

VANDERSTEEN AUDIO CONTROL CENTER L5-ACC

Preliminary Operation Manual

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Welcome to your new Linestage L5 AUDIO CONTROL CENTER. This precision-handcrafted instrument is one of the finest Audio Control Centers available. Congratulations on bringing this into your system; we hope you enjoy it for many years. The new Vandersteen Audio Control Center is a meticulously engineered component designed to deliver an unparalleled level of purity and precision in audio reproduction. Building on Vandersteen's legacy of high-performance audio equipment, this Audio Control Center is crafted for audiophiles who demand the best from their systems.

At the heart of the Vandersteen Audio Control Center is a state-of-the-art circuit design that prioritizes signal integrity. Every detail has been considered to minimize noise and distortion, ensuring that the original character of the music is preserved from the source to the speakers. The Audio Control Center's ultra-low distortion levels and wide bandwidth allow it to handle the most demanding audio signals with ease, providing a listening experience that is both dynamic and transparent.

The Audio Control Center features an intuitive, user-friendly interface and offers precise control over your audio system. Its finely calibrated volume control, multiple input options, and high-quality components make it a versatile addition to any setup.

The Vandersteen L5-ACC is housed in a robust, vibration-resistant chassis that reflects the brand's commitment to quality and longevity.

With the new Vandersteen Audio Control Center, listeners can expect a remarkable improvement in soundstage depth, detail retrieval, and overall musicality. It's a must-have for anyone looking to elevate their listening experience to the highest level, offering a sound as close to the original performance as possible.

As you read and learn about this state-of-the-art Audio Control Center, you will also find that we have added features not typically found in purist designs, although you may recognize them from vintage designs. These system controls include bass attenuation and boost, treble attenuation and boost, a matrix solution, and mono-to-stereo controls.

However, unlike vintage designs, none of these features are in the circuit in Direct Mode. These added controls are “Smoke and Mirrors,” designed to enhance recordings that are not normally enjoyable on your system. These extra features come at a small additional price and, thus far, seem to be appreciated by audiophiles and music lovers, adding value to the listening experience. You will find these extra features on the remote, along with a large Direct button. Should you get nervous, you can quickly return to the minimum component purist Audio Control Center circuit without smoke and mirrors by pushing the Direct button to eliminate the extras.

Again, we thank you and welcome you to the Vandersteen experience.
Vandersteen Audio

IMPORTANT SAFETY INSTRUCTIONS

The Audio Control Center has been designed to operate at the highest level of efficiency and performance in any normal operating situation; however, there are a few critical use and care principles that must be kept in mind when operating the Audio Control Center:

- Do not expose the Audio Control Center to rain, moisture, or excessively damp conditions.
- Always bring to room temperature before operation. 68-85 degrees Fahrenheit.
- This unit is set for 120-volt 60-hertz power mains. Do not attach to any other voltage, as immediate and irreparable damage will occur.
- The L5-ACC AUDIO CONTROL CENTER must not be modified in any way; otherwise, the factory warranty will be immediately voided.
- Be sure the Audio Control Center is muted before connecting or disconnecting any interconnect cables.
- When operating the L5-ACC AUDIO CONTROL CENTER, a properly grounded AC receptacle should be used. A potential shock hazard may result if the supplied 3-wire, grounded AC cable ground terminal is defeated or lifted or the unit is connected to a 2-wire ungrounded AC outlet.
- The L5-ACC AUDIO CONTROL CENTER is designed to perform optimally with no adjustments or maintenance for its lifetime. Do not attempt to open the Audio Control Center and refer all service issues to the Vandersteen Factory. The voltages inside it can be hazardous. The exception is to adjust the LCD display brightness. See specific instructions on page 11.
- Because the L5-ACC AUDIO CONTROL CENTER is energy efficient, it does not need to be unplugged when not in use.

