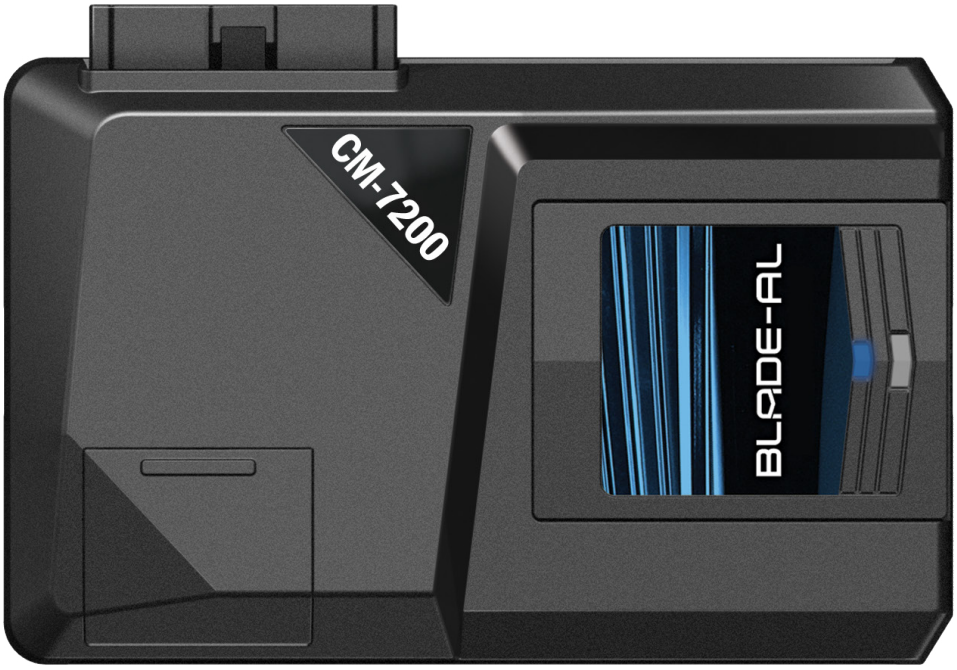
FIRSTECH



MASTER GUIDE

CM7200 Remote Start System

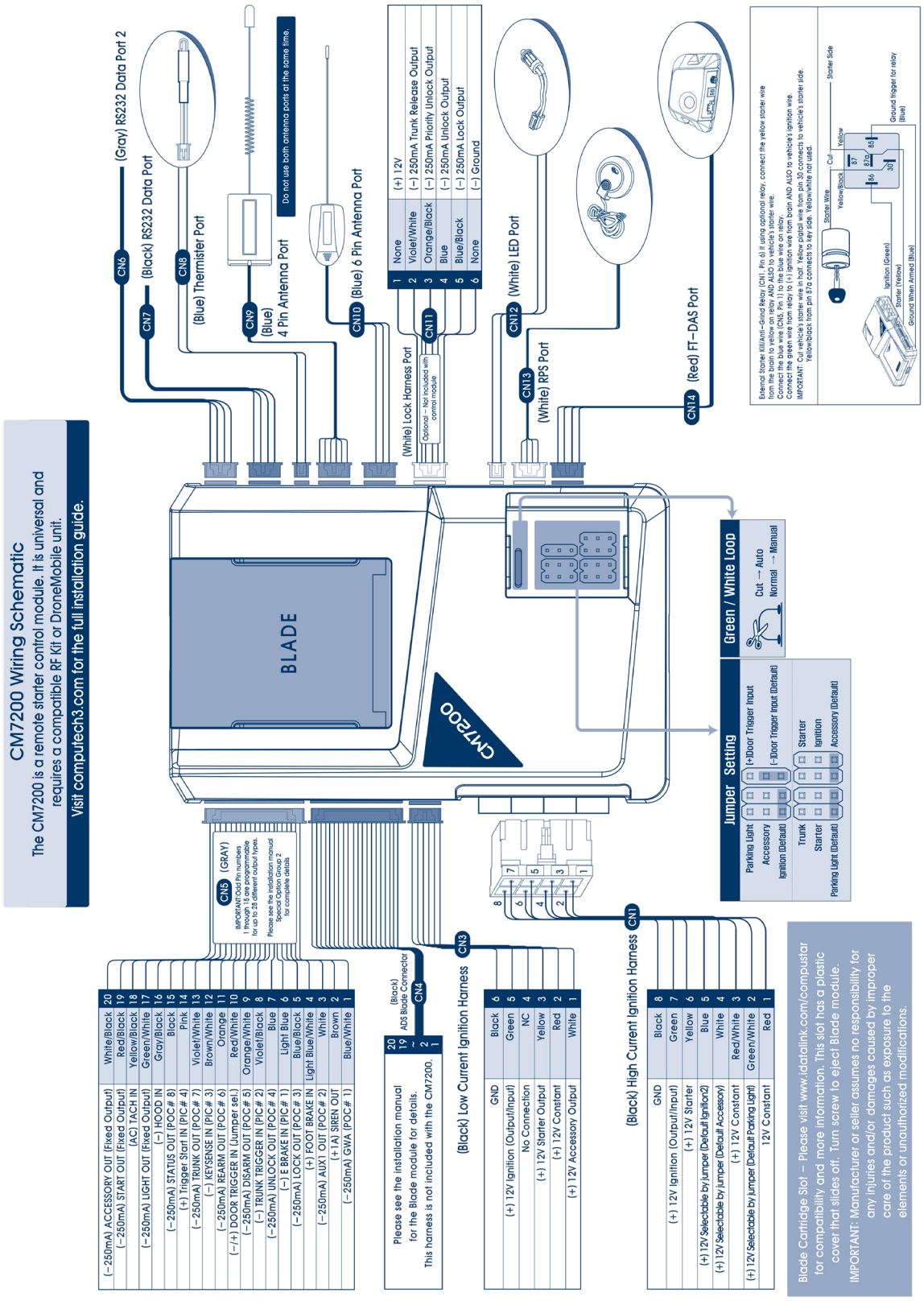
V 3.25

Firstech, LLC.
21903 68th Ave S.
Kent, WA 98032
Phone. 888-820-3690
Fax. 206-957-3330
Please visit www.firstechdata.com for additional installation resources

Table of Contents

Introduction	**4**
Kit Contents	**4**
Installation Basics	**5**
Remote Programming Routine	**6**
Valet Mode	**7**
Placement and Use of Components	**8**
Common Procedures	**14**
Wiring Descriptions	**20**
Option Programming Tables	**28**
Option Menu Descriptions	**32**
Special Option Groups 1, 2, and 3	**49**
Option Programming	**54**
Troubleshooting	**57**
Frequently Asked Questions	**58**
Technical Support Contacts	**60**

Copyright 2016 Firstech, LLC.



Copyright 2016 Firstech, LLC.

Introduction

Thank you for purchasing this Firstech system for your vehicle. The following installation manual is intended for experienced and authorized Firstech technicians. We highly recommend that you contact your local Firstech dealer and seek professional installation. Call 888-820-3690 or visit our website at www.firstechonline.com to locate your nearest dealer. If you need additional or replacement remotes and/or online support please visit www.firstechdata.com.

Caution: The Manufacturer's warranty will be void if this product is installed by anyone other than an authorized Firstech dealer. Firstech provides installation support services to authorized dealers only.

This manual may change frequently. Please check www.firstechdata.com for updates.

Kit Contents

All Firstech FT-7200S CONT controllers include the following:

- CM7200 main control module
- Wiring diagram sheet
- High Current ignition harness with one external relay
- Low current ignition harness
- Wiring harnesses
- Hood pin

RF Kits with remote(s), Antenna, and Antenna Cable are not included with the FT-7200S CONT.

The following sensors are available but **not included** with every system:

- FT-DAS Firstech Digital Adjustable Sensor (Required for Manual Transmissions)
- Auto lock and unlock system (FT-EZGO)
- Remote pager sensor (FT-RPS TOUCH) or (FT-RPS-2)
- Temperature sensor (FT-TEMP SENSOR) (Drone and 2 Way remote LCD systems)

The remote(s) and antenna are modular and are not specific to the control modules. You have the ability to pair almost any Firstech remote(s) and antenna receiver to the CM7200. This includes all 4 and 6 pin antennas.

Any questions on contents please contact your distributor or us directly at 1.888.820.3690, Monday through Friday, 8 AM to 5 PM Pacific Time.

Copyright 2016 Firstech, LLC.

Installation Basics

If you are new to installing Firstech Series Remote Starts and/or Alarms, we highly recommended that you thoroughly review this manual to installing your first unit.

- [ ] **Remote Programming:**
You must code remotes to this system before anything will function. Begin by cycling the ignition ON and OFF five times within 10 seconds and press and release button 1 (half second) on the first remote, and then press and release button 1 (half second) on the second remote.

- [ ] **DAS Sensor (Required for Manual Transmission Installs):**
The DAS sensor monitors forward movement for remote starting manual transmissions, dual stage impact, and auto adjusting tilt sensor. See the DAS Sensor section of this manual for details.

- [ ] **Internal green/white loop must be cut for AUTOMATIC transmission vehicles.**
By default, the units come in MANUAL transmission mode. You will need to cut the green/white loop inside the control module if you are installing the unit in a AUTOMATIC transmission.

- [ ] **High Current 2nd Ignition Output (CN1 Blue Wire) (Jumper Programmable)**

- [ ] **High Current Parking Light Output (CN1 Green/White Wire) (Jumper Programmable)**

- [ ] **High Current Accessory Output (CN1 White Wire) (Jumper Programmable)**

- [ ] **Optional Low Current Outputs Available (CN3 Pin 1 - 3 Amp (+) In) Harness Included. When Using Connector, CN1 (High Current Connector) Not Required.**

- [ ] **2nd RS232 Data Port (Grey CN6) Default DroneMobile Protocol w/Fortin Protocol Optional.**

- [ ] **Lock connector functions added to Connector 5 - 20 Pin Grey Harness**
Lock connector functions are now available via POC 3, 4 and 7. There is also a lock connector for FT-DM600/FT-DM700 on rear of Control Module. (CN11)

- [ ] **Built-In Blade Removal Tool**
(Located on bottom of Control Module) - Turn screw to eject Blade Module.

- [ ] **Tach learning procedure:**
Learn tach by: (1.) Starting the vehicle with the key, (2.) Press and hold the foot brake, then (3.) Activate the remote start sequence - one chirp and parking light flash indicates that the vehicle tach signal has been successfully learned. Three chirps and three parking light flashes indicate that the control module failed to see a proper tach signal. (These units have the option for Tachless and 3 second assume cranking).

Copyright 2016 Firstech, LLC.

Remote Programming Routine

IMPORTANT: Any and all remotes must be coded to the control module prior to performing any and all operations.

STEP 1: Activate programming mode by manually turning the vehicle's key between the Ign On and Off (or the Acc & On positions) five times within 10 seconds. The vehicle's parking lights will flash once with the successful completion of this step.

STEP 2: Within a 2 second period after the 5th ignition cycle tap Button I on two way remotes or the Lock button on one-way remotes for a half second. The parking lights will flash once to confirm the transmitter has been coded. Repeat for additional remotes, up to four. ***Note: if you only have 2 remotes please program each remote twice.***

*****parking lights will flash twice signaling the end of programming mode.***

****NEW****

Remote programming procedure: PTS (Push to Start vehicles) application

STEP 1: Make sure feature 2-15 (remote programming procedure) is set to option 2 for PTS programming procedure.

STEP 2: Set the vehicle to the ignition or "ON" position

STEP 3: Within 5 seconds push to the "OFF" position

STEP 4: Within 5 seconds set the vehicle to the ignition or "ON" position (do not start)

STEP 5: Step on the foot brake 3 times within 5 seconds *parking lights will flash 1 time to indicate remote programming is enabled

STEP 6: Tap (a quick 0.5 second press and release) the lock button on the remote * the parking lights will flash 1 time indicating the remote code has been accepted

STEP 7: After 10 seconds of no valid remote codes being transmitted the CM will automatically exit programming mode

Note: If no valid remotes are programmed the CM will enter valet mode.

Copyright 2016 Firstech, LLC.

Valet Mode

Valet Mode disables all system features except for the keyless entry. Use Valet when servicing or loaning your vehicle to others to avoid any inconvenience or mishap when operating the vehicle. There are no visual indicators when the security system is in Valet Mode. There is a parking light indication when remote starting in Valet Mode. (3 flashes followed by 10 flashes). Also when in Valet Mode, the keyless entry feature will still operate.

The system can be put into valet mode one of 4 ways:

1. While holding the foot brake (12V+ brake input), cycle the key to the Ignition or 'On' position and then back to the 'Off' position 5 times within 10 seconds. The parking lights will flash once indicating that the system has entered Valet Mode.

2. Turn the key to the Ignition or 'On' position then using a 4 button remote press and release the lock and trunk buttons together simultaneously for a half second. The vehicle parking lights will flash 1 time to indicate the system has successfully entered valet mode.

****NEW****

3. With feature 2-15 (remote programming) to set to option 2 (PTS option) the user may enter valet mode by performing the remote programming procedure and make sure there are no remotes transmitting.

Step 1: Set the vehicle to the ignition or "ON" position.

Step 2: Within 5 seconds push to the off position.

Step 3: Within 5 seconds set the vehicle to the ignition or "ON" position. (do not start)

Step 4: Step on the foot brake 3 times within 5 seconds *parking lights will flash 1 time to indicate programming is enabled.

Step 5: After 10 seconds the parking light will flash 2 times, indicating the system has entered valet mode

Copyright 2016 Firstech, LLC.

The System can be taken out of Valet mode by one of the following procedures:

1. **No Remote:** If there are no remotes or there are no remotes available you can exit Valet Mode by turning the key to the ignition or 'On' position then press and release the foot brake pedal 10 times within 10 seconds. This procedure will only deactivate Valet Mode it will not activate Valet Mode. The vehicles parking lights should flash 2 times to indicate the system has exited valet mode

2. **With Remote:** While within remote range of the vehicle, using a 4 button remote, press and release the lock and trunk button together simultaneously for a half second. The vehicle's parking lights will flash 2 times to indicate the system has exited Valet Mode.

   a. **When using a 1 button remote** to exit valet turn the key to the ignition or 'On' position. Press and release the remote button for a half second. Wait for the remote LED to stop flashing and repeat for a total of 5 times within 10 seconds. Once you have tapped the remote button 5 times the vehicles parking lights will flash 2 times to indicate the system has exited Valet Mode.

Placement and Use of Components

IMPORTANT: The placement and use of components are critical to the performance of this system.

Antenna and Cable

Firstech antennas are calibrated for horizontal installation at the top of the windshield. The cable that connects the antenna to the control module must be free from any pinches or kinks. Installing the antenna in areas other than the windshield may adversely affect the effective transmitting distance of the remotes.

RPS Touch and RPS (Remote Paging Sensor)

The RPS is an optional feature. The car call/RPS feature uses a small sensor that is mounted on the inside of your windshield.

