constellation audio

Orion phono preamp

owner's manual

CAUTION
To reduce risk of electric shock, do not remove any of the phono preamplifier's cover plates or screws. There are no user serviceable parts inside. Contact qualified service personnel.

WARNING
To reduce risk of fire or electric shock, do not expose this preamplifier to moisture, rain, or excessive humidity.

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

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

Thank you for purchasing the Constellation Audio Orion phono preamplifier. Our "dream team" of acclaimed audio engineers and industrial designers set a high goal for the Orion: We wanted it to not only be the best phono preamp ever made, but also to be exceptionally versatile and convenient to use. We designed the Orion to bring you a higher level of sound quality and musicality than you have ever before experienced.

The Orion's no-compromise design required that we do a few things differently from conventional phono preamps. Thus, you're probably not used to the Orion's connections and setup. Please read this manual all the way through before you set up the Orion. The few minutes you spend will pay off in greatly enhanced performance.

Contents

Before you install the Orion

Unpacking

Take care when you remove the Orion from its packaging. Because of its machined aluminum chassis, it is much heavier than the average phono preamp. Have an extra person nearby to help if you need it. You may wish to use gloves to protect your fingers.

Power supply setup

The Orion's separate power supply (bottom component in the picture above) must be connected to the Orion main chassis (top component in the picture above) as shown above before you plug the unit into a wall. Make sure the power switch on the power supply is in the off (O) position.

The supplied cables are spiral-wrapped, gold-plated copper designed for aerospace use, and can handle up to 30 amps.

Connect one of the supplied cables to the Analog Left power socket on the Orion, then into the Analog Left power socket on the power supply as shown above. Repeat with the Analog Right and Control power connections.

At this point you can plug the Orion power supply into the wall socket. Leave the master power switch off until you connect your other equipment to the Orion.

DO NOT remove the power cables while the unit is powered on. If you do happen to accidently pull one of them out, DO NOT plug it back in. Turn off the power supply using the hard switch on the rear panel, unplug the unit, then replace the cable. Failure to power down the unit before replacing a power cable can result in substantial damage to your Orion.

If you will be using the Constellation Audio Centaur or Hercules amplifiers (or any other high-powered amplifier), do not plug the Orion into the same AC socket or into any other outlet connected on that circuit. Constellation Audio amplifiers draw a great deal of power and could affect the Orion's performance if the amplifier(s) and preamp are plugged into the same electrical circuit or AC outlet.

When you connect or disconnect the AC cord, always grasp it by the plug, not by the cord itself. Pulling the plug out by the cord can damage the cord, the AC socket, and/or the Orion.

Installation notes

The Orion preamplifier uses passive cooling; there are no internal fans. While the Orion does not generate as much heat as an amplifier, it should still be located in an area with adequate ventilation.

There should be at least 6 in/15 cm of clearance between the sides and top of the preamp and the nearest wall or cabinet. If the Orion is installed in a cabinet or an equipment closet, ensure the cabinet/closet has adequate ventilation. Installation in an unventilated cabinet or closet may cause the Orion to overheat, significantly reducing its lifespan.

The Orion requires a room-temperature environment to operation properly. Ambient temperature should be about 70°F/21°C, plus or minus 10°F/5°C. Never install the Orion in a place where it may be exposed to direct sunlight, and do not install it next to a room heater, radiator, air conditioner, etc.

Make sure that the Orion will not be exposed to moisture. Do not locate it in an area where it might be spilled on, and do not place it in a humid location (such as an unfinished basement).

We recommend leaving the Orion on all the time to ensure maximum performance and the best possible sound quality.

Installing the Orion in a place where it will be exposed to direct sunlight or moisture, or where it will not have adequate ventilation, will void your warranty.

Connected components

The Orion phono preamp is designed to be paired with any high-quality turntable, and with any quality preamp; ideally Constellation's Altair or Virgo preamps. Both balanced (XLR) and unbalanced (RCA) connections are available. XLR will provide the highest quality/lowest noise signals, and should be used when possible.

Before making or changing any connections to the Orion, first turn off the master power switch on the back of the power supply, and turn off the power on the preamp and power amplifier(s).

In the event of malfunction

Do not under any circumstances open the chassis of the Orion. There are no user-serviceable parts inside. Opening the chassis can present a shock hazard even if the AC power is disconnected. Any alteration or modification of the Orion's internal parts or circuit will immediately void your warranty.