PROTECTIVE SYSTEMS

The L5-ACC AUDIO CONTROL CENTER is equipped with protection against excessive AC draw; however, since no protection circuitry or system can completely protect a product from every electrical hazard, certain precautions should be observed. In the event of severe voltage hazards such as lightning or when the Audio Control Center will not be used for extended periods, the Audio Control Center should be unplugged from the AC mains to avoid potential damage to the internal circuitry. All other audio/video system components should also be disconnected from AC mains power, as hazardous voltages can easily travel throughout an interconnected system.

SPECIAL DESIGN FEATURES

DAMPED AND GROUNDED CHASSIS: The L5-ACC chassis is designed to minimize the vibration of the circuit, whether that noise comes from within the chassis or from the outside. You will note a cone in the center of the chassis. This is strategically placed to ground any vibrations from the internal transformer circuit to the contacted surface below. This is one of many examples of specialized techniques employed to mitigate vibrations of the circuit.

FUNCTIONAL POWER ISOLATION: Noise dissipation circuits condition incoming power, removing unwanted noise from the line before it enters the amplification circuits. This allows the L5-ACC to operate at a high signal-to-noise ratio, improving dynamic nuances without adding external power noise dissipation products.

FREE OF INTERNAL SIGNAL POLLUTION: Control functions are taken completely offline after each command execution to maximize sonic purity. All signal switching relays are “latching” type, which only draws current for a few milliseconds during the switching event and then revert to a no current “off” state.

AUDIO CONTROL CENTER SIGNAL PATH: There are only 5 components in the Direct Mode signal path.

TRANSFORMER QUALITY: High-quality transformers with DC noise offset and minimum path connection to power create a noise-free circuit power source.

12-VOLT TRIGGER: Either constant on or impulse triggers can be connected on the back panel.

INPUT GAIN OFFSETS: Built-in nonadjustable 6 dB offset for Balanced vs. Single-Ended Inputs for parity volume.

PHASE INVERSION: True Phase inversion control.

CHANNEL BALANCE: +/- 9 dB

LARGE DISPLAY LETTERS: Designed to be easily read from a distance.

HANDHELD REMOTE TRANSMITTER: This highly ergonomic, custom handheld remote transmitter has a rechargeable battery (cable supplied) and offers complete system control.

NAKED VISHAY-BASED VOLUME CONTROL: Tactile feel, with volume adjustments from 0dB to 64dB from the multi-role control knob on the front panel, as well as from the multi-function handheld remote transmitter. The control knob adjusts the volume by 1 dB increments with distinct clicks as it changes from one resistor to the next. Although very expensive to execute, the volume control is critical to every Audio Control Center circuit.

QUIET POWER-UP: No turn-on or turn-off transients.

CUSTOMIZATION: Inputs can be named from a preset list of common sources.

FLEXIBLE CONNECTIVITY: 6 inputs (4 XLR balanced, 2 RCA unbalanced); 2 main outputs (2 XLR balanced); HT bypass (programmable on any input).

MAINTENANCE AND CARE

All Vandersteen products are designed to provide a lifetime of listening enjoyment.

The chassis is sealed to prevent dust from entering the interior and, thus, should never need interior cleaning during the product's lifetime. All internal circuitry is maintenance-free, so no adjustments are necessary over the product's lifetime. If the Audio Control Center ever needs service, updating, or upgrading, it should only be returned to the Vandersteen Factory.

WARNING: THE FRONT PANEL OF THE UNIT SHOULD NEVER BE CLEANED WITH ANYTHING OTHER THAN A VERY SOFT COTTON CLOTH AND PLAIN WATER; ANY OTHER CLEANING AGENT MAY PERMANENTLY SCRATCH THE FINISH.

A durable black powder coat finish protects the top cover, sides, and bottom. They can be cleaned with a soft cotton cloth (such as an optical lens or microfiber cleaning cloth) dampened with plain water. Water should be applied directly to the cloth, not the chassis. A mild plastic or glass cleaner that does not contain ammonia may also be used. If a mark has been left on the chassis, do not use any abrasive or chemical cleaner to remove it.

The control knobs are anodized and cleaned with a soft cloth and water.

