

# Quick Reference Install Guide

## Automate 4114A 1-Way Super Code

### Wiring Connections

#### Main Harness, 6-pin connector

H/1	RED	(+)12VDC CONSTANT INPUT
H/2	BLACK	(-) CHASSIS GROUND
H/3	BROWN	(-) 200mA HORN HONK OUTPUT
H/4	WHITE/BROWN	LIGHT FLASH ISOLATION WIRE - PIN 87a of light flash relay
H/5	WHITE	LIGHT FLASH OUTPUT - Pin 30 of light flash relay
H/6	ORANGE	(-) 500mA GROUND WHEN ARMED OUTPUT

#### Door Lock, 3-pin connector

1	BLUE	(-) 500mA UNLOCK OUTPUT
2	EMPTY	NOT USED
3	GREEN	(-) 500mA LOCK OUTPUT

### Guide Translations

For a Spanish version of the Installation Guide, please download it from [www.directechs.com](http://www.directechs.com) under Resources.

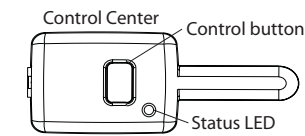
#### Estimado Cliente:

Si buscas los guías de instalación, por favor de bajar lo del Resources en el sitio [www.directechs.com](http://www.directechs.com)

#### Remote Start, 8-pin connector

H/1	PINK	(+) IGNITION 1 INPUT/OUTPUT
H/2	RED/WHITE	(+) 12VDC CONSTANT INPUT for ignition 2 and flex relays
H/3	ORANGE	(+) ACCESSORY OUTPUT
H/4	VIOLET	(+) STARTER OUTPUT
H/5	RED	(+) 12VDC CONSTANT INPUT for ignition 1 relay
H/6	PINK/WHITE	(+) IGNITION 2 / FLEX RELAY OUTPUT
H/7	PINK/BLACK	(+) FLEX RELAY INPUT 87A key side (if required) of FLEX RELAY
H/8	RED/BLACK	(+) 12VDC CONSTANT INPUT for ACC and starter relays

### Installation Points



### Learning the Tach (not needed with Virtual Tach)

To learn the tach signal:

1. **Start** the vehicle with the key.
2. Within 5 seconds, **press and hold** the Control button.
3. After 3 seconds the status LED on your Control Center lights constant when the tach signal is learned.
4. **Release** the Control button.

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

When programming tach learning with:

- Analog, the parking lights flash one time.
- D2D interface module, the parking lights flash twice.

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

### Learning Virtual Tach (not needed with hardwire tach inputs)

To program Virtual Tach:

1. After the install is complete, **remote start** the engine. The programming operation may require 3 cranks of the starter before the engine starts and runs. Do not turn off the remote start if this happens, it is a normal programming operation.
2. Once the engine begins running, let it run for at least 30 seconds.
3. Using the Remote, send the Remote start command to turn remote start off. Virtual Tach is programmed.

To reset Virtual Tach, go to the Reset and Deletion section of this guide. Virtual Tach **cannot** be reset with the Bitwriter.

**Note:** Virtual Tach cannot be used in MTS Manual Transmission Mode. It is also not recommended for diesel trucks.

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.

**Important:** After successfully learning Virtual Tach, a small minority of vehicle starters may over crank or under crank during remote start. The Bitwriter can be used to fine tune the starter output time in 50mS increments to compensate for such an occurrence.

### Remote Start Shutdown/Startup Diagnostics

Unit can report the cause of the last shutdown of the remote start system through flash sequences of the status LED.

To perform shutdown diagnostics:

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

Status LED Flashes	Shutdown Mode
1 flash	Runtime expired
2 flashes	Over-rev shutdown
3 flashes	Low or no RPM
4 flashes	Transmitter shutdown (or optional push button)

5 flashes	(+) Brake shutdown
6 flashes	(-) Hood shutdown
7 flashes	Timer mode/Turbo mode/Manual mode error *
8 flashes	Neutral safety shutdown
9 flashes	Low battery (voltage mode)
11 flashes	Wait-to-start input timed out

- \* Timer mode error: Ignition is on or shutdown input is active when activating timer mode.  
Turbo mode error: Turbo mode is programmed off, engine is not on or shutdown input is active.  
Manual mode error: MTS mode not enabled.

