

# TC-7535 Caiman SEG Instruction Manual

## SEG-22 & SEG-30

### Overview

The Caiman SEG is a reference-quality digital-to-analogue audio converter featuring the latest DAC Audio technology, The Caiman SEG is designed for maximum transparency and critical playback in professional audiophile applications.

### Burn in

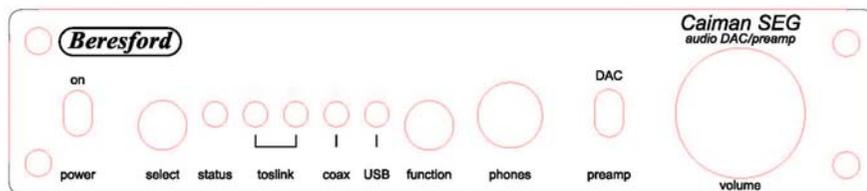
Many users report that the sound output develops in quality after a few days of use. The Caiman SEG can be left powered on and playing a music stream with the volume turned down for a few days to speed up the burn in process.

### DAC output connection

The Caiman SEG DAC Output is designed to connect to the CD or AUX input of an amplifier.

### Pre-amp output level connection

The Caiman SEG pre-amp output is a variable output. It is controlled by the Volume control. It is designed to connect to the input of a power amplifier or active speakers, or used as a buffer stage into a LINE or AUX input of another pre-amp.



## Front Panel

### Digital Inputs

Four digital input connectors (1 x coaxial, 1 x USB, and 2 x optical).

### Input Status Display

Five LEDs on the front panel indicate which digital input is selected and when the Caiman is in AUTO or MANUAL mode.

### Select Switch

The Select switch allows you to select between input signals, and sound signatures.

### Function Switch

The Function switch allows you to select between AUTO input signal detect, Manual input channel selection, and LED sleep mode.

### Stereo Headphone Socket

The stereo headphone socket mutes the fixed RCA/PHONO output when a headphone plug is inserted

### Headphone Amplifier

The Caiman headphone amplifier is designed to drive loads between 12 to 600 Ohms.

### Headphone amplifier gain adjustment

The headphone gain can be adjusted to suit different listening sensitivities and headphone impedances. To adjust the gain, do the following:

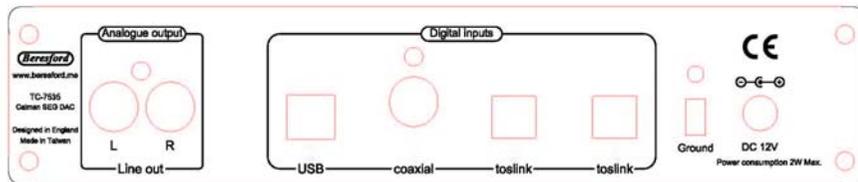
1. Turn the volume control to the minimum position.

2. Pull out the volume control knob. (This might require the use of a bit of pulling force the very first time that you attempt this).
3. Right next to the volume control spindle is a little hole with a recessed adjustment control. Use a small flatblade screwdriver to adjust this control. Turn left to reduce the gain. Turn right to increase the gain. Play some music and use the volume control to check that the gain is not too high or low for you.
4. Turn the volume control to the minimum position. Refit the volume control knob with the volume level marker on the knob pointing to about the 7AM position.

### Volume Control

The Volume Control sets the output level of the headphone and pre-amp.

## Rear Panel



## Digital Inputs

Four digital inputs, selected from the front-panel toggle switches. The *Caiman* will not decode DSD, AC3, DTS, or ADAT signals.

### Input 1 – Optical

The optical input 1 is a TOSLINK connector. Input up to 24Bit/192kHz

### Input 2 – Optical

The optical input 2 is a TOSLINK connector.. Input up to 24Bit/192kHz

### Input 3 - SPDIF

The coaxial input uses a RCA connector. Input up to 24Bit/192kHz

### Input 4 – USB

The USB input uses a USB B connector. Input up to 24Bit/192kHz in shared mode Input up to 24Bit/96kHz in exclusive mode

**Consult the expanded instructions for more info.**

## Analogue Output

The Caiman SEG has a Left and Right LINE/Variable output, terminated into a pair of RCA/PHONO sockets.

The output is disconnected when a headphone is plugged into the headphone socket.

## DC power supply socket

The Caiman SEG can work with regulated power supplies up to 15Volts. It also supports the use of 12V rechargeable batteries or battery packs. The centre pin is the Positive power supply terminal.

A country specific AC-DC power cord is included with each order shipped to most countries. Plug adapters for less well known configurations are otherwise available locally.

The Caiman SEG can operate from as little as 200mA.

## Ground Terminal

The Caiman SEG has a ground terminal. This should be used for connection to your amplifier if you are experiencing ground loop problems.

