

**KEMKRAFT** *ENGINEERING, INC.*

MODEL KEI-850E READOUT BOX

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*ENGINEERING, INC.*

INSTRUCTION MANUAL

CLEAR VISION DUAL INCLINOMETER BOX

MODEL # KEI-850E

DATE:

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# **KEMKRAFT** ENGINEERING, INC.

## MODEL KEI-850E READOUT BOX

### **\* INSTALLATION INSTRUCTIONS \***

1. The KEI-850E Display box should be permanently installed in a location that is best for the application. It is usually mounted straight out the drivers side window on a pedestal stand.
2. When the box is installed, place a vehicle in the alignment machine and install the mechanical fixture onto the steering wheel. Ensure that the KEI-850E display box can be easily viewed while loading a Clear Vision Tool onto a steering wheel.

### **\* OPERATING INSTRUCTIONS \***

1. Apply power to the KEI-850E by turning on the power switch located on the bottom left part of the enclosure. This power switch also doubles as a circuit breaker for the KEI-850E Display box. Should the breaker ever trip the power switch only needs to be turned to the off position and back on to reset the breaker.
2. After the power has been applied to the KEI-850E Display box the LCD display will have this display.

XX.XX Deg TL#1  
CAL SW = Calibrate

4. If power is applied and the KEI-850E Display box has the LCD has the following display, the calibration data is bad and the unit needs to be calibrated.

MEMORY ERROR  
CALIBRT TOOL NOW

### **\* WARRANTY AND SERVICE INSTRUCTIONS \***

KEMKRAFT Engineering, Inc. warranties this equipment against defects in workmanship and materials for a period of 1 year from date of receipt. This warranty is covered out of Kemkrafts' Plymouth, MI facility. Said equipment would either need to a.) be sent to Kemkraft for evaluation and/or repair, or b.) if required, Kemkraft would repair the equipment on site if end user pays all travel costs. We will, at our option, repair or replace products which prove defective during the warranty period. No other warranty, expressed or implied, is given. KEI is not liable for consequential damages. Damage caused to the equipment as a result of improper use or abuse, or unauthorized modification of the instrument is not covered under this warranty.

For service contact: KEMKRAFT Engineering, Inc. PH: (734) 414-6500  
47650 Clipper Drive FAX: (734) 414-6599  
Plymouth Twp., MI 48170

### **\* CALIBRATION PROCEDURE \***

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## **MODEL KEI-850E READOUT BOX**

NOTE: Place the cal stand on a surface that is very solid and stable. The angle transducer inside the tool is very sensitive and any movement at all will cause the numbers being displayed to fluctuate. **During the calibration procedure the cal stand should not be allowed to tip or move, on the table, because the cal stand might become unlevel and reduce calibration accuracy.** It would be advisable to attach the cal stand to the table (eg. Destaco clamps) to reduce the possibility for errors.

- A) Install the Clear Vision Steering Wheel Set Tool onto a calibration stand. Adjust the leveling feet until the digital level reads 0.00 degrees.

**INSURE THAT THE BACK OF THE ROLLERS, ON THE TOOL, ARE PRESSING AGAINST THE CALIBRATION STAND ROLLER SUPPORT. IF TOOL IS NOT PARALLEL TO THE CALIBRATION STAND, CALIBRATION VALUES WILL NOT BE ACCURATE.**

- B) There are 2 LED's on the front panel, one labeled RUN MODE, and one labeled CAL MODE. The green RUN MODE LED will be lit when the unit is in the standard run mode. When the CALIBRATION push-button switch on the front panel of the KEI-850E Digital Readout box is pressed, the green RUN LED will turn off and the red CAL MODE LED will turn on. The CAL MODE LED will stay lit until you go back to the RUN MODE.

- C) Press the CALIBRATION push button switch once and the display will read;

**Press CAL switch  
again to calibrate**

If a calibration procedure is to be performed, press the CAL switch a second time and the program will go into the cal procedure. If the cal procedure is not desired, a countdown timer will countdown for 15 seconds and the program will go back to the RUN MODE. The red LED should turn off and the green LED should turn back on.

- D) If calibration is desired, press the CALIBRATION switch again and the display will read;

**xxxx Tx,CAL STND  
CAL SW = Run**

**xxxx:** is the raw A to D (analog to digital) value displayed in Hexadecimal. It will change as the tool is tilted. (0000 = most negative angle, 8000 ~ zero degrees, FFFF = most positive angle)

**Tx:** means it will display T1 if Tool 1 is in the cal stand or T2 if Tool 2 is in the cal stand.

**CAL STND CAL SW = Run:** means place the tool in the cal stand adjusted to 0.00 degrees and press the CALIBRATE switch when the Hex number has settled out. (It should settle out in a second or two).

The KEI-850E will automatically return to the run display.

This completes the calibration procedure.

