Analog ECG Output Adapter User Instructions
Part Number 273-0008-001 (Option R08)

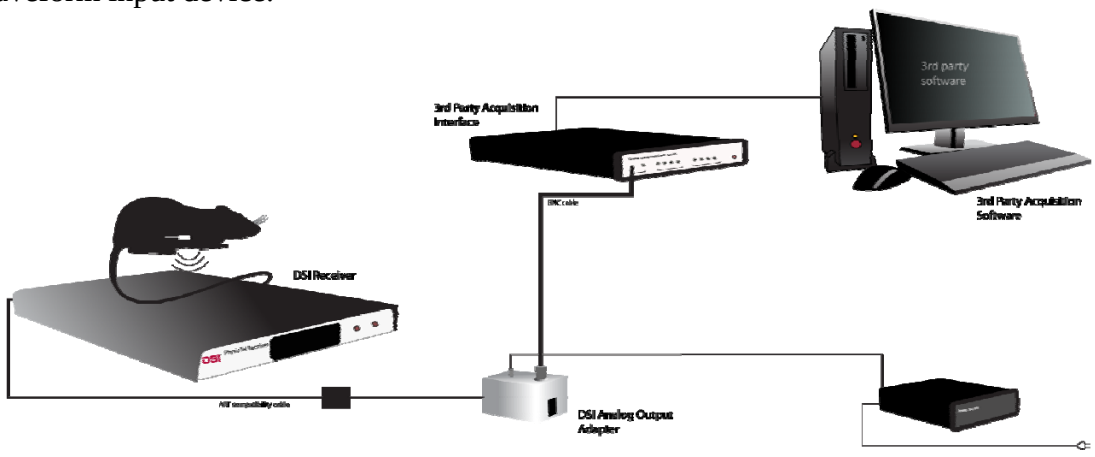
The Analog ECG Output Adapter (Option R08) is a device that connects in-line between a receiver (RMC-1 or RPC-1) and either a power supply or Data Exchange Matrix with the use of an A.R.T. Compatibility cable (Part # 264-0021-001). **The adapter may not be connected to both the power supply and the Data Exchange Matrix at the same time.** The adapter's primary function is to intercept an ECG waveform from the data sent by a single channel biopotential implant (models ETA, CTA, EA, or CA) and output that signal in analog form.

This adapter's output is an uncalibrated analog signal that can be displayed with an oscilloscope, chart recorder, data acquisition program, or other analog data collection device. It is most commonly used to measure the time that has elapsed between events of an ECG signal and not the amplitude of the ECG waveform. If desired, the output can be calibrated by maintaining the device's gain at a constant value, providing known inputs to the implant, and calibrating the analog data collection device to the output from the adapter. Once this is done, the adapter is calibrated only for the specific implant that has been used for the calibration.

The Analog ECG Output Adapter converts a telemetry signal to an analog voltage signal. The Analog ECG Output Adapter does not affect the transfer of power or data between the receiver and power supply or Data Exchange Matrix.

To connect the Analog ECG Output Adapter to a Power Supply

1. Starting with the receiver, connect a network cable (Category 5 or better with standard RJ-45 connections) in-line between a telemetry receiver and jack J1 on the Analog ECG Output Adapter.
2. Connect the Power Supply to the Power jack on the Analog ECG Output Adapter.
3. Connect a BNC cable in-line between the Analog ECG Output Adapter and your analog waveform input device.

