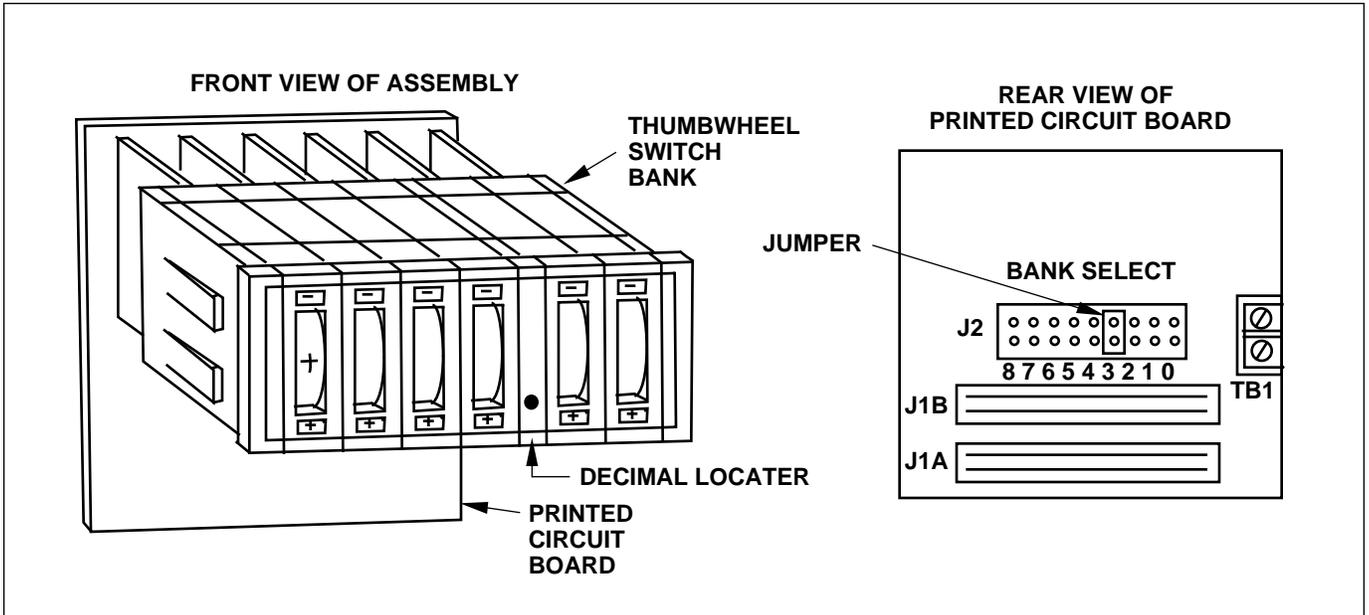


INPUT/OUTPUT DEVICE  
**USER REFERENCE SHEET**  
 FOR

**THUMBWHEEL SELECTOR SWITCH ASSEMBLY**  
**Part No. 46S02875-XXXX**

For use with MicroTrac DSD Local or Remote Input/Output boards



Effective 5/30/90

## **INTRODUCTION**

The Thumbwheel Selector Switch Assembly may be interfaced to any of the Local or Remote I/O boards that support thumbwheel inputs. The Thumbwheel Selector Switch Assembly comes in many configurations, such as number of digits, decimal point location, and whether or not a sign selector is present.

## **HARDWARE DESCRIPTION**

### CONFIGURATION

One bank of thumbwheel switches is mounted to a printed circuit board to form this assembly. The Thumbwheel Selector Switch Assembly comes in many configurations; up to 6 digits, or 4 or 5 digits and a +/- sign selector, may be included in the switch bank mounted on this printed circuit board. In addition, a decimal point location spacer may be mounted. The assembly is designed for mounting in a panel cutout, held in place by tension clips on the ends of the switch bank.

