

Owner's Manual

Magnet

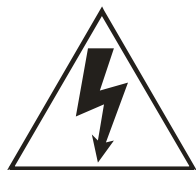
Handcrafted Audio Products

Janus Reference One

Pure Balanced Line Amplifier

WARNING

Please read and observe the following safety points at all times



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to people.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

CAUTION:

To prevent the risk of electric shock, do not remove the cover (or back) . No user-serviceable parts inside. Refer servicing to qualified service personnel.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT OPEN OR EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

(FOR CANADIAN MODEL)

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THE PROVIDED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE. AVIS: RISQUE DE CHOC ELECTRIQUE. NE PAS OUV

RIR

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PORLONGGATUER, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSES AUCUNE PARTIE A DECOUVERT.

INTRODUCTION

Welcome to Magnet family and congratulation on your purchase of what is unquestionably one of the finest Vacuum Tube Line Amplifier. With its combination of precision electronics circuitry and other components throughout, your Janus Reference One Pure Balanced Line Amplifier will offer you many years musically satisfying enjoyment. Please take a few moments to read remainder of this Owner's manual. A thorough understanding of the operational features will allow you to gain maximum performance and ease of use for the Janus Reference One. The serial number of the product is located on the rear panel of each and also recorded below. Please include these serial number with any correspondence regarding your Janus Reference One Pure Balanced Line Amplifier.

The Janus Reference One Pure Balanced Line Amplifier is audio component of enduring value which will reflect a higher ideal of musical and artistic expression. Hope that these qualities will enrich your experience of ownership.



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PRODUCT OVERVIEW

The Janus Reference One Pure Balanced Vacuum Tube Line Amplifier

The Janus Reference One is true dual monaural, fully balanced, pure tube in pure Class A operation, extremely low noise, with high intrinsic linearity. It provides an exquisite tube sound in terms of transparency, ambience, harmonics and refinement in one word, **musicality**.

High grade selected components, balanced mode operation on balanced circuit layout, result in lower noise and therefore a cleaner signal. And with our craftsmanship of the highest level you get the most appropriate compliments to the sound of...The Janus Reference One.

The Janus Reference One with true dual monaural features completely independent left

and right channel operation, outfitted with oversized toroidal transformers and dedicated stabilized power supplies. and packaged in an artistically refined massive chassis constructed of 4.5 mm thick aluminum. This rigid aluminum chassis ensures total freedom from typical coloration problems caused by vibration and current-induced hysteresis distortion.

The chassis features a brushed anodized finish, which preserves the natural beauty of the aluminum while providing a distinctive appearance that blends elegantly with interior decor.

Finally, flexibility is provided for which 3 RCA and 3 Balanced XLR input pairs and full infrared remote controlled function over volume, mute and input selection.

IMPORTANT SAFETY PRECAUTIONS

Before proceeding with the installation, please read the instructions carefully and completely. If you have any problems, do not hesitate to contact your retailer or our Service Department.

1. All warnings on the unit and in the operating manual should be followed.
2. Operate the unit only from a power source of the appropriate voltage indicated on the rear panel.
3. Do not use a damaged or deformed power cord as it may cause electric shock. When removing the plug from the wall outlet, be sure to remove by holding the plug attachment and not by pulling the cord.
4. This unit should not be used near water or in humid conditions.
5. Do not pour or spill liquids of any kind onto this unit.
6. Do not operate this product with any cover removed.
7. Before connecting or disconnecting any cables, always turn off your equipment and disconnect your entire system from the AC mains.
8. Do not replace any fuse with a value or type other than that specified.
9. Do not overload the wall outlet or extension cord because this can result in a risk of fire or electric shock.
10. Do not push objects of any kind into this product through the openings e.g., ventilation slots, because they may touch dangerous voltage points or short-out parts. This act could result in a fire or electric shock.
11. Do not attempt to repair this product because opening or removing covers may expose you to dangerous voltage or other hazards. If a problem occurs, contact your Marsh retailer.
12. Disconnect your entire system from the AC mains before cleaning.

13. Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of this product and to protect it from overheating. These openings must not be blocked or covered.

14. The operating temperature ranges from +5 to +35 degrees C. Operating humidity ranges from 5% to 80%. Do not operate the unit when the temperature and/or humidity are outside of this range.

UNPACKING

The following information will guide you through the setup and operation of the Janus Reference One Pure Balanced Line Amplifier. Please read through this entire manual preceding your setup.

