







AGD Productions, Inc.

# **AGD ALTO MKII**

## **Reference Analog and Digital Preamplifier**

**By AGD Productions, Inc.**



# Operating Manual

Rev.03

Document Date, Sept. 18<sup>th</sup>, 2024

## CAUTION

**THE UNIT CONTAINS NO USER-SERVICEABLE PARTS.**

**DO NOT REMOVE THE PANELS OR ANY SCREWS OR CONNECTORS.**

DO NOT OPERATE THE UNIT WITHOUT THE GLASS TUBE FULLY INSERTED IN THE PROPER SOCKET.

DO NOT OPERATE THE UNIT IF WET, NEAR WATER, OR IN UNCONTROLLED OUTDOOR CONDITIONS.

BE CERTAIN TO INSTALL IT IN A SECURE LOCATION WHERE IT CANNOT FALL OR TIP OVER.

TIME SPENT FAMILIARIZING YOURSELF WITH THIS MANUAL WILL BE WELL REWARDED.





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## 1- ABOUT THIS DOCUMENT

This Owner's Manual covers unboxing of, familiarization with, and configuration of your new amplifier. This manual will enable you to expertly tailor the behavior and performance of your preamplifier to fit your preferences of your equipment and listening room.

This user manual is an integral part of the AGD "ALTO MKII" and must be available and consulted prior to the installation of the equipment.

The "ALTO MKII" is designed to operate indoors and must be utilized uniquely for the scope of audio signal amplification within the specifications and conditions defined in the manual.

It is strongly recommended that you follow this manual in the order in which it is written so that you understand the safety considerations before configuring the unit.



*Dear Customer,*

*I have always been driven by my passion for merging perfection and beauty in the art of Audio reproduction.*

*After the AGD “TEMPO” launch, we wanted to create a perfect companion preamplifier, so the AGD “ALTO” was our new compact reference analog preamplifier. With its MKII revision, we have increased overall features and performance.*

*Crafted with the same care and dedication as all AGD products, the “ALTO MKII” is a superior musical preamplifier and the perfect companion to the AGD line of GaN Amplifiers.*

*The Alto MKII Phono stage, a fully balanced topology, has superior performances, thanks to the lowest noise and high dynamic circuitry, to satisfy the most demanding Audiophile.*

*The musicality of the R2R DAC (optional with a streamer) sets the Alto MKII in the echelon class of reference-sounding products.*

*To enhance the functionality of audio-video systems, the ALTO MKII has the Home-Theater Pass-Through functionality with separate gain control. AGD Alto MKII will deliver the most sublime and purest sound with any audiophile-level system.*

*The AGD Audio Design team is confident the “ALTO” will meet your expectations, and as a team, we are ready to support your needs and future requirements.*

*Sincerely*

*Alberto Guerra*

*CEO, AGD Productions, Inc.*

A handwritten signature in black ink, appearing to read 'Alberto Guerra', with a stylized flourish extending from the end.



### 3- IMPORTANT SAFETY INFORMATION



**READ ALL INSTRUCTIONS:** All the safety and operating instructions of your AGD ALTO MKII PREAMPLIFIER should be read before power is applied to the equipment.

**RETAIN OWNER'S MANUAL:** These safety and operating instructions should be retained for future reference.

**READ WARNING:** All warnings on the unit and in the operating instructions should be adhered to.

**FOLLOW INSTRUCTIONS:** All operating and use instructions should be followed.

**CLEANING:** Unplug the unit from the wall outlet and leave for at least 10 min. - make sure the unit is not hot before you start cleaning. Use a dry or damp soft cloth to clean the surfaces. Do not use corrosive/abrasive spray for cleaning.

**VENTILATION:** Do not block any ventilation openings. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including other amplifiers). The unit should not be installed in a built-in location, such as a bookcase or rack, unless proper ventilation is provided.

**GROUNDING:** Do not defeat the safety purpose of the grounding-type plug. A grounding-type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician to replace the obsolete outlet.

