Quick Reference Install Guide
Remote Start with Keyless Entry 4X05 series
4115 1-button and 4105 4-button systems

Wiring Connections
Primary Harness, White 9-pin connector
1. LIGHT: GREEN/WHITE (-) 200mA STATUS OUTPUT
2. PURPLE (+/-) LIGHT FLASH OUTPUT
3. (+) (+) (30A) HIGH CURRENT 12V INPUT
4. VIOLET/WHITE (-) 200mA ACCESSORY OUTPUT
5. RED/BROWN (+) STARTER OUTPUT
6. BLACK/WHITE (-) 200mA HOOD PIN SWITCH SHUTDOWN INPUT
* Connect this wire to the (-) Parking Brake wire in the vehicle. The parking brake must be applied for the remote start to work.
7. ORANGE (+) IGNITION OUT (TO ALARM)
8. BLACK/WHITE (-) 200mA TACHOMETER INPUT
9. WHITE (-) CHASSIS GROUND
10. RED/YELLOW (+) 12V
11. BLACK (+) IGNITION 1 INPUT/OUTPUT
12. WHITE (-) PARKING BRAKE INPUT*
* Option not applicable to 1-button remote control.

Secondary Harness, Gray 4-pin connector
1. LIGHT BLUE (-) HOOD PIN SWITCH SHUTDOWN INPUT
2. GREEN (+) 12V
3. BLACK (-) (200 mA) 2ND STATUS/REAR DEFOGGER OUTPUT

Remote Start harness, Black 3-pin connector
1. RED (+) 12V
2. ORANGE (-) 200mA
3. BLACK (-) 200mA

Remote Start System/Garage Mode
Garage Mode is a safety feature that disables the remote start system if the vehicle is parked in a garage, being serviced, or used by someone unfamiliar with remote start systems.

Remote Start Shutdown/Startup Diagnostics
If the remote start activates but fails to start running, the remote start module has the ability to inform you of what may have caused the remote start failure. Before performing the shutdown diagnostics it is important that you let the remote start shut off on its own i.e., let it attempt to start three times then shut down, if this is not done and you press on the brake or use the remote, the unit will report the shutdown last used to shut off the remote start.

To perform shutdown diagnostics:
1. With the ignition OFF, press and hold the Valet button.
2. Turn the ignition ON and then back OFF while holding the Valet button.
3. Release the Valet button.
4. Press and release the Valet 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.

Satellite harness - White 4-pin connector
1. BLUE (+) CHASSIS GROUND
2. ORANGE (-) 200mA ACCESSORY OUTPUT
3. PURPLE (+) 30A STARTER OUTPUT
4. PINK (-) IGNITION 1 INPUT/OUTPUT

Satellite harness - Red 4-pin connector
1. BLUE (+) DVD - RK
2. BLACK (-) GROUND
3. GREEN (-) DVD - RK
4. RED (-) 12V

Bitwriter/Directed SmartStart Harness, Black 3-pin connector
1. RED (+) 12V
2. ORANGE (-) 200mA
3. BLACK (-) 200mA

Notice to Installer
A Remote Start Safety Check must be performed before returning the vehicle to the owner. This Safety Checklist document (TB 011) can be found online by going to www.directechs.com and can also be found in the full online installation guide (N4X05).

The Valet Button must be installed as it is required for disabling the Remote Start System/Garage Mode.

Installation Points
Learning Hardwired or Data Tach (not needed with Virtual Tach)

To learn the tach signal:
1. Start the vehicle with the key.
2. Within five seconds, press and hold the Valet button.
3. After three seconds the LED will light constant when the tach signal is learned.
4. Release the Valet button and turn OFF the vehicle.

Important: This unit can learn the tachometer with the analog input or through D2D using an interface module. The unit confirms which source is being used by flashing the parking lights.

When programming tach learning with:
• The analog Violet/White Tachometer input, the parking lights flash three times.
• A D2D interface module, the parking lights flash twice.

If the analog tachometer input on the system is connected to the vehicle, the D2D tachometer input will be ignored.

Initializing Virtual Tach (not needed w/hardware and data tach inputs)
Note: Virtual Tach is not recommended for diesel vehicles.

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 (these cranks may be required to start and run the engine).
3. Once the car starts, let the engine run for 30 seconds.
4. Use the remote control to shut OFF the remote start that's if Virtual Tach is programmed.

Virtual Tach handles disengaging the starter motor during remote starting – it does not address issues if the customer wants to have the override protection capability, the tach wire must be connected.

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. Turn the vehicle ignition to the ON position.
2. Within five seconds press and release the Valet button; two times to delete remote controls, three times to reset the features to default or four times to reset Virtual Tach.
3. Once you have selected the function step, press the Valet button once more and hold it. The LED will flash and the horn (if connected) will honk to confirm the functional step chosen. Do not release the Valet button.
4. Press the Valet button of a programmed remote control. The horn (if connected) will honk confirming the feature has been reset/deleted.
5. Release the Valet button and turn OFF the the vehicle. The horn (if connected) beeps to confirm exiting.