**Startup Diagnostics:** If the vehicle fails to activate the remote start, the remote start module will flash the parking lights on the vehicle to notify you of what caused the no-start situation.

#### Parking Light Flashes

5 flashes	Brake wire is active
6 flashes	Hood pin wire is active
7 flashes	Manual transmission mode is enabled and not initialized.
8 flashes	Neutral safety wire has no ground or the neutral safety switch is Off.

### Remote Pairing

Prepare the vehicle system to be Paired with a new remote

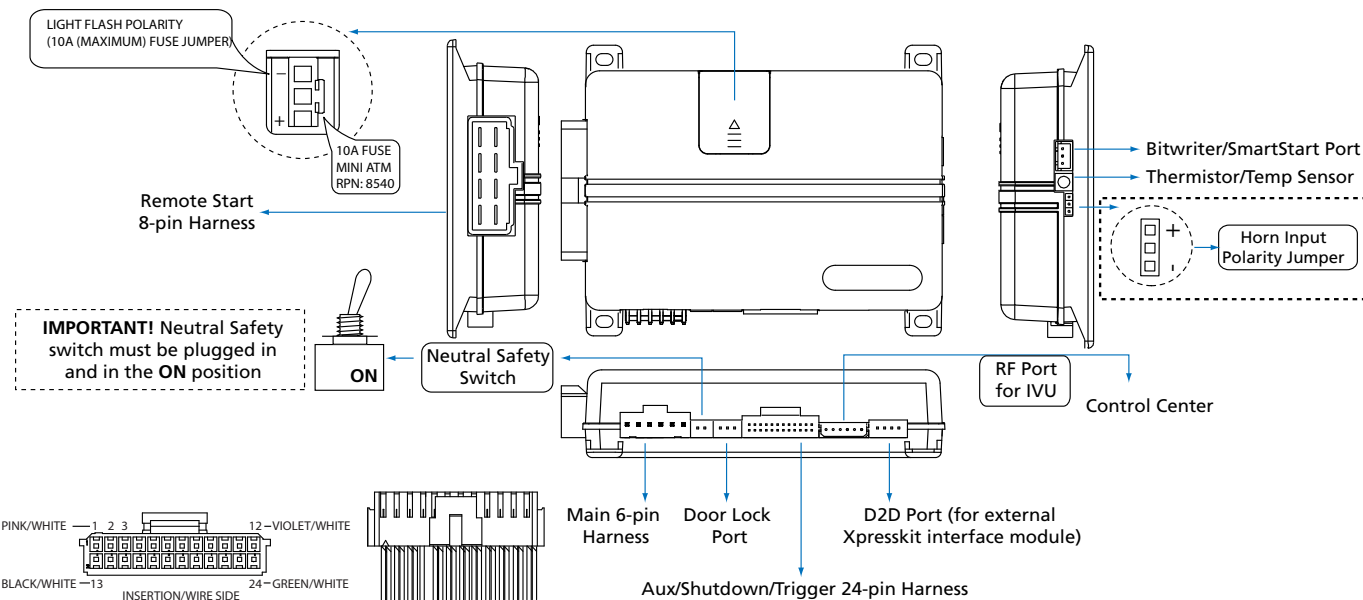
1. **Turn** the key to the ON position.
2. Press/release once and then press/hold the control button on the system's Control Center. The status LED begins flashing in a sequence of 1 flash and the horn sounds once to confirm the system is ready for pairing.
3. Release the Control Center button.
4. Press/hold the remote button for 1.5 seconds. The LED patterns change while holding.
5. The horn emits 1 sound to confirm learning.
6. Repeat for each remote to be learned (up to four).
7. **Turn** the ignition off or wait 60 seconds to exit learning, the horn emits 2 sounds to confirm.

The learn routine Exits if any of the following occurs:

- The ignition is turned off.
- There is no activity for 60 seconds.
- The control button is pressed too many times.

