



## Shift Position Sensor Kit for Motion Raceworks Operator Shifter

Congratulations on your purchase of the Shift Position Sensor Kit for the MRW Operator Series Shifter.

This kit allows the option to bolt on a 0-5V Rife 1.75" shift/travel position sensor to any existing MRW Operator shifter.

*\*\*\*Please note: This shifter is intended for racing. Improper operation or installation may cause damage to yourself, vehicle, or others around you.\*\*\**

### Installation:

1. Begin by removing your existing gear selector bracket and replacing it with the provided updated gear selector bracket. Please reference the diagram in Figure 1 for your transmission and corresponding shift selector location

Figure 1



**HOLE A: TH400, TH400 2SPD, TH350**

**HOLE B: 4L80E, 4L60E, 700R4**

**HOLE C: POWER GLIDE**

**HOLE D: SHORT SHIFT SHAFT 4L80E**



2. Remove your shifter cable from the transmission pan cable bracket.
3. Reinstall shifter cable into the transmission pan bracket with the shift position bracket sandwiched in between like a washer and the slot extending toward the rear of the vehicle as shown in **Figure 2 below**. Note: please also verify bracket is clocked so that the sensor shaft is moving without binding throughout the travel.

**Figure 2**



4. **You MUST re-adjust/re-verify your shifter cable after installation since you will have removed it during installation!!!**
5. Using the 10-32 x  $\frac{3}{4}$  bolt and lock nut, bolt the rod end of the Rife 1.75" Travel Sensor to the small hole in the new gear selector bracket.
6. Using the 10-32 x 1  $\frac{1}{4}$  bolt, black spacer and lock nut, loosely bolt the fixed/wiring end of the Rife 1.75" Travel Sensor into the long slot of the shift position bracket.
7. **You MUST properly adjust the shift position sensor before use or you risk damaging the Rife Travel Position Sensor!!!**
8. To adjust the travel sensor move the gear selector to lowest gear/rear most gear position. Then slide the gear position sensor almost all the way in, leaving  $\sim\frac{1}{8}$  in of shaft showing on the sensor (see **Figure 3**). Tighten down the bolt in that position.

**Figure 3**



9. Shift the transmission carefully by hand back to the park position, ensuring you are not over extending/ topping out the Travel Sensor.
10. Once again ensure your shifter cable is properly re-adjusted after installation

**Wiring:**

- Red: +5v Sensor Power (Directly from ECU or Data Logger)
- White: Signal
- Black: Sensor Ground (Directly from ECU or data logger)

Please note: Sensor power and ground need to come directly from the ECU or data logger. These need to be sensor reference power and ground to ensure a clean signal and proper configuration for sensor reading. Failure to do this may result in poor or no sensor data signal. For best performance, we recommend using a shielded cable wiring directly to the ECU or datalogger to avoid outside noise.

**Questions/Concerns? Give us a call!**

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