

# **CIRCUITWERKES**

**Makers of Innovative Electronics**

*Operation &  
Technical Manual*

## **Transcon-16**

**Bi-directional Contact Transporter**

Hardware Version 3  
Revised 07/10/2006



## Introduction

The CircuitWerkes Transcon-16 is a bi-directional contact transporter that uses standard serial communications which can be routed over any three conductor cable. One Transcon-16 is required at each end of the cable. Each unit has 16 optically-isolated inputs and sixteen relay outputs. Whenever one of the inputs is grounded, the corresponding relay closes on the second unit. Serial data rates can be switched from 9600b to 1200b for noisy/rugged environments or extremely long runs. Inputs and outputs appear on standard D-25 connectors.

## Installation

Two Transcon-16s are required for each installation. Power is provided by the supplied 9Vdc adaptor that comes with your Transcon-16. If you wish to provide your own power, it must be 7 to 10Vac or 8 to 12Vdc at 250mA or greater. A serial connection between the two units is also required. Serial connections can be standard or null modem types. Jumper JP23, lets you choose the type of cable that will connect the two units. If a standard serial connection is used, then one Transcon-16 must have its jumpers set to the "A" position and the other unit must be set to the "B" position. If a null modem (crossover) cable is used, both Transcon-16s must be jumpered the same (A or B can be selected as long as both are set the same).

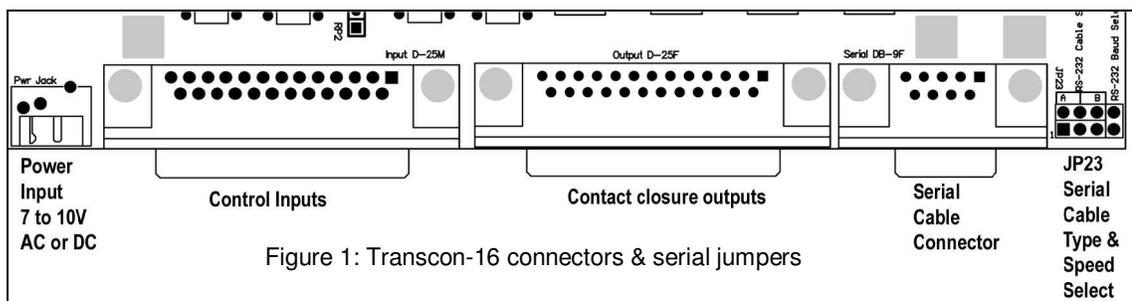
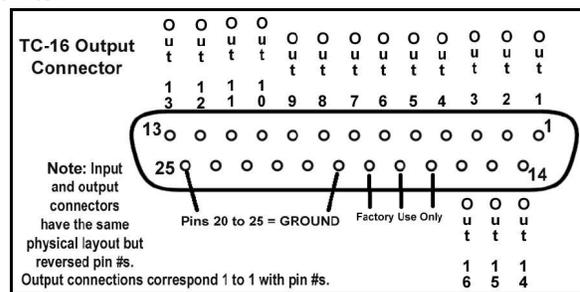
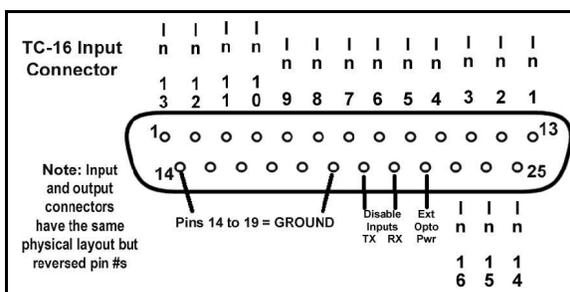


