

THE PREMIER FAMILY
OF STEREO SOUND REPRODUCERS



22



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

THE ALL-IMPORTANT SOURCE OF SOUND

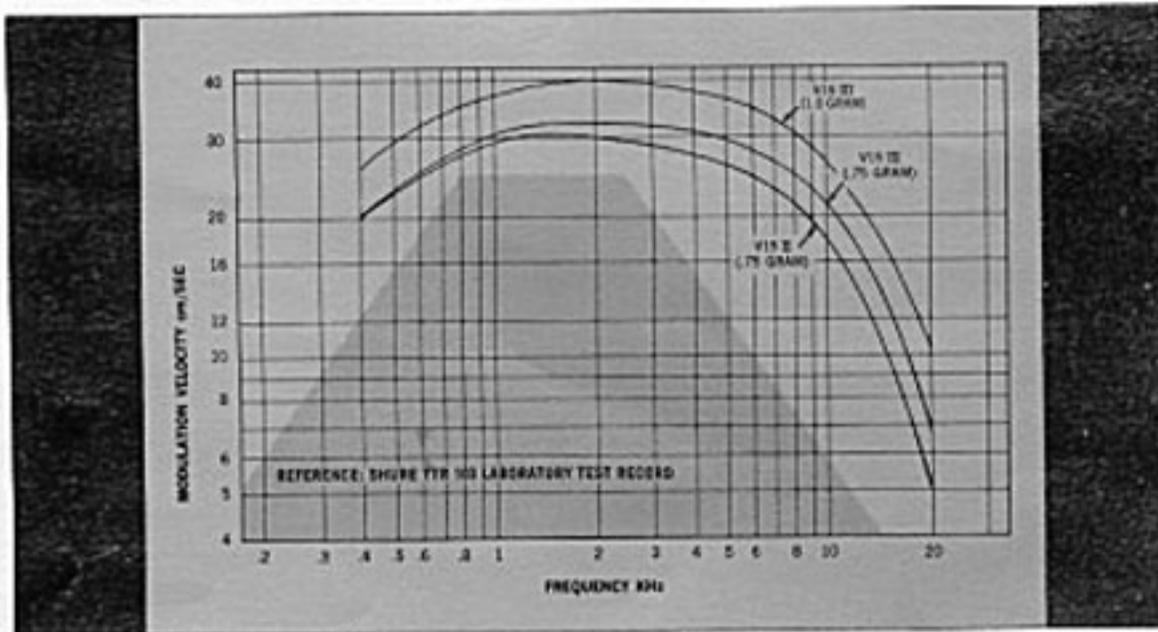
True high fidelity sound re-creation begins at the *source of sound*. Just as a camera is no better than its lens, a phonograph system is no better than its cartridge. This breathtakingly precise miniaturized electric generator (that's really what it is) must carry the full burden of translating the 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.

ABOUT TRACKABILITY

Trackability is the measure of a cartridge's *total* performance. The "secret" of High Trackability is to enable the stylus tip to follow the hyper-complex record groove not only up to but 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.



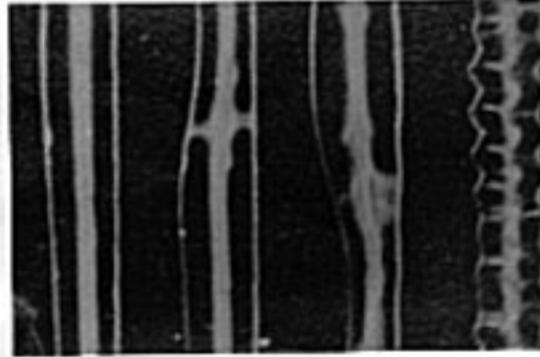
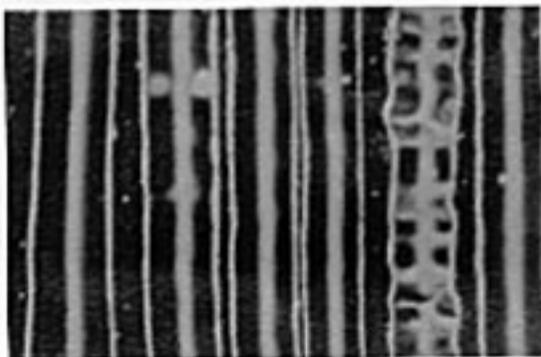
CARTRIDGES AT A GLANCE



The trackability curve above dramatizes the differences in trackability between the V-15 Type II Improved (shown at $\frac{3}{4}$ gram) and the extraordinary Shure V-15 Type III (shown at $\frac{3}{4}$ and 1 gram). The shaded area represents the recommended theoretical limits for cutting recorded velocities. *Modulation velocities* are shown up the left edge, *frequency range* is registered across the bottom. *The smoother the curve of the cartridge being tested and the greater its distance above the shaded area, the greater its trackability.*

Any good cartridge will track these grooves . . .

but only a high trackability cartridge can cope with this groove!



THE RECORD GROOVE

The photomicrograph above left portrays an errant, hard-to-track castanet sound in an otherwise conservatively modulated recording. The somewhat more heavily modulated grooves shown above right are an exhilarating combination of flutes and maracas with a low frequency rhythm complement from a recording cut at sufficiently high velocity to deliver precise and definitive intonation, full dynamic range, and optimum signal-to-noise ratio. Neither situation is a rarity, far from it. They are the very essence of today's highest fidelity recordings. But when played with an ordinary "good" quality cartridge, the stylus invariably loses contact with these demanding grooves—the castanets sound raspy, while the flute and maracas sound fuzzy, leaden, and "torn apart." One of the most common, most universally audible examples of mistracking occurs on vocal recordings when a cartridge attempts to track sibilant "sss" and "th" sounds. Mistracking here produces clearly audible, intrusive "sibilant distortion." Increasing tracking weight to force the stylus to stay in the groove will literally shave off the groove walls. Only High Trackability cartridges will consistently and effectively track all the grooves in today's recordings at light, record-saving pressures . . . even with cymbals, orchestral bells, and other difficult-to-track instruments. They will preserve the fidelity and reduce distortion from all your records, old and new.

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; 3,055,989; 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. OTHER PATENTS PENDING.

	Model No.	Page No.	Trackability CM/SEC.				Trackability Measured at (Grams)	Tracking Force Range	Stylus Configuration	Type
			400 Hz	1000 Hz	5000 Hz	10,000 Hz				
SUPER-TRACK (PLUS) V-15 TYPE III SERIES	V-15 Type III	4-5	26	38	35	26	1 Gram	$\frac{3}{4}$ to $1\frac{1}{4}$	 .0002" x .0007" Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard
	V-15 III-G	4-5	26	38	35	26	1 Gram	$\frac{3}{4}$ to $1\frac{1}{4}$	 .0006" Spherical	Standard Mount with Snap-Down Stylus Guard
DELUXE HIGH TRACK-ABILITY SERIES	M91ED	6	22	33	28	19	1 Gram	$\frac{3}{4}$ to $1\frac{1}{2}$	 .0002" x .0007" Biradial Elliptical	Standard Mount
	M91GD	6	22	33	28	19	1 Gram	$\frac{3}{4}$ to $1\frac{1}{2}$	 .0006" Spherical	Standard Mount
	M75ED Type 2	6	22	33	28	19	1 Gram	$\frac{3}{4}$ to $1\frac{1}{2}$	 .0002" x .0007" Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard
CUSTOM HIGH TRACK-ABILITY SERIES	M91E	7	20	28	25	18	1 Gram	$\frac{3}{4}$ to $1\frac{1}{2}$	 .0002" x .0007" Biradial Elliptical	Snap-In Easy-Mount
	M75G Type 2	7	20	28	25	18	1 Gram	$\frac{3}{4}$ to $1\frac{1}{2}$	 .0006" Spherical	Standard Mount with Snap-Down Stylus Guard
	M75EJ Type 2	7	28	35	30	20	2 Grams	$1\frac{1}{2}$ to 3	 .0004" x .0007" Biradial Elliptical	Standard Mount with Snap-Down Stylus Guard
	M75B Type 2 (Formerly M75-6 Type 2)	7	28	35	30	20	2 Grams	$1\frac{1}{2}$ to 3	 .0006" Spherical	Standard Mount with Snap-Down Stylus Guard
EXTRA DURABILITY HIGH-TRACK SERIES	M93E	8	18	25	24	13	2 Grams	$1\frac{1}{2}$ to 3	 .0004" x .0007" Biradial Elliptical	Snap-In Easy-Mount
	M75-6S	8	18	25	24	13	2 Grams	$1\frac{1}{2}$ to 3	 .0006" Spherical	Snap-In Easy Mount
	M75ECS	8	14	25	20	14	3 Grams	2 to 4	 .0004" x .0007" Biradial Elliptical	Snap-In Easy-Mount
	M75CS	8	14	25	20	14	3 Grams	3 to 5	 .0006" Spherical	Snap-In Easy-Mount

