



REVO IPA-70B
REVO IPA-140USB
REVO DS-1, CDP-1BR, DAC-1
REVO PA-150, PA-160MR
REVO SC-2
HS DA1

norma
AUDIO ELECTRONICS



Norma is based in Cremona, Italy.

The city and its surroundings are well known all over the world for being home to great composers as Monteverdi and Pochielli, and to famous violin makers such as Stradivari, Amati, Guarneri and many others. As of today, more than 100 violin makers' shops are found in the ancient roads of the city.

In this inspiring context, where music permeates everything, for more than 20 years Norma has been involved in the study and implementation of sophisticated audio amplifiers, where technical skills and musical sensitivity must be merged together, in the same way the best musical instruments are made.

The result of this endeavor is a unique sound, which represents a synthesis of parameters usually set one against each other: dynamics, speed, and absolute transparency are combined with extraordinary musicality and total lack of listening fatigue.

The struggle between solid state and valves is finally overcome, as is the concept of reproduction.

Norma brings the listener to an intimate relation with the original event.

NORMA REVO IPA-70B



Technical Features:

- Extreme low noise, high speed, wide band circuit topology (>1 MHz).
- High current MOS-FET power devices (100 A output peak current).
- 8 power devices for a total rated 1000 W power handling capability.
- Selected and matched semiconductors for left and right channels.
- PCB Board with wide ground plane.
- Separate ground plane power supply for Gain, Driver and Output stage.
- High speed, low noise regulated power supply for gain and driver stages.
- High filtering capacity with numerous low impedance capacitors.
- Full aluminium non-magnetic frame.
- Toroidal power transformer especially designed for audio applications. Low dispersion flow, low mechanical noise, high permeability magnetic core with consequent low output impedance.
- Very effective DC protection.
- Versatile inputs/outputs (Direct Input for Home Theatre, Tape/External processor Output)
- Input selection done by relay with GOLD/PALLADIUM contacts.
- Automatic microprocessor stand-by, which removes the possibility of interference on analog signal.
- All functions controllable by included remote control, including two-speed volume control (Fine and Fast).

Optional Features:

- High Resolution USB input, 24/192, DSD compatible.
- High Quality phono stage, for MM and MC pick-up
- Optional Remote, machined from a full block of aluminium, controls all Norma products.

"Upon request, the REVO IPA-70B is also available in black anodized finish"

NORMA REVO IPA-140USB



Technical Features:

- Extreme low noise, high speed, wide band circuit topology (>2 MHz).
- High current MOS-FET power devices (150 A output peak current).
- 12 power devices for a total rated 1.500 W power handling capability.
- Separate power supply for Gain, Driver and Output stages.
- High speed, low noise regulated power supply for gain and driver stages.
- High filtering capacity (70.000 uF) with numerous (24) low impedance capacitors.
- Full aluminium non-magnetic frame.
- 2 toroidal power transformers especially designed for audio applications. Low dispersion flow, low mechanical noise, high permeability magnetic core with consequent low output impedance, 2 x 400 VA.
- Very effective DC protection.
- Customizable inputs/outputs (Direct Input for Home Theatre, active or passive Pre Output for subwoofer or Bi-Amping)
- Input selection done by relay with GOLD/PALLADIUM contacts.
- Solid core gold plated RCA plugs.
- Automatic microprocessor stand-by, which removes the possibility of interference on analog signal.
- All functions controllable by included remote control, including two-speed volume control (Fine and Fast).

Optional Features:

- High Resolution USB input, 24/192, DSD compatible.
- High Quality dual mono phono stage, for MM and MC pick-up
- Optional Remote, machined from a full block of aluminium, controls all Norma products.

"Upon request, the REVO IPA-140 is also available in black anodized finish"

NORMA REVO DS-1, CDP-1BR, DAC-1



Technical Features:

- Two PCM 24 Bit Digital to Analogue converters.
- Digital filter (up to 8x oversampling) with user selectable filter roll-off (Sharp or Slow).
- Proprietary I-V conversion architecture.
- Analog output stage fully based on discrete components.
- Extreme low noise, high speed, wide band circuit topology (>2 MHz).
- RCA (Unbalanced) and XLR (Balanced) output connections.
- Separate power supply for Digital and Analog sections.
- High filtering capacity with numerous low impedance capacitors.
- 15 Power supply regulators.
- Full aluminium non-magnetic frame.
- Toroidal power transformer especially designed for audio applications. Low dispersion flow, low mechanical noise, high permeability magnetic core with consequent low output impedance.
- All functions controllable by included remote control.