**POWER CORD PROTECTION:** Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and where they exit from the apparatus.

**LIGHTNING:** Unplug this apparatus during lightning storms or when unused for long periods.

**SERVICING:** Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged, such as if the power supply cord or plug is damaged, liquid has been spilled inside the appliance, or it has been exposed to moisture, the appliance does not operate normally or has been dropped.

**DO NOT OPEN THE CABINET:** This product has no user-serviceable components. Opening the cabinet may present a shock hazard, and any modification to the product will void your warranty.



**WARNING:** Do not expose this apparatus to rain or moisture to reduce the risk of fire or electric shock.





## 4- INTRODUCTION

The AGD “ALTO MKII” is a complete audiophile Analog and Digital Reference Preamplifier that delivers unique features and components in a single beautifully crafted single billet aluminum cabinet. With his built-in fully balanced phono stage (MM & MC) and now the optional R2R DAC with a full-fledged versatile Network Player, the “ALTO MKII” is, by design, the perfect companion preamplifier for our line of GaN-based amplifiers.





## 5- MAIN FEATURES

- Fully Balanced Phono preamplifier stage with MM & MC cartridges support (selection via Menu and Remote control) and with dedicated ultra-low noise linear power supply and ultra-low noise linear professional grade amplifiers stage.
- Analog boards are fully shielded and separated from digital boards to deliver the lowest possible noise and prevent undesired interference.
- High Dynamic low noise professional grade instrumentational amplifier stages for the output buffer stage (configurable as bi-amp X-Over upon request).
- Fully balanced design and full DC coupling (no capacitors in line with analog signals).
- Three Analog inputs with one input fully balanced (XLR connectors).
- Three analog outputs (for multi-amplification solutions).
  - 1 XLR balanced output (6.4VRMS max)
  - 1 Single-ended stereo output
  - 1 Sub-woofer output (L & R)
- 8-bit fully balanced passive Ladder volume control.
- Digital inputs: (with Digital Option installed)
  - 1- AES
  - 1- SPDIF
  - 1- TOSLINK
  - 1- USB
- Network Player functionality (via Ethernet port). Full HD Streaming Capability (DLNA, UPNP, Apple).
- HD AptX Bluetooth.
- R2R multibit DAC with Up-Sampler (sampling rate of all signals is increased to 32-bit / 384 kHz).
- Clock / Jitter control Digital block- synchronizes incoming data with an internal clock reference generator, removing jitter.
- Remote control.



## 6- UNPACKING

### Unpacking

All AGD products' shipping boxes have been specially designed to protect their contents, and special care has been taken to prevent damage under normal shipping conditions.

When unpacking the product:

- Mishandling should be evident upon inspection of the flight case.
- Carefully remove the component from its packaging and examine it closely for signs of shipping damage.
- We strongly recommend saving all original packaging to protect the unit from damage, should you wish to store it or ship it later.



Please check that the content of the shipping is complete and that all the following items are included:

- 1- AGD ALTO MKII Unit
- 2- Power Cable
- 3- BT Antenna (in case an optional Digital board is ordered)
- 4- Remote control
- 5- Gloves
- 6- Operating Manual



## 7- INSTALLATION

### POWER REQUIREMENTS:

The AGD “ALTO MKII” has a universal voltage input configuration and can operate between 90~264VAC 50/60Hz single phase.

A detachable IEC power cable is included in the region where the unit is sold.



**WARNING:** The unit should be operated only at the rated voltage indicated on the power connector. If you are unsure what the primary voltage supplied to your home is, consult your unit dealer.

- Connect the power supply to the power source indicated on the rear panel.
- Avoid power conditioners that float the ground pin.
- ALWAYS connect the power cord to the component before plugging it into an AC outlet, and make sure that the unit's main switch is set to the “OFF” position before making the final connection.
- For best performance, try to position the power cord away from any input signal cables if possible.
- Pay close attention to power quality and know that different power cords can alter the sound.
- For initial power-up, operate the main switch on the back-panel power entry module.
- **BE CERTAIN TO INSTALL THE UNIT IN A SECURE LOCATION WHERE IT CANNOT FALL OR TIP OVER.**
- Do not operate on carpet or any other surface that might block airflow.
- Do not allow the chassis to touch any metal parts, such as the frame of an equipment rack. This might create a parallel ground path that could degrade the sound of your system.
- Connect the source's cables to their appropriate inputs.



