sPQ-100 Operating instructions

Rev1.0g

www.sotm-audio.com

Precaution

Please read these instructions carefully before use.

- Do not attempt to disassemble or modify the product.
- Keep the product away from external shocks or vibrations.
- Do not use damaged or peeled cables.
- Do not use the product outdoors.
- Product specifications and features are subject to change without notice.

Warranty Information

- Free warranty service
  - In the case that a defect is found which is caused by a design or the production flaw while using the device properly, the manufacturer is responsible for the faulty product and there is free warranty service for 1 year from the date of purchasing.
  - Even during the warranty service period, malfunction or damage of products caused by inevitable incidents such as a natural disaster is not subject to the free warranty service.
- Warranty service at a cost
  - The free warranty service period is expired.
  - Malfunction of the product caused by a user's fault.
  - Malfunction of the product caused by incidents.
  - Malfunction of the product caused by a natural disaster such as earthquake, flood, lightning & etc.
  - In case of the warranty service at a cost, the customer should cover the shipping costs.
- Examples of a user's fault
  - In case of attempts to disassemble or modify the device.
  - In case of not following the instructions in this manual.
- Please read these operating instructions and Q&A board on our website carefully before asking for the warranty service.

Supplied Components

- A sPQ-100 Unit
- A 9V adaptor
- sPQ-100 Operating instructions

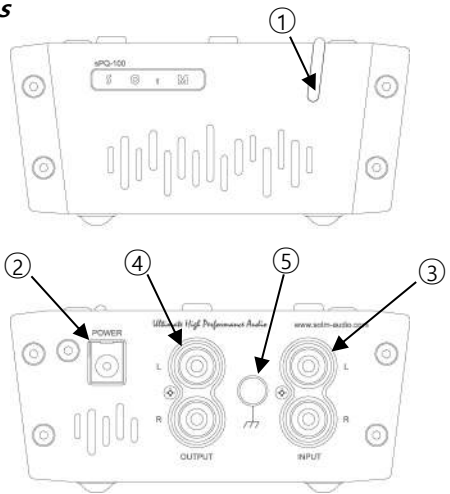
S O t M

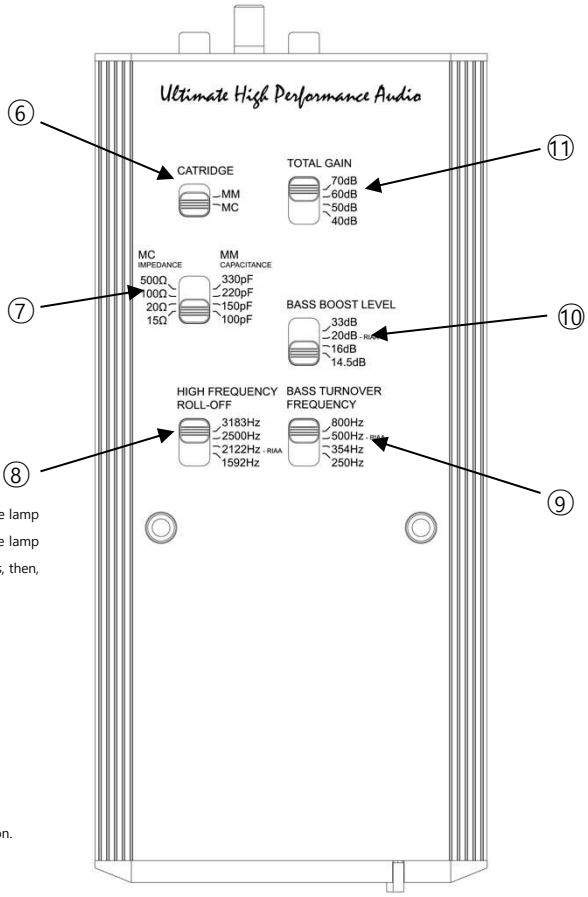
Ultimate High Performance Audio

Specification

- User interface
  - Power on/off switch
  - Operating indicator LED x1
  - MM/MC selection switch
  - Input impedance/capacitance selection switch
    MM : 47KΩ, 100pF, 150pF, 220pF, 330pF
    MC : 15Ω, 20Ω, 100Ω, 500Ω, 10pF
  - Bass boost level selection switch
    14.5dB, 16dB, 20dB @ 20Hz, 33dB @ 7Hz(no bass shelf)
  - Bass turnover frequency selection switch
    250Hz, 354Hz, 500Hz, 800Hz
  - High frequency roll off frequency selection switch
    1592Hz, 2122Hz, 2500Hz, 3183Hz
  - Total gain selection switch
    40dB, 50dB, 60dB, 70dB @ 1KHz
  - Tolerance : ±10%(all switch location)
- Input/Output signal
  - Input signal
    Stereo RCA jack with earth terminal x 1
    MM input
      Signal level : 3mVac ~ 10mVac @ 1KHz
