DESCRIPTION

The Serial Inverter provides a simple means for connecting popular EFX-TEK accessory devices (DC-16, FC-4, RC-4, etc.) to a PC serial port for high-level control from a PC-based application (e.g., Vixen). A DC power connection is provided for applications that require bi-directional communications, or when the device under control takes power from the 3-pin serial connection (e.g., RC-4, serial LCD, etc.).
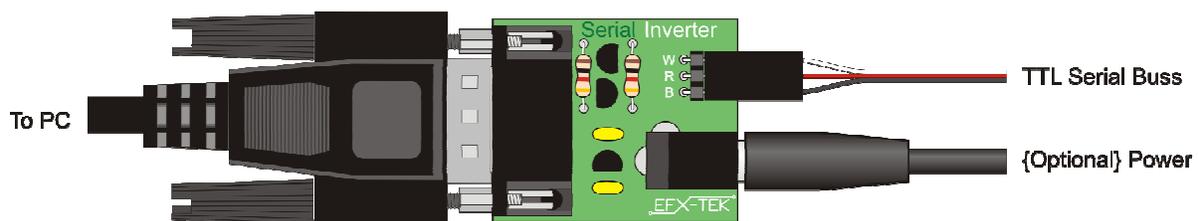
PRODUCT APPLICATIONS

- Holiday and museum displays
- Special FX and props
- Small-scale industrial control

FEATURES & BENEFITS

- DB-9F connector for device control from PC
  – may be connected to PC using the USB-Serial adapter (#28030)
- 3-pin bi-directional TTL serial buss compatible with EFX-TEK accessories
- 2.1 mm (center positive) power input (7 to 12 VDC) – use is optional
- Compact size: 1.5" x 1.25" (38.1mm x 31.8mm)

Connections

The Serial Inverter connects between you PC (using a standard serial cable) and EFX-TEK accessories boards using the #805-00002 extension wire.

Power (7 to 12 VDC) is not required, except in the following situations:

- When the RC-4 is in the device chain
- When bi-directional communications with a device is required

Providing Power to Accessory Devices (RC-4)

The Serial Inverter has an onboard voltage regulator that is capable of providing 300 mA at 5 VDC that can be used to power the RC-4. Connect a 7 to 12 VDC, center-positive power supply to the Serial Inverter when using it to provide power to the RC-4.
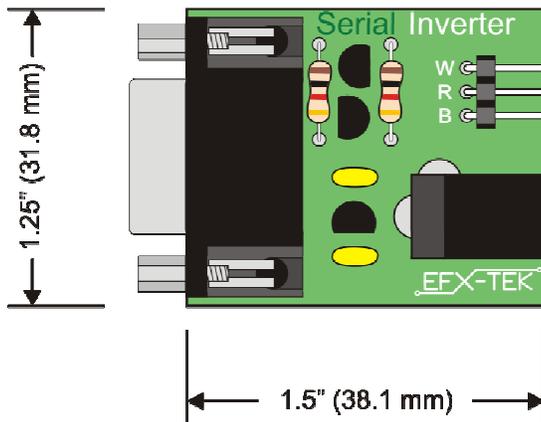
The chart below provides the maximum expected loads for various RC-4 configurations.

# RC-4s	Max. Relays	Current (mA)
1	4	45
2	8	90
3	12	135
4	16	180

CAUTION: Do not connect a power supply to the Serial Inverter when it is used to communicate with the Prop-1, Prop-2, or Prop-SX controllers; the TTL output headers of EFX-TEK controllers provide 5 VDC on the center (red) pin.
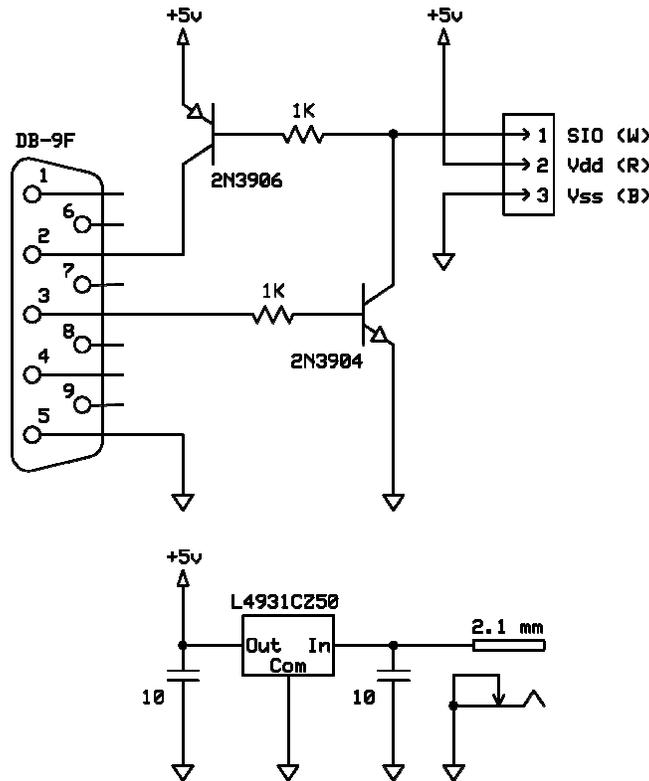
MECHANICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Parameter	Symbol	Specification			Unit
		Min.	Typical	Max.	
Supply Voltage	V_{IN}	7	9	12	VDC
Output Voltage	V_{OUT}	4.8	5	5.2	VDC
Output Current	I_{OUT}			300	mA
Operating Temperature	T_{OP}	-25	25	85	C

Specifications subject to change without notice.

SCHEMATIC

Accessories

805-00003   Serial cable; *used to connect Serial Inverter to PC*
805-00035   12-inch, 3-pin extension cable; *used to connect external devices to the Serial Inverter*
750-00007   12 VDC, 1 Amp power supply
28030   USB-Serial Adapter; *used to connect Serial Inverter to USB ports*

Additional Applications

For additional ideas and application notes for the Serial Inverter please visit us on the Internet at the following links:

www.efx-tek.com
forums.efx-tek.com

The staff at EFX-TEK particularly like the freeware program Vixen for lighting control and other automation applications. You can download Vixen from:

www.vixenlights.com