

# Quick Reference Install Guide

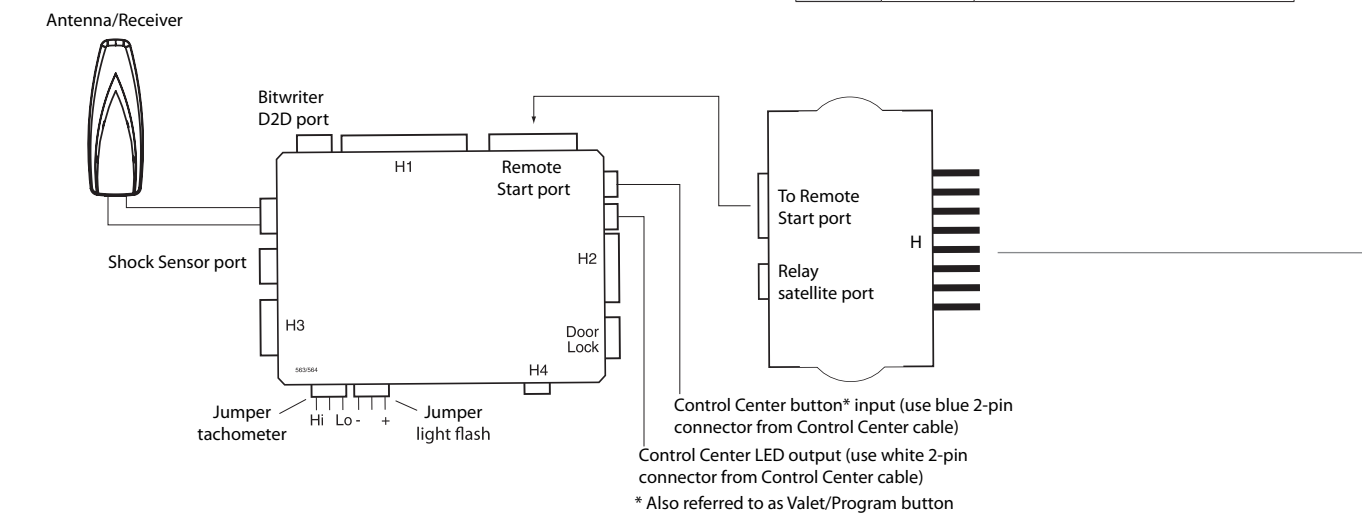
## 5500-series Security and Remote Start System

### Wiring Connections

#### Main Harness (H1), 12-pin connector

H1/1	RED/WHITE	(-) 200mA AUX TRUNK RELEASE OUTPUT
H1/2	RED	(+) CONSTANT POWER INPUT
H1/3	BROWN	(+) SIREN OUTPUT
H1/4		NOT USED
H1/5	BLACK	(-) CHASSIS GROUND INPUT
H1/6	VIOLET*	(+) DOOR TRIGGER INPUT, ZONE 3
H1/7	BLUE	(-) INSTANT TRIGGER INPUT, ZONE 1
H1/8	GREEN*	(-) DOOR TRIGGER INPUT, ZONE 3
H1/9	BLACK/WHITE	(-) 200mA DOMELIGHT SUPERVISION OUTPUT
H1/10	WHITE/BLUE	(-) REMOTE START ACTIVATION INPUT
H1/11	WHITE	(+)/(-) SELECTABLE LIGHT FLASH OUTPUT
H1/12	ORANGE	(-) 500mA GROUND WHEN ARMED OUTPUT

\* The door trigger wire will still need to be connected if the system is programmed with security features OFF to allow the system to enter the programming modes.



#### H4 AUX 4/Horn, 2-pin connector

H4/1	ORANGE/BLACK	(-) 200mA AUX 4 OUTPUT
H4/2	BROWN	(-) 200 mA HORN OUTPUT

#### Door Lock, 3-pin connector

1	LIGHT BLUE	(-) UNLOCK (+) LOCK OUTPUT
2		NOT USED
3	GREEN	(-) LOCK (+) UNLOCK OUTPUT

#### H2 Harness, 6-pin connector

H2/1	LIGHT BLUE	(-) 200mA SECOND UNLOCK OUTPUT
H2/2	WHITE/BLACK	(-) 200mA AUX 3 OUTPUT
H2/3	VIOLET/BLACK	(-) 200mA AUX 2 OUTPUT
H2/4	GREEN/WHITE	(-) 200mA FACTORY ALARM REARM OUTPUT
H2/5	GRAY/BLACK	(-) WAIT-TO-START INPUT
H2/6	LIGHT GREEN/BLACK	(-) 200mA FACTORY ALARM DISARM OUTPUT