If you have any questions about caring for or cleaning your L5-ACC AUDIO CONTROL CENTER, please contact your dealer or the Vandersteen Factory before attempting to clean the chassis. Using a cleanser or abrasive not approved by the factory will almost certainly damage the finish and will not be covered under warranty.

When remote functions are intermittent, it is time to charge the battery. Plug the

provided 1/8" charge cable into the remote and the other end into a USB charger. A red light will show through the remote window. The red light will extinguish when the battery is full.

INITIAL INSPECTION

Inspect the shipping container for damage. If any portion of the shipping container, packing material, Audio Control Center, or accessories is damaged or missing, immediately notify your dealer and the shipper (if a claim is to be made).

NOTE: MANY SHIPPERS REQUIRE NOTIFICATION AND INSPECTION WITHIN 24 HOURS OF DELIVERY TO DETERMINE THE NATURE OF DAMAGES INCURRED.

UNPACKING

Carefully unpack the Audio Control Center chassis from their original packing box. Remove all accessory items from the accessory box. Accessories include:

- 1 Detachable IEC 90-degree AC Power Cord
- 1 Handheld Remote
- 1 Handheld Remote Charging Cable
- Operation Manual
- Warranty Card

IMPORTANT: RETAIN ALL PACKING MATERIALS FOR FUTURE TRANSPORT. SHIPPING PRODUCT IN INADEQUATE PACKING MATERIALS MAY VIOLATE THE VANDERSTEEN MANUFACTURER'S WARRANTY. NEITHER VANDERSTEEN NOR THE SHIPPER CAN BE HELD RESPONSIBLE FOR DAMAGES INCURRED DURING TRANSIT IF THE ORIGINAL FACTORY PACKING IS NOT USED. ALL FACTORY RETURNS REQUIRE A VANDERSTEEN RETURN AUTHORIZATION FORM, WHICH CAN BE FOUND ON THE WEBSITE.

NOW IS A GOOD TIME TO FILL OUT AND RETURN THE WARRANTY CARD.

REAR PANEL

1. **INPUTS.** Four (4) pairs of Balanced (XLR) and two (2) pairs of Unbalanced (RCA) input jacks for each channel.
2. **MAIN OUTPUT.** ONE (1) Balanced (XLR),
3. **REMOTE 12 VOLT SWITCH.** Connect your 12v trigger products so they all come on when the L5-ACC Audio Control Center powers up. There are two choices: 12-



volt continuous or 12-volt pulsed, which is the connection to the Vandersteen High Pass Amps. We use the latter, as it eliminates any continuous foreign voltage in the chassis.

PLACEMENT AND ALIGNMENT

Insert the power cord into the bottom of the L5-ACC. Then, place the L5-ACC AUDIO CONTROL CENTER on a stable platform, rack, or shelf. The bottom spike must touch the surface below for optimum sound.

NOTE: DO NOT FORCE THE CABLE INTO THE RECEPTACLE; ONCE ALIGNMENT IS ACHIEVED, INSERTION IS EASY.

After all interconnects are connected, plug the AC power cord into any AC mains source (120 volts and 60 hertz only). When the Audio Control Center first powers on, it will display a red light while it performs its initial checks. The light will turn green when the L5-ACC is in standby and ready for operation.

Your L5-ACC AUDIO CONTROL CENTER has undergone extensive performance evaluations, listening tests, quality control inspections, and a minimum 72-hour burn-in period before shipment. Therefore, it should be in perfect operating condition upon delivery however the sound will continue to improve for 6-7 weeks as the Teflon caps form. Please notify your dealer immediately if the Audio Control Center does not operate correctly.

NOTE: WHEN NOT IN USE AND FOR INITIAL BURN-IN, THE AUDIO CONTROL CENTER IS BEST LEFT IN STANDBY MODE TO ENSURE OPTIMUM OPERATING CHARACTERISTICS.

FRONT PANEL CONTROLS

POWER: Press the right knob once to change from the standby state (green light) to the run state (blue light) and press again to return to standby mode.

VOLUME: Turn the right knob clockwise to increase volume and counterclockwise to bring the volume down.

MUTE: Press the left knob to immediately mute the sound.