Make sure you have the following to best enjoy the high performance of your Janus Reference One Pure Balanced Line Amplifier.

- A. This owner's manual
- B. Your source equipment, Power Amplifier and their owner's manuals.
- E. Interconnects cable to connect source components and Power Amplifier to your Janus Reference One.

UNPACKING YOUR JANUS

Take care in unpacking your Janus Reference One Pure Balanced Line Amplifier so as not to scratch or damage the unit .Magnet recommends saving the box should you ever need to move it or return it for any reason.

While unpacking please make note of the enclosed item and set them aside.

Items Included

1 Ea	Copy of this Manual
1 Ea	Remote controller
1 Ea	1/8"-to-1/8" mono mini remote trigger cable
1 Ea	AC Power Cord
1 Ea	Warranty card

INSTALLATION GUIDELINES

Before placing, connecting and using your Janus Reference One Pure Balanced Line Amplifier, please read through these guidelines to familiarize yourself with the installation specifications.

HEAT DISSIPATION

The Janus Reference One Pure Balanced Line Amplifier is a high voltage-high Bias design, and like all vacuum tube line amplifiers, will produce heat under normal operating conditions. To maintain proper operation of your Janus Reference One:

DO NOT stack your Janus Reference One in an enclosed environment such as closets or completely enclosed audio racks.

When placing your Janus Reference One into your audio system allow 3" of clearance on the top and 2" of clearance on each side to help disperse the heat. Each amplifier should be placed on a separate shelf with space above and to the sides.

If the Janus Reference One are required to be mounted in an enclosed environment, the use of a fan is recommended to remove excess heat from the enclosure.

DO NOT place Janus Reference One directly on carpeted floors. An amplifier placed on carpeting restricts the flow of air from the bottom and causes the Janus Reference One to heat up prematurely. This may also pose a safety hazard because may come in direct contact with the Janus Reference One's chassis which is a source of heat.

AC POWER LINE

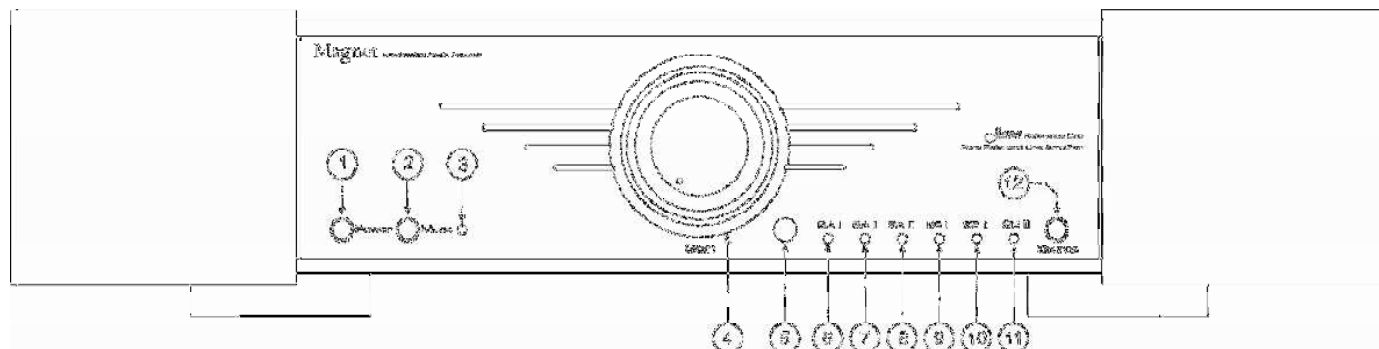
Connection is made through a heavy duty grounded power cord. For safety and proper operation DO NOT remove the ground pin, cut the power cord or use a ground lifting adapter.

AUDIO CONNECTIONS

When purchasing cable to connect your Janus Reference One Pure Balanced Line Amplifier to your system, make sure the cable are long enough to have some slack between components.

