

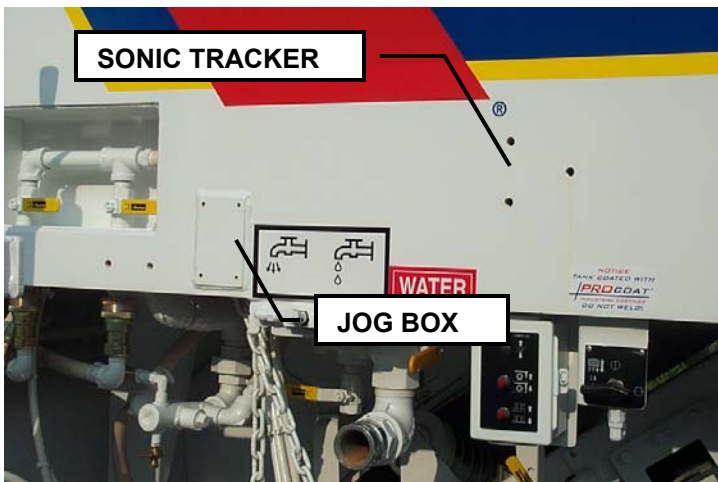
TOPCON INSTALLATION PROCEDURE FOR ROADTEC MILLING MACHINES

This procedure has been developed to provide the user's of ROADTEC milling equipment the information needed to install and utilize the TOPCON positioning system in conjunction with their milling machine.

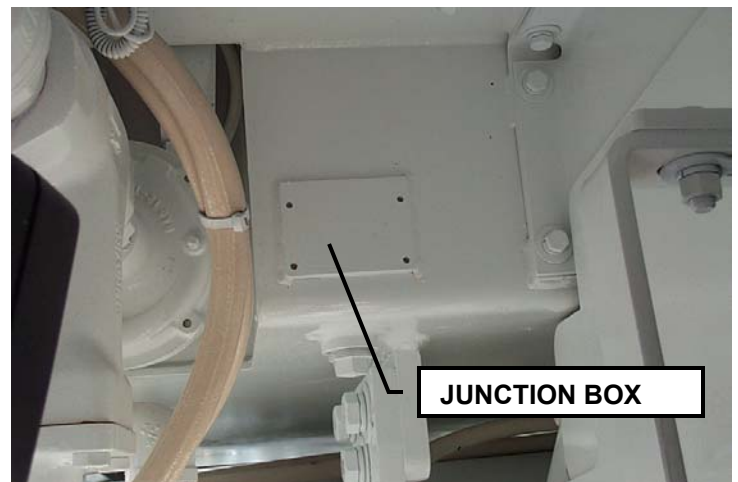
INSTALLATION POINTS:

Each component of the TOPCON unit has a pre-set mounting location for ease of installation. There are (6) mounting locations on your machine. These locations are for the following components:

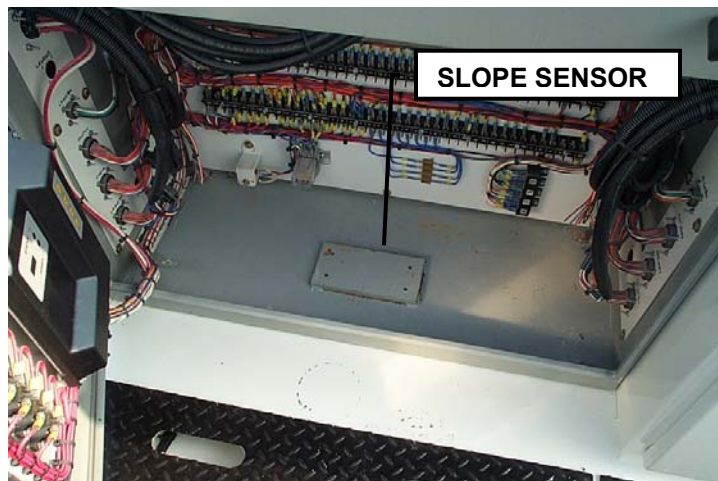
- (1) Sonic tracker
- (2) Jog box (mill installation only)
- (3) Junction box
- (4) Slope Sensor
- (5) Control box
- (6) Control box (for ground control operation)



