



# RS-120-DP

Deluxe Keyless Entry & Remote Start

## Back Cover

**Color cover is in a separate file.**

## Operation Guide

**Temporary cover. Color cover is in a separate file.**

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## Introduction

Congratulations on your purchase of this convenience system by Omega Research & Development, Inc., a world leader in vehicle security and convenience products since 1975. This system is designed to offer ease of use and it's modular design allows for many features to be customizable to suit your needs.

Please note that this manual is written to reflect the full capability of this system though some features may not be available to you because of vehicle limitations and/or chosen options at the time of installation. It is also written to reflect the operations in their default configurations.

This system has two principal user components that you should familiarize yourself with:

The **Status Lights** which indicate the current system status and helps in troubleshooting failed remote start attempts as well as in customizing the programmable features. The specific operations of the lights are described on **page 4**.

The **Valet Switch** is used to access transmitter and feature programming. It is also used to place the system in valet mode which temporarily bypasses the remote start feature. See "Using the Valet Switch" on **page 3**.

## Remote Starting

To remote start your vehicle, press the button or button combinations on your alarm/keyless entry's transmitter that were configured to activate this feature. If you are unsure, consult with your installer to learn how to activate the system. You can write the activation method in the space below for later reference.

Remote start: \_\_\_\_\_

## Installer Programmable Features (cont'd)

### Feature #7 Turbo Timer

**Off** (press the brake pedal 1 time to program) - **DEFAULT**

**Run 1 Minute** (press the brake pedal 2 times to program)

**Run 2 Minutes** (press the brake pedal 3 times to program)

**Run 3 Minutes** (press the brake pedal 4 times to program)

This feature when turned on configures the system to automatically keep the engine running briefly after it is turned off. This operation is designed specifically for vehicles having turbocharged engines. This feature should only be programmed by the installer, and the operation of this feature depends on the correct connection of the neutral safety wire to the vehicle's parking brake. Please refer to the "Black/White wire" in the installation manual for the proper connection of this important wire.

## Programmable Features Matrix

# Feature	Brake x 1	Brake x 2	Brake x 3	Brake x 4
1 Engine Run Time	10 min	5 min	15 min	20 min
2 Steady/Flashing lights for RS	Steady	Flashing		
<b>Installer Feature Programming:</b> Ignition on, off, press valet 10 times				
1 RS Activation	1 pulse	2 pulses	3 pulses	4 pulses
2 Engine Deletion	Tachless Hi	Tachless Lo	Tach Wire	Datatach
Crank Only (Brake x 5)				
3 Gas or Diesel Engine	Gas	Diesel		
4 Sat. Port Green Wire	Starter	Pulse After Start	Ign/Status	Accessory
5 Crank Time	0.7 Sec	1.00 Sec	1.5 Sec	2.25 Sec
6 N/A				
7 Turbo Timer	OFF	1 min	2 min	3 min

This device complies with FCC Rules part 15. Operation is subject to the following two conditions, (1) This device may not cause harmful interference and, (2) This device must accept any interference that may be received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## Installer Programmable Features (cont'd)

looks for a voltage increase of 0.5v after cranking.

**Tach Wire** Before this setting is programmed, refer to the "Violet/White wire" section of the installation manual for proper wiring connection and the Tach Learn Procedure. It will crank the engine for up to 3 seconds or until a tach signal is detected. **Data Tach** mode operates just like the "Tach Wire" setting except it takes its reading from the D2D data port instead of using the Violet/White wire. Before using, make sure this function is supported by the Databus Interface module.

**Crank Only** AKA "blind start" is similar to the "Tachless" settings however, it only makes one start attempt and does not monitor engine running conditions. This is useful for many "push-to-start" vehicles.

### Feature #3. Gasoline Or Diesel Engine

**Gasoline** (press the brake pedal 1 time to program) - **DEFAULT**

**Diesel** (press the brake pedal 2 times to program)

This feature changes the system's timing of the ignition and starter output sequence for remotely starting vehicles with gas or diesel engines. When set for gasoline, the starter output will occur 3 seconds after the ignitions turn on. Also, when the system is in "Tachless" mode, the engine running status will be determined 10 seconds after cranking. When set for diesel, the starter output will occur 20 seconds after the ignitions turn on to allow for glow plug warming. Also, when the system is running in "Tachless" mode, the engine running status will be determined 40 seconds after cranking. This allows the vehicle battery(s) to recharge properly and show normal voltage levels due to the heavy drain diesel engines have on the electrical system.