Figure 1: Transcon-16 connectors & serial jumpers

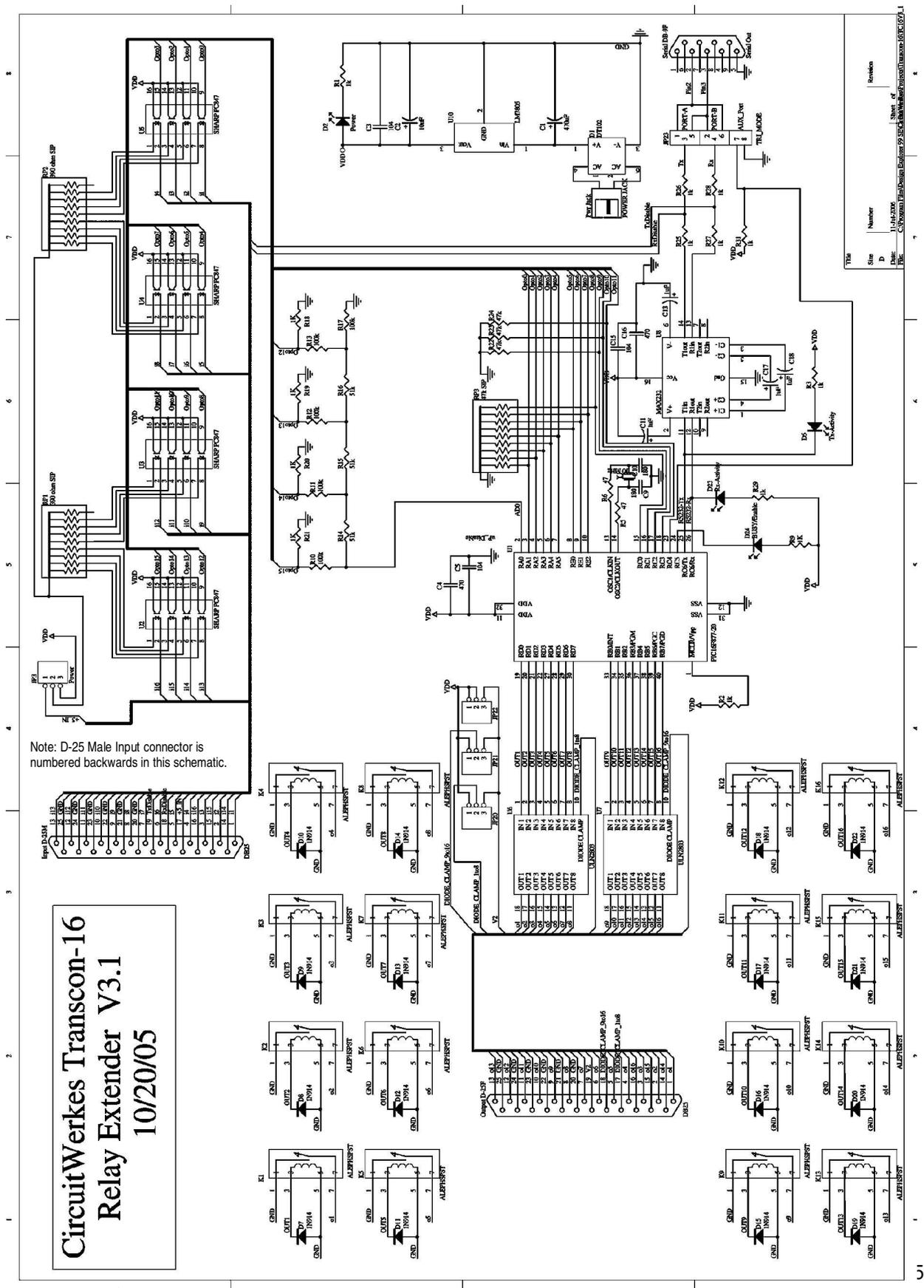
The jumper at the far right end of JP23 sets the speed of the communications to either 9600b (OFF) or 1200b (ON). Both units must have the same speed setting selected. For very long runs or noisy environment, you may need to select the slower speed setting for your units.



The Transcon-16 uses a male D-25 connector for its input connections and a female D-25 for the relay outputs. All of the inputs are optically isolated and are factory defaulted to be internally pulled up. In the default mode, any input can be activated by connecting its associated pin to ground. When that happens, the corresponding relay output on the second Transcon-16 should close to ground. You can also choose to source your own external Voltage to the input optocouplers by moving JP3 (inside the unit) from the "Internal" position to the "external" position and applying a Voltage source from 3 to 18V to Pin 22 & connecting your external supply's ground to one of the ground pins of the input connector. Do not apply external power to the Transcon-16 without moving JP3 first or damage may result to the Transcon-16, your power supply or both.

Pins 20 & 21 of the input connector provide a means to mute the RS-232 transmit or receive from your device by grounding the corresponding pin.





**CircuitWerkes Transcon-16  
Relay Extender V3.1  
10/20/05**

## **SERVICE & REPAIR**

In the event of the need for service or repair, call CircuitWerkes at (352) 335-6555 for a Return Merchandise Authorization number (RMA). Then carefully package the unit along with a note of the problem and send it to the address below. Clearly indicate the RMA number on the outside of the box. We cannot accept returns without an RMA. Be sure to include your address (not a PO box), telephone number and best time to call.

### **CircuitWerkes**

ATTN: CUSTOMER SERVICE DEPT.  
2805 NW 6<sup>TH</sup> STREET  
GAINESVILLE, FL 32609

E-MAIL: [info@circuitwerkes.com](mailto:info@circuitwerkes.com)  
WEB SITE: [www.circuitwerkes.com](http://www.circuitwerkes.com)

## **CircuitWerkes Limited 2-Year Warranty**

This product is warranted against defects for two years from date of purchase from CircuitWerkes and CircuitWerkes authorized distributors. Within this period, we will repair it without charge for parts and labor. Proof of purchase-date required. Warranty does not cover transportation costs, or a product subjected to misuse, accidental damage (including lightning), alteration (except as authorized by CircuitWerkes), improper installation, or consequential damages.

Except as provided herein, CircuitWerkes makes no warranties, express or implied, including warranties of merchantability and fitness for a particular purpose. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.