Spherical, 15 microns (.0006 inch) radius diamond tip

Inductance: 720 millihenries

DC Resistance: 630 ohms

Weight: M91E, 5.6 grams; M75G Type 2, 6.2 grams

Mounting: Standard 12.7 mm (1/2 inch) mounting centers

NOTE: To play 78 rpm records with any M91 Series cartridge use an N91-3, 63 microns (.0025 inch) Spherical stylus. To play 78 rpm records with any M75 Series cartridge use an N75-3, 63 microns (.0025 inch) Spherical stylus.

MODEL M91E Custom Hi-Track Cartridge with Biradial Elliptical stylus . . . \$66.95

MODEL N91E Biradial Elliptical replacement stylus . . . \$27.30

MODEL N91G Spherical replacement stylus . . . \$16.15

MODEL M75G Type 2 Custom Hi-Track Cartridge with Spherical stylus . . . \$54.50

MODEL N75G Type 2 Spherical replacement stylus . . . \$21.45

Premounted Cartridges

MODEL M91E-50H Premounted M91E Cartridge fits Elac/Miracord automatic turntables tracking from 3/4 to 1-1/2 grams . . . \$69.50

MODEL M91E-D12 Premounted M91E Cartridge fits all Dual "1200" Series automatic turntables tracking from 3/4 to 1-1/2 grams . . . \$70.50

M75EJ Type 2 and M75B Type 2 Specifications

Trackability at 2 grams tracking force (in cm/sec peak recorded velocity) 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

Tracking Force: 1-1/2 to 3 grams

Frequency Response: From 20 to 20,000 Hz

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.

Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 20 dB at 1,000 Hz

Channel Balance: Output from each channel within 2 dB

Stylus: M75EJ Type 2 Biradial Elliptical diamond tip

- 17.8 microns (.0007 inch) frontal radius
- 10 microns (.0004 inch) side contact radii
- 25 microns (.0010 inch) wide between record contact points

Stylus: M75B Type 2 Spherical 15 microns (.0006 inch) radius diamond tip

Inductance: 720 millihenries

DC Resistance: 630 ohms

Weight: 6.2 grams

Mounting: Standard 12.7 mm (1/2 inch) mounting centers

MODEL M75EJ Type 2 Custom Hi-Track Cartridge with Biradial Elliptical stylus . . . \$61.50

MODEL N75EJ Type 2 Biradial Elliptical replacement stylus . . . \$24.90

MODEL M75B Type 2 Custom Hi-Track Cartridge with Spherical stylus . . . \$48.95

MODEL N75B Type 2 Spherical replacement stylus . . . \$18.70

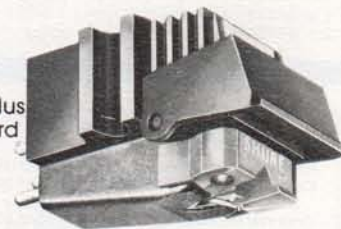
NOTE: To play 78 rpm records with the M75G Type 2, M75EJ Type 2 or M75B Type 2, use an N75-3 63 microns (.0025 inch) Spherical stylus. To play 78 rpm records with the M91E, use an N91-3 63 microns (.0025 inch) Spherical stylus.

M75B Type 2 Spherical Stylus with Built-in Snap-down Stylus Guard

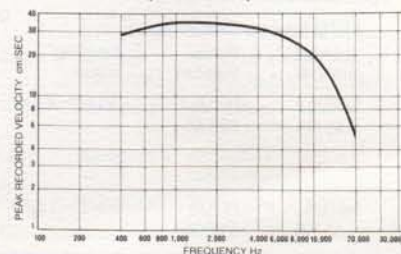
M75EJ Type 2 Biradial Elliptical Stylus with Built-in Snap-down Stylus Guard

For 1-1/2 to 3 Grams Tracking

The Shure M75EJ Type 2 and M75B Type 2 cartridges deliver excellent trackability at moderate tracking forces between 1-1/2 and 3 grams, making them ideal choices for moderately priced systems and for upgrading older systems. Trackability measurements (see chart) show that these cartridges track even heavily modulated recordings at velocities that are well above theoretical cutting limits of modern recordings. Choice of Biradial Elliptical or Spherical stylus. Both cartridges feature a built-in snap-down stylus guard. The M75EJ Type 2 and M75B Type 2 have identical trackability characteristics. The M75B Type 2 is offered for those who prefer a Spherical stylus.

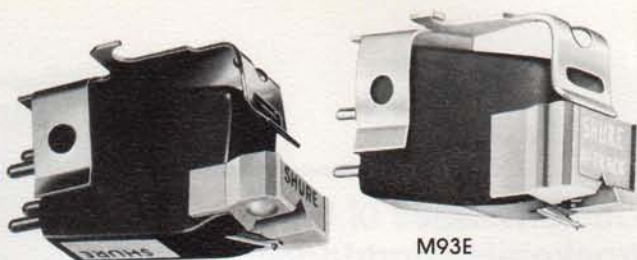


TRACKABILITY CHART
(at 2 Grams)





Extra durability high trackability cartridges



M75-6S, M75ECS and M75CS

For 1-1/2 to 5 Grams Tracking

Economy priced, but excellent performance when used in moderately priced record changers. Extra durable stylus assemblies for heavy use.

Easy-Mount Design

Clip-on easy-mount design cuts cartridge mounting time in half. First mount the specially designed retaining clip in the tone arm head — there's plenty of room for your fingers and a screwdriver. Then connect the leads and simply snap the cartridge into the retaining clip.

