

2110v MANPACK TRANSCEIVER

➤ FEATURES AT A GLANCE



- Lightweight & rugged design
- CES-128 & AES-256 Voice Encryption
- FED-STD-1045 ALE
- Long battery life
- Intelligent battery system
- Interoperability with advanced calling facilities
- Smart, fast & fully automatic antenna tuner
- Clear communications with DSP noise reduction — *Easitalk*[™]
- Innovative & user-friendly interface
- Integrated GPS receiver
- 3 year warranty

The CODAN[™] 2110 v Manpack is extremely light and rugged, specially designed for long distance communications, whilst on the move.

The 2110v in the Manpack series is designed for voice only operations, providing portable, secure and reliable long-range communications without dependence on installed infrastructure.

The 2110v is extremely light and delivers the lowest power consumption of any available manpack transceiver, meaning you can operate continuously on a single charge for up to 65 hours.

Comfortable to carry and packed with easy-to-use features, the 2110v is ideal for all types of terrain and weather conditions, complying with the toughest environmental standards including MIL- STD-810F.

The 2110v is interoperable the majority of commercial and tactical HF transceivers that are used by government, NGOs and humanitarian organisations.

LIGHTWEIGHT & RUGGED DESIGN

Codan's 2110 series Transceivers are designed for harsh field conditions and comply with the most demanding environmental standards including MIL-STD-810F.

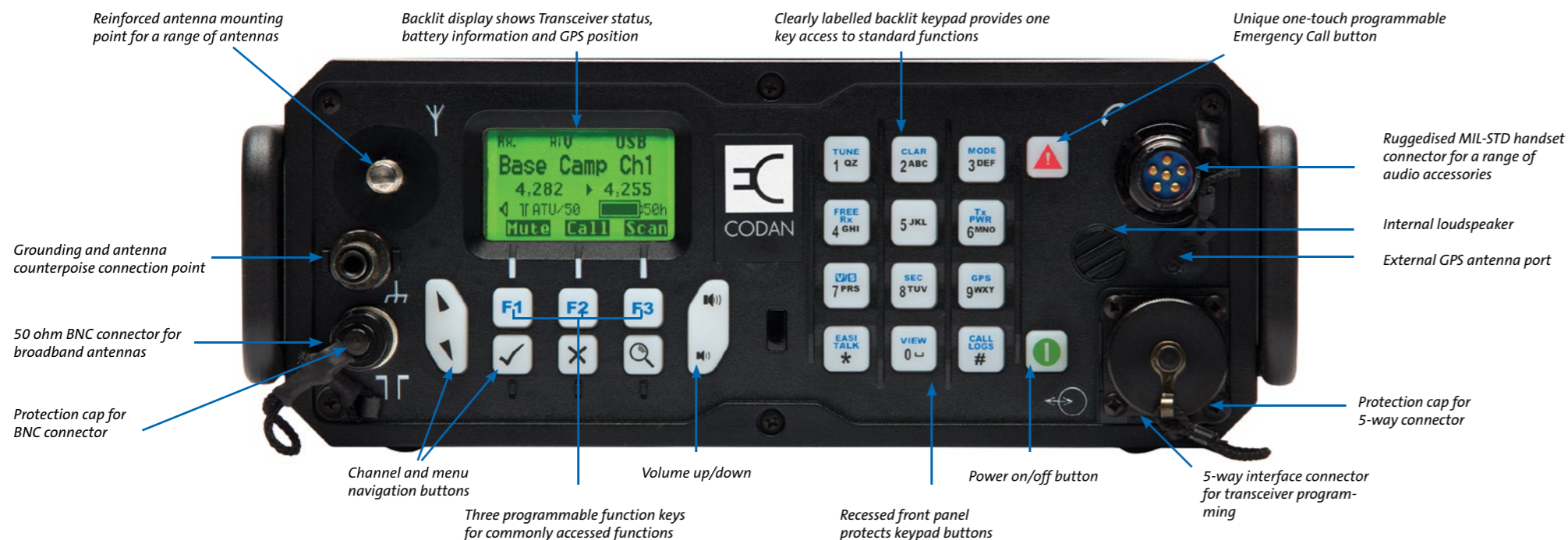
The transceiver and battery compartments are made from lightweight alloys and high impact plastics. Both are capable of withstanding immersion to a depth of one metre.

