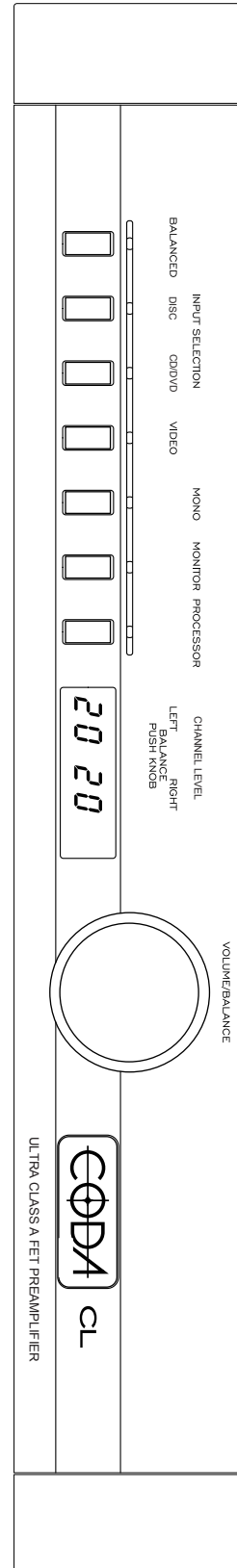






CL/s Vertical FET Stereo Preamplifier

OWNERS MANUAL



CAUTION		
	WARNING	
<p>CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		
	<p>THIS SYMBOL IS TO ALERT YOU OF THE PRESENCE OF UNINSULATED DANGEROUS VOLTAGE WITHIN THE UNIT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.</p>	
	<p>THIS SYMBOL IS INTENDED TO ALERT YOU OF THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.</p>	

WARNING: TO PREVENT FIRE OR SHOCK HAZARD , DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. TO AVOID ELECTRICAL SHOCK , DO NOT OPEN THE UNIT. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION

- Never install or remove the power cord from the chassis unless it has been disconnected from the AC power source first.
- Never pull on the power cord when removing it from an AC power source. Grasp it by the plug.
- Do not leave the power cord connected to an AC power source unless it is connected to the unit.
- It is recommend that during extended periods of nonuse that the units power cord be unplugged from its AC power source.
- Route the AC power cord so that it will not be damaged or walked on.

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Thank you for selecting Coda Technologies. The CL/CLS stereo control preamplifier is a precision instrument that will provide you with many years of listening enjoyment. Please take a few moments to read this brief manual to insure maximum benefit from your electronic system.

WARRANTY

I. Warranty- Any failure of Coda products to operate or to meet specifications, applicable at time of manufacture, due to a manufacturing defect or component failure, will be corrected by Coda Technologies, Inc. without charge for parts, or labor for a period of **ten years** from date of original purchase. Coda Technologies, Inc. will provide for surface transportation to the Coda factory from an authorized Coda Technologies, Inc. authorized dealer for a period of one year from date of purchase.

Maximum term for any warranty claim shall be **ten years** from date of original sale, or 11 years from date of manufacture, whichever is shorter. Date of manufacture shall only be defined only manufacture date imbedded in serial number of product.

Warranty shall be transferrable for a period of five years from the date of purchase. Subsequent owners are required to provide proof of sale/transfer from the original owner. Original owner may transfer warranty for the entire period of the warranty. Coda Technologies reserves the right to make the final determination as to validity of warranty claims in cases where ownership or manufacture date is not clear and substantiated in writing.

II. Procedure- If the product should require service under warranty, take it with proof of purchase date, with its carton and packing material, to a Coda Technologies, Inc. dealer. The dealer will arrange for service. Direct shipments to the factory will be not be accepted without advance written authorization (RMA). Coda products purchased outside of the U.S. will be covered by those warranty conditions extended by the importing distributor which may differ in some respects from those given above. Warranty service, if required, is the responsibility of the importing distributor. If a Coda Technologies, Inc. product is removed from the country of original purchase, Coda Technologies, Inc. distributors or dealers are not obligated by the conditions of this warranty and repairs will be affected at their discretion.

III. Exclusion of Coverage- At the sole opinion of Coda Technologies, Inc. the following situations are specifically excluded from coverage:

1. Any product not operated in accordance with the instructions contained in this manual, or otherwise subjected to abuse, tampering, modification, accidental damage, or serial number defacement.
2. Damage to other property caused by any defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss, or any other damage whether incidental, consequential, or otherwise.
3. It is Coda Technologies, Inc. policy to extend coverage when reasonable doubt exist; however, freight and diagnostic charges will be billed for any units returned under warranty and found by the company to be operating according to specification.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Coda Technologies, Inc. continually researches new techniques, designs, and construction methods and so reserves the right to introduce refinements into current product lines without notice or obligation. The company may offer product modifications to make these refinements available to earlier production units.

