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<b>CAUTION</b>		
	<b>WARNING</b>	
<b>CAUTION:</b> TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		
	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.	
	THIS SYMBOL IS INTENDED TO ALERT YOU OF THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.	

**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 non-use 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.

Thank you for selecting Coda Technologies and our procession line of high definition, high value audio components. The Control Amplifier CSi Balanced is a precision device, designed in an effort to provide the listener with unmatched sound quality, design, and construction. The CSiB will provide you with many years of listening enjoyment.

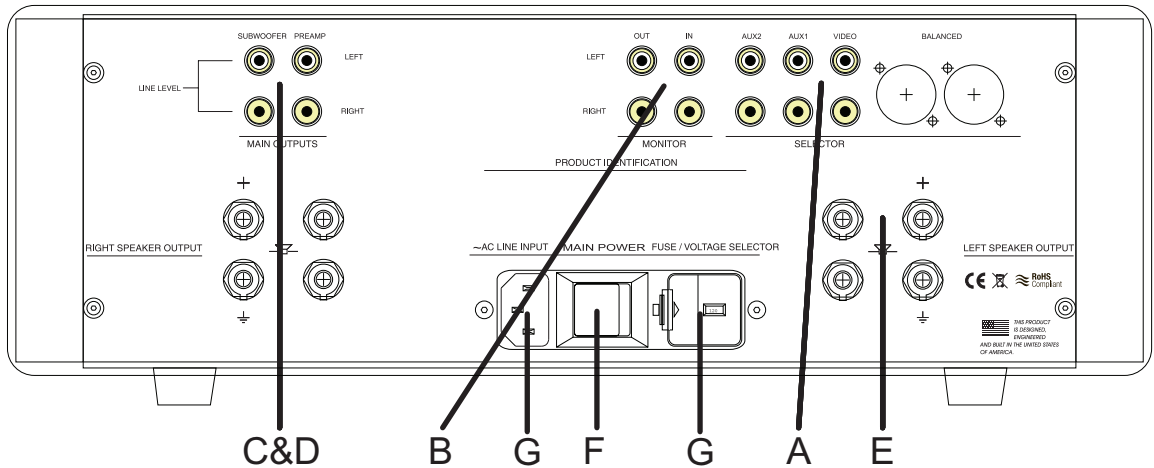
The Control Amplifier CSi Balanced is the latest refinement of the Control Amplifier CSi, itself a substantially improved evolution of the highly regarded Unison Ultra. Most notable are the styling and industrial design changes, introduced with the CSi, bringing the CSiB harmony with the Coda C series line styling changes introduced in 2006.

The preamplifier and amplifier sections remain virtually unchanged from the Unison Ultra, while the power supply and output stages have been improved to increase power to 400W per channel.

The CSiB also includes an extended preamplifier section incorporating a new balanced audio input. The preamplifier in the CSiB has been fully modularized, becoming a separate unit from the amplifier itself and increasing future extensibility.

Other functional, optional, or operational changes are noted throughout this manual. In order to operate your amplifier properly and to realize all of the capabilities of the CSiB, we recommend that you read this entire manual carefully to insure maximum benefit from your audio system.

REAR PANEL CONNECTIONS



To provide for adequate ventilation you should allow at least six inches of unobstructed space above and a couple of inches on each side of the amplifier. Because of its large power supply, a local magnetic field may be created and picked up by CD players, turntables and similar equipment. For this reason you should provide at least a foot of space between the CSiB and these components.

**A. INPUT SELECTOR**

Signal inputs for Disc, Video, Aux and Aux2.

**B. MONITOR**

Signal inputs and outputs for a tape deck or other recording device.

**C. PREAMPLIFIER OUTPUTS**

Signal outputs for an additional outboard amplifier.

**D. SUBWOOFER OUTPUTS**

Variable outputs for a powered subwoofer which track the master volume. Independently controlled.

**E. AMPLIFIER OUTPUTS**

Amplified outputs to connect to speakers. To ensure identical speaker phasing connect both speakers with the same polarity (positive to positive, negative to negative).