1. RPS Touch (Remote Paging Sensor)

The new RPS touch has multiple features including: remote paging, 4 digit pin unlock/disarm, and arm/lock. All features are operated with a simple touch of the sensor. **Note: check feature 3-16 to make sure it is set to RPS touch setting. (default to RPS touch)**

RPS Touch and car call functions do not require programming, however in order to unlock/disarm your vehicle you must program a 4 digit passcode (numbers 1 through 10 only) you can view our video library for programming instructions at: www.firstechdata.com

Copyright 2016 Firstech, LLC.

Programming Your Code

STEP 1: Choose your RPS Touch 4 digit code. '0' is not available.

STEP 2: Turn ignition to the 'ON' position and leave driver's door open.

STEP 3: Hold your finger over the 'Red Circle' icon for 3 seconds.

STEP 4: When the siren chirps and LEDs flash in a circular pattern, tap on your first number. (Hold the number for 2.5 seconds to choose 6 through 10.) After choosing your first number you will get one siren chirp and LEDs will flash in a circular pattern.

STEP 5: Repeat Step 4 until all four digits are set. You will get 1 siren chirp and 1 parking light flash. Repeat Steps 2 - 5 if you get 3 chirps and light flashes. Your RPS Touch is now programmed.

Alarm rearm and lock

To rearm hold your finger on the 'Red Circle' for 3 seconds.

Alarm disarm and unlock

To disarm hold your finger over the 'Red Circle' for 3 seconds. Once the LEDs start their circular pattern, enter your 4 digit code by touching the window with the flat part of the tip of any finger over the number for each digit of your code. (Refer to Step 4 above or training video at www.firstechdata.com) Two seconds after entering the 4th digit, your system will first re-arm/lock. In two seconds, it will disarm/unlock.

2 Way LCD remote paging

To page a 2 Way LCD remote just tap the 'Red Circle' twice.

Touch Panel Sensitivity

To change touch sensitivity open the driver's door, hold the button on the back of the RPS Touch until the LEDs go out. Release button and tap again. The number of solid LEDs represent sensitivity of touch, 1 being the lowest, 5 the highest.

RPS Touch On or Off

You can turn the RPS Touch off from your remote. Just follow the instructions below:

STEP 1: Enter remote programming mode by holding down buttons 2+3 (Trunk and Key/Start buttons on 2W901R-SS) simultaneously for 2.5 seconds. The remote will beep once and the LCD or read "REMOTE MENU" indicating that you have entered programming mode.

Copyright 2016 Firstech, LLC.

STEP 2: Scroll through the remote options by taping button 3 or 4 (Function button 2W901R-SS). Once the LCD RPS icon flashes reads "RPS-ON" tap button 1 or (Lock button 2W901R-SS) to turn this feature on. The LCD will read "RPS-OFF"

STEP 3: Exit remote programming by holding down buttons 2+3 (Trunk and Key/Start 2W901R-SS) buttons simultaneously for 2.5 seconds. The remote will beep indicating that you have successfully exited programming.

RPS (Remote Paging Sensor) Unlock/Disarm

RPS and car call functions do not require programming, however in order to unlock/disarm your vehicle you must program a 4 digit passcode (numbers 1 through 10 only) using the instructions below:

STEP 1: Disarm/unlock the alarm (remote must be programmed first) and choose a 4 digit code. You can not have zeros.

STEP 2: Turn ignition key to the "on" position and leave the driver's door open.

STEP 3: Knock on the windshield in front of the RPS a total of 5 times (each time you knock the LED on the RPS will flash RED). The LED will begin to flash rapidly in BLUE with successful completion of this step.

STEP 4: Enter the first digit of the desired four digit pass code by knocking on the windshield in front of the RPS the desired number of times. For example, to enter 3, knock on the sensor 3 times (each time you knock the LED will flash RED) then wait.

STEP 5: The LED on the RPS will confirm your first number by flashing BLUE slowly. Once the LED begins to flash rapidly in BLUE, enter your second number by repeating step 4.

STEP 6: Repeat steps 4 & 5 to enter all four numbers.

STEP 7: Turn the ignition OFF - the RPS disarm/unlock passcode is now programmed. Follow steps 3 – 5 to enter your disarm/unlock code.

Alarm rearm and lock

To rearm, knock on your sensor 5 times.

Alarm disarm and unlock

To disarm, knock on your sensor 5 times. Wait for the Blue LEDs to flash rapidly. Follow STEP 4 and 5 above to enter your 4 digit passcode.

2 Way LCD remote paging

To page a 2 Way LCD remote just knock on the RPS twice.

Copyright 2016 Firstech, LLC.

Knock Panel Sensitivity
To change knock sensitivity, disarm the system and adjust the switch on the rear of the RPS. The larger the circle, the more sensitive the knock sensor is.

FT-DAS (Digital Adjustable Sensor) (Not Programmable with OEM Remotes)
The DAS sensor monitors sudden movement forward or backward during the remote start process when starting a manual transmission vehicle. It also includes a dual stage impact sensor, and auto adjusting tilt sensor. Follow the steps below to properly setup your DAS sensor. You can view our programming/ demonstration video located in our video library at www.firstechdata.com.

Installing Your DAS
STEP 1: Make sure Option 4-12 is set to the DAS option. (Default is DAS option 1)
STEP 2: Set switch 1 and 2 on the side of the DAS. *See below for explanation of switches.
STEP 3: Connect cable to the red 4 pin port on the CM7 Series module.
STEP 4: Mount DAS securely using zip ties or included hardware. Can be mounted in any orientation. Tilt will set 30 seconds after arming.

Switch 1:	ON - 3 Degree Tilt	Switch 2:	ON - 4 Inch Movement
	OFF - 1.5 Degree Tilt		OFF - 3 Inch Movement

Adjusting DAS Shock Sensitivity (CM7000, *CM7200, CM6300)
STEP 1: Turn the ignition to the 'on' position. ***(CM7200: Feature 3-06, FO2 must be selected)**

STEP 2: 2 Way remotes-hold buttons 1 and 2 (Lock and Unlock) for 2.5 seconds. You will get two parking light flashes. 1 Way remotes-hold Lock and Unlock for 2.5 seconds. You will get two parking light flashes.

STEP 3: To set the Warn Away Zone 1, (2way LCD) tap lock or button I. (1 Way) tap Lock. After you get one parking light flash, proceed with impact testing on the vehicle. **Note: please be careful as not to damage the vehicle during the sensitivity adjustments.** You will get siren chirps 1-most sensitive (lightest impact to the vehicle requiring the least amount of force to trigger warn away) through 10-least sensitive (heaviest impact to the vehicle requiring more force to trigger warn away). This sets the impact sensitivity of Warn Away Zone 1. **Setting Zone 1 will automatically set Zone 2. If you would like to manually set Zone 2 proceed:**

a. To set Instant Trigger Zone 2, tap button 2. (1 Way: Unlock) After you get two parking light flashes, tap the vehicle. You will get siren chirps 1-most sensitive through 10-least sensitive. This sets the impact sensitivity of Instant Trigger Zone 2.

STEP 4: Once you get two parking light flashes, you are ready to test your DAS.

Copyright 2016 Firstech, LLC.

NEW **Optional DAS Shock Sensitivity setting Procedure (CM7000, *CM7200)

STEP 1: Turn the ignition to the 'on' position

STEP 2: Hold Foot Brake (make sure the CM sees a valid foot brake input)

STEP 3: Tap Lock 3 times from any Firstech remote (including 1Button remotes)

STEP 4: Release Foot Brake *Parking lights will flash 2 times confirming DAS is in programming mode

STEP 5: The CM will chirp/honk/flash (1-10 times) indicating the current sensitivity level

STEP 6: Using any Firstech remote tap lock or unlock 1 time to increase or decrease 1 level of sensitivity (up to 10 (least sensitive) or down to 1 (most sensitive)) which should be confirmed by chirps/horn honks/flashes
*repeat this process until desired sensitivity level has been reached

a. Example 1. Current sensitivity level is 4, we send 1 lock we should receive 1 chirp or 1 horn honk after 1 second of no incoming commands
b. Example 2. Current level is set at 4, we send lock + lock + lock, after 1 second of no incoming commands we should receive 3 chirps or horn honks
c. Example 3. Current level is now set at 7, we send unlock + unlock, after 1 second of no incoming commands we should receive 2 chirps/horn honks/park light flashes

STEP 7: 5 seconds after the last setting change confirmation the CM will chirp/horn honk/flash the sensitivity level *you will have an additional 5 seconds to make any adjustments

STEP 8: Programming completed.

STEP 9: You are now ready to test the DAS

Testing The DAS Sensor

STEP 1: Turn the ignition off and Arm/Lock the system.

STEP 2: Wait 30 seconds then test the impact sensitivity.

Copyright 2016 Firstech, LLC.

FT-EZGO Setup

The FT-EZGO from Firstech will unlock/disarm the vehicle when in range. It is capable of proximity lock/arm and unlock/disarm when in or out of range off the vehicle. There is a manual override button located on the back of the EZ-GO remote. It will lock/arm, unlock/disarm by press and releasing the button for ½ of a second (0.5 seconds). It will also trigger the trunk release output by press and releasing the button for ½ second (0.5 seconds) then holding for 2.5 seconds.

Installing The FT-EZGO

STEP 1: Set Option 1-14 to Setting 2, 3 or 4

STEP 2: Connect included Blue 6 Pin (With Ground Wire) to Black 6 Pin to control module. If connecting to a 4 Pin to 4 Pin antenna, use the included 6 Pin to 4 Pin adapter.

STEP 3: Connect the ground wire from the included 6 Pin to 6 Pin cable to vehicle's ground. ***Warning: Failure to connect this wire WILL result in damage to your FT-EZGO antenna (ANT-RFID).***

STEP 4: If you are using an additional RF kit the antenna cable will connect to the blue 6 pin connector on the EZ-GO antenna either directly or using the 6 to 4 pin adapter harness included with the EZ-GO kit.

STEP 5: Find a spot to mount your ANT-RFID on the windshield. This is recommended for optimum range. For more specific mounting location information visit us at www.firstechdata.com under the Authorized Tech section document titled: "FT-EZGO Recommended Mounting Locations."

STEP 6: Program your EZ100-R using the standard remote programming procedure along with any additional RF Kit remotes to the control module (Maximum 4 Remotes including EZ100-R). You are now ready to test your FT-EZGO system.

Testing The FT-EZGO

STEP 1: Turn the proximity lock/unlock feature on by holding the button on the EZ100-R for 8-10 seconds. You will get one parking light flash and/or siren chirp. To deactivate the proximity feature simply hold the button again for 8-10 seconds and you will get two parking light flashes and/or chirps to indicate your feature is off.

Copyright 2016 Firstech, LLC.

STEP 2: Proximity locking/unlocking-The main control module will monitor all of the zone inputs that are connected analog or data. In order for the proximity Lock/arm function to work all zones must be closed and ignition off. Once the EZGO remote leaves the proximity of the antenna it will lock/arm within 15 seconds.
a. the proximity unlock feature will unlock the doors as soon as its within proximity of the EZGO antenna once the system has proximity locked.

STEP 3: Proximity unlock- Once the system is locked/armed using a remote, Drone, arm/lock input, RPS, or passive locking feature, allow 15 seconds for the EZGO remote to unlock/disarm the system once its within proximity of the EZGO antenna. I.e. Arm the system wait 15 seconds walk up to the vehicle and it will automatically unlock/disarm.

Siren

We include the standard 6 tone mini siren with every remote start security (AS) kit. We also offer 2 additional siren options 1. Mini Piezo (pain generator) 2. Battery backup siren with key. We have a variety of siren feature options including length of output time, chirp output timing (i.e. when locking, unlocking, or starting) so please make sure to set features 3-02 and 3-09 to desired options.

Thermister (Temperature Sensor)

Every 2 Way LCD Firstech RF kit includes an optional thermister, which must be plugged into the blue 2 pin port of the CM7 in order to use properly. The use of the thermister allows the 2 Way LCD remote to display the vehicle's interior temperature on screen or the status page of your Drone mobile phone App. (only when premium service is active). The thermistor will also allow for the vehicle to start with timed hot or Cold starting; see features 2-05, 2-07 and 2-08 for the different options. **IMPORTANT:** The 2 pin connector on the end of the thermister may be white or blue.

Hood Pin

The hood pin switch triggers the alarm in the event the hood is opened while the alarm is armed. The hood pin doubles as an important safety feature that prevents the remote start from engaging while the hood is open.

Common Procedures

Jumper Settings

Caution: Jumper settings affect the polarity and use of certain outputs. If these jumpers are used incorrectly, damage to the vehicle and /or control module may occur.

Jumper 1 (Door Trigger Polarity)

Determines the polarity of the door trigger input wire (red/white). In the default position the door trigger registers negative (-) triggers. To change to a positive (+) trigger, move the jumper.

Copyright 2016 Firstech, LLC.

Jumper 2 (2nd Ignition / 2nd Starter / 2nd Parking light)
Jumper 2 sets the behavior of the large blue wire on Connector 1. This wire is powered by an internal relay in the control module. In the default position the jumper is set to 2nd Ignition. 2nd Ignition is common on GM and Toyota vehicles and will need to be powered. You can change the behavior of the wire to act as a 2nd Starter or 2nd Parking light to power up those wires common on newer Toyotas and Nissans.

Jumper 3 (Parking Light, 2nd Starter, or (+) Trunk Release)
Determines the output (not polarity) of the green/white wire on connector one (CN1). In the default position it provides a positive (+) parking light output. Additional jumper settings (including Positive (+) 2nd Starter, or positive (+) trunk output) can be selected by moving the jumper positions.

Jumper 4 (Accessory, 2nd Ignition, 2nd Starter)
This Jumper offers additional high current output options using the default Accessory wire on connector one (CN1 white wire). When selected, this wire provides additional positive (+) Ignition or Starter output instead of Accessory.

Setting Auxiliary Outputs on Connector 2
You Must Have the OP500 Option Programmer
Setting auxiliary outputs on the control module involves the Programmable Output Connector wires (POCs). Choose two odd pin wires that you are not using on the grey 20 pin connector. For example we will use POC 7 and 8.

STEP 1: Plug in OP500 and use the Right or Left Arrow Button to scroll through the menu to POC 7 and POC 8 on LCD Line 1.

STEP 2: Use the Up or Down Arrow Button to change the lower number on LCD Line 2 to 10 – Auxiliary 1 or 11- Auxiliary 2.

STEP 3: Scroll up the menu to Option 4-01 and 4-02 and set the options. Please see the Option Table for details.

STEP 4: Our control modules have a secure auxiliary option 4-05. This requires you to tap the Start Button before you tap the Trunk Button for Aux 1 or Hold Trunk + Start for 2.5 an then tap Trunk for Aux 2. On 1-Way remotes you must hold the Trunk and Start Buttons for 2.5 seconds then tap the Trunk Button for Aux 1 or the Start Button for Aux 2.

STEP 5: If you need to change the time settings of the outputs, scroll down to AU1 or AU2 on the OP500. LCD Line 2 is the timed output. **Note: with an OP500 update (www.firstechdata.com) you will now be able to allow for timed AUX outputs of up to 15 minutes.**

STEP 6: Hold the "W" Write button for 3 seconds to set all the options.

Copyright 2016 Firstech, LLC.

