The GDP-32™ is Zonge International’s fourth generation multi-channel receiver for acquisition of controlled- and natural-source geoelectric and EM data.

**ENHANCEMENTS**
- 133 MHz 586 processor
- Expanded keyboard
- ½-VGA graphics display
- Ethernet port

**UNIQUE CAPABILITIES**
- Remote control operation
- Broadband time-series recording
- High-speed data transfer

**FEATURES**
- 1 to 16 channels, user expandable
- 133 MHz 586 CPU
- Alphanumeric keypad
- Real-time data and statistics display
- Easy to use menu-driven software
- Resistivity, Time/Frequency Domain IP, CR, CSAMT, Harmonic analysis CSAMT (HACSAMT), AMT, MT, TEM & NanoTEM®
- Screen graphics: plots of time-domain decay, resistivity and phase, complex plane plots, etc., on a 480x320 ½-VGA, sunlight readable LCD
- Internal humidity and temperature sensors
- Time schedule program for remote operation with the XMT-32S transmitter controller
- Use as a data logger for analog data, borehole data, etc.
- Full compatibility with GDP-16 and GDP-32 series receivers.
- 0.015625 Hz to 8 KHz frequency range standard, 0.0007 Hz minimum for MT
- One 16-bit A/D per channel for maximum speed and phase accuracy.
- 512 Mb flash RAM (up to 4 Gb) for program and data storage, sufficient to hold many days worth of data.
- 128 Mb dRAM (up to 256 Mb) for program execution.
- Optional 40 Gb hard disk for time series data storage.
- Anti-alias, powerline notch, and telluric filtering
- Automatic SP buckout, gain setting, and calibration
- Rugged, portable, and environmentally sealed
- Modular design for upgrades and board replacement
- Complete support: field peripherals, service network, software, and training
SPECIFICATIONS FOR THE GDP-32™ MULTI-FUNCTION RECEIVER

General
Broadband, multichannel, multifunction digital receiver.
Frequency range: 1/64Hz - 8KHz (0.0007Hz - 8KHz for MT)
Number of channels: Large case, 1 to 16 (user expandable)
Small case, 1 to 6 (user expandable).
Standard Survey capabilities: Resistivity, Frequency- and Time-
Domain IP, Complex Resistivity, CSAMT (scalar, vector,
tensor), Harmonic Analysis (CSAMT), Frequency-Domain EM,
Transient Electromagnetics, NanoTEM®, MMR, Magnetic IP,
Magnetotellurics, Downhole Logging.
Software language: C++ and assembly.
Size: Large case 43x41x23cm (17x16x9”)
Small case 43x31x23cm (17x12x9”)
Weight: (including batteries and meter/connection panel):
Small case 13.7 kg (29 lb)
Large case:
8 channel, 10 amp-hr batteries, 16.6 kg (36.5 lb)
8 channel, 20 amp-hr batteries, 20.5 kg (45 lb)
16 channel, disk, 10 amp-hr batteries, 19.1 kg (42 lb)
Enclosure: Heavy-duty, environmentally sealed aluminum
Power: 12V rechargeable batteries (removable pack)
Over 10 hours nominal operation at 20°C (8 channels and 20 amp-
hour batteries). External battery input for extended operation in
cold climates, or for more than 8 channels.
Temperature range: -40° to +45° C (-40° to +115°F)
Humidity range: 5% to 100%
Internal temperature and humidity sensors
Time base: Oven-controlled crystal oscillator; aging rate <5x10^-10
per 24 hours (GPS disciplining optional)
Displays & Controls
High-contrast sunlight readable ½-VGA (480x320) DFT-technology
LCD graphics display, with continuous view-angle adjustment
(optional heater for use down to –40°C).
Sealed 80-key keyboard
Analog signal meters and analog outputs
Power On-Off
Standard Analog
Input impedance: 10 MΩ at DC
Dynamic range: 190 db
Minimum detectable signal: 0.03 μV
Maximum input voltage: ±32V
SP offset adjustment: ±2.25V in 69μV steps (automatic)
Automatic gain ranging in binary steps from 1/8 to 65,536
Common-mode rejection at 1000 Hz: >80 db
Phase accuracy: ±0.1 milliradians (0.006 degree)
Adjacent channel isolation at 100 Hz: >90 db
Filter Section: Four-pole Bessel anti-alias filter (software-
controlled) Quadruple-notch digital telluric filter (50/150/250/450
Hz, 50/150/60/180 Hz, 60/180/300/540 Hz, specified by user)
Analog to Digital Converter (Standard Channel)
Resolution: 16 bits ± ½ LSB
Conversion time: 17 μsec
Continuous self calibration
One A/D per channel for maximum speed and phase accuracy

NanoTEM® Analog
Input impedance: 20 KΩ at DC
Dynamic range: 120 db
Minimum detectable signal: 4 μV
Automatic gain ranging in binary steps from 10 to 160
Analog to Digital Converter: 14 bits ± ½ LSB, 16 bits optional
Conversion time: 1.2 μsec
One A/D per channel for maximum data acquisition speed

Digital Section
Microprocessor: 133 MHz 586
Memory: 128 Mb dRAM (up to 256 Mb)
Mass Storage (program & data storage): 512 Mb flash RAM (up to 4 Gb).
Hard disk drives with capacities to 40 Gb optional
Serial ports: 2 RS-232C ports (16650) standard
Network Adapter: Ethernet adapter standard (100 Base-T)
Mouse, CRT (VGA), and standard keyboard ports
Optimized operating system

Additional Options
Number of channels: (maximum of 3 NanoTEM® channels)
Large case: 1-16, Small case: 1-6
External battery and LCD heater for –40°C operation

Other Acquisition Software
External RPIP/TDIP/CR Control: Remote control through serial
port on GDP-32™ for electrical resistance tomography (ERT).
Streaming RPIP/TDIP: Continuous acquisition of TDIP or RPIP
data (time domain or resistivity/phase IP) using a towed
electrode array.
Borehole TEM: Remote control through GDP-32™ serial port for
efficient logging of borehole TEM and MMR data. Compatible
with Crone and Geonics 3-component probes.

Extended Broadband Time Series Data Recording: Continuous
recording of up to 5 standard analog channels sampling at 32 K
samples/sec (bandwidth 8 KHz with 2x oversampling) with no
loss of data. The recording time is limited only by the size of the
hard disk drive. Developed for recording broadband magneto-
telluric measurements.

Equal-Interval Mode TEM (TEME): Uniform sampling and
storage of TEM transients as time series. Used for LOTEM data
acquisition and any application that requires uniformly sampled
TEM transients.

Specifications subject to change without notice
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