REVO DS-1 and REVO DAC-1 Only

- 5 digital inputs, USB, 2 x SPDIF RCA, SPDIF OPTICAL, AES-EBU. USB input and SPDIF full bandwidth, up to 24 Bit / 192 KHz.
- Possibility to select the oversampling frequency between 44.1 KHz, 48.0 KHz, 88.2 KHz, 96.0 KHz, 176.4 KHz, 192.0 KHz or AUTO.
- Possibility to customize all parameters for each digital input, including oversampling value, clock source, digital filter, phase.
- Possibility to choose as the master D/A clock source the local oscillator or the clock from the input signal.
- Two separate local clock oscillators 22 MHz / 24 MHz (to better work with 44.1 KHz / 48KHz and multiple frequencies).
- High Stability local oscillators, with low Jitter and low phase noise.

REVO DS-1 and REVO CDP-1BR Only

- High Quality TEAC CD Mechanism, especially designed for Audio CD.

Optional Features:

- Optional Remote, machined from a full block of aluminium, controls all Norma products.

"Upon request, the REVO DS-1 is also available in black anodized finish"

"REVO DAC-1 available only on request"

"Red display available only on request"

Technical Specifications:

Some specifications not applicable to all versions – DS-1, CDP-1BR, DAC-1

- Input Connections (Only with optional Digital Source board):
 - IN1 : USB, 2.0 High Speed
 - IN2 : SPDIF RCA, 750ohms
 - IN3 : AES/EBU XLR, 1100ohms
 - IN4 : TOSLINK OPTICAL, 96 KHz, (192.0 KHz may be achieved, but not guaranteed)
 - IN5 : SPDIF RCA, 750ohms (IN5 can be set as SPDIF Output by CD Mechanism).
- Digital Specifications:
 - Sampling Frequencies: 44.1 KHz, 88.2 KHz, 176.4 KHz, 48.0 KHz, 96.0 KHz, 192.0 KHz
 - UpSampler Frequencies: 44.1 KHz, 88.2 KHz, 176.4 KHz, 48.0 KHz, 96.0 KHz, 192.0 KHz, AUTO MODE Based on TI SRC4392
 - Clock performances: +/- 2ppm typ. at 25°, +/- 10ppm at 60°.
 - Digital Filter: Slow & Sharp mode, based on TI DF1706.
 - De-emphasis: 44.1 KHz, 48.0 KHz, auto e manual mode.
 - Oversampling: DF 1706 8x Digital Filter.
 - Oversampling: Filter.
 - User selectable: Sharp or Slow filter roll-off.
 - Output Connections: RCA (Unbalanced), XLR Balanced.
 - Output Voltage : 3.0 V RMS (+10 dBV) RCA (at 0 dB), 6.0 V RMS (+16 dBV) XLR(at 0 dB).
 - Output Impedance : 200 ohm.
 - Analogue Output Filter: 0.0 to 180 kHz +/- 3 dB.
 - Analogue Stage Frequency Response: 0.0 to 2 MHz +/- 3 dB.
 - Configuration: Solid state.
 - D/A Converters : Burr-Brown PCM 1704 True-Multibit 24 Bit.
 - I/V Conversion: I/V Conversion by proprietary topology with discrete component.
 - Output Stage: Proprietary topology with discrete components, high linearity & low noise.
 - Supply : 230 V AC / 50 Hz, (100V AC or 115 VAC / 50-60Hz in some country).
 - Dimensions (HxWxD) : 90 x 430 x 350 mm.
 - Weight: 10 Kg.
 - Note: Specification subject to change without notice.

NORMA HS DA1



Technical Features:

- 5 digital inputs, USB, 2 x SPDIF RCA and OPTICAL, AES-EBU.
- All parameters customizable for each digital input: oversampling value, clock source, digital filter, phase.
- Two separate local clock oscillators 22MHz / 24 MHz, High Stability, low Jitter and low phase noise.
- Two PCM 24 Bit Digital to Analogue converters.
- Digital filter (up to 8x oversampling) with user selectable filter roll-off (Sharp or Slow).
- Proprietary I-V conversion architecture.
- Analog output stage fully based on discrete components.
- Extreme low noise, high speed, wide band circuit topology (>2 MHz).
- RCA (Unbalanced) and XLR (Balanced) output connections.
- Separate power supply for Digital and Analog sections.
- High filtering capacity with numerous low impedance capacitors, 15 Power supply regulators.
- Toroidal power transformer especially designed for audio applications.

