Serial Connector Pin-out Description For:

Pilot organizer, PalmPilot™ organizer, and Palm III™ organizer

The organizer's 10 pin edge connector has some EIA562 interface signals and some additional signals to support the use of the synchronizing cradle and the Palm™ Modem.

PIN#	Signal Name & Direction	Function
1	DTR (out)	Nonstandard implementation. Signal is named RS232_V+. This is the voltage doubler output from the transceiver's V+ pin (pin 3) through a 330-ohm resistor, it is used as the Data Terminal Ready signal. When the serial port is "opened" by Serial Manager, it enables the transceiver and the UART. As long as the transceiver is enabled this pin outputs an asserted signal. The signal is 3.0 volts when the transceiver is shutdown (normal mode) and is about 6.0 volts when the transceiver is enabled (HotSync). When this signal is at 6.0 volts it is a valid assertion. Note: According to spec, a 3.0 volt signal constitutes a valid assertion, but it "seems" at the time that all pocket modems which require DTR being valid, simply have a logic detector to detect the signal being greater than about 4 volts, so effectively 3 volts is not a valid assertion and that is why this simple implementation works.
2	VCC (out)	This is tied to Vcc (3.3v) through a 330 ohm resistor. This signal is connected to the HotSync® button (normally open) on both the cradle and the Palm Modem. The other side of the HotSync button connects to pin 7 (GPI1).
3	RD (in)	Receive Data -- from PC to organizer
4	RTS (out)	Request To Send -- hardware flow control handshake signal
5	TD (out)	Transmit Data -- from organizer to PC
6	CTS (in)	Clear To Send – hardware flow control handshake signal
7	GPI1 (in)	Interrupt line for initiating HotSync. This input requires a voltage greater than about 0.7 volts in order to turn on a MUN2214 NPN transistor which asserts a low on the DragonBall IRQ1 (U1 pin 38)
8	GPI2 (in)	Peripheral ID line for synchronization. Signals "Modem Sync" when asserted high (this is achieved in the Palm Modem because this pin is connected to pin 2 through a 20K ohm resistor). This input requires a voltage greater than about 0.7 volts in order to turn on a MUN2214 NPN which asserts a low on the DragonBall UART GPIO (U1 pin 32) to present a "Modem connected" ID signal to the processor.
9	UNUSED	This is reserved for future designs by Palm Computing, Inc., a 3Com company.
10	SG	Signal Ground

- Looking at the back of the organizer, the pins are counted 1 to 10 going from right to left.
- Maximum transmission rate is 115,200 bps, using the modem it is limited to 57,600 bps.
- RTS and CTS are used to communicate at speeds above 2400 bps.
- The DTR signal is not a standard implementation. It is important because some modems will not function without it and have no override. We found that this is particularly true with modems sold in Europe.
- All organizer's released so far do not implement DSR, RI, CD and TC.
- No TC (Transmitter Clock) means synchronous transmission is not possible.
- Transceivers used:
  Pilot organizer 1000/5000 -- Maxium MAX3222;
  PalmPilot™ organizer Personal/Professional -- Sipex SP385ACA, Linear Technology LTC1385CG
  Palm III™ organizer-- Sipex SP385ACA