

### **Ortofon SPU-moving coil cartridges**

Thank you for choosing an Ortofon SPU-cartridge for your turntable.

All Ortofon SPU-cartridge models are highly indebted to their SPU-ancestor launched in 1958, when the original Ortofon stereo-cartridge was born.

So, ever since the various Ortofon SPU-models announced in this manual, have never compromised with the basic design - responsible for the so-called "Ortofon Sound", world wide related to these cartridges. Refinements on the models have taken benefit from the use of new materials and improved stylus types, to gain the outstanding reproduction qualities.

### **Mounting**

All SPU-cartridges are designed to bring optimum performance, when the tonearm mounted with the cartridge is adjusted parallel to the record surface, at recommended tracking force.

When antiskating adjustment is possible, we recommend a 50% higher value, when using SPU-cartridges with the Ortofon Replicant stylus, compared to normal setting at recommended tracking force.

### **Maintenance**

To obtain optimal sound reproduction, remove dust from the stylus regularly by using a small brush.

Guide the brush gently forward in the direction of the diamond tip.

From time to time also remove the cartridge system from the tonearm and clean the gold plated contact points with a small amount of propyl alcohol. Also the contacts inside the tonearm will need this type of cleansing, to avoid dust or sticky material to result in annoying disconnection.

We do not recommend the use of propyl alcohol for cleansing the record surface, as resolved materials will stick to the stylus.

As a consequence the Ortofon warranty - in such cases - may not be valid.

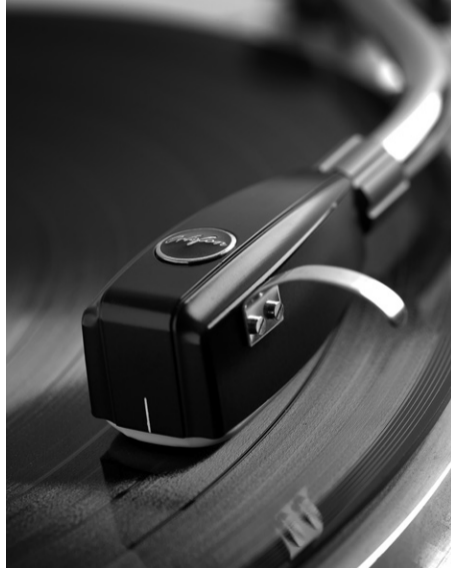
### **Special Repair service**

Owing to the design of the SPU moving coil cartridge, the stylus is not part of a replaceable assembly and therefore we offer Special Repair service for the SPU Series cartridges. Special Repair service is available through our webshop:

[www.ortofon.com/hifi/products/repair-service](http://www.ortofon.com/hifi/products/repair-service)  
and Ortofon Authorized dealers:  
[www.ortofon.com/where-to-buy](http://www.ortofon.com/where-to-buy).

### **Warning**

This phono cartridge is only for mounting on tonearms and must not be used for other purposes.



# ortofon

accuracy in sound



SPU  
Moving Coil  
Cartridges

Ortofon A/S  
Stavangervej 9  
DK-4900 Nakskov  
Denmark

Technical Data										
	SPU ROYAL GM MKII	SPU Synergy	SPU MEISTER SILVER GM MKII	SPU CLASSIC GM E MKII	SPU CLASSIC GM MKII	SPU MONO GM MKII	MONO CG 25 Di MKII	MONO CG 65 Di MKII	SPU #1 S and E	SPU Wood A
Output voltage at 1000 Hz, 5 cm/sec.	0.2 mV	0.5 mV	0.3 mV	0.2 mV	0.2 mV	3 mV	1.5 mV	1.5 mV	0.18 mV	0.18 mV
Channel balance at 1 kHz	< 1 dB	< 1.5 dB	< 1 dB	< 1 dB	< 1 dB				1.5 dB	1.5 dB
Channel separation at 1 kHz	> 25 dB	> 23 dB	> 20 dB	> 20 dB	> 20 dB				20 dB	20 dB
Channel separation at 15 kHz	> 20 dB	> 15 dB	> 10 dB	> 10 dB	> 10 dB				10 dB	10 dB
Frequency response	20-20,000 Hz + 1.5/-0 dB	20-20,000 Hz + 2 dB	20-20,000 Hz + 2/-1 dB	20-20,000 Hz + 3/-2 dB	20-20,000 Hz + 3 dB	20-15,000 Hz + 2/-1 dB	20-15,000 Hz + 3/-1 dB	20-15,000 Hz + 3/-1 dB	20-20,000 Hz ± 3 dB	20-25.000 Hz
Tracking ability at 315 Hz at recommended tracking force*)	> 70 µm	> 70 µm	> 70 µm	65 µm	> 65 µm	> 70 µm	> 60 µm	> 60 µm	65 µm	70 µm
Compliance, dynamic, lateral	8 µm/mN	8 µm/mN	8 µm/mN	8 µm/mN	8 µm/mN	12 µm/mN	7 µm/mN	7 µm/mN	10 µm/mN	10 µm/mN
Stylus type	Nude Ortofon Replicant 100	Nude elliptical	Nude elliptical	Nude elliptical	Nude spherical	Spherical	Spherical	Spherical	Spherical / Elliptical	Spherical
Stylus tip radius	r/R 5/100 µm	r/R 8/18 µm	r/R 8/18 µm	r/R 8/18 µm	R 18 µm	R 25 µm	R 25 µm	R 65 µm	R 18 µm / r/R 8/18 µm	R 18 µm
Tracking force range	2.5-3.5 g (25-35 mN)	2.5-3.5 g (25-35 mN)	3.0-5.0 g (30-50 mN)	3.0-5.0 g (30-50 mN)	3.0-5.0 g (30-50 mN)	3.0-5.0 g (30-50 mN)	3.0-4.0 g (30-40 mN)	4.0-5.0 g (40-50 mN)	3.0-5.0 g (30-50 mN)	3.0-5.0 (30-50 mN)
Tracking force, recommended	3.0 g (30 mN)	3.0 g (30 mN)	4.0 g (40 mN)	4.0 g (40 mN)	4.0 g (40 mN)	3.5 g (35 mN)	3.5 g (35 mN)	4.5 g (45 mN)	4.0 g (40 mN)	4 g (40 mN)
Tracking angle	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
Internal impedance, DC resistance	7 ohm	2 ohm	3 ohm	2 ohm	2 ohm	100 ohm	6 ohm	6 ohm	2 ohm	2.5 ohm
Recommended load impedance	> 100 ohm	10 - 50 ohm	> 10 ohm	> 10 ohm	> 10 ohm	47 kohm	> 100 ohm	> 100 ohm	> 10 ohm	> 10 ohm
Cartridge body material	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Ground wood and resin composite	Wood
Coilwire material	Goldplated silver	High Purity Copper (OFC)	Silver, 6-nines	High Purity Copper (OFC)	High Purity Copper (OFC)	High Purity Copper (OFC)	High Purity Copper (OFC)	High Purity Copper (OFC)	High Purity Copper (OFC)	High Purity Copper (OFC)
Cartridge colour	Shiny black	Shiny black	Shiny black	Shiny black	Shiny black	Shiny black	Shiny black	Shiny black	Shiny black	Dark maroon
Cartridge weight, GM model	28 g	28 g	28 g	28 g	28 g	28 g	35 g	35 g	28 g	
Cartridge weight, N model	13 g			13 g	13 g					
Cartridge weight, A model										29 g
*) Typical value										