Sonic Tracker & Jog Box



Junction Box



Slope Sensor

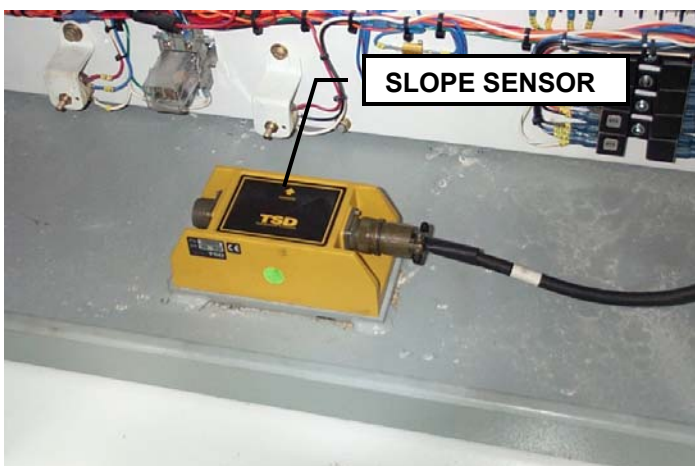
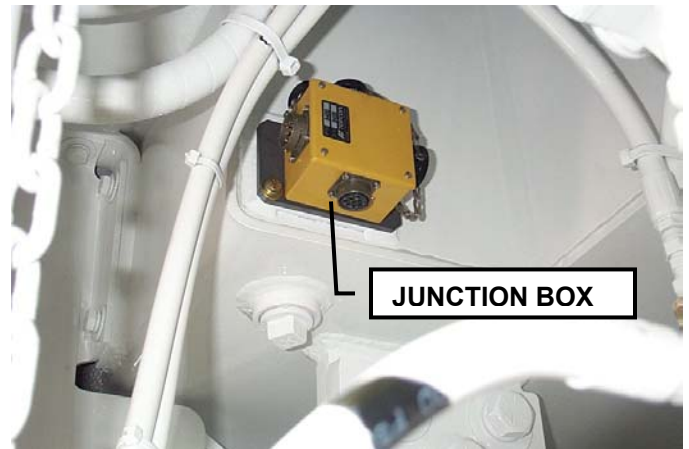
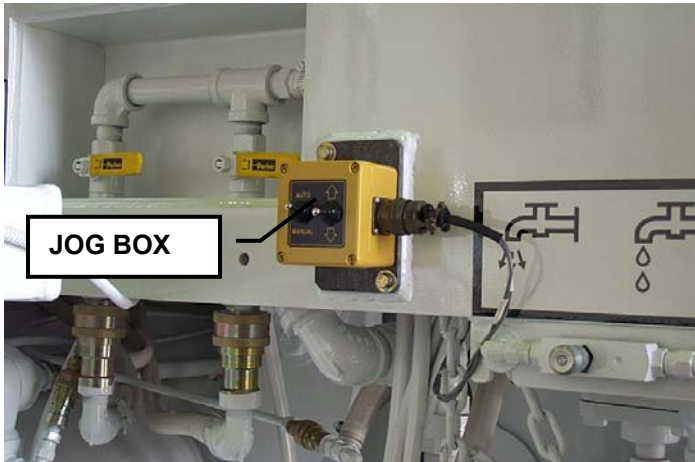