### NOTICE:

*The Caiman SEG does not have a sound muting output relay.*

*So when using the Caiman SEG as preamplifier, switch the Caiman SEG ON before your power amplifier, and switch your power amplifier OFF before the Caiman SEG. This is to prevent the switch off signal pulse from the Caiman SEG passing to your speakers.*

## Important Specification Notes

The first 1mm of travel of the volume control is used to bias the headphone amplifier circuit. So some differences in channel balance might be noticeable within that space.

## Installation

1. Connect the DC plug from the Caiman SEG power supply to the DC socket on the DAC.
2. Connect the power cord figure of 8 end to the DAC power supply.
3. Connect the DAC input sockets to your audio and video equipment with suitable optical or digital coaxial cables.
4. Connect the RCA stereo output via RCA/PHONO cables to the CD or AUX input of your amplifier via stereo RCA/PHONO cables of a suitable length. See the extended instructions for more info.
5. Plug the mains plug end of the DAC power supply power cord into a mains socket.
6. Press the Power button to switch ON the DAC.

## AUTO/MANUAL Mode

Press the FUNCTION button for about 1 second and let go of it as soon as the RED STATUS LED light up. The DAC will scan each input one by one till it finds a digital input signal. The STATUS LED and the operating input LED will now both light up. When the input signal is removed, or the external equipment plugged into that input is switched OFF, the DAC will start to scan the inputs again till it finds a new valid input signal.

### **IMPORTANT:**

The basic Auto function won't operate with incoming digital signals that do not switch OFF when no audio is present. Examples of this are some satellite and cable boxes. In those cases you can try the Advanced AUTO Mode.

## MANUAL MODE

If the STATUS LED is lit and the DAC is either scanning for a new input signal or playing music, you can switch to manual mode by pressing the FUNCTION button once. The STATUS LED should now be OFF.

To select an input, press and release the SELECT button.

## SIGNAL PROCESSING MODES

The Caiman SEG firmware is capable of processing the incoming digital data in four different ways, which in turn can produce a different sound signature and signal stability from individual source equipment.

How to change signal processing modes:

Press and hold down the SELECT button for about two seconds.

Release the SELECT button as soon as the RED STATUS LED lights up.

The firmware will now automatically switch to the next data processing option.

- One LED blinks = Mode-1 = DAC chip XTAL Clock signal.  
Suitable for external clocks
- Two LED blinks = Mode-2 = Signal Data Clock processing  
Suitable for CD/DVD players, PC
- Three LED blinks = Mode-3 = Signal Data processing  
Suitable for streamed music, TV
- Four LED blinks = Mode-4 = DATA recovered Clock processing  
Suitable for everything, but clock tracking errors may occur when the data and the clock are out of sync.

***You can program each input to have its own setting for the best playback result in each case.***

**NOTE:** the clock might not be able to find the exact beginning of an audio track when you first switch on the DAC or change to playing files of a different sampling rate. You can correct that by temporarily selecting a different mode so that the clock gets back its bearings.

## SLEEP MODE

Make sure that the STATUS LED is OFF when setting the SLEEP mode function. If the STATUS LED is not OFF, press and release the FUNCTION button once to switch the STATUS LED OFF.

Press and hold down the FUNCTION button until the STATUS LED blinks. This will activate the SLEEP MODE function. To cancel the SLEEP mode, repeat the same procedure.

In SLEEP MODE each LED will be dimmed when a valid audio stream is detected. The selected input LED will light up again if no audio, or an error in the signal, is detected.

## Program Backup

When you switch the DAC OFF your settings will be saved. So next time you switch the DAC back ON your DAC will start using your saved settings.

## RESET MODE

The DAC's operating system might get confused on occasions and refuse to operate correctly when the buttons are pressed. If that happens you need to reboot the MCU (Micro Control Unit) to restore the DAC to the factory default mode.

1. Switch the DAC OFF via the Power button.
2. Wait at least twenty seconds.
3. Switch the DAC back ON via the Power button.
4. Whilst the LEDs are each lighting up one by one, press and hold down the SELECT button.
5. When all the LEDs are lit up, let go of the SELECT button.

**NOTE:** *It is important to have a source connected to the Caiman, and switched ON. The Caiman reset needs to see a signal when it resets.*

## Fuse Holder

The fuse holder is inside the case close to the DC power connector socket. The fuse rating is 2 Amps.

## **Safety Information**

The factory supplied AC/DC adapter is suitable for 90 to 270 Volts AC operation.

## Repairs

Do not service or repair this product unless properly qualified.

## Fuses

For continued fire hazard protection always replace the internal fuse with the correct size and type.

## Modifications

Do not substitute parts or make any modifications that may create safety hazards and void the warranty.

## **Notes on Warranty Repairs**

An RN (Returns Number) is required when sending products back. Goods for repair must be shipped to Beresford ME prepaid and preferably in their original shipping carton with the RN clearly visible on the exterior of the packaging. A note should be included giving detailed reasons for the return.