If your Orion does not function correctly, refer to the Troubleshooting section at the end of this manual. If you are still unable to resolve the problem, contact your Constellation Audio dealer.

If any liquid is spilled on the preamp, or if any metal object (such as a staple or a paper clip) is inadvertently forced inside, immediately disconnect the AC power and contact your Constellation Audio dealer.

Turntable and preamp connections

1. XLR MC inputs

The two XLR inputs farthest to each side of the back panel of the Orion are for use with MC cartridges. As you are looking at the rear panel, the left XLR inputs are for the right channel, the right inputs are for the left channel. These correspond with inputs MC-1 and MC-3. These XLR connections cannot be used concurrently with the RCA input below them; for example, you can use either MC-1 (XLR) or MC-2 (RCA), but not both. Use of XLR connections is recommended for the best possible audio quality. To remove an XLR plug, push on the tab above the jack and pull the plug out.

IMPORTANT NOTE: To preserve true dual-mono operation, the Orion uses a symmetrical circuit layout. This configuration requires that the Orion's back panel connections be laid out a little differently from those on most preamps. For example, the left-channel connection for input MC-1 is at the far right side of the back panel, and the right-channel connection for MC-1 is at the far left side. Connecting the cables in the usual side-by-side fashion will result in an incorrect installation and the mixing of sounds from different tonearms or turntables.

The MC input numbers from left to right, looking at the back of the Orion are:
$MC\text{-}1_{right}$, $MC\text{-}3_{right}$——$MC\text{-}3_{left}$, $MC\text{-}1_{left}$.

2. XLR MM input

The two XLR inputs closest to the center of the Orion back panel are for use with MM cartridges. As you are looking at the rear panel, the left XLR input is for the right channel, the right input is for the left channel. These XLR connections cannot be used concurrently with the RCA input below them; for example, you can use either MM-1 (XLR) or MM-2 (RCA), but not both. Use of XLR connections is recommended for the best possible audio quality. To remove an XLR plug, push on the tab above the jack and pull the plug out.

IMPORTANT NOTE: To preserve true dual-mono operation, the Orion uses a symmetrical circuit layout. This configuration requires that the Orion's back panel connections be laid out a little differently from those on

most preamps. For example, the left-channel connection for MM input is on the right side of the back panel, and the right-channel connection is on the left side. Connecting the cables in the usual side-by-side fashion will result in an incorrect installation and the mixing of sounds from different source devices.

3. RCA MC inputs

These unbalanced inputs are provided as a convenience for use with turntables having only unbalanced output. Whenever possible, we recommend using XLR connections instead. Connecting to an unbalanced turntable is handled in the same way an XLR balanced source. As you are looking at the rear panel, the left RCA input is for the right channel, the right input is for the left channel. These cannot be used concurrently with the corresponding RCA inputs; for each input, you can use either XLR or RCA, but not both.

The RCA input numbers from left to right, looking at the back of the Orion are:
MC-2_{right}, MC-4_{right}——MC-4_{left}, MC-2_{left}

IMPORTANT NOTE: To preserve true dual-mono operation, the Orion uses a symmetrical circuit layout. This configuration requires that the Orion's back panel connections be laid out a little differently from those on most preamps. For example, the left-channel connection for MC-2 is at the far right side of the back panel, and the right-channel connection is at the far left side. Connecting the cables in the usual side-by-side fashion will result in an incorrect installation and the mixing of sounds from different source devices.

4. RCA MM input

This unbalanced input is provided as a convenience for use with turntables having only unbalanced output. Whenever possible, we recommend using XLR connections instead. Connecting to an unbalanced source is handled in the same way an XLR balanced source.

IMPORTANT NOTE: To preserve true dual-mono operation, the Orion uses a symmetrical circuit layout. This configuration requires that the Orion's back panel connections be laid out a little differently from those on

most preamps. For example, the left-channel connection for MM is on the right side of the back panel, and the right-channel connection is on the left side. Connecting the cables in the usual side-by-side fashion will result in an incorrect installation and the mixing of sounds from different source devices.

5. XLR output

The inner XLR connections on the rear of the Orion are outputs. To remove an XLR plug, push on the tab on the connector body and pull the plug out. Be sure to match the output to the correct channel on your preamp. As you are looking at the back of the Orion, the output on the left side is for the right channel, the output on the right is for the left channel.