THE SHURE CARTRIDGES LISTED ABOVE ARE COMPATIBLE WITH ALL FOUR-CHANNEL MATRIX SYSTEMS

Several matrix (or mixing) systems have been devised that permit four channels of program material to be recorded and reproduced on phonograph records. Although these systems differ in detail, they all require careful matching and control of pickup response to obtain optimum separation into four channels in playback.

The same performance parameters that apply to conventional stereo—especially *trackability*—also apply to four-channel systems, and because mistracking is one of the most noticeable types of distortion in four-channel playback systems, Shure recommends the use of the highest trackability cartridge compatible with your playback equipment for four-channel use. The use of cartridges with poor trackability can upset the balance of four-channel systems causing spurious unwanted signals, resulting in less-than-satisfactory performance.

STANDARD STEREO DYNETIC SERIES	M55E	9	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.	$\frac{3}{4}$ to 2	 .0002" x .0007" Biradial Elliptical	Standard Mount
	M44E	9		$1\frac{1}{4}$ to 4	 .0004" x .0007" Biradial Elliptical	Standard Mount
	M44G	9		$\frac{3}{4}$ to $1\frac{1}{2}$	 .0006" Spherical	Standard Mount
	M44-7	9		$1\frac{1}{2}$ to 3	 .0007" Spherical	Standard Mount
	M44C	9		3 to 5	 .0007" Spherical	Standard Mount
	M7/N21D	9		$1\frac{1}{2}$ to $2\frac{1}{2}$	 .0007" Spherical	Standard Mount
	M3D	9		3 to 6	 .0007" Spherical	Standard Mount

ANYTHING II COULD DO III CAN DO BETTER!

... introducing a singular achievement
in phono cartridge design
— the V-15 Type III!

Now, after seven years of extensive laboratory research and development, the remarkable Shure V-15 Type III Phono Cartridge is ready for the connoisseur's high fidelity system. It clearly defines the outer limits of the state of the art of phono cartridge design. It is indeed the worthy successor to the world-acclaimed Shure V-15 Type II Improved.

Among its brilliant innovations is an all-new laminated magnetic core structure, and an exquisitely designed stylus assembly with 25% effective reduction of tip mass.

Result: (1) Higher-than-ever trackability at the ultra-light tracking forces of the 1970's; (2) an astonishingly flat frequency response with no noticeable emphasis or de-emphasis at any frequency; (3) an extended dynamic range even beyond that of our V-15 Type II Improved; and (4) all this without a reduction in output level.

We call the Type III the Synergistic Cartridge because it maintains all performance factors in perfect equilibrium to produce a total audio effect that is greater than the sum of its individual improvements would indicate.

All in all, the V-15 Type III offers you an extraordinary listening experience.



SUPER-TRACK "PLUS" CARTRIDGES

For 3/4 to 1 1/4 Grams Tracking



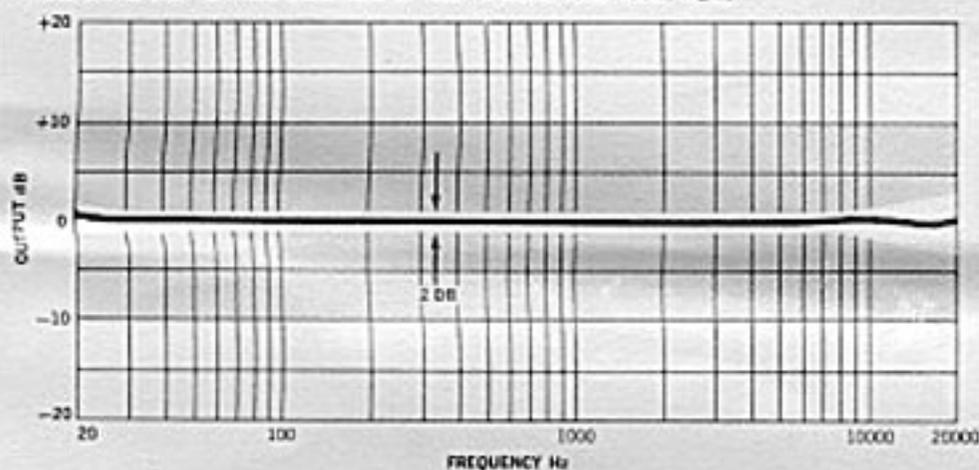
V-15 TYPE III SUPER-TRACK "PLUS" PHONO CARTRIDGE

THE SOUND OF THE V-15 TYPE III

The sound of the V-15 Type III, paradoxically, is due in no small part to an absence of a sound of its own. In no way does it interpose itself upon the music. Thus, the resultant sound of the Type III is not "sweet," "mellow," or "brilliant" . . . it is the sound of the recording itself! Its truly flat, unaccented frequency response and extended dynamic range mean a hearable difference in all your recordings, old and new.

In extended listening, the uncolored neutral timbre and tonality of the Type III results in a remarkable listening experience in which complex melodic lines from every conceivable kind of music — from baroque to rock — utilizing a wide variety of recording techniques and playback equipment, are delineated with startling and hitherto unheard clarity.

