CoCo-80 & CoCo-90

HANDHELD DATA RECORDER, DYNAMIC SIGNAL ANALYZER, VIBRATION DATA COLLECTOR

SD-Card
Reset
Ethernet
Headphone
USB Host
Mic
USB Client

CoCo-80 and CoCo-90
High fidelity, lab quality data analysis and a portable rugged package. Excels in both dynamic and static measurements. Battery life of up to 10 hours. Up to 16 channels.

LOW COST, LIGHT WEIGHT, BATTERY POWERED SYSTEM

IDEAL FOR MACHINE CONDITION MONITORING, AEROSPACE, AND MILITARY

ACCURATELY MEASURES BOTH DYNAMIC AND STATIC SIGNALS

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CoCo-80 & CoCo-90

The CoCo is a handheld data recorder, dynamic signal analyzer, and vibration data collector. The CoCo is ideal for a wide range of industries; including machine condition monitoring, automotive, aviation, aerospace, electronics, and military. These industries demand easy, quick, and accurate data recording in addition to real-time processing in the field. The CoCo units are low cost, lightweight, battery powered handheld systems with unparalleled performance and accuracy. The intuitive user interface is specifically designed for easy operation while still providing a wide variety of analysis functions.

The CoCo hardware platform supports two different software working modes: Dynamic Signal Analyzer (DSA) and Vibration Data Collector (VDC). Each working mode has its own user interface and navigation structure. DSA mode is designed for mechanical structure analysis, testing and optimization, electrical, geophysics, and a wide range of other applications. VDC mode is dedicated to route-based machine condition monitoring, vibration data collection, and trending.

PERFORMANCE

The CoCo hardware utilizes a dual CPU architecture. An XScale CPU handles the user interface, project configuration, power management, network communication, and all peripherals. A high-speed floating point DSP manages the data input/output and real-time processing. The CoCo is also configured with large RAM and NAND flash memory for mass data storage. The proprietary design eliminates the need for multiple front-end gain settings, while at the same time delivering a dynamic range of more than 150 dBFS.

RELIABILITY

The CoCo battery lasts up to 10 hours. Special thermo and low power design eliminates the need for a cooling fan, which increases the battery operating time.

DATA RECORDER
Max Data Recording Rate: 102.4 kHz, 8 channels simultaneously
Real-Time Spectral Bandwidth: 46 kHz
Real-Time Frequency Response + Recording Rate: 1 excitation plus 7 response inputs with sampling rate up to 102.4 kHz when streaming recording is disabled; up to 64 kHz when streaming recording is enabled.

FREQUENCY RESPONSE FUNCTION (FRF)
The CoCo performs FRF analysis, a standard feature.

ACOUSTIC ANALYSIS
The CoCo performs octave and sound level meter (SLM), an option included under FFT Spectral Analysis.

ORDER TRACKING
The following measurements can be made in the Order Tracking option: raw time streams, real-time order tracks and order spectra, narrow band RPM spectra and fixed band RPM spectra, overall RPM spectrum, and order tracks with phase relative to tachometer signals.

WHOLE BODY VIBRATION
Standards: Conforms to ISO 2631-1:1997
Channel Count: Analysis on 3 channels (x, y, z axis)
Applications: Health, Comfort, Perception, Motion Sickness
Testing Positions: Seated, Standing, Recumbent (laying)

ZOOM FFT
Compute FRF, coherence, auto power spectra and phase spectra within user-defined frequency band. With Zoom Spectrum Analysis, user can achieve very high frequency resolution without computing the entire spectrum.

ACQUISITION MODE
Trigger Setup Display: A special display view is created for trigger setup. User selects the acquisition mode, trigger source, trigger level, trigger delay and trigger condition. The arrow buttons serve one of three functions: window scaling, window moving, and trigger threshold position change. Trigger delay is operated by the left-right buttons.
Trigger Run-Time Display: In manual arm-mode, a smaller window will pop up for the user to accept or reject the transient captured signals. Only accepted signals are averaged into the spectra.

ROUTE BASED CONDITION MONITORING

Measurement Channels: 1 or 3 channels (tri-axis) with tachometer enabled or disabled
Route Collection Control: Easy navigation from the UI level to routes. View or hold live signals, review measured record, previous measurement entry, next measurement entry, previous point, next point, point and route management.

