



# 900 Series Interfaces

The 900 series is a range of communications interfaces specifically designed to facilitate connecting radio equipment to handsets, consoles and radio management systems supplied by Omnitronics. The family includes the 920FR and the 925FR for control of radio equipment over leased lines and the 935/936 for connection of handsets and consoles to local two-way radios.

## 920FR and 925FR Remote Interfaces

The combination of the 920FR and 925FR allow two-way radios to be controlled over a leased line from OMNITRONICS 960 series handsets and/or consoles. These units are "A-tick" compliant and use tone keying for PTT control. A choice of keying frequencies is available. Up to three handsets or consoles can plug directly in to the 920FR which in turn connects to the leased line. A single plug-pack powers the 920FR, including the connected handsets and/or consoles. The 925FR interfaces the radio to the other end of the leased line.

An optional "Base Busy" sub-audible encoder/decoder combination can be fitted to give the operator an indication of the radio status. These modules are the 925E encoder and the 920B decoder and fit inside the appropriate interface box.

Automatic level controls on both transmit and receive make setting up systems very simple.

## 920D/NA and 925D/NA Remote Interfaces

These interfaces perform the same functions as the "FR" versions, however they use DC keying for PTT and are NOT APPROVED for connection to telecom lines. They are suitable for private networks that require control of two-way radios from the OMNITRONICS range of handsets and consoles.

## 935 Local Radio Interface

The 935 Local Radio Interface allows direct connection of the 960 family of peripherals to a base station transceiver. This unit covers communications applications where the operators are within 100 metres of the radio equipment. Up to three handsets or consoles can plug directly into the 935 with power derived from the radio.

## 936 Multi Purpose Interface

The 936 is similar to the 935, however it has an additional port for connection to 4 wire devices with E & M signalling. This arrangement allows a number of additional interfacing options including direct connection of 960 peripherals, (handsets and consoles), to the OMNITRONICS 619 audio bridge or to radio link equipment using 4 wire audio and E & M control lines. By using the 925/radio port and a 925FR, leased lines can be connected to the 619 audio bridge to become part of a larger radio system.

*To get details on the numerous applications of all these interfaces, it is strongly recommended that you contact OMNITRONICS and ask for the "900 Series Technical Handbook" which will be e-mailed at no cost. The handbook provides information on installation, applications and circuits.*