      Recommended impedance : 47KΩ
      Recommended capacitance : 100pF ~ 330pF
      Frequency response : 20Hz ~ 20KHz
    MC input
      Signal level : 0.1mVac ~ 1mVac @ 1KHz
      Recommended impedance : 15Ω ~ 500Ω
      Frequency response : 20Hz ~ 20KHz
  - Output signal
    Stereo RCA jack
    Output signal level : 9.5Vac Max
    Output impedance : 20Ω typical
    Frequency response : 20Hz ~ 20KHz
    SNR : 100dB typical @ 1KHz max output level
    (MC, RIAA, 50dB Gain setting)
  - Tolerance : ±10%(all signal level, gain and frequency)
- DC power input
  - Input voltage : 7Vdc ~ 9Vdc
  - Input current : 1A max
  - 5.5mm OD, 2.1mm ID adaptor jack
- Operating environment
  - Operating temperature : 0 ~ +40℃
  - Storage temperature : 0 ~ +40℃
  - Operating & storage humidity : 10% ~ 90%
- Dimension
  - 106 x 48 x 245(mm)
- Weight
  - 1.5kg >

Product Outlines





① Power on/off switch and power lamp : The lamp blinks several times when connected power to the unit, then, the lamp lights out and the unit is in turn off status. To turn on the unit, press the switch for about 0.5 seconds, then, the lamp will blink for about 10 seconds and continue light up. To turn off the unit, press the switch for about 0.5 seconds, then, the lamp will blink for about 2 seconds and light out.

② Power input jack: Connect to the power supply.

③ Audio input jack : Connect to audio output jack of a record player.

④ Audio output jack : Connect to audio input jack of a pre-amp or inti-amp.

⑤ Earth Terminal : Connect to earth terminal of a record player.

⑥ MM/MC selection switch : Set the MM or MC per a cartridge type of a record player.

⑦ Input impedance/capacitance selection switch:
When set to MC, MC impedance value is set by the switch position.
When set to MM, MM capacitance values is set by the switch position.

⑧ High frequency roll off frequency selection switch : High frequency roll off frequency is set by the switch position.

⑨ Bass turnover frequency selection switch : Bass turnover frequency is set by the switch position.

⑩ Bass boost level selection switch : Bass boost level is set by the switch position.

⑪ Total gain selection switch : Total gain is set by the switch position.

How to use

- *Precautions*

- Please read these operating instructions fully before installing the unit.
- Please turn off all audio devices and disconnect AC power cables from all audio devices before installing the unit.
- Please check output and input connectors and connect cables correctly.