Tach Sensing

The default engine sensing mode is tach. In cold weather climates we recommend using an injector wire verses a computer "data" signal, or a coil wire for tachometer sense. **IMPORTANT:** The remotes must be coded prior to programming tach. Firstech recommends using a digital multimeter when testing for tach.

STEP 1: Start the vehicle with the key. Allow time for the engine to idle down. (If you do not want to wait for the vehicle to idle down, you can shift the vehicle into reverse while holding your foot on the brake.)

STEP 2: Test wire and make connection. At idle, the tach wire should test between 1 to 4 Volts AC. As the vehicle RPM's increase the voltage on the meter will also increase. Always make a wire to wire connection for tach.

STEP 3: Learn tach: Start the vehicle, hold the foot brake and activate the remote start by holding the Start Button for 3 seconds. The parking lights will flash once and the siren will chirp once to confirm a good tach signal. If the parking lights flash 2 times and the sirens chirps twice, this indicates the tach did not learn. A few seconds after the 2 flashes, the CM7 will flash parking lights to indicate the tach learn error.

Number of Parking Light Flashes	Tach Error
1	Option 2-10 is not in default setting 1
2	Key is in the off position
3	Bad tach signal. Find a different wire.

NEW "EZ TACH" programming procedure

STEP 1: Hold the foot brake (must be held down before vehicle is on)

STEP 2: Start the vehicle (with foot brake still held down)

STEP 3: Wait 30 seconds (with foot brake still held down) for the CM to capture the engine running tach signal. The CM will flash the parking lights 1 time after 30 seconds to indicate it has captured a good tach or engine running signal. If there is no or poor signal the CM will flash the standard tach programming diagnostics as shown above.

STEP 4: Programming complete

Alternator Sensing

Alternator sensing is another method the remote start can utilize to determine if the engine is running. This is different than the tachless mode and a wire to wire connection must be made. **IMPORTANT:** The remotes must be coded prior to setting up alternator sensing.

Copyright 2016 Firstech, LLC.

STEP 1: Change Option 2-10 to setting 2 - Alternator sensing.

STEP 2: Test wire and make connection. The stator wire is found at the vehicle's alternator. Change your multimeter to DC voltage before testing for this wire.
A. At rest, with the ignition off, the stator wire should test 0V DC.
B. Turn the ignition to the run position. The stator wire should now test between 4 – 6V DC.
C. Start the vehicle with the key. The stator wire should now test between 12 – 14V DC at idle.

STEP 3: Process complete – no further programming is required.

Tachless Mode – (Automatic Transmission Vehicles Only)

Tachless sensing is an alternative engine sensing mode. It does not require a connection to the vehicle other than the main ignition harness. **Note: due to the delayed peak charging found with most late model computer controlled alternators, this feature may not be reliable.**

STEP 1: Change Option 2-10 to setting 3 – Tachless Mode.

STEP 2: Process complete – there is no further programming required other than adjusting crank time when necessary (see below).

Adjusting Crank Time: To adjust minimum crank times, refer to Option 2-12. To help ensure successful starting, the system will automatically add additional crank time to the 2nd and 3rd start attempts. In addition, there is a built in "Smart Resting Mode". Traditional tach sensing is still highly recommended for colder climates.

Timed Crank Setting – Automatic Transmissions Only
Option 2-10 setting 4 provides a timed 3 second crank for the remote start sequence. This option just cranks the vehicle for 3 seconds and assumes remote start has completed. This option can be used for GM and other vehicles with built in anti-grind systems.

Advanced Tachless

Advanced Tachless is a no connection feature (2-11 option 2) that can be used as a more reliable "tachless" or no wire connection option. In order for this feature work the no connection "voltage sense" feature (2-10 option 3) must be selected and no tach signal input on the main control module should be present.

Assumed Timed Crank

Assumed Time Crank is the last feature of Option 2-10 for remote starting. This is intended for vehicles with built-in anti-grind feature or vehicles that do not have a 12V Positive starter wire at the ignition harness. This option will send a 3.0 second crank signal to the vehicle. This option can be used on vehicles with built in anti-grind systems or Push To Start (PTS) systems.

Copyright 2016 Firstech, LLC.

Green/White Loop
This loop wire determines the transmission setting. The default position (uncut loop) is for manual transmissions. When the loop is cut, the system will be ready for automatic transmissions. In the default (manual transmission) mode, the system must be set up in Reservation mode prior to the vehicle being able to remote start. **IMPORTANT:** All warranties or claims are void if a controller with a cut loop is installed on a vehicle with a manual transmission.

Reservation Mode for Manual Transmissions
To remote start a manual transmission vehicle, the system must first be set up in reservation mode. Reservation mode is designed to prevent the vehicle from remote starting while the transmission is in gear.

Installation Requirements

1. FT-DAS (Digital Adjustable Sensor) must be connected.

2. The vehicle's door triggers must be connected to the control module. Prior to making final connections, test the factory door triggers to ensure that they are functioning properly.

3. The vehicle's emergency/parking brake wire must be connected to the control module. The proper vehicle wire usually provides a negative (-) trigger while the emergency / parking brake is set.

4. The vehicle's clutch must be temporarily bypassed **ONLY** when the remote start cranks the engine. This bypass simulates the clutch being depressed. For complete details on how to wire a momentary clutch bypass visit www.firstechdata.com or contact our technical support department by calling 888-820-3690.

IMPORTANT: Do not install a remote start in manual transmission vehicles with convertible / removable tops and in user's vehicles that leave their windows down. Firstech or their authorized dealers will not assume any responsibility for improper use or install.

Activating Reservation Mode

STEP 1: Start the vehicle with the key. Place the transmission in neutral, remove pressure from the foot brake, and set the emergency/parking brake.

STEP 2: Remove the key from the vehicle's ignition. The vehicles engine should remain running even after the key has been removed. If the vehicle does not remain running, check the emergency / parking brake connection and your tach connection.

STEP 3: Exit the vehicle and close the door. The vehicle's engine should shut off upon closing the door. If the vehicle's engine does not shut off, check the door trigger connection or wait for the factory dome-light to go out. The Firstech system is in reservation mode and the vehicle is ready to safely remote start.

Copyright 2016 Firstech, LLC.

Additional Notes
Reservation mode will be cancelled if the control module recognizes the vehicle's door, hood or trunk opening – or if the alarm is triggered. Each time the end user wants to remote start their manual transmission vehicle, they must set the control module in reservation mode. Reservation mode settings can be programmed with Option 1-06.

Version Diagnostics
All the new control modules come with the ability to check which firmware is on the module. This is accomplished by turning the ignition on. Then with 1 and 2 Way remotes, you must hold Lock and Start together for 2.5 seconds. Current version starts with 1 flash.

Blade Cartridge Slot and Connector
CM7000, CM7200, and CM6300 slot gives you the ability to use the Blade-AL and Blade-TB modules from Firstech and ADS. With these modules you can virtually eliminate all wire connections between your control module and bypass module. You only need to connect the main ignition harness and needed from the Black 20 pin Blade connector that may be required according to the vehicle specific Blade installation guide. For more information on how to program and wire the Blade, please visit compustar.idatalink.com for the specific wiring diagram for that vehicle. **Note: the CM7 has a "Blade Eject" dial on the bottom of the control module that may be turned using a coin or flat tip tool to assist with Blade removal.**

The CM7 Series Blade connector has a locking tab. **Non-locking tab blade harnesses will work but you MUST TAKE CARE TO NOT PLUG THE HARNESS IN UPSIDE DOWN.** Make sure the two notches on the top of the harness face the top (CM and barcode sticker side) of the brain. When looking at the wire side of the harness the two notches must be at the top of the plug.

Blade system includes:
1. Blade-AL or Blade-TB (NOTE: These modules are blank and must be flashed on your computer.)
2. 20 Pin locking wiring harness
3. 3 Pin harness used in some installs

IMPORTANT: Install diagrams are not included and must be downloaded from compustar.idatalink.com when flashing the Blade you can use the Y-Cable OP500 (gold tag) end and not CM4 Series (silver tag) end. ADS and Firstech recommends using the 4 pin RS232 cable to avoid confusion. Cartridge must be removed to if the CM7 is being updated with a Firstech updater program from www.firstechdata.com

WARNING: Manufacturer or seller assumes no responsibility for any injuries and/or damages caused by improper care of the product such as decomposition, conversion, and transform done by a user voluntarily.

WARNING: There should be no wiring routed around any pedals which can cause a driving hazard.

Copyright 2016 Firstech, LLC.

Wiring Descriptions

Connector 1 (CN1), 8-Pin

Pin 1 **Red** - Constant 12V positive (+) power input. This wire must be connected. The proper wire will test (+) 12V at all times, even when the key is in the off position, on position, and during crank.

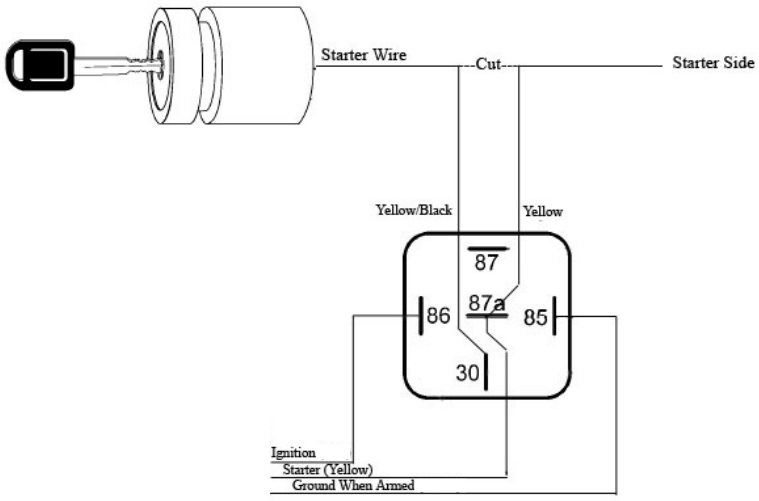
Pin 2 **Green/White - Programmable Output:** This positive (+) parking light wire triggers when you lock, unlock, remote start, or during troubleshooting diagnostics. **Note: This output is programmable and can provide a 2nd starter or (+) trunk release output. This is achieved using Jumpers located under the access door on top of the control module.**

Pin 3 **Red/White** - Constant 12V positive (+) power input. This wire must be connected it provides power for the accessory and starter output. The proper vehicle wire will test (+) 12V at all times - while the key is in the off position, the on position and during crank.

Pin 4 **White - Programmable Output:** Accessory 12V positive (+) output. This wire must be connected to the vehicle accessory / HVAC blower motor wire. The proper wire will test 0V with the key in the off position, (+) 12V while key is in the on position, 0V while cranking and back to (+) 12V when the key is returned to the on position. **Note: This output is programmable and provides a (+) 2nd ignition or (+) 2nd Starter using the jumpers located under the access door on top of the control module.**

Pin 5 **Blue - Programmable Output:** Positive 12V (+) output that powers up during remote start. This output is programmable to provide a (+) 2nd ignition (**default jumper setting**), (+) 2nd Accessory, or (+) parking light output using the jumpers located under the access door on top of the control module.

Pin 6 **Yellow** - Starter 12V positive (+) output. This wire must be connected for remote start. The proper wire will test 0V with the key in the off position, 0V while the key is in the on position and (+) 12V during crank. **Note: You must purchase the FT-ELOCK for starter kill and anti-grind features. It can be used to configure the starter interrupt in various ways. We provide a GWA (Ground When Armed) output for standard starter interrupt (Blue/White Pin 1 Grey 20 pin accessory harness)**



Copyright 2016 Firstech, LLC.

Pin 7 **Green** - Ignition 12V positive (+)
output and input. This wire must be connected to the vehicle's ignition for remote start and valet / remote programming. The proper wire will test 0V with the key in the off position, 12 V (+) while the key is in the on position and 12V (+) during crank.

Pin 8 **Black** - Ground negative (-) input. This wire must be connected to the vehicle's chassis ground. Make sure no paint or rust is on the mounting surface. We recommend connecting this wire before the others.

Connector 3 (CN3), 6-Pin: Low Current power harness
NOTE: This is a low current power harness and is NOT to be used in addition to CN1 (the high current power harness) this is ONLY to be used in LOW current applications where High current is not needed for any reason.

Pin 1 **White:** Accessory 12V positive (+) output. This wire must be connected to the vehicle accessory. The proper wire will test 0V with the key in the off position, (+) 12V while key is in the on position, 0V while cranking and back to (+) 12V when the key is returned to the on position. Note: this is a low current accessory output will not support more than 1A (+)

Pin 2 **Red:** Constant 12V positive (+) power input. This wire must be connected. The proper vehicle wire will test (+) 12V at all times while the key is in the off position, the on position, and during crank. Note: this is a LOW current 12v input and can only support up to 3A. (+)

Pin 3 **Yellow:** Starter 12V positive (+) output. This wire must be connected for remote start. The proper wire will test 0V with the key in the off position, 0V while the key is in the on position and (+) 12V during crank. Note: this is a LOW current (+) starter output and will not support more than 1A (+).

Pin 4 Not Used

Pin 5 **Green:** Ignition 12V positive (+) output and input. This wire must be connected to the vehicles' ignition for remote start and valet / remote programming. The proper wire will test 0V with the key in the off position, 12 V (+) while the key is in the on position and 12V (+) during crank. Note: this is a low current ignition output and will not support more than 1A (+)

Pin 6 **Black:** Ground negative (-) input. This wire must be connected to the vehicles ground (preferably before any other connection). Note: this is a LOW current ground input and can only support up to 3A

Connector 4 (CN4), Black 20-Pin: Blade Connector
This connector is used only if you are installing a Blade-AL or Blade-TB. The wiring harness for this connector only comes with the Blade cartridge. Please refer to the Blade install guide for wire description compustar.idatalink.com. The CM7 Series Blade connector has a locking tab however the Non-locking tab blade harnesses will work but you MUST TAKE CARE TO NOT PLUG THE HARNESS IN UPSIDE DOWN. Make sure the two notches on the top of the harness face the top (CM and barcode sticker side) of the brain. Looking at the wire side of the connector the two notches must be at the top of the plug to line up properly.

Copyright 2016 Firstech, LLC.

Connector 5 (CN5), Grey 20-Pin: Programmable Output Channel (POC)
IMPORTANT: Odd Pin numbers 1-15 are programmable for up to 28 different output types. Refer to Special Option Group 2 for complete details. Even numbers pins 2-20 do offer 4 PIC (programmable input channels) features that are selectable using the OP500 updater. **Note: These inputs/outputs are subject to change, for the latest software update and feature table please visit compustar.idatalink.com or www.firstechdata.com**

Pin 1 **Blue/white** - [POC 1] GWA: 250mA negative (-) output when armed and during remote start (while running). This wire is pre-wired to the anti-grind/starter-kill relay. Caution: When this wire is being used to trigger aftermarket accessories it must be diode isolated. **Note: There are 28 additional POC setting options for this POC.**

Pin 2 **Brown** - Siren: 1A (+) output can be connected to the positive lead of an aftermarket siren.

