

# SC-8 Signal Conditioner

## *Preamplifier and Filter*



The SC-8 Signal Conditioning Box is used to amplify and filter electric and magnetic telluric signals prior to entering the GDP receiver system. Use of this device is recommended to provide low-noise amplification, radio-noise filtering, and limiting of low-frequency tellurics for MT/AMT surveys. The SC-8 can also be used as a radio signal filter for CSAMT and IP surveys.

# SPECIFICATIONS FOR THE SC-8 SIGNAL CONDITIONER

## Electrical

Analog channels: 8  
Gain settings: x1, x8, x32, x128  
High pass filters for low-frequency tellurics:  
1. 0.1, 0.01, 0.001 Hz  
Low pass filters:  
Seven-pole Bessel 10 kHz filter to limit radio frequency noise  
10 Hz for extra filtering for MT low range  
Saturation detector:  $\pm 4.5$  volts  
Batteries:  $\pm 12$  V, 7 amp-hr  
Noise: less than 50 nV /  $\sqrt{\text{Hz}}$  at 1 Hz

## Mechanical

Analog input:  
5-way Pomona connectors, 8 pairs red and black  
BNC inputs for channels 6, 7, 8 for capacitor (AC) coupling  
Analog output:  
26-pin connector, same as input connector on the GDP receivers  
Analog common for input:  
5-way black Pomona connector  
LCD, 8-character:  
Gain setting for each channel  
High pass filter setting  
10 Hz low pass filter in/out  
Analog meter on/off  
Time schedule information display  
Analog meter:  
 $\pm 5$  volt analog output and battery level monitor

## LED:

$\pm$  saturation indicator, red – positive, green – negative

## Switches:

Power on/off on side panel  
Manual / Time Schedule operation  
Filter / Gain selection

## Analog meter function:

$\pm$  battery voltage monitor  
Analog signal monitor for each channel

## Filter / Gain switch functions:

### Filter position:

Selects the high pass filter setting  
Sets the 10 Hz low-pass filter in/out  
Turn analog meter on/off

### Gain position:

Set the gain for each channel  
Turn channels 4, 5, 6, 7, or 8 on/off

## 24 V battery charge port:

4-pin, on side panel  
This port also serves as an external battery connection

## Serial input port:

10-pin, for time schedule input

## Remote reference operation:

Output can drive cable up to 1000m

*Specifications subject to change without notice  
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