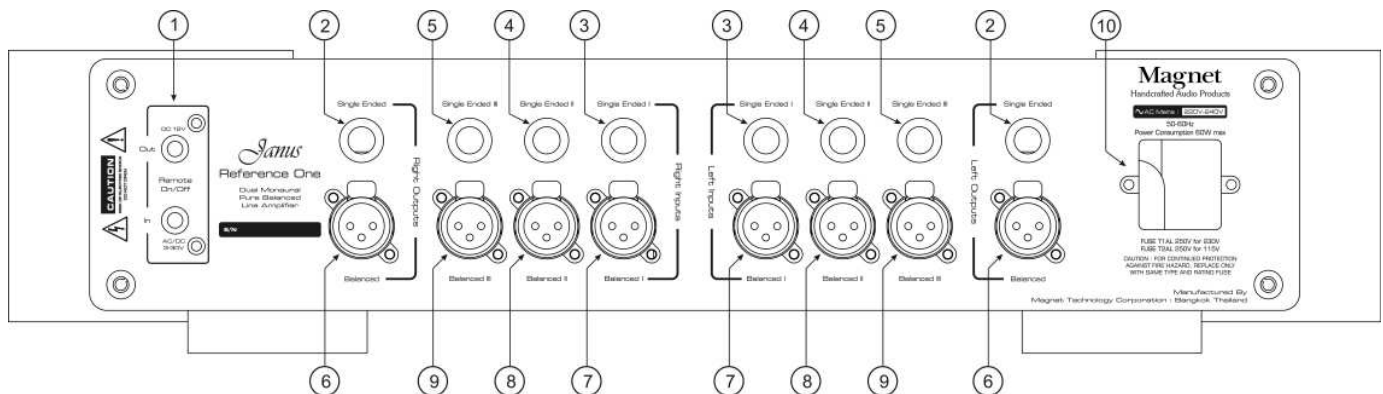
DO NOT stretch the cables tightly between components. Cables should be of sufficient length so that they are not pulled around shelves or other components.

JANUS REFERENCE ONE FRONT PANEL



1. **Power button** : Press this button to operate Janus Reference One press this button again to place Unit One in standby mode.
2. **Mute button** : Press the Mute button to turn the sound off. And Press the Mute button again to resume the sound.
3. **Mute/Standby/Power LED** : This small, Blue LED will light up when there is AC Power to the system and will blink when press the Mute button, or under mute condition.
4. **Gain control knob** : Adjust the output level.
5. **Remote receiver** : Receives signal from remote control unit.
6. **BA I LED** : This small, Red LED will light up when select to use Balanced I input channel.
7. **BA II LED** : This small, Red LED will light up when select to use Balanced II input channel.
8. **BA III LED** : This small, Red LED will light up when select to use Balanced III input channel.
9. **SE I LED** : This small, Red LED will light up when select to use Single End I input channel.
10. **SE II LED** : This small, Red LED will light up when select to use Single End II input channel.
11. **SE III LED** : This small, Red LED will light up when select to use Single End III input channel.
12. **Source Selector Button** : Press the selector button to the desired source input.

JANUS REFERENCE ONE REAR PANEL



1. Remote On/Off :

- **Remote Out** : This is a +12 VDC control signal designed to send a remote control signal to a Power Amplifier with remote turn on capabilities. With this function, your Power Amplifier can be Powered ON and Off at the same time as the Janus Reference One.

Connect the cable supplied with the Janus Reference One into this jack and connect the other end to a power amplifier with remote turn on capabilities.

- **Remote In** : This input accepts +3 to 30v AC/DC control voltage from other equipment. The Janus Reference One will be turned on when the control voltage is applied to this input. This control voltage may come from a system power control center or other equipment.