M93E Biradial Elliptical Stylus Hi-Track Cartridge

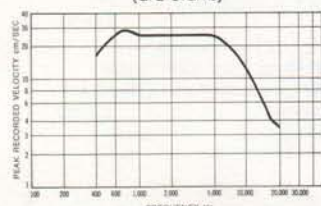
M75-6S, M75ECS and M75CS Hi-Track Cartridges

Designed to give heavy-duty performance at moderate prices in all modern turntables and tone arms. Four High Trackability Cartridges in a choice of tracking force ranges from 1-1/2 to 5 grams.

Trackability (in cm/sec peak recorded velocity) using a Shure/SME Arm:

Cartridge	Tracking Force				
	In Grams	400 Hz	1,000 Hz	5,000 Hz	10,000 Hz
M93E	2	18	25	24	13
M75-6S	2	18	25	24	14
M75CS	4	25	39	25	15
M75ECS	3	26	37	21	12

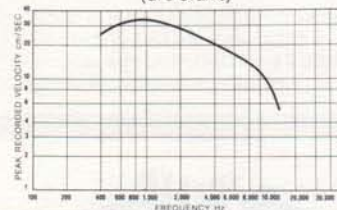
TRACKABILITY CHART FOR M93E AND M75-6S (at 2 Grams)



TRACKABILITY CHART FOR M75CS (at 4 Grams)



TRACKABILITY CHART FOR M75ECS (at 3 Grams)



Specifications

Frequency Response: From 20 to 20,000 Hz

Output Voltage: M93E and M75-6S, 6.2 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity; M75CS and M75ECS, 9.3 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity.

Channel Separation: Minimum 20 dB at 1,000 Hz

Channel Balance: Output from both channels within 2 dB.

Stylus: N93E Biradial Elliptical with diamond tip, 1-1/2 to 3 grams tracking force

18 microns (.0007 inch) frontal radius

10 microns (.0004 inch) side contact radii

25 microns (.0010 inch) wide between record contact points

N75ECS Biradial Elliptical with diamond tip, 2 to 4 grams tracking force

18 microns (.0007 inch) frontal radius

10 microns (.0004 inch) side contact radii

25 microns (.0010 inch) wide between record contact points

N75-6S Spherical 15 microns (.0006 inch) radius with diamond tip, 1-1/2 to 3 grams tracking force

N75CS Spherical 15 microns (.0006 inch) radius with diamond tip, 3 to 5 grams tracking force

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.

Inductance: 720 millihenries

DC Resistance: 630 ohms

Weight: M93E, 5.7 grams; M75-6S, M75ECS, M75CS, 5.6 grams

Mounting: Snap-in type; standard 12.7 mm (1/2 inch) mounting centers on retaining clip

NOTE: To play 78 rpm records with the M93E, use an N91-3, 63 microns (.0025 inch) Spherical stylus. Use an N75-3, 63 microns (.0025 inch) Spherical stylus to play 78 rpm records with the M75-6S, M75ECS or M75CS.

M93E and M75 Series Cartridges

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M93E \$55.95	N93E \$21.80	1-1/2-3 gm	Biradial (Elliptical)	10 microns x 18 microns (.0004 inch x .0007 inch)
M75-6S \$41.95	N75-6 \$13.10	1-1/2-3 gm	Spherical	15 microns (.0006 inch)
M75ECS \$44.50	N75EC \$16.30	2-4 gm	Biradial (Elliptical)	10 microns x 18 microns (.0004 inch x .0007 inch)
M75CS \$32.95	N75C \$11.00	3-5 gm	Spherical	15 microns (.0006 inch)

Specifications

Frequency Response: From 20 to 20,000 Hz

Output Voltage: 6.2 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity

Channel Separation: Minimum 20 dB at 1,000 Hz

Channel Balance: Output from both channels within 2 dB

Stylus: N70EJ Biradial Elliptical diamond tip, 10 x 18 microns (.0004 inch x .0007 inch), 1-1/2 to 3 grams tracking force. N70B Spherical diamond tip, 15 microns (.0006 inch) radius, 1-1/2 to 3 grams tracking force

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.

Inductance: 720 millihenries

DC Resistance: 630 ohms

Weight: 5.8 grams

NOTE: To play 78 rpm records with the M70 cartridges, use an N70-3, 63 microns (.0025 inch) Spherical stylus.

M70 Series Cartridges

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M70EJ \$48.95	N70EJ \$15.45	1-1/2-3 gm	Biradial (Elliptical)	10 microns x 18 microns (.0004 inch x .0007 inch)
M70B \$43.50	N70B \$12.05	1-1/2-3 gm	Spherical	15 microns (.0006 inch)

M70EJ and M70B Cartridges... the BETTER bargain!

For 1-1/2 to 3 Grams Tracking

Dollar for dollar, the Shure M70 cartridges are the easiest way to upgrade your hi-fi stereo system without straining your budget. The M70EJ (with Biradial Elliptical stylus tip) and the M70B (with the Spherical stylus tip) deliver an essentially flat 20 to 20,000 Hz frequency response — comparable to other brands of cartridges costing twice the price! The 1-1/2 to 3 gram tracking force range means the M70 cartridge series is suitable for the vast majority of stereo systems made today.