**IMPORTANT: READ THE SECTIONS “BACK PANEL”**



## 8- FRONT PANEL FUNCTIONS AND OPERATION

All keys of the AGD ALTO MKII are touch-sensitive (no mechanical movement); hence, familiarization with their operation is required. The functions of the left-end side switch group are:



**Stand-by** - Switches the unit from stand-by to operational mode.



**Function/Menu selection:** sequential rotation of the following:

- Balance control
- Selection of the **Menu pages**:
- **Page 1:** Phase inverting / Remote control setup / Display brightness / Phono stage source type - MC or MM / Direct Volume
- **Page 2:** Digital filter - SD Slow / SD Sharp / Slow / Sharp / Bypass.



**Input Selector**

- Toggles between input sources as follows:
- PHONO, RCA2, RCA3, XLR, USB, COAX, OPT, AES, LAN, BT

Switch back to the home screen if one of the menu pages is open.

- A small icon ☐ **D** with a checkbox activates the option **HT-Pass through** on the specific input.



## 8- FRONT PANEL FUNCTIONS AND OPERATION

The functions of the right end side switch group are:



### Volume up

- Turn the volume control up by one step
- Menu navigation (up).
- Activate the **HT-Pass Through** function of the selected input



### Enter

- Apply input selection
- Select the highlighted menu item.



### Volume Down

- Turn the volume control Down by one step
- Menu navigation (down)
- De-activate the **HT-Pass Through** function of the selected input



## 9- BACK PANEL CONNECTORS

### DIGITAL INPUTS



### The AGD ALTO MKII has a complete front end of digital signal inputs.

- All the digital input connectors are in the upper area of the back panel.
- Please refer to the above picture to locate their positions and identify the functionality.

### DIGITAL INPUTS:

- 1x Network (LAN)
- 1x COAX (RCA)
- 1x Toslink (Optical)
- 1x AES (XLR)
- 1x USB
- 1x Bluetooth Antenna

**Note:** The Bluetooth antenna is assembled before shipping and should be re-checked and locked in position during installation.

**Do not exercise excessive force. No tools are necessary to secure the correct position and orientation of the BT antenna.**



## 9- BACK PANEL CONNECTORS

### ANALOG INPUTS:



The AGD ALTO MKII has four different analog inputs.

- All the Analog input connectors are located on the bottom left area of the back panel.
- Please refer to the above picture to locate their positions and identify the functionality.

### ANALOG INPUTS

- 1x Phono Input L-R – Input #1
- 2x RCA Single-Ended (Line level) Input # 2 & #3.
- 1x XLR balanced level input

**Note:** A ground screw connection is made available next to the Phono Input (Analog Input 1). Use this ground binding terminal to secure the connection of the ground wire from the Turntable.





## 9- BACK PANEL CONNECTORS

### **ANALOG OUTPUTS:**



The AGD ALTO MKII has three sets of analog output terminals.

- One pair of XLR (balanced output)
- 2 pairs of RCA (single-ended outputs).

The ALTO MKII output interface can drive up to six independent amplification channels.

The buffer output stage circuit is designed around professional-grade operational amplifier ICs with output characteristics capable of driving any amplification system thanks to an output impedance of  $\sim 50\Omega$  and a maximum voltage swing of  $6.4V_{RMS}$ .

### **ANALOG OUTPUTS**

- |                                |           |            |
|--------------------------------|-----------|------------|
| • 1x XLR 1(Balanced Output)    | Output #1 | Full Range |
| • 1x RCA (Single-ended output) | Output #2 | Full Range |
| • 1x RCA (Single-ended output) | Output#3  | SUB-OUT    |
- (Options: Full Range, Hi-Pass filter).

