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**Boston** *Acoustics*

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**Installation and  
User Information**

**Boston MC-1**

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## Caution

All phono cartridges are fragile. Improper handling can easily damage the stylus cantilever assembly, and such damage is not covered by the warranty.

To avoid damage, keep the stylus guard attached to the cartridge body when handling the cartridge by itself and, as long as possible, when mounting the cartridge to the turntable tonearm. When removing or replacing the stylus guard, be careful not to touch the stylus.

## Mounting

- Using the hardware supplied with the cartridge (or with your turntable), bolt the cartridge finger tight to the tonearm headshell.
- Attach the color coded headshell wires to the corresponding terminals on the cartridge:
  - White is left channel hot
  - Red is right channel hot
  - Blue is left channel ground
  - Green is right channel ground

Tweezers or long nose pliers can be useful in making these wire connections. Be sure that the connections are firm and that the connectors do not touch one another. *NEVER SOLDER WIRES OR APPLY HEAT TO THE CARTRIDGE TERMINALS*; permanent damage (not covered by the warranty) will result.

- Adjust the cartridge for proper overhang (refer to your turntable or tonearm instructions).
- After mounting the cartridge in the tonearm, disconnect the turntable power with the tonearm in a mode where it can be moved freely across the turntable platter.
- Fasten the platter with masking tape so that it cannot rotate.
- Carefully remove the stylus guard and set the vertical tracking force to 1.8 grams and the anti-skating force to zero.

## Alignment

Proper cartridge alignment maximizes musical reproduction from any cartridge; accurate alignment is critical for proper performance with a van den Hul stylus.

- Place a record on the turntable and the enclosed Cartridge Alignment Guide over the turntable spindle.
- Position the tonearm and rotate the Guide so that the stylus rests exactly on the lateral tracking *zero-error point*.
- Twist the cartridge clockwise or counterclockwise in the tonearm headshell so that the cartridge body sides are parallel to the grid lines. The stylus cantilever should be centered over the grid center line.
- Tighten the mounting screws snugly but not overtight.
- Adjust the tonearm height so that the bottom of the cartridge is parallel to the grid lines when viewed from the side and the front.
- Remove the Guide and the tape from the turntable, and reconnect the power.

## About Vertical Tracking Force

With proper cartridge alignment, record and stylus wear will be minimized. Furthermore, setting tracking force within the recommended range will reduce distortion and record damage by insuring constant stylus contact with the record groove walls during the most difficult passages. You can optimize the tracking force for your tonearm by decreasing the force gradually until distortion becomes audible on your most difficult to track records and then increasing the force slightly to eliminate the distortion.

## Anti-Skating Force

Adjust the anti-skating force setting according to your turntable instructions. You can check the anti-skating force by viewing the cartridge from the front while playing a very quiet record passage and slowly lifting the stylus from the record groove with the cueing device. The cartridge should be centered in the groove. If the stylus moves laterally in or out *when it just leaves the groove*, the anti-skating setting should be adjusted until the stylus remains centered when it is lifted.

## Stylus Cleaning

Whenever touching the stylus for cleaning, do so gently in a back to front motion only, and never touch the stylus directly with your finger.

## Specifications

Type:	High Output, Moving Coil	
Frequency Response:	20-20,000Hz $\pm$ 1 $\frac{1}{2}$ dB	
Channel Balance:	within 1dB	
Channel Separation:	23dB minimum from 200-10,000Hz 20dB minimum from 10,000-20,000Hz	
Tracking Force:	1.8 gram $\pm$ 0.3 gram	
Output Voltage:	2.5mV at 3.54cm/sec RMS at 1000Hz	
Cartridge Weight:	5.0 gram	
Mounting:	standard $\frac{1}{2}$ in. (12.7mm) centers	
Recommended Load Impedance:	47Kohm (non-critical)	
Capacitance:	non-critical	
Cantilever:	thin walled, high strength extruded aluminum alloy	
Vertical Tracking Angle:	20°	
Dynamic Compliance:	$8 \times 10^{-6}$ cm/dyne at 100Hz	
Stylus:	<b>van den Hul</b> 0.14 $\times$ 3.3mil (3.5 $\mu$ $\times$ 85 $\mu$ ) grain oriented, square shank diamond, nude mounted	<b>Elliptical</b> 0.3 $\times$ 0.7mil (7.6 $\mu$ $\times$ 17.8 $\mu$ ) diamond, bonded to titanium
Effective Tip Mass:	0.27mg	0.35mg
Tracking:	70 $\mu$ m amplitude, 300Hz lateral modulation @ 1.8 gram	60 $\mu$ m amplitude, 300Hz lateral modulation @ 1.8 gram

