

## INSTALLATION GUIDE 2023

### WHAT'S IN THE BOX



**CAUTION:** Carefully read instructions before proceeding. Not legal for sale or use in California or on any pollution controlled vehicles.

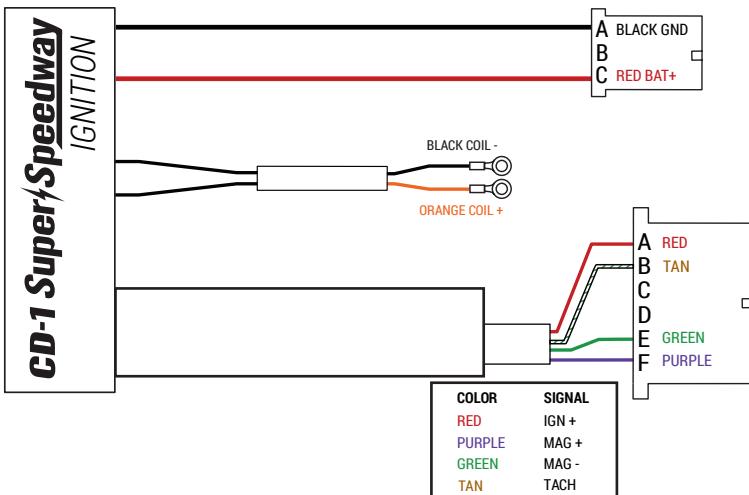
### OVERVIEW

**CD-1 Super Speedway Ignition System** (P/N 6000-6701K) is a complete plug and play capacitive discharge ignition system that has been designed for racing.

- 135 mJ spark energy output.
- Set maximum RPM limit from 6,000 to 9,900 RPM (100 RPM steps).
- Fully encapsulated, vibration resistant construction
- All wiring terminates into plug and play weather pack connectors, compatible with 8 cylinder racing engines, triggered by either a magnetic pickup distributor or four magnet crank trigger.
- Compact - Ignition Module: 9.375" L x 3.625" W x 2.75" H  
– Coil: 4.4" L x 3.2" W x 3" H
- Efficient – Less than 5A current draw at 8000 rpm
- Designed for 16v power systems (8-20v) and reverse polarity protected
- Approved ignition system for: *Southern Super Series, CARS Super Late Model Tour, SPEARS Southwest Tour Series, American Canadian Tour(ACT) and all Dirt Late Models*

### STEPS 1, 2 & 3

1. Turn off the battery disconnect switch.
2. Select a convenient mounting location for the Super Speedway Ignition system. The CD-1 module is fully encapsulated and waterproof, but every effort should be made to mount the plate in a dry location away from direct sources of heat. Orient the unit so that you will have easy access to the two rotary switches.
3. Verify that the vehicle weatherpack connector wiring matches the ignition system wiring.



## STEPS 4, 5, 6, 7 & 8

4. Plug the large weatherpack connector into the existing vehicle connector.
5. Turn on the battery disconnect switch, start the engine, and verify the correct operation of the ignition. Tach output is compatible with all aftermarket tachometers that utilize the industry standard 0-12v square wave signal. *If your timing has changed significantly after the installation, verify that the MAG +/MAG - wires are not reversed.*
6. Two Rotary Dials on the front of the Super Speedway Ignition control the maximum RPM (*real time adjustment – RPM can be adjusted when the engine is running between 60–99 [60=6000 RPM, 99=9900 RPM]*).
7. Ignition timing curve is determined by the distributor (*locked = fixed ignition timing or the ignition curve will match your distributor's spring/weights/rpm). While cranking - Ignition timing is automatically retarded (10 degrees).*
8. Reconnect the battery. Start engine & verify ignition timing.



## SWITCH SETTINGS & STATUS LED

The front panel of the Super Speedway CD-1 has two rotary switches and a status LED.

- The status LED will illuminate when the ignition switch is turned on. If an ignition fault condition occurs when powering on the ignition, the status LED will BLINK.
- The most common fault is a loss of ignition trigger signal from the magnetic pickup. If the engine turns off (without turning off the ignition) the LED will blink, this is NORMAL due to signal loss.

### Maximum RPM Limit Switch Settings

The maximum RPM limit switches are on the end plate. The RPM limit switches can be adjusted when the engine is running, and they can be set to a value between 6,000 RPM and 9,900 RPM.

**00-99** Maximum RPM limit setting X100 (i.e. switch setting 63 = 6,300 RPM, 83 = 8,300RPM and 99 = 9,900 RPM)

## SPARK PLUGS & WIRES

To avoid electrical noise that may interfere with the CD-1 or other on board computer and radio equipment, resistor spark plugs are recommended, and spiral core RFI/EMI suppression type spark plug wires are required. Optimum spark plug gap for a normally aspirated racing engine is typically between 0.030" and 0.045". Do not use solid copper or high resistance carbon core spark plug wires. Optimum spark plug wire resistance is 50-500 ohms per foot. Most high-quality spiral core silicone racing plug wires are compatible with this ignition system.

## TROUBLESHOOTING

*- Did the engine run properly before installation of the CD-1?*

If not, remove the CD-1, reinstall the original ignition system and then find and correct the original problem.

