



3 Channel Configuration

The VLF series of analog field telemetry system represents a flexible means for transmitting seismic signals through analog transmission (telephone or radio). The TC-20DS is a low power, multi channel central site discriminator. It is a field proven system, with many worldwide installations. Compared to other systems, it offers additional features, lower cost, and improved performance

The discriminator features low noise and drift, complementary filters to those found in the field telemetry system to assure a high degree of anti alias protection for digitally recorded data, a highly selective three pole input bandpass filter, a fast acting squelch circuit, highly linear frequency to voltage converter, low pass and high pass data filters, and an output LED display circuit. A single PC card can be ordered in 1, 2, or 3-channel configurations thus conserving valuable rack space. The TC-20DS is low power and features a minimum of adjustments to attain maximum performance from the telemetry system. The convenient output display indicates the positive and negative offsets, permitting the user an easy visual method of verifying that each channel's offset is properly nulled. The unit is designed for the CG-x series central site racks, housing up to 26 discriminator cards or 78 individual data discriminators. For portable and rapid deployment applications an optional field case is available.

Coupled with the high performance field telemetry system (model PTS-3bgx) at the field site, this system offers the user a simple, easy to maintain, cost effective transmission system. Other system components include external multi channel multiplexer (Model PTS-9MX), lightning suppression systems (Model LPS-x), external signal band pass, high pass, or low pass filters (Model TC-70X), line amplifier (Model TC-80X), central site digitizing and recording systems (Model DAS-6102PC), and analysis software.

Specifications subject to change without notice. 06/03

VLF/eentec

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TC-20DS SPECIFICATIONS

INPUT CHANNELS

Number of Input Channels:	1 through 3("x" indicates number of channels)
Audio Input Level:	15Vp-p max
Normal Input Amplitude:	500 mVp-p per carrier
Input Impedance:	100 K Ohms
Input Coupling:	A/C coupled, single ended
Input Filter Type:	3 pole bandpass
Squelch Level:	125 mVp-p
Unsquench Level:	250 mVp-p
Squelch Attack Time:	1 cycle of input signal
Squelch Release Time Delay:	2 seconds

OUTPUT

Output Level:	$\pm 5V$ DC for ± 125 Hz deviation (nominal)
Output Level Maximum:	± 5.75 VDC
Output Impedance:	Less than 10 ohm
Output Noise:	5 mVp-p or less
Output Offset:	5 mVDC max

FILTERS

High Pass Filter:	0.1 Hz (others available)
Low Pass Filter:	5 pole 25 Hz Butterworth (others available)

POWER

Operating Voltage:	$\pm 11 - 15$ VDC (nominal)
Operating Current:	10mA per channel

USER INTERFACE

Adjustments:	Bandpass filter frequency adjustment, 3 positions A/C balance Span
Indicators:	DC positive offset (green LED) DC negative offset (green LED) Squelch
Front Panel Test Points:	Filter out Ground Signal out

SYSTEM SPECIFICATIONS

Dimensions:	W 4" x L 9" x D 0.6" Card
Optional Field Box style:	NEMA 4X die cast painted aluminum
Operating Temperature:	$-30^{\circ}C$ to $+65^{\circ}C$
Humidity:	0-100% RH, non condensing (in field case)

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