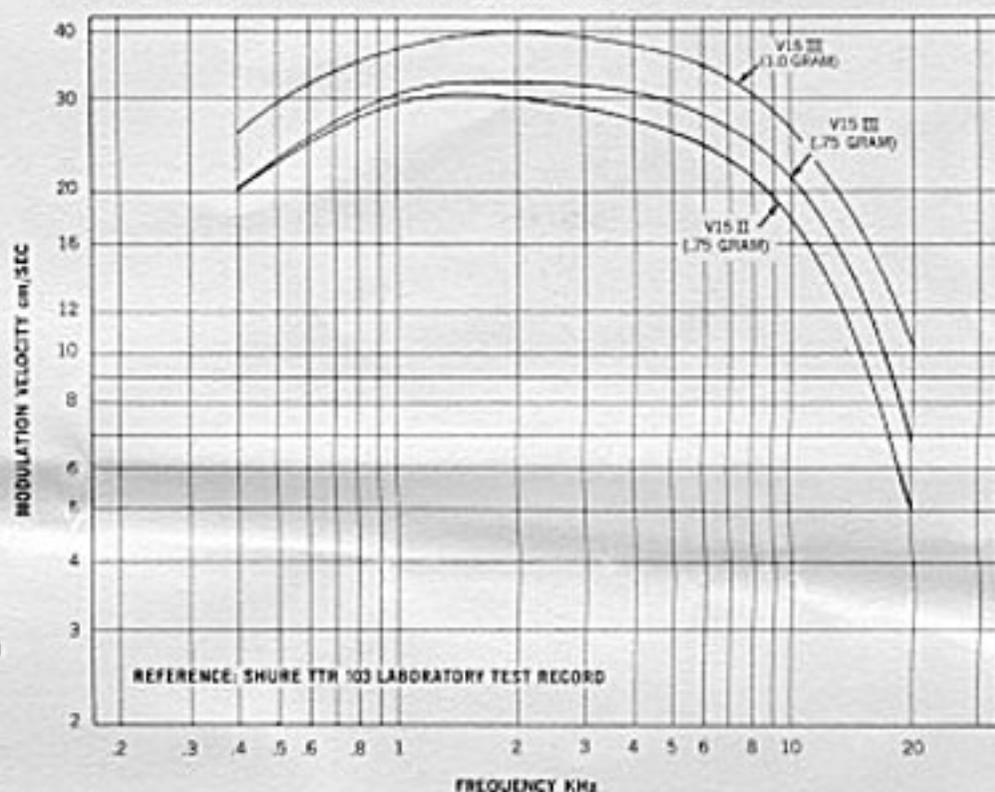
ABSOLUTE UNIFORMITY OF PERFORMANCE



Shown above is a graphic representation of the audible spectrum, which illustrates the uniformly flat response you will achieve with your V-15 Type III cartridge. Under the Shure Quality Control Program, every Type III cartridge, whether it is purchased now or next year, in Chicago, London, Hong Kong, or Sydney, must produce a flat response curve that fits within the extraordinarily narrow limits of the Type III response "output envelope" (the unshaded area above) before shipment! The curve shown was made by a typical Type III, mounted in an SME tone arm, and tracking the STR100 test record, response corrected for 6 dB/octave below 500 Hz.

EXTRAORDINARY TRACKABILITY

Its exceptional trackability enables you to use ultra-light tracking forces that will significantly increase the life of recordings and stylus tip. Further, it enables you to use the most advanced light-tracking tone arms and precision turntables available, and to use the newer, ever more sophisticated turntables and arms now under development.



The trackability chart above shows the unmistakable superiority of the V-15 Type III in the single most important measure of overall cartridge performance: trackability. These curves were produced by Shure V-15 cartridges tracking in a Shure SME tone arm. The Type III effortlessly tracks the highest modulated levels of modern recordings.

V-15 TYPE III and V-15 III-G SPECIFICATIONS

Typical Trackability (at 1 gram in Shure-SME Tone Arm). Reference: Shure TTR 103 Laboratory Test Record.

400 Hz — 26 CM/SEC	5000 Hz — 35 CM/SEC
1000 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: Nominally 28 dB at 1000 Hz
Nominally 20 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. (Most amplifiers and tone arms meet this requirement.)

Inductance: 500 millihenries nominal

D.C. Resistance: 1350 Ohms nominal

Output Terminals: 4 terminals

V-15 Type III Styli Available:

- VN35E Biradial Elliptical Stylus (as supplied in V-15 Type III Cartridge) Diamond Tip
 - 18 microns (.0007 inch) frontal radius
 - 5 microns (.0002 inch) side contact radii
 - 25 microns (.001 inch) between record contact points
- VN3-G Spherical Stylus, (as supplied in V-15 III-G Cartridge) Diamond Tip [15 microns (.0006 inch) radius]

VN78E Biradial Elliptical Stylus, Diamond Tip for monaural 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 1/2 inch (12.7 mm) mounting centers.

Weight: Net Weight— 6 grams

MODEL V-15 Type III Super-Track cartridge

MODEL V-15 III-G Super-Track cartridge with .0006" spherical stylus

MODEL V-15 III-DL Super-Track cartridge pre-mounted for DUAL "1200 Series" automatic turntables tracking from 3/4 to 1 1/4 grams

MODEL V-15 III-GZ Super-Track cartridge pre-mounted for GARRARD Zero automatic turntables tracking from 3/4 to 1 1/4 grams

MODEL VN35E Biradial Elliptical stylus fits V-15 Type III and V-15 III-G cartridges

MODEL VN3-G .0006" Spherical stylus fits V-15 Type III and V-15 III-G cartridge

MODEL VN78E Biradial Elliptical stylus designed for monaural 78 rpm recordings. Fits V-15 Type III and V-15 III-G cartridges

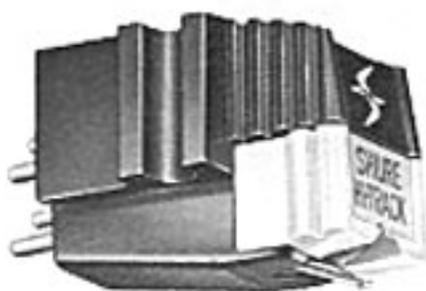
**DELUXE
SERIES
OF
HIGH
TRACKABILITY
CARTRIDGES**

Optimized design parameters in the stylus assembly give these new Deluxe Series cartridges superb high frequency trackability, and overall performance second only to the incomparable V-15 Type III.

For 3/4 to 1 1/2 Grams Tracking



**M91ED Elliptical Stylus
M91GD Spherical Stylus
Deluxe high trackability
cartridges**



Optimized design parameters in the stylus assembly give these new Deluxe Series cartridges superb high frequency trackability, and overall performance second only to the incomparable V-15 Type III. By mounting an ultra-lightweight diamond tip directly on the stylus bar and eliminating the small metal bushing, Shure engineers have materially reduced stylus tip mass. The result is a smooth, peak-free frequency response and a level of overall performance not previously available in this price class. The excellent performance characteristics of these cartridges make them suitable choices for use in four-channel encoded (matrix) playback systems.

The M91ED, M91GD and M75ED Type 2 have identical trackability 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.

M91ED, M91GD and M75ED Type 2 SPECIFICATIONS

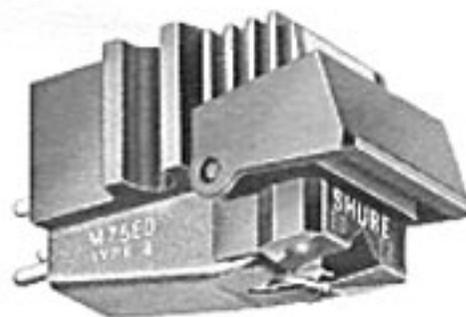
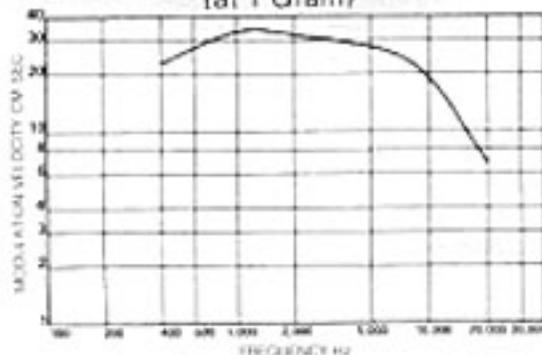
Trackability at 1 gram tracking force using a Shure/SME Arm:

22 CM/SEC at 400 Hz	28 CM/SEC at 5,000 Hz
33 CM/SEC at 1,000 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

TRACKABILITY CHART
(at 1 Gram)



**M75ED Type 2
Elliptical Stylus with
Built-in snap-down stylus guard**

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. (Most amplifiers and tone arms meet this requirement.)

Output Voltage: 5.0 mv per channel at 1,000 Hz at 5 CM/SEC peak velocity
Channel Separation: Nominally 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

.0007 inch (17.8 microns) frontal radius

.0002 inch (5 microns) side contact radii

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

Stylus: N91GD Spherical—.0006 inch radius with nude diamond tip

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Weight: 5.5 grams

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

MODEL M91ED Deluxe Hi-Track Cartridge with Biradial Elliptical stylus

MODEL N91ED Biradial Elliptical replacement stylus

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

MODEL N91GD Spherical replacement stylus

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

MODEL N75ED Type 2 Biradial Elliptical replacement stylus

NOTE: To play 78 rpm records with the M91ED or M91GD cartridges, use a Model N91-3 .0025 inch spherical stylus; to play 78 rpm records with an M75ED Type 2 cartridge, use a Model N75-3 .0025 inch spherical stylus.