#### Heavy gauge relay satellite

H/1	PURPLE	STARTER OUTPUT TO STARTER (STARTER SIDE)
H/2	GREEN	STARTER INPUT FROM IGNITION SWITCH (KEY SIDE)
H/3	RED	(+) 30A HIGH CURRENT 12V INPUT
H/4	ORANGE	OUTPUT TO ACCESSORY CIRCUIT
H/5	RED	(+) (30A) HIGH CURRENT 12V INPUT
H/6	PINK	OUTPUT TO PRIMARY IGNITION CIRCUIT
H/7	RED/WHITE	(+) (30A) HIGH CURRENT 12V INPUT
H/8	PINK/WHITE	OUTPUT TO SECOND IGNITION/ACCESSORY CIRCUIT

#### Relay satellite 4-pin connector

1	BLUE	(-) 200mA STATUS OUTPUT
2	ORANGE	(-) 200mA ACCESSORY RELAY TURN ON
3	PURPLE	(-) 200mA STARTER RELAY TURN ON
4	PINK	(-) 200mA IGNITION RELAY TURN ON

#### H3 Harness Remote Start, 5-pin connector

H3/1	BLACK/WHITE	(-) NEUTRAL SAFETY SWITCH INPUT
H3/2	VIOLET/WHITE	TACHOMETER INPUT WIRE
H3/3	BROWN	(+) BRAKE SHUTDOWN INPUT WIRE
H3/4	GRAY	(-) HOOD PIN SWITCH INPUT, ZONE 6
H3/5	BLUE/WHITE	(-) 200 mA 2ND STATUS/REAR DEFOGGER - Latched Pulsed

#### Remote Start ribbon harness\*

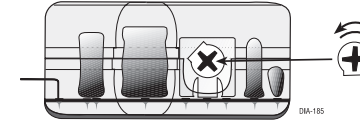
1	PINK/WHITE	(-) 200mA PROGRAMMABLE IGN2/ACC2 RELAY TURN ON
2	YELLOW	(+) IGNITION INPUT TO ALARM
3	PINK	(-) 200mA IGNITION RELAY TURN ON
4	ORANGE	(-) 200mA ACCESSORY RELAY TURN ON
5	PURPLE	(-) 200mA STARTER RELAY TURN ON
6	ORANGE/BLACK	(-) 500mA ANTI GRIND/GROUND WHEN ARMED OUTPUT
7	BLUE	(-) 200 mA STATUS OUTPUT

\*The ribbon harness connects to the heavy gauge relay satellite.

### Installation Points

#### Adjusting the Shock Sensor

**Important!** Make sure the vehicle is disarmed. The shock sensor sensitivity can be adjusted by using a trimmer tool to turn the potentiometer.



#### Adjusting the sensor:

1. **Disarm** the system, **turn** the ignition Off.
  2. With the sensor mounted in its permanent location, locate the trim pot on the shock sensor module and using a trimmer tool:
    - Turn the potentiometer clockwise for increased sensitivity or
    - Turn it counterclockwise for decreased sensitivity
- Note:** You can test the new setting by cautiously impacting the vehicle with increasing intensity while noting the LED status on the shock sensor. The LED turns on for a short duration for small impacts before turning off (indicating a warn-away trigger). The impact level required to fully trigger the alarm is indicated when the LED remains on for a longer duration before turning off.

### Tach Learning

#### To learn the tach signal:

1. Start the vehicle with the key.
2. Within 5 seconds, press and hold the control center button.
3. After 3 seconds the LED will light constant when the tach signal is learned.
4. Release the control center button.

### Virtual Tach

**Note:** Virtual tach is not recommended for diesel trucks

#### To program Virtual Tach:

1. After the install is complete, remote start the car.
2. If the car does not start on the first attempt, let the remote start attempt again.
3. Once the car starts, let it run until the parking lights come on.
4. When the parking lights come on, shut off the remote start with the remote - that's it! Virtual Tach is programmed.

Virtual Tach handles disengaging the starter motor during remote starting – it does not address over-rev. If the customer wants to have the over-rev protection capability, the tach wire must be connected. This may involve more installation shop charges than initially quoted.