Trackability (in cm/sec peak recorded velocity) using a Shure/SME Arm:

Cartridge	Tracking Force			
	In Grams	400 Hz	1,000 Hz	10,000 Hz
M70EJ	2	19	26	12
M70B	2	19	26	12

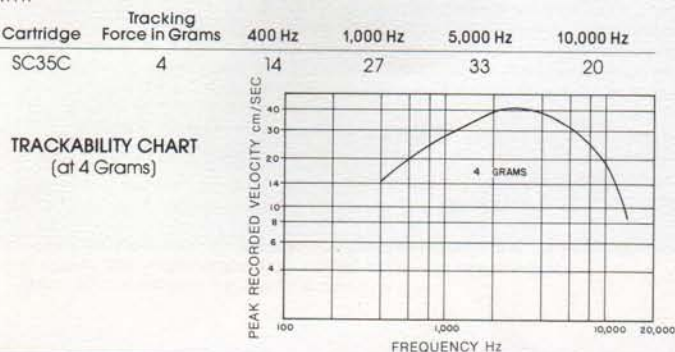
Professional Studio and Disco Phonograph Cartridge

For 4 to 5 Grams Tracking

SC35C Professional Studio Phono Cartridge

The SC35C uses a special stylus assembly that is rigid enough to withstand studio or disco punishment (such as backcuing), yet is compliant enough to offer excellent mid- and high-frequency reproduction. Cutaway stylus grip design and special "band alignment point," a Brilliant Orange dot on the stylus tip that increases tip visibility and makes record band location "missproof." Frequency response is extremely flat (± 1 dB) up to 15,000 Hz, with a smooth rolloff up to 20,000 Hz.

Trackability (in cm/sec peak recorded velocity) using a Shure/SME Arm:



Specifications

Frequency Response: From 20 to 20,000 Hz
Output Voltage: 5.0 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity
Channel Separation: Minimum 20 dB at 1,000 Hz
Channel Balance: Output from both channels within 2 dB
Stylus: SS35C Spherical diamond tip, 15 microns (.0006 inch) radius, 4 to 5 grams tracking force
Optimum Load: 47,000 ohms

resistance in parallel with 400 to 500 picofarads total capacitance per channel. Total capacitance includes both the tone arm wiring and amplifier input circuit
Inductance: 425 millihenries
DC Resistance: 975 ohms
Weight: 6.2 grams

NOTE: To play 78 rpm records with the SC35C cartridge, use an SS78E, 13 x 63 microns (.0005 x .0025 inch) Biradial (Elliptical) stylus. Set amplifier to "MONO" or "A+B."

SC35C Cartridge

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
SC35C	SS35C	4-5 gm	Spherical	15 microns (.0006 inch)
\$30.25	\$9.25			



Standard series of stereo dynetic® cartridges

M55E

For 3/4 to 2 Grams Tracking

A popular cartridge that gives professional performance within a moderate budget. Incorporates Biradial Elliptical stylus.

M55E Specifications

Tracking Force: 3/4 to 2 grams
Frequency Response: From 20 to 20,000 Hz
Output Voltage: 6.2 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity
Channel Separation: Minimum 22 dB at 1,000 Hz
Channel Balance: Output from each channel within 2 dB
Trackability at 1 gram Tracking Force: 12 cm/sec at 400 Hz
Stylus N55E: Biradial Elliptical diamond tip

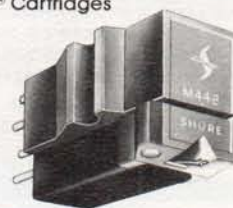
18 microns (.0007 inch) frontal radius
 5 microns (.0002 inch) side contact radii
 25 microns (.0010 inch) wide between record contact points
Optimum Load: 47,000 ohms resistance in parallel with 400 to 500 picofarads total capacitance per channel. Total capacitance includes both the tone arm wiring and amplifier input circuit
Inductance: 720 millihenries
DC Resistance: 630 ohms
Weight: 6.5 grams
Mounting: Standard 12.7 mm (1/2 inch) mounting centers

M55E Cartridge

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M55E	N55E	3/4-2 gm	Biradial (Elliptical)	5 microns x 18 microns (.0002 inch x .0007 inch)
\$45.95	\$17.10			

M44E, M44G, M44-7 and M44C Stereo Dynetic® Cartridges

Four cartridges in the under \$35 range to fill the needs of the hi-fi hobbyist who wants the most for his money in this price range. All have received ample critical acclaim as the best in their price class.



NOTE: All M44 Series styli are interchangeable.

M44E, M44G, M44-7 and M44C Specifications

Frequency Response: From 20 to 20,000 Hz
Output Voltage: M44E, 9.5 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity; M44G, 6.2 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity; M44-7 and M44C, 9.5 mV per channel at 1,000 Hz at 5 cm/sec peak recorded velocity
Channel Separation: Minimum 20 dB at 1,000 Hz
Channel Balance: Output from both channels within 2 dB
Stylus: N44E Biradial Elliptical diamond tip, 1-3/4 to 4 grams tracking force, 18 microns (.0007 inch) frontal radius, 10 microns (.0004 inch) side contact radii, 25 microns (.0010 inch) wide between record contact points
 N44G Spherical diamond tip, 15 microns

(.0006 inch) radius, 3/4 to 1-1/2 grams tracking force
 N44-7 Spherical diamond tip, 18 microns (.0007 inch) radius, 1-1/2 to 3 grams tracking force
 N44C Spherical diamond tip, 18 microns (.0007 inch) radius, 3 to 5 grams tracking force

Optimum Load: 47,000 ohms resistance in parallel with 400 to 500 picofarads total capacitance per channel. Total capacitance includes both the tone arm wiring and amplifier input circuit

Inductance: 720 millihenries
DC Resistance: 630 ohms
Weight: 6.5 grams

NOTE: To play 78 rpm records with any of the M44 Series or M55E Cartridges, use Model N44-3, 63 microns (.0025 inch) radius, Spherical tip stylus