BALANCE: Press and hold the right knob to access the balance. Release, then turn the knob to adjust the signal between the left and right speakers by +/- 6dB.

INPUT: Turn left knob to cycle through inputs. See the programming inputs section below to customize your input names.

PROGRAMMING THE INPUT LABELS: First, choose the input you wish to label. Press and hold the left knob on the front panel until the screen displays “PROG,” then release. Turn the knob to scroll through the predetermined choices. Once you have the desired name for the input, short-press the left knob to store it.

SMOKE AND MIRRORS

The L5-ACC has advanced signal processing installed, which can enhance the listening experience on lesser quality recordings of music we love. This module is optional and upgradable for future refinements. These functions are injected into the direct circuit using high-quality relays. They are not in the signal path, so they can be completely disengaged without any additional switches or relays by pressing “DIRECT” on the remote. This ensures no sonic difference between an L5-ACC with or without the “SMOKE AND MIRROR” module. The SMOKE AND MIRRORS section of the L5-ACC includes the following functions:

BASS boost or cut by pressing BASS and using the UP or DOWN ARROWS. Many early recordings in the LP days were cut with reduced bass and mono because most users had minimal record players, which would skip if too much bass was cut into the record, resulting in a returned defective record. Adding one or two bass steps will enhance the listening experience on many recordings. Late at night listening sessions at low levels could also use a little bass boost.

TREBLE boost or cut by pressing TREBLE and using the UP or DOWN ARROWS. Boost or cut can enhance the listening experience on many lesser-quality recordings of good music. Recordings made in the radio days may benefit from bass boost and treble boost with less overall volume, yielding the smiling face curve, reducing some midrange aggression.

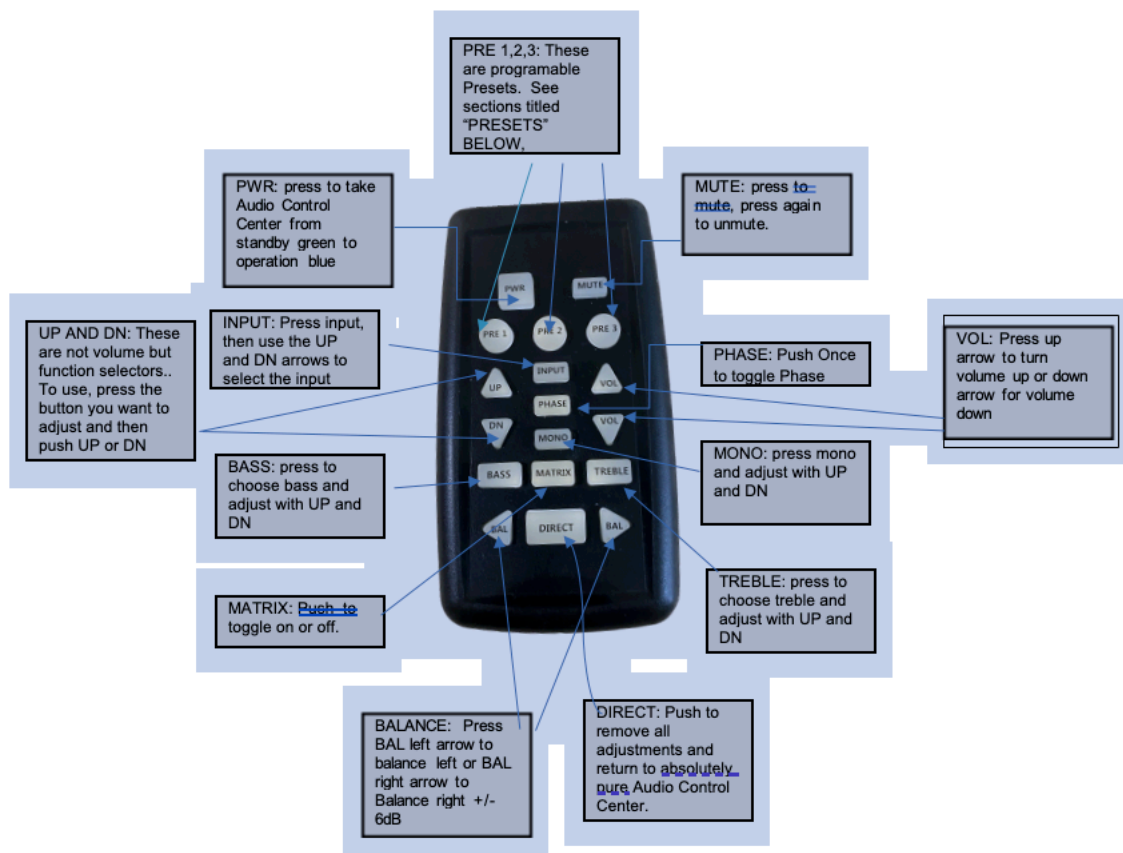
MONO blend is selected by pressing the MONO and then the UP or DOWN ARROWS for the amount of blend (crosstalk) desired. Some early stereo recordings were quite PING PONGY with little info in the center stage; this can be minimized with one or two steps of mono blend. Mono blend can also be used to adjust the amount of Matrix desired.