**Control Box
(Console Location)**

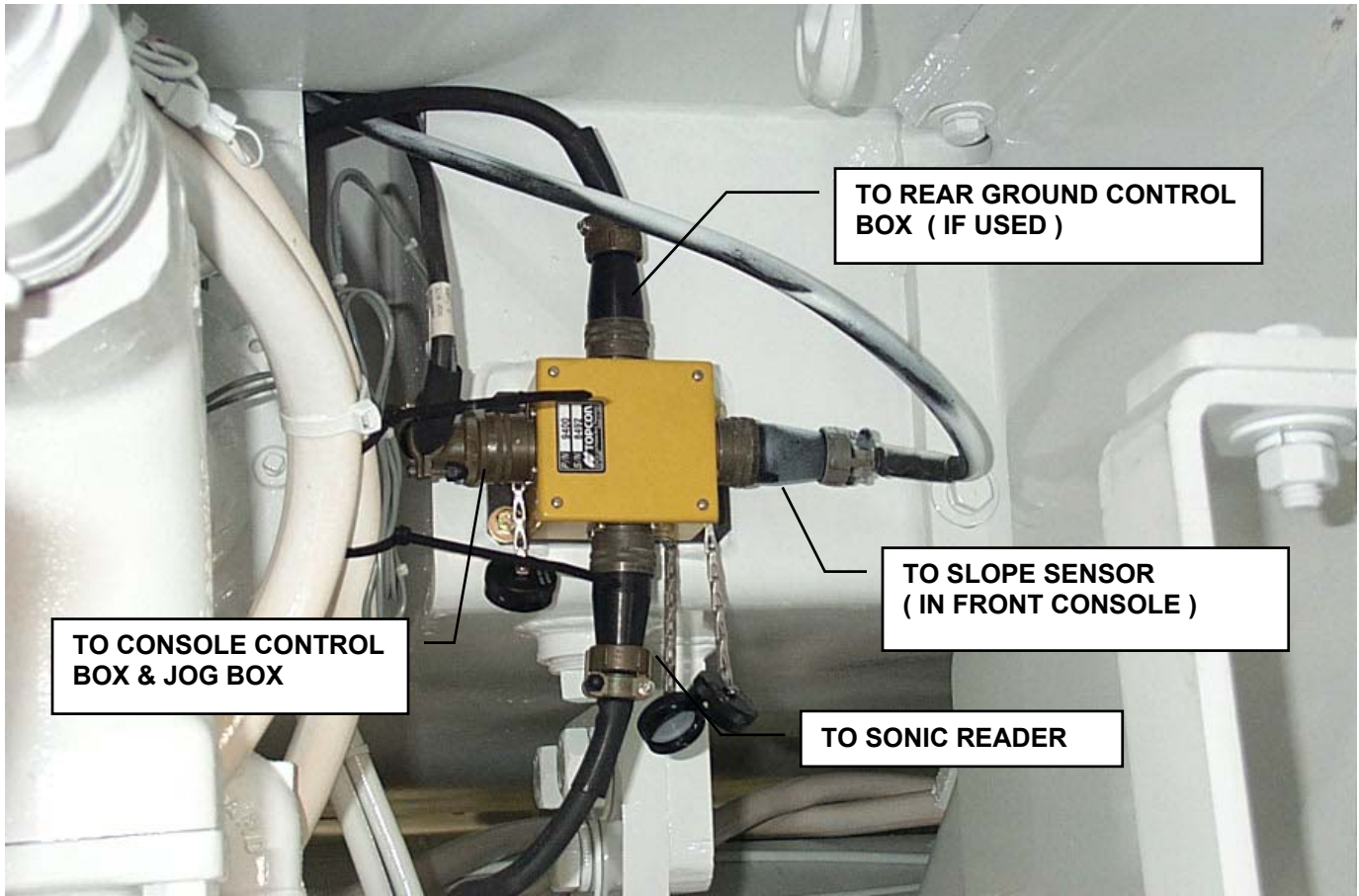


**Control Box
(Ground Control Location)**

Identify each of the TOPCON components and mount to machine in its proper location using the supplied hardware.