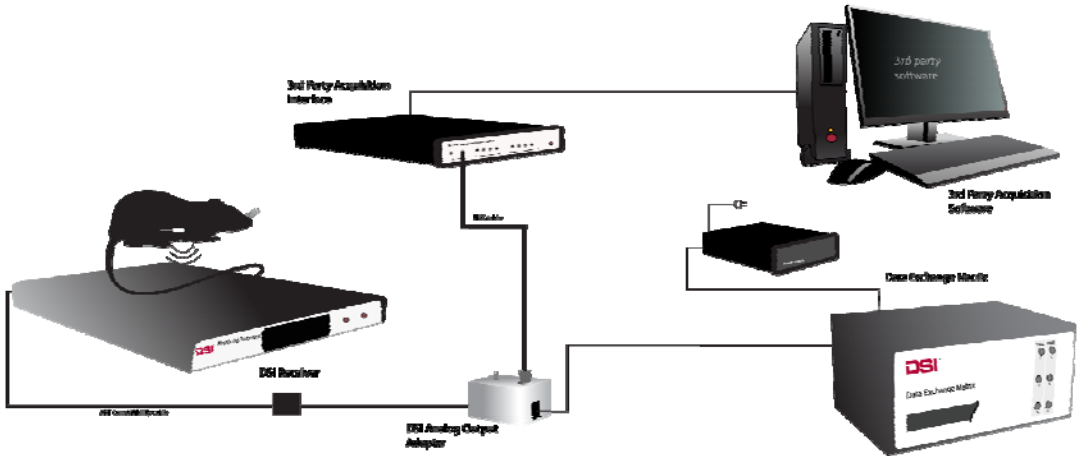


To connect the Analog ECG Output Adapter to a Data Exchange Matrix

1. Starting with the receiver, connect an A.R.T. compatibility cable to a Category 5 or better network cable with standard RJ-45 connections , which will plug into to jack J1 on the Analog ECG Output Adapter.
2. Using a network cable, connect the J2 jack on the Analog ECG Output Adapter to an available jack on the Data Exchange Matrix. This will supply power to both the adapter and receiver as well as import the data into the Dataquest A.R.T. Acquisition system.
3. Connect a BNC cable in-line between the Analog ECG Output Adapter and your analog waveform input device.
4. In the Dataquest A.R.T. Acquisition software, configure the receiver as an RLA1020 or an RLA2000. This must be done only if you intend to collect the ECG data directly in your Dataquest A.R.T. Acquisition system in addition to using the analog signal from the Analog ECG Output Adapter.

   NOTE: If using an older generation receiver such as the RLA3000, or if there is a sticker on the adapter that says "Dataquest A.R.T. Compatible," you do not need to use an A.R.T. Compatibility cable between the receiver and Analog ECG Output Adapter.

   WARNING: The Analog ECG Output Adapter needs only one source of power. Do not connect an Analog ECG Output Adapter to both a power supply and a Data Exchange Matrix (which is also connected to a power supply) at the same time.



To adjust the Analog ECG Output Adapter

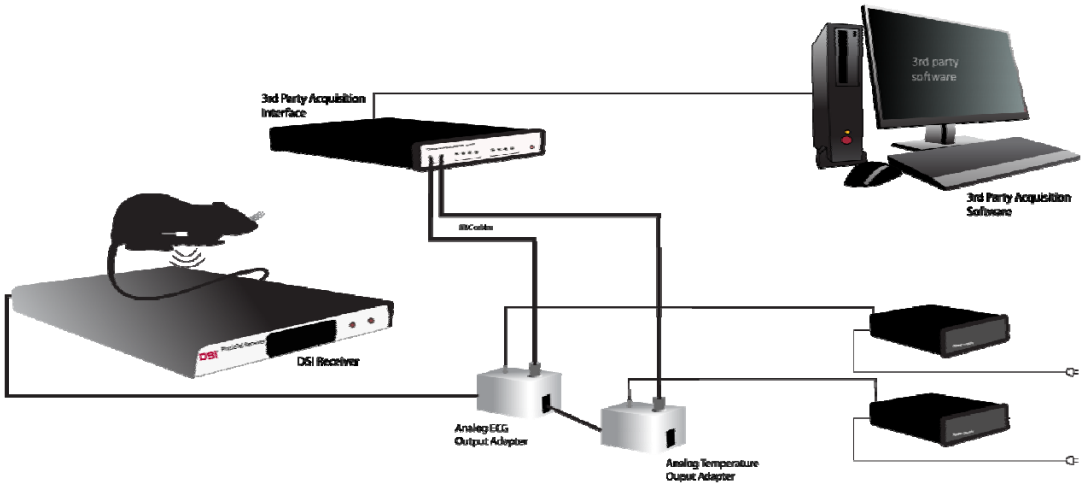
Use the scale adjustment control to adjust the AC coupled output signal and the amplitude of the signal. The gain of the system, from the sensing leads of the implant to the output of the adapter, can be set anywhere between 100 -1000 (CTA or CA implants) and 400 – 4000 (ETA or EA implants).

Collecting ECG and Temperature from a Single Channel Implant

When collecting data from a single channel implant that has both biopotential and

temperature monitoring capabilities (ETA or CTA), you can use the Analog ECG Output Adapter in series with the Analog Temperature Output Adapter (Part #273-0016-001). This will provide analog voltage outputs for both signals. To do this, connect the Analog Output Adapters in-line. It does not matter which adapter is first in the series.

If powering the adapters with a power supply, each adapter will require their own power supply and each adapter will be connected via BNC cables to the analog waveform input device.



If powering the adapters with a Data Exchange Matrix, connect the adapters in-line between the receiver, A.R.T. Compatibility Cable and Data Exchange Matrix as depicted in the diagram below.