WARRANTY REGISTRATION

Fill in and retain this copy of the warranty registration sheet for your records .
To validate your registration, please call, mail, email, or FAX a copy of this registration
to Coda at 916.386.8296 within 30 days of date of purchase. Please include proof of
purchase with your submission.

MODEL DESIGNATION: _____

SERIAL NUMBER: _____

DATE OF PURCHASE: _____

PLACE OF PURCHASE

Dealer: _____

Address: _____

City: _____ State: ____ Zip: _____

Phone: _____

PURCHASER

Name: _____

Address: _____

City: _____ State: ____ Zip: _____

Phone: _____

NOTES: _____

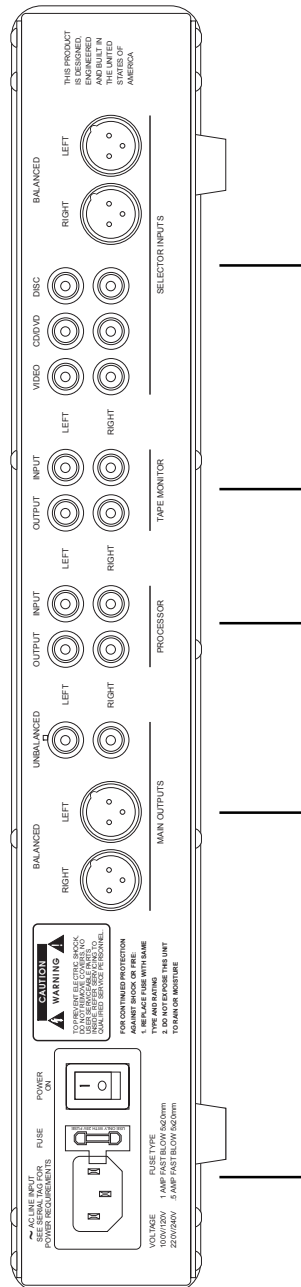
The remote controlled CL and CLS preamplifier is designed with the same level of thoroughness usually reserved for the finest preamplifier gain stages. Analytical, as well as subjective design techniques are all applied in an open-minded fashion with musical perfection as the goal.

On the face plate, the straight forward simple controls and display provide comprehensive functionality to the user. All input selections have LEDs to show when they are in use. A single knob controls both volume and balance, with an LED to show when the knob is in the balance mode. Settings for the volume and balance are precisely indicated by the dB attenuation display.

The input stages use FETs which are transconductance devices, meaning that an input voltage controls an output current. This eliminates complex interactions, reducing the chance of cable characteristics altering the sound. Optional voltage gain provides exceptional rejection of external noise and contributes to the inherent DC stability of the circuit. This allows direct coupling without servo circuitry. The single ended class A followers used to drive the preamp output are so linear that no feedback correction is required or used. The advantage of this stability, is that transient response is preserved into a wide range of difficult and unpredictable loads.

The supply starts with a toroidal transformer and 14,000 uF of capacitance. A reference voltage is developed by delivering a constant current to zener diodes. The resulting voltage is heavily filtered and delivered through class A followers. The non-reactive low impedance and extremely wide bandwidth yields a perfect stable power source for the gain stages.

Rear panel connectors include XLRs which have the advantage of greater noise rejection than RCAs. The AC power entry module has a line fuse, a spare fuse and a power switch. Since the power draw is low, the preamp may be left on, except when installing, changing cables, or changing system components.



REAR PANEL CONNECTIONS

You may place the CL preamp wherever is convenient. However, because of their large power supplies, amplifiers produce a local magnetic field that may be picked up by low level circuitry such as preamplifiers turntables and the like. For this reason you should provide at least a foot of space between the CL preamp and your amplifier.

Be certain the CL preamp and all associated equipment is turned off before making any connections.

A. SELECTOR INPUTS

Signal input is made through two XLR (balanced) type connectors and six gold plated RCA (unbalanced) type connectors. The XLR pin configuration is as follows; ground is pin 1, positive is pin 2, negative is pin 3.

B. TAPE MONITOR

Signal input and output connections for a recording device.