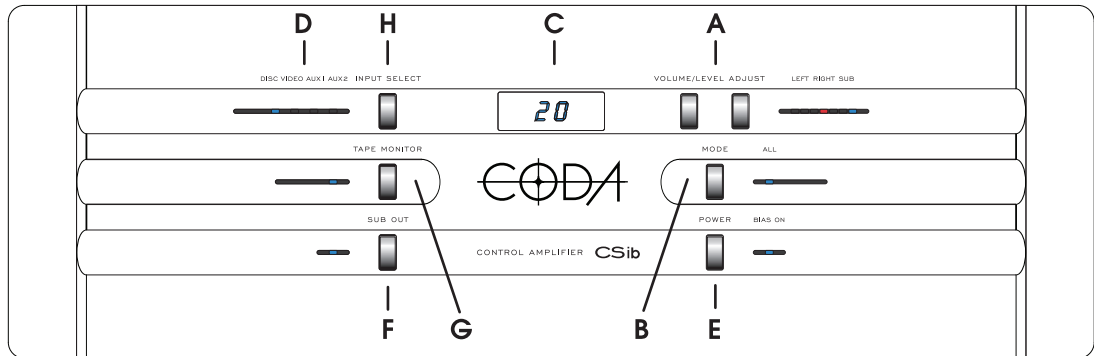
**F. POWER SWITCH**

Main power switch. This power switch is intended only for complete shutdown while connecting and disconnecting cables. The rocker switch must be in the "ON" position for the CSiB to operate. Rather than switching off the amplifier entirely when it is not in use, the bias pushbutton on the front panel should be used to toggle the amplifiers bias off when it is in standby.

**G. AC LINE INPUT AND FUSE HOLDER**

110 or 220 volt power input, fused as specified on the rear panel. To replace a blown fuse, insert a small screwdriver into the slot next to the fuse drawer, indicated by a fuse icon, and twist to release the drawer. Replacement fuses must match the original fuse as specified on the rear panel.

FRONT PANEL CONNECTIONS



**A. LEVEL ADJUST**

Controls the currently-selected audio level visible on the LED display.

**B. MODE**

Selects the audio level to adjust. Cycles between volume, left / right channel attenuation, and subwoofer level.

**C. LED DISPLAY**

Displays the currently-selected audio level. Level is indicated in decibels, with 99 being maximum volume and 00 being 100dB of attenuation.

**D. LEVEL / INPUT INDICATORS**

Indicates which audio level is selected for adjustment (right) or which audio input is selected (left). The three LEDs in the level indicator indicate left and right channels and subwoofer. The LED indicator for the main volume level is located next to the MODE push button.

**E. BIAS**

Toggles the amplifiers bias. With the bias off the amplifier will not produce any audio, effectively operating in standby. In this mode the amplifier will draw negligible current, and can be left on indefinitely.

**F. SUBWOOFER**

Toggles (mutes/unmutes) the subwoofer output.

**G. MONITOR**

Enables the monitor input, overriding all other inputs.

**H. INPUT SELECTOR**

Selects the active audio input. Cycles through Disc, Video, Aux and Aux2.

REMOTE OPERATION

The CSiB can be operated by remote control. The MX-450 Learning Remote is included with the amplifier. For instructions on using the MX-450 itself see the on screen manual included in the remote.



The interior of the unit requires no special care. If external cleaning beyond simple dusting is necessary, any dilute commercial ammonia based product will be appropriate. NEVER use any abrasive rags, cleaners or chemical solvents on Coda products.

When handling the unit, take care not to mar the aluminum. Aluminum is a medium hardness metal and can be scratched by harder tool steels. Avoid exposing the unit to direct sunlight, and keep it away from sources of intense heat.

It is recommended that you keep the carton and associated packing material. They are ideal if you need to pack the unit for transportation. If service is required they will be absolutely necessary for safe shipment.

The remote controlled Coda Control Amplifier CSi Balanced is designed with thoroughness reserved only for the finest preamplifier and amplifier gain stages. Analytical design techniques, both objective and subjective, were applied in an open-minded fashion with musical perfection as the goal. The CSiB features a wide range of design topologies and components ported from both broad lineage and the most recent advances in the Coda products and design topologies.

Unlike other integrated amplifiers, the CSiB offers true “separates” performance. The CSiB is, internally, essentially a Stereo Amplifier Ts with a separate preamplifier section based on the circuit topology of the Coda 07x Preamplifier.

On the faceplate, the straightforward controls and display provide comprehensive functionality to the user. All input selections have LEDs to show when they are in use. Buttons control both volume and balance, with an LED display to show which channels are being adjusted. Gain is controlled by a high performance Burr-Brown PGA2310 analog attenuator. This digitally controlled analogue device features an improved output buffer and increased voltage swing for high level input signals. Digitally controlled level tracking allows 1 dB per step attenuation without error. The digitally controlled stepped resistors & zero crossing detection circuit allow for “zipper-free” operation. Total harmonic distortion is less than 0.04% with a signal to noise ratio approaching 130 dB.

The preamplifier section has its own separate power supply with multiple independent transformer taps. A reference voltage is developed by delivering constant current to zener diodes. The resulting voltage is heavily filtered and delivered through class-A followers to provide absolutely stable power to the preamplifier section. A separate power supply is provided for all controls and microprocessor control system.

In the amplifier section of the CSiB, differential voltage gain throughout provides exceptional rejection of external noise and contributes to the inherent stability of the circuit. The front end is designed to provide a slew rate of 50 V/us without entering class B operation as is common in many other designs. This combined with excellent high frequency design insures linear operation at high speed.

The amplifier's overbuilt power supply take a very direct approach to high performance by utilizing a top quality 3.0 kVA custom toroidal transformer, high current rectifiers and a 80,000µF capacitor filter bank with very low ESR and inductance.

