

ANTENNA TUNER

3046 ANTENNA TUNING UNIT

DTC
A CODAN COMPANY

The 3046 is a low profile, 150 W HF antenna tuning unit designed to deliver high performance and reliability in the world's harshest environments. It provides high speed and efficient tuning of short and long whip antennas across the full operational HF band.

KEY FEATURES

- Fast tuning
- High efficiency
- Waterproof
- MIL-STD-810G compliance
- 2 to 30 MHz
- 125 W RF power handling
- Suits antennas up to 9 m
- Flexible mounting
- ALE, 3G ALE, and frequency hopping compatibility
- Internal receive mode amplifier

HIGH PERFORMANCE

With up to 150 W RF power handling capability, the 3046 can be used for voice (including frequency hopping) and data operation over the full 2 to 30 MHz frequency band. The tuner has an unlimited tune from memory capacity, and using a state-of-the-art tuning algorithm, new frequencies are tuned in typically less than one second.

The 3046's innovative circuit design ensures power delivery to the antenna is maximised, and receive mode performance is optimised by the internal receive mode amplifier. These features combine to provide an easy-to-use, trouble-free, high performance mobile antenna solution.

COMPLIANT TO MIL-STD-810G

The high strength and lightweight alloy housing of the 3046 ensures that it is capable of withstanding the severe environmental conditions encountered in mobile environments.

The unit is designed to meet MIL-STD-810G for dust and vibration and is waterproof to 1 m as per IP67 standard.



TRANSCIVER INTEGRATION

The control interface of the 3046 is fully integrated with Codan's Envoy and Sentry-H 6120-BM transceivers so that tuning is transparent to the operator. If there is a tune problem, the transceiver issues an audible and visual warning, however, an override capability exists for emergency situations. The 3046 is designed for full compatibility with all modes of operation, including receiver scanning, ALE (Automatic Link Establishment), and frequency hopping.

ANTENNA & MOUNT OPTIONS

The 3046 is offered with a 3 m carbon fiber MIL spec whip antenna, MIL spec rubber spring, and NATO hole pattern base. The 3 m whip can be configured for NVIS operation using the tie down kit included and can also be extended to 7 m with the 3 section Extension and Guy Kit for semi-permanent stationary use. An additional antenna accessory is the 9 m tactical long wire kit designed to attach directly to the NATO base stud.



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GENERAL SPECIFICATIONS	
Frequency range	2 to 30 MHz (using 3 m or 7 m MIL spec whip or 9 m long wire antenna)
Power rating	150 W PEP (refer to duty cycle specification)
RF duty cycle	Voice: 100% for up to 150 W, across operational temperature range Data: 60% for up to 125 W and 45% for up to 150 W, across operational temperature range
Power consumption	Typically 400 mA, less than 0.8 A maximum
Input impedance	50 Ω
VSWR	Typical $\leq 1.5:1$
Tuning speed	New frequency <1 second average, memory tune <150 ms
Memory channels	Unlimited (unique non-linear memory allocation)
DC operating range	Codan transceiver (12 V nominal)

MECHANICAL SPECIFICATIONS	
Temperature	-30°C to +60°C, 95% humidity (-22 to +140°F)
Protection	Open Circuit, Short Circuit, Over Temperature, High VSWR
Environmental	MIL-STD-810G (Dust, Vibration) Ingress protection: IP67
EMC	Designed to MIL-STD-461
Dimensions	340 L x 210 W x 95 mm H (13.4 L x 8.3 W x 3.7 in H)
Weight	2.4 kg (5.3 lbs)
Colour	White or olive drab green

INTERFACE SPECIFICATIONS	
RF connector	N-type socket
Control	6-pin bayonet (MIL spec)

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

OPTIONAL ANTENNA ACCESSORIES

Antennas

- 3 m MIL spec two section whip (includes NVIS tie down kit)
- MIL spec rubber spring
- MIL spec, 3 section antenna extension and guy kit (extends standard 3 m antenna to 7 m)
- 9 m long wire antenna kit

Antenna bases

- V/UHF radio interface cables
- Spare mounting cradle

Antenna tuner mounting hardware

- Printed User Guide
- Printed Quick Reference Card

Antenna tuner cables

- 2, 6, 10, 20, and 30 m RF coaxial cables (6.6, 19.7, 32.8, 65.6, 98.4 ft)
- 2, 6, 10, 20, and 30 m control cables (6.6, 19.7, 32.8, 65.6, 98.4 ft)

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