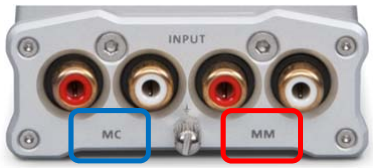
iFi iPhono User 4 Step Guide

Step 1: Connect MM/MC Input.

Refer to the cartridge manual for the specified output voltage.

Eg: The output voltage of the MC cartridge Denon DL-103R is 0.25mV;
The output voltage of a the MM cartridge Shure M97xE is 4mV.

Cartridge output	iPhono input connection
1mV	MC
>1mV	MM



e.g. Shure M97xE (4mV) should be connected to the MM input of the iPhono;
Denon DL-103R (0.25mV) should be connected to the MC input of the iPhono.

Note: MM and MC inputs should NOT be connected simultaneously.

Tip: For rare High Output MC cartridges like the Ortofon MC-3 Turbo , its output is 3.3mV , so it should be connected to the MM input of the iPhono. The actual output voltage determinate which input should be used.

Tip: Remember to connect the ground wire from the turntable/arm to the iPhono. Use the small extension lead included for ease of connection. So full vinyl system is now fully grounded together.

Step 2: Set Gain.

All phono pre-amplifiers have gain adjustment. Different cartridges require different levels of gain.

MM cartridges require lower gain and MC cartridge require higher gain. Normally gain is expressed in decibel (dB), 40dB means 100 times gain.

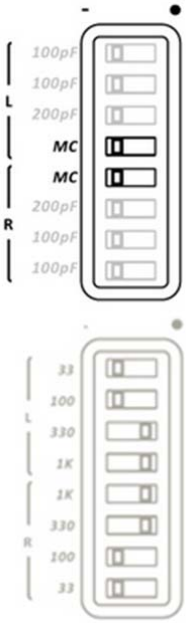
Cartridges Output	Gain Required
>3mV	40dB
1mV-3mV	46dB
0.3-1mV	60dB
<0.3mV	66dB

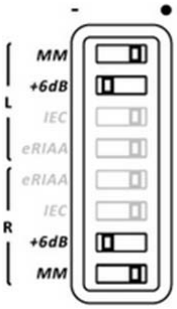
From the above table, Shure M97xEshould use 40dB gain, and Denon DL-103R should use 66dB gain.

As long as the right connection (MM/MC) is made as per “Step 1: Connect MM/MC Input”, there is no need to distinguish MM/MC cartridge anymore for the following steps.

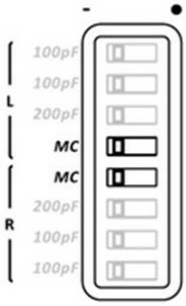
(i) Please look at the output voltage of the cartridge;
(ii) Determinate the gain required (dB) from the above table;
(iii) Then just set the micro switches exactly as follows, ignore the grayed out switches for now.

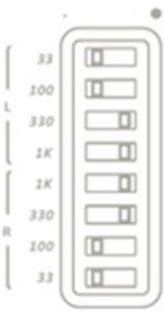
40dB

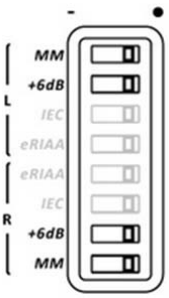




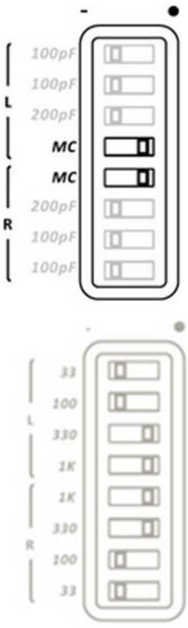
46dB





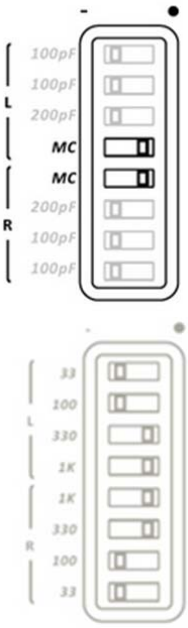


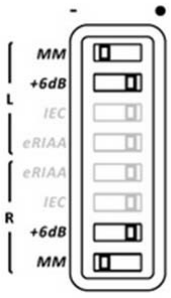
60dB


100pF
100pF
200pF
MC
MC
200pF
100pF
100pF
L
R
33
100
330
1K
1K
330
100
33
L
R


MM
+6dB
IEC
eRIAA
eRIAA
IEC
+6dB
MM
L
R

66dB


100pF
100pF
200pF
MC
MC
200pF
100pF
100pF
L
R
33
100
330
1K
1K
330
100
33
L
R


MM
+6dB
IEC
eRIAA
eRIAA
IEC
+6dB
MM
L
R

Step 3: Set Load.