2. Single Ended Output : Sends unbalanced output signals to Power Amplifier.

3. Single Ended I : Receives signal from a unbalanced source I

4. Single Ended II : Receives signal from a unbalanced source II

5. Single Ended III : Receives signal from a unbalanced source III

6. Balanced Output : Sends balanced output signals to Power Amplifier.

7. Balanced I : Receives signal from a balanced source I

8. Balanced II : Receives signal from a balanced source II

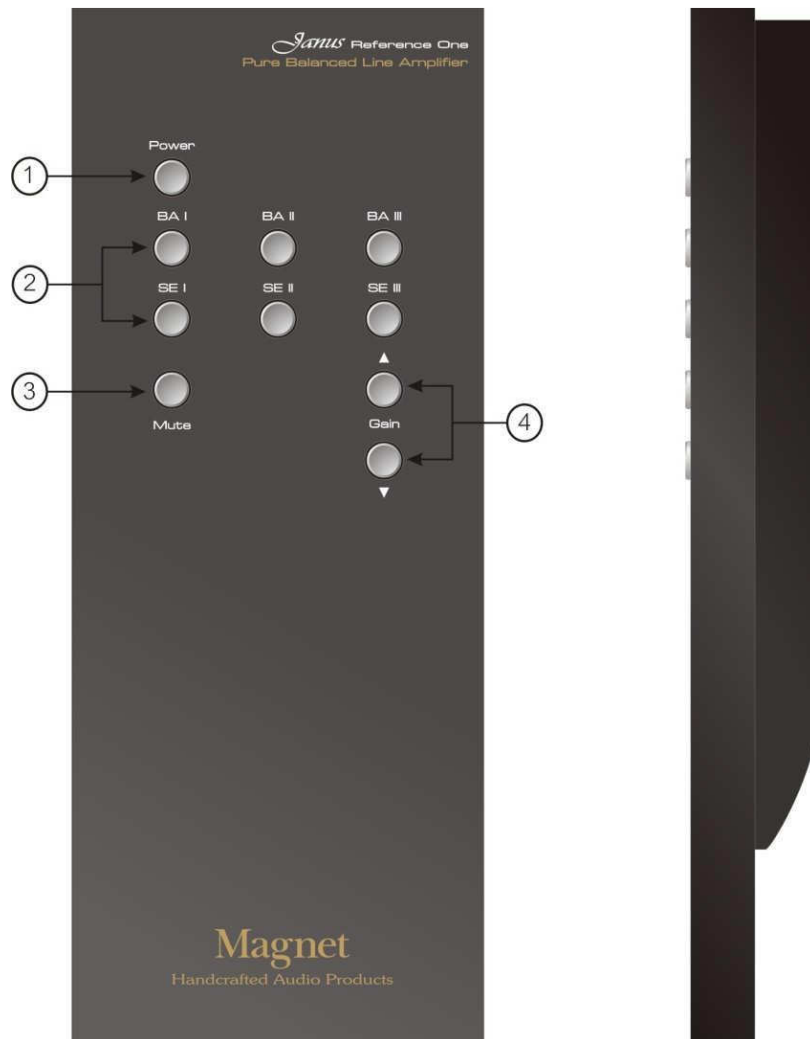
9. Balanced III : Receives signal from a balanced source III

10. AC Power Receptacle with Main Fuse : Connect the Janus Reference One to the outlet with the enclosed power cord.

IMPORTANT:

Operate the unit only from the power source of the appropriate voltage indicated on rear panel.

JANUS REFERENCE ONE REMOTE



1. **Power button** : Press Power button to operate Janus Reference One and press this button again to place Janus Reference One in standby mode.
2. **Source selection button** : Press the selector button to the desired source input.
3. **Mute button** : Press the Mute button to turn the sound off. And Press the Mute button to again to resume sound.
4. **Gain button** : Adjust signal input levels.

INSTALLATION AND OPERATION

The following section will guide you through the steps to connect your Janus Reference One Pure Balanced Line Amplifier to the test of your system. Read through this section carefully before connecting.

INPUT CONNECTIONS

A. The Janus Reference One Pure Balanced Line Amplifier provide both unbalanced (RCA) type and balanced (XLR) type connection for use with a variety of systems. Should your source and Power Amplifier have both types of the connections, Magnet recommends using balanced connections for cleaner more accurate reproduction.

**CAUTION: Never connect both balanced and unbalanced to the same input.
Damage to components may occur.**

B. Input connections are marked with the channel name they are intended for. In some situations the channel input may be from a different channel. Please make note of which channel you use if a channel other than the one marked is used.

TRIGGER CONNECTIONS

The Janus Reference One Pure Balanced Line Amplifier feature remote trigger input and output to turn the Power Amplifier on/off with the Preamplifier.

As well. Refer to the Power Amplifier specifications page for more information. The remote trigger works on 3-30v AC/DC and the remote trigger out is 12v DC.

KNOWING THE CONNECTIONS

Before continuing with the connection of the Janus Reference One Line Amplifier, please familiarize yourself with the Unit back panel. This will allow you to make the proper connections, prevent damage and ensure you get the most enjoyment from your system.

Once you are familiar with the back panel follow the steps provided in the connections guide.

JANUS REFERENCE ONE CONNECTIONS

STEP 1A : For Unbalanced RCA Connection

1. Connect one of the unbalanced RCA type interconnects to the Left and Right channel source output of your source. (CD player/DVD player or any source)
2. Connect the other end of the unbalanced interconnects to the appropriate channel inputs on the Janus Reference One Line Amplifier black panel.

STEP 1B : For Balanced XLR Connections.

1. Connect one of the balanced XLR type interconnects to the Left and Right channel source output of your source. (CD player/DVD player or any source)
2. Connect the other end of the balanced interconnects to the appropriate channel inputs of Janus Reference One Line Amplifier black panel.