**Important:** If the Virtual Tach mode over cranks or doesn't crank the vehicle long enough to start and run the car, use the Bitwriter to add or subtract the starter output time. You can adjust the output time in increments of 50msec of the learned time using the Bitwriter.

### Reset and Deletion

If a feature/virtual tach needs to be reset or the remote controls need to be deleted, use the following procedure.

1. Open a door. (The GREEN wire, H1/8, or the VIOLET, H1/6 must be connected.)
2. Turn the ignition to the ON position (The heavy gauge pink wire must be connected).
3. Within 10 seconds, press and release the control center button: 2 times if you want to delete remotes, 3 times to reset features or 4 times to reset virtual tach. These features are described next.

**Delete remotes:** This feature erases all remotes from the memory of the security system. This is useful in cases when a customer's remote is lost

or stolen.  
**Note:** This does not reset the programmed features of the security system or reset the Virtual Tach setting.

**Reset Features:** This resets all features of the security system to the factory default settings.  
**Note:** This feature does not delete the remotes from the security system or reset the Virtual Tach setting or security features enabled/disabled settings

**Virtual Tach Reset:** Deletes all previously learned values for Virtual Tach, and on the next remote start sequence the unit begins virtual tach initialization.

**Note:** The "Zap" feature on the Bitwriter does not reset the Virtual tach setting.

4. Once you have selected the function step, press the control center button once more and hold it. The LED flashes and the siren chirps to confirm the selected functional step. Do not release the control center button
5. While holding the control center button, press the button on the remote control. The unit chirps to confirm that the feature has been successfully reset.

Once the feature is reset, the control center button can be released.

### Remote Start Shutdown Diagnostics

#### To perform shutdown diagnostics:

1. With the ignition Off, **press** and **hold** the control center button.
2. **Turn** the ignition On and then back Off while **holding** the control center button.
3. **Release** the control center button.
4. **Press** and **release** the control center button. The LED flashes to report the last shutdown for one minute or until the ignition is turned on, as shown in the following table:

#### LED Flashes

- 1 flash
- 2 flashes
- 3 flashes
- 4 flashes
- 5 flashes
- 6 flashes
- 7 flashes
- 8 flashes

#### Shutdown Mode

- Timed out
- Over-rev shutdown
- Low or no RPM, low battery (voltage and virtual tach modes)
- Transmitter shutdown (or optional push button)
- (-) Hood Shutdown (H3/4 GRAY)
- (+) Shutdown (H3/3 BROWN)
- (-) Neutral safety shutdown (H3/1 BLACK/WHITE)
- Wait-to-start timed out

Bitwriters with a date code of 6a or older require an IC upgrade (p/n 998M). Some bitwriters with a date code of 6B do not require the IC upgrade, refer to tech tip # 1112 for more information.



The Bitwriter® (p/n 998U) requires chip version 2.7 or newer to program this unit.

See full Installation Guide for more detailed information on this system. Such information and more can be found online at:

[www.directechs.com](http://www.directechs.com)



## Programming System Features

**Note:** When doing any programming with security features off, the horn function (feature menu 1 item 13) must be programmed as Siren function to get an audible confirmation from the unit.

The System Features Learn Routine dictates how the unit operates. It is possible to access and change most of the feature settings using the control center button.

1. **Open** a door.
2. **Turn** the ignition on, then off.
3. **Select** a Menu. **Press** and **hold** the control center button. The number of siren chirps indicates the menu number. 1 chirp indicates menu 1, 2 chirps - menu 2 and 3 chirps for menu 3.
4. When the desired menu chirps are heard, **release** the control center button.
5. **Select** a Feature. **Press** and **release** the control center button the number of times corresponding to the feature you wish to change. Then **press** and **hold** one more time to select the features.
6. **Program** the Feature. While holding the Control center button, you can program the feature using the remote control.

For features with only two options;  = option 1 while  = option 2.

For features with more than two options;  selects the options in ascending order.

**Once a feature is programmed:**

- Other features can be programmed within the same menu
- Another menu can be selected
- The learn routine can be exited if programming is complete

**To access another feature in the same menu:**

1. **Press** and **release** the control center button the number of times necessary to advance from the feature you just programmed to the next one you want to program.
2. Then **press** the control center button once more and **hold** it.

