

With JPS's ACU-T Tactical Interconnect System, a radio gateway can be rapidly configured and deployed to meet almost any interoperability application involving radios and telephones and Radio over Internet Protocol (RoIP).



### ACU-T Overview

The ACU-T provides tactical packaging for the proven ACU-1000 modular interoperability system. The flexible control and status monitoring options of the system make the ACU products truly flexible and versatile. Interconnections between any of the system radios and telephones (and a local operator) can be initiated and terminated in a variety of ways:

- Local operator using the system keypad
- DTMF signaling from radios or consoles
- The ACU Controller software provided can be used to configure and control the unit via IP link

The six devices interfaced to the ACU-T (radios, telephones, and local operator) can be interconnected in any combination from three nets of two users, to a single net with all six users connected together.

The ACU-T's keypad, handset, speaker, and LEDs allow full local control and monitoring of the interoperability system. The ACU controller and WAIS Controller software provide multipoint control and monitoring capability over a network. The control software and DSP algorithms allow the ACU-T to be optimized for best performance with connected radios or other equipment.

All of the interface features that made the 19' rackmount ACU-1000 the industry leader in interoperability solutions are available with the ACU-T, including: a choice of VOX, VMR, or Hardwired COR, Digital Audio Delay, and COR Sampling to ensure that a false key or noisy signal can't tie up a net.

The ACU products offer a truly modularized approach to controlling and interconnecting various types of communications systems. The basic system components are interface modules, each designed to connect a specific communications medium. The ACU-T's interface modules are the same as those used in the ACU-1000, and the internal and control software are likewise compatible between the two products.

The ACU-T provides all of these features in a small rugged unit suitable for rapid deployment in a tactical or vehicular environment. Weighing less than eight pounds, the ACU-T incorporates a drip-proof top cover, quick connect/disconnect CPC connectors for radio interfacing, and a keypad, speaker, and handset for local control and monitoring. The unit is DC powered, allowing easy battery or vehicular use. AC power supply is also provided.

### Benefits

- Modular tactical interoperability system employing proven ACU Technology.
- Small, rugged design suitable for tactical and rapid deployment applications.
- Sophisticated DSP algorithms provide adaptive hybrid, VOX, VMR (voice modulation recognition), and noise reduction.
- Deployable as an above or below ground repeater. Radios can be located up to 1000' away using optional extension cables.
- Custom interface cables available for over 300 radio models.
- Top cover display provides visual indication of current system interconnection status.
- ACU controller software provides full system status.
- Connects up to six communications sources (including local handset) in any configuration from three two-way conversations to a single six-way conference.

# ACU-T™

## Tactical Interoperability

### Capabilities

- Voice prompts/LEDs provide connection status for each port and guide operation
- Can interconnect radios in any band including HF, VHF, UHF, P25, 800Mhz
- Radio templates for supported devices provided in ACU Controller software allow quick setup and optimization
- Connection to a Wide Area Interoperability System via WAIS Controller Software
- External audio connectors for handset and headset support

### Mission Support

- Mobile
- 24/7 support provided; extended warranty available
- Optional Pelican Case includes battery, charger, and storage slots



Left: ACU-T in transportable Pelican case featuring power supply, battery, power cables, manual, and storage area for radio cables and accessories. Right: An ACU-T rear view showing connectors

### DSP-2 RX Audio Input

Input Impedance: Balanced & Unbalanced 600 ohms or 10k ohms

Input Level: -26 dBm to +10dBm, adjustable

### DSP-2 TX Audio Output

Output Impedance: Balanced or unbalanced 600 ohms

Output Level: -20dBm to +11dBm, adjustable

Frequency Response: 100 to 3200 Hz +/- 2dB

Distortion: Less than 0.2%

### DSP-2 COR Input

Input Impedance: 47k ohm pullup to +5V

Polarity: Active low or high, selectable

Protection Up To: +/- 100 VDC

### DSP-2 PTT Output

Output Type: Open drain

Active low or high, selectable

Maximum Sink Current: 100mA

Max. Open Circuit Voltage: +60 VDC

### PSTN-2 Telephone Interface

Telephone Line Levels: Adjustable -24 dBm to 0 dBm in 3 dB steps

Hybrid Type: DSP adaptive hybrid; -30 dB broadband balance

Frequency Response: 100 Hz to 3200 Hz +/- 2 dB

### General/Environmental

CPM Serial Port : RS-232 DCE connector (female DB9). Baud Rates:1200, 2400, 4800, or 600, 115,200 software selectable

Chassis Mounted : Speaker on/off, Power on/off, charger switch, CPC connectors, 1/8"headphone jack, volume control, PTT LED, Fault LED, Handset jack, 3x4 keypad

DC Input Power :+11 to +15 VDC @ 5A nominal

Size : 6.75" H x 6.75"W x 10.5"D (17.2 x 17.2 x 26.7cm)

Temperature : Operating: -20 to +60 degrees C. Storage: -40 to +85 degrees C

### JPS Interoperability Solutions

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