

HCS-100 HARDWARE MANUAL

Overview

The HCS-100 is a versatile stimulator capable of delivering 50V @ 0.8A for a single channel and 50V @ 0.2A on all four channels.

The high output current of the HCS-100 makes it ideal for multiple bath applications or other applications where higher current is desirable. The HCS-100 will output a voltage 10X the input voltage supporting virtually any protocol - Step, Train, Pulse, etc.

Included Items

The HCS-100 is shipped with the following:

- 1 HCS-100 Hardware (1)
- 2 15V, 3A wall power supply(1)
- 3 8 High Voltage Safety Connectors
- 4 Hardware/Software Manual (1)

If any items are missing, they should be reported to iWorx within 10 days of receipt.

Panels



Front Panel



Back Panel

Inputs

There are four BNC inputs located on the back panel, see above. The input range is 0 to 5V analog voltage. Stimulus protocols such as constant DC voltages, pulses, step protocols, etc. can be used.

Outputs

The outputs are located on the front panel. They consist of 8 high voltage safety connectors, 4 +(signal) and 4 -(ground). The HCS-100 has a Gain of x10 on each channel. The maximum output voltage range is 0 - 50V.

Setup

- 1 Take the HCS-100 out of the box and ensure that nothing looks broken on the unit.
- 2 Place the HCS-100 gently on a flat surface.
- 3 Plug the power supply into the wall, then into the HCS-100. Ensure that the green LED on the front panel is off.
- 4 Connect the BNC inputs to a 0-5V control signal.
- 5 Plug in the output electrodes into the high voltage connectors on the front panel. Position the output electrodes in the sample that is to be stimulated.
- 6 Turn the HCS-100 on and start the input stimulus.
- 7 If readjusting is needed, turn off the HCS-100 and the input stimulus. Readjust the electrodes and turn everything back on.

8 For example:

The low voltage stimulator on board some of the iWorx Data Acquisitions units can be used as a suitable control for the HCS-100.

General Safety Instructions

There are several safety measures that were put into place in order to ensure the safety of the operator. However, improper or careless use can result in the operator sustaining a serious injury. Therefore, the following guidelines must be followed to ensure safe operation.

- Only use the given 15V, 3A DC wall supply that comes with the product.
- Only use the given output connectors
- Do NOT turn on the HCS-100 before the output electrodes are placed
- If repositioning the output electrodes is necessary, turn off the HCS-100 then reposition the electrodes.
- Do not short the output electrodes.
- Do not hold an electrode in each hand, in case of accidental turn on
- Do not under any circumstances connect to a human

Maintenance

The HCS-100 is maintenance free. There will never be a need for the operator to open the enclosure to try and service the equipment. If the unit is opened the 3 year warranty is voided. If any problems arise please contact your iWorx representative.

Intended environment

Indoors with the temperatures ranging from 10°C to 27°C.

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Intended Use

This product is NOT intended for human use. Futhermore, it is intended for research and teaching applications. It is in no way intended to be used as a medical device.

Safety Symbols

The following warning symbol is printed on the front panel of the enclosure. This is to alert the user that improper use of this product can result in serious injury.