M44 Series Cartridges

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M44E	N44E	1-3/4-4 gm	Biradial (Elliptical)	10 microns x 18 microns (.0004 inch x .0007 inch)
\$39.95	\$14.30			
M44G	N44G	3/4-1-1/2 gm	Spherical	15 microns (.0006 inch)
\$34.95	\$11.40			
M44-7	N44-7	1-1/2-3 gm	Spherical	18 microns (.0007 inch)
\$34.95	\$11.40			
M44C	N44C	3-5 gm	Spherical	18 microns (.0007 inch)
\$32.50	\$11.35			

M3D

All-Time Best-Seller

M3D Cartridge

Cartridge Number	Stylus Number	Tracking Force	Type of Stylus	Stylus Size
M3D	N3D	3-6 gm	Spherical	18 microns (.0007 inch)
\$25.95	\$8.75			



Tone arms • Preamp • Stylus gauge

NOTE: See Back Page for Shure/SME Series III Pickup Arm

SME Series II Improved Pickup Arm

For high quality systems. Recommended for use with all Shure high trackability cartridges tracking at up to 1-1/2 grams. Among its many distinguished advantages the Shure/SME Series II Improved features: (1) Ultra-low friction pivot points with high-precision, protected ball and knife-edge bearings (arm deflects either vertically or horizontally with less than .020 gram force applied at stylus tip). (2) Very low overall mass, with heavier elements positioned near the arm fulcrum. (3) Low distortion geometry. (4) Superlatively accurate adjustments for every factor related to precise tracking including height, overhang, tracking force and bias (antiskating). (5) Accepts cartridges weighing four to nine grams, and allows positive tracking force adjustment in 1/4-gram increments from 0 to 1-1/2 grams. (6) Deluxe hydraulic cuing control.

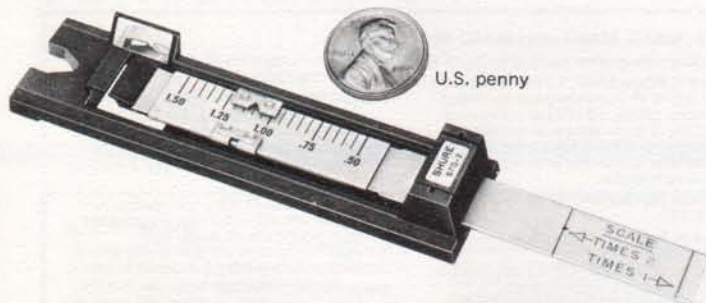
MODEL 3009 Series II Improved (non-removable shell)	\$177.00
MODEL 3009/S2 (removable shell)	\$190.00
MODEL S2 Extra shell for 3009/S2	\$ 11.00
MODEL LCL-4 Low-Capacitance Cable (for four-channel cartridges such as the M24H)	\$24.50



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. Recommended for use with cartridges tracking at 1-1/2 grams or more.

MODEL M232 for 12" recordings	\$52.00
MODEL A23H extra plug in head	\$ 5.25



Height: 13 mm (1/2")
Width: 138 mm (5-7/16")
Depth: 25 mm (1")
Weight: 20 grams (0.7 oz.)

SFG-2 Stylus Force Gauge

Low-cost, precision stylus force gauge is a must for the serious audiophile. Detects excessive or insufficient tracking force; allows precise resetting of stylus force to maintain optimum trackability and sharply reduce wear on records and stylus tip. Especially valuable when cartridges are switched. Accuracy to within 1/10th of a gram in 1/2 to 1-1/2 gram primary operating range; extended range to 3 grams. The SFG-2 uses friction-free, stainless steel pivot points and easy-to-read reference bars in a permanently accurate "balance" system — no springs to weaken or wear out. Special tilted mirror reflects reference bar positions for effortless, accurate reading. Greater accuracy in measurement is obtained because the SFG-2 is used with the tone arm in actual playing position.

MODEL SFG-2 Stylus Force Gauge	\$6.30
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NOTE: SME tone arms are distributed by Shure only in the U.S.

F.D. 200 FLUID DAMPER

A standard feature of the new Series III precision tone arm, the F.D. 200 is also available separately for those who wish to update or optimize the already superb performance of the Shure/SME Series II Improved tone arm.

WHAT IT DOES FOR THE SERIES II IMPROVED

The F.D. 200 Fluid Damper is a refined, miniature "shock absorber," which can discriminate between forces which might cause exaggerated arm motion and forces normally encountered in tracking your records. While it never interferes with normal arm motion, the F.D. 200 gently but effectively resists spurious or potentially damaging stylus forces. The benefit of this action is: (1) smoother bass; (2) improved trackability; (3) resistance to external shock; and (4) reduction of potentially record- or stylus-damaging low-frequency resonance effects. Effective in both planes, the fluid damper can be adjusted to provide whatever rate of damping your cartridge requires.

MODEL F.D. 200 Fluid Damper	\$59.50
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M64 and M64-2E Universal Stereo Preamp For Phonographs, Tape Decks, Microphones

- Converts phonos to accept magnetic cartridges
- Equalizes and amplifies tape decks
- Boosts microphone output
- Ideal as a broadcast phono preamplifier

The Model M64 is a low-cost, versatile, compact, low noise and low distortion stereo preamplifier that provides gain, equalization, and choice of impedances and levels to solve an unusually broad variety of preamplification and equalization problems. Silicon transistor circuitry, easy permanent-mount installation.

M64 and M64-2E Specifications

Frequency Response:

- Flat ± 2 dB from 20 Hz to 20 kHz
- Phono ± 2 dB from 40 Hz to 15 kHz (Standard RIAA Curve)
- Tape ± 2 dB from 50 Hz to 15 kHz (7-1/2 IPS NAB Curve)

Distortion: Under 1% total harmonic distortion for an output of 2 volts at 1 kHz in phono, flat and tape positions

Channel Separation: Minimum 50 dB at 1 kHz

Channel Balance: Channels matched to within 2 dB at 1 kHz

Dimensions: 59 mm (2-21/64") High x 142 mm (5-19/32") Wide x 114 mm (4-1/2") Deep

Weight: 794 grams (1-3/4 lb.)

