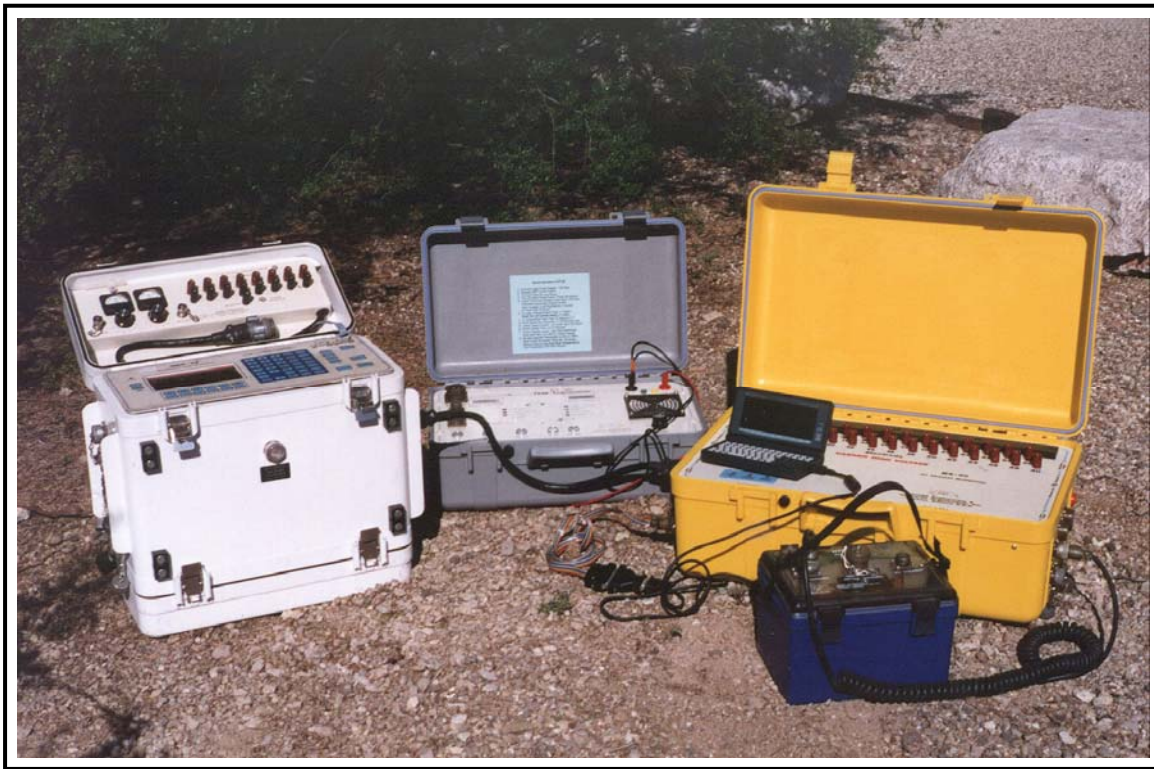


# THE MX-30

## *Multiplex Switch*



### DESCRIPTION

The MX-30 was developed to provide a computer-controlled switching interface between a transmitter, a multi-channel receiver such as the GDP-32<sup>II</sup>, and an array of electrodes. The MX-30 features a transmitter input multiplexer which can connect the transmitter leads to any pair of electrodes. A receiver multiplexer permits the operator to select any number of electrode pairs (up to half the number of electrodes) for input to the receiver. Multiplexer configuration is controlled by commands transmitted over an RS-232C serial communications channel. A control program is available for a laptop computer. The MX-30 is an essential component of any system designed to rapidly acquire resistivity data using cabled electrode arrays. Customers are currently using the MX-30 together with a GDP-32<sup>II</sup> receiver and a ZT-30 transmitter to gather data for **Electrical Resistivity Tomography**. The MX-30 can be configured to provide fewer channels at a reduced cost. The unit can be upgraded in the field at a later date to give it increased output channel capacity.

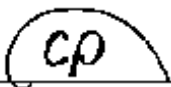
### FEATURES

- Selectable Electrode String – 30 electrodes Max
- External Control – RS-232C Serial (4800,N,8,1)
- Signal Output Channels (differential) – 16 Max
- Transmitter Output Relay Specs -  $\pm 500$  Vdc 5 A
- Transmitter/Receiver Channel Isolation – 1000V
- High Speed Optical Relays on Receiver MUX
- Fully compatible with GDP-32<sup>II</sup> Receiver
- MX-30's may be cascaded together to address several electrode arrays

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# SPECIFICATIONS FOR THE MX-30 MULTIPLEXOR

## Mechanical Characteristics

Enclosure: Heavy-Duty Environmentally Sealed  
ABS Plastic Case  
Size: 55 x 23 x 37 cm (22 x 9 x 15 in)  
Weight: 16 kg (35 lb)

## Electrical Characteristics

Transmitter Multiplexer: 500 Vdc (max); 5 A (max)  
Signal Multiplexer:  $\pm 18$  Vdc

## Controls & Displays

Power ON / OFF switch  
LED indicators for:  
POWER ON, SERIAL DATA, and CPU

## Power

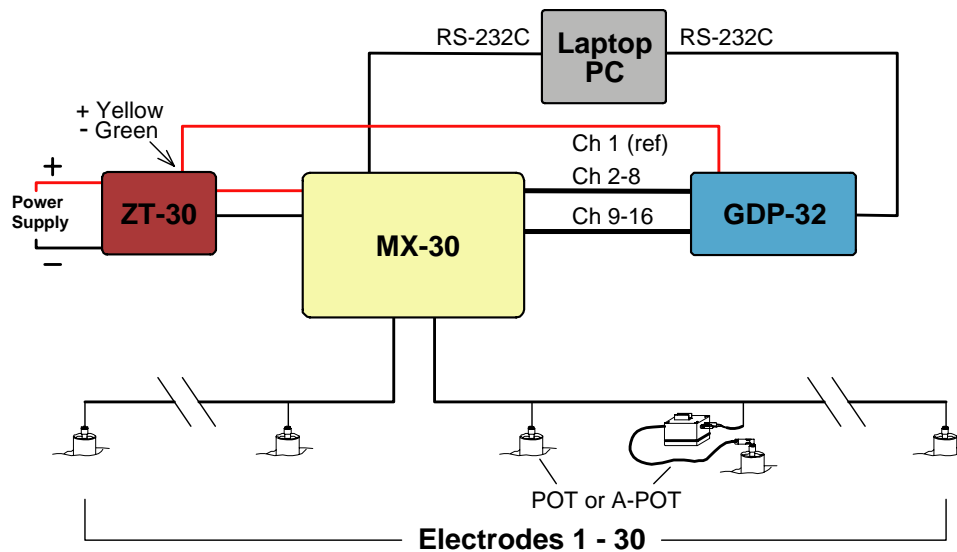
External battery: 10-14 Vdc  
(6 Amp-hr recommended)

## I/O Connectors

External Battery  
RS-232C IN  
RS-232C OUT  
RS-485 IN  
RS-485 OUT  
Signal Channels 1-8  
Signal Channels 9-16  
TX Current IN  
Electrodes IN (1-30)

## Applications

Electrical Resistance Tomography  
Automated Resistivity Soundings  
Automated Dipole-Dipole Resistivity/IP Profiling



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