Pin 3 **White** - [POC 2] Horn:250mA negative (-) output. This is an optional output that will provide a fixed 30mS negative output when triggered by the remote(s). The output control is based on feature 3-08 option setting. **Note: There are 28 additional POC setting options for this POC.**

Pin 4 **Light Blue/White** - Brake 12V positive (+) input: This wire must be connected as it provides a shut down for the remote start. It is also required to enter and exit Valet Mode. The proper wire will test (+) 12V while the foot brake is pressed.

Pin 5 **Blue/Lt. Green** - [POC 3] Lock 250mA (-) negative output: This is an optional output that will provide only negative (-) output pulse for locking doors. System will lock doors and arm alarm. IMPORTANT: You must reverse polarity for (+) trigger door lock systems using the FT-DM700, FT-DM600 or relays. For additional lock settings review Option Group 1. **Note: There are 28 additional POC settings for this POC.**

Pin 6 **Light Blue** - [PIC 1] Parking / Emergency brake negative (-) programmable input: This input is required for manual transmission/reservation and Turbo Timer mode. The proper e-brake wire will provide a (-) trigger when parking / emergency brake is set and the key is in the ignition or "on" position. This wire or input is required for manual transmission and turbo timer mode. **There are additional options for this PIC.**

Pin 7 **Blue** - [POC 4] Unlock 250mA (-) negative output: This is an optional output that will provide only a negative (-) output pulse for unlocking doors. System will unlock doors and disarm alarm. IMPORTANT: You must reverse polarity for (+) trigger door lock systems using the FT-DM700, FT-DM600 or relays. For additional lock settings review Option Group 1. **Note: There are 28 additional POC setting options for this POC.**

Pin 8 **Violet/Black** - [PIC 2) Trunk zone input (-) programmable input: This is an optional input that will monitor when the vehicle's trunk has been opened. The proper wire will provide a (-) trigger while the trunk is open. **There are additional options for this PIC.**

Copyright 2016 Firstech, LLC.

Pin 9 **Orange/White** - [POC 5] Factory Alarm Disarm (FAD) 250mA negative (-) output: This output will provide a (-) pulse during unlock and every time prior to the GWR (ground when running: aka. Status output) turning on during the remote start sequence. It is typically used to disarm factory security systems. **Note: There are 28 additional POC setting options for this POC.**

Pin 10 **Red/White** - Door zone input (-/+) Jumper programmable polarity: This wire monitors negative (-) or positive (+) trigger door-pins. The proper wire will provide a (-) trigger or a (+) trigger only when the doors are opened. You will need to test the wire for proper polarity and set the jumper on the control module for the corresponding polarity. **IMPORTANT: This wire is required for manual transmission remote starts.**

Pin 11 **Orange** - [POC 6] Factory Alarm Arm (FAA) 250mA negative (-) output: This is an optional output that will provide a (-) pulse during lock, after crank and again after the ignition shuts down. The FAA output can be configured using feature 1-05. **Note: There are 28 additional POC setting options for this POC.**

Pin 12 **Brown/White** - [PIC 3] Key Sense INPUT (-) programmable input: This input can monitor the keysense provided by the vehicle for manual transmission reservation mode, use of EZGO and/or Passive arming. **There are additional options for this PIC.**

-In case of reservation mode for manual transmission the keysense input will not allow the CM7 to complete reservation mode until the (-) input to the CM7 is removed.

-In case of EZGO the CM7 will monitor all of the Input zones including the (-) keysense input to make sure the (-) input is removed before it will allow it to proximity lock.

-In case of passive arming the CM7 will monitor the keysense input and not allow the CM7 to arm/lock passively until (-) input is removed.

Pin 13 **Violet/White** - [POC 7] Trunk release 250mA negative (-) output: This is an optional output that will release the trunk. Use CN1, Pin 2 if the vehicle is equipped with a (+) trunk release. System will unlock doors and disarm alarm prior to trunk release (this procedure is programmable with feature 1-07 and the output time can be changed using feature 1-15). **Note: There are 28 additional POC setting options for this POC.**

Pin 14 **Pink** - [PIC 4] Trigger Start (+) programmable input. This is an input (+) that can be used to activate the start sequence when triggered 1, 2, or 3 times based on option selected on feature 2-04. This can be done with a door lock motor output being operated by a factory keyless entry or another external source. **There are additional options for this PIC please check feature 4-10.**

Copyright 2016 Firstech, LLC.

Pin 15 **Black** - [POC 8] Status/Ground while running (GWR) 250mA negative (-) output: This is an optional output that will provide a negative (-) output 250mS before the ignition turns on, stays on throughout the remote start duration and will be the last to shut off. This wire is most commonly used to trigger bypass / transponder modules. **Note: There are 28 additional POC setting options for this POC.**

Pin 16 **Gray/Black** - [PIC 5]Hood Pin negative (-) input: This input is a safety shut down and alarm trigger. It prevents the vehicle from remote starting while the hood is open and triggers the alarm if the hood is opened while the alarm is armed. You can connect this wire to the hood pin supplied with this kit, or to a wire in the vehicle that shows (-) only while the hood is open. **There are additional options for this PIC, please check Special Options Group 3.**

Pin 17 **Green/White** - (fixed output) Parking light 250mA negative (-) output. This will provide output whenever the parking lights are activated for lock, unlock, remote start, diagnostics, and programming The proper wire in the vehicle will test (-) when the parking light switch is in the on position.

Pin 18 **Yellow/Black** - Engine sensing input (A/C): This wire is connected to the vehicle's Tach or Alternator wire and is required when using the tach and alternator sense setting. (You can also connect this wire to the battery (+) post when using voltage sense to make it more accurate) IMPORTANT: To change engine-sensing modes, you must change Option 2-10; Default option is set for tach input.

Pin 19 **Red/Black** - (fixed output) 2nd Starter output 250mA negative (-) output. This output provides a (-) negative start output during the crank period of the remote start process.

Pin 20 **White/Black** - (fixed output) 2nd Accessory 250mA negative (-) output. This output provides a (-) negative accessory output that will drop out during the crank period of the remote start process.

Connector 6 (CN6), Grey 4 Pin (UART data port) **NEW: Drone/Fortin data to data only

Pin 1 **(B+)** - Constant 12V positive (+) output

Pin 2 **(B-)** - Ground (-) output

Pin 3 **(RX)** - Input, this wire receives data

Pin 4 **(TX)** - Output, this wire transmits data

Connector 7 (CN7), Black 4-Pin (RS 232 Data Port) ADS/Drone data to data

This connector is used for updating control modules via www.firstechdata.com. You must also use this port to flash Blade bypass modules. This port provides simple connectivity of DroneMobile and iDataLink bypass modules.

This port is also used to communicate with DroneMobile controllers. Make sure to use the data port from the DroneMobile unit to this RS232 port.

Copyright 2016 Firstech, LLC.

Pin 1 **(B+)** - Constant 12V positive (+) output

Pin 2 **(B-)** - Ground (-) output

Pin 3 **(RX)** - Input, this wire receives data

Pin 4 **(TX)** - Output, this wire transmits data

Connector 8 (CN8), 2-Pin (Pre-wired Thermister)
Plug optional thermister into this connector to monitor the vehicle's temperature. It used in conjunction with Timer Start features along with displaying temperature on two-way LCD's. To use Timer Start features review Option Group 2. **IMPORTANT:** Thermister plugs are blue 2 pin connectors on the CM6 series but old white plug Thermisters will still work.

Pin 1 **Black** - Thermister

Pin 2 Black/White - Thermister

Connector 9 (CN9), 4-Pin to 4-Pin or 6-Pin (Pre-wired Antenna Cable)

Connect your antenna cable to this port. You can only use 4 to 4 pin or 4 to 6 pin antenna cables. 6 to 6 Pin antenna cables do not work. Do not use both Connector 9 and Connector 10 at the same time.

Pin 1 Yellow - RX input. This wire receives the signal from remote.

Pin 2 White - TX output. This wire transmits the signal to remote.

Pin 3 Red - Constant 12V positive (+) output.

Pin 4 Black - Ground

Connector 9 (CN9), 4-Pin to 4-Pin or 6-Pin (Pre-wired Antenna Cable)
Connect your antenna cable to this port. You can only use 4 to 4 pin or 4 to 6 pin antenna cables. 6 to 6 Pin antenna cables do not work. Do not use both Connector 9 and Connector 10 at the same time.

Pin 1 **Yellow** - RX input. This wire receives the signal from remote.

Pin 2 **White** - TX output. This wire transmits the signal to remote.

Pin 3 **Red** - Constant 12V positive (+) output.

Pin 4 **Black** - Ground

Copyright 2016 Firstech, LLC.

Connector 10 (CN10), 6-Pin to 6-Pin (Pre-wired Antenna Cable)
Connect your antenna cable to this port. You can only use 6 to 6 pin antenna cables. 4 to 4 or 4 to 6 Pin antenna cables do not work. **Do not use both Connector 9 and Connector 10 at the same time.**

Pin 1 **Red** - Constant 12V positive (+) output.

Pin 2 **White** - TX output. This wire transmits the signal to remote.

Pin 3 **Orange** - Constant 5V output

Pin 4 **Yellow** - RX input. This wire receives the signal from remote.

Pin 5 **Black** – Negative (-) ground.

Pin 6 **Blue** - RX/TX control

Connector 11 (CN11), 6-Pin
Note: This harness is no longer included with CM7 wire harness kits. The Lock (POC 3), Unlock (POC 4), Trunk (POC 7) release outputs have been moved to CN5 (Grey 20 pin accessory harness) and are now programmable outputs. This connector will still be available for any Firstech lock harness. (FT-DM600 or FT-DM700)

Pin 1 None - 12v B+ constant output: available when using a Firstech door lock Module DM600, DM700

Pin 2 **Violet/White** - Trunk release 250mA negative (-) output: This is an optional output that will release the trunk. Use CN1, Pin 2 if the vehicle is equipped with a (+) trunk release. System will unlock doors and disarm alarm prior to trunk release.

Pin 3 **Orange/Black** - 2nd Unlock 250mA negative (-) output: This is an optional output that will provide a (-) pulse for driver's priority door lock. IMPORTANT: You must isolate the driver's door and set feature 1-03 to option 2 (on).

Pin 4 **Blue** - Unlock 250mA negative (-) output: This is an optional output that will provide a (-) pulse for unlocking doors. System will unlock doors and disarm alarm. IMPORTANT: You must reverse polarity for (+) trigger door lock systems. For additional lock settings review Option Group 1.

Pin 5 **Blue/Black** - Lock 250mA (-) negative output: This is an optional output that will provide a (-) pulse for locking doors. System will lock doors and arm alarm. IMPORTANT: You must reverse polarity for (+) trigger door lock systems. For additional lock settings review Option Group 1. Pin 6 not used.

Pin 6 None - B- ground output: available when using a Firstech door lock Module FT-DM600, FT-DM700

Copyright 2016 Firstech, LLC.

Connector 12 (CN12), 2-Pin (Pre-wired LED) **WHITE connector Note: Do not mistake for Thermistor port. Note: The LED will stay solid blue when armed for the duration of the sensor set up time. (Approx. 25 seconds)
Pin 1 **Black** - L.E.D negative (-) ground.

Pin 2 **Black/White**- L.E.D. 2.5V positive (+) output.

Connector 13 (CN13), 4-Pin (Pre-wired RPS Touch or RPS 2)
Pin 1 **Black** - Negative (-) ground.

Pin 2 **White** - Negative (-) paging input.

Pin 3 **Red** - 12V positive (+) output.

Pin 4 **Yellow** - 9V positive (+) L.E.D. output.

Connector 14 (CN14), 4-Pin (Pre-wired DAS Sensor)
Pin 1 **Black** - Negative (-) ground when armed (GWA).

Pin 2 **White** - 2nd stage negative (-) input. (Instant trigger)

Pin 3 **Red** - 12V positive (+) output.

Pin 4 **Yellow** - 1st stage negative (-) input. (Warn away)

Copyright 2016 Firstech, LLC.

Option Programming Tables

Option Group 1					
	Feature	**Default Setting - I**	**Optional Setting - II**	**Optional Setting - III**	**Optional Setting - IV**
1-01	Unlock before, Lock after, starting	Off	On	Lock After Remote Start Only	Lock After Shutdown Only
1-02	Lock / Unlock pulse duration	0.8 sec	2.5 sec	0.125 sec	3.5 sec
1-03	Driver's priority unlock	Off	On		
1-04	Double pulse unlock	Off	Unlock	Lock	Both Lock and Unlock
1-05	Rearm Output	After Start, Shutdown and First Lock	After Shutdown and 1st Lock	After Start Only	After Shutdown Only
1-06	Reservation Mode (Manual transmissions)	Locks Before Reservation Mode is Set	Hold Start Button for 2.5 sec. to Activate Reservation Mode	Reservation Sets 10 Seconds After the Last Door is Closed	Locks After Reservation Mode is Set
1-07	Unlock / Disarm With Trunk Release	Unlock, Factory Disarm, and Trunk Release	Factory Disarm, Trunk Release Only	Trunk Release Only	
1-08	Passive Mode	Off	Passive locking with Passive Arming	No Passive Locking with Passive Arming	
1-09	Ignition controlled door locks	Off	On	RPM Locks (Tach Sensing Mode Only)	
1-10	Auto Relock (If a door is not opened within this amount of time)	Off	30 sec	60 sec	5 min
1-11	Ignition / Accessory Out Upon Unlock	Off	Ignition Pulse - same timing as disarm pulse	Acc Pulse - same timing as disarm pulse	Ignition and Acc Pulse - same timing as disarm pulse
1-12	Arm/Disarm Remote Paging by iDatalink Module	On	Off		
1-13	Double Pulse Disarm	Single Pulse	Double Pulse		
1-14	EZGO	Off	FT-EZGO Unlock for FTX	FT-EZGO Unlock	FT-EZGO Lock and Unlock
1-15	Trunk Output Timing	1 sec	2 sec	3 sec	4 sec
1-16	Siren/Horn mute control	Disabled	Enabled		

Option Group 2					
	Feature	**Default Setting - I**	**Optional Setting - II**	**Optional Setting - III**	**Optional Setting - IV**
2-01	Tach Sensing Method	Optimal Tach Method	Previous Tach Method		
2-02	Turbo Timer	Off	2 Min	1Min	4 Min
2-03	Diesel Timer	Wire	3~99sec (12 sec Default)	7 sec	GM Ignition Delay
2-04	Trigger Start	Off	Single Pulse	Double Pulse	Triple Pulse
2-05	Cold or Hot Start with Thermistor Assembly	Off	Cold Start Only	Hot Start Only	Cold and Hot Start

Copyright 2016 Firstech, LLC.