Certifications: Model M64 (only) is listed by UL and CSA

MODEL M64 Preamp — For 120 Vac 50/60 Hz	\$80.75
MODEL M64-2E Preamp — For 240 Vac 50/60 Hz	\$88.75

Stylus Assembly the Inside Story...

Rather than a simple "needle," the Shure stylus is a complex miniature assembly consisting of many distinct, interacting components and subassemblies. Electrodischarge machining, precision pressure-fitting, shadowgraph positioning, are a few of the exacting processes upon which stylus excellence and uniformity depends.

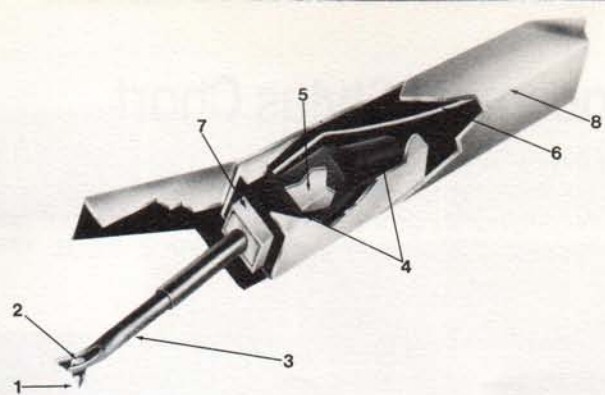


THIS...PROTECTS YOUR MOST EXPENSIVE HI-FI INVESTMENT.

Don't jeopardize your record collection by using imitations. Look for the name SHURE on the stylus grip and the words "This Stereo Dynetic® stylus is precision manufactured by Shure Brothers Inc." on the box.

The Inside Story...

1. Full diamond stone—equal in quality to the finest gemstones, it is meticulously shaped and polished, then assembled into an accurately machined mounting. The result: flawless nude diamond stylus tips—Hyperelliptical in the V15 Type IV; Hyperbolic in the M24H; Biradial (Elliptical) in the V15 Type III, M95ED, M75ED Type 2, M91ED; and Spherical in the V15 IV-G, V15 III-G, M91GD.
2. Doubly secure mounting—precisely aligned, the diamond is first fitted into its socket, then high-temperature cemented to ensure permanent geometric orientation. No shortcuts are ever used.



3. Ultra-thin wall stylus shank—telescoped structure in V15 Type IV for low mass, strength without extra weight, never a tracking error due to uncontrolled flexing at any frequency. Ancorlite™ control lever in V15 Type III, M24H, M95 Series, M75 Type 2, and M91 Series for rigidity where needed to prevent tracking errors.
4. Viscoelastic suspension block—the efficient "heart" of the bearing which defines the pivot point of the stylus. In the V15 Type IV and M24H, a two-function bearing system separately optimized for high frequencies and for low frequencies to ensure lowest dynamic mechanical impedance.
5. High-energy magnet—super-strong magnetic field, smallest size, with electro-machined aperture for exact positioning of stylus shank. Pivot location assures minimal contribution to effective mass of moving system.
6. Precisely adjusted, resonance-free support wire—proper orientation to record assured, collapse of cantilevered shank prevented, with no degradation of performance throughout the cartridge's operating range.
7. Pivot control—correct location and function of bearing and support wire ensured.
8. Stylus assembly carrier—undeviatingly maintained placement of stylus assembly relative to pickup coils within cartridge body.

NOTE: For more information about the importance of using Shure cartridges and styli, see Page Two of this catalog.

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 ultra-lightweight tracking force cartridges (3/4 to 1-1/4 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 recording beyond salvation in a single playing!

SHURE PERFORMANCE DEPENDS ON A GENUINE SHURE STYLUS

If you find that a new stylus assembly is required, don't settle for imitations of Shure styli. These imitations cannot possibly match the performance afforded by a genuine Shure replacement stylus. And because cartridge performance—especially trackability—depends so largely on the stylus assembly, always insist on a genuine Shure replacement stylus.

An inferior replacement stylus 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! Always 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 Spherical 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 (2-1/2 grams maximum).

Any M44 Cartridge...Substitute N55E stylus for greater compliance and lighter tracking (at 3/4 to 2 grams). For tracking at 1-3/4 to 4 grams, use the N44E stylus.

Any M71, M73 or M75 Cartridge...Substitute N75 Type 2 stylus for higher trackability.

Any M91, M92 or M93 Cartridge...Substitute N91ED stylus for lower stylus tip mass and higher trackability at 3/4 to 1-1/2 grams.

REPLACEMENT DIAMOND STYLUS FOR OLDER SHURE CARTRIDGES

MODEL N21D Stylus. 18 microns (.0007 inch) Spherical tip radius. Direct replacement for M7/N21D and M3/N21D cartridges \$12.20

MODEL N22D Stylus. 13 microns (.0005 inch) Spherical tip radius. Fits M22, M7/N21D, M3/N21D, M3D and M7D cartridges \$27.50

MODEL N44-1 Stylus. 25 microns (.0010 inch) Spherical tip radius. For mono L.P.s. Fits M44 series, M55E and V15 Type I cartridges \$11.10

MODEL N77 Stylus. 18 microns (.0007 inch) Spherical tip radius. Fits M77 cartridge \$12.75

MODEL VN2E Stylus. Biradial Elliptical tip. Fits V15 Type I \$29.50

MODEL VN7 Stylus. Spherical tip radius. Fits V15 Type II-7 \$28.50

MODEL VN15E Stylus. Biradial Elliptical tip. Fits V15 Type II \$31.50

STYLI FOR 78 RPM RECORDS

If you have a large collection of 78 rpm records, you can equip the M31E, M32E, any M44 series cartridge, M55E, M70, M71, M73, M75, M75 Type 2 series, M81, M91, M92, M93 series, M95, SC35C, V15 Type I, II, III or IV cartridges with a special stylus for 78 rpm records.