MATRIX is selected by pressing MATRIX, which will toggle IN and OUT in succession. Informed with permission from BSG Technologies, qøl uses information in all recordings to enhance spatial cues for a more open sound stage and sonic enhancement. For more information, research BSG Technologies qøl. There were several reviews by the major magazines. Depending on the amount of out of phase information Matrix has to work with the volume will go up but is program dependent. To compensate for this the volume should be reduced by 2 to 6 dB for a fair sonic assessment.

PROGRAMMING THE PRESETS: Three presets are available to store any mixture of the above features. One could be as simple as some bass boost to mimic the old “Loudness” button in the old days for listening at low levels. If you want to save it to PRE 1, 2, or 3, hold the desired PRE button down until the screen reads saved. The 4 settings above, if selected, are now stored. You can save up to three presets with different combinations of the “Smoke and Mirrors” features you will discover over time that are surprisingly useful on many recordings. One preset could be Bass boost, Treble cut, Matrix and one step of mono blend for early rock and roll. Another could be stored with Bass cut and mono blend for early stereo jazz, etc.

GETTING TO KNOW YOUR REMOTE

Touch any button to light up the keyboard.



REMOTE FUNCTIONS IN DIRECT MODE

1. **PWR.** Press once to change from the standby state (green light) to the run state (blue light) and press again to return to standby mode.
2. **VOL.** Press the VOL upward arrow to turn the volume up and the VOL down arrow to bring the volume down.
3. **MUTE:** Press the mute button to immediately mute the sound. Press again to unmute.
4. **PHASE INVERSION INDICATOR.** Press phase to toggle between out “O” and in “I” phase.



5. **DIRECT** may be the most crucial function. This button removes all the “Smoke and Mirrors” tools and returns you to the purist Audio Control Center.
6. **INPUT.** Push the Input button, then press the UP or DN arrow to cycle through inputs. See the programming inputs section below to customize your input names.
7. **BAL.** Press the BAL pointed left to move the balance to the left, and the BAL pointed right to move the balance to the right +/- 6 dB.

CONNECTING A HOME THEATER PROCESSOR IN BYPASS MODE

By programming an input to PROC, it becomes a pass-through input, and the L5-ACC volume control is disabled, defaulting to the theater processor volume control for the stereo channels.

ADJUSTING THE DISPLAY BRIGHTNESS

Unplug the unit and remove the cover. On the front panel PCB, locate a white thumbwheel that is set to maximum brightness by default. Plug in the power, being careful only to touch the white thumbwheel. Rotate until the desired brightness is achieved with the power on. Pull the power plug out of the wall and replace the cover.