6. RCA output

RCA unbalanced outputs are also supplied for preamplifers not equipped with XLR connections. When connecting to an amplifier, be sure to match the output to the correct channel on your amp. As you are looking at the back of the Orion, the output on the left side is for the right channel, and the output on the right is for the left channel. To remove an RCA plug, grasp it by the connector body and pull the plug out.

7. Chassis ground

The chassis ground terminal is one of two ground terminals provided on the Orion. Two separate grounds provide more grounding options and will allow you to reduce hum to an absolute minimum. Typically the chassis ground will be connected to the ground terminal on the turntable or the motor, while the other ground terminal (signal ground) will be connected to the tonearm. However, you may find that you get less hum by connecting the chassis ground to the center plate screw on the AC outlet, and grounding both the tonearm and turntable to the signal ground. Experiment and go with whatever configuration gives the best results.

8. Signal ground

The signal ground terminal is one of two ground terminals provided on the Orion. Two separate grounds provide more grounding options and will allow you to reduce hum to an absolute minimum. Typically the signal ground will be connected to the ground terminal on the tonearm, while the other ground terminal (chassis ground) will be connected to the turntable or motor. However, you may find that you get less hum by connecting both the tonearm and the turntable to the signal ground, and connecting the chassis ground to the center plate screw on the AC outlet. Experiment and go with whatever configuration gives the best results.

Other connections on the Orion

9. Power inputs

These inputs connect to the power outputs of the Orion's separate power supply. The Orion power supply includes permanently attached, spiral-wrapped, gold-plated copper cables designed for aerospace use. Each cable is rated to handle 30 amps.

Each of these jacks mates with a matching jack on the power supply. Be sure to connect the Analog Right power jack on the phono preamp to the Analog Right power jack on the power supply, the Analog Left power jack on the phono preamp to the Analog Left power jack on the power supply, and the Control power jack on the phono preamp to the Control power jack on the power supply.

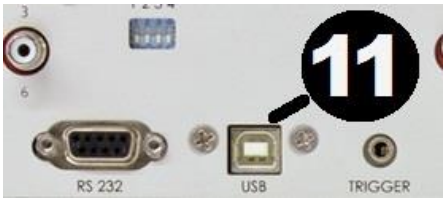
Before connecting these cables, switch off the Orion's power supply and disconnect it from the AC power. Failing to do this can damage the Orion or its power supply.

10. RS-232

This DB-9 style serial connection can be used to interface the Orion with third-party control systems such as those from AMX, Crestron and Control4. It can also be used to update the Orion's firmware. For more information, contact your dealer.

11. USB / control

This USB jack is used to interface the Orion with third-party control systems such as those from AMX, Crestron and Control4, and also to update the Orion's firmware. For more information, contact your dealer.



12. Trigger

This 3.5mm (1/8-inch) jack emits 12 volts DC whenever the Orion is on. It can be used to turn on an amplifier or other component equipped with a 12-volt trigger input.

Power supply connections

13. Power outputs

These outputs work with the supplied cables that connect the power outputs of the power supply to the power inputs of the main chassis. Included with each Orion are supplied special spiral-wrapped, gold-plated copper cables designed for aerospace use. Each of these cables is rated to handle 30 amps.

Each cable mates with a matching jack on the preamp and power supply. Be sure to connect the Analog Left power jack on the main chassis to the Analog Left power jack from the power supply; the Analog Left power jack on the main chassis to the Analog Right power jack from the power supply, and the Control power jack on the main chassis to the Control power jack from the power supply.

Before connecting these cables, switch off the power supply and disconnect it from the AC power. Failing to do this can damage the Orion or the power supply.

14. AC input

This AC input accepts standard 15-amp IEC-type power cords. You may use the high-quality power cord supplied with the Orion, or substitute an aftermarket power cord if you wish.

Controls / displays / indicators

15 – 19. Front panel controls

The front panel includes an LCD touchscreen and five buttons positioned underneath the display. These buttons work along with the touchscreen to provide control and monitoring of most Orion functions. The functions of the buttons are shown using icons on the screen. Here are the functions:

15. Home

This button brings you to the Input Select screen no matter which control screen you are currently viewing.

16. Return/back

This button brings you back to the previous control screen. For example, from the MC Load screen, pushing this button will take you back to the Input Setup screen.

17. Standby/power

Push this button to turn the Orion on and off. When you turn the unit on, it will take a few seconds for the power supply and preamp to warm up. When the Orion is ready for use, its LCD screen will illuminate. Press the mute button on the Orion to activate the sound.

When you turn the Orion off, the unit will enter cool-down mode for 10 seconds. During cool-down, no buttons on the unit will operate.