STEP 2 : Remote Trigger Connections

1. Connect one end of the 1/8" to-1/8" mono mini cable to the **remote in** of your Power Amplifier.
2. Connect the other end of the 1/8"-to-1/8" mono mini cable to the **remote out** of the Janus Reference One.
3. Connect one end of the 1/8" -to- 1/8" mono mini cable to the **remote out** of the Janus Reference One and the other end to the component you wish to control.

STEP 3 : AC Power Connections

1. Connect one end of the supplied AC power cord to the Janus Reference One.
2. Connect the other end into the local AC Mains.

IMPORTANT:

Operate the unit only from the power source of the appropriate voltage indicated on rear panel.

TROUBLESHOOTING

The following lists some troubleshooting types should you encounter issues when using your Janus Reference One Line Amplifier.

Problem	Possible Cause	Remedy
Unit does not turn on	Power cord disconnected	Check power cord and connects to AC line
	Blown power fuse	Check Main power fuse on back panel. IMPORTANT: Disconnect Line Amplifier from AC before removing fuse. Replace with same value fuse only
	Remote trigger cable not connected to Power Amplifier	Verify that remote trigger cable is connected to both the Line Amplifier and Power Amplifier.
No sound from one or more channels	Input selection set to the incorrect input channel	Verify that all of the Input selection are in the corresponding channel.
	Input from your Source Power Amplifier is not connected	Check input and output connections
	Speaker Cables are not connected.	Check speaker connections Verify there is no short in the connections of the speaker.
Sound comes out of Incorrect speaker channel	Source output channel connected to an Incorrect input channel on Line Amplifier	Verify that the source output channel is properly connected to the corresponding input channel on the Line Amplifier.
	Power Amplifier output channel Connected to Incorrect speaker	Verify that the amplifier output channels go to the correct speakers.

WARRANTY INFORMATION

Thank you for purchasing this Magnet handcrafted Audio products. All Janus Reference One Pure Balanced Line Amplifier products are finely engineered and robustly manufactured to boost any system's performance beyond that you thought possible. Magnet proudly stands behind every one of its product, We know your Janus Reference One Pure Balanced Line Amplifier will bring you tremendous satisfaction and outstanding performance and reliability.

1. Magnet Technology Corp. warranty only applies to the original retail purchaser. The warranty certifies that the product is free from defects in material and workmanship and authorizes free service and/or parts exchange for a period of **TWO** years from the date of purchase. Service must only be done at an authorized Magnet Service center.
2. The warranty is subjected to the following conditions and limitations. The warranty is void if the product has been used in a manner other than that specified within the operating manual, if the product has been abused or misused, or if the product has been repaired by anyone other than an authorized Magnet Service center.
3. The warranty does not apply to defects or failure caused by usage of unauthorized parts, improper maintenance, fire, flood, lightning or other unusual natural causes.
4. This warranty does not cover damage to the external parts, e.g. front panel, knobs, casing, etc.
5. A returned product must include a copy of the Warranty Certificate and the receipt of sale and must be sent in the original packaging.
6. The warranty does not extend to any incidental or consequential cost or damage to the purchaser caused by a malfunction of the product.

TECHNICAL SPECIFICATIONS

CONFIGURATIONS	DUAL MONAURAL TRULY BALANCED VACUUM TUBE LINE AMPLIFIER
VOLTAGE GAIN	9.0 dB
FREQUENCY RESPONSE	20Hz-50KHz +/- 0.1dB
BANDWIDTH	0.5Hz-300KHz (-3dB)
THD+NOISE	BETTER THAN 0.05% @ 1.0Vrms OUTPUT
SIGNAL TO NOISE RATIO	BETTER THAN -72dB @ 20KHz
CHANNEL SEPERATION	BETTER THAN -94dB @ 1KHz AND -91dB @ 20KHz
INPUT SENSITIVITY	220mV @ 1.0Vrms OUTPUT
MAXIMUM OUTPUT	9.0Vrms
INPUT IMPEDANCE	1M UNBALANCED / 2M BALANCED
REMOTE TRIGGER IN	3 - 30v AC/DC 15mA +/-5mA
REMOTE TRIGGER OUT	12v DC 100mA
Dimensions	Width : 482 mm.
	Height : 106 mm.
	Depth : 460 mm.
Weight	Net Weight : 12.5 kg
	Shipping Weight : 15 kg

By Product Class



Magnet SP-01	Single Ended Cascode High Current Pre-Amplifier
Frequency Response	20Hz - 50kHz [+0, -0.2 dB]
Bandwidth [-3 dB]	15Hz - 200kHz
Output Impedance	750 Ohms
Maximum Output Voltage	5.5 Vrms
Crosstalk	< -80 dB [1 kHz, 1 Vrms]
Tone Control	+/- 6 dB @ 10 kHz [TREBLE] +/- 6 dB @ 80 Hz [BASS]
S/N RATIO [A-Weighted]	< -80 dB [1 Vrms, 20Hz - 20 kHz]
THD + Noise	< 0.003 %

Magnet reserve the right to alter specifications without further notice.



