The Cromwell Echo is a unique helmet system for firefighters with an integral, cordless radio allowing multi-way communications between Controllers, Team Leaders and individual members of firefighting teams. The system can be used in any application, but was primarily designed to overcome the communication problems associated with traditional radio systems when operating in confined spaces or in high ambient noise conditions. The proven system significantly enhances frontline capability by enabling users to transmit and receive information or commands loudly and clearly without distortion, however remote or difficult the location.

**KEY FEATURES**

- Intrinsically safe
- Unrivalled communications capability
- Time out facility to prevent channel jamming
- Communicate with up to 16 firefighting teams with a single system
- Suitable for use in confined spaces and high ambient noise conditions
- Exceptionally high standards of comfort and protection
- Lightweight adjustable single size helmet, simple ratchet adjustment fits all head sizes from 53cm to 61cm
- Bone conductive microphone, enclosed in a unique noise isolation mounting for enhanced performance in high ambient noise conditions, giving excellent speech quality
- Push to talk (PTT) switch, easily accessed and operated with gloved hand
- Team leader can transmit to and override both Controller and Firefighter Communications by pre-setting the Team Leader/Firefighter switch
- Compatible with most BA systems and anti-flash hoods
- Generously padded interior for optimum comfort
- Optional helmet mounted torch and torch bracket
- Unique rechargeable cordless radio communications system built into rear of helmet
- Hand-held radio powered by rechargeable battery
- Audible low battery warning
- Helmet & hand-held batteries rechargeable on fast charge in under 4 hours
- Optional fist microphone & shoulder/waist holster
**SPECIFICATIONS**

**Transmitters**
- **DUPLEX WITH PTT AND OVERRIDE**
- **Frequency Range:** 395MHz to 450MHz
- **Estimated Radiated Power:** 0.35W
- **Channel Spacing:** 12.5kHz
- **Channels:** 16
- **Modulation Deviation:** ±2.5kHz

**Receivers**
- **DUPLEX WITH OVERRIDE**
- **Audio Response:** 300Hz to 2.7kHz
- **Helmet Audio Output:** 75mW
- **HHR Audio Output:** 350mW

**Battery Life**
*Dependent on TX:RX Ratio:* 4 Hours nominal *

**Weight**
- **Helmet Radio System:** 1.7kg
- **Hand Held Radio:** 1.2kg

**Helmet**
- CE Market to EN443:1997 with the additional options: Wet Helmet and Surface Insulation Test and Thermal Minus Conditioning at -20°C

**General**
- **Environmental Rating:** BS EN 60529:2001 IP54
- **Operational Temperature:** -10°C to +40°C
- **Externally Generated Vibration:** BS EN 60068-2-6
- **Shock:** BS 2011:Part.1Ea
- **Helmet Microphone Type:** Bone Conducting
- **Intrinsically Safe:** (IS) approved TUV-A-10ATEX0001X Ex ib IIC T4

**Chargers**
- **6 Way Helmet / 5 Way Helmet & 1 Way HHR / 1 Way HHR Input:**
  - 110-240 Volts a.c.
  - 50/60Hz/250VA max
- **Fast Charge Output:** 10 Volts/0.64 Amp
  - Constant Current Nominal
- **Trickle Charge Output:** 10 Volts/80mA
- **Charge Temperature:** -10°C to +45°C
  - Double insulated