- Installations

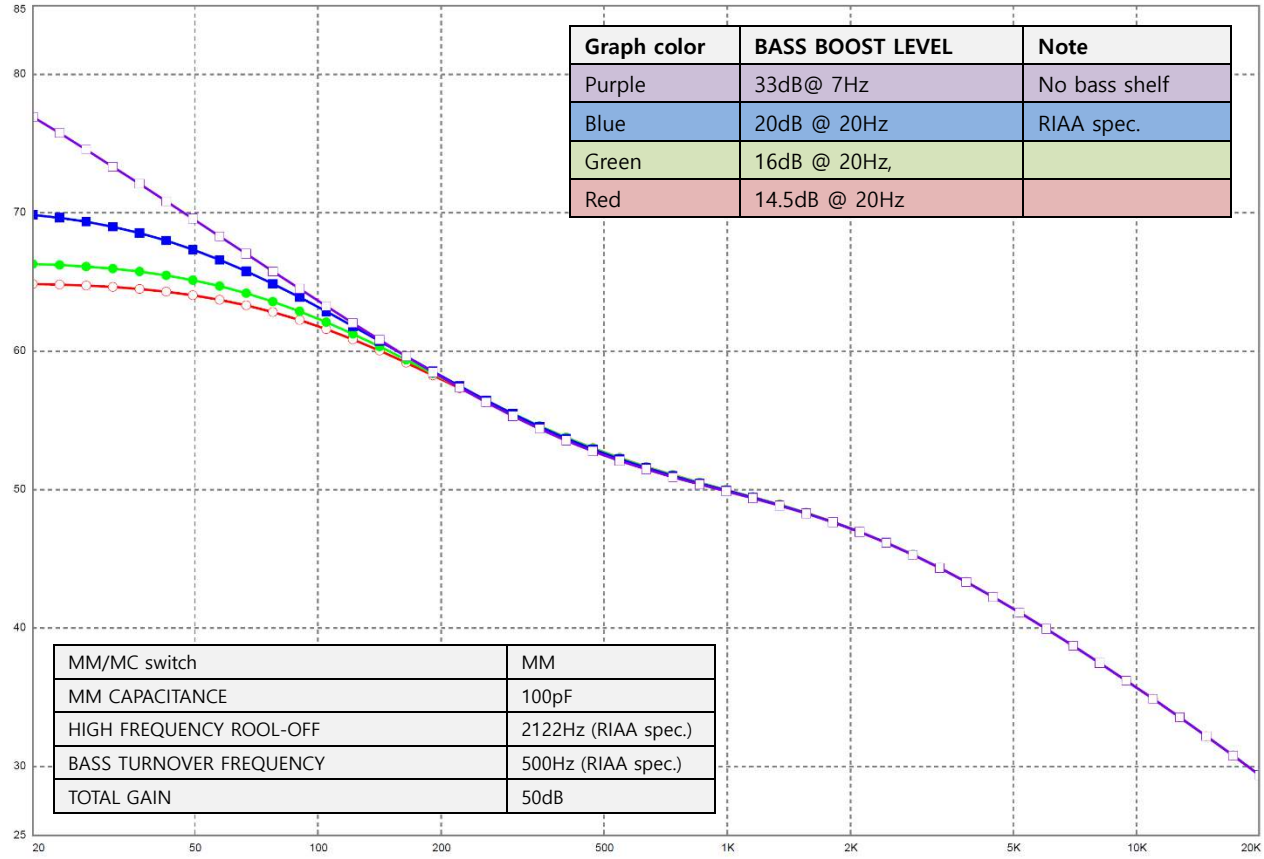
- Make sure to turn off all audio devices.
- Disconnect AC power cables from all audio devices.
- Connect the Earth terminal of a record player and the earth terminal of the sPQ-100 with a earth cable. And tighten the earth terminal so that it does not come loose.
- Connect audio output jack of a record player and the audio input jack of a sPQ-100 with an inter cable.
- Connect the audio output jack of a sPQ-100 and the audio input jack of a pre-amp or inti-amp.
- Set the MM or MC per a cartridge type of a record player, and set MC impedance or MM capacitance.
- Refer to the enclosed sPQ-100 EQ characteristics and select the desired EQ graphs by setting the switches on the top of the sPQ-100 according to the specifications of the record you want to listen to.
- Turn on the unit by pressing the switch for about 0.5 seconds, then, the lamp will blink for about 10 seconds and continue light up.
- Turn the volume down on the audio system, then turn on all audio devices.
- Put a record into the record player and start playing.
- Set the volume of a pre-amp or inti-amp gradually and fix the volume to listen to music.
- When turning off the sPQ-100, make sure turn off the power-amp and pre-amplifier first, then press the switch on the front of the sPQ-100 to turn off.

LP record EQ table by Switch settings

EQ Graph Spec.	HIGH FREQUENCY ROLL-OFF	BASS TURNOVER FREQUENCY	BASS BOOST LEVEL	Note
RIAA	2122Hz	500Hz	20dB	
AES	2500Hz	354Hz	33dB	
NARTB(NAB)	1592Hz	500Hz	33dB	
TELDEC	3183Hz	500Hz	20dB	
CCIR 78	3183Hz	354Hz	33dB	
IEC N78	3183Hz	354Hz	16dB	
Columbia LP	1592Hz	500Hz	14.5dB	
RCA Old Orthophonic	2122Hz	500Hz	33dB	
LONDON LP	3183Hz	500Hz	14.5dB	
All settings tolerance are ±1 dB with ideal values at 50Hz, 1KHz, 10Khz				

