WEIGH-TRONIX

Zeus Radio Fact Sheet

Introduction

The Zeus radio lets you connect two pieces of equipment, which use RS-232 to communicate, without using cables. The system consists of two radio units with antennae, attached to your equipment, as shown in Figure 1.

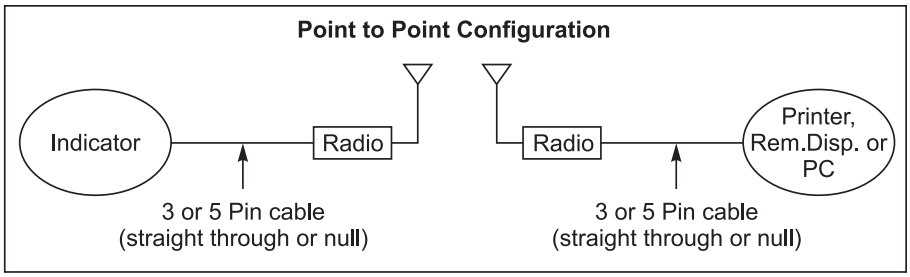


Figure 1
Zeus system diagram

One Zeus style comes with a built in antenna. The other has interchangeable antennae for different distance requirements.

The Zeus radio has a standard IBM interface—a female DB-9pin connector as shown in Figure 2.

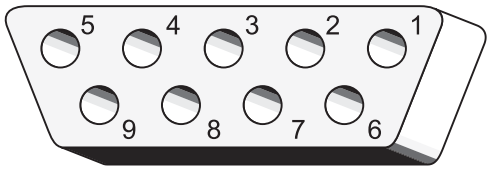


Figure 2
Female DB-9pin connector

Pin assignments are shown on the next page.

Most, if not all, units should use a 3 or 5 wire interface:

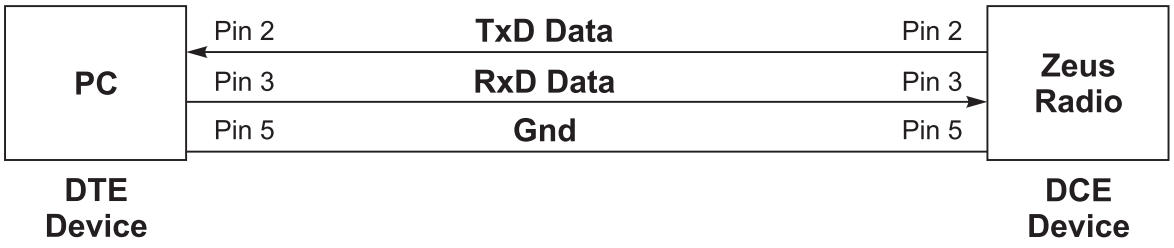
- 3 Wire Connection—Data (TxD/RxD) and Ground
- 5 Wire Connection—Data and Ground; with Hardware Flow control (RTS/CTS)

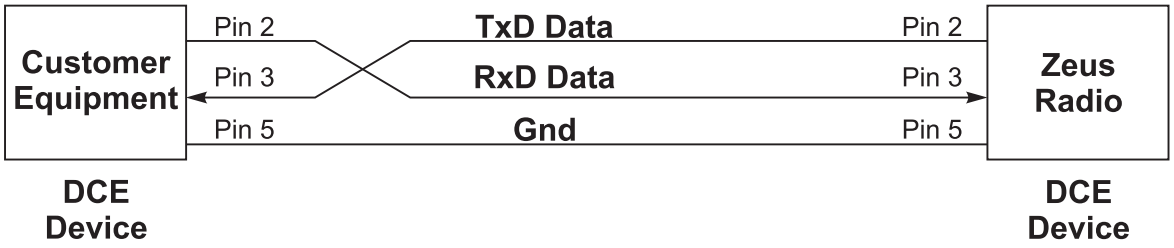
The only complicating issue is whether the interface between the Radio and the attached device is a DCE or DTE connection—thereby requiring a straight through or Null cable.

Factory set defaults:
9600 baud
8 data bits
N parity
1 stop bit

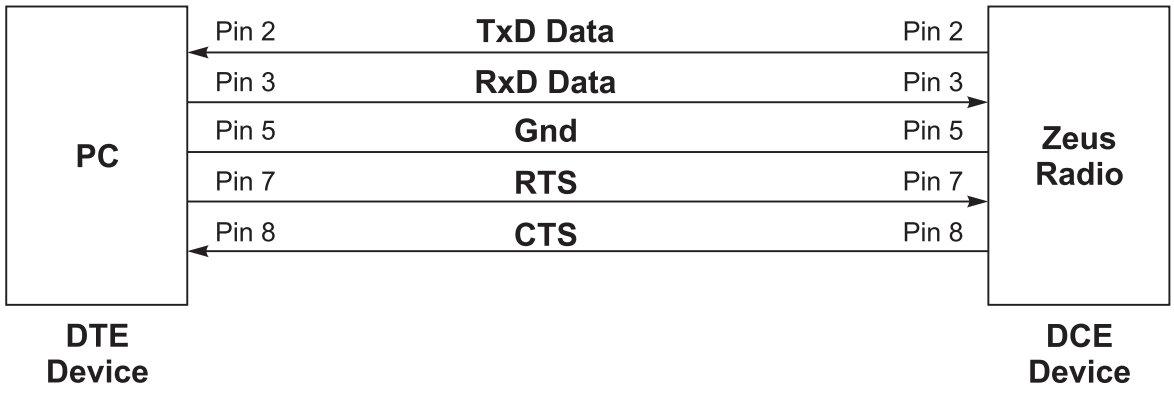
A Data Communication Equipment (DCE) device is one that accepts data. A Data Transmission Equipment (DTE) device is one that transmits data.