18. Setup

Pressing this button will call up the Screen Setup screen, which lets you adjust contrast, brightness and timeout of the LCD screen.

19. Mute

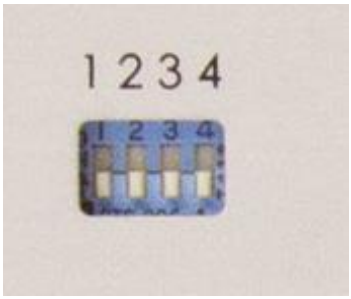
Press this button to silence the audio temporarily, such as when you're lowering the tonearm onto a record. Because the Orion uses a relay to perform the Mute function, it may take a second or so for this control to respond. When the Orion is in mute mode, an X will appear next to the speaker icon in the lower right corner of the touchscreen. Press the button again to restore the sound.

20 - 21. Rear panel controls

20. MM loading adjustment switches

These two arrays of four microswitches each adjust loading for the MM input. You can flick the switches gently with a small screwdriver, a toothpick, etc. Up is on, down is off. Use the settings recommended by the manufacturer of your cartridge, or experiment and use the settings that sound best to you. But always use the same settings on both switch arrays. Below are the functions for each switch:

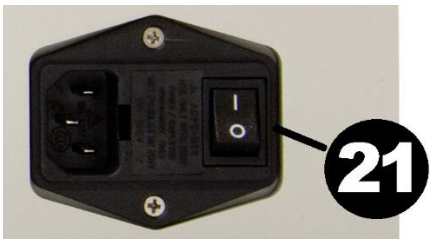
CAPACITIVE LOADING
SW1 and SW2 off: No capacitive loading
SW1 or SW2 on: 100 pF
SW1 and SW2 on: 200 pF



RESISTIVE LOADING
SW3 and SW4 off: 47 KΩ
SW3 on, SW4 off: 33 KΩ
SW3 off, SW4 on: 10 KΩ
SW3 and SW4 on: not recommended

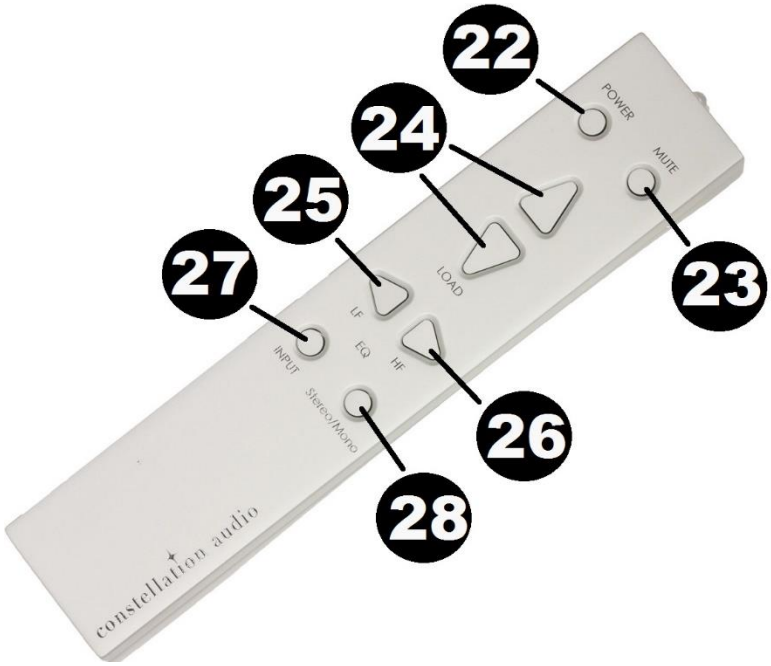
21. Master Power switch

Use this switch to turn the Orion's power supply on and off. The Orion will not power up unless this switch is on. Do not turn this switch on until all connections have been made to all components in the audio system.



Remote control

The remote operates the basic functions of the Orion. It does not operate other Constellation Audio components.



22. Standby/power

Push this to turn the Orion on and off. When you turn the unit on, it will take a few seconds for the power supply and preamp to warm up. When the preamp is ready for use, its LCD screen will show the most recently selected input. To put the unit in Standby mode—which will silence the audio but keep the power supply on so the unit stays warmed up—press this button again after turning on the power.

23. Mute

Press this to button to silence the Orion temporarily. Press again to restore the audio. Because the Orion uses a relay to perform the mute function, it may take a second or so for this control to respond.