HS-DA1 Var

- All features of DAC Version, plus
- Variable output level, with Direct/Variable selection.
- Remote control of all functions.

HS-DA1 Pre

- All features of DAC Version, plus
- 2 Analog Input Preampifier section.
- 2 High Quality Class-A headphone amplifiers.
- Very low output impedance, to best match all types and impedance values of headphones. (e.g. 10-600 Ohms).
- Very wide range of Gain Values customization, to best match all types and impedance values of headphones.
- User-selectable amplification gain independently for line and headphone outputs, also done by remote control.
- Active and Passive mode selectable on RCA pre outputs, also done by remote control.
- Variable output level
- Remote control of all functions.

"Upon request, the REVO HS DA1 is also available in black anodized finish"

NORMA REVO SC-2



Technical Features:

- Extreme low noise, high speed, wide band circuit topology (>2 MHz).
- High filtering capacity (51.000 uF) with numerous (23) low impedance capacitors.
- Toroidal power transformer especially designed for audio applications. Low dispersion flow, low mechanical noise, high permeability magnetic core with consequent low output impedance.
- Full aluminium non-magnetic frame.
- Configurable RCA (unbalanced) & XLR (balanced) Inputs and Outputs
- Input selection done by relay with GOLD/PALLADIUM contacts.
- Solid core gold plated RCA plugs.
- P.D.A.A. Programmable Digital Analogue Attenuation, volume control
- Attenuation range of 127.5 dB in 0.5 dB steps, realized only with discrete components, relays and precision resistors.
- Active and Passive mode selectable also by remote control.
- All functions controllable by included remote control, including two-speed volume control (Fine and Fast).

Optional Features:

- High Resolution DAC board, 24/192.
- High Quality dual mono phono stage, for MM and MC pick-up
- Optional Multichannel Board MCH-6 (2 sets of 6 inputs and outputs) for Audio-Video application.
- Optional Remote, machined from a full block of aluminium, controls all Norma products.

"Upon request, the REVO SC-2 is also available in black anodized finish"

Technical Specifications:

- Inputs: 4 RCA Unbalanced, 2 XLR Balanced
- Inputs Impedance: 10 KOhm
- Inputs Configuration: Line, Balanced, Phono MM/MC, Multichannel & DAC options
- Input Connections (Only with optional Digital Source board)
 - IN1 : USB, 2.0 High Speed
 - IN2 : SPDIF RCA, 750ohms
 - IN3 : AES/EBU XLR, 1100ohms
 - IN4 : TOSLINK OPTICAL, 96 KHz, (192.0 KHz may be achieved, but not guaranteed)
 - IN5 : SPDIF RCA, 750ohms
- Multichannel Connections (Optional): 2 sets of 6 RCA Inputs and Outputs
- Outputs Configuration: 1 RCA Unbalanced, 1 XLR Balanced
- Outputs Impedance: 220 Ohm
- Phono Input Impedance: 47 KOhm, 1 KOhm, 500 Ohm. 100 Ohm, Spare
- Phono Gain: 34 dB, 38 dB, 42 dB, 46 dB, 50 dB, 52 dB, Spare
- Line Gain: 17.5 dB
- Output Voltage: 7.0 V r.m.s.
- Frequency Response: D.C. – 2 MHz (-3dB), (unfiltered)
- Configuration: Solid state, Dual Mono
- Supply : 230 V AC / 50 Hz, (100V AC or 115 VAC / 50-60Hz in some countries)
- Dimensions (HxWxD): 125 x 430 x 430 mm
- Weight: 15 Kg
- Note : Specifications subject to change without notice

Technical Features (PA-150):

- Extreme low noise, high speed, wide band circuit topology (>2 MHz).
- High current MOS-FET power devices (200 A output peak current PER CHANNEL).
- 16 power devices for a total rated 2.000 W power handling capability.
- Separate power supply for Gain, Driver and Output stages.
- High speed, low noise regulated power supply for Gain and Driver stages.
- High filtering capacity (70.000 uF) with numerous (24) low impedance capacitors.
- Full aluminium non-magnetic frame.
- 2 toroidal power transformers especially designed for audio applications. Low dispersion flow, low mechanical noise, high permeability magnetic core with consequent low output impedance, 2 x 400 VA.
- Very effective DC protection.
- Input selection done by relay with GOLD/PALLADIUM contacts.
- Solid core gold plated RCA plugs.
- Automatic microprocessor stand-by, which removes the possibility of interference on analog signal.