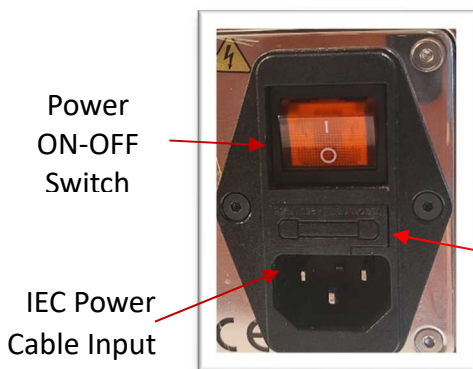


## 10- AC POWER ENTRY MODULE

### AC POWER ENTRY MODULE



#### AC Power Entry module functions:



The AGD “ALTO MKII” has a universal voltage input configuration and can operate between 90~264VAC 50/60Hz single phase.

A detachable IEC power cable is included for use in the region where the unit is sold.







**WARNING:** The unit should be operated only at the rated voltage indicated on the power connector. If you are unsure what the main voltage supplied to your home is, consult with your unit dealer.



## 11- OPERATION




### OPERATION

- After all the connections of the input signals are verified and are correct, and the power cable is plugged in, turn the power switch of the back panel ON. A red light will illuminate. The unit is powered up.
- At this point, the unit enters automatically in STAND-By mode.
- To bring the unit into operation mode, touch the “Stand-by” switch. 
  - Please note that it will take 2~3 seconds after turning the main power on before the front panel touch sensors are operational, including the standby switch.
- Use the “INPUT” selector switch  to toggle between input sources and set the one you will be using by touching the ENTER  button.
- The Menu button  gives access to the following functions:

#### Screen 1:

- Balance control Operation

#### Screen 2:




- Output Phase
- Remote control setup
- Display brightness
- Phono stage source select - MC or MM
- **Direct Volume** (for the pass-through input) – After it is activated, press the menu button again , then use the volume keys  or  to set the value. The desired volume is stored after 10 seconds if no other keys are touched.

#### Screen 3: DAC Digital filters Selection (if Digital option is installed)


- SD Slow / SD Sharp
- Slow / Sharp Bypass
- Dither
- De-emphasis.



- **BALANCE ADJUSTMENT:**

- To shift the Left/Right balance, press Menu  once, and use the navigation keys either on the remote or front panel   to adjust the balance of the LEFT-RIGHT channels.

- **PHONO INPUT**

- To select the appropriate setting for the type of cartridge mounted on the tonearm (MM - moving magnet or MC - moving coil), press the MENU function twice to enter the second page of the menu and select the radio button MM or MC and press ENTER 

- **BLUETOOTH**

- The Bluetooth functionality requires pairing the source (Phone, PC, tablet, etc.) with the AGD ALTO MKII Bluetooth receiver.
- Select, either via remote control or by manual selection from the front panel, the Bluetooth input on the AGD ALTO MKII.
- From the settings menu of the source (Phone, PC, tablet), search for the Bluetooth devices available, the one named “AGD ALTO MKII,” select it, and initiate the pairing function.
- The Bluetooth range is about ~10mt (30 feet).
- Make sure the BT antenna is inserted correctly and locked in position.

- **LAN (Streaming Function)**

- THE AGD ALTO MKII streaming function is available via Ethernet port (LAN).
- Once the LAN input is selected, the AGD ALTO MKII acts as DNLA, UPNP renderer or as ROON End Point (only via AirPlay), or Airplay enabled player (and it is recognized as such by the relevant application software in use).
- The broadcasted name of the renderer is “AGD ALTO MKII.”
- That is the name of the device that needs to be selected in the application settings of the streaming device (Phone, tablet, PC) to send the streaming signal to the unit.
- In streaming mode, all audio formats are available with resolutions up to 192Khz-24bit.




- When in streaming mode (LAN input), volume control is also possible from the application (i.e., Audirvana, BubbleUPNP, etc.).
- Music services such as Qobuz or Tidal, are compatible with the ALTO MKII, by using various streaming Applications/software available for the major operating systems (Android, iOS, Windows, Linux).
- To access Quboz and Tidal services, or in general as main music management platform, we strongly recommend Audirvana (which is our favorite platform), or BUBBLE UP&P (available only on Android), or MConnect (available in Android and Windows), and of course iTunes AirPlay or ROON (please note Roon is only available via Airplay because AGD has not signed and will never sign any privacy violation agreement with Roon).