24. Load

Press these buttons to raise or lower the resistive loading on the selected input. Pressing a button briefly will start the impedance readout on the front panel counting up or down. Pressing the button again will stop the count. Pressing the opposite button will reverse the count.

25. EQ LF

Press this button to change the low-frequency record EQ (below 50 Hz). Pushing the button once will bring up the front-panel display showing the current setting. To scroll through settings A through E, press the button repeatedly. Each push changes the response below 50 Hz by 1 dB. The settings are: A = +2 dB, B = +1 dB, C = 0 db (RIAA standard), D = -1 dB and E = -2 dB. This button also doubles as a way to select the left channel only when doing load adjustment.

26. EQ HF

Press this button to change the high-frequency record EQ (above 10 kHz). Pushing the button once will bring up the front-panel display showing the current setting. To scroll through settings A through E, press the button repeatedly. Each push changes the response above 10 kHz by 1 dB. The settings are: A = +2 dB, B = +1 dB, C = 0 db (RIAA standard), D = -1 dB and E = -2 dB. This button also doubles as a way to select the right channel only when doing load adjustment.

27. Input

Press this button to select among the Orion's XLR and RCA inputs. You will have to wait a second or so between pushes of this button, because for best sound quality the Orion uses relays to switch inputs.

28. Stereo/Mono

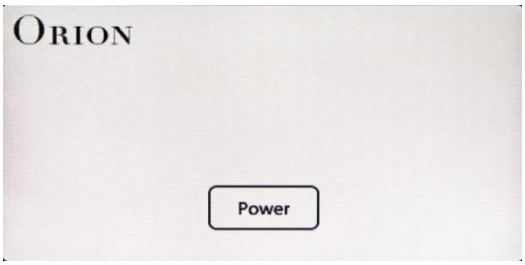
Push this to change between stereo and mono operation. On the first push, the front panel display will come on to show which mode is currently active. Push again to change from stereo to mono or mono to stereo.

Control screens

Many Orion functions are controlled through the LCD touchscreen. Here is how the control screens function.

Standby screen

Touch the power button to turn the power on. If the power is off, touching the darkened screen will call up the Standby screen.

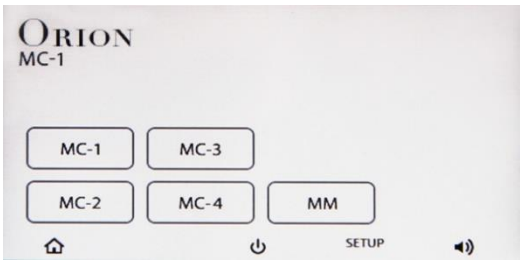


Powering On screen

This screen appears when the power is on and the unit is warming up.

Input screen

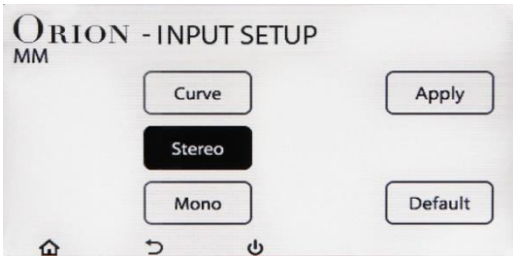
When the unit has finished its power-on cycle, this screen will appear. It provides selectors for the various MC and MM inputs. Pushing the Setup button from this screen enters the Screen Setup mode.



MM Input Setup screen

When you press the Setup button on the front panel when MM input is selected, this screen will appear. It allows you to set up basic parameters for the MM input. Hit the Apply button to save changes and the Default button to return to factory settings.

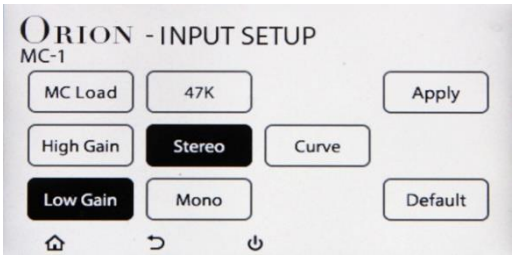
<u>To set stereo or mono operation:</u> Press either the Stereo or Mono button. The current mode is indicated by a darkened button. In the screen at right, stereo is activated. Hit Apply to save your changes, Default to restore the factory presets.



<u>To adjust EQ curve:</u> Press the Curve button. The curve adjustment screen will appear. See instructions for adjusting EQ curve on page 16.