### POWER REQUIREMENTS

The Thumbwheel Selector Switch Assembly receives input power (+24VDC and COMMON) via the Thumbwheel Switch Interface (ribbon cable connection) from the Local or Remote I/O board to which it is interconnected, either directly or as part of a daisy chain.

### INPUT/OUTPUT BOARD INTERCONNECT

There are two 26 pin connectors (J1-A and J1-B) on the assembly's printed

circuit board that are to be connected to a Local or Remote I/O board, or to other Thumbwheel Selector Switch Assemblies, through use of 26 conductor ribbon cables. The cable is intended to be connected in a daisy chain style from Thumbwheel Selector Switch Assembly to Thumbwheel Selector Switch Assembly, originating from the Local or Remote I/O board.

### NOTE

When used as a Local I/O device for a MicroTrac DSD drive, the ribbon cable connection to the Local I/O board can be made directly, without the need of a Terminal Transition Adapter PCB.

### PUSH TO LOAD

In addition, a PUSH TO LOAD input may be connected to this printed circuit board. When the PUSH TO LOAD input is connected to COMMON (either through a push button or directly tied), then the input is asserted. A connection terminal for the PUSH TO LOAD input and a connection terminal that supplies COMMON are provided TB1 on the printed circuit board. PUSH TO LOAD affects all thumbwheel switches connected (i.e. daisy chained) to this printed circuit board.

## **INSTALLATION AND HOOKUP**

This assembly is factory installed and should require no further connections to be made to it. However, if it should become necessary to install the assembly in the field, then the following steps should be taken:

## **WARNING**

HAZARDOUS VOLTAGES CAPABLE OF SEVERE INJURY OR DEATH MAY BE PRESENT WITHIN CABINET. BEFORE OPENING CABINET DOOR, DISCONNECT AND LOCK-OUT INCOMING POWER.

## **CAUTION**

TO AVOID DAMAGE TO ELECTRONIC COMPONENTS, DO NOT MAKE ANY CONNECTIONS WITH POWER APPLIED. USE PROPER ELECTROSTATIC DISCHARGE (ESD) PROCEDURES WHEN HANDLING PRINTED CIRCUIT BOARDS.

1. Turn off incoming power.
2. Locate where this assembly is to be physically mounted. Refer to the System Schematic for the location.
3. If replacing an existing assembly, then disconnect all cables and wires to the assembly from their connectors. Then unmount the existing assembly.
4. Mount the assembly into its proper position. Note that the printed circuit board will fit through a cutout properly sized for the switch bank.
5. Connect all of the cables and wires per the Interconnection Diagram.

Refer to the equipment Interconnection Diagram for detailed wiring information. Ensure that wire size and disconnect devices conform to the installation contractor's drawings and to all applicable codes. Observe the following:

- A. In long cable runs, take care to prevent excessive voltage drop.
- B. Separate the leads used for speed reference, feedback, and other low level signals from those used for the motor armature, field and AC power. Do not run these two groups in the same conduit or wire trough.
- C. Provide shielded and twisted leads as indicated on the schematic and Interconnection Diagrams. Connect all shields on shielded wire to system common (not ground) on one end only. Use Twisted shielded pair wire for long runs.

## **SETUP**

### **CAUTION**

TO AVOID DAMAGE TO ELECTRONIC COMPONENTS, DO NOT MAKE ANY CONNECTIONS WITH POWER APPLIED.

There are nine possible Thumbwheel Switch Banks for connection to a Local I/O board. The Thumbwheel Switch Bank is selected by the **BANK SELECT** jumper on connector J2 on the Thumbwheel Selector Switch Assembly's printed circuit board. Thumbwheel Switch Bank 0 through 8 may be selected. To determine the proper **BANK SELECT** jumper position, refer to the System Schematic.

### **IMPORTANT**

Ensure that there is no duplication of Switch Bank numbers in a daisy chained group of Thumbwheel Selector Switch Assemblies.