PRE-MOUNTED DELUXE M91ED HIGH TRACKABILITY CARTRIDGES



**For Miracord
Turntables**

Model M91ED-BJ
Pre-mounted M91ED
cartridge fits Elac/
Miracord automatic
turntables tracking
from 3/4 to 1 1/2 grams

For Garrard

Zero 100 Turntables
Model M91ED-GZ
Pre-mounted M91ED
cartridge fits Garrard
Zero 100 turntables

For Garrard

SL Series B Turntables
Model M91ED-GS
Pre-mounted M91ED
cartridge fits Garrard
SL95B and SL72B auto-
matic turntables

PRE-MOUNTED CARTRIDGE REPLACEMENT STYLUS

MODEL N91ED Biradial Elliptical replacement stylus.

Fits all M91ED pre-mounted cartridges

**CUSTOM
SERIES
OF HIGH
TRACKABILITY
CARTRIDGES**

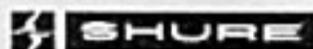
About the Custom Hi-Track Series

The trackability charts for the cartridges on this page tell 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 are available in both Bi radial Elliptical and Spherical stylus configurations. Manufactured and tested under the critical Shure quality control program.

For 3/4 to 1 1/2 Grams Tracking



M91E
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 pre-mounted in tone arm head for instant installation in Garrard, Miracord or Perpetuum Ebner turntables. The M91E and M75G Type 2 have identical trackability characteristics. The M75G Type 2 is offered for those who prefer a spherical stylus.

M91E and M75G Type 2 SPECIFICATIONS

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

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. (Most amplifiers and tone arms meet this requirement.)

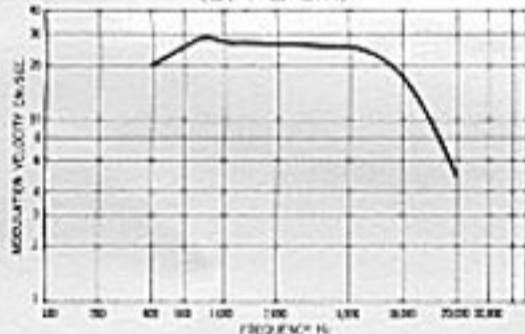
Output Voltage: 5.0 mv per channel at 1,000 Hz at 5 CM/SEC
Channel Separation: Nominally 25 db at 1,000 Hz
Channel Balance: Output from each channel within 2 db
Stylus: N91E Biradial Elliptical with diamond tip
.0007 inch (17.8 microns) frontal radius
.0002 inch (5 microns) side contact radii
.0010 inch (25 microns) wide between record contact points

Stylus: N75G Type 2 Spherical, .0006 inch radius
Inductance: 720 millihenries
D.C. Resistance: 630 ohms
Weight: 6 grams
Mounting: Standard 1/2 inch (12.7 mm) mounting centers

NOTE: To play 78 rpm records with any M91 Series cartridge use an N91-3 .0025 inch spherical stylus. To play 78 rpm records with any M75 Series cartridge use an N75-3 .0025 inch spherical stylus.

- MODEL M91E Custom Hi-Track Cartridge with Biradial Elliptical stylus
- MODEL N91E Biradial Elliptical replacement stylus
- MODEL M75G Type 2 Custom Hi-Track Cartridge with Spherical stylus
- MODEL N75G Type 2 Spherical replacement stylus

TRACKABILITY CHART
(at 1 Gram)



PRE-MOUNTED CARTRIDGES

- MODEL M91E-GSL Pre-mounted M91E Cartridge fits Garrard SL95B and SL72B automatic turntables
- MODEL M91E-50H Pre-mounted M91E Cartridge fits Elac/Miracord automatic turntables tracking from 3/4 to 1 1/2 grams

For 1 1/2 to 3 Grams Tracking



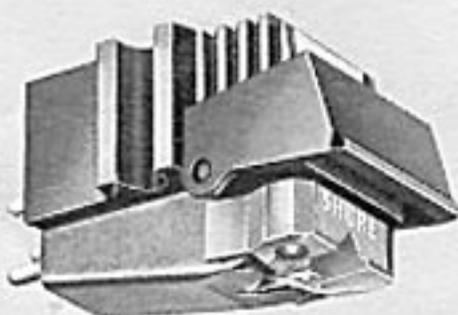
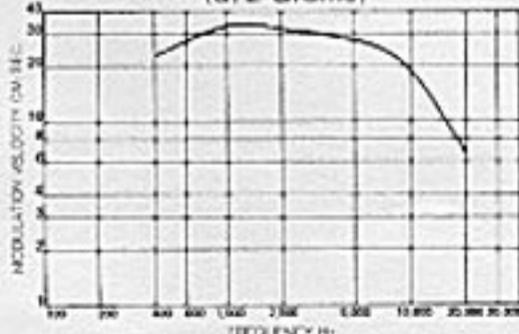
M75B Type 2
Spherical Stylus with
Built-in Snap-down Stylus
Guard

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 styli. 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.



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

TRACKABILITY CHART
(at 2 Grams)



M75EJ Type 2 and M75B Type 2 SPECIFICATIONS

Trackability at 2 grams tracking force using a Shure/SME Arm:
28 CM/SEC at 400 Hz 30 CM/SEC at 5,000 Hz
35 CM/SEC at 1,000 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. (Most amplifiers and tone arms meet this requirement.)

Output Voltage: 5.0 mv per channel at 1,000 Hz at 5 CM/SEC
Channel Separation: Nominally 25 db at 1,000 Hz
Channel Balance: Output from each channel within 2 db
Stylus: N75EJ Type 2 Biradial 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

Stylus: N75B Spherical .0006 inch radius
Inductance: 720 millihenries
D.C. Resistance: 630 ohms
Weight: 6 grams
Mounting: Standard 1/2 inch (12.7 mm) mounting centers
MODEL M75EJ Type 2 Custom Hi-Track Cartridge with Biradial Elliptical stylus
MODEL N75EJ Type 2 Biradial Elliptical replacement stylus
MODEL M75B Type 2 Custom Hi-Track Cartridge with Spherical stylus
MODEL N75B Type 2 Spherical replacement stylus

NOTE: To play 78 rpm records with the M75G Type 2, M75EJ Type 2 or M75B Type 2, use an N75-3 .0025 inch spherical stylus.

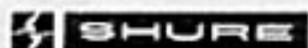
**EXTRA
DURABILITY
HIGH
TRACKABILITY
CARTRIDGES**

Economy priced, but fine performance when used in moderately priced record changers. Extra durable stylus assemblies for heavy use by the whole family. These cartridges are well suited for institutional (school) and broadcast applications where durability is a performance consideration.

For 1½ to 5 Grams Tracking

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. Alignment is precise and positive. Stylus replacement is greatly simplified, too.



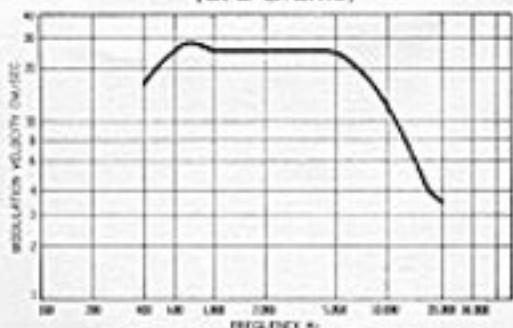
M93E Elliptical Stylus Hi-Track Cartridge



This high performance series of cartridges was designed to give heavy duty performance at moderate prices in all modern turntables and tone arms. Three High Trackability Cartridges in a choice of tracking force ranges from 1½ to 5 grams—and all feature "snap-in" design for fast, effortless installation.