MODEL N44-3 Stylus. 63 microns (.0025 inch) Spherical tip radius. Fits any V15 Type I, M44 series or M55E cartridge \$11.10	MODEL N95-3 Stylus. 63 microns (.0025 inch) Spherical tip radius. Fits M95ED and M95EJ cartridges \$12.30
MODEL N70-3 Stylus. 63 microns (.0025 inch) Spherical tip radius. Fits M70 series cartridges \$10.90	MODEL SS78E Stylus. 63 microns x 13 microns (.0025 x .0005 inch) Biradial Elliptical tip radii. Fits SC35C cartridge \$14.50
MODEL N75-3 Stylus. 63 microns (.0025 inch) Spherical tip radius. Fits the M71, M73, M75, M75 Type 2 series, M81 and V15 Type II cartridges \$11.10	MODEL VN78E Stylus. 63 microns x 18 microns (.0025 inch x .0007 inch). Biradial Elliptical tip radii. Fits V15 Type III cartridge \$33.00
MODEL N91-3 Stylus. 63 microns (.0025 inch) Spherical tip radius. Fits the M91, M92, M93, M91GD and M91ED series cartridges \$11.10	MODEL VN478E Stylus. 63 microns x 18 microns (.0025 inch x .0005 inch). Biradial Elliptical tip radii. Fits V15 Type IV cartridge \$58.00

All styli designed for use with 78 rpm recordings track between 1-1/2 grams and 3 grams, except the VN478E which tracks at 3/4 to 1-1/4 grams, the N32-3 which tracks at 2-1/2 to 5 grams, and the SS78E which tracks at 4 to 5 grams.

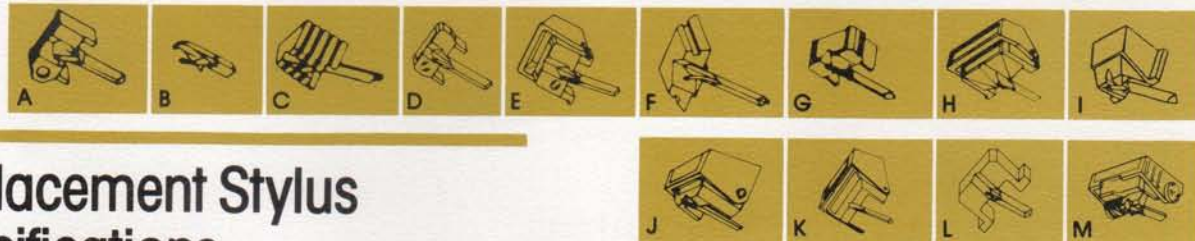
Replacement Stylus Chart

(See facing page for specifications.)

The genuine Shure replacement styli listed below provide performance at least equal to the original stylus. If your cartridge model is not listed, write to Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204.

Cartridge Model	Replacement Stylus Model	Cartridge Model	Replacement Stylus Model	Cartridge Model	Replacement Stylus Model
AA92E	N75ED Type 2	M71MB	N75-6	M92EJ	N91E
AMC50E	N55E	M71MC	N75C	M92G	N91GD
AM97EE	N75ED Type 2	M71-6	N75-6	M93E	N93E
AV200C	N75C	M73G	N75G Type 2	M95ED	N95ED
AV300E	N32E	M73MG	N75G Type 2	M95EJ	N95EJ
AV400-HTE	N91E	M73PE	N31E	M95G	N95G
DM101MG	N91GD	M73PED	N75ED Type 2	M98/A	N44-7
DM103ME	N91ED	M73SG	N75G Type 2	M99/A	N99
DU10-M75E Type 2	N75ED Type 2	M75B Type 2	N75B Type 2	M99/AT6	N99
ETS-109E	N75ED Type 2	M75CS	N75C	M99/M10	N99
HTE	N75ED Type 2	M75E	N75ED Type 2	P3EC	N32E
HT9ES	N91E	M75E Type 2	N75ED Type 2	PHASE 1000-4	N75ED Type 2
M3D	N3D	M75ECS	N75EC	P4EJ	N75EJ Type 2
M3/N21D	N21D	M75ED Type 2	N75ED Type 2	R7C	N75C
M7D	N3D	M75EJ Type 2	N75EJ Type 2	R25EC	N75EC
M7DMF	N3D	M75E-D19	N75ED Type 2	R27E	N75ED Type 2
M7/N21D	N21D	M75E-D19 Type 2	N75ED Type 2	R47EB	N75EJ Type 2
M8D	N3D	M75EM	N75ED Type 2	R700E	N75ED Type 2
M21	N21D	M75EM Type 2	N75ED Type 2	R1000E	N91ED
M22	N22D	M75E-P20 Type 2	N75ED Type 2	RM900E	N91E
M24H	N24H	M75E-95G	N75ED Type 2	RM910E	N75EJ Type 2
M31E	N31E	M75E-95G Type 2	N75ED Type 2	RM930C	N75C
M32E	N32E	M75G	N75G Type 2	RS100	N3D
M33-5	N99	M75G Type 2	N75G Type 2	RS120E	N32E
M44C	N44C	M75MB	N75-6	RS220E	N31E
M44E	N44E	M75MB Type 2	N75B Type 2	SC35C	SS35C
M44EM	N44E	M75MG	N75G Type 2	SL95-M75E Type 2	N75ED Type 2
M44G	N44G	M75MG Type 2	N75G Type 2	V15	VN2E
M44MA	N44-7	M75MG-D	N75G Type 2	V15 Type II	VN15E
M44MB	N44-7	M75 Type D	N75-6	V15 Type II Improved	VN15E
M44MC	N44C	M75-6	N75-6	V15 II-7	VN7
M44MF	N44G	M75-6 Type 2	N75B Type 2	V15 Type III	VN35E
M44MG	N44G	M75-6S	N75-6	V15 III-G	VN3G
M44-5	N44G	M77	N77	V15 Type IV	VN45HE
M44-7	N44-7	M77D	N77	V15 IV-G	VN4G
M55E	N55E	M77MD	N77	WC975	N91E
M55EM	N55E	M80E	N55E	24-0003	N3D
M70B	N70B	M80E-D	N55E	24-0044	N44E
M70EJ	N70EJ	M80E-D19	N55E	42-238	N3D
M71C	N75C	M81CS	N75C		
M71EB	N75EJ Type 2	M81ECS	N75EC		
M71EMB	N75EJ Type 2	M81MC	N75C		
		M91E	N91E		
		M91ED	N91ED		
		M91G	N91G		
		M91GD	N91GD		
		M91MGD	N91GD		