### Remote Functions

System State	Press/Release	Press/Hold for 3 sec.
ENGINE OFF	START ENGINE	CAR FINDER
ENGINE ON	UNLOCK DOORS	STOP ENGINE



#### Auxiliary/Shutdown Harness 24-pin connector

1	PNK/WHITE	(-) 200mA Ignition 2/Flex OUTPUT
2	BLUE/WHITE	(-) 200mA 2ND STATUS /REAR DEFOGGER OUTPUT
3	RED/WHITE	(-) 200mA TRUNK RELEASE OUTPUT
4	BLACK/YELLOW	(-) 200mA DOME LIGHT OUTPUT
5	DARK BLUE	(-) 200mA STATUS OUTPUT
6	WHITE/BLACK	(-) 200mA AUX 3 OUTPUT
7	WHITE/VIOLET	(-) 200mA AUX 1 OUTPUT
8	ORANGE/BLACK	(-) 200mA AUX 4 OUTPUT
9	GRAY	(-) HOOD PIN INPUT (NC OR NO)
10	BLUE*	FACTORY HORN INPUT (Use Jumper to set polarity)
11	WHITE/BLUE**	ACTIVATION INPUT
12	VIOLET/WHITE***	TACHOMETER INPUT
13	BLACK/WHITE****	(-) NEUTRAL SAFETY /PARKING BRAKE INPUT
14	GREEN/BLACK	(-) 200mA FACTORY ALARM DISARM OUTPUT
15	GREEN***	(-) DOOR INPUT

16	EMPTY	-----
17	PINK	(-) 200mA IGNITION 1 OUTPUT
18	VIOLET***	(+) DOOR INPUT
19	VIOLET/BLACK	(-) 200mA AUX 2 OUTPUT
20	BROWN	(+) BRAKE SHUTDOWN INPUT
21	VIOLET/YELLOW	(-) 200mA STARTER OUTPUT
22	GRAY/BLACK	(-) DIESEL WAIT TO START INPUT
23	ORANGE	(-) 200mA ACCESSORY OUTPUT
24	GREEN/WHITE	(-) 200mA FACTORY ALARM ARM OUTPUT

\* This option is not available with the 1-way system.


\*\* Connect this wire to ground through an optional momentary switch for turbo timer mode activation.


\*\*\* Required connection for manual transmission vehicles.

\*\*\*\* Ground this wire for automatic transmission vehicles or connect to the parking brake wire for manual transmission vehicles.

**Important:** NEVER connect 200mA low current outputs directly to a motor or high current device WITHOUT a relay.

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.

## 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 Control button.

1. Turn the ignition on, then off.
2. Select a Menu. Press and hold the Control button. The number of horn honks and LED flashes indicates the menu number. 1 horn honk and LED flash indicates menu 1, 2 horn honks and LED flashes - menu 2 and 3 horn honks and LED flashes for menu 3.
3. When the desired menu horn honks are heard with LED flashes, release the Control button.
4. Select a Feature. Press and release the Control button the number of times corresponding to the feature you wish to change. Then press and hold one more time to select the features.
5. Program the Feature. While holding the Control button, you can change the feature by pressing the button on the remote control, each press will cycle through each option.

### 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 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 button once more and hold it.

### To select another menu:

1. Press and hold the Control button.
2. After 3 seconds, the unit advances to the next menu and the horn honks and the LED flashes, indicating which menu has been accessed.

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

- The ignition is turned On
- There is no activity for 30 seconds
- The Control 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 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. Default settings are in **bold**.

Menu Item	Feature	Default	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Aux/Trunk Icon Type*	<b>Trunk</b>	Window	Sunroof	Audio	Lights/Left dr/Right dr/Rear Hatch
2	Aux 1 Timed Output	<b>30 sec.</b>	Options: 1 to 90 sec.			
3	Aux 1 Icon Type*	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/Left dr/Right dr/Rear Hatch/Timed/Latched
4	Aux 2 Timed Output	<b>30 sec.</b>	Options: 1 to 90 sec.			
5	Aux 2 Icon Type*	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/Left dr/Right dr/Rear Hatch/Timed/Latched
6	Aux 3 Timed Output	<b>30 sec.</b>	Options: 1 to 90 sec.			
7	Aux 3 Icon Type *	<b>Pulsed</b>	Trunk	Window	Sunroof	Audio/Lights/Left dr/Right dr/Rear Hatch/Timed/Latched
8	Aux 4 Timed Output	<b>30 sec.</b>	Options: 1 to 90 sec.			
9	Diesel Start Delay type (seconds)	<b>15 sec.</b>	Options: 1 to 90 sec.			