Option Group 2					
2-06	Timer Start, or, Minimum Interval Between Cold Starts	3 Hour (4 minute runtime, double for Diesel)	2 Hour Repeat with Cold Starting of 2-08 (Runtime set by 2-07) 2 Way LCD Remotes Only	Reservation (Runtime set by 2-7) 2 Way LCD Remotes Only	24 Hour Repeat with Cold Starting of 2-8 (Runtime set by 2-7) 2 Way LCD Only
2-07	Remote Start Runtime	15 Min	25 Min	45 Min	3 Min
2-08	Temperature of Cold Starting	-10° C / 14° F	-20° C / -4° F	-5° C / 23° F	-15° C / 5° F
2-09	Temperature of Hot Starting	25° C / 77° F	30° C / 86° F	35° C / 95° F	40° C / 104° F
2-10	Engine Sensing	Tach	Alternator	No Connection - Tachless Sensing (Automatic Trans Only)	No Connection – 3 Second Crank (Automatic Trans Only)
2-11	Advanced Tachless	Off	On		
2-12	Crank Time	Standard	+0.2 Seconds to Crank Time	+0.6 Seconds to Crank Time	(-)0.2 Second Crank Time
2-13	Timer Mode	Off	On		

Option Group 3					
	Feature	**Default Setting - I**	**Optional Setting - II**	**Optional Setting - III**	**Optional Setting - IV**
3-01	Parking lights While Remote Started	Constant Output	Flashing Output	Off	Off with Lock and Unlock Only
3-02	Confirmation Chirps	Medium (30 ms)	Short (15 ms)	Normal (60 ms)	
3-03	Dome Light Delay	Off	5 sec	45 sec	Auto
3-04	Starter-Kill Relay	Anti-Grind + Starter Kill	Anti-Grind	Anti-Grind + Passive Starter Kill	
3-06	Factory Style Alarm	Off	On		
3-08	Horn Output	On Double Lock Only	On Lock and Unlock	On Lock, Unlock, and Start	On Double Lock and Start
3-09	Siren Output	On Lock, Unlock, and Start	On Double Lock Only	On Lock and Unlock	On Double Lock and Start
3-10	Valet	Brake + Key 5 times or Remote (Lock + Trunk) w/Ign. On	Key 5 times or Remote (Lock + Trunk)		
3-11	Auxiliary Settings Mode	Disabled	Enabled		
3-12	VAC (Ventilation, Air Conditioning)	Above 100 Degrees F	Above 90 Degrees F	Above 80 Degrees F	Above 90 Degrees Latched for Runtime
3-13	Defroster Temperature Control	Standard	Only below 32 degrees F	Only below 42 degrees F	
3-14	Defroster Output Timing	0.5 sec pulse	3 min latch	7 min latch	Constant Output Until Remote Start Shuts Down
3-15	Soft Disarm	Off	On		
3-16	RPS	FT-RPS Touch	FT-RPS 2		

Copyright 2016 Firstech, LLC.

Option Group 4					
	Feature	**Default Setting - I**	**Optional Setting - II**	**Optional Setting - III**	**Optional Setting - IV**
4-01	Aux 1 output	0.5sec	Latch	0.5 sec Pulse + Program	Program
4-02	Aux 2 output	0.5sec	Latch	0.5 sec Pulse + Program	Program
4-03	Aux 1 output Control	By Remote	Arm	Disarm	Negative (-) out w/ign shutdown
4-04	Aux 2 output Control	By Remote	Arm	Disarm	Start
4-05	Secure Aux Output (1 and 2 Only)	On	Off	On While Armed	
4-08	Aux 1 and Aux 2 Control for iDatalink Modules (Sliding Doors)	Off	Unlock, Factory Disarm, and Sliding Door Control	Factory Disarm and Sliding Door Control Only	
4-10	PIC 4 (+) Input	(+) Trigger Start Input	Closed Loop System Input	(+) Keysense Input	(+)Glow plug Input
4-11	DroneMobile or Fortin on 2nd RS232 Port (Grey Plug)	DroneMobile	Fortin		
4-12	Impact Sensor	DAS Sensor	N/A	1st Stage Disarm Input | 2nd Stage Double Arm Input	1st Stage Disarm Input | 2nd Stage Arm Input
4-13	Antenna Power Save	Off	1 Day Later	2 Days Later	3 Days Later
4-14	Low Battery Warning	Off	On (at 11.7 volts)	Low Battery Start (11.7 volts)	
4-15	Door Status Input (Red/White)	(-) Input All Doors	N/C Circuit Input (1 Door Only)		

Special Option Group 1		
	Feature	**Setting Value (Seconds)**
1	Diesel Timer - DISL	3 ~ 99
2	AUX1 output time	1 ~ 100
3	AUX2 output time	1 ~ 100
4	AUX3 output time	1 ~ 100
5	AUX4 output time	1 ~ 100
6	AUX5 output time	1 ~ 100
7	AUX6 output time	1 ~ 100
8	AUX7 output time	1 ~ 100

Copyright 2016 Firstech, LLC.

Special Option Group 2			
	Feature	**Setting and OP500 Value**	
	Programmable Output Channel	**0 - Default Setting**	**1~28 – Optional Settings**
1	POC #1	(-) Starter Kill (Blue/White)	2nd Light - [1] 2nd Start - [2] 2nd IG1 - [3] 2nd Acc - [4] Status Out - [5] Rearm Out - [6] Disarm Out - [7] Horn Out - [8] Dome Light - [9] Aux 1 Out - [10] Aux 2 Out - [11] Aux 3 - [12] Aux 4 Out - [13] Aux 5 Out - [14] Aux 6 Out - [15] Aux 7 Out – [16] Defrost - [17] GWA - [18] Status 2 For Manual Trans. - [19] Siren 2 - [20] Defrost 2 - [21] VAC - [22] PTS Button - [23] Aux 3 (EZGO Unlock) - [24] Lock - [25] Unlock - [26] 2nd Unlock (Driver's Priority) - [27] Trunk Release - [28]
2	POC #2	(-) Horn (White)	
3	POC #3	(-) Lock (Blue/Light Green)	
4	POC #4	(-) Unlock (Blue)	
5	POC #5	(-) Disarm (Orange/White)	
6	POC #6	(-) Rearm (Orange)	
7	POC #7	(-) Trunk (Violet/White)	
8	POC #8	(-) Status (Black)	

Special Option Group 3			
	Feature	**Setting and OP500 Value**	
	Programmable Input Channel	**0 - Default Setting**	**1~28 – Optional Settings**
1	PIC #1	(-) E-Brake (Light Blue)	(-) E-Brake Input - [1] (-) Trunk Input - [2] (-) Key Sense Input [3] (-) Hood Input - [4] (-) Door Input - [5] (-) Trigger Start Input - [6] (-) Glow Plug Input - [7] (-) Disable Arm/Disarm/Trigger Start - [8] (N/C) Trunk Input - [9] (N/C) Key Sense Input - [10] (N/C) Hood Input - [11] (N/C) Door Input - [12]
2	PIC #2	(-) Trunk (Violet/Black	
3	PIC #3	(-) Key Sense (Brown/White)	
4	PIC #4	(+) Trigger Start (Pink) **Option 4-10 Only**	
5	PIC #5	(-) Hood (Grey/Black)	

Copyright 2016 Firstech, LLC.

Option Menu Descriptions

FO = Feature Option

1-01 Unlock before, Lock after:

FO1 - Off

FO2 - On: Sends an unlock command as soon as the remote start sequence is triggered then send a relock command as soon as the CM7 has confirmed remote start success.

FO3 - Lock after start only: Sends a lock command after the CM7 has confirmed remote start success.

FO4 - Lock after shutdown only: will send a lock command only after the CM7 has successfully shut down. ***Note: It will not provide an output if the CM7 is shut down with an emergency override input. (i.e. hood pin, or foot brake input)***

1-02 Door Lock/Unlock Pulse Duration: This does not affect the behavior of the factory arm output (orange wire) or factory alarm disarm output (orange/white wire).

FO1 - 0.8 seconds: (-) Negative lock and unlock output time.

FO2 - 2.5 seconds: (-) Negative lock and unlock output time.

FO3 - 0.125 seconds: (-) Negative lock and unlock output time. This option may be helpful when using lock/unlock to arm/disarm vehicles that may roll windows down with factory Arm/Disarm wires when the standard output is too long.

FO4- 3.5 seconds: (-) Negative lock and unlock output time.

1-03 Driver's Priority Unlock:

FO1 - Off: (default)

FO2 - On: This feature will allow the user to unlock the driver's door first. If the unlock button is pressed again within 4 seconds, the other doors will unlock. The driver's door unlock must be isolated from the other doors and use the blue (-) unlock. The Orange/Black (-) 2nd unlock (POC setting) is used to provide unlock output to unlock all other doors.

1-04 Double Pulse Unlock:

FO1 - Off: (default)

FO2 - Unlock: This option will provide a double pulse output **only** for unlock each time the CM7 executes the unlock command. (Length of output time will be based on feature 1-02 option settings.)

FO3 - Lock: This option will provide a double pulse lock output **only** for lock each time the CM7 executes the lock command. (Length of output time will be based on feature 1-02 option settings.)

FO4 - Lock and unlock: This option will provide a double pulse lock output for both lock and unlock each time the CM7 executes lock or unlock commands. (Length of output time will be based on feature 1-02 option settings.)

1-05 Rearm Output: Factory Alarm Arm (FAA) output function options

FO1 - After start, after shutdown, after first lock: This option triggers the FAA after every successful remote start, every successful remote start shut down, and with every first lock command. (First lock command is the first arm/lock command sent after the CM7 has been disarmed or unlocked.)
down.

Copyright 2016 Firstech, LLC.

FO2 - After shut down only and first lock: This option triggers the FAA after every successful remote start shut down, and with every first lock command. (First lock command is the first arm/lock command sent after the CM7 has been disarmed or unlocked.)
FO3 - After Start only: This option triggers FAA after every successful remote start.
FO4 - After shutdown only: This option triggers the FAA after every successful remote start shut

1-06 Reservation Mode: Optional manual transmission reservation mode procedures.
FO1 - Locks before set: (default) this option will lock the doors before the vehicle engine shuts down to complete reservation mode. This procedure is much safer ensuring that the vehicle cannot be shifted into gear after the engine shuts down and before or during the door locking procedure.
FO2 - Activate reservation mode using RF remote: This procedure is designed to give the user more control over when reservation mode is initiated. (Default is any time the e-brake is set reservation mode will engage). Once the e-brake is set the user must hold the start button on the remote for 2.5 seconds before reservation mode will engage. Once engaged, reservation mode will operate normally. ***Note: this procedure is strongly recommended for manual transmission Push To Start (PTS) vehicles.***
FO3 - Reservation sets 10 seconds after last zone is closed: This option will allow the user to open any zone (that is connected to the CM7) within 10 seconds and extend the reservation mode procedure time until 10 seconds after all zones are closed. If the user wishes to complete reservation mode before the 10 second window is up they can arm or lock the CM7 using any means available.
Note: this procedure is NOT recommended for Push to Start vehicles (PTS)
Note 2: this is the only reservation mode option that will allow the user to complete reservation mode using the arm/lock command. All other options will cancel reservation mode with the arm/lock command.

1-07 Unlock / Disarm with Trunk Release:
FO1 - Unlock, Factory Alarm Disarm (FAD) trunk release: This option will send unlock and FAD outputs prior to sending the Trunk release output. This applies to analog and data to data situations.
FO2 - Factory Alarm Disarm (FAD) with trunk release: This option will send the FAD output prior to sending the trunk release output. This applies to analog and data to data situations.
FO3 - Trunk release only: This option will only send the trunk release output when triggered. This applies to analog and data to data situations.

1-08 Passive Mode: When options 2 or 3 are selected the user has the choice to activate "Passive" feature using a Firstech remote or Drone ***(please check specific remote user's manual for steps to activate passive)***
FO1 - Off: (default)
FO2 - Passive locking with passive arming: This option, when passive is activated will send lock/arm outputs to lock/arm the CM7 30 seconds after the last zone is closed. The CM7 will flash the parking lights and chirp the siren 1 time every 10 seconds 3 times total as a warning that it is going to Arm/lock itself.

Copyright 2016 Firstech, LLC.

FO3 - No lock output with Passive arm: This option, when passive arm feature is activated, will **NOT** send the **lock** command one the CM7 has passively armed itself. The CM7 will flash the parking lights and chirp the siren 1 time every 10 seconds 3 times total as a warning that it is going to arm itself.

1-09 Ignition Controlled Locks: When FO 2-4 are selected, the user can activate the "drive lock" or ignition controlled door locking feature using a Firstech remote or Drone. ***(Please check specific remote user's manual for steps to activate Drive lock.)***

FO1 - Off: (default)

FO2 - On: This option (when activated with the Firstech remote or Drone) will provide a door lock output when the foot brake is applied or 12 Volts is applied to the foot brake input on the CM7. The CM7 will also provide a door unlock output as soon as the key is turned off or 12v ignition is removed from the CM7.

FO3 - RPM locking: ***(Tach input is required for this option to operate properly.)*** This option will provide a door lock output at approximately 20% RPM over the programmed idle tach output. (i.e. program tach at 1000 rpm and doors will lock at a sustained 1200 rpm when moving.) The CM7 will also provide a door unlock output as soon as the key is turned off or 12v ignition is removed from the CM7.

1-10 Auto Relock:

FO1 - Off: (default)

FO2 - 30 seconds: This option allows the CM7 to automatically relock/rearm 30 seconds after CM7 has been disarmed/unlocked. This will only happen if no zones have not been opened.

FO3 - 60 seconds: This option allows the CM7 to automatically relock/rearm 60 seconds after CM7 has been disarmed/unlocked. This will only happen if no zones have not been opened.

FO4 - 5 minutes: This option allows the CM7 to automatically relock/rearm 5 minutes after it has been disarmed/unlocked. This will only happen if no zones have not been opened.

1-11 Ignition / Accessory Upon Unlock:

FO1 - Off: (default)

FO2 - Ignition (+) and (-) pulse output with disarm: This option will pulse both (+) and (-) ignition wires upon unlock/disarm. ***Most new Ford vehicles require ignition pulsed + immobilizer with unlock to disarm the factory alarm.***

FO3 - Accessory (+) and (-) pulse output with disarm: This option will pulse both (+) and (-) accessory wires upon unlock/disarm.

FO4 - Ignition (+) and (-) pulse and Accessory (+) and (-) pulse output with disarm: This option will pulse both (+) and (-) ignition and accessory wires upon unlock/disarm. ***Some new Ford vehicles require ignition and accessory pulsed + immobilizer with unlock to disarm the factory alarm.*** Important: Also used in cases where the vehicle's radio may turn on and stay on until the door is opened when accessory is pulsed.

Copyright 2016 Firstech, LLC.

1-12 OEM Remote Arm/Disarm Update for 2 Way Firstech Remotes: This feature disables the arming, disarming, and remote start confirmation updates to any Firstech 2 Way LCD when using an OEM remote.

FO1 - On: (default)

FO2 - Off: This feature disables the page back update to the 2 Way Firstech remote when your interface module provides OEM remote status updates to the CM7.

1-13 Double pulse disarm: This feature enables the FAD output. It will pulse 2 times with a single disarm command.

FO1 - Off (default): Standard single pulse output on the FAD wire. (orange/white by default)

FO2 - On: This feature will generate a double pulse output on the FAD wire. (orange/white by default)

1-14 EZGO: This feature covers the EZGO options. (Please refer to the EZGO section of this manual for specific operation instructions and antenna mounting locations)

FO1 - Off (default): No EZGO functions are enabled by default.