**To select another menu:**

1. **Press** and **hold** the control center button.
2. After 3 seconds, the unit advances to the next menu and the siren chirps, indicating which menu has been accessed.



**The learn routine exits if any of the following occurs:**

- The open door is closed
- The ignition is turned On
- There is no activity for 30 seconds
- The control center button is pressed too many times

## Security Features Disable/Enable

The system has the ability to function as a security/remote start system or keyless/remote start system by enabling or disabling security. The default setting is Enabled.

To program the feature.

1. Open a door.
2. Turn the ignition on, then off.
3. Press and hold the control center button until the LED flashes 3 times and the siren (if connected) chirps 3 times.
4. Release the control center button.  
**Note:** If the control center button is released and then pressed again, the system will enter the features programming menus.
5. Within 15 seconds, simultaneously press the  and  buttons of a programmed remote control.
6. The siren (if connected) will chirp and the parking lights will flash as listed below  
1 flash/chirp: Security features disabled  
2 flashes/chirps: Security features enabled

Security Features Disabled will disable all security operations of the system, including but not limited to those listed below:

- Multi Level Arming
- Sensor Warn-away


- Full Trigger Operation
- Armed While Driving
- Automatic Engine Disable


**Note:** Disabled features with programmable options can still be programmed manually or with the Bitwriter but will not operate until the Security Features have been enabled.

The Security Features Disable/enable routine exits if the following occurs:

- The open door is closed
- The ignition is turned on
- There is no activity for 15 seconds
- The control center button is pressed too many times

## Bitwriter - Only Options

 If programming with the Bitwriter®, the learn routine can be locked or unlocked. If the learn routine has previously been locked, it must be unlocked with Bitwriter® - this cannot be done manually with the control center button.

The Bitwriter®  gives you access to a wider range of system options. These features and the adjustments that may be programmed are described in the table below.

Menu Item	Feature	Default	Options
1	Siren Duration	<b>30 sec.</b>	1-180 sec.
2	Aux 2 Timed Output	<b>30 sec.</b>	1-90 sec.
3	Aux 3 Timed Output	<b>30 sec.</b>	1-90 sec.
4	Aux 4 Timed Output	<b>30 sec.</b>	1-90 sec.
5	Engine Runtime	<b>12 min.</b>	1-60 min.
6	Diesel Start Delay	<b>15 sec.</b>	1-90 sec.
7	Timer Mode Runtime	<b>12 min.</b>	1-16 min.
8	Virtual Tach Fine Tune	<b>Not initialized</b>	0-1000 in 50 millisecond increments
9	Transmitter Programming	<b>Unlocked</b>	Locked
10	Feature Programming	<b>Unlocked</b>	Locked

**Note:** The “Zap” feature on the Bitwriter does not reset the Virtual tach or security features enabled/disabled settings

## Feature Menus

Default settings are in **bold** type.

### Menu 1 - Basic

Menu Item	One-chirp setting	Two-chirp setting
1	<b>Active Arming</b>	Passive arming
2	<b>Arm/disarm chirps on</b>	Arm/disarm chirps Off
3	Ignition lock On	<b>Ignition lock Off</b>
4	Ignition unlock On	<b>Ignition unlock Off</b>
5	<b>Active locking only</b>	Passive locking
6	<b>Panic with ignition On</b>	No panic with ignition On
7	<b>0.8 second door lock pulses (1)</b>	3.5 (2), 0.4 (3) seconds
8	<b>Forced passive arming on</b>	Forced passive arming off
9	Automatic engine disable on	<b>Automatic engine disable off</b>
10	<b>Armed When Driving (AWD) On</b>	AWD Off
11	<b>Code Hopping On</b>	Code Hopping off
12	<b>Horn Output Pulsed</b>	Constant
13	<b>Horn function Full Alarm Only (1)</b>	Siren function - chirp length 20ms (2), 30ms (3), 40ms (4), 50ms (5)
14	Comfort Closure ON (1)	<b>Comfort Closure OFF (2)</b> Comfort Closure 2 (3)