MC Input Setup screen

When you press the Setup button on the front panel when one of the MC inputs is selected, this screen will appear. It allows you to set up basic parameters for each MC input. Hit Apply to save changes and Default to return to factory settings.



To adjust MC loading: To set a standard 47 KΩ resistive load for the MC phono cartrdge on the selected input, press the 47K button. The 47 KΩ setting achieves maximum gain. To choose a different setting, press the MC Load button. This takes you to the MC Load screen. See below for further instructions.

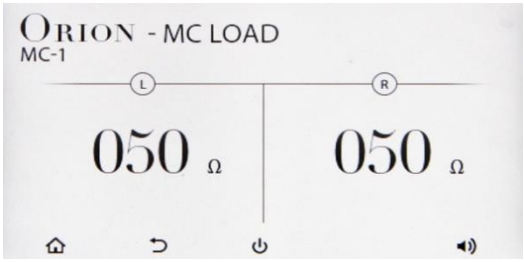
To set high or low gain: Press either the High Gain or Low Gain button. The current mode is indicated by a darkened button. We recommend you set this by ear, so that the Orion has a similar output level to your other source devices. If the level is too low, select High Gain. If it is too high, select Low Gain. Touch Apply to save your changes.

To set stereo or mono operation: Press the Stereo or Mono button. The current mode is indicated by a darkened button. Touch Apply to save your changes.

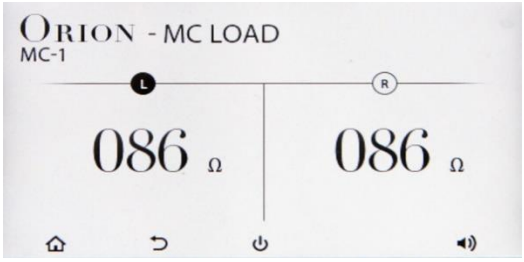
To adjust EQ curve: Press the Curve button. The curve adjustment screen will appear. See instructions for adjusting EQ curve on the next page.

MC Load screen

When you press the MC Load button on the input setup screen, the screen you see at right will appear. It provides a readout of the current load impedance setting.

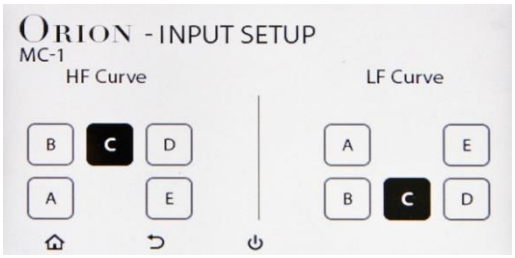


To adjust load impedance, push the EQ LF button on the remote to select left channel, or the EQ HF button to select right channel. The indicator for the selected channel will turn black, as seen at lower right. Use the load up/down buttons on the remote to change the setting for the selected channel. Push the load up or down button once and you will see the load impedance setting go up or down accordingly. For the first 20Ω, the adjustment will change at 1Ω/sec. For the next 50Ω, it will change at 4Ω/sec. Beyond that, it will change at 10Ω/sec. Press the load up/down botton again to stop. If you go beyond the setting you want, hit the other up/down button to reverse.



Push the EQ LF or HF button on the remote to adjust the other channel. You may require slightly different settings on the two channels, especially if you are using a hand-wound cartridge.

Curve screen

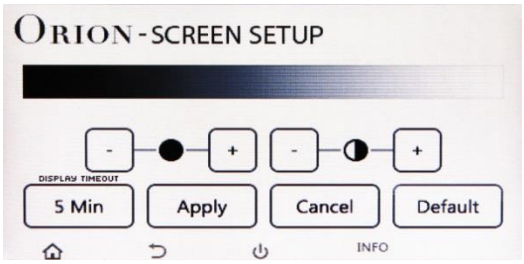


Press the Curve button on the MC or MM Input Setup screens and this screen will appear. It selects standard RIAA EQ curve or alternative curves that may work better for old, non-RIAA records or for poorly mastered records. To find info on settings for non-RIAA records, Google "record equalization vinyl engine". You can also make these adjustments by ear, with RIAA or other records, because the EQ is relatively subtle and you won't do great sonic harm no matter what the setting.