Menu Item	Feature	Default	Opt. 2	Opt. 3	Opt.4	Opt. 5+
10	Timer Mode Runtime (minutes) *	<b>12 min.</b>	Options: 1 to 16 min.			
11	Timer Mode Starts*	<b>6 starts</b>	Options: 1/2/3/4 to 24 (Starts) in increments of 2			
12	Timer mode intervals (hours)*	<b>3 hr.</b>	Options: 1/2/ <b>3</b> /4 to 24 in 2 hour increments			
13	Smart start low temp*	<b>0° (F)</b>	Options: OFF, -20° to 70° in 10° increments			
14	Smart start high temp*	<b>100° (F)</b>	Options: OFF, 40° to 130° in 10° increments			
15	Smart start low battery (volts)*	<b>10.5V</b>	Options: OFF, 9V to 12.5V in 0.5V increments			
16	Starter Release Fine Tune	<b>6 (normal)</b>	Options: 0 to 20 in increments of 1			
17	Feature Programming	<b>Unlocked</b>	Locked			
18	Transmitter Programming	<b>Unlocked</b>	Locked			
19	Remote Start Runtime	<b>12 min.</b>	Options: 1 to 60 min.			
20	Virtual Tach Fine Tune	<b>Not Initialized</b>	Options: Not initialized, 0 to 1000 in 50 millisecond increments			

\* Feature only available on 2-way LCD system.

## Feature Menus

Default settings are in **bold** type.

### Menu 1 - Vehicle Integration

Menu Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	System Locking Mode	<b>Active Locking</b>	Passive Locking	Auto Re-locking		
2	Panic Mode *	<b>On</b>	Ign Off only	Off		
3	Horn Function	<b>Confirmation Chirp (20 ms) &amp; Panic</b>	Confirmation Chirp (30 ms) & Panic	Confirmation Chirp (40 ms) & Panic	Confirmation Chirp (50 ms) & Panic	Confirmation Chirp Off - Panic Only * (Pulsed)
4	Ign-controlled locks	<b>No Ign-locking</b>	Lock & Unlock	Lock Only	Unlock Only	
5	Door Lock Pulses	<b>Single</b>	Double Unlock Only	Double Lock Only	Double Lock & Unlock	
6	Door Lock output duration	<b>0.8 sec.</b>	3.5 sec.	0.4 sec.		
7	2nd Unlock	<b>2nd unlock on/ Ign-control after first unlock</b>	2nd unlock on/ Ign-control with first unlock			
8	Comfort Closure *	<b>No Comfort Closure</b>	Comfort Closure 1	Comfort Closure 2		
9	Hood Trigger Type	<b>Normally Open</b>	Normally closed			
10	Door Switch Type	<b>Normally open</b>	Normally closed			
11	Ignition Off msg * (remote button unlock)	<b>On</b>	Off			

\* Feature only available on 2-way LCD system.