STYLUS GROUP



Replacement Stylus Specifications

Replacement Stylus Model	Stylus Group	Tip Type	Stylus Radius	Stylus Color Code	Tracking Force (Grams)
N3D	B	Spherical	18 microns (.0007")	(A)	3-6
N21D	B	Spherical	18 microns (.0007")	(B)	1-1/2-2-1/2
N22D	B	Spherical	15 microns (.0006")	(C)	3/4-1-1/2
N24H	K	Hyperbolic		Gold	1-1-1/2
N31E	F	Elliptical	5 microns x 18 microns (.0002" x .0007")	Yellow	1-2
N32E	F	Elliptical	10 microns x 18 microns (.0004" x .0007")	Brown	2-1/2-5
N44C	A	Spherical	18 microns (.0007")	Light Blue	3-5
N44E	A	Elliptical	10 microns x 18 microns (.0004" x .0007")	Brown	1-3/4-4
N44G	A	Spherical	15 microns (.0006")	Gray	3/4-1-1/2
N44-7	A	Spherical	18 microns (.0007")	White	1-1/2-3
N55E	A	Elliptical	5 microns x 18 microns (.0002" x .0007")	Yellow	3/4-2
N70B	L	Spherical	15 microns (.0006")	Beige	1-1/2-3
N70EJ	L	Elliptical	10 microns x 18 microns (.0004" x .0007")	Light Green	1-1/2-3
N75B Type 2	D	Spherical	15 microns (.0006")	Beige	1-1/2-3
N75C	D	Spherical	15 microns (.0006")	Blue	3-5
N75ED Type 2	D	Elliptical	5 microns x 18 microns (.0002" x .0007")	Black	3/4-1-1/2
N75EJ Type 2	D	Elliptical	10 microns x 18 microns (.0004" x .0007")	Light Green	1-1/2-3
N75-6 *	D	Spherical	15 microns (.0006")	Beige	1-1/2-3
N77	C	Spherical	18 microns (.0007")	Black	3-6
N91E *	G	Elliptical	5 microns x 18 microns (.0002" x .0007")	Black	3/4-1-1/2
N91ED	G	Elliptical	5 microns x 18 microns (.0002" x .0007")	Yellow	3/4-1-1/2
N91G *	G	Spherical	15 microns (.0006")	Gray	3/4-1-1/2
N91GD	G	Spherical	15 microns (.0006")	Red	3/4-1-1/2
N93E	G	Elliptical	10 microns x 18 microns (.0004" x .0007")	Light Green	1-1/2-3
N95ED	J	Elliptical	5 microns x 18 microns (.0002" x .0007")	Yellow	3/4-1-1/2
N95EJ	J	Elliptical	10 microns x 18 microns (.0004" x .0007")	Light Green	1-1/2-3
N95G	J	Spherical	15 microns (.0006")	Gray	3/4-1-1/2
N99	C	Spherical	18 microns (.0007")	Gray	1-1/2-3
SS35C	I	Spherical	15 microns (.0006")	Blue	4-5
VN2E	A	Elliptical	5 microns x 18 microns (.0002" x .0007")	Black	3/4-1-1/2
VN3G	H	Spherical	15 microns (.0006")	Gray	3/4-1-1/4
VN4G	M	Spherical	15 microns (.0006")	(D)	3/4-1-1/4 (F)
VN7	E	Spherical	18 microns (.0007")	Gray	3/4-1-1/2
VN15E	E	Elliptical	5 microns x 18 microns (.0002" x .0007")	Black	3/4-1-1/2
VN35E	H	Elliptical	5 microns x 18 microns (.0002" x .0007")	Black	3/4-1-1/4
VN45HE	M	Hyperelliptical		(E)	3/4-1-1/4 (F)

***Note:** For improved performance, replacement styli with an asterisk (*) may be upgraded with the following stylus model numbers:

Original Stylus

- N75-6
- N91E
- N91G

Recommended Upgrading Stylus

- N75B Type 2
- N91ED
- N91GD

Styli for M75 Series may be used with V 15 Type II, M71 Series, M73 Series, (except M73PE), M81 Series, and M91, M92, and M93 Series.