FO2 - FTX EZGO "always unlock": This option will enable the EZGO proximity unlock feature after activating with the EZ100-R remote. (Refer to the EZGO section of this manual for specific operating instructions) The CM7 will always send the unlock/disarm output when the EZ100-R enters the proximity field regardless of the current state of the CM7. (i.e. armed/locked-disarmed/unlocked). Once the EZ100-R leaves the proximity field, it will be set to send the unlock/disarm output as soon as it re-enters. ***Note: because the EZGO antenna is always searching for the EZ100-R, it will produce more current draw than the standard EZGO unlock option 3.***

FO3 - EZGO "unlock only": (The CM7 must be in an armed state for this option) This option will enable the EZGO proximity unlock/disarm feature after activating with the EZ100-R remote. (Refer to the EZGO section of this manual for specific operating instructions). The CM7 will be ready to send the disarm/unlock command 12-15 seconds after the system has been armed using a Firstech remote or accessory (RPS, Drone, OEM remote input). Once the EZGO system is ready and the remote enters the proximity field, it will unlock/disarm.

FO4 - EZGO lock and unlock: This option will enable the EZGO proximity lock/arm and unlock/disarm features once it's activated using the remote. (Refer to the EZGO section of this manual for specific operation instructions.) The EZGO will arm/lock approx. 12-15 seconds after the RFID remote leaves proximity of the EZ-GO antenna and all zones being monitored (including any key sense or ignition inputs) are closed or off. As soon as the CM7 is armed/locked the proximity unlock is active and will unlock/disarm as the EZGO remote enters the proximity field. ***Note: because the EZGO antenna is always searching for the EZ100-R, it will produce more current draw than the standard EZGO unlock option 3.***

Copyright 2016 Firstech, LLC.

1-15 Trunk Output Timing: This feature determines the length of output time for the (+) or (-) analog trunk release wire.

FO1 - 1 Second: (default) Will provide a 250mA (-) negative output for 1 second on any POC that is programmed for trunk release or setting 28.

FO2 - 2 Seconds: FO1- 1 Second: (default) will provide a 250mA (-) negative output for 2 seconds on any POC that is programmed for trunk release or setting 28.

FO3 - 3 Seconds: FO1- 1 Second: (default) will provide a 250mA (-) negative output for 3 seconds on any POC that is programmed for trunk release or setting 28.

FO4 - 4 Seconds: FO1- 1 Second: (default) will provide a 250mA (-) negative output for 4 seconds on any POC that is programmed for trunk release or setting 28.

1-16 Siren/Horn mute control: this feature allows the installer to enable or disable the siren/horn mute control. The mute feature will silence the siren or horn during arm, disarm, and start from the Firstech remote.

FO1 - Disabled: (default) will not allow for the Firstech remote to mute the siren or horn output.

FO2 - Enabled: this feature will allow the end user to activate or deactivate the siren or horn mute control.

2-01 Tach Sensing Method: This feature will determine the point at which the CM7 releases the starter based on the sampled tach method.

FO1 - Optimal Tach reading: This option will allow the CM7 to sample the tach signal several times during tach programming and select the optimal tach voltage at which to release the starter.

FO2 - Previous tach reading: This option will set the CM7 to record the idle voltage which it is being programmed. The CM7 will release the starter once the idle tach voltage is met.

2-02 Turbo Mode: ***(This feature requires door and e-brake input)*** This feature allows the user to activate Turbo Timer Mode with their Firstech remote or accessory. This will keep the engine running after removing the key for the specified time selected below. ***(Please check specific remote or accessory user's manual for steps to activate Turbo Timer Mode)***

FO1 - Off: (default)

FO2 - 2 Minutes: This option allows for a 2 minute run time after Turbo Mode has been engaged. To engage, set the e-brake, remove key, exit vehicle, and lock with the Firstech remote or accessory.

Note: when using Turbo Mode with a manual transmission, the CM7 will not lock the doors automatically. Before the turbo timer expires, the system must be locked using the Firstech remote or accessory.

FO3 - 1 minute: This option allows for a 1 minute run time after Turbo Mode has been engaged. To engage, set the e-brake, remove key, exit vehicle, and lock with the Firstech remote or accessory.

Note: when using Turbo Mode with a manual transmission, the CM7 will not lock the doors automatically. Before the turbo timer expires, the system must be locked using the Firstech remote or accessory.

Copyright 2016 Firstech, LLC.

FO4 - 4 minutes: This option allows for a 4 minute run time after Turbo Mode has been engaged. To engage, set the e-brake, remove key, exit vehicle, and lock with the Firstech remote or accessory. ***Note: when using Turbo Mode with a manual transmission, the CM7 will not lock the doors automatically. Before the turbo timer expires, the system must be locked using the Firstech remote or accessory.***

2-03 Diesel Timer: ***Note: OP500 required to adjust time from any of the default settings, will show up as DISL on the top line of text when option 2 or 3 are enabled.*** This feature provides a timed alternative solution to a hard wired glow plug input to enable the CM7 to wait to start.

FO1 - Wire: (default) This option will allow the CM7 to read input on brown/white wire. (PIC3) It may be connected to a wait to start indicator on a diesel vehicle. When the CM7 sees (-) negative input, it will delay the crank output for 99 seconds or until negative signal has been removed.

FO2 - Program (3-99 seconds): default setting is 12 seconds. This option allows the installer to adjust the time in 1 second increments that the CM7 waits before cranking the starter.

FO3 - 7 seconds: This option offers a fixed 7 second delay before providing starter output.

FO4 - GM Ignition delay: This option is designed to delay the ignition output 250mS during the remote start procedure. This allows for the accessory to output first, then ignition, to simulate normal key starting. There are some vehicle models that may require this additional delay in order for it to remote start properly.

2-04 **Trigger Start:** This feature changes the number of pulsed inputs (min of 60mS per pulse) on the trigger start input wire. (Pink wire CN5). **Note: If option 3 is selected and OEM remote control feature is available through data, the Control Module will accept 3 OEM lock commands to activate the start sequence.**

FO1 - Off: (default)

FO2 - Single pulse: This option will trigger the remote start sequence with a single pulsed input to the trigger start wire. This is ideal when adding accessories that can trigger the CM7.

FO3 - Double pulse: This option will trigger the remote start sequence with 2 pulses to the trigger start input wire. This can be used when integrating with an OEM keyless entry remote.

FO4 - Triple pulse: This option will trigger the start sequence with 3 pulses to the trigger start input wire. This is ideal when trying to integrate the OEM keyless entry remote. Note: this option will also allow the CM7 to accept a 3 pulse input from OEM remote commands through data.

2-05 Cold or Hot Start: ***Note: the Firstech Thermister temp sensor must be connected to the CM7 in order to use these options.*** This feature turns on the cold/hot Timer start features.

FO1 - Off: (default)

FO2 - Cold start: This option enables the thermister when using Timer Start Mode. It will start the car at the preset cold temperature (see feature 2-08) according to the selected timer start option (see feature 2-06)

FO3 - Hot Start: This option enables the thermister when using Timer Start Mode. It will start the car at the preset hot temperature (see feature 2-09) according to the selected timer start option. (see feature 2-06)

Copyright 2016 Firstech, LLC.

FO4 - Cold And Hot start: This option enables the thermister when using Timer Start Mode. It will start the car at the preset Cold and Hot temperature (see features 2-08 and 2-09) according to the selected timer start option (see feature 2-06)

2-06 Timer Start: This feature is designed to allow the user to have the CM7 automatically remote start at the end of a selected timed cycle. It also be controlled by the thermister so it will start at a specified temperature at the end of the timed cycle.

FO1 - 3 hour cycle: (4 minute runtime, 8 minute runtime for diesel) Once Timer Mode is enabled (see feature 2-13) the CM7 will wait 3 hours, remote start and run for 4 minutes unless the cold start feature is enabled. If this is the case, the CM7 will check the temperature once every 3 hours. If it is at or below the selected temperature, (see feature 2-08) it will start and run for 4 minutes. The same procedure will apply to the hot start feature. If there is any interaction with the CM7 after timer mode has been activated using the Firstech remote or accessory, timer mode will be cancelled and must be re-started in order to start a new timed cycle.

FO2 - 2 hour repeat with cold starting: (runtime based on feature 2-07 option setting and cold start setting based on feature 2-08) Note: 2 way LCD remote required. This option is designed to monitor the temperature 2 hrs. After timer mode is set and start if it is at or below the preset cold start temperature (see feature 2-08). This process will continue until the user manually starts or remote starts the vehicle.

FO3 - Reserve runtime: (runtime based on feature 2-07 option setting) Note: 2 way LCD remote required. This option will allow the user to set a predetermined time to remote start on the 2 way LCD remote. Once the timer mode is activated it will start the countdown timer on the CM7 based on the difference of time between what the remote clock is set to and the timer mode time is set to. (NOTE: Must be set a minimum of 20 minutes from the current time displayed on the remote) I.e. remote time reads 7:00pm and timer mode time is set to 7:00 am the CM7 will activate the timer mode to go for 12hours before it starts. Note: it is important that the remote time is as accurate as possible when activating the timer mode to ensure that it will start at the desired time. If there is any interaction with the vehicle or system after timer mode has been activated it will cancel the timer.

FO4 - 24 hour repeat with cold starting: (runtime based on feature 2-07 option setting and cold start setting based on feature 2-08) Note: 2 way LCD remote required. This option is designed to monitor the temperature 24 hrs. After timer mode is set and start if it is at or below the preset cold start temperature (see feature 2-08). This process will continue until the user manually starts or remote starts the vehicle.

2-07 Remote Start Runtime: This feature consists of four different settings for the remote start run time.

FO1 - 15 minutes (default)
FO2 - 25 minutes
FO3 - 45 minutes
FO4 - 3 minute runtime: to comply with any local idle laws prohibiting extended idle times.

Copyright 2016 Firstech, LLC.

2-08 Cold start Temperature: This feature allows the user 4 different temperature settings for cold start operation

FO1 - 14°F/-10°C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or below this temperature.

FO2 - -4°F/-20°C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or below this temperature.

FO3 - 23° F/-5° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or below this temperature.

FO4 - 5° F/-15° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or below this temperature.

2-09 Hot Start Temperature: This feature allows the user 4 different settings for hot start operation

FO1 - 77° F/25° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or above this temperature.

FO2 - 86° F/30° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or above this temperature.

FO3 - 95° F/35° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or above this temperature.

FO4 - 104° F/40° C: will activate the start sequence at the end of the time cycle (set by feature 2-06 option setting) if temperature is at or above this temperature.

2-10 Engine Sensing: This feature provides 4 options for engine sensing methods. Every CM7 is shipped in manual transmission mode. Tach sensing is our default engine sense option.

FO1 - Tach: This option uses a hard wired input (yellow/black CN4 gray connector) to read the vehicles RPM's in order to release the starter during the remote start process and determine that the engine is running.

FO2 - Alternator: This option uses the hardwired tach input (yellow/black CN4 gray connector) to read the voltage output from the vehicles stator wire in order to release the starter during the remote start process and determine that the engine is running. Note: with late model computer controlled alternators, the peak charging voltage mat not be reached for several seconds after the vehicle is running. This may make this option inconsistent when the battery is low or very cold.

FO3 - No connection Tachless sensing: (aka "voltage sensing") Note: can only be used with automatic transmission. This option uses the voltage readings on the power input at the main CN1 connector to monitor the voltage before, during, and after crank, to determine when to release the starter and consider the vehicle running. Note: with late model computer controlled alternators, the peak charging voltage mat not be reached for several seconds after the vehicle is running. This may make this option inconsistent when the battery is low or very cold.

FO4 - No connection Assumed running: (aka engine sense off) Note: can only be used with automatic transmission. This option provides a 3 second starter output, leave the rest of the CM7 ignition and accessory outputs on and consider the vehicle running. Note: This is a good option for (PTS) Push To Start applications and Hybrid vehicles (except manual transmission).

Copyright 2016 Firstech, LLC.

2-11 Advanced Tachless: This feature when used in conjunction with feature 2-10 option 3 will provide an enhanced Tachless engine sensing mode.
FO1 - Off: (default)
FO2 - On: this option will enable the advanced algorithm to monitor battery voltage before, during, and after crank to allow the CM7 to release the starter and consider the vehicle running. This option is better suited for late model computer controlled vehicles or older vehicles with poor battery conditions.
Note: feature 2-10 must be set to option 3 in order for it to work properly. If there is tach signal input to the CM7 either analog or data interface module, this option will not operate consistently.

2-12 Crank Time: This feature allows the user to add or remove crank time to the selected option for feature 2-10 (engine sense).
FO1 - Standard: (default crank time no change).
FO2 - +200mS: To standard crank time of option selected on feature 2-10.
FO3 - +600mS: Adds 600 milliseconds to standard crank time of option selected on feature 2-10.
FO4 - (-)200mS: releases the starter output 200 Milliseconds earlier than standard crank time of option selected on feature 2-10.

2-13 Timer Mode: (Note: Must be set to on in order to operate timer mode).This feature enables the user to activate and deactivate Timer Mode (see option 2-06) using the Firstech remote or accessory (see the user manual for that remote for instructions).
FO1 - Off: (default)
FO2 - On: user must still activate timer mode using their Firstech remote or accessory.

Copyright 2016 Firstech, LLC.

3-01 Parking Lights while Remote Started: This feature changes the parking light behavior during remote start.

FO1 - Constant output: This option will keep the parking light output (+ and -) on steady throughout the entire runtime (runtime based on feature 2-07 selection)

FO2 - Flashing output: This option will flash the parking light output (+ and -) throughout the entire runtime (runtime based on feature 2-07 selection)

FO3 - Off: This option turns the parking lights off while the vehicle is remote started.

FO4 - Off with lock and unlock only: This feature is designed to eliminate redundant parking light flash with lock/unlock when interface module flashes the parking lights controlling the Factory security.

3-02 Confirmation chirps: This feature will allow the user to select a shorter siren output time to simulate a quieter arm/disarm/start output.

FO1 - 30mS: This is a 30 milliseconds siren output with arm, disarm, and start confirmation chirps. It will produce a "medium" volume sound. (Softer than the standard 60mS output)

FO2 - 15mS: This is a 15 millisecond siren output with arm, disarm, and start confirmation chirps. It will produce a "short" or quiet volume of sound. (Significantly softer than the standard 60mS output)

FO3 - 60mS: This is a standard 60 millisecond siren output with arm, disarm, and start confirmation chirps.

3-03 Dome Light Delay: This option is used when connecting the door trigger input to the vehicles dome light circuit. It delays the door trigger input to prevent the door open icon displaying on 2 Way remotes upon lock/arm.

FO1- Off: (default)

FO2 - 5 seconds: This option will delay the door trigger input for 5 seconds when arming the system to account for any vehicle dome light output delay.

FO3 - 45 seconds: This option will delay the door trigger input for 45 seconds when arming the system to account for any vehicle dome light output delay.

FO4 - Auto: This option will allow the CM7 to wait for a change in polarity on the door input circuit, after the system has been armed, to monitor for security.

Copyright 2016 Firstech, LLC.