The Orion allows adjustment of the high-frequency (HF) curve above 10 kHz and the low-frequency (LF) curve below 50 Hz. To choose a curve, press the button on the touchscreen, or use the volume up/down buttons on the remote to scroll among the different choices. The selected EQ curve button will go dark. Use the left/right balance buttons on the remote to flip between HF and LF. Here are the settings:

A = +2 dB
B = +1 dB
C = 0 db (RIAA standard)
D = -1 dB
E = -2 dB

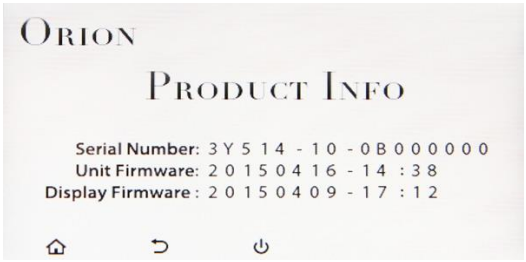
Screen Setup screen



When you press the Setup button while on the Input Select (Home) screen, the Screen Setup display appears.

To adjust LCD brightness: Press the + and – buttons on the left side of the screen, on either side of the dark dot.
To adjust LCD contrast: Press the + and – buttons on the right side of the screen, on either side of the half-dark/half-light dot.
To adjust LCD backlight timeout: Press the Timeout button in the lower left corner to keep the screen lit for 15 sec., 30 sec., 1 min., 5 min., 10 min., and always on.
To accept or cancel screen setting changes: Press the Apply or Cancel button, respectively.
To return to the factory default settings: Press the Default button. This will bring up a screen asking "Are you sure you want to set this device to its default settings?" Hit the Yes button to go to default settings, the No button to cancel.

Info screen



This screen can be accessed by pushing the button under the Info label on the Screen Setup screen. It shows the unit's serial number and firmware versions.

Step-by-step operating process

We've covered all of the basic controls and indicators of the Orion. Here's how you use them to perform the basic operations of turning the unit on, selecting a source, adjusting the sound, and turning the unit off.

STEP 1: Before making or changing any connections to the Orion, turn off the master power switch on the back of the power supply, and turn off the preamp and power amplifier(s).

STEP 2: To turn on the Orion from the front panel, push the Standby button in the middle under the LCD touchscreen. You may also tap the touchscreen to "wake it up," then push the onscreen Power button.

Whichever way you turn on the power, you will hear the Orion's internal relays click as the unit goes into warm-up mode. In a few seconds, the front touchscreen will illuminate. The Input Select screen will then appear, with the most recently used input selected.

STEP 3: If the input you want is not selected, select the desired input by pushing one of the onscreen buttons for MC-1, MM, etc. The button for the selected input will go dark. If you change to an MC input, the MC Load adjustment screen will appear temporarily as the Orion automatically adjusts itself to the load setting already stored for that input. The Input Select screen will then reappear.

STEP 4: If you need to set up either of the MC inputs, push the Setup button on the front panel. Set the input for high gain or low gain, stereo or mono, as desired.

STEP 5: If you need to adjust resistive loading of the MC inputs, push the MC Load button on the Input Setup screen. The load settings will be displayed. Push the EQ LF button on the remote to select left channel, or the EQ HF button to select right channel. To increase the impedance, push load up once. To lower it, push load down. The numbers will count up or down starting in 1Ω increments, then increasing to 4Ω then 10Ω increments. Push the load button again when you reach the adjustment you want. If you go past the desired setting, push the opposite load button to reverse.

STEP 6: If you want to adjust resistive or capacitive loading for the MM input, use the microswitches on the back of the Orion. See page 13 for details.

STEP 7: If you want to adjust the EQ curve, push the Curve button on any of the Input Setup screens. Push the left balance button on the remote to adjust the HF curve (>10 kHz) and the right balance button to adjust the LF curve (<50 Hz). To change the curve, either push the button on the touchscreen for the curve you want, or use the volume up/down buttons on the remote to select a different curve. The factory default is the C curve, which conforms to the RIAA standard.

The available curves are: A = +2 dB, B = +1 dB, C = 0 db (RIAA standard), D = -1 dB and E = -2 dB.

STEP 8: If you wish to mute the output temporarily, such as when lowering the tonearm onto a record, push the Mute button. An X will appear next to the speaker icon in the lower right corner of the touchscreen. Press the Mute button again to restore the sound.

STEP 9: To turn the system off, stop playback on the source device. Press the Standby button in the middle under the LCD touchscreen. The unit will enter cool-down mode for 10 seconds, during which no buttons will work. After cool-down mode finishes, you can turn the unit back on again as described in Step 2 above.