EQ characteristics per sPQ-100 Switch settings

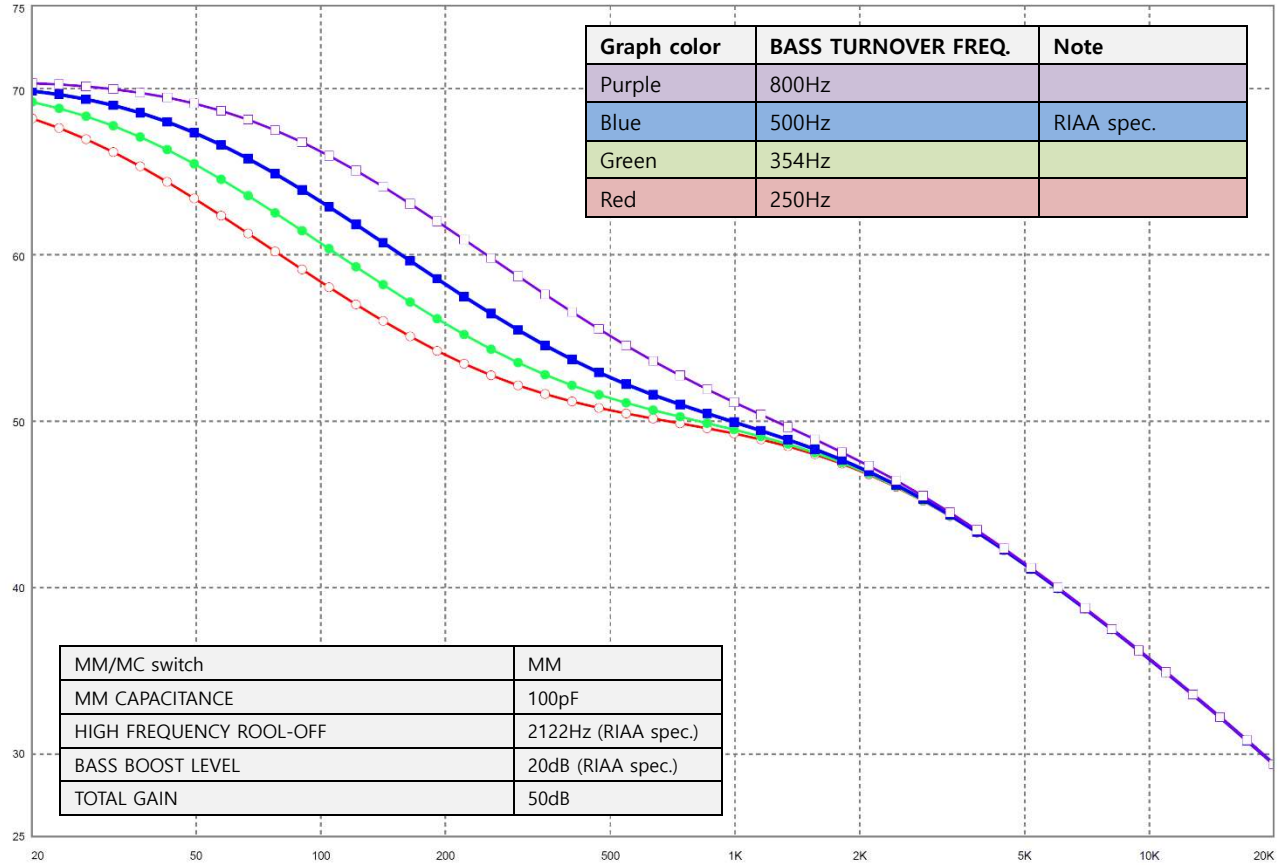
- BASS BOOST LEVEL switch



Graph color	BASS BOOST LEVEL	Note
Purple	33dB@ 7Hz	No bass shelf
Blue	20dB @ 20Hz	RIAA spec.
Green	16dB @ 20Hz,	
Red	14.5dB @ 20Hz	

MM/MC switch	MM
MM CAPACITANCE	100pF
HIGH FREQUENCY ROOL-OFF	2122Hz (RIAA spec.)
BASS TURNOVER FREQUENCY	500Hz (RIAA spec.)
TOTAL GAIN	50dB

