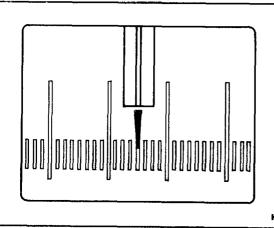


# **V15 LT**



HYPERELLIPTICAL

The Shure V15 LT, a SUPER TRACK™ IV Cartridge, mounts directly to Technics Linear Tracking Turntables such as Models SL-10, SL-15, and SL-7. This cartridge brings outstanding trackability, transparent frequency response, and phenomenally low distortion to the Technics Linear Tracking Turntables.

La Shure V15 LT, cellule SUPER TRACK™ IV, s'adapte directement sur les platines Technics SL-10, SL-15 et SL-7, platines à bras tangentiel. Cette cellule apporte aux platines Technics, une formidable capacité de lecture, une réponse en fréquences très étendue, et une distorsion extraordinairement faible. Se reporter à la page 13 pour plus ample information en Français.

Das SHURE Modell V15 LT, ein Tonabnehmer der Typ IV-Serie, paßt direkt zu Technics Plattenspielern mit Tangential-Tonarmen. Zum Beispiel zu den Modellen SL-10, SL-15 und SL-7. Dieser Tonabnehmer bietet hervorragende Abtastfähigkeit, einenglatten Frequenzgang und außergewöhnlich geringe Verzerrungswerte in Verbindung mit dem Tangential-Tonarm einiger Plattenspieler von Technics. Siehe Seite 15 für weitere Hinweise in Deutsch.

La Shure V15 LT, una cápsula SUPER TRACK IV, se monta directamente en los giradiscos tangenciales Technics, Modelos SL-10, SL-15 y SL-7. Esta cápsula consigue una extraordinaria habilidad de lectura, una transparente respuesta de frecuencias y una distorsión considerablemente baja en los giradiscos tangenciales Technics. Vea en la página 17 más instrucciones en español.

# MOUNTING, MONTAGE, MONTAJE

FIGURE 1

# STYLUS CLEANING

Use a soft brush with an alcohol-distilled water solution or Shure Stylus Cleaning Solution. (See your dealer and ask for the Shure SK-1, Stylus Cleaning Kit.) Brush only from back to front as shown in Figure 2. Other commercial cleaning solutions may cause stylus damage.

# STYLUS REPLACEMENT

Place the Technics Linear Tracking arm in a convenient position as follows.

- With the lid closed, use the "manual" mode to move the arm to approximately the center of its travel.
- 2. Make certain the cartridge is cued "up" (raised off the record), and press the Off-On switch "Off."
- 3. Raise the lid.

Replace the stylus as shown in Figure 3. Always hold the stylus only by the plastic grip; take care not to touch or damage the shank or diamond tip. **STYLUS REPLACEMENT** 



STYLUS REPLACEMENT FIGURE 3

# PREAMPLIFIER SETTING

The V15 LT is a moving magnet cartridge. If your Technics Linear Tracking Turntable has a preamplifier selector switch, be sure to set the switch to the moving magnet position (MM).

# TRACKING FORCE

The V15 LT is designed to operate at a tracking force of 1.25 grams optimum. Do not use heavier tracking forces. Consult the turntable manufacturer if you have any doubts about whether its tracking force is appropriate.

# SPECIAL NOTE

As the only source of contact between the record groove and the balance of your high fidelity system, the stylus in your cartridge plays a critical role in the ultimate quality of sound reproduction. Additionally, because records can be irreparably damaged by a worn stylus, it is essential to ensure that your Shure stylus is in peak condition in order to preserve your records in "mint" condition. Your cartridge can perform at original operating specifications for many years with these simple maintenance steps:

- 1. Follow the stylus cleaning instructions given on page 4.
- See your Shure dealer at least once a year for a checkup of your cartridge's stylus. He'll clean it and inspect it for wear.
- 3. When it becomes necessary to replace your stylus, insist on a genuine Shure replacement. Extensive testing of imitations of Shure styli revealed numerous grave flaws. To be certain that your replacement stylus meets original specifications, 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 stylus box.

# V15 LT: V15 IV PERFORMANCE FOR TECHNICS LINEAR TRACKING TURNTABLES

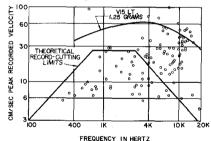
- 1. Demonstrably improved trackability across the entire audio spectrum.
- 2. Patented two-function bearing system individually optimized for high and low frequencies.
- Telescoped shank structure and new lightweight high-energy magnet for reduced dynamic mechanical impedance.
- 4. Ultra-flat response individually tested to meet all specifications.
- 5. Hyperelliptical tip configuration dramatically reduces both harmonic and intermodulation distortion.