*- Did the CD-1 function correctly before the problem occurred?*

*If the answer is yes, did you change anything that may have affected it?*

To isolate the problem, go back to the last setup that was OK. *If the engine will not start, runs intermittently, or misfires, try these steps:*

### • Status LED Doesn't Illuminate

If the status LED doesn't illuminate after the ignition switch is turned on, check power and ground connections. Use a voltmeter to verify +12V is available at BOTH the heavy gauge battery + red wire and the thin red ignition switch wire with the ignition switch in **BOTH the RUN and START switch positions**.

The CD-1 requires a minimum of +9V when the ignition switch is first turned on. During cranking, the unit will continue to operate down to +4.5V and under high rpm operation a min of +10v is required.

### • Engine Will Not Start

If the status LED illuminates when the ignition switch is turned on, but the engine will not start, verify that the status LED blinks while the engine is cranking.

If the status LED doesn't blink during cranking, the unit is not getting a trigger signal. Verify that trigger module is not bad, verify that the distributor is turning and that the signal wiring is not shorted together or to ground.

If the status LED blinks, but engine will not start, verify your base ignition timing and recheck coil primary connections or replace coil.

### Intermittent Operation or Misfire at High RPM

1. Misfire at high RPM is usually not an electrical problem with the CD-1. *Common causes include: bad spark plug, wire, cap, rotor, coil failure or arcing at spark plug boots or within the distributor.*
2. For vehicles without an alternator, low battery voltage may cause misfire at high RPM. Verify that the battery is fully charged or try replacing the battery.
3. To avoid electrical noise problems, route magnetic trigger wiring away from any coil or spark plug wires. Use only spiral core spark plug wires. Do not use solid copper core or carbon core resistance wires.
4. Check for broken, loose, or corroded connections. Verify correct air gap for magnetic pickup. Check distributor for loose, missing, or jammed parts in advance mechanism.
5. Verify that spark plugs are proper type, gap size, and heat range.
6. Replace spark plugs, spark plug wires, and distributor rotor and cap.
7. **Ignition run-on.** If the engine continues to run after the ignition switch is turned off, current is leaking back into the CD-1 through the charging system indicator lamp. GM or Ford models with an external voltage regulator will require installation of a diode.

## WIRING OVERVIEW

|                      |          |   |
|----------------------|----------|---|
| Heavy (12 AWG) Red   | Battery+ | Weatherpack 3 Pin (C) - Connect to battery positive +12v terminal.<br>Do not connect to the alternator. |
| Heavy (12 AWG) Black | Ground   | Weatherpack 3 Pin (A) - Connect to chassis ground.  |

### IGNITION COIL PRIMARY CONNECTIONS

|        |       |  |
|--------|-------|--|
| Orange | Coil+ | Ring Terminal - Connects to coil positive terminal |
| Black  | Coil- | Ring Terminal - Connects to coil negative terminal |
|        |       |  |
|        |       |  |
|        |       |  |
|        |       |  |

### WEATHERPACK 6 PIN CONNECTIONS

|                |                   |   |
|----------------|-------------------|---|
| Red (Pin A)    | Ignition Switch   | Connect to key on ignition switch +12v                    |
| Purple (Pin F) | Magnetic Trigger+ | Connect to magnetic pickup distributor or crank trigger + |
| Green (Pin E)  | Magnetic Trigger- | Connect to magnetic pickup distributor or crank trigger - |
| TAN (Pin B)    | Tach              | Connect to tachometer (used to be Green/White)            |

## Warranty & Contact Information

### JMS-Daytona Sensors warrants to the original purchaser:

Your product will be free from defects in materials & workmanship for a period of twelve (12) months from the original purchase date. The warranty only covers the product itself & not the cost of removal & re-installation of the product. We may extend the limited warranty on a case by case basis, based on the circumstances of the warranty claim. Our products are designed exclusively for use in racing applications. **JMS-Daytona Sensors** products that are not installed according to the supplied instructions, may not be covered by warranty.

### Specific conditions that will VOID the product warranty:

- If the product case has been opened or the product has been modified or repaired.
- If the product was not installed or used correctly.
- If the product has been tampered with by: negligence, misuse or accident.
- If the product is returned without explanation of the problem or Return Authorization.

### Contact us at 601-766-9424 for a Return Authorization Number:

All warranty returns should be returned freight pre-paid & should include inside of the box: *Proof of Purchase & a Letter that contains both the Return Authorization Number and a Clear Explanation of the EXACT problem.*

The Return Authorization Number should also be clearly written on the outside of the box.

### Send all returns to:

**JMS Returns**  
240 Springview Commerce Drive, Bld 1, Ste J  
DeBary, FL 32713

**This product was designed for RACING.** JMS-Daytona Sensors is not liable for any and all consequential damages arising from the breach of any implied or written warranty in regards to the sale of this product, in excess of the purchase price.

### Technical Support & Contact Information:

JMS-Daytona Sensors  
240 Springview Commerce Drive, Bld 1, Ste J  
DeBary, FL 32713  
**601-766-9424 or 386-304-0700**

### Technical Support Hours:

Monday - Thursday 10:00am - 4:00pm (*Eastern Standard Time*)

**Installation videos available online:** [www.youtube.com/jmschip](http://www.youtube.com/jmschip)  
If you have any questions, please contact JMS technical support via email: [tech@jmschip.com](mailto:tech@jmschip.com)

### Follow Us on Social Media

*For a chance to be featured, tag your posts with: #CD1SuperSpeedway*

-  Facebook: [@jmschips / @daytonasensors](#)
-  Instagram: [@jmschip](#)
-  YouTube: [www.youtube.com/jmschip](http://www.youtube.com/jmschip)