This latest generation output stage design is capable of producing peak currents in excess of 100 peak amperes with a degree of linearity and speed unmatched by other designs producing only a fraction of this massive amount of current. This is achieved by the implementation of several distinct circuit features. Each channel uses 20 individual output transistors with a combined power rating of over 4,000 watts and 125 amperes and a bandwidth of 30 MHz. The CSiB V3 operates in Class A up to approximately ~8 watts. At higher output levels, the bias section is designed to produce a precision transition with no abrupt changes in distortion or output impedance. This “Precision Bias” technique yields seamless performance regardless of the complexity of the load. With such linearity and bandwidth, only 6db of feedback is used to maintain damping factor while permitting the minimal value custom emitter resistors to provide current limiting only under extreme conditions that would exceed the output stages high current capabilities. One advantage of this is a high degree of immunity from interactions with complex speaker loads or cables.



## RATINGS

## Rated Power

V3:  
400 watts @ 8Ω  
800 watts @ 4Ω  
Class A to ~8W @ 8Ω

V2:  
250 Watts @ 8Ω  
500 Watts @ 4Ω  
Class A to ~12W @ 8Ω

V1:  
150 Watts @ 8Ω  
300 Watts @ 4Ω  
Class A to ~18W @ 8Ω

## Maximum Current

130 Amperes peak

## Noise

-130dB referenced to rated output

## Input Impedance

50kΩ unbalanced/1k balanced

## Output Impedance

.04Ω from 20Hz to 20kHz

## Frequency Response

DC to -3dB @ 100kHz

## Distortion

&lt;.04% from 10 Hz to 20kHz @ 400 Watts

## Gain

26dB

## POWER SUPPLY

## Transformer Type

Multi-tap, multi-winding toroidal

## Power Filtering

80,000 μF

## Transformer Rating

3,000VA

## Power Requirement

45 watts @ Standby (bias on)

## DIMENSIONS

## Height

5.5" Faceplate, 6.0" Overall

## Width

17.0" Faceplate, 16.75" Chassis

## Depth

14" Overall

## Weight

55 lbs.

I. Warranty - Any failure of the Control Amplifier CSi Balanced, hereafter known as the product or original product, 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 without charge for parts or labor, for a period of ten years from date of original purchase. Coda Technologies will provide for surface transportation to and from the factory for a period of one year from date of original purchase.

II. Procedure - If the product should require service under warranty contact Coda Technologies at the location on the back cover of this manual for shipping instructions. Products purchased outside of the United States will be covered by the warranty conditions extended by the importing distributor which may differ from those given above.

III. Exclusion of Coverage - Coda Technologies is not obligated to service the product if any of the following conditions apply:

- a. The product has been damaged through:
  - I. operation not in accordance with the instructions in this manual
  - II. abuse, tampering, modification or accident
  - III. serial number defacement

- B. The product has been transferred to a third party. In this case the warranty is valid for 5 years from date of manufacture as determined from the serial number
- c. The product has been transported outside of the United States of America.

In these conditions any service will be made at Coda Technologies sole option.

IV. Total Loss and Replacement - If the product is submitted for service due to a severe malfunction which has caused damage sufficient enough to make a repair attempt infeasible, the product will be replaced with another unit of equal or superior specifications. Coda Technologies' product line is frequently updated and changed, and the specific model and version of the original product may be discontinued at any time without notice. In this case no guarantees are made that the replacement unit will be visually similar to the original product.

V. Subjective Differences - No guarantee is made that the product will perform to any specifications that cannot be measured and conformed with precision audio analysis equipment. Coda Technologies is only obligated to make repairs which will bring the product into compliance with the specifications stated in this manual.

VI. Unnecessary Service - In all conditions, if the product is submitted for service and found to be operated without fault and within specifications, shipping charges will be billed to the customer.

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

Disclaimer - Coda Technologies cannot be held responsible for any damage caused by their products, including but not limited to:

- a. Damage to speakers caused by failure of a Coda Technologies product to mute or disable itself as expected or described in its manual.
- b. Damage caused by connecting a load to a Coda Technologies product having an improper impedance as described in the products manual.
- c. Damage caused by defects in design, construction or component quality.

Fill in this registration sheet and fax or mail it to Coda Technologies to ensure you are in our warranty system. This will facilitate warranty service should it become necessary.

It is recommended that you retain a copy of this form for your own records. Coda Technologies' address and fax number are located on the back of this manual.

MODEL DESIGNATION: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

PLACE OF PURCHASE

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

OWNER INFORMATION

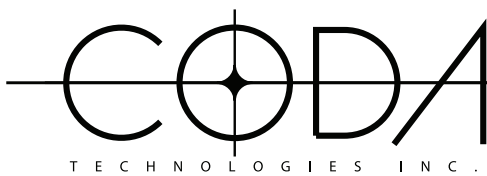
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Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

NOTES: \_\_\_\_\_  
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