# TRACKABILITY

Trackability – the ability of the stylus to stay in contact with both groove walls – remains the single overwhelming measure of a cartridge's overall performance. In the trackability chart (Figure 4), the pyramidal shape represents the recommended theoretical limits of record cutting velocities. The small scattered circles 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 within the theoretical record-cutting limits, substantially higher trackability is obviously needed to track the recorded velocities actually found on today's discs.

At 1.25 grams the V15 LT tracks more of the "hottest" points than any other existing cartridge at the same tracking force.



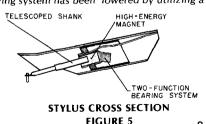
TRACKABILITY FIGURE 4

# TWO-FUNCTION BEARING SYSTEM

Previously designed cartridges used a bearing that represented a compromise between the compliance necessary for accurately tracking low frequencies and the damping necessary for high frequencies. The patented two-function bearing system shown in Figure 5 makes such compromise outmoded. The V15 LT bearing system is independently optimized for low frequencies and for high frequencies. Trackability and frequency response are enhanced across the entire audible spectrum.

# TELESCOPED SHANK AND HIGH-ENERGY MAGNET

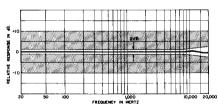
The effective mass of the V15 LT moving system has been lowered by utilizing a telescoped shank structure and a new TELESCOPED SHANK lightweight high-energy magnet (see Figure 5). With no sacrifice in either electrical output level or required shank stiffness, the dynamic mechanical impedance has been significantly reduced. The outcome is ultra-flat frequency response and improved trackability in the critical mid and high frequencies.



### **ULTRA-FLAT RESPONSE**

Faithful reproduction of recorded music requires flat response from the phono cartridge, the very first element in the reproducing chain. If the cartridge neither adds nor subtracts emphasis at any frequency, then the sound of the original performance can be recaptured.

Each V15 LT is individually tested to make certain that it meets all specifications, including trackability, and to ensure that its response is flat within the extremely narrow envelope shown in Figure 6. These tests guarantee true high fidelity reproduction of all your recordings. You will be able to hear the music as the musicians intended it.

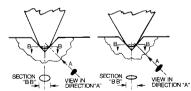


TYPICAL FREQUENCY RESPONSE FIGURE 6

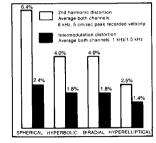
### HYPERELLIPTICAL STYLUS TIP

The hyperelliptical nude diamond tip configuration of the V15 LT represents a significant advance in tip design for stereo sound reproduction. As shown in Figure 7, its "footprint" (black oval) is longer and narrower than the traditional biradial (elliptical) tip-groove contact area. Because the hyperelliptical footprint geometry is narrower than both the biradial and long-contact shapes such as the hyperbolic, it is pre-eminent for reproduction of the stereo-cut groove. In fact, as a

result of the optimized contact area of the hyperelliptical tip, both harmonic distortion (white bars in Figure 8) and intermodulation distortion (black bars) are dramatically reduced.



BIRADIAL TIP HYPERELLIPTICAL TIP FIGURE 7



HARMONIC AND INTERMODULATION DISTORTION FOR VARIOUS TIP SHAPES

FIGURE 8

# **SPECIFICATIONS**

Frequency Response: 10 to 25,000 Hz

Typical Trackability (at 1.25 grams tracking force, in cm/sec peak velocity):

400 Hz - 36 cm/sec 1,000 Hz - 52 cm/sec 5,000 Hz - 59 cm/sec 10,000 Hz - 46 cm/sec

Output Voltage (at 1,000 Hz, 5 cm/sec peak 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: 1380 ohms Tracking Force: 1.25 grams

Net weight: 6 grams

Replacement Stylus: VN45LT with hyperelliptical nude diamond tip, black grip

FULL ONE-YEAR WARRANTY: Shure Brothers Incorporated ("Shure"), 222 Hartrey Avenue, Evanston, Illinois 60204, warrants to the owner of this product that it will be free, in normal use, of any defects in workmanship and materials for a period of one year from date of purchase. You should retain proof of date of purchase. Shure is not liable for any consequential damages. If this Shure product has any defects as described above, carefully repack the unit and return it prepaid to:

Shure Brothers Incorporated Attention: Service Department 1501 West Shure Drive Arlington Heights, Illinois 60004

If you are not in the United States, return the unit to your dealer or Authorized Service Center for repair. The unit will be repaired or replaced and returned to you promptly, and if it cannot be repaired or replaced, you may elect to receive a refund. This warranty does not include stylus wear.

**PATENT NOTICE:** Cartridge and stylus manufactured under one or more of the following U.S. Patents: 3,055,988; 3,077,521; 3,077,522; 3,463,889; and 4,194,744. Other patents pending.

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