- (A) Gold Spade—Large Silver Shank
- (B) Gold Spade—Small Silver Shank
- (C) Silver Spade—Silver Shank
- (D) Black with Gray Nameplate
- (E) Black with Black Nameplate
- (F) To obtain recommended tracking force with Dynamic Stabilizer operating, .5 grams (offset) must be added.



New! SME Series III Precision Pickup Arm

"The best pickup arm in the world"

The state of the art in independent tone arms. The Series III Precision Pickup Arm is the culmination of research and development extending over more than seven years. It embodies a number of significant breakthroughs as well as evolutionary improvements over its distinguished Shure/SME predecessor. For example: Nitrogen-hardened titanium tubing* having a wall thickness only twice the diameter of the average human hair provides a previously-unattainable strength-to-weight ratio. The arm has a soft core and an internal fibrous lining which results in a natural damping of the vibration fed into the arm by the cartridge.

The Series III "cartridge carrier," a combination tone arm and shell in one piece, is removable and interchangeable for multi-cartridge use. Its coupling is close to the fulcrum so it makes a minimum contribution to the Series III total effective mass (only 5.05 grams measured at 9 inch radius)! The F.D. 200 Fluid Damper is standard on the Series III. (See description on Page 12.)

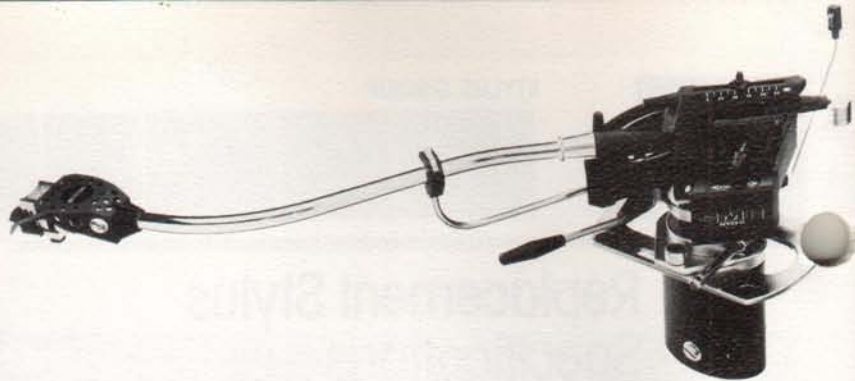
INCOMPARABLE HIGH FIDELITY PERFORMANCE!

THE SME SERIES III PRECISION PICKUP ARM WITH THE NEW SHURE V15 TYPE IV CARTRIDGE

The combination of the Shure V15 Type IV cartridge and the SME Series III tone arm transcends previous tone arm-cartridge system performances to a significant degree. It is nothing short of state of the art in connoisseur-class high fidelity reproduction capability. (See Pages Four and Five for detailed information on the V15 Type IV cartridge.)



*Superior to conventional materials and even to the carbon fiber used in many of today's finer tone arms.



FEATURES OF THE UNIQUE SME SERIES III PRECISION PICKUP ARM:

- Unique balance system enables cartridges weighing 0 to 12 grams to be operated under conditions of minimum inertia.
- Integral carrying arm replaces conventional tone arm and shell and is interchangeable for multi-cartridge use.
- Positive tracking adjustment through rack and pinion.
- Main pillar hardened and ground.
- Low friction pivots, vertical axis: high precision fully protected ball races. Horizontal axis: knife edges. Less than .02 gram applied at the stylus will deflect the arm.
- Vertical and horizontal bearing axes intersect at stylus level for minimum warp-wow.
- Precise tracking force up to 2.5 grams can be applied without a tracking force gauge. 0 to 1.5 grams fine adjustment plus 1 gram coarse adjustment.
- Bias (antiskating) with fine adjustment graduated 0 to 2.5 grams.
- Longitudinal and lateral balance with fine adjustment.
- Ultra low-distortion geometry.
- Fluid-damped lowering and raising control.
- Output: twin phono-sockets plus separate ground.
- 1.22 meters (4 ft.) audio lead. Total capacitance with arm 293 pF per channel. Lead incorporates 200 pF padding capacitors which can be removed or replaced with another value.
- All electrical contacts heavily gold-plated.
- Superb camera finish throughout.

MODEL 3009 Series III\$294.00
MODEL S3CA-1 SME Series III Extra headshell and carrier tube\$39.60

"An Audio Obstacle Course — Era IV" the new Shure TTR115 Trackability Test Record

An Audio Obstacle Course, Era IV (TTR115) is a unique test record developed and produced by Shure to help evaluate total cartridge performance by analyzing its most important performance characteristic: total trackability.

It is a highly refined and completely updated successor to Shure's internationally famous TTR101 and TTR110 trackability test recordings. This new record enables you to evaluate trackability of the cartridge with musical instrument sounds covering high, mid-range, and low frequencies at graduated recorded velocity levels, and various combinations of these instruments which present even greater demands on the cartridge. These tests incorporate many complexities and difficulties encountered in today's increasingly demanding commercial recordings under controlled conditions that enable you to

define and isolate problem areas in your own playback system, without the need for test instruments. There are many other important tests, such as an arm-cartridge resonance test which indicates the cartridge-tone arm system's ability to reject warp effects. Level, balance, and phasing tests, etc., are also included. Complete with instructions and evaluation guidelines.

NO. TTR115 Trackability Test Record\$5.50

An excellent trackability test recording, somewhat less demanding than the TTR115

NO. TTR110 Trackability Test Record\$4.50



Shure Brothers Inc.
222 Hartrey Avenue, Evanston, IL 60204.