#### • **USB INPUT**

- THE AGD ANDATE USB module is based on the latest XMOS chipset and can decode any format available: MP3, WMA, MPEG-4 AAC, WAV, FLAC, AIFF, ALAC, DSD.
  - Sampling frequencies: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 352.8kHz, 384kHz, 705.6kHz and 768kHz  
16, 24 and 32-bit resolution  
DSD: DSD64, DSD128, DSD256, and DSD512 are on Linux and Windows, using **Thesycon audio driver**.
- No drivers are needed for MAC OS version 10.6.4 and above.
- ASIO/KS/WASAPI/Direct Sound drivers are needed for Windows XP to 10 (32 and 64 bit).
- Licensed XMOS USB Audio 2.0 Stereo Driver downloadable from 3<sup>rd</sup> party link: [www.JLSounds.com](http://www.JLSounds.com)

#### • **DIGITAL FILTER SELECTION**

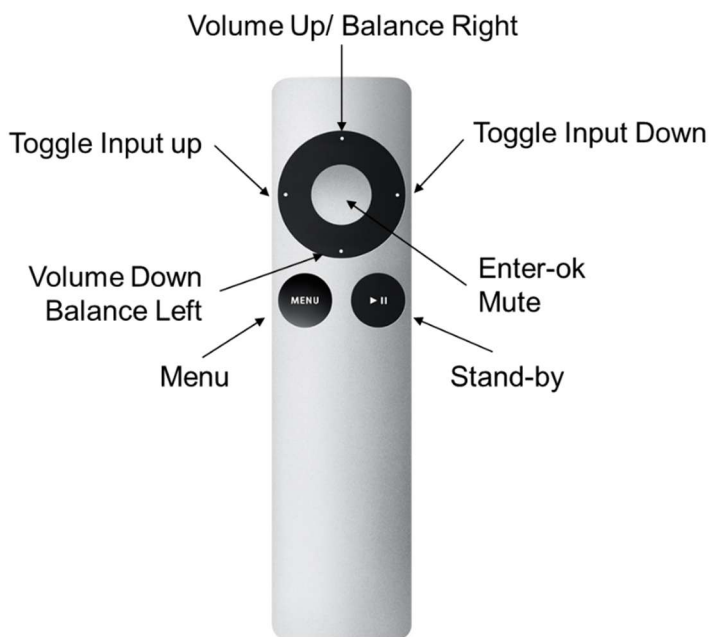
- The ALTO MKII has five different digital filter options (Slow, Sharp, SD Slow, SD Sharp, Bypass)
- The Digital filter functions are available via menu options and can be accessed by entering the third page of the Menu function by pressing the Menu key  three times.
- Each option provides a distinctly defined listening experience based on individual preference and the musical content.
- By default, no filter selection is active at the first turn-on.





## 12- REMOTE CONTROL

### REMOTE CONTROL FUNCTIONALITIES:

- All functions of the AGD ALTO MKII are available via Remote control.
- The “ALTO MKII” is compatible with a standard Apple Remote type, included with the unit,
- The remote control delivered to the unit is already set up to work with the ALTO MKII and requires no additional setup.
- By factory settings, the remote keys assignment is as follows:



- The user can reassign each button's function through the device's menu as follows:
  - Touch the Menu button  on the front panel twice
  - Select Remote Control Setup and press ENTER 
  - Follow the instructions on the screen.
  - Once completed, the ALTO MKII will restart and apply the new settings.
  - The Remote control is now re-programmed.



## **13- TROUBLESHOOTING**

- The unit is designed to prevent damage to itself and associated components.
- Incorrect operation is sometimes mistaken for malfunction.
- If problems occur, see this section for troubleshooting information.
- If problems persist, contact your authorized AGD Productions dealer.

### **NO POWER**

- Examine the power cord to ensure it is connected to the AC mains connector and a working, un-switched electrical outlet.
- Make sure the unit is powered on with the rear-panel power switch. Examine the electrical circuit breaker to ensure power is supplied to the electrical outlet to which the amplifier is connected.
- Make sure the light of the ON/OFF switch of the AC power entry module is on.