3-04 Starter-Kill: This option determines the operation of the GWA wire (POC 1 CN4 Pin 1 Blue/white)

FO1 - Anti grind + Starter interrupt: this option will allow for POC 1 to provide a negative output when the system is armed or remote started. This will enable a starter interrupt to prevent the vehicle from being started with the key when in an armed state.

FO2 - Anti Grind only: This option will allow POC 1 to provide a negative output when the system is armed. This will enable starter interrupt and prevent the user from grinding the starter during the takeover procedure.

FO3 - Anti Grind and passive starter interrupt: This option will allow for POC 1 to provide a negative output when the system is remote started or the passive starter interrupt is engaged. This will prevent the user from grinding the starter during the takeover procedure and enable starter interrupt 45 seconds after the ignition has been turned off.

3-06 Factory Alarm Option: This feature will enable or disable the security features of the CM7000, or CM7200. Security features include sensor inputs, zone inputs (unless using with manual transmission), horn, and siren output. Basic features will function normally (lock, unlock, trunk release, remote start, parking lights.)

FO1 - Off: (CM7200 default)/FO1- On: (default CM7000) Depending on the Control Module this option will enable or disable the security features.

FO2 - On: (CM7200)/FO2- off (CM7000) Depending on the Control Module this option will enable or disable the security features.

3-08 Horn output: This feature controls the horn output behavior during Arm, Disarm, and Remote Start. (POC setting #8)

FO1 - On double lock only: (default) this option is design to simulate a factory keyless entry system by providing a horn output pulse (based on the option selection of feature 3-02) each time the lock command is sent a second time within 8 seconds of the first lock command.

FO2 - On lock and Unlock only: this option will provide a horn output pulse (based on the option selection of feature 3-02) with each lock or unlock confirmation.

FO3 - On lock, Unlock, and Start: this option will provide a horn output pulse (based on the option selection of feature 3-02) with each lock, unlock, remote start command and remote started confirmation.

FO4 - On double lock and Start: this option is design to simulate a factory keyless entry system by providing a horn output pulse (based on the option selection of feature 3-02) each time the lock command is sent a second time within 8 seconds of the first. In addition it will provide a horn output pulse with remote start command and remote started confirmation.

3-09 Siren output: This feature controls the siren (+) output behavior during Arm, Disarm, and Remote Start.

FO1 - On lock, Unlock, and Start: (default) this option will provide a (+) siren output pulse (based on the option selection of feature 3-02) with each lock, unlock, remote start command and remote started confirmation.

FO2 - On double lock only: This option is design to simulate a factory keyless entry system by providing a (+) siren output pulse (based on the option selection of feature 3-02) each time the lock command is sent a second time within 8 seconds of the first lock command.

Copyright 2016 Firstech, LLC.

FO3 - On lock and Unlock only: this option will provide a (+) siren output pulse (based on the option selection of feature 3-02) with each lock or unlock confirmation.
FO4 - On double lock and Start: this option is design to simulate a factory keyless entry system by providing a (+) siren output pulse (based on the option selection of feature 3-02) each time the lock command is sent a second time within 8 seconds of the first. In addition it will provide a (+) siren output pulse with remote start command and remote started confirmation.

3-10 **Valet Mode:** This feature will change the enter/exit valet mode procedure based on the option selected.
FO1 - Key 5 times with Foot Brake Trigger or Remote (Lock + Trunk) while Ignition is on: This option allows the user to enter valet mode using either method described. ***Note: the user may exit valet mode with their Firstech remote (please check users guide for each remote for valet mode exit procedure), or with the key to ignition or "on" position and press the foot brake 10 times within 10 seconds.***
FO2 - Key 5 times with Foot Brake Trigger or Remote (Lock + Trunk): This option allows the user to enter valet mode using either method described. ***Note: the user may exit valet mode with their Firstech remote (please check users guide for each remote for valet mode exit procedure), or with the key to ignition or "on" position and press the foot brake 10 times within 10 seconds.***

3-11 **Auxiliary Settings:** (2 Way LCD remote required) this feature enables access to AUX 3 through 7 via any Firstech 2 way LCD remote.
FO1 - Off: (Default) This option will prevent the user form activating AUX 3-7 with the Firstech 2way LCD remote.
FO2 - On: This feature will allow the user to enable AUX 3-7 which can be activated using a Firstech 2 way LCD remote. (Please refer to the remote users guide for specific AUX 3-7 activation process)

3-12 **VAC:** (Thermister required) this determines the temperature at which the CM7 will provide an output on any POC programmed with setting 22(VAC: Ventilation-Air Conditioning) which can be used to vent widows, activate AC controls, or cooling seats.
FO1 - 100°F: This option will provide a pulsed output on any POC programmed with setting 22 (VAC) if the temp sensor reads at or above 100°F with remote start confirmation.
FO2 - 90°F: This option will provide a pulsed output on any POC programmed with setting 22 (VAC) if the temp sensor reads at or above 90°F with remote start confirmation.
FO3 - 80°F: This option will provide a pulsed output on any POC programmed with setting 22 (VAC) if the temp sensor reads at or above 80°F with remote start confirmation.
FO4 - 90°F: Latched output: this option will provide a latched output for the selected runtime on any POC programmed with setting 22 (VAC) if the temp sensor reads at or above 90°F.

Copyright 2016 Firstech, LLC.

3-13 **Defrost output Temperature Control:** This feature will determine the temperature at which the CM7 will provide an output on any POC programmed with setting 17 or 21 (defrost and defrost 2).
FO1 - Standard: (Default) this option will provide an output (length of output based on feature 3-13 option settings) on any POC programmed with setting 17 (defrost) or 21 (defrost 2) every time with remote start confirmation.
FO2 - 32°F: (Thermister required) this option will provide an output on any POC programmed with setting 17 (defrost) or 21 (defrost 2) with remote start confirmation on. This will happen if the temp reading is at or below 32°F. (Length of output based on feature 3-13 option settings)
FO3 - 42°F: (Thermister required) this option will provide an output on any POC programmed with setting 17 (defrost) or 21 (defrost 2) with remote start confirmation on. This will happen if the temp reading is at or below 42°F. (Length of output based on feature 3-13 option settings)

3-14 **Defrost output Timing:** This feature controls the output timing of POC setting 17, defrost. ***Note: POC setting 21 defrost 2 is has a fixed pulsed output and is NOT affected by this feature.***
FO1 - 500mS Pulse: This option will provide a 500 Millisecond pulsed output on any POC programmed with setting 17 (Defrost) with timing based off of feature 3-12 option setting.
FO2 - 3 minute latched: This option will provide a 3 minute latched output on any POC programmed with setting 17 (Defrost) with timing based off of feature 3-12 option setting. (This would be good for any rear view mirror defrost that may need a short latched output time.)
FO3 - 7 minute latched: This option will provide a 7 minute latched output on any POC programmed with setting 17 (Defrost) with timing based off of feature 3-12 option settings. (This would be good for many front, rear, or rear view mirror defrost functions that may need a longer latched output time.)
FO4 - Latched for entire runtime: (Remote start runtime based off of feature 2-07 option setting) This feature will provide a latched output for the entire remote start runtime on any POC programmed with setting 17 (defrost) with timing based off of feature 3-12 option settings. Caution: make sure not to latch rear defrost functions on for too long as it may cause damage to the heating elements in the window.

3-15 **Soft Disarm:** this feature will enable Factory Alarm Arm (FAA) and Factory Alarm Disarm (FAD) outputs to trigger when silencing the Compustar siren when sounding with full alarm.
FO1 - Off: (Default) this will keep the standard Compustar soft disarm operation. Soft disarm feature allows the user to silence the Compustar siren as its sounding with full alarm without fully disarming the system which may unlock the doors and leave the vehicle unsecure.
FO2 - On: this option will provide a FAD output on both data and analog connections, when the user taps the unlock/disarm once to silence the Compustar system while it's sounding, so it will disarm any factory alarm that may be sounding as well. In case the FAD function unlocks the doors the CM7 will send the FAA on both data and analog connections 5 seconds later to make sure the vehicle is re-locked and secure. (This feature works well with GM, Chrysler, Dodge, Jeep, Toyota, Lexus vehicles that may have factory security.)

Copyright 2016 Firstech, LLC.

3-16 **RPS:** (Remote Paging Sensor) this feature sets the RPS hardware being used with the CM7.
FO1 - RPS Touch: (default) this option enables the RPS touch functions when using the RPS touch hardware with the CM7. RPS can be used to arm/lock and disarm/unlock a CM7 or page a Firstech remote or accessory. Please refer the RPS section of this manual or the RPS product manual for installation and operation of the RPS touch hardware.
FO2 - RPS II: (knock sensor) This option enables the RPS II functions when using the RPS II hardware with the CM7. RPS can be used to arm/lock and disarm/unlock a CM7 or page a Firstech remote or accessory. Please refer the RPS section of this manual or the RPS product manual for installation and operation of the RPS II hardware.

4-01 **Aux 1 Output:** This feature determines the duration of the auxiliary 1 output. (Option 4 allows the output duration to be set for a specific length of time 1-99 sec. and 1-15 min (with OP500 update only) ***(Specific time setting only available when using the OP500)***
FO1 - 500mS: This option will provide a (-) negative output for 500 milliseconds (Half second) output on any POC programmed with setting 10 (AUX 1)
FO2 - Latched: This option will provide a latched (-) negative output on any POC programmed with setting 10 (AUX 1). ***Note: This will stay latched until AUX 1 command is sent again to shut it off.***
FO3 - 500mS pulse + programmable timed output: this option will provide a (-) negative output for 500 milliseconds (0.5 seconds) output on any POC programmed with setting 10 (AUX 1). It will pause for 250 milliseconds then provide a timed output (based off of feature 4-01 option 4). Note: in order to program the timed output the user must change feature 4-01 to option 4, then adjust AU1 (AUX programmable output time) to desired time. To complete the programming steps feature 4-01 must be changed to option 3. I.e. 0.5 second pulse…pause…10 second pulse, this option can be used to roll windows up or down on a vehicle that requires a similar action using the driver's door key cylinder.
FO4 - Program: This option allow the AUX output time to be programmed for a duration between 1-99 seconds. Note: with an OP500 update there will be additional time duration between 1-15 minutes available.

4-02 **Aux 2 Output:** This feature determines the duration of the auxiliary 2 output. (Option 4 allows the output duration to be set for a specific length of time 1-99 sec. and 1-15 min (with OP500 update only) only available when using the OP500)
FO1 - 500mS: This option will provide a (-) negative output for 500 milliseconds (0.5 seconds) output on any POC programmed with setting 11 (AUX 2)
FO2 - Latched: This option will provide a latched (-) negative output on any POC programmed with setting 11 (AUX 2). ***Note: This latched output will reset when ignition is turned on.***

Copyright 2016 Firstech, LLC.

FO3 - 500mS pulse + programmable timed output: this option will provide a (-) negative output for 500 milliseconds (0.5 seconds) output on any POC programmed with setting 11 (AUX 2). It will pause for 250 milliseconds then provide a timed output (based off of feature 4-02 option 4). Note: in order to program the timed output the user must change feature 4-02 to option 4, then adjust AU2 (AUX programmable output time) to desired time. To complete the programming steps feature 4-01 must be changed to option 3. (i.e. half second pulse…pause…10 second pulse) ***This option can be used to roll windows up or down on a vehicle that requires a similar action using the driver's door key cylinder.***

FO4 - Program: This option allows the AUX output time to be programmed for a duration between 1-99 seconds. **Note: The OP500 must be updated for additional time duration settings. (1-15 minutes available)**

4-03 **Aux 1 Output Control:** This feature allows the user to configure the method of which Auxiliary 1 can be activated.

FO1 - Remote: (default) This option allows AUX 1 (output time based on feature 4-01) to be triggered by any 4 button Firstech remote or drone.

FO2 - With Arm: this option will trigger AUX 1 (output time based on feature 4-01) any time the CM7 is locked/armed the first time (i.e. if you send a second lock/arm command it will not trigger again)

FO3 - With Disarm: this option will trigger AUX 1 (output time based on feature 4-01) any time the CM7 is unlocked/disarmed. ***Note: the system has to be in the armed state when disarming in order to trigger AUX 1. (I.e. if the vehicle is already in the unlocked/disarmed state and you send a second unlock/disarm command it will not trigger the output)***

FO4 - With ignition removed: this option will trigger AUX 1 (output time based on feature 4-01) as soon as Ignition input is removed from the CM7. (I.e. this feature can be used with a manual transmission vehicle to open the door input circuit on the CM7 for a set period of time when reservation mode is complete in order to prevent the dome light from cancelling reservation mode.)

4-04 Aux 2 Output Control: This feature allows the user to configure the method of which Auxiliary 2 can be activated.

FO1 - Remote: (default) this option allows AUX 2 (output time based on feature 4-02) to be triggered by any 4 button Firstech remote or drone.

FO2 - With Arm: this option will trigger AUX 2 (output time based on feature 4-02) any time the CM7 is locked/armed the first time (I.e. if you send a second lock/arm command it will not trigger again)

FO3 - With Disarm: this option will trigger AUX 2 (output time based on feature 4-02) any time the CM7 is unlocked/disarmed. Note: the system has to be in the armed state when disarming in order to trigger AUX 1. (I.e. if the vehicle is already in the unlocked/disarmed state and you send a second unlock/disarm command it will not trigger the output)

FO4 - With Start: This option will trigger the AUX 2 (output time based on feature 4-02) when the remote start sequence is initiated. It will trigger at the same time as GWR (ground when running)

Copyright 2016 Firstech, LLC.

4-05 **Secure Aux Output:** this feature is designed to prevent accidental activation of the AUX outputs by requiring an additional step when using any 4 button or 2 way LCD Firstech remote.
FO1- On: (default) this option will require the user to perform an additional step before activating AUX output using any Firstech 4 button or 2 way LCD remote (2way remotes with Roman numeral buttons will require a 0.5 second tap of button IV before activating any of the AUX outputs.2Way LCD remotes with lock/unlock/trunk/start icons on the buttons use the start button for the same. 1way remotes require the user to hold trunk + start buttons for 2.5 seconds before activating AUX outputs.)
FO2- Off: this option will disable the additional step required by the user to activate the AUX outputs.
***NEW* FO3- On while armed:** this feature will only require the user to perform the additional override step to activate Aux outputs **ONLY WHEN** the CM7 is **ARMED**. While the system is disarmed or unlocked this step is not required.

4-08 **Sliding door control for datalink:** (must be enabled to allow data to data sliding door control) This feature will provide an Unlock or Factory Alarm Disarm (FAD) output when triggering the AUX control using iDatalink Modules (Sliding Doors)
FO1 - Off: (default) This option does not provide an unlock or a FAD output when activating AUX output control using the iDatalink modules.
FO2 - Unlock and FAD: This option will provide unlock and a FAD output when activating AUX output control using iDatalink modules.
FO3 - FAD only: This option will only provide a FAD (factory alarm disarm) output when activating AUX output control using iDatalink modules.

4-10 **PIC 4 (+):** (Programmable input Channel 4 CN5 pin 14 Pink) this feature will determine the input function of PIC4.
FO1 - Trigger start input: This option will enable PIC4 to be used as a trigger for activating the remote start function using a (+) pulse input on the Pink wire CN5
FO2 - Closed Loop: This option will enable PIC4 to be used as a closed loop input to trigger the CM7 full alarm. This input should see ground when the CM7 is armed. (to complete the ground circuit), then either see B+ or ground removed (which opens the ground circuit) to trigger the full alarm.