Magnet PR-8A	Symmetrical Class A Ultra Low Noise Pre-Amplifier
Frequency Response	20Hz - 50kHz [+0.3, -0.7 dB]
Bandwidth [-3 dB]	15Hz - 200kHz
Input Impedance	20 kOhms, 220pF
Maximum Output Voltage	15 Vrms
Crosstalk	< -80 dB [1 kHz, 1 Vrms]
Tone Control	+/- 10 dB @ 10 kHz [TREBLE] +/- 10 dB @ 80 Hz [BASS]
S/N RATIO [A-Weighted]	< -85 dB [1 Vrms, 20Hz - 20 kHz]
THD + Noise	< 0.01 %

Magnet reserve the right to alter specifications without further notice.



Magnet SA-01	Single Ended Cascode Stereo Integrated Amplifier
Frequency Response	20Hz - 20kHz
THD + Noise 20Hz-20kHz @ 50W	<0.06%
Input Impedance @ 1kHz	16 kOhm
Cross Talk	> 50 dB
Power Output	50Wrms @ 8 Ohm 75Wrms @ 4 Ohm
Output Impedance	0.088 Ohm
Dimensions (W x D x H)	43.4 x 32 x 8.8 cm.
Weight	7.8 kg.

Magnet reserve the right to alter specifications without further notice.



Magnet SM-01	Symmetrical Complementary Output Stage Power Amplifier
Frequency Response	20Hz - 20kHz [+ 0, -0.1 dB]
Bandwidth [-3 dB]	1Hz - 185kHz
Input Impedance	58 kOhms
Input Sensitivity	1.25 Vrms
Crosstalk	< -80 dB [1 kHz, 1 Vrms]
Gain	29 dB
Power Output	120 Wrms into 8 Ohms
S/N RATIO [A-Weighted]	< -100 dB @ Rated power
THD + Noise	< 0.004 %

Magnet reserve the right to alter specifications without further notice.



Magnet MA-8A	Dual Monaural-High Output Current With Uniform Feedback Circuit Power Amplifier
Frequency Response	20Hz - 20kHz [+ 0, -0.2 dB]
Bandwidth [-3 dB]	1.3Hz - 132kHz
Input Impedance	33 kOhms
Input Sensitivity	1.25 Vrms
Crosstalk	< -86 dB [1 kHz, 1 Vrms]
Gain	29 dB
Power Output	100 Wrms into 8 Ohms
S/N RATIO [A-Weighted]	< -120 dB @ Rated power
THD + Noise	< 0.1 %

Magnet reserve the right to alter specifications without further notice.



Magnet	Hyperion Reference One Dual Monaural Power Amplifier
Number of Channels	2 Channels Bridgeable
Power output Stereo	250 Wrms @ 8Ohms from 20Hz - 20kHz all channels driven 400 Wrms @ 4 Ohms from 20Hz - 20kHz all channels driven
Power output - Bridged	650 Wrms @ 8 Ohms from 20Hz - 20kHz all channels driven
THD + Noise	<0.01%at 1 KHz and <0.02% at 20 KHz, at rated power 8 Ohms
Frequency Response	20 Hz - 20KHz +/-0.1dB
Signal to Noise	>110dB from A-weighted below rated power
Crosstalk	>70 dB at 20KHz
Slew Rate	70v/microsecond
Damping Factor	>600
Input Impedance	24k Unbalanced / 50k Balanced
Input Sensitivity	1.55v for 250w ; 1v for 100w
Gain	29 dB
Bandwidth	300KHz @ 1w - 8 Ohms Load
Remote Trigger In	3 - 30v AC/DC 15mA +/-5mA
Remote Trigger Out	12v DC 100mA
Dimensions	Width : 482mm Height : 193.5mm Depth : 514mm
Weight	Net Weight : 34 kg Shipping Weight : 40 kg

Magnet reserve the right to alter specifications without further notice.

Magnet

Music speaks louder than words

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