### **THERE IS NO SIGNAL AT THE OUTPUTS**

- Examine all audio cables to ensure a solid connection between the unit and all associated components.
- Examine the speaker cables to ensure a solid connection between the amplifier and the speakers.
- Make sure the connected units (CD player, Turntable, etc.) are powered on.
- Make sure the volume is set to an audible level.
- Make sure every input cable is correctly inserted.
- In the case of the streaming, make sure the LAN is working and the render selected is AGD ALTO MKII
- If Bluetooth is selected, ensure the BT source is paired with AGD ALTO MKII.
- Make sure the preamp is not muted.
- Make sure all associated components are connected to working electrical outlets and powered on.



## **13- TROUBLESHOOTING**

### **AUDIO HUM**

- Disconnect components one at a time to isolate the problem.
- Once the problem is identified, ensure the problematic component is properly grounded and connected to the same electrical socket as the ALTO MKII.

### **IF ALL ELSE FAILS...**

- Contact your authorized AGD Productions, Inc. dealer and/or contact AGD Productions Customer Service at [www.AGDproductions.com](http://www.AGDproductions.com)





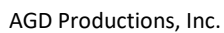
## 14- SPECIFICATIONS

| Parameter          | Description   |
|--------------------|---|
| Phono Input        | Moving Magnet and Moving Coil selectable via Menu<br>MM Input Impedance: 47k $\Omega$ , S/R $\geq$ 80db<br>MC Input Impedance: 420 $\Omega$ , S/R $\geq$ 70db<br>RIAA Accuracy: <0.1dB<br>Frequency Response: 20Hz-20kHz $\pm$ 0.1db<br>THD%: $\leq$ 0.05%  |
| Line Analog Inputs | 2 Single-ended (RCA2, RCA3), 1 XLR input (XLR)<br>Frequency Response: 1Hz-100kHz $\pm$ 0.2db<br>(Passive front-end direct coupling)   |
| Analog Outputs     | 1 XLR Output, 2 RCA Outputs (Output #2 full range, Output #3 Sub-Out (Full range <b>optional</b> )).<br>Output Impedance: <50ohm<br>Frequency Response: 1Hz-100kHz $\pm$ 0.2db<br>THD+N (Balanced): $\leq$ 0.005%<br>THD+N (Single-Ended): $\leq$ 0.009%<br>S/R $\geq$ 140db<br>Direct output coupling.             |
| Digital Inputs     | 1 USB<br>1 x AES/EBU (XLR)<br>1 Coax<br>1 x TOSLINK (max sample rate 192 kHz)<br>LAN (Ethernet Port)  |
| File Formats       | MP3, WMA, MPEG-4 AAC, WAV, FLAC, AIFF, ALAC, DSD  |
| DNLA               | 1.5   |
| USB                | XMOS XU208 Process-based Chipset<br>Frequency: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 352.8kHz, 384kHz, 705.6kHz, 768kHz<br>Resolution: 16, 24 & 32-bit.<br>DSD64 (2.8224MHz and 3.0720MHz), DSD128 (5.6448MHz and 6.1440MHz) and DSD256 (11.2896MHz and 12.2880MHz), DSD512 (22.5792MHz and 24.576MHz). |



## 14- SPECIFICATIONS

| Parameter               | Description                         |
|-------------------------|-------------------------------------|
| Streaming Functionality | Via LAN Port<br>DNLA, UPnP, Airplay |
| Bluetooth               | AptX HD (24-bit/48kHz.)             |
| Net Dimension           | 11"x 7.1"x 3.5" (280 x 180 x 90mm)  |
| Remote                  | Infrared                            |
| Trigger Output          | 12V, 0.1A DC                        |
| Flight Case Dimension   | 20"x 16"x 7.5" (500 x 406 x 190mm)  |
| Net Weight              | 11lb/5Kg                            |
| Gross Weight            | 17lb/8Kg                            |
| Input voltage           | Universal (110-240V, 50-60Hz)       |

[illegible]

