

Portable Precision from Rapco



The Rapco 7370 Portable Calibration Unit gives precise frequency and time signals in all situations where conventional laboratory instrumentation cannot be used. The main features of the unit are as follows.

- Battery powered for 'go anywhere' use.
- Retains accurate time and frequency during long periods of field use due to calibration via GPS and high quality internal oscillator.
- Low power consumption for long battery life between recharges.
- Unique oscillator attitude sensing and compensation for optimal frequency stability.
- Fully automatic battery recharging and oscillator calibration overnight using optional fixed antenna, or while travelling (via in-car charger lead and magnetic base GPS antenna (both supplied)).
- LED and audible warning of low batteries or approaching calibration limit so all use is within guaranteed levels.
- Rugged design and construction for use in all industries and environments.



7370 Technical Specification Issue 9 Q3 2007

Power Supply

Universal a.c. adapter

100V to 250V for worldwide use

IEC a.c. input connector, cable supplied with UK plug

or **Internal Battery** giving support times of up to 8 hours.

Recharge time 12 hours approx.

or **External d.c. supply** Voltage range 10.5V to 16.5V.

Cable supplied, fitted with vehicle cigarette-lighter plug.

Rear panel features

1 x d.c. power input, 7 way DIN conn.

1 x Control and Monitoring port , 'D' conn. 9-way skt. RS232, standard [2,3,5] pin out.

[RS422 signalling on separate pins may be selected via internal circuit jumper link]

1 x GPS antenna r.f. input (+ d.c. out to Antenna), TNC conn.

1 x 10 MHz (sine) output, +10dBm, 50ohm, BNC

1 x 5 MHz (sine) output, +10dBm, 50ohm, BNC

1 x Timing, 1Hz, UTC aligned, (TTL), output, 50ohm, BNC

[1 x 2.048MHz (sine) output, +10dBm, 50ohm, BNC (Option -- Q4, 2007)]

Front Panel Indicators

External dc power ON (amber)

Internal battery power ON (red)

Calibration OK (green)

Calibration timeout (amber)

GPS status (green)

Fault alarm status (BIT) (red)

Oscillator type 10MHz SC-cut Quartz OCXO.

Calibration

Built-in self-calibration software.

active when GPS is connected; time-to-calibrate approx. 2 hours from a warm start.

Accuracy following calibration

These are ongoing performance levels during continuous GPS reception at quasi-constant temperature.

Frequency Accuracy after calibration better than ± 5 in $10E11$, ref USNO

Timing (1 Hz) after calibration better than ± 300 nanosec ref UTC(GPS)

Stand-alone (holdover) performance without GPS.

10MHz Frequency Drift (due to ageing, attitude, temperature) < 4 in $10E10$ per 8 hour run

Timing error after 8 hours < 6 microsec ref UTC(GPS)

GPS Receiver

12-Channel, timing oriented, with self-survey, position-hold and TRAIM.

Operating temperature range

0 °C to +40 °C ambient.

Weight (excluding cables and antenna)

2.6Kg approx

Size Height 49mm (inc. feet) Width 215mm (inc. fold-flat handle) Depth 365mm (inc. panel components)

Standard configuration

1x 7370 Portable Calibration unit

1x a.c. power adapter

1x a.c. power input cable

1x d.c. power input cable

1 x Type 4b fixed GPS antenna

1x User Manual (printed)

Extra-cost Options

E143 Antenna download (length 20m, assembled, c/w connectors).

E144 Antenna download (length 50m, assembled, c/w connectors).

Antenna Mounting Hardware Kit (Mast, wall brackets etc.)

Magnetic-mount GPS antenna, 3m integral cable, TNC.

Serial RS232 port cable, to PC/Laptop, 3m

Additional 2048kHz frequency output (Q4, 2007)

The 7370 is just one of a family of portable Rapco units designed for military or other demanding applications.

If you need a unit similar to that described above please contact us to discuss your requirements.

Rapco Electronics Ltd.

Joule Road Basingstoke

Hampshire England RG21 6X F

Tel: +44 (0) 1256 325 454

Fax: +44 (0) 1256 322 695

Web: www.rapco.co.uk