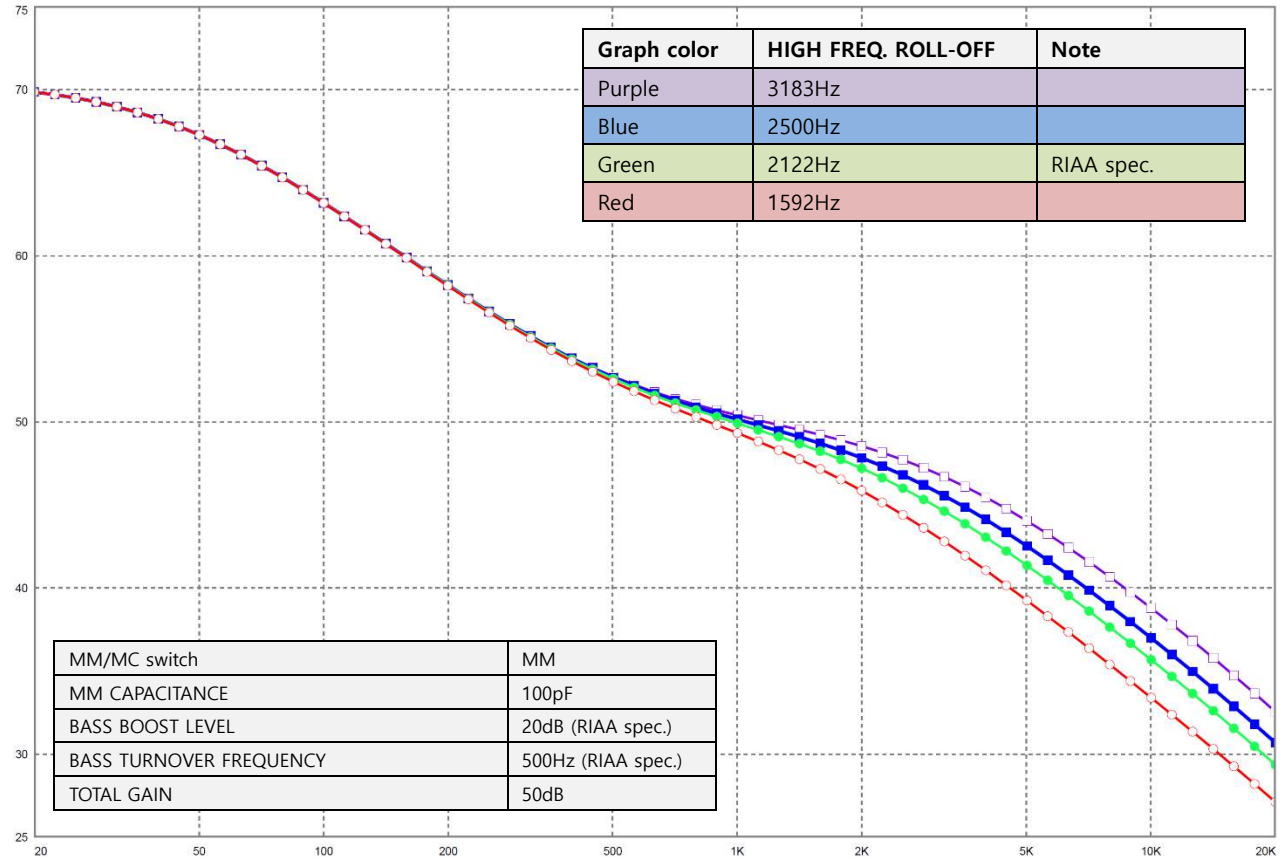
- BASS TURNOVER FREQUENCY switch



Graph color	BASS TURNOVER FREQ.	Note
Purple	800Hz	
Blue	500Hz	RIAA spec.
Green	354Hz	
Red	250Hz	

MM/MC switch	MM
MM CAPACITANCE	100pF
HIGH FREQUENCY ROOL-OFF	2122Hz (RIAA spec.)
BASS BOOST LEVEL	20dB (RIAA spec.)
TOTAL GAIN	50dB