At 2.9 kg the 2110v is one of the lightest HF manpacks available today without compromising quality and dependability.

CLEAR COMMUNICATIONS WITH DSP NOISE REDUCTION — *EASITALK*[™]

Codan's Digital Signal Processing (DSP) techniques greatly reduce the effect of interference and channel noise to provide clearer communications. *Easitalk*[™] operates at the press of a button and the result is a loud and clear signal at all times.

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Please note that the picture shown (above) is not to scale

LONG BATTERY LIFE

Using state of the art technology, the 2110v Manpack has by far the lowest current consumption of any available Manpack Transceiver. This enables continuous operation for several days on a single battery charge, which can save some users from carrying spare batteries.

INTELLIGENT BATTERY SYSTEM

Codan's unique battery management technology continuously monitors the battery condition and remaining capacity. The Transceivers' front panel shows remaining operating hours, reassuring users of their ability to communicate in mission critical operations.

The intelligent monitoring system also monitors battery charging and prevents batteries from being overcharged. This ensures maximum battery life and minimises operational costs.

Users can charge batteries via the Transceivers' front panels either while they are operating the manpacks or separately.

The 2110v is compatible with a range of battery charging solutions for either AC or DC sources.

INTEROPERABILITY WITH ADVANCED CALLING FACILITIES

The 2110v provides seamless operation with Codan's Envoy™ base and vehicle Transceivers. It is fully interoperable with Envoy™ 4 and 6 digit calling facilities including Phone call, Message call, GPS call, Get Status call, and Over-The-Air (OTA) remote configuration and remote disable capabilities.

SMART, FAST & FULLY AUTOMATIC ANTENNA TUNER

The 2110v features an integrated antenna tuner that provides smart, fast and fully automatic tuning of whip and long wire antennas.

From the moment an antenna is connected to the 2110v, the Transceiver automatically detects the antenna and tunes it to the correct operating frequency.

Users no longer have to select tuning modes, antenna types or manually initiate the tune cycle.

Initial tuning typically occurs within 2.5 seconds and takes only 50 milliseconds when tuning from memory.

The tuner is fully protected against unexpected antenna loads and mismatches, overvoltage, or continuous use.

A separate 50 ohm BNC connection is also available for broadband and other untuned antennas.

The 2110v supports connection to external antenna tuners including the the 9350 and 3040 Automatic Tuning Whip Antennas plus the 3042 and 3046 125W HF tuners.

FED-STD-1045 ALE

The 2110v Manpack includes FED-STD-1045 ALE to ensure mission critical messages are transferred securely by employing link protection and data encryption. Synchronised scanning provides more efficient use of existing bandwidth.

INNOVATIVE & USER-FRIENDLY INTERFACE

Codan's intuitive interface is easy to use right from the start and minimises training time and costs. The Transceivers' menu driven interface includes a smart address book containing up to 100 names, call locations, and even pre-programmed text messages. It also features one key access to standard functions and pre-programmed sequences.

The front panel includes an internal speaker, full alpha-numeric keypad, and a large display that are backlit for night time operations.

The 2110v is highly configurable and supports both user and administrative access levels. This includes the ability to simplify the user interface by restricting a user to only those functions that are necessary to operate the Transceiver.

INTEGRATED GPS RECEIVER

The 2110v supports an integrated GPS receiver option, which enables you to monitor your own location, and

your distance and bearing from other transceivers within a network.

Emergency calls sent through the unique one button emergency facility automatically include GPS position information.

Using CODAN™ GPS and tracking software, a base station operator can track manpack units on a single map. Warning messages can be issued if the field operator enters a no-go area for added security. For extra protection, GPS data can be encrypted so positions are only seen by authorised users.