### Menu 2 - Advanced

Menu Item	One-chirp setting	Two-chirp setting
1	<b>30 second siren duration</b>	60 second siren duration
2	<b>Nuisance Prevention Circuitry On</b>	Nuisance Prevention Circuitry OFF
3	<b>Progressive door trigger</b>	Instant door trigger
4	<b>Disarm from Valet, 1 pulse</b>	Disarm from Valet, 2-5 pulses
5	<b>Door trigger error chirp ON</b>	Door trigger error chirp OFF
6	<b>Ignition controlled domelight On</b>	Ignition controlled domelight OFF
7	<b>Unlock output 1 pulse</b>	Unlock output 2 pulses
8	<b>Lock output 1 pulse</b>	Lock output 2 pulses
9	<b>Factory disarm with trunk release ON</b>	Factory disarm with trunk release OFF
10	<b>FAD function with Unlock (1)</b>	Before Unlock (2), Remote Start only (3)
11	<b>FAD 1 pulse</b>	2 pulses
12	<b>AUX 2 validity (1)</b>	Latched (2), Latch reset with ignition (3), 30-secs timed (4), 60-secs (5), 90-secs (6)
13	<b>AUX 2 Linking None (1)</b>	Arm (2), Disarm (3), Remote Start (4)
14	<b>AUX 3 validity (1)</b>	Latched (2), Latch reset with ignition (3), 30-sec. timed (4)60sec(5)90sec(6)
15	<b>AUX 3 linking None (1)</b>	Arm (2), Disarm (3), Remote Start (4)
16	<b>AUX 4 validity (1)</b>	Latched (2), Latch reset with ignition (3), 30-sec. timed (4) 60sec (5) 90 (6)
17	<b>AUX 4 linking None (1)</b>	Arm (2),Disarm (3), Remote Start (4)

### Menu 3 - Remote start

Menu Item	One-chirp setting	Two-chirp setting
1	<b>Engine checking: Virtual Tach</b>	Voltage(2), OFF(3), Tachometer(4)
2	<b>Remote start runtime: 12 min</b>	24 min, 60 min
3	Parking light output: Flashing	<b>Constant</b>
4	<b>Cranking time: 0.6 sec</b>	0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0, 4.0 second
5	<b>Activation pulse 1</b>	2
6	<b>2nd Ignition/Acc output: Ignition</b>	Accessory
7	<b>Acc state during wait-to-start Off</b>	On
8	<b>2nd status output: Normal</b>	Rear defogger: latch 10 min. rear defogger pulse
9	<b>Anti grind: On</b>	Off
10	<b>Diesel timer: Wait-to-Start input</b>	Timed 15 , 30 ,45 seconds
11	<b>Timer mode run time: 12 min</b>	3, 6, 9, min
12	<b>Timer mode: Timed starts</b>	Temp starts
13	<b>Short run (turbo): 1 min</b>	3,5, 10 min

## Remote Programming

1. Open a door
2. Turn key to the ON position
3. Within 5 seconds, press and release the control center button one time.
4. Within 5 seconds, press and hold the control center button. The LED will flash one time and the siren chirps to confirm entry into remote programming.
5. Press the  button on the remote control.
6. The siren will chirp to confirm the remote has been programmed.
7. Release the control center button.
8. The siren will emit one long chirp confirming that remote programming has been exited.

**The programming routine exits if any of the following occurs:**




The open door is closed

The ignition is turned off

There is no activity for 30 seconds

The control center button is pressed too many times

## Basic Remote Functions

Button	Function
	ARM
	DISARM
	REMOTE START
AUX	TRUNK RELEASE

**Note:** See Owner's guide for more details

## Long Term Event History

The system stores the last two full triggers in memory. These are not erasable. Each time the unit sees a full trigger, the older of the two triggers in memory is replaced by the new trigger. To access long term event history:

1. With the ignition Off, **press** and **hold** the control center button.
2. **Turn** the ignition On.
3. **Release** the control center button.
4. Within 5 seconds, **press** and **release** the control center button. The LED flashes in groups indicating the last two zones that triggered the unit for 1 minute or until the ignition is turned off. Refer to table of zones.

**Note:** The Warn Away triggers are not stored to memory and is not reported.

## Table of Zones

A zone is represented by the number of LED flashes used by the system to identify a particular type of input.

Zone	Trigger Type	Input Description
1	Instant Trigger	BLUE (H1/7)
2	Multiplexed Shock Sensor Input	Mux BLUE sensor port wire.
3	Door Trigger	GREEN (H1/8) and VIOLET (H1/6).
4	Multiplexed Shock Sensor Input	Mux GREEN wire
5	Ignition	Yellow ribbon harness wire
6	Hood Trigger	GRAY on the 6-pin shutdown harness