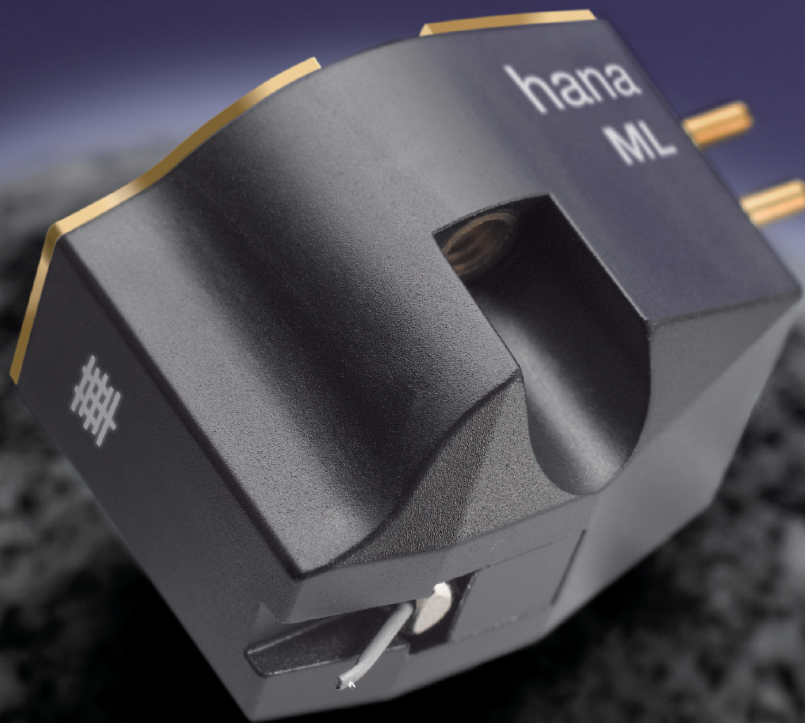


# A New Dawn for HANA Brilliance

## HANA **ML&MH**



### HANA-M Series Delux model MC cartridges

With its special Japanese character and meaning, “華”, Hana brand moving coil cartridges manufactured by Excel Sound deliver the most “Brilliant and Gorgeous” performance for vinyl music lovers and audiophiles. During the past several years, the HANA E and S Series moving coil cartridges have achieved global recognition for their world-class analog music reproduction, offering outstanding performance and value.

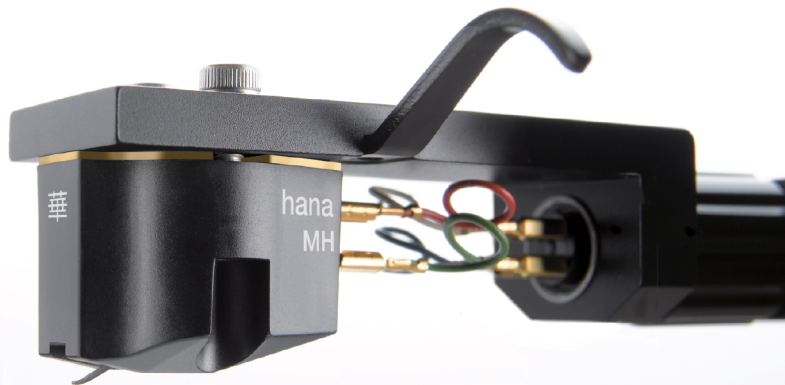
#### Aspiring towards affordable perfection

The HANA sound comes from superb design, engineering excellence and 50 years of experience by Masao Okada-san, the Excel Sound cartridge design Master.

Excel Sound manufacture all the major parts, producing affordable cartridges with an excellent sound quality. Specialized tooling improves the price/quality ratio, with manufactured parts, designed for maximum performance and consistency. Excel's experienced craftsmen skillfully hand assemble all the parts into an excellent finished product, producing the consistently “Brilliant and Gorgeous” HANA sound.

Now, building upon the foundation of the HANA sound, we introduce our new “M” Series moving coil cartridges, featuring higher specification parts, advanced materials, unique technical treatment and superior mechanical interface.

# HANA ML&MH



## M Series Micro line stylus – Higher Specification Part

Befitting its name, the M Series stylus profile is called 'Micro Line', fitting more precisely into the vinyl groove. This enhances tracking to capture the very smallest musical details with better frequency reproduction, stereo imaging, and resolution.

## High Purity copper wire – Higher Specification Part

Very high-quality copper wire is used for winding the M Series moving coils, offering greater clarity of sound for both low output ML and high output MH models.

## Delrin® cartridge body – Advanced Materials

The M Series cartridge body is injection molded from Delrin®, a high tech polymer with improved mechanical characteristics for better resonance damping to reveal more low level information and enhance dynamic range.

## Cryogenic Processing - Unique Technical Treatment

Cryogenic processing is Cold Annealing at near absolute zero temperature that restructures metals at the molecular level. Especially important in the Alnico based magnetic electro-motive circuit (cartridge signal generator). The M Series parts treated

include the front yoke as well as center and rear components. The result is a more precise and controlled magnetic flux field for greater linearity and musical sound quality.

## Threaded fittings and Brass Cap - Superior Mechanical Interface

Built into the M Series Delrin® cartridge body are metal threaded fittings for headshell mounting hardware, offering easier attachment and a superior mechanical interface for better bass and dynamics.

The Delrin® cartridge body also features an integral machined brass cap providing constrained mode layer damping and its heavier 9.5 gram weight provides expanded compatibility with a wider range of tonearms and turntables.

We have now reached a new dawn for HANA brilliance with the M Series Delux model moving coil cartridges. The Hana ML (low output) and MH (high output) options represent the further evolution of the "Brilliant and Gorgeous" quality that has earned HANA its worldwide reputation as we aspire towards affordable perfection.

Model No.	HANA-MH	HANA-ML
Stylus	Nude Microline tip	Nude Microline tip
Cantilever	Aluminum	Aluminum
Magnet	Alnico	Alnico
Magnetic circuitry	Pure Iron/Cryo treatment	Pure Iron/Cryo treatment
Coil wire	High Purity Copper	High Purity Copper
Cartridge Housing	POM (Delrin®) /Brass	POM (Delrin®) /Brass
Output level	2mv/1KHz	0.4mv/1KHz
Output balance	<1dB/1KHz	<1dB/1KHz
Vertical Tracking force	2gr	2gr

Model No.	HANA-MH	HANA-ML
Trackability	70μ/2gr	70μ/2gr
Compliance	10 x 10 <sup>-6</sup> cm/dyne	10 x 10 <sup>-6</sup> cm/dyne
Channel separation	30dB/1KHz	30dB/1KHz
Frequency response	12-45,000Hz	12-45,000Hz
Impedance	130Ω/1KHz	8Ω/1KHz
Suggested load Impedance	47KΩ	> 100Ω
Cartridge weight	9.5gr	9.5gr
Plastic Body Color	Black	Black

Distributor & Dealer

## EXCEL SOUND™

Manufactured by **Excel Sound Corporation.**

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