CARTRIDGE MODEL	STYLUS CONFIGURATION	TRACKING FORCE	REPLACEMENT STYLUS
M93E	.0004" x .0007" Biradial Elliptical	1½-3	N93E
M75-6S	.0006" Spherical	1½-3	N75-6
M75ECS	.0004" x .0007" Biradial Elliptical	2-4	N75EC
M75CS	.0006" Spherical	3-5	N75C

TRACKABILITY CHART for M93E and M75-6S (at 2 Grams)



M93E, M75-6S, M75ECS and M75CS SPECIFICATIONS

Trackability using a Shure/SME Arm:

- M93 and M75-6S at 2 grams tracking force:
18 CM/SEC at 400 Hz 24 CM/SEC at 5,000 Hz
25 CM/SEC at 1,000 Hz 13 CM/SEC at 10,000 Hz
- M75CS and M75ECS at 3 grams tracking force:
14.3 CM/SEC at 400 Hz 24 CM/SEC at 5,000 Hz
24 CM/SEC at 1,000 Hz 13 CM/SEC at 10,000 Hz

Frequency Response: From 20 to 20,000 Hz

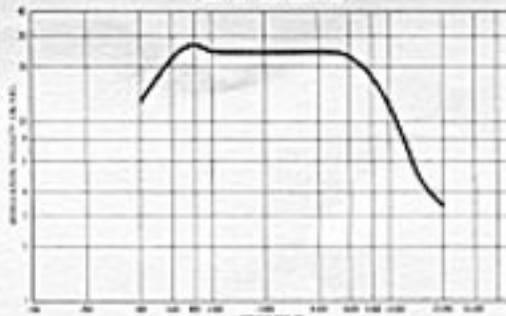
Output Voltage: M93E and M75-6S, 6.2 mV per channel at 1,000 Hz at 5 CM/SEC; M75CS and M75ECS, 9.0 mV per channel at 1,000 Hz at 5 CM/SEC

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



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

TRACKABILITY CHART for M75CS and M75ECS (at 3 Grams)



Channel Balance: Output from both channels within 2 dB.

Stylus: N93E Biradial Elliptical with diamond tip, 1½ to 3 grams tracking force

.0007 inch (17.8 microns) frontal radius

.0004 inch (10 microns) side contact radii

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

N75EC Biradial Elliptical with diamond tip, 2-4 grams tracking force

N75-6 Spherical .0006 inch (15 microns) radius with diamond tip,

1½ to 3 grams tracking force

N75C Spherical .0006 inch (15 microns) 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. (Most amplifiers and tone arms meet this requirement.)

Inductance: 720 millihenries

D.C. Resistance: 630 ohms

Weight: 6 grams

Mounting: Snap-in type; standard ½" (12.7 mm) mounting centers on retaining clip

MODEL M93E Hi-Track Cartridge with Biradial Elliptical stylus

MODEL N93E Biradial Elliptical replacement stylus

MODEL M75-6S Hi-Track Cartridge with Spherical stylus

MODEL N75-6 Spherical replacement stylus

MODEL M75ECS Hi-Track Cartridge with Biradial Elliptical stylus

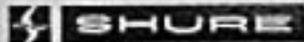
MODEL N75EC Biradial Elliptical replacement stylus

MODEL M75CS Hi-Track Cartridge with Spherical stylus

MODEL N75C Spherical replacement stylus

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

**STANDARD
SERIES
OF
STEREO
DYNETIC
CARTRIDGES**



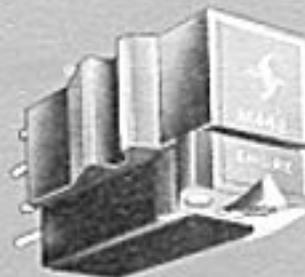
**M55E
For ¾ to 2 Grams Tracking**

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

- Tracking Force: ¾ to 2 grams
- 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 } 15.0 x 10⁻⁶ CM/dyne
 - Vertical }
- Effective Stylus Tip Mass: 1.2 milligrams
- Stylus N55E: Elliptical shaped 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
- 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
- D.C. Resistance: 630 ohms
- Weight: 7 grams
- Mounting: Standard ½" (12.7 mm) mounting centers
- MODEL M55E Cartridge
- MODEL N55E Stylus

NOTE: To play 78 RPM records with any of the M44 Series or M55E cartridges, use Model N44-3 .0025 radius, spherical tip stylus.



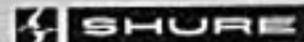
**M44E
For Heavier Tracking Forces
1¾ to 4 Grams**

All the advantages of a Bi Radial elliptical stylus for older turntables that track at heavier forces. Good performance at a moderate cost.

SPECIFICATIONS

- Tracking Force: 1¾ to 4 grams
- Frequency Response: From 20 to 20,000 Hz
- Output Voltage: 9.3 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
 - Vertical }
- Effective Stylus Tip Mass: 1.4 milligrams
- Stylus N44E: Elliptical shaped 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
- 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. (Most amplifiers and tone arms meet this requirement.)
- Inductance: 720 millihenries
- D.C. Resistance: 630 ohms
- Weight: 7 grams
- Mounting: Standard ½" (12.7 mm) mounting centers
- MODEL M44E Cartridge
- MODEL N44E Stylus
- MODEL M44E-GSL Pre-mounted M44E Cartridge in tone arm head fits GARRARD turntable models SL72B, SL65B, SL55B, SL40B and SP20B tracking at 1¾ to 4 grams

SPHERICAL STYLUS CARTRIDGES



**M44 Series
Combines Quality and Economy**

Three budget-priced cartridges 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.

SPECIFICATIONS

- Frequency Response: From 20 to 20,000 Hz
- Output Voltage: At 1,000 Hz at 5 CM/SEC
 - Model M44G, 7 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

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. (Most amplifiers and tone arms meet this requirement.)

- Inductance: 720 millihenries
- D.C. Resistance: 630 ohms
- Weight: 7 grams
- Mounting: Standard ½" (12.7 mm) mounting centers
- For Light Tracking ¾ to 1½ Grams**
- MODEL M44G Cartridge. With .0006-inch radius spherical diamond stylus
- MODEL N44G Stylus. .0006-inch radius spherical diamond
- For Heavier Tracking 1½ to 3 Grams**
- MODEL M44-7 Cartridge. With .0007-inch radius spherical diamond stylus
- MODEL N44-7 Stylus. .0007-inch radius spherical diamond
- For Heaviest Tracking 3 to 5 Grams**
- MODEL M44C Cartridge. With .0007-inch radius spherical diamond stylus
- MODEL N44C Stylus. .0007-inch radius spherical diamond stylus



**M3D
All-time Best Seller**

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



**M7/N21D
Musical Best Buy**

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.)

ACCESSORIES AND STYLI

SHURE M64 and M64-2E Universal Stereo Preamplifier



For Phonographs, Tape Decks, Microphones

- Converts phono 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.

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 (7½ 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: 50 db or better at 1 KHz

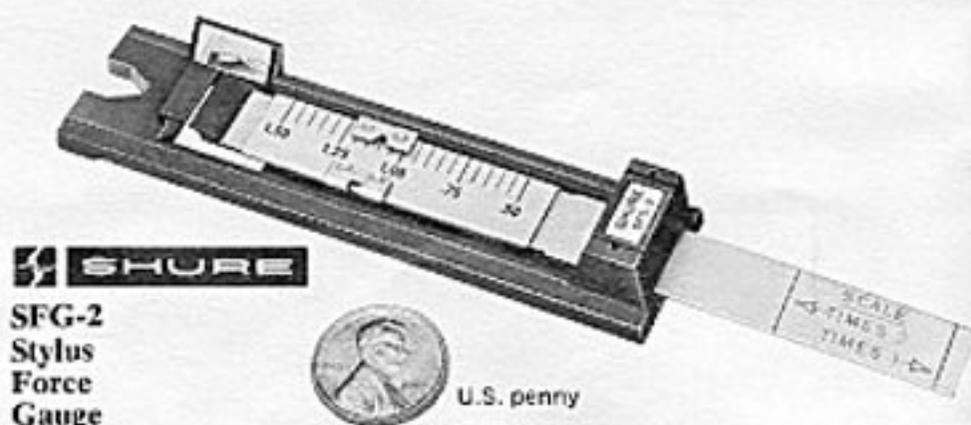
Channel Balance: Channels matched to within 2 db at 1 KHz

Dimensions: 5½" Wide x 2½" High x 4½" Deep

Weight: 1¼ lbs.