NOTE: Deleting a remote control does not delete the features or virtual tach, resetting the features does not delete remote controls or reset virtual tach. The “Zap” feature on the Bitwriter will not reset the virtual tach setting.

Reset/Delete will exit if:
• The ignition is turned OFF.
• There is no activity for 30 milliseconds.
• The Valet button is pressed too many times.

Reset Delete 1 2 3 6 5 4 8 7 5 4 3 2 1 3 2 1 1 4 3 2 2 3 4 5 6

Remote Start System/Garage Mode
When Garage Mode is ON, any attempt to start the engine, activate Timer Mode, or enter Pit Stop mode is denied and remote start diagnostics flashes the parking lights nine times.

Turn Garage Mode on or off:
1. Turn the ignition on then off.
2. Within 10 seconds, press and release the Valet button once.
3. The LED turns on.
4. The parking lights flash:
   • Nine times quickly when turning on.
   • Nine times slowly when turning off.

How detailed information about this system can be found online at www.directechs.com
### Programming System Features

The System Features Learn Routine™ dictates how the unit operates. It is possible to access and change most of the feature settings using the Valet Button.

1. Turn the ignition ON, then OFF.
2. Within five seconds, press and hold the Valet button. The number of LED flashes and horn hons (if connected) indicates the menu number. A single LED flash and horn (if connected) indicates Menu 1. Two LED flashes and 2 hons (if connected) indicates Menu 2.
3. When the desired Menu LED flashes and horn hons (if connected) are heard, release the Valet button.
4. Within five seconds, press and release the Valet button the number of times corresponding to the feature you want to change. Then press and hold one more time to select the feature. The LED flashes and the horn (if connected) hons to indicate which feature is selected.
5. While holding the Valet button, you can program the feature using the remote control:
   - Using a 1-button remote control: For features with only two options, pressing & option 1, while pressing & option 2. For features with more than two options, select within the options in ascending order. The LED flashes and the horn (if connected) hons indicating which option is selected.
   - Using a 1-button remote control: Pressing the button on the remote control advances to each feature option. The LED flashes and the horn (if connected) hons indicating which option is selected.
6. Release the Valet button to exit the Learn Routine.

Once a feature is programmed:
- Other features can be programmed within the same menu.
- Another menu can be selected.
- The System Features Learn Routine™ can be exited if programming is complete.

To access another feature in the same menu:
1. Press and release the Valet 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 Valet button once more and hold it.

To select another menu:
1. Press and hold the Valet button.
2. After three seconds, the unit advances to the next menu, the horn hons (if connected) are heard, and the feature settings using the Valet button.

The Learn Routine exits if any of the following occurs:
- The ignition is turned ON.
- There is no activity for 30 seconds.
- The Valet button is pressed too many times.

When exiting Feature Programming, the horn (if connected) sounds one long honk to confirm.

### 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 Valet button.

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

<table>
<thead>
<tr>
<th>Menu Item</th>
<th>Feature</th>
<th>Default</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Engine Runtime</td>
<td>minutes</td>
<td>12 min.</td>
<td>1-60 min.</td>
</tr>
<tr>
<td>2. Diesel Start</td>
<td></td>
<td>Off</td>
<td>Normal</td>
</tr>
<tr>
<td>4. Virtual Tach Fine Tune</td>
<td></td>
<td>Not initialized</td>
<td>0 to 1 second in 50 ms increments</td>
</tr>
<tr>
<td>5. Remote Control Programming</td>
<td></td>
<td>Unlocked</td>
<td>Locked</td>
</tr>
<tr>
<td>6. Feature Programming</td>
<td></td>
<td>Unlocked</td>
<td>Locked</td>
</tr>
</tbody>
</table>

* Option not applicable to the 1-button remote control.

### Feature Menus

 Default settings are in **bold** types.

#### Menu 1

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Horn Function (Multiple)</td>
<td>Off</td>
<td>0.8 sec</td>
<td>3.5 sec</td>
<td>0.4 sec</td>
<td>0.8 sec</td>
<td>3.5 sec</td>
</tr>
<tr>
<td>2. Ignition Controlled Lock</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>3. Ignition Controlled Unlock</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>4. Defrost (Outside Temperature)</td>
<td>0.8 sec</td>
<td>3.5 sec</td>
<td>0.4 sec</td>
<td>0.8 sec</td>
<td>3.5 sec</td>
<td>0.4 sec</td>
</tr>
<tr>
<td>5. Double Pulse Unlock</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>6. Double Pulse Lock</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>8. Factory Alarm Delay Pulses</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>9. System State</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>10. Panic*</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
</tbody>
</table>

* Option not applicable to the 1-button remote control.