### Feature #4. Satellite Relay Port Green Wire Function

**Starter** (press the brake pedal 1 time to program) - **DEFAULT**

**Pulse After Engine Start** (press the brake pedal 2 times to program)

**Ignition/Status Output** (press the brake pedal 3 times to program)

**Accessory** (press the brake pedal 4 times to program)

This feature changes the operation of the Green wire (negative) on the satellite relay port. This gives you the flexibility to accommodate certain vehicles that require any out-of-the-ordinary pulses or remote start timing.

**Starter** setting operates as a secondary START output. This will have the same pulse timing as the large Violet wire on the main harness.

**Pulse After Start** gives a 0.8 second pulse after the engine starts and is running.

**Ignition/Status Output** setting will behave like the ignition output except it turns on 1.5 seconds earlier than the primary ignition output.

**Accessory** setting operates as a secondary ACCESSORY output. This will have the same operation as the large Orange wire on the main harness.

### Feature #5. Extended Starter Cranking Time

**0.7 Second** (press the brake pedal 1 time to program) - **DEFAULT**

**1.00 Second** (press the brake pedal 2 times to program)

**1.5 Seconds** (press the brake pedal 3 times to program)

**2.25 Seconds** (press the brake pedal 4 times to program)

This feature determines the crank time of the 1st start attempt when in "Tachless" mode. If the engine doesn't start on the first attempt, it will retry up to 3 more times extending the crank time by an additional 0.2 second with each attempt.

## Remote Start Features

### LOW BATTERY/LOW TEMP AUTOMATIC STARTING

This feature will automatically start the engine should the vehicle battery drop below 11 volts or the interior temperature drop to 15 (or 32) degrees Fahrenheit. This feature is very useful when the vehicle is parked for a long period of time in cold climates. You must activate these features each time you park and wish to use them.

- Turn the ignition switch "on", then "off" (engine not running), and within 7 seconds press the valet switch twice. The system is now in low voltage start mode.

- To activate low temp starting, enter low voltage start mode as described above but, within 5 seconds of entering low voltage mode, press the valet switch 1 time (15 degrees) or 2 times (32 degrees) within 5 seconds.

**NOTE:** When low temp start mode is activated, low voltage start is also activated.

These features will operate once every two hours until the ignition key is turned "ON".

### TURBO TIMER FEATURE

It is typically recommended that vehicles equipped with turbocharged engines allow the engine to idle for after driving to cool the turbocharger. When this Installer Programmable Feature is enabled, the system will automatically keep the engine running as follows:

- With the engine running, hold the brake pedal and engage the parking brake. When the brake pedal is released, the system will keep the engine running for the programmed time (1, 2, or 3 minutes), and then automatically turn it off.

- The system may be locked while the engine is running. Turbo Timer can be prevented from engaging, or "bypassed" if desired, by turning the engine off before engaging the parking brake, or if it's already engaged, step on the brake pedal to turn the engine off.

### PIT-STOP FEATURE

This feature allows you to leave your engine running for making quick errands. To use this feature, have the engine running normally from the ignition switch and your foot off the brake pedal. Press the Valet Switch twice; the parking lights will flash. Turn the key off and the engine will remain running for the programmed run time.

## Using The Valet Switch

### Valet Mode

Valet mode prevents the remote start feature from being activated. It also disables horn honks when unlocking the doors. Valet Mode should be used when you do not wish for remote starting to be operated, such as when you have your vehicle serviced. **To engage Valet Mode:**

- With the system "unlocked", press and hold the Valet Switch for 3 seconds; the Status Light will turn on and stay on to indicate Valet Mode. The lights will flash twice. Once in Valet Mode, an attempt to remote start will result in no response. Keep this in mind if remote start stops functioning.

- To turn off Valet Mode, simply press & release the Valet Switch once.

## The Status Light

The Status Light helps to visually confirm the status of the system and provides a high level of visual deterrence. The Status Light is located in the window mount receiver unit.

### Normal System Status

- 1) Off = The remote starter system is off, in standby mode.
- 2) On Constant = The system is in the Valet Mode & remote start is disabled.