MODEL M64 Preamplifier—For 110 V.A.C. 50/60 Hz.

MODEL M64-2E Preamplifier—For 110/220 V.A.C. 50/60 Hz.



SHURE SFG-2 Stylus Force Gauge



U.S. penny

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 ½ to 1½ 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

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 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 (2½ grams maximum).

Any M44 Cartridge . . . Substitute N55E stylus for greater compliance and lighter tracking (at ¾ to 2 grams). For tracking at 1¾

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 ¾ to 1½ grams.

REPLACEMENT DIAMOND STYLI FOR OLDER SHURE CARTRIDGES

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

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

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

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

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, M71, M73, M75, M75 Type 2 series, M91, M92, M93 series, V-15 Type I, II, or III cartridges with a special stylus for 78 rpm records.

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

MODEL N44-3 Stylus. .0025" spherical tip radius. Fits any V-15 Type I, M44 series or M55E cartridges

MODEL N75-3 Stylus. .0025" spherical tip radius. Fits the M71, M73, M75, M75 Type 2 series and V-15 Type II cartridges

MODEL N91-3 Stylus. .0025" spherical tip radius. Fits the M91, M92, M93, M91GD and M91ED series cartridges

MODEL VN78E Stylus. .0002" x .0007" Biradial Elliptical tip radii. Fits V-15 Type III cartridge

REPLACEMENT STYLUS CHART

(All stylus are diamond
unless noted otherwise)



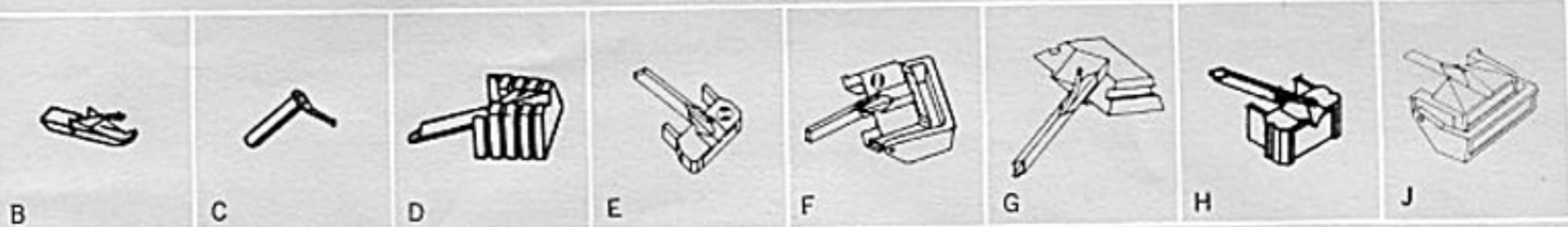
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Cartridge Model	Replacement Stylus Model	Stylus Group See top of Page 12	Stylus Radius	Stylus Grip Color	Tracking Force (grams)
DM101MG	N91GD*	H	.0006"	Red	¾ - 1½
DM103ME	N91ED*		†.0002" x .0007"	Yellow	¾ - 1½
DU10-M75E Type 2	N75ED Type 2*	E	†.0002" x .0007"	Yellow	¾ - 1½
M1 (Mono LP only)	N1	C	.0007"	Orange Dot	1 - 2
M3D	N3D	B	.0007"	Ⓐ	3 - 6
M3/N21D	N21D		.0007"	Ⓑ	1½ - 2½
M5D (Mono LP only)	N5D	C	.001"	Black Dot	3 - 6
M6S (78 RPM only)	N6S		.0027" Sapphire	Yellow Dot	3 - 6
M7D	N3D*	B	.0007"	Ⓐ	3 - 6
M7DMF	N3D*		.0007"	Ⓐ	3 - 6
M7/N21D	N21D		.0007"	Ⓑ	1½ - 2½
M8D	N3D*		.0007"	Ⓐ	3 - 6
M21	N21D		.0007"	Ⓑ	1½ - 2½
M22 (Stereo only)	N22D		.0005"	Ⓒ	¾ - 1½
M31E	N31E	G	†.0002" x .0007"	Yellow	1 - 2
M32E	N32E		‡.0004" x .0007"	Brown	2½ - 5
M32-3	N32-3		.0025	Green	2½ - 5
M33-5	N99*	D	.0007"	Gray	1½ - 3
M44C	N44C	A	.0007"	Light Blue	3 - 5
M44E	N44E		†.0004" x .0007"	Brown	1¾ - 4
M44EM	N44E*		‡.0004" x .0007"	Brown	1¾ - 4
M44MA	N44-7*		.0007"	White	1½ - 3
M44MB	N44-7*		.0007"	White	1½ - 3
M44MC	N44C*		.0007"	Light Blue	3 - 5
M44MF	N44G*		.0006"	Gray	¾ - 1½
M44MG	N44G*		.0006"	Gray	¾ - 1½
M44-5	N44G*		.0006"	Gray	¾ - 1½
M44-7	N44-7		.0007"	White	1½ - 3
M55E	N55E		†.0002" x .0007"	Yellow	¾ - 2
M55EM	N55E*		†.0002" x .0007"	Yellow	¾ - 2
M71C	N75C*		.0006"	Blue	3 - 5
M71EB	N75EJ Type 2*		†.0004" x .0007"	Light Green	1½ - 3
M71EMB	N75EJ Type 2*	‡.0004" x .0007"	Light Green	1½ - 3	
M71MB	N75-6*	.0006"	Beige	1½ - 3	
M71MC	N75C*	.0006"	Blue	3 - 5	
M71-6	N75-6*	.0006"	Beige	1½ - 3	
M73G	N75G Type 2*	.0006"	Dark Gray	1 - 1½	
M73MG	N75G Type 2*	.0006"	Dark Gray	1 - 1½	
M75CS	N75C	.0006"	Blue	3 - 5	
M75E	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75ECS	N75EC	‡.0004" x .0007"	Brown	2 - 4	
M75E Type 2	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75ED Type 2	N75ED Type 2	†.0002" x .0007"	Black	¾ - 1½	
M75EJ Type 2	N75EJ Type 2	‡.0004" x .0007"	Light Green	1½ - 3	
M75E-D19	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75E-D19 Type 2	N75ED Type 2*	‡.0002" x .0007"	Black	¾ - 1½	
M75EM	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75EM Type 2	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75E-P20 Type 2	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75E-95G	N75ED Type 2*	†.0002" x .0007"	Black	¾ - 1½	
M75E-95G Type 2	N75ED Type 2*	‡.0002" x .0007"	Black	¾ - 1½	
M75G	N75G Type 2*	.0006"	Dark Gray	¾ - 1½	
M75G Type 2	N75G Type 2	.0006"	Dark Gray	¾ - 1½	
M75MB	N75B Type 2*	.0006"	Beige	1½ - 3	
M75MB Type 2	N75B Type 2	.0006"	Beige	1½ - 3	
M75MG	N75G Type 2*	.0006"	Dark Gray	¾ - 1½	
M75MG Type 2	N75G Type 2	.0006"	Dark Gray	¾ - 1½	
M75MG-D	N75G Type 2*	.0006"	Dark Gray	¾ - 1½	
M75 Type D	N75-6	.0006"	Beige	1½ - 3	
M75-6	N75-6	.0006"	Beige	1½ - 3	

NOTE: For units not listed, replace cartridge.