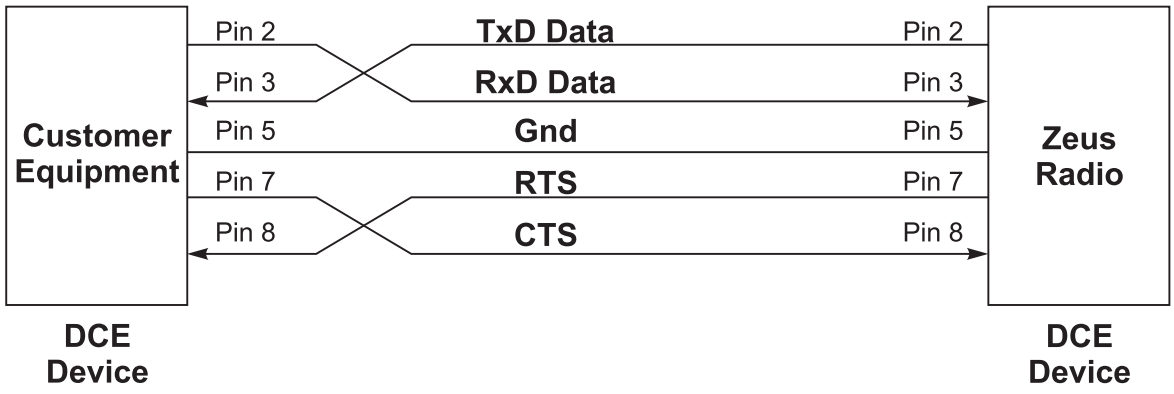
Three (3) Wire Interface





Five (5) Wire Interface—Data and Hardware Flow Control





Pin	Signal	Name	I/ O	Function / Usage	Default	Active State
1	DCD	Data Carrier Detect	Output	Communications session in progress	Low	High (Active Session)
2	TXD	Transmit Data	Output	Data from radio to the attached device	Low (no data)	Mixed (Data)
3	RXD	Receive Data	Input	Data into radio from the attached device	Low (no data)	Mixed (Data)
4	DTR	Data Terminal Ready	Input	Data	High	NA
5	Gnd	Signal Ground	N/ A	Common Ground Reference		
6	DSR	Data Set Ready	Output	Always asserted (Active High)	High	High
7	RTS	Request To Send	Input	Attached device is ready to communicate (Hardware Flow Control - if enabled)	High (Ok to send data)	Low (Stop sending data)
8	CTS	Clear To Send	Output	Radio is ready to communicate (Hardware Flow Control - if enabled)	High (Ok to send data)	Low (Stop sending data)
9	R	Ring Indicator	Output	Session status change indicator	Low	High (Status Change)

Input Power Requirements (Barrel Connector):

- 115 VAC wall-mount transformer (included)
- Plug Style (2. 5mm ID, 5. 5mm OD, 8mm shift length) with the positive (+) contact on the inside of the barrel
- Greater than 6.5 Volts and Less than 9.0 Volts
- Ripple: Less then 250mVolts(RMS) from DC to 1MHz
- Current in Idle mode: ~200mA
- Instantaneous Current in Tx mode: 550mA
- Time averaged (over 100mSec.) Current in Tx/ Rx mode: ~360mA

Physical Interface Requirements:

- PCB connector: Standard DB- 9(Female)

Electrical Interface Voltage Levels (RS- 232C):

- Input Levels: Low (- 3. 0 to -30 Volts); High (+ 3.0 to +30 Volts)
- Output Levels: Low <- 7.5 Volts; High >+ 8. 7 Volts @ 3mA

Radio Frequency Exposure Warning

The field strength radiated by any of the antenna, when connected to a transmitting ZLRT9600 module, may exceed FCC mandated RF exposure limits. FCC rules require professional installation of these antennas in such a way that the general public will not be closer than 8 inches (20 cm) during operation. RF exposures may be exceeded if personnel come closer than this minimum aperture clearance.

Warning

Do not install this unit within 8 inches (20 cm) of personnel. Radio Frequency exposure could be exceeded.

FCC Warning

This equipment complies with the limits for a Class B digital device. pursuant to Part 15 of the FCC Rules. These limits are designed to provide protection against harmful interference in a residential installation. Operation of this device is subject to the condition that it does not cause harmful interference; this device must accept any interference received, including interference that may cause undesired operation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

When a Zeus Wireless, Inc. RF product is installed in an OEM device, this device must reference the enclosed Zeus Wireless Transmitter. The information which the OEM must reflect on the label is: "**TRANSMITTER MODULE FCC ID: N4JLRT006" and "This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.**

Specifications

General

Indoor Range	Up to 1500 ft. in normal construction
Outdoor Range	10,000 ft. Omni-directional; 12 mi. directional
Radio Data Range	2.4Kbps to 9.6Kbps, full duplex
Channels	550 independent, non-interfering frequencies
Connectivity	TTL as an embedded device; RS-232 serial as a stand-alone device
Certifications	FCC Part 15 Class B for residential use

Radio

Frequency Band	2.4GHz license-free ISM Band
Radio Type	Frequency Hopping Spread Spectrum
Power Output	10 mW to 600 mW (Self-adjusting)

Environmental

Humidity	0% to 95% (non-condensing)
Temperature Range	-4°F to +140°F (-20°C to +60°C)

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