### Starting System Status

The Status Light also indicates the remote start status:

- 3) Flashing Slow (once per second): Remote start is on.
- 4) Flashing Fast (after activating remote start): The system is in the process of starting the engine.

### Remote Starting Diagnostics

Whenever the system is placed into Valet Mode, the Status Light illuminates solid. However, when this first occurs, the Status Light will flash 1 to 6 flashes before resuming solid illumination. This indicates why the engine stopped running from the last previous remote starting attempt.

- 5) 1 Flash = Programmed run time expired.
- 6) 2 Flashes = Brake was pressed or hood opened.
- 7) 3 Flashes = Engine stalled or bad tach signal.
- 8) 4 Flashes = Received transmitter command to stop.
- 9) 5 Flashes = Gear selector removed from "park".
- 10) 6 Flashes = Low voltage.

## Programming Features

**Step 1** Turn the ignition key "ON", then "OFF"

**Step 2** Within 5 seconds of step 1, press the valet switch 5 times to access user features (10 times to access installer features).

~ The parking lights and the status light will turn on.

**Step 3** Within 10 seconds of step 2, press the valet switch the number of times corresponding with the desired feature's number.

~ The status lights and the parking lights will flash equal to the selected feature.  
**Step 4** Change the feature by pressing the brake pedal the same number of times that corresponds with the desired setting.

~ The status lights and the parking lights will flash equal to the selected setting.

**Step 5** If you wish to change more features, repeat steps 3 & 4 at this time.

**Step 6** To exit programming, turn the ignition key "ON" then "OFF". Or, you can wait 10 seconds for programming mode to expire. The lights will turn off.

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## User Programmable Features

This group of User Programmable Features are all accessed as a group in the first level of features' programming. These features have a direct affect upon the system's operations, so the programming and operation of each are described.

### Feature #1 Remote Start Run Time

**10 Minutes** (press the brake pedal 1 time to program) - **DEFAULT**

**5 Minutes** (press the brake pedal 2 times to program)

**15 Minutes** (press the brake pedal 3 times to program)

**20 Minutes** (press the brake pedal 4 times to program)

This feature sets the period of time that the engine will run after being remotely started. If the engine is not stopped by controller/transmitter command or a safety circuit violation, the engine will automatically stop upon the expiration of the selected time period. **Caution: The remote engine starting feature should NEVER be used when the vehicle is parked in an enclosed structure or garage.**

### Feature #2 Steady/Flashing Lights During Remote Start

**Steady** (press the brake pedal 1 time to program) - **DEFAULT**

**Flashing** (press the brake pedal 2 times to program)

This Feature configures the operation of the vehicle's parking lights during the remote start operation. The default setting turns on the parking lights during remote start; the other setting flashes the parking lights on and off during remote start.

## Installer Programmable Features

This group of Installer Programmable Features are all accessed as a group in the second level of features' programming. These features have a direct affect upon the system's operations related to the installation and vehicle type **AND SHOULD ONLY BE CHANGED BY THE INSTALLER!!**

### Feature #1 Remote Start Activation

**1 button pulses** (press the brake pedal 1 time to program)

**2 button pulses** (press the brake pedal 2 times to program) - **DEFAULT**

**3 button pulses** (press the brake pedal 3 times to program)

**4 button pulses** (press the brake pedal 4 times to program)

This feature allows you to choose the number of pulses required on the White/Blue activation wire to activate the remote start feature. All of the settings must occur within a 5 second window of the previous pulse.

### Feature #2 Engine Detection Method

**Tachless Hi** (press the brake pedal 1 time to program) - **DEFAULT**

**Tachless Lo** (press the brake pedal 2 times to program)

**Tach Wire** (press the brake pedal 3 times to program)

**Data Tach** (press the brake pedal 4 times to program)

**Crank Only** (press the brake pedal 5 times to program)

This feature selects the method in which the remote start monitors the engine's running condition in remote start mode.

"**Tachless Hi**" sensitivity mode has an associated base starter output time duration (see installer feature #5) and monitors the vehicle's voltage level to determine if the engine is running. This setting looks for a voltage increase of 0.3v after cranking.

"**Tachless Lo**" sensitivity mode operates like the "Tachless Hi" setting but

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