DEMODULATED SPECTRUM

Available in both route collection and onsite mode
Demodulation Bandwidth: 24 bandwidth options ranging from 125 Hz -1.44 kHz, to 32 kHz - 46.08 kHz

COAST-DOWN/RUN-UP

The following measurements can be made in the Order Tracking option: Raw time streams, real-time order tracks and order spectra, narrow band RPM spectra and fixed band RPM spectra, overall RPM spectrum, and order tracks with phase relative to tachometer signals.

ROTOR BALANCING

Enables users to correct the imbalance without dismantling the machine. It is possible to balance rotors of any size with either 1 or 2 plane balancing. Using the multiple channel option, parallel measurements on 2 sensors are possible, resulting in a faster, safer, and more accurate procedure. The user interface allows stopping and starting balancing as needed and to repeat7 any single operation without running the whole procedure.
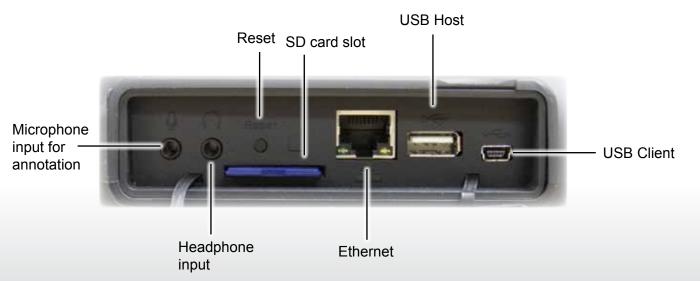
BUMP TEST

Computes FRF, coherence, auto power spectra and phase spectra within user-defined frequency band.

CoCo FRONT DIAGRAM

Additional loop for strap adjustment

Durable strap

5.7 inch color LCD display

Function keys

Escape or back button

Dedicated keypad allows user to start, stop, & record data. Allows quick display settings.

Directional & enter buttons

Shift button

Power button

Indicator light

Reset   SD card slot

USB Host

Microphone input for annotation

USB Client

Headphone input

Ethernet

CoCo CHANNEL CONFIGURATIONS

The CoCo-80 is equipped with 2, 4, or 8 BNC input channels. It can accurately measure and record both dynamic and static signals. The mass flash memory can record 8 channels of streaming signals simultaneously (up to 102.4 kHz) while computing real-time time and frequency based functions. An embedded signal source channel provides various signal output waveforms that are synchronized with the input sampling rate.

The CoCo-90 is equipped with 16 SMB input channels. It can accurately measure and record both dynamic and static signals. The mass flash memory can record 16 channels of streaming signals simultaneously (up to 51.2 kHz) while computing real-time time and frequency based functions. An embedded signal source channel provides various signal output waveforms that are synchronized with the input sampling rate.

4 CHANNEL

8 CHANNEL

16 CHANNEL

Inputs of CoCo-80
Up to 8 BNC connectors, built-in IEPE current source, single-ended or differential, AC or DC coupling, 150 dBFS dynamic range, dual 24 bit-A/D converters, range ±10 Volts (Optional ±20 Volts range)

Inputs of CoCo-90
16 SMB connectors, built-in IEPE current source, single-ended, AC or DC coupling, 100 dB dynamic range, 24-bit A/D converters, range ±10 volts

Outputs
1 SMB connector, 100 dB dynamic range, 24-bit D/A converter

Audio
3.5 mm Audio Jack Stereo connector for earphones, plus built-in speaker and microphone

Dimensions
231 x 170 x 69 mm

Weight
1.71 kg including battery

Power
AC Adapter: 110-240 Volts AC

Max power consumption: 14 watts
Battery operations: up to 10 hours in automatic mode

Host Interface
2 USB ports, 100Base-T Ethernet, SD Card

Maximum Sampling Rate
102.4 kHz simultaneously (CoCo-80 only)

Flash Memory
4 GB used for system and data storage

LCD
5.7 inch LED backlight, 320 x 240 resolution

Typical Real-time Analysis Functions
Math (+,-,*, /), integration, differentiation, FFT, averaging, windowing, auto power spectra, cross spectra, FRF, coherence, real-time filters, RMS, octave, order tracking, swept sine, limiting, alarm/abort and much more.

Vibration Data Collection Functions
RMS, true-RMS, overall-RMS, waveforms, spectrum, demodulated spectrum, trending and alarm, 2 plane balancing. Measure acceleration, velocity, displacement and tacho.

FOR DETAILS: SALES@GO-CI.COM OR VISIT WWW.CRYSTALINSTRUMENTS.COM