

INSTRUCTION MANUAL**SPECIFICATIONS**

Nominal impedance.....	16 ohms
Frequency response.....	600Hz-20kHz w/suitable horn mounted
Voice coil diameter.....	4 inches (101mm)
Phasing plug.....	5 slit rear type
Throat diameter.....	2 inches (50.8mm)
Mounting pitch.....	4in (101mm) for 4 holes
Crossover frequency.....	600Hz \geq (-12dB/oct)
Rated Input.....	30W @ 600Hz, -12 dB/oct
Musical program input.....	60W @ 600Hz, -12 dB/oct
Output SPL.....	110dB/W/m
Total magnetic flux.....	246,000Mx
Magnetic flux density.....	21,500G
Dimensions.....	6-7/8" x 6-5/16" (diam x depth)
Weight.....	14lbs. 4oz. (6.5kg)
Accessories.....	Instruction manual

* Specifications and features are subject to change without notice

FEATURES**Pure Beryllium Diaphragm**

The 100mm diameter diaphragm features extremely high grade beryllium processed by a unique vacuum evaporation technique. Being an extremely light-weight, yet very rigid metal, the propagation speed of sound through beryllium is one of the fastest in all known metals. This property makes it ideal for use in a high frequency reproduction system. The weight of the dome section has been reduced to 1 gram, resulting in a very high efficiency. The surround is also constructed of beryllium, and is joined directly to the dome, thereby increasing the high range resonant frequencies to 20kHz. The extremely wide range reproduction from 600Hz-20kHz is a remarkable achievement for a 100mm diameter driver.

Rear Compression System

The rear compression system featured in this unit practically eliminates all resonance and phase distortion produced in the surround, resulting in extremely uniform phase at all frequencies. Subsequent elimination of the cavity resonance in the surround and the magnetic circuit, have produced a very flat frequency response, resulting in a very natural sound with a high degree of definition.

5-Slit Phasing Plug

Our precision-engineered 5-slit phasing plug and diamond tool machine finishing (± 0.02 mm tolerance) allow this driver to achieve a very high equalization capacity. This is successful in eliminating phase disturbances in the throat region and producing flatter frequency response, especially at the high end.

Newly Developed Neodymium Magnetic Circuit

This powerful magnetic circuit, constructed from neodymium magnet material, low carbon steel pole piece and top plate, features a total magnetic flux of 246,000Mx and a magnetic flux density of 21,500G. Furthermore, an oxygen-free copper shorting-ring on the center pole effectively prevents impedance increases in the high frequency region. The end result is a superbly flat frequency response extending well into the ultra high frequency range, with a very noticeable lack of distortion.

Aluminum Edgewise Voice Coil

Adoption of an aluminum edgewise voice coil treated with aluminum insulating material, and a voice coil bobbin made of 75 micrometer thick polyamide film, greatly increases the total conductor volume within the magnetic circuit, resulting in a higher conversion efficiency and smoother frequency response. The use of special non-flammable adhesive material also contributes to improvements in stability and reliability.

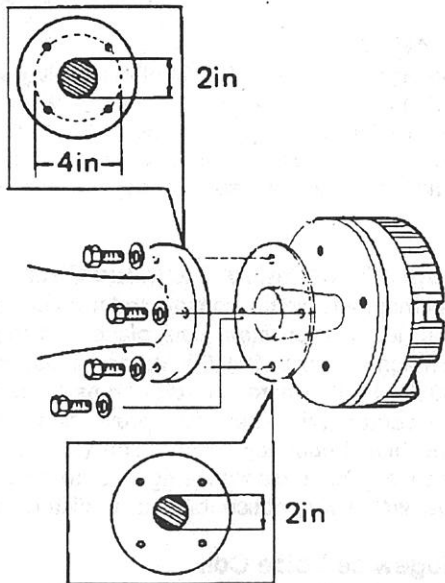
PRECAUTIONS

The TD-4002 compression driver is equipped with a throat extension which permits the unit to be used with a variety of manufacturers 2" entry horns. This throat assembly must not be removed for proper operation of the driver. Operation of the unit without the throat adaptor will provide improper loading of the diaphragm and result in destruction of the diaphragm. Additionally, a horn must be mounted to the driver unit prior to supplying any input signal. If signal is applied to the driver unit by itself, the diaphragm is subject to damage when amplitude is increased.

Because this unit has a very high level of magnetic flux, care should be taken when handling the unit. Remove all watches & jewelry which may be affected by magnetism, and avoid positioning the driver near televisions and video display terminals.

HORN MOUNTING

Use a horn throat diameter of 2in (50.8mm). Make the mounting pitch 4in (101.6mm). Use the accessory hexagonal screws (W1/4-20UNCx 1in) and flat washers, making sure that each is secured firmly. Note: Incorrect horn mounting may result in deterioration of the frequency response, and the generation of distortion.



CROSSOVER FREQUENCY

The crossover frequency of the TD-4002 is 600Hz. When using this unit in a multi-way system, use a crossover frequency of 600Hz or higher and a network cut-off slope of at least 12db/oct. These values are determined by the diaphragm excursion at maximum input.

Exploded Diagram of the TD-4002