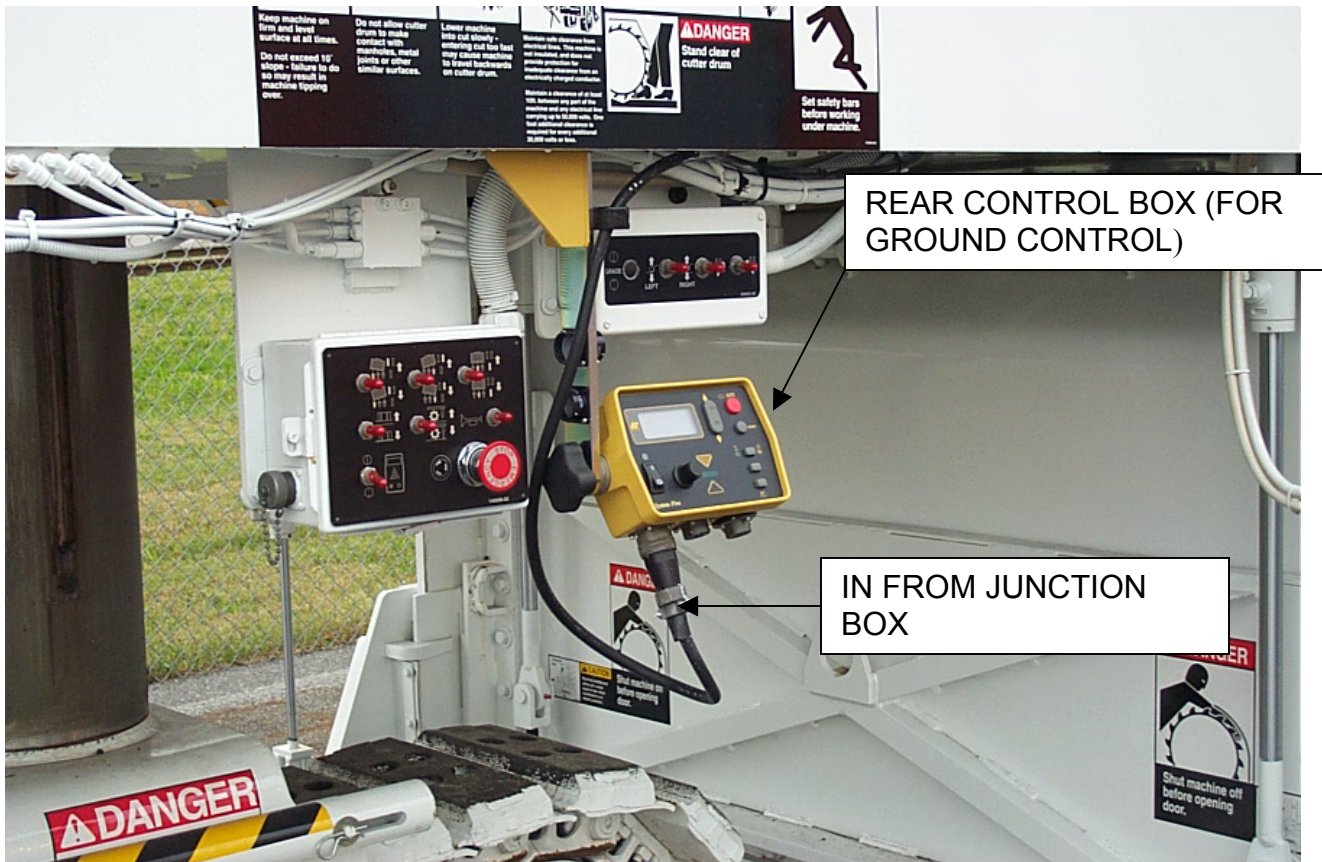
From the TOPCON junction box, begin attaching the appropriate cables to each TOPCON unit as required. Note that the slope sensor cable is directed through a bulkhead to the unit located on the front console floor.



The sonic tracker is mounted to an arm attachment located on either side of the machine. The tracker is connected to the junction box via a coiled wire that is directed underneath the sidewall.



The rear control box is mounted to the machine just above the rear track assembly. The box is connected to the junction box via a cable that is run under the floor plate.



Once the system is installed then it will need to be calibrated. The following is a chart that will aid in system calibration.

TOPCON SYSTEM 5 SETTINGS

Mills with proportional valves (access menu by cycling power on and off while holding the set/menu button).

DESCRIPTION	SYMBOL	ROADTEC SYMBOL
GAIN (ELEVATION)	gAN*	40
GAIN (SLOPE)	<gAN	40
BEEPER	bEP	OFF
DEADBAND ELEVATION	db*	3
DEADBAND SLOPE	<db	0.075
LH VALVE OFFSET UP	OFS	400
LH VALVE OFFSET DOWN		400
RH VALVE OFFSET UP		400
RH VALVE OFFSET DOWN		400
UNITS	unt	INS
VALVE TEST	tst	*
SET POINT	SPt	1
AVERAGING	Avg	50