#### Menu 2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Engine Check &amp; Engine Runtime</td>
<td>Virtual Tach &amp; Voltage</td>
<td>Off</td>
<td>0.6 sec</td>
<td>0.8 sec</td>
<td>1.0 sec</td>
<td>1.2 sec</td>
</tr>
<tr>
<td>2. Engine Runtime</td>
<td>12 min.</td>
<td>24 min.</td>
<td>60 min.</td>
<td>120 min.</td>
<td>180 min.</td>
<td>240 min.</td>
</tr>
<tr>
<td>3. Park Light</td>
<td>Pulsed</td>
<td>Constant</td>
<td>Pulsed</td>
<td>Constant</td>
<td>Pulsed</td>
<td>Constant</td>
</tr>
<tr>
<td>4. Siren</td>
<td>0.6 sec</td>
<td>0.8 sec</td>
<td>1.0 sec</td>
<td>1.2 sec</td>
<td>1.4 sec</td>
<td>1.6 sec</td>
</tr>
<tr>
<td>5. Light</td>
<td>1 pulse</td>
<td>2 pulses</td>
<td>3 pulses</td>
<td>4 pulses</td>
<td>5 pulses</td>
<td>6 pulses</td>
</tr>
<tr>
<td>6. 2nd Ignition Behavior</td>
<td>Ignition</td>
<td>Accessory</td>
<td>Accessory</td>
<td>Accessory</td>
<td>Accessory</td>
<td>Accessory</td>
</tr>
<tr>
<td>7. Accessory</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
</tr>
<tr>
<td>8. Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>9. Antigrind</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
</tr>
<tr>
<td>10. Diesel Start Del. Time</td>
<td>Off</td>
<td>Timed 1.5 sec</td>
<td>Timed 3 sec</td>
<td>Timed 4.5 sec</td>
<td>Timed 6 sec</td>
<td>Timed 7.5 sec</td>
</tr>
<tr>
<td>11. Timer Mydole Runtime</td>
<td>12 min.</td>
<td>3 min.</td>
<td>6 min.</td>
<td>9 min.</td>
<td>12 min.</td>
<td>15 min.</td>
</tr>
</tbody>
</table>

* Option not applicable to the 1-button remote control.

### Parrying a Remote Control

1. Turn key to the OFF position.
2. Within five seconds, press and release the Valet button one time.
3. Within five seconds, press and hold the Valet button. The LED will flash one time and the horn (if connected) hons to confirm entry into remote programming.
4. Press the button if using a 4-button remote control (or the single button if using the 1-button remote control).
5. Release the Valet button, and turn the key to the OFF position. The horn (if connected) sounds one long honk to confirm that remote programming has been exited.

The programming routine exits if any of the following occurs:
- The ignition is turned ON.
- There is no activity for 30 seconds.
- The Valet button is pressed too many times.

### Basic Remote Functions

#### 4-button Remote Control

<table>
<thead>
<tr>
<th>ICON</th>
<th>BASIC COMMANDS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCK</td>
<td>Pressing for one second locks the system (if the door locks are connected)</td>
<td></td>
</tr>
<tr>
<td>UNLOCK</td>
<td>Pressing for one second unlocks the doors (if connected)</td>
<td></td>
</tr>
<tr>
<td>REMOTE START</td>
<td>Press to remotely start and run the vehicle for a programmable period of time or press to turn off if vehicle is already remote started</td>
<td></td>
</tr>
<tr>
<td>AUX</td>
<td>Silent Mode works by pressing this button for less than one second before locking or unlocking. This button can also be used for an optional auxiliary function such as trunk release</td>
<td></td>
</tr>
</tbody>
</table>

Note: See Owner’s guide for more details.

#### 1-button Remote Control

<table>
<thead>
<tr>
<th>SYSTEM STATE</th>
<th>PRESS/RELEASE</th>
<th>PRESS/HOLD FOR 3 sec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINE OFF</td>
<td>START ENGINE</td>
<td>CAR Finder</td>
</tr>
<tr>
<td>ENGINE ON</td>
<td>UNLOCK DOORS</td>
<td>STOP ENGINE</td>
</tr>
</tbody>
</table>

Note: See Owner’s guide for more details.

### Guide Translations

For a Spanish or French version of the Installation Guide, please download it from www.directechs.com under “Resources.”

Traducción de los manuales:
Para obtener una versión en Español o Francés del Manual de Instalación, descargue de www.directechs.com bajo el título “Recursos” (Resources).

Traducción del guión:
Para una versión francesa o español del guía de instalación, vea el téléchargement à www.directechs.com sous “Recursos”.

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 QRN4X05 2016-10 for more information.