VOICE & DATA SECURITY

Codan's Voice Encryptor option is available with the 2110v to prevent third party monitoring of communications that may otherwise jeopardise an operation. It uses a patented voice encryption technology to ensure sensitive information remains confidential.

For added security, the 2110v also support encryption of transmitted text messages and confidential GPS position information.

WORLDWIDE SUPPORT

Codan customers are supported with our worldwide network of Accredited Service Centres, agents and distributors — 24 hours a day. Regular auditing and training by Codan technical staff ensure the best after sales service. The 2110v Manpack is backed by a 3 year warranty.

UPGRADABILITY & EASY SERVICE

The 2110v Manpack is designed to preserve your investment in the equipment by supporting future features and capabilities. Its large memory capacity and digital signal processing capabilities enables it to be extended easily through software updates.

The modular design of the 2110v makes it simple to service and repair with a minimum of tools. A range of built-in test capabilities makes it easy to test and report on the Transceivers' performance.

All CODAN™ Transceivers are fully protected from faults such as antenna damage, overvoltage and reverse polarity, which can destroy other transceivers.

OPTIONS

- FED-STD-1045 ALE (CALM™)
- Voice Encryption, CES-128 or AES-256
- Morse Key
- GPS
- 500 Hz Bandwidth Filter

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SPECIFICATIONS

GENERAL

Channel capacity	400 channels, 10 networks
Scanning	Configurable up to 8 channels per second
Linking	FED-STD-1045 ALE
Vocoder	MELPe (1200/2400 bit/s); TWELP (600/1200/2400 bit/s)
Operating temperature range	-40 to +70°C, full spec -30 to +60°C
Frequency stability	±1.5 ppm (-30 to +60°C)
Clarifier	10 Hz
Power source	12 V DC (10.8 to 15 V operational)
Size	Transceiver: 245 mm W x 250 mm D x 92 mm H, with battery 245 mm W x 350 mm D x 92 mm H
Weight	Transceiver: 2.9 kg (5.0 kg with 8 Ah NiMH battery)
Environmental	Per MIL-STD-810F including shock, vibration, humidity, immersion (1 hr at 1 m), altitude, fungus, salt fog, sand and dust, blowing dust, and rough handling
EMC	Complies with MIL-STD-461
Cooling	Convection from case
Transceiver conformance	Exceeds or meets requirements of AS/NZS 4770:2003, CE, NTIA and FCC
Interfaces	USB (full opto-isolation) or RS232
Approximate battery life	Approx. 50 hr (13 Ah NiMH), 1:9 Tx:Rx Approx. 65 hr (17 Ah Li-FePO ₄), 1:9 Tx:Rx

RF

Frequency range	Transmit: 1.6 to 30 MHz, 10 Hz steps Receive: 250 kHz to 30 MHz, 10 Hz steps
Modes	Voice, USB/LSB (J3E), AM (H3E), AFSK (J2B), CW (J2A)
RF input/output impedance	Whip/long wire antenna via internal Automatic Antenna Tuner, or 50 Ω nominal
Antenna tuner	Tuning: 2.5 s typical first tune (fully automatic), 50 ms for memory recall Last tune stored for 100 frequencies
Transmitter specifications	Power output: 25 W PEP (High)/5 W PEP (Low) selectable Duty cycle: 50% with over temperature protection Audio bandwidth: 300 to 2700 Hz (standard filter)
Receiver specifications	Operating current: 120 mA typical (speaker muted) Sensitivity: 0.14 µV for 10 dB SINAD Image & IF rejection: 85 dB Spurious response: ≥70 dB Mute: Syllabic Voice Detect Audio output: Waterproof internal speaker; 0.5 W into 8 Ω, 10% THD

ENCRYPTION

CES-128, 97 x programmable 16-digit keys, 4-digit PIN
AES-256, 256 x programmable 256-bit keys

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Values noted are typical. Equipment descriptions and specifications subject to change without notice or obligation.



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