## General

The Boston MC-1 high output, moving coil phono cartridge offers the outstanding sound quality – clear, spacious, and detailed accuracy – for which moving coil designs have long been recognized. It delivers this performance without the need for a transformer or pre-preamp step-up device. The MC-1's high output can be connected directly to preamplifier and receiver phono inputs (slightly higher volume control settings may be required than with conventional moving magnet and induced magnet cartridges). Furthermore, its design makes impedance and capacitive loading at the preamp electronics non-critical.

The MC-1 can be used with the widest range of turntables. Its low mass and optimum compliance put cartridge/turntable resonance in the ideal 8-12 Hertz range – higher than the record warp/feedback range and below the audible range. With ultra low mass tonearms, weight can be added to the headshell if necessary to lower the resonance to this optimal range.

The van den Hul stylus version offers absolute state of the art performance by precisely tracing the path of the record cutter stylus. The elliptical stylus version offers outstanding performance in less demanding installations.

The MC-1's rectangular body helps in aligning the cartridge during installation. And the white scribe line down the cartridge front makes accurate record cueing easy.

## Replacement

The phono cartridge is repeatedly moved back and forth, dropped and lifted, and pressed against rotating records. Far more than any other component, it is the one that eventually needs replacement. Normally, a phono cartridge can be used for hundreds of hours of record playing before the contact areas of the stylus begin to wear and require replacement. Improper cartridge installation in the turntable and/or playing unclean records can reduce stylus life (and the quality of reproduction) significantly. If in doubt, take your cartridge to your dealer for an inspection.

For the Boston MC-1, when you require a stylus replacement, you should replace the entire cartridge:

1. The moving coil design of the MC-1 takes the electrical output from generating coils mounted directly on the cantilever behind the stylus. This integrated design is more accurate and efficient, but it is not possible to separate the stylus from the generating coils and output wires for replacement in the field.
2. All cartridges use elastomeric rubber damping material to control cantilever motion and to damp very high and very low frequency resonances, and these elastomers can deteriorate over time.
3. We appreciate you as a Boston Acoustics Owner and want to encourage you to buy another Boston MC-1 Cartridge. You can purchase a new Boston MC-1 Cartridge at a reduced price with the return of your used Boston MC-1 Cartridge. This can normally be done at

the Dealer where you originally purchased your cartridge, or you may return your old cartridge for credit against the purchase of a new cartridge directly from Boston Acoustics.

See your Boston Acoustics dealer or write to us for details.

## Limited Warranty

Our quality control program includes testing every individual cartridge to ensure compliance with our design and performance specifications.

Boston Acoustics warrants to every original retail purchaser for one (1) year from the date of purchase that every cartridge is free from defect in material and workmanship. If a defect is discovered, Boston Acoustics will remedy the defect or (at its option) exchange the cartridge for a new cartridge without charge for parts or labor.

It is the owner's responsibility to deliver the defective cartridge with proof of purchase to Boston Acoustics or its authorized service representative for examination, repair and/or exchange. The owner's responsibilities include proper protective packaging and shipping expense.

This warranty excludes normal stylus wear or failure due to accident or misuse. Consequential damages are excluded. This warranty gives you specific legal rights, and you may also have other rights which can vary from state to state.

## Service

If you need service, whether in or out of warranty:

1. Take your cartridge with proof of purchase to the dealer from whom you purchased it.
2. If that is not possible, contact Boston Acoustics directly giving us:

Your name and address

When and where you purchased it

Make and model of your turntable

Description of the problem

We will promptly advise you of what action to take.