## Menu 2 - Convenience

Menu Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	One-time Bypass	<b>No Bypass</b>	Bypass			
2	Valet Switch Pulse Count	<b>1</b>	2	3	4	5
3	Door Ajar Error msg *	<b>On</b>	Off			
4	Ign-controlled Dome light	<b>On</b>	Off			
5	OEM Alarm Disarm w/Aux/trunk*	<b>On</b>	Off			
6	OEM Alarm Disarm Output	<b>With Unlock</b>	Before Unlock	Remote Start Only		
7	OEM Alarm Disarm Pulses	<b>1</b>	2			
8	Aux 1 Output type **	<b>Validity</b>	latch	latch/reset/ign	Timed	Off (5)/2nd Unlock (6)
9	Aux 1 Linking	<b>No Linking</b>	Link to Lock*	Link to Unlock	Link to Lock/Unlock*	Link to Remote Start only
10	Aux 2 Output type **	<b>Validity</b>	latch	latch reset/ign	Timed	Off (5)/2nd unlock (6)
11	Aux 2 Linking	<b>No Linking</b>	Link to Lock*	Link to Unlock	Link to Lock/Unlock*	Link to Remote Start only
12	Aux 3 Output type**	<b>Validity</b>	latch	latch reset/ign	Timed	Off (5)/2nd unlock (6)
13	Aux 3 Linking	<b>No Linking</b>	Link to Lock*	Link to Unlock	Link to Lock/Unlock*	Smart Key Control (Link to Remote Start Off)
14	Aux 4 Output Type**	<b>Validity</b>	latch	latch reset/ign	Timed	Off (5)/2nd Unlock (6)
15	Aux 4 Linking	<b>No linking</b>	Link to Lock*	Link to Unlock	Link to Lock/Unlock*	Link to Remote Start Only
16	Aux/Trunk Output type	<b>Validity</b>	Off	2nd unlock		

\* Not available with the 1 button remote control.

\*\* Aux channels with the 1 button remote can only be accessed with channel linking to unlock or remote start.

## Menu 3 - Remote start

Menu Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
1	Transmission Mode	<b>Manual</b>	Automatic			
2	Engine Checking Mode	<b>Virtual Tach</b>	Voltage	Off	Tachometer	
3	Cranking Time	<b>0.6 sec.</b>	0.8 sec.	1.0 sec.	1.2 sec.	1.4 (5) / 1.6 (6) / 1.8 (7) / 2.0 (8) / 4.0(9)
4	Remote Start Runtime	<b>12 min.</b>	24 min.	60 min.		
5	Activation Pulse Count	<b>1</b>	2			
6	Turbo Mode *	<b>No Turbo Mode</b>	On-1 min.	On-3 min.	On-5 min.	On-10 min.
7	Timer Mode Runtime**	<b>12 min.</b>	3 min.	6 min.	9 min.	
8	Flex Relay Function	<b>Ignition 2</b>	Accessory 2	Starter 2		
9	Diesel Start Delay	<b>Wait-to Start input</b>	Timed 15 sec.	Timed 30 sec.	Timed 45 sec.	
10	Accessory during Diesel Start Delay	<b>On</b>	Off			
11	Status 2 Output	<b>Status</b>	Latch Rear Defogger	Pulse Rear Defogger		
12	Parking Light Output	<b>Constant</b>	Pulsed	Off		
13	Anti-grind Output	<b>On</b>	Off			

Menu Item	Feature	Opt. 1	Opt. 2	Opt. 3	Opt.4	Opt. 5+
14	Tach Mode Starter Release	<b>Normal</b>	Increase	Decrease		
15	Vehicle temp auto report**	<b>Off</b>	On			
16	Remote Start Safelock	<b>Off</b>	On			

\* With the 1 button remote; turbo timer mode can only be activated by adding a push button to the white/blue (-) activation input wire on the 24 pin harness.

\*\* Not available with the 1 button remote control.

## 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 ignition to the ON position (The heavy gauge pink wire must be connected).
2. Within 10 seconds, press and release the Control button: two times if you want to delete remote controls, three times to reset features or four times to reset virtual tach. These features are described next.

**Delete remote controls:** This feature erases all remote controls from the memory of the 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 system or reset the Virtual Tach setting.

**Reset Features:** This resets features to the factory default settings.

Note: This does not delete the remote controls from the system or reset the Virtual Tach setting

**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.

3. Once you have selected the function step, press the Control button once more and hold it. The LED flashes and the horn sounds to confirm the selected functional step. Release the Control button (learning exits in 60 seconds if no action is performed).
4. Press the button on the remote control. The vehicle sounds to confirm that the feature has been successfully reset.
5. Turn the ignition off or wait 60 seconds to exit the reset/delete procedure, the horn emits 2 sounds to confirm.

The routine Exits if any of the following occurs:

- The ignition is turned off
- There is no activity for 60 seconds
- The control button is pressed too many times

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)

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