Each and every cartridge requires the correct load to sound its best. MM cartridges require capacitive load (pF), MC cartridges require resistive load (Ω/Ohm).

The correct load value shall be stated in the cartridge manual too, however not ALL cartridges state this value.

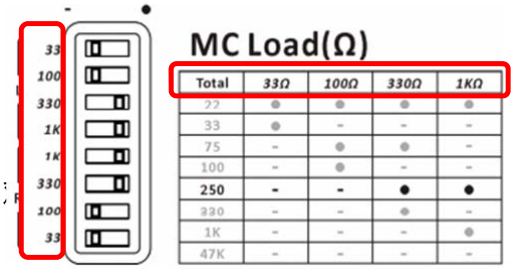
Many people have misunderstood this load value as the same as the cartridge internal impedance/resistance which is incorrect.

Cartridge	**Impedance/Resistance**	**Correct Load**
Shure M97xE (MM) 	1550 Ohm	200-300pF
Ortofon MC-3 Turbo (High Output MC) 	100 Ohm	47kOhm
Denon DL-103R (MC) 	14 Ohm	Not Stated.

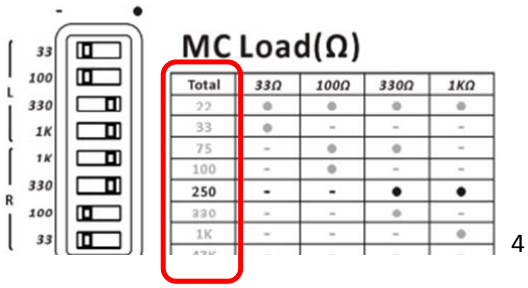
For cartridges that have no load value stated in the manual, the only way to find out the correct load value is by listening. Which load value provides the most natural sound, then it is the right value. For example, the correct load for Denon DL-103Ris around 1kOhm.

Tip: If the sound is too dull, try increasing the pF(MM)or Ω/Ohm(MC) value ; if the sound is too bright, try lowering the pF(MM) or Ω/Ohm(MC) value.

The upper-most row of the load table is the name of the micro switches, corresponding to the actual micro switches on the left:

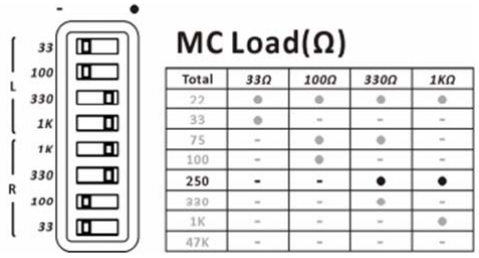


The left-most column of the load table is the actual load value:



For example：

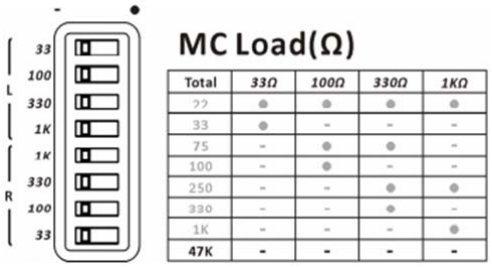
250Ω（MC）



Total	33Ω	100Ω	330Ω	1KΩ
22	●	●	●	●
33	●	-	-	-
75	-	●	●	-
100	-	●	-	-
250	**-**	**-**	**●**	**●**
330	-	-	●	-
1K	-	-	-	●
47K	-	-	-	-

If the required load value is 250Ω, then the 4 micro switches 330 Ω and 1k Ω shall be in the "●" (right) position; other micro switches shall be in the "-" (left) position.