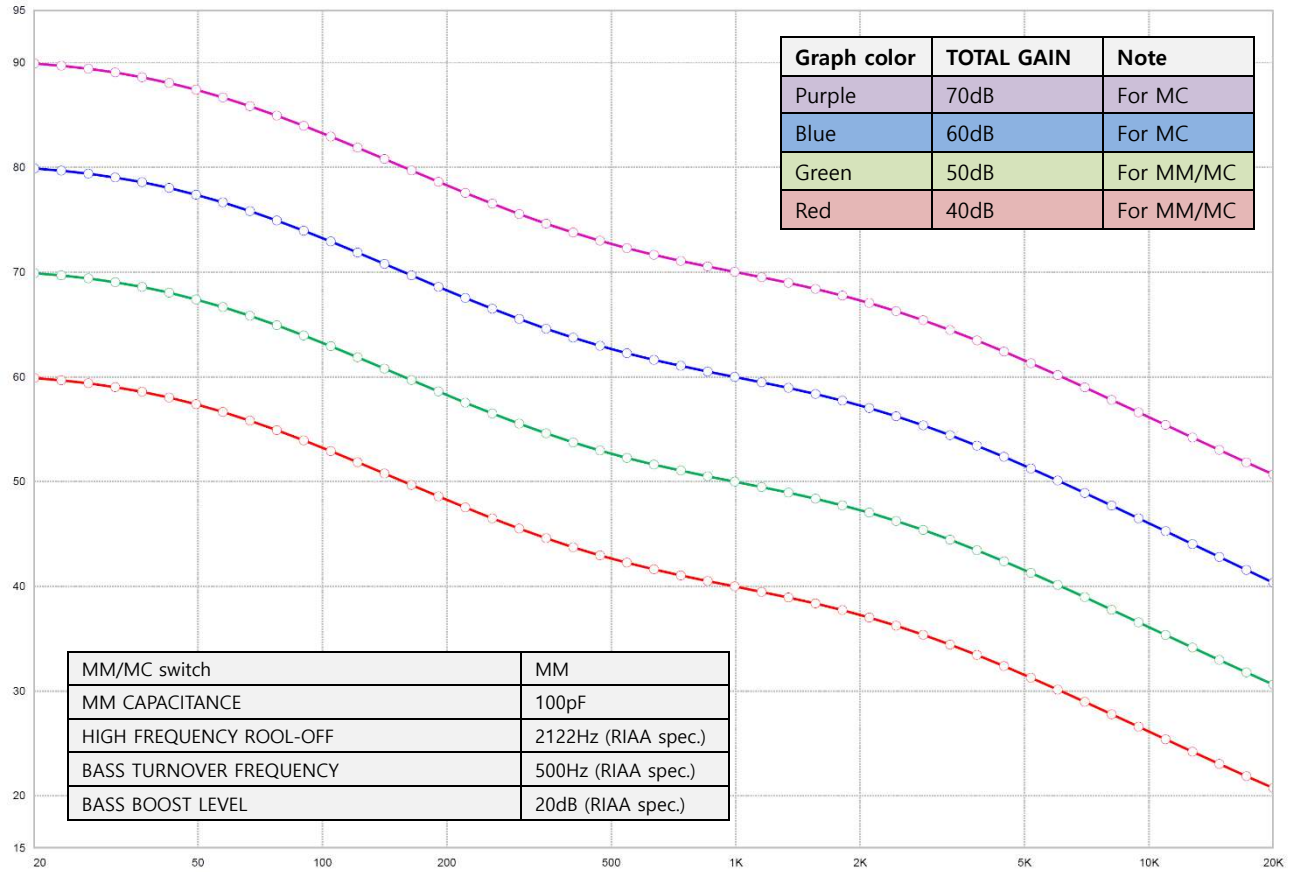
- HIGH FREQUENCY ROLL-OFF switch



Graph color	HIGH FREQ. ROLL-OFF	Note
Purple	3183Hz	
Blue	2500Hz	
Green	2122Hz	RIAA spec.
Red	1592Hz	

MM/MC switch	MM
MM CAPACITANCE	100pF
BASS BOOST LEVEL	20dB (RIAA spec.)
BASS TURNOVER FREQUENCY	500Hz (RIAA spec.)
TOTAL GAIN	50dB

- TOTAL GAIN graph



Graph color	TOTAL GAIN	Note
Purple	70dB	For MC
Blue	60dB	For MC
Green	50dB	For MM/MC
Red	40dB	For MM/MC

MM/MC switch	MM
MM CAPACITANCE	100pF
HIGH FREQUENCY ROOL-OFF	2122Hz (RIAA spec.)
BASS TURNOVER FREQUENCY	500Hz (RIAA spec.)
BASS BOOST LEVEL	20dB (RIAA spec.)