SPECIFICATIONS

Overall Gain	12 dB
Gain Resolution	1 dB, +/- 0.01 dB Over Entire Range
Frequency Response	10 Hz – 150 kHz, -3 dB @ 8 ohms > 10K
Maximum input level	10 volts (RMS) @ 0 dB Gain
Maximum Output Level	12 volts (RMS)
THD + Noise	< .008% @ 1.5 volt (RMS) Output, 50 Hz – 20 kHz
Signal-to-Noise Ratio	> 100 dB
Common Mode Rejection Ratio	> 80 dB, 20 Hz – 20 kHz
Channel Separation	90 dB
Input Impedance	100k ohms Balanced or 50K ohm
Output Impedance	300 ohms Balanced or Unbalanced
Inputs	4 pair Balanced (XLR), 2 pair Unbalanced (RCA)
Outputs	2 pairs Balanced (XLR)
Power Consumption	20 watts
Power Supply	115 – 125 Volt AC
Display	Large Easy-Read Display
Audio Control Center Weight	22 lbs. / 10 kg
Audio Control Center Dimensions	3.9" x 15.5" x 12.3" (99mm x 394mm x 312.5mm)

LIMITED ONE-YEAR WARRANTY (EXTENDABLE TO 5 YEARS WITH REGISTRATION)

REMOTE TRANSMITTER BATTERY

The L5-ACC AUDIO CONTROL CENTER's handheld remote transmitter is powered by a rechargeable lithium battery. Never open the remote, as doing so voids the warranty and other warranties. If you have a problem, call us.

VANDERSTEEN AUDIO products are warranted to the original purchaser to be free from defects in materials or workmanship, SUBJECT TO THE FOLLOWING CONDITIONS, for one (1) year from the date of purchase from an authorized VANDERSTEEN AUDIO dealer, or 5 years when registered.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS:

This warranty is void and inapplicable if the product has:

- Not been used in accordance with the instructions contained in the operation manual.
- Been subject to misuse or abuse, examples of which would be burned drivers, resistors, or damage from dropping.
- Been modified, repaired, or tampered with by anyone who is not expressly authorized by Vandersteen Audio to do so.
- Been subject to inputs in excess of the maximum rating or inputs from an unstable or clipped amplifier.
- Suffered physical damage due to accident, neglect, or transportation.

IF A VANDERSTEEN AUDIO PRODUCT FAILS TO MEET THE ABOVE WARRANTY AND THE ABOVE CONDITIONS HAVE BEEN MET, THEN THE CUSTOMER'S SOLE REMEDY SHALL BE TO RETURN THE PRODUCT TO VANDERSTEEN AUDIO, WHERE THE DEFECT WILL BE REPAIRED WITHOUT CHARGE FOR PARTS OR LABOR. THIS WARRANTY APPLIES ONLY TO PRODUCTS RETURNED TO VANDERSTEEN AUDIO IN HANFORD, CA, USA.

(Returning the product to Vandersteen Audio from some countries other than the United States may involve considerable time and expense. The customer is responsible for all fees and duties and providing instructions and all the paperwork required to return the product after it is serviced.)

The unit(s) must be packed in their original packaging and returned to VANDERSTEEN AUDIO via insured freight by the customer at their own expense. A returned product must be accompanied by a Return Authorization Form (available from the VANDERSTEEN AUDIO website) that includes a written description of the defect and return shipping information.

ANY IMPLIED WARRANTIES RELATING TO THE ABOVE PRODUCT SHALL BE LIMITED TO THE DURATION OF THE ABOVE WARRANTY. THIS WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO THE PURCHASER.

Some states do not allow limitations on how long an implied warranty lasts or an exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply. This warranty gives you specific legal rights; you may also have other rights in your state.

VANDERSTEEN AUDIO reserves the right to modify the design of any product without any obligation to previous purchasers and to change the prices or specifications without notice or obligation to anyone.

A PERSONAL NOTE

I have been doing volunteer work for several years with elderly people with severe hearing losses, and I have seen the frustration and anger that are brought on by these losses. We now know that many of these people developed their hearing problems because of exposure to high noise levels when younger. Many home stereo systems, as well as audio/video, personal, and automobile sound systems are capable of volume levels potentially damaging to your hearing. Please use common sense and listen to your music and movies at safe levels now so you will still have the ability to hear and enjoy them in the future.