Ⓐ Gold Spade—Large Silver Shank
 Ⓑ Gold Spade—Small Silver Shank
 Ⓒ Silver Spade—Silver Shank

STYLUS GROUP



Cartridge Model	Replacement Stylus Model	Stylus Group (See Above)	Stylus Radius	Stylus Grip Color	Tracking Force (grams)
M75-6 Type 2	N75-6 Type 2	E	.0006"	Beige	1½ - 3
M75-6S	N75-6		.0006"	Beige	1½ - 3
M75CS	N75C	E	.0006"	Blue	3 - 5
M75ECS	N75EC	E	.0004" x .0007"	Brown	2 - 4
M77	N77	D	.0007"	Black	3 - 6
M77D	N77*		.0007"	Black	3 - 6
M77MD	N77*		.0007"	Black	3 - 6
M80E	N55E	A	†.0002" x .0007"	Yellow	¾ - 2
M80E-D	N55E		†.0002" x .0007"	Yellow	¾ - 2
M80E-D19	N55E		†.0002" x .0007"	Yellow	¾ - 2
M81MC	N75C*	E	.0006"	Blue	3 - 5
M91E	N91E	H	‡.0002" x .0007"	Black	¾ - 1½
M91ED**	N91ED		‡.0002" x .0007"	Yellow	¾ - 1½
M91GD**	N91GD		.0006"	Red	¾ - 1½
M91MGD	N91GD*		.0006"	Red	¾ - 1½
M92E	N91E*		†.0002" x .0007"	Black	¾ - 1½
M92G	N91GD*		.0006"	Red	¾ - 1½
M93E	N93E		‡.0004" x .0007"	Light Green	1½ - 3
M98/A	N44-7		A	.0007"	White
M99/A	N99	D	.0007"	Gray	1½ - 3
M99/AT6	N99		.0007"	Gray	1½ - 3
M99/M10	N99		.0007"	Gray	1½ - 3
R7C	N75C*	E	.0006"	Blue	3 - 5
R27E	N75ED Type 2*		†.0002" x .0007"	Black	¾ - 1½
R47EB	N75EJ Type 2*		†.0004" x .0007"	Light Green	1½ - 3
R700E	N75ED Type 2		†.0002" x .0007"	Black	¾ - 1½
RM910E	N75EJ Type 2*		†.0004" x .0007"	Light Green	1½ - 3
RM930C	N75C*		.0006"	Blue	3 - 5
RS100	N3D*	B	.0007"	Ⓐ	3 - 6
RS120E	N32E*	G	†.0004" x .0007"	Brown	2½ - 5
RS220E	N31E*		†.0002" x .0007"	Yellow	1 - 2
SL95-M75E Type 2	N75ED Type 2*	E	†.0002" x .0007"	Black	¾ - 1½
V-15	VN2E	A	†.0002" x .0007"	Black	¾ - 1½
V-15 Type II***	VN15E	F	†.0002" x .0007"	Black	¾ - 1½
V-15 II-7	VN7		.0007"	Gray	¾ - 1½
V-15 Type III	VN35E	J	†.0002" x .0007"	Black	¾ - 1¼
V-15 III-G	VN3-G	J	.0006"	Gray	¾ - 1¼
24-0003EP	N3D*	B	.0007"	Ⓐ	3 - 6
24-0044	N44C*	A	.0007"	Light Blue	3 - 5

† Elliptical.
 * Styli marked with (*) provide equal or better performance than original styli.
 ** The M91GD and M91ED are identical in performance to the Dual DM101MG and DM103ME.
 *** Includes both V15 Type II and V15 Type II (Improved) Models.

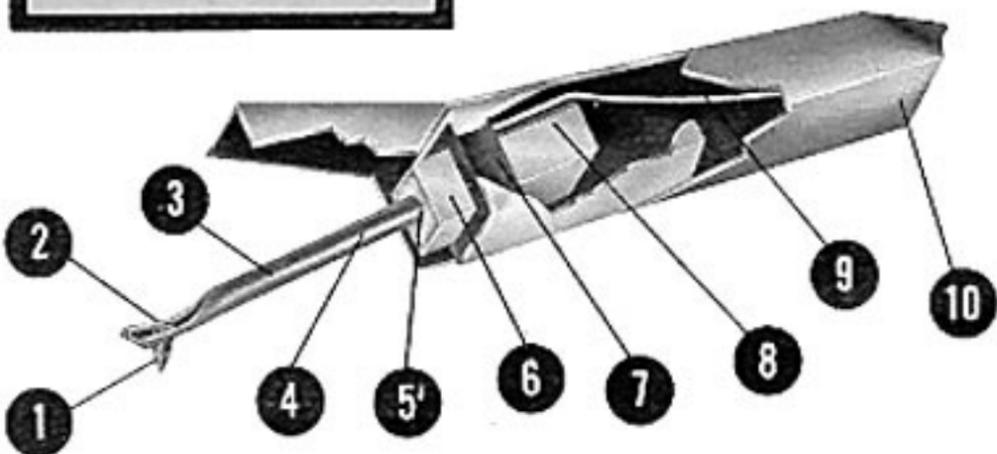
PRE-MOUNTED CARTRIDGES

Pre-mounted cartridges feature the V-15 Type III, M91E, M91ED or M44E as indicated, already mounted in the tone arm head, ready for instant installation without further assembly.

Turntable Manufacturer	Model	Cartridge	Stylus Model	Tracking Force (grams)	Stylus Radius	Stylus Grip Color Code	Stylus Function
Elac Miracord	770H, 50H, 750, 660H, 660, 630, 625, 620	M91E-50H	N91E	¾ - 1½	.0002" x .0007"	Black	Stereo-Mono LP
		M91ED-BJ	N91ED	¾ - 1½		Yellow	Stereo-Mono LP
Dual	1229, 1219, 1218, 1215S, 1215, 1209	V-15 III-DL	VN35E	¾ - 1¼	.0002" x .0007"	Black	Stereo-Mono LP
		M91E-D12	N91E	¾ - 1½		Black	Stereo-Mono LP
		M91ED-DL	N91ED	¾ - 1½		Yellow	Stereo-Mono LP
Garrard	SL95B, SL75B, SL72B	V-15 III-GSL	VN35E	¾ - 1¼	.0002" x .0007"	Black	Stereo-Mono LP
		M91E-GSL	N91E	¾ - 1½		Black	Stereo-Mono LP
		M91ED-GSL	N91ED	¾ - 1½		Yellow	Stereo-Mono LP
Zero-100	V-15 III-GZ M91ED-GZ	VN35E	VN35E	¾ - 1¼	.0002" x .0007"	Black	Stereo-Mono LP
		N91ED	N91ED	¾ - 1½		Yellow	Stereo-Mono LP
SL65B, SL55B, SP20B, 40B, 30	M44E-GSL	N44E	1¾ - 4	.0004" x .0007"	Brown	Stereo-Mono LP	

STYLUS ASSEMBLY

the
inside
story



When you buy a replacement stylus, don't be surprised when you find that the cost translates to something like \$20,000 a pound. It's worth it, because all the parts you can't see with a naked eye (shown above) make up what is — pound for pound — the most complex component in your stereo system!

1. Full diamond stone (nude in the Super-Track "Plus" and Deluxe Series)—Equal in quality to the finest quality gem stones. It is precisely shaped and polished, then assembled into an accurately machined mounting—not merely a small chip cemented to the end of the mounting—producing flawless Bi-Radial (elliptical) or spherical styli.

2. Doubly secure mounting — The diamond is first press-fitted, then high-temperature epoxy-cemented to insure permanent axial orientation. No short-cuts are ever used.

3. Ultra-thin-wall tubular stylus bar — Special heat-treated aluminum alloy gives necessary rigidity, with relatively small contribution to mass.

4. Dynamic control lever (hidden) — Optimizes stylus bar compliance. (V-15 Type III, M91 and M75 Type 2 series only).

5. Center-mounted stylus bar — Precisely fitted into electro discharge-machined magnet aperture. (V-15 Type III Series and M91 and M75 Type 2 Series only).