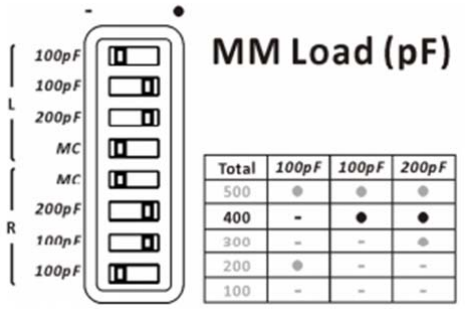
47kΩ（MC）



Total	33Ω	100Ω	330Ω	1KΩ
22	●	●	●	●
33	●	-	-	-
75	-	●	●	-
100	-	●	-	-
250	-	-	●	●
330	-	-	●	-
1K	-	-	-	●
47K	**-**	**-**	**-**	**-**

If the required load value is 47Ω, all micro switches shall be in the "-"(left) position.

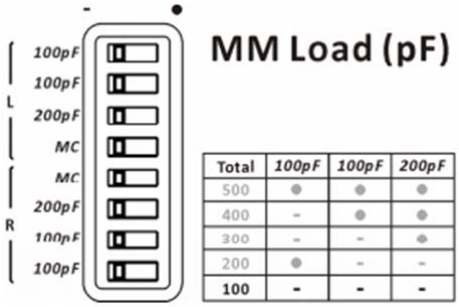
400pF（MM）



Total	100pF	100pF	200pF
500	●	●	●
400	**-**	**●**	**●**
300	-	-	●
200	●	-	-
100	-	-	-

If the required load value is 400pF，then the 4 micro switches 100pF and 200pF shall be in the "●" (right) position; other micro switches shall be in the "-" (left) position.

100pF（MM）



Total	100pF	100pF	200pF
500	●	●	●
400	-	●	●
300	-	-	●
200	●	-	-
100	**-**	**-**	**-**

If the required load value is 100pF, all micro switches shall be in the "-"(left) position.

Note: For high output cartridge, please use the MM cartridge (pF) settings.

Tip: Typically, MC cartridges offer the best sound, MM cartridges are most economical, High output MC cartridges are somewhere in between.

Step 4: Set EQ curve.

For the correct playback of each and every record, the correct EQ curve must be used. There are two small steps to set this correctly.

1：RIAA/eRIAA/IEC

(Under normal circumstance, one can just leave this unchanged as it is part of the factory Default settings)

RIAA EQ Curve

	IEC	eRIAA	Remarks
eRIAA (Default)	-	●	Enhanced RIAA
IEC	●	-	Standard RIAA + Subsonic Filter
RIAA	●	●	Standard RIAA
eRIAA+IEC	-	-	Enhanced RIAA + Subsonic Filter

Two eRIAA micro switches should be in "●" (right) position; two IEC micro switches shall be in "-" (left) position.

	Description	**Remarks**
eRIAA （Default）	Enhanced RIAA EQ curve	Extended High Frequency
IEC	Subsonic filter	For warped records
RIAA	Standard RIAA EQ curve	-
eRIAA + IEC	Enhanced RIAA EQ curve + Subsonic filter	Extended High Frequency + For warped records

2: DECCA/RIAA/COLUMBIA

At the beginning, there used to be many different kinds of EQ curve. In 1954, Record labels all over the world agreed to use a single RIAA EQ curve for all records. However, the reality is that only after 1980s, all records are actually using RIAA EQ curves (just think, how easy is it to reach a single agreement on a global scale? And implement it over the short space of 1-2 years?).

If the wrong EQ curve is used, the record will not sound "right." For example: Deutsche Grammophon's classical records released before 1980 often sound dry and flat, the reason is because those were manufactured using the DECCA EQ curve, not the RIAA EQ curve.

Record released before 1980:

Record Labels	iPhono front EQ switch
COLUMBIA, Epic, EMI	**COLUMBIA(Up)**
RCA	**RIAA(Middle)**
Deutsche Grammophon, DECCA, ARCHIV PRODUKTION, EMI, LONDON RECORDINGS, argo, NAB	**DECCA(Down)**

Note: For EMI records issued in Europe, many of them were using the DECCA EQ curve. For EMI records issued in the USA, many of them were using the COLUMBIA EQ curve, especially the ones which were originally produced by COLUMBIA/CBS but issued under the EMI label after the merger.

For records issued after 1980, most of them are using the standard RIAA EQ curve.

We hope this tutorial has helped you find more life in your vinyl collection and ultimately, lead to an even greater level of musical enjoyment!