"Upon request, the REVO PA Series is also available in black anodized finish"



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Technical Specifications:

- Inputs: 4 RCA, 1 XLR Balanced, USB
- Input Impedance: 10 KOhm
- Input Configuration: Phono MM/MC, Line, Direct AV, Balanced
- Output Configuration: Pre Out Passive, Pre Out Active, Tape Output, Subwoofer Output
- Phono Input Impedance: 47 KOhm, 1 KOhm, 500 Ohm. 100 Ohm, Spare
- Phono Gain: USB Input Specifications
- 34 dB, 38 dB, 42 dB, 46 dB, 50 dB, 52 dB, Spare
- up to 24 bit, 192 KHz, DSD compatible
- Speaker Outputs: 2 pairs for main outputs
- Frequency Response: 0.1 Hz – 2 MHz (-3dB)
- Configuration: Solid state, Dual Mono
- Output Power: 140 W RMS / 8 Ohm - 280W RMS / 4 Ohm (each channel)
- Gain: 34 dB
- Supply: 230 V AC / 50 Hz, (100V AC or 115 VAC / 50-60Hz in some countries)
- Dimensions (HxWxD): 125 x 430 x 430 mm
- Weight: 25 Kg
- Note : Specifications subject to change without notice

Technical Specifications

- Connections Digital Inputs : USB, 2x SPDIF RCA, AES/EBU, TOSLINK OPTICAL
- Connections Analog Inputs: 2 line RCA (PRE only)
- Sampling Frequencies: Up to 192.0KHz
- UpSampler Frequencies: Up to 192.0KHz or AUTO
- Connections Outputs: Line RCA output, XLR Balanced, additional Line RCA output (PRE only)
- Connections Headphones: 2x 6.3mm Jacks (0.5 Ohm Output Impedance)
- Outputs DAC Voltage: 3.0 V RMS (+10 dBV) RCA (at 0 dB), 6.0 V RMS (+16 dBV) XLR(at 0 dB)
- Output DAC and PRE Impedance: 200 ohm
- Output Tension: 10V RMS
- Gain: 0.5, 5, 6, 10, 17.5 dB (Selectable) (PRE only)
- Analogue DAC Output Filter: 0.0 to 180 kHz +/- 3 dB
- Analogue DAC Stage Frequency Response: 0.0 to 2MHz +/- 3 dB
- Configuration: Solid state
- Oversampling: DF 1706 8 x Digital Filter
- D/A Converter: PCM 1704 Multibit 24 Bit D/A converter
- I/V Conversion: I/V Conversion by proprietary topology with discrete component
- Analog Stage: Proprietary topology with discrete component, high linearity & low noise
- Supply: 230 V AC / 50 Hz, (100V AC or 115 VAC / 50-60Hz in some countries)
- Dimensions (HxWxD): 126 x 215 x 350 mm
- Weight: 5 Kg
- Note : Specifications subject to change without notice

NORMA REVO PA-150, PA-160MR



Technical Features (PA-160 MR):

- All features of PA-150, plus
- 8 high current MOS-FETs for power stabilization (per unit).
- High speed, low noise regulated power supply also applied to the amplification power output stage.
- When using two REVO PA-160 MR for a stereo configuration, the number of low impedance capacitors, the filtering capacity, and the number of toroidal transformers is of course doubled.

Technical Specifications:

- Inputs: 1 RCA (unbalanced) , 1 XLR (Balanced)
- Input Impedance: 47 KOhm
- Speaker Outputs: 2 pairs for main outputs (1 pair in PA-160)
- Frequency Response: D.C. – 2 MHz (-3dB)
- Configuration: Solid state (Dual Mono in PA-150)
- Output Power (PA 150): 150 W RMS / 8 Ohm - 300W RMS / 4 Ohm (per channel)
- Output Power (PA 160 MR): 160 W RMS / 8 Ohm - 320W RMS / 4 Ohm
- Gain, Sensitivity: 28.5 dB, 1.30 V RMS @ 150 W / 8 Ohm
- Supply: 230 V AC / 50 Hz, (100V AC or 115 VAC / 50-60Hz in some countries)
- Dimensions (HxWxD): 125 x 430 x 430 mm
- Weight: 25 Kg (per unit)
- Note: Specification subject to change without notice