6. Pivot control — Assures correct positioning and functioning of bearing and support wire.

7. Viscoelastic suspension block — The "heart" of the bearing. Cyclic temperature variations ranging from -60°F. to 165°F. will not deteriorate cartridge performance in normal playback environment — nor will humidity adversely affect the performance.

8. High energy Alnico 5W magnet — Super-strong magnetic field allows for smallest size — contributes less than 20% to effective mass of the assembly.

9. Tuned, resonance-free support wire — Does not affect performance within the cartridge's operating range.

10. Stylus assembly carrier — Holds the stylus assembly in precisely the correct position relative to pick-up coils.

The Shure Stereo Dynetic® Stylus Assembly is a micro-engineering masterpiece that tells your entire stereo system what's happening in the record grooves. It's no simple "needle," but rather a complex miniature assembly made up of seven distinct, interacting sub-components* with an aggregate weight of $1/2800$ of an ounce, and with an effective mass of only .4 milligrams (referred to the groove contacting stylus tip). Its manufacturing processes look and sound like science fiction, with electro-discharge machining, annealing, shadowgraph positioning and so on.

* Not counting the stylus grip, guard, or positioning carrier.

FREE STYLUS BOOKLET

For more information about Shure styli, send for the authoritative booklet "Small World of the Stylus." Ask for booklet AL402.

CARTRIDGE SELECTION GUIDE

Just as a chain is no stronger than its weakest link, and a camera only as good as its lens, the quality of your stereo system can be no better than your weakest component.

Case in point: A superb light tracking cartridge operating in a tone arm designed to be used at heavier tracking forces will yield far poorer results than a cartridge designed to track in the correct range of that tone arm.

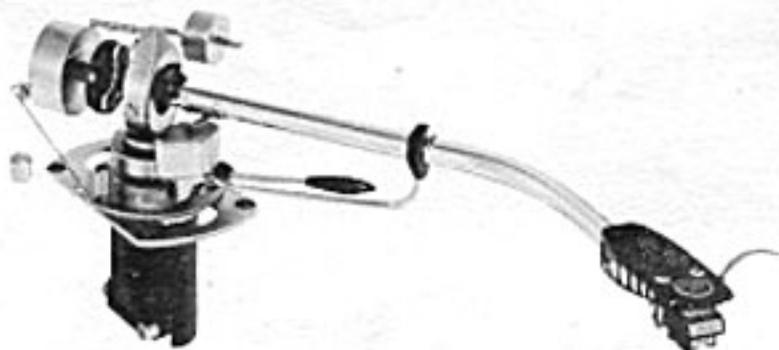
Conversely, it is a waste to utilize a heavier tracking cartridge (with the resultant increase in stylus and record wear) where a very light tracking cartridge can be used.

It is with this in mind that the following recommendations are made.

CARTRIDGE RECOMMENDATIONS	FOR THESE OPERATING PARAMETERS
V-15 Type III	For ultimate performance in precision quality manual tone arms and automatic turntables capable of tracking at $1\frac{1}{4}$ grams or less.
M91ED M75ED Type 2	For deluxe performance in high quality manual tone arms and automatic turntables capable of tracking at $1\frac{1}{2}$ grams or less.
M75EJ Type 2	For custom performance in standard manual tone arms and automatic turntables that operate in the $1\frac{1}{2}$ -3 gram tracking force range.
M75ECS	For extra-durable high-track performance in older manual tone arms and record changers requiring 2-4 gram tracking for optimum operation.
M75CS	For upgrading older, heavier tracking cartridges or for maximum economy in virtually any tone arm or record changer tracking from 3-5 grams.
	NOTE: Other Shure cartridges, in the appropriate tracking force range, may be used if preferred.

THE SHURE CARTRIDGES LISTED ABOVE ARE COMPATIBLE WITH ALL FOUR-CHANNEL MATRIX SYSTEMS

**TONE
ARMS**



SME Series II Improved "the best pickup arm in the world"

The ultimate in independent tone arms — now redesigned for significantly superior performance. The Shure-SME Series II Improved combines the flawless craftsmanship and unmatched precision of its predecessor (the SME Series II) with design improvements that reduce tone arm/cartridge system mass and friction to significantly lower levels.

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. Very low overall mass, with heavier elements positioned near the arm fulcrum. Low distortion geometry.

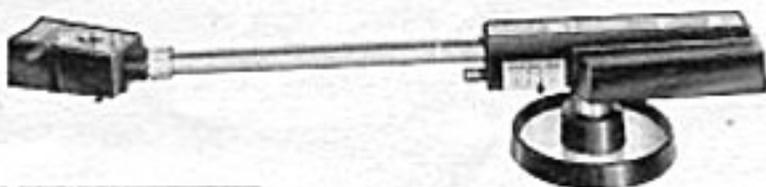
Precisely accurate adjustments for every factor related to perfect tracking, including height, overhang, length, tracking force and bias (anti-skating). Accepts cartridges weighing four to nine grams, and allows positive tracking force adjustment in 1/4-gram increments from 0 to 1 1/2 grams. Deluxe hydraulic cueing control.

Recommended for use with all Shure high trackability cartridges, and when teamed with the super-trackability Shure V-15 Type III, the result is a tone arm/cartridge system that is, quite simply, unsurpassed for precision record playback. Highly recommended for connoisseurs' component systems in which quality requirements are uncompromisingly high.

MODEL 3009 Series II Improved (non-removable shell)

MODEL 3009/S2 (removable shell)

Note: SME tone arms are distributed by Shure only in the U.S. and Canada.



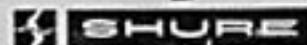
Professional Tone Arm.

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.

MODEL M232 for 12" recordings

MODEL M236 for 16" recordings

MODEL A23H extra plug in head



Model SA-1, SA-2 For Use With The Sound Source of Your Choice

The Solo-Phone Series was specifically designed for private headphone listening. It is a small, all-transistor pre-amplifier, that will deliver the depth and "presence" of high fidelity stereo—in private—from whichever sound source you choose to connect to 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 high efficiency speakers, for low-volume background music. Each stereo channel can be adjusted separately to achieve proper balance. U.L. listed for commercial applications. Weighs just 2 lbs.

MODEL SA-1 SOLO-PHONE AMPLIFIER:

105-125 V., AC., 10 1/4" x 3 1/2" x 3". Less Headphones

MODEL SA-2E

Same as SA-1 except for 120 V. or 240 V. AC, 50-60 Hz. No plug.

MODEL SA-1F SOLO-PHONE FOR PANEL MOUNTING.

Less Headphones

MODEL SA-2FE

Same as SA-1F except for 120 V. or 240 V. AC, 50-60 Hz. No plug.



Model SA-10 Complete Self-Contained Solo-Phone System



An exciting new concept in superior quality, private high fidelity listening. It is a completely self-contained record playing system that combines a Garrard 4-speed automatic turntable with a Shure all-transistor Solo-Phone amplifier and the Shure M44C Stereo Dynetic Cartridge.

Plug in one or two sets of headphones and you can listen to your favorite recordings or language lessons . . . without disturbing others.

Easy to set up and to use. Simply plug it into a wall outlet, plug in your headphones and you're ready to enjoy! It will play 16, 33 1/3, 45 and 78 RPM; 7", 10" or 12" records; stereophonically or monophonically. Only three controls: "on-off," volume and turntable speed selector. And you can adjust each stereo channel separately to achieve proper balance.

MODEL SA-10 SOLO-PHONE SYSTEM; 105-125 V., AC., 50-60 Hz, 8" x 17 1/2" x 13 1/4". Less headphones

MODEL SA-10M SOLO-PHONE SYSTEM WITH 4-SPEED MANUAL TURNTABLE. Less Headphones

NOTE: SA-10 Series is available only in the U.S.A.

**FOR ADDITIONAL INFORMATION ON
SHURE SOLO-PHONES, write for complete catalog**

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