Maintenance

The Orion requires no regular maintenance. If the phono preamp's surface becomes dusty, simply wipe it off with a soft dry cloth. Do not spray cleaners on the surface.

To clean fingerprints from the surface of the Orion, spray a small amount of mild window cleaner such as Windex onto a soft dry cloth, then use the cloth to remove the fingerprints. Do not spray the cleaner directly onto the preamplifier.

Troubleshooting

Unit will not turn on

1. Try the following steps in order. After you perform each step, touch the Standby button on the front of the unit and wait a few seconds to see if the touchscreen illuminates. If any one of the steps restores the power (i.e., allows the Standby button to turn the unit on), there is no need to continue to the next steps.

A. Check power cable connections between the wall and the Orion's power supply. Push the wall plug and the connector at the power supply in firmly.

B. Check power cables between Orion and power supply. DO NOT pull out these cables while the power supply is on.

C. Make sure the master power switch on the rear of the power supply is turned on.

D. If the Orion is plugged into an AC line conditioner, make sure the line conditioner is turned on.

F. Flip the master power switch off and on again. This will reset the Orion's internal circuit breaker.

G. Check the circuit breaker for the AC circuit that the Orion is plugged into. If the breaker is tripped, flip it back on. If it will not turn on, there is likely a short circuit somewhere in the lines or in a device connected to this AC circuit. Check the power cords for your components to make sure none have been damaged.

H. If none of these conditions restores power, it is possible one of the Orion's internal fuses is blown. Do not attempt to change the fuse yourself—the Orion requires the use of special high-voltage fuses that are not commonly available. Contact your Constellation Audio dealer for service.

Unit is on but no sound is produced

1. Try the following steps in order. If any one of the steps restores the sound, there is no need to continue to the next steps.

A. Check you are on the correct input. Cycle through inputs using the touchscreen controls. Remember that MC-1 and MC-3 are for XLR inputs, and MC-2 and MC-4 are for RCA inputs.

B. Check that the turntable is on and that the stylus is contacting the surface of the record.

C. Check the speaker icon in the lower right corner of the touchscreen. If there is an X next to the icon, the unit is in mute mode. Press the Mute button directly beneath the speaker icon to restore the sound.

D. Check the connections between the turntable and the Orion, and between the Orion and the preamp. If a cable is disconnected, reconnect it. If this does not restore sound, try substituting a different set of cables in order to make sure the original set was functioning properly.

E. Check the connection between your amp and the speaker. Make sure the speaker cable has not come loose. If it has, turn the power off on your amp, then re-install the cable.

F. Check that the volume is at a sufficient level. Do not turn the volume all the way up to check this, as if sound is reestablished while the preamp is set to output maximum volume, damage can be done to your speakers and amplifiers.

G. If none of these actions restores the sound, contact your Constellation Audio dealer.

Sound comes from the wrong speaker

If left-channel sounds are coming from the right or vice-versa (i.e., the violins in an orchestral recording come from the right speaker, not the left), check the cable connections between the turntable and the Orion, between the Orion and your preamplifer, between the preamp and the amplifier, and between the amplifier

and the speakers. Make sure left-channel cables are connected to the left channels, and right to the right channels.

Only one speaker is working, or one speaker is playing a different piece of music

1. Check each cable, starting with the turntable. Make sure the left channel of the turntable goes to the left input on the Orion (which is on the right side, as you're looking at the back panel), and the right channel to the right input (which is on the left side). On the back of the Orion, the left and right inputs are NOT next to each other. They are on opposite sides of the unit. In other words, the XLR input numbers are 1, 3, 3, 1, the RCA input numbers are 2, 4, 4, 2.
2. Check to make sure the cables between the Orion and the preamp are connected correctly.

Excessive hum is heard

1. Check to make sure the ground cables between the turntable and the Orion are firmly connected.
2. Experiment with various ground connection configurations to see which produces the least hum. The recommended default configuration is to run the tonearm ground to the signal ground connection on the Orion, and the turntable/motor ground to the chassis ground on the Orion. If this produces excessive hum, try grounding both the turntable and the tonearm to the signal ground, and connect the chassis ground to your house ground by wiring it to the center plate screw of the AC outlet.

For more information

Your Orion phono preamp should give you many years of trouble-free, maintenance-free service. If you encounter any problems you cannot solve or have technical questions, please contact your Constellation Audio dealer.

For more information about Constellation Audio products, please visit our website:

www.constellationaudio.com

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Simply. Light Years Ahead.