C. PROCESSOR

Signal input and output connections for a audio processor (surround sound processor, equalizer, etc.).

D. MAIN OUTPUTS

Signal output to your amplifier is made through two gold plated RCA (unbalanced) type connectors and two XLR (balanced) type connectors. The XLR pin configuration is as follows; ground is pin 1, positive is pin 2, negative is pin 3.

E. AC LINE INPUT

Insert the power cord into the AC receptacle and then connect it to an appropriate power source. The fuse can be removed by pulling the fuse drawer out and clipping in a new one. Once all connections are made the power switch may be set to the on position. The CL Preamp may be left on as it draws a negligible amount of power.

Note: the AC line voltage is preset at the factory but may be changed by your Coda dealer.

FRONT PANEL CONTROLS

A. VOLUME/BALANCE

Audio level is controlled by this optical pot. Counterclockwise rotation increases level, clockwise rotation decreases level. Left to right balance is made by pressing the knob, which it then becomes a balance control. Rotating it clockwise will reduce the left channel and counterclockwise will reduce the right channel. Pressing the knob again will bring it back to being a volume control.

B. RELATIVE dB ATTENUATION DISPLAY

Left and right volume setting is indicated by this decibel (dB) display. When the display reads 99 there is no decibel attenuation, 00 is the maximum decibel attenuation and the default setting, unless additional gain has been selected. See section G below for detailed information on setting individual input attenuation or gain.

In addition the display will flash on and off when the volume is muted.

In between the left and right display is a LED that lights when the VOLUME/BALANCE control is active in the balance mode.

C. PROCESSOR LOOP

For switching in a audio processor (surround sound processor, equalizer, etc.).

D. TAPE MONITOR

For switching in a recording device (tape deck, mini disk, etc.).

E. MONO

To sum the left and right channels

F. INPUT SELECTION

Primary input selection between one balanced (XLR) input and three unbalanced (RCA) inputs. Note that only one selection may be used at a time.

F. INPUT ATTENUATION / GAIN SETUP

Each input has the ability to store a preset gain or attenuation level. The default value is unity gain. To program: 1) Press & HOLD the input to program 2) Press the volume knob. Display now shows default 00 for unity gain. 3) Rotate the volume knob to select up to 18 db of optional gain. 4) Press input again to store value.

REMOTE CONTROL

The CL 2 Preamp may be operated by remote control.

1. CH SELECTOR

These up and down buttons select the source which will be presented to the unbalanced outputs and balanced outputs.

2. VOL–, VOL+

These buttons control the volume and balance level. VOL–, when in the volume mode, lowers the volume level. VOL+ raises the volume level. VOL–, when in the balance mode, raises the left channel level. VOL+ raises the right channel level.

3. VOL«»BAL

This button toggles the VOL– and VOL+ buttons between volume control and balance adjust.

4. MUTE

This button completely mutes the left and right channels, which is indicated by the flashing display on the Audio Window. To unmute you must press the mute button again. Note: while muted you can still change the volume level.

If you wish to clean your preamplifier use a diluted ammonia based window cleaner. Do not use any abrasive cleaners or chemical solvents. Take care not to damage the aluminum faceplate, since aluminum is a medium hardness metal and can be scratched by the careless use of tools during installation.

The preamplifier may overheat and the finish may fade if exposed to direct sunlight or intense heat sources for prolonged periods.

Save your box and packing material, they may be necessary for moving or shipping the unit for servicing by the factory.

FREQUENCY RESPONSE

5Hz to -3dB at 200kHz

DISTORTION

Less than .02% from 10Hz to 40kHz at 6 Volts peak into 600 Ohms or higher, shunted by 1000 pF or less

GAIN

Unity Gain Buffer by default. Variable to +18dB

MAXIMUM OUTPUT

10 Volts peak

NOISE

More than 100 dBA referenced to 1 Volt output

INPUT IMPEDANCE

20k Ohms unbalanced

20k Ohms balanced

OUTPUT IMPEDANCE

50 Ohms non-reactive unbalanced

100 Ohms non-reactive balanced

CROSSTALK

90dB at 20kHz

POWER SUPPLY

Toroidal transformer with 14,000 uF of capacitance

DIMENSIONS

Height: 2.5" Faceplate, 3.0" Overall

Width: 17.0" Faceplate, 17.0" Chassis

Depth: 12.0" Overall

WEIGHT

15 lbs

POWER CONSUMPTION

20 Watts