925FR

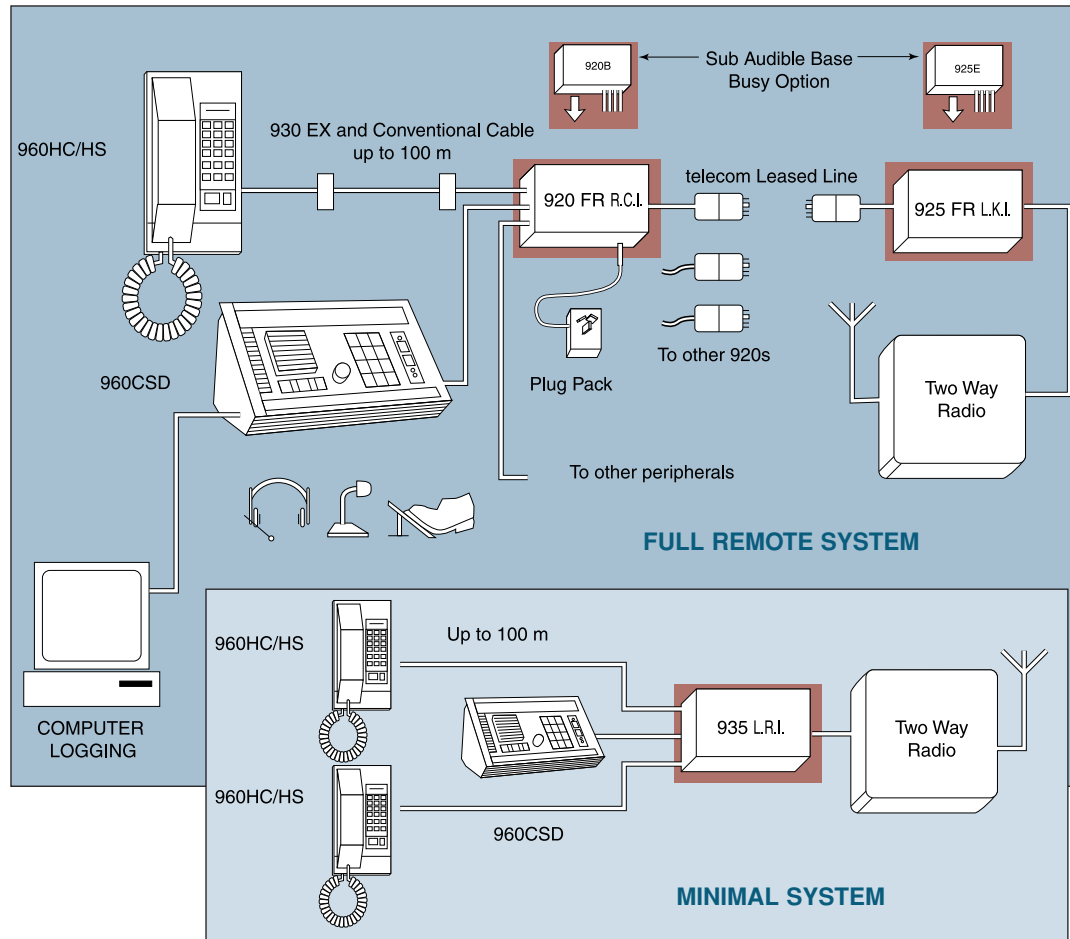
920FR



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Challenging Communication Boundaries

## Basic connections for the 900 series interfaces



### 920FR Specifications

- Power Requirement: 14VDC from supplied plug-pack.
- Line Impedance: RX, 600 or 2.7k ohms selectable. TX, 600 ohms.
- Audio output: -13dBm.
- Audio input: -35dBm minimum.
- PTT tone TX: 2600Hz @ -23dBm (other frequencies available).
- Handset/Console Interface: Audio input, balanced @ 1Vp-p.
- PTT In: Active low, PTT asserted when 4.0V.

### 925FR Specifications

- Power Requirement: 11-15VDC @ 40mA, from radio.
- Line Impedance: 600 ohms.
- Audio output: -13dBm.
- Audio input: -27 dBm minimum.
- PTT tone RX: -37dBm minimum.
- Transceiver Interface: Audio output, unbalanced, 1Vp-p.  
Audio input, unbalanced, 0.1-2.5Vrms.  
Input Impedance: 6Kohms.
- PTT Out: Selectable high or low going, 100mA max.

### 920D/NA and 925D/NA Specifications

Similar to above except for the PTT which is 12 VDC across the line, current limited to 20mA.

### 935LRI and 936MPI Specifications

- Output level (to radio): Unbalanced, variable from 0V to 1Vp-p, output impedance, 1Kohms approx.
- PTT Output: Selectable high or low going from open collector transistors, 100mA max.
- Input Level (from radio): Unbalanced, 30mVrms min. into 4k7 ohms.
- Mute Control: Link selectable, high or low, 5k ohms loading.
- Peripheral Interface: 3 ports designed to suit OMNITRONICS 960 series of handsets and consoles.
- Additional 4 wire Port Specs for the 936: 2 Isolated balanced I/O audio lines @ 600ohms impedance, 1Vp-p.
- Selectable modes for "E" and "M" activation. Opto isolated "M" input and relay "E" output.

### Common Specifications

- Dimensions (H x W x D): 46 x 67 x 130mm ABS box. Environmental: Temperature, 0-60 degrees C, Humidity 0-85%.



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E-mail: [sales@omnitronics.com.au](mailto:sales@omnitronics.com.au)  
[www.omnitronicsworld.com](http://www.omnitronicsworld.com)

#### North America Office:

8301 Cypress Plaza Drive, Suite  
 105, Jacksonville, FL 32256  
**Phone: +1 904 425 0336**  
 Fax: +1 904 208 2697

#### Head Office:

15 Hector Street, Osborne Park,  
 WA 6017, Australia  
**Tel: +61 8 9445 2633**  
 Fax: +61 8 9445 1687

#### International Sales Office:

301 Coronation Drive, Milton,  
 QLD 4064, Australia  
**Tel: +61 7 3369 5733**  
 Fax: +61 7 3369 5799