

CH150-14/ CH250-13

CHELTON

TETRA Single / Dual Head Controllers

The CH150-14 and CH250-13 TETRA Single and Dual Head Controllers are Control and Display Units (CDU) which provide the user interface for Chelton airborne TETRA radio sub-systems.

The CH250-13, which controls two 7-450-14 or 7-450-15 TETRA transceivers, is specifically designed for airborne use.

The CH150-14 controls a single transceiver.

The design of the MMJ, display and controls benefits from Chelton's extensive experience of fielding TETRA radios for airborne use, which, because of the unique nature of TETRA networks, is significantly more challenging than operating standard tactical radios.

The CDUs display the operating mode and status of the associated

radios using a colour screen, with a viewable area of approximately 272 pixels x 204 pixels (48 mm x 67 mm).

The CDUs feature user-upgradeable embedded firmware, which controls the display of text, graphics and icons.

The CDUs are compatible with the RH150-13 remote/slave CDUs. The RH150-13 provides an additional control position for larger aircraft.

The Display

The CDUs are Night Vision Imaging System (NVIS) compliant and may be integrated into NVIS Green B Class A and B cockpits. Light emitted



from the displays is LED white. Maximum NVIS radiance is within the MIL-STD-3009 published limits for 'multi-colour' electro-optical displays.

For night operation, the keys are backlit with LEDs, the intensity of which is controlled by the aircraft's bus rail. The key backlighting complies with NVIS Green A.

System Upgrades

The application software of both CDUs is upgradeable without removal of the units from the aircraft. This is facilitated with PC-based tools through the integrated programming serial port, using a LEMO connector to the unit's front panel. This facility also permits external data transfer between the CDU and a Pc.

- DZUS mounting
- NVIS compatible
- Large display screen with automatic dimming
- Keypad suitable for the gloved user
- CH250-13 allows simultaneous use of both radios

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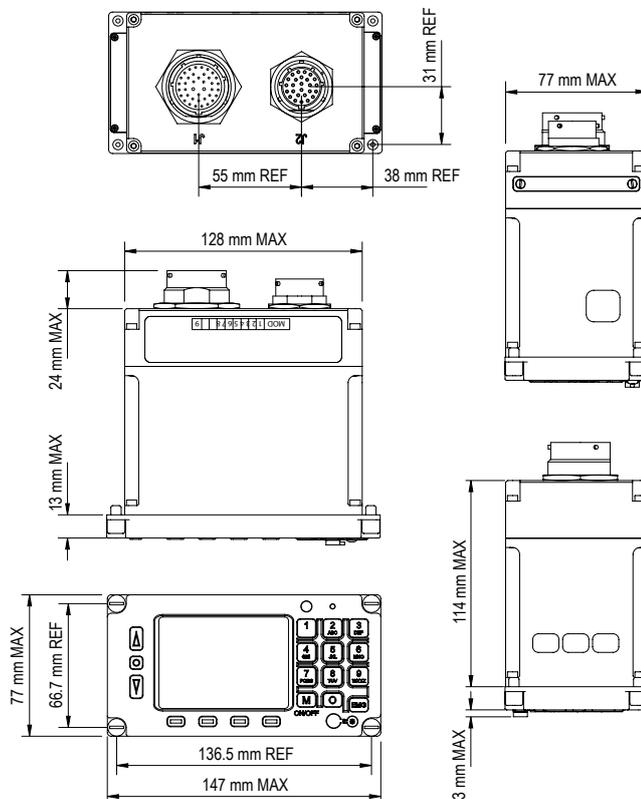
TETRA Single / Dual Head Controllers

ELECTRICAL

Operating Voltage	28 V dc (nominal) (16 V to 32 V)
Input Current	700 mA max at 28 V Input
Panel Dimming Input Voltage	0 V to 28 V dc
Panel Dimming Input Current	60 mA max

MECHANICAL

Dimensions	77 x 147 x 154 mm max
Weight	1.5 kg
Connectors	
To Aircraft bus	Multi-pin MS3114E-20-39S, Male
To Controlling CDU	Multi-pin Type MS3114E-16-26S, Male
LEMO	4-pin Type EGG.00.304.CLL, Female
LCD Screen Dimensions	272 pixels x 204 pixels (48 mm x 67 mm)



ENVIRONMENTAL

Temperature	EUROCAE ED-14E/DO-160E, Section 4, Cat B1 modified Operational: -40°C to +55°C Short Time (Powered up): +70°C Ground Survival (Powered down): -40°C to +85°C
Altitude	25,000 feet
Temperature Variation	EUROCAE ED-14E/RTCA DO-160E, Section 5, Cat B
Humidity	EUROCAE ED-14E/RTCA DO-160E, Section 6, Cat B
Operational Shocks and Crash Safety	EUROCAE ED-14E/RTCA DO-160E, Section 7, Cat B (Helicopter and all fixed wing) Operational shock: 6 g, 11 ms Crash Safety (Impulse): 20 g, 11 ms Crash Safety (Sustained): 20 g, 3 secs
Vibration	EUROCAE ED-14E/RTCA DO-160E, Section 8 Cat S, Curve M (Sinusoidal) Fixed Wing Cat S, Curve B2 (Random) Fixed Wing Cat R, Curve G (Sin-Random) Helicopter
Explosion Atmosphere	EUROCAE ED-14E/RTCA DO-160E, Section 9, Cat X
Waterproofness	EUROCAE ED-14E/RTCA DO-160E, Section 10, Cat W (Front Face Plate only)
Fluids Susceptibility	EUROCAE ED-14E/RTCA DO-160E, Section 11, Cat F (with the exception of SKYDROL)
Sand and Dust	EUROCAE ED-14E/RTCA DO-160E, Section 12 Cat X
Fungus Resistance	EUROCAE ED-14E/RTCA DO-160E, Section 13, Cat F
Salt Fog	EUROCAE ED-14E/RTCA DO-160E, Section 14, Cat X
Magnetic Effect	EUROCAE ED-14E/RTCA DO-160E, Section 15, Class Z 0.3 m
Power Input	EUROCAE ED-14E/RTCA DO-160E, Section 16, Cat B
EMC	
Voltage Spike	EUROCAE ED-14E/RTCA DO-160E, Section 17, Cat B
Audio Frequency Conducted Susceptibility	EUROCAE ED-14E/RTCA DO-160E, Section 18, Cat Z
Emission of Radio Frequency Energy	EUROCAE ED-14E/RTCA DO-160E, Section 21, Cat B
Noise Radiation	The equipment will not radiate noises in excess of 70 dB(A) @ 1 m