FO3 - (+) keysense input: this option will operate as a key sense INPUT to the CM. When used with manual transmission, keysense input will keep the CM from completing reservation mode as long as the input is present. In addition the keysense input will keep the system from passively arming or EZGO proximity locking as long as the input is present.

FO4 - (+) Glow plug: this option will allow PIC 4 to read a positive input as a glow plug delay or wait to start input. This is recommended for diesel vehicles that may have a positive analog glow plug output available.

Copyright 2016 Firstech, LLC.

4-11 **UART port 2 protocol:** This feature will determine the communication protocol of the gray UART port.
FO1 - Drone: (default) This option will allow the grey UART port to communicate using the Drone data protocol.
FO2 - Fortin: This option allows the grey UART port to communicate using the Fortin data protocol. Note: there is no longer an "auto detect" feature with the Fortin protocol it must be changed manually.

4-12 **Impact sensor:** This feature will determine the impact sensor input port function.
FO1 - DAS: (default) This option allows the impact sensor port to communicate with the DAS including sensitivity programming and monitor any sensor output to the CM7. ***Note: This option is required when using with a manual transmission vehicle.***
FO2 - Standard Shock: This option allows the CM7 to communicate with the FT-Shock analog shock sensor. This impact sensor is manually adjustable on the sensor.
FO3 - Arm/Disarm input: This option allows the impact sensor port (red) to be used as a CM7 arm/lock and disarm/unlock input. ***Note: the arm input requires 2 pulses to trigger arm/lock and 1 pulse to disarm/unlock.***
FO4 - Arm/Disarm input: this option allows the impact sensor port (red) to be used as a CM7 arm/lock and disarm/unlock input. ***Note: the arm input requires 1 pulse to trigger arm/lock and 1 pulse to disarm/unlock.***

4-13 **Antenna power save:** this will allow the CM7 to reduce overall current draw of the system when armed by powering down the antenna.
FO1 - Off: (default) antenna will operate normally when armed.
FO2 - 24hrs (1 day): this option will allow the antenna to power down 24hrs after being armed. ***Note: once the antenna has powered down, 1 Way operation to the vehicle will stop. 2 Way operation will still function incase any alerts are sent to the remote. In order to wake up the antenna the user must unlock/disarm using a Firstech accessory, power ignition or trigger the alarm.***

Copyright 2016 Firstech, LLC.

FO3 - 48hrs (2 days): This option will allow the antenna to power down 48hrs after being armed. ***Note: once the antenna has powered down, 1 Way operation to the vehicle will stop. 2 Way operation will still function incase any alerts are sent to the remote. In order to wake up the antenna the user must unlock/disarm using a Firstech accessory, power ignition or trigger the alarm.***

FO4 - 72hrs (3 days): This option will allow the antenna to power down 72hrs after being armed. ***Note: once the antenna has powered down, 1 Way operation to the vehicle will stop. 2 Way operation will still function incase any alerts are sent to the remote. In order to wake up the antenna the user must unlock/disarm using a Firstech accessory, power ignition or trigger the alarm.***

4-14 **Low battery:** This feature offers low battery options to help alert the user of a low battery in the vehicle.

FO1 - Off: (default) This option does not provide a low battery indication.

FO2 - On: This option will provide an alert to any Firstech 2 Way LCD remote or Drone when the vehicle's battery voltage (at the CM7 power connector) drops to 11.7volts. ***Note: the Firstech 2 way LCD remote must be within range of the vehicle to receive the low battery alert and this option must be set in order to receive low battery alerts to Drone.***

FO3 - On + Start: This option will provide an alert to any Firstech 2 Way LCD remote or Drone when the vehicles battery voltage (at the CM7 power connector) drops to 11.7volts. In addition to the alert the user can active the Timer mode (please refer to this manual for timer mode feature description) to enable the low battery start function. Once the timer mode is active the CM7 will adhere to the timer mode feature options selected but also monitor the vehicle battery voltage which will override the timer mode and start at 11.7 volts.

4-15 **Door Status Input:** This feature will allow the door input (red/white) to be used to read (-) input or a N/C door trigger input. (N/C circuit will rest at a closed or complete circuit (usually ground) and when the zone is opened it will break or open the circuit changing the state of the input to low current voltage or nothing)

FO1 – (-) Door Input (all doors) This option will use a (-) negative input to consider the door zone open for RS or security operation

FO2 – N/C Circuit Input 1 DOOR ONLY This option will allow for the red/white door input to consider 1 N/C door circuit as being opened or closed for Remote Start or Security based on N/C circuit operation (i.e. circuit rests at ground and goes to voltage when opened or rests at ground and ground is removed when opened)

Special Option Groups 1, 2, and 3

IMPORTANT: The OP500 is required to change settings in Special Option Groups 1 and 2.

Special Option Group 1

FO1- Diesel Timer: (Option 2-03 must first be set to setting 2.) This special option allows a specific wait to start time (in seconds) to be programmed. This prevents the need for a timer relay and eliminates a connection to the "wait to start" wire.

FO2 - Aux 1 Output Timing: (Option 4-01 must first be set to setting 4.) This special option allows a specific output duration for Aux 1 to be programmed 1-99 seconds. ***Note with OP500 update, latched output time 1-15 minutes are available for programming in addition to the standard 1-99 seconds.***

Copyright 2016 Firstech, LLC.

FO3 - Aux 2 Output Timing: (Option 4-02 must first be set to setting 4.) This special option allows a specific output duration for Aux 2 to be programmed 1-99 seconds. ***Note with OP500 update, latched output time 1-15 minutes are available for programming in addition to the standard 1-99 seconds.***

FO4 - FO8- Aux 3-7 Output Timing: (Option 3-11 must first be set to setting 2 and the optional Auxiliary settings module must be used and AUX 3-7 function only available with 2 Way LCD remotes) These special options allow specific output durations to be set for Aux 3-7. ***Note with OP500 update, latched output time 1-15 minutes are available for programming in addition to the standard 1-99 seconds.***

Special Option Group 2

This special option group allows you to determine the output type of the POC wire. For example, if you want to set POC #5 (default setting status out) to Aux 1, you will need change special option 5 to number 10. This must be done with the OP500.

POC 1 - Blue/White • GWA (starter interrupt/Anti-grind): (default setting) This channel will provide a 250mA (-) negative output when the CM7 is armed ***(function also POC setting 18)***

POC 2 - White • Horn: (default setting) This channel will provide a 250mA output when Horn is triggered. ***(function also POC setting 8)***

POC 3 - Blue/Black • Lock: (default setting) This channel will provide a 250mA output with the lock/arm command. ***(function also POC setting 25)***

POC 4 - Blue • Unlock: (default setting) This channel will provide a 250mA output with the unlock/disarm command. ***(function also POC setting 26)***

POC 5 - Orange/White • FAD (Factory Alarm Disarm): (default setting) This channel will provide a 250mA output with the unlock/disarm command. ***Note: the CM7 will provide this output approx. 100mS before the unlock output. (function also POC setting 7)***

POC 6 - Orange • FAA (Factory Alarm Ream): (default setting) This channel will provide a 250mA output with the lock/arm command. Note: the CM7 will provide this output approx. 100mS before the unlock output. ***(function also POC setting 6)***

POC 7 - Violet/White • Trunk release: (default setting) This channel will provide a 250mA output with the trunk release command. ***(function also POC setting 28)***

POC 8 - Black • GWR (ground when running aka status output): (default setting) This channel will provide a 250mA output with the remote start activation command and continue to provide output until 100mS after the remote start process has shut own. ***(function also POC setting 5)***

POC setting value description (SV)

SV 1 - **Parking light:** provides a 250mA (-) negative parking light output on any POC programmed with this setting.

SV 2 - **Starter:** provides a 250mA (-) negative starter output on any POC programmed with this setting.

SV 3 - **Ignition:** provides a 250mA (-) negative ignition output on any POC programmed with this setting.

SV 4 - **Accessory:** provides a 250mA (-) negative accessory output on any POC programmed with this setting.

Copyright 2016 Firstech, LLC.

SV 5 - **GWR (status):** provides a 250mA (-) negative while remote started on any POC programmed with this setting. Can be used to activate interface modules during the remote start process.

SV 6 - **FAA (Factory Alarm Arm):** provides a 250mA (-) negative output with the arm/lock command on any POC programmed with this setting.

SV 7 - **FAD (Factory Alarm Disarm):** provides a 250mA (-) negative output with the disarm/unlock command on any POC programmed with this setting.

SV 8 - **Horn:** provides a 250mA (-) negative output with output control based on feature 3-08 option setting when using any POC programmed with this setting.

SV 9 - **Dome light supervision:** provides a 250mA (-) negative output with the disarm/unlock command, on any POC programmed with this setting, for up to 45 seconds or until ignition is on.

SV 10 - **AUX1:** provides a 250mA (-) negative output when AUX is triggered by Firstech 4 button remote, 2way LCD remote, or Drone, on any POC programmed with this setting.

SV 11 - **AUX2:** provides a 250mA (-) negative output when AUX is triggered by Firstech 4 button remote, 2way LCD remote, or Drone, on any POC programmed with this setting.

SV 12 - **AUX3:** provides a 250mA (-) negative output when AUX3 is triggered, using a Firstech 2 way LCD remote (please refer to remote users guide for activation steps), on any POC programmed with this setting. ***(Feature 3-11 must be set to option 2)***

SV 13 - **AUX4:** provides a 250mA (-) negative output on any POC programmed with this setting,when AUX4 is triggered using a Firstech 2 way LCD remote (please refer to remote users guide for activation steps), ***(Feature 3-11 must be set to option 2)***

SV 14 - **AUX5:** provides a 250mA (-) negative output on any POC programmed with this setting, when AUX5 is triggered, using a Firstech 2 way LCD remote (please refer to remote users guide for activation steps), on any POC programmed with this setting. (Feature 3-11 must be set to option 2)

SV 15 - **AUX6:** provides a 250mA (-) negative output on any POC programmed with this setting, when AUX6 is triggered, using a Firstech 2 way LCD remote (please refer to remote users guide for activation steps), on any POC programmed with this setting. (Feature 3-11 must be set to option 2)

SV 16 - **AUX7:** provides a 250mA (-) negative output on any POC programmed with this setting, using a Firstech 2 way LCD remote (please refer to remote users guide for activation steps ***(Feature 3-11 must be set to option 2)***

SV 17 - **Defrost:** provides a 250mA (-) negative output on any POC programmed with this setting, when defrost function has been activated (output time based on features 3-13 and 3-14 option settings)

SV 18 - **GWA (ground While Armed):** provides a 250mA (-) negative output on any POC programmed with this setting, while the system is armed or locked.

SV 19 - **GWR 2 (status output 2):** provides a 250mA (-) negative output on any POC programmed with this setting, when the remote start sequence is activated and continue until after the remote start has shut down. ***Note: With GWR 2 the output will not provide ground during reservation mode set up in order to avoid any possible factory immobilizer issue that may occur if the vehicle sees 2 or more immobilizer override coding.***

SV 20 - **Siren 2:** provides a 250mA (-) negative output on any POC programmed with this setting, only with the full alarm or panic modes. May be used to power any additional horn or sirens while the CM7 is in full alarm or panic mode.

Copyright 2016 Firstech, LLC.

SV 21 - **Defrost 2:** provides a 250mA (-) negative pulsed output only on any POC programmed with this setting, when the defrost output is engaged based on the temp setting of feature 3-13.
SV 22 - **VAC (Ventilation and Air Conditioning):** provides a 250mA (-) negative output on any POC programmed with this setting, when the VAC feature is activated based on temperature settings of feature 3-12 during the remote start sequence.
SV 23 - **PTS control:** More info coming soon
SV 24 - **AUX3 EZGO:** provides a 250mA (-) negative output on any POC programmed with this setting, (based on timing set for AUX 3) ***only when the CM7 is unlocked using the EZGO proximity unlock feature.***
SV 25 - **Lock:** provides a 250mA (-) negative output on any POC programmed with this setting, with the lock/arm command.
SV 26 - **Unlock:** provides a 250mA (-) negative output on any POC programmed with this setting, with the unlock/disarm command.
SV 27 - **2nd Unlock:** provides a 250mA (-) negative output on any POC programmed with this setting, when using the driver's door priority feature. This wire would be used to unlock the rest of the doors while unlock should be used to unlock the isolated driver's door. ***Note: this output can only be activated within 5 seconds after the first unlock command is sent.***
SV 28 - **Trunk release:** provides a 250mA (-) negative output (output timing based on feature 1-15 on any POC programmed with this setting, with the trunk release command.

Special Options Group 3: This special option group allows you to determine the input type of the PIC **(Programmable Input Channel)** wire. i.e. If you want to set PIC #5 (default setting (-) hood status INPUT) to (N/C) hood pin INPUT, you will need change special option 4 from 0 to number 11 using your OP500 or flashing website.

PIC 1 - Light Blue: (-) E-Brake INPUT (Emergency/parking brake input) (default setting) (function also PIC setting 1)
PIC 2 - Violet/Black: (-) Trunk Status INPUT (Trunk input) (default setting) (function also PIC setting 2)
PIC 3 - Brown/White: (-) Key Sense INPUT (default setting) (function also PIC setting 3)

PIC 5 - Gray/Black: (-) Hood Status INPUT (default setting) (function also PIC setting 4)

PIC setting value description (SV)

SV 1 - **(-) E-Brake INPUT:** This setting allows any PIC programmed with value 1 to be used as a (-) negative parking /emergency brake INPUT.
SV 2 - **(-) Trunk Status INPUT:** This setting allows any PIC programmed with value 2 to be used as a (-) negative Trunk status INPUT. This can be used as a single trunk or multi rear door input for security or Manual transmission remote start.

Copyright 2016 Firstech, LLC.

SV 3 - **(-) Key-Sense INPUT:** This setting allows any PIC programmed with value 3 to be used as a (-) negative Key-sense INPUT. Keysense is recommended when remote starting manual transmission vehicle.

SV 4 - **(-) Hood Status INPUT:** This setting allows any PIC programmed with value 4 to be used as a (-) negative Hood Status INPUT. This can be used as a single hood pin input for security or Manual transmission remote start.

SV 5 - **(-) Door Status INPUT:** This setting allows any PIC programed with value 5 to be used as (-) negative Door Status. This can be used as a **single door or multi door input** for security or Manual transmission remote start.

SV 6 - **(-) Trigger Start INPUT:** This setting allows for any PIC programmed with value 6 to be used as a (-) negative Remote Start Trigger Start INPUT.

SV 7 - **(-) Glow Plug INPUT:** This setting allows for any PIC programmed with value 7 to be used as a Glow Plug INPUT for diesel wait to start function.

SV 8 - **(-) Disable ARM/Disarm/Start INPUT:** This setting allows any PIC programmed with value 8 to be used as a (-) negative arm/disarm/start disable INPUT when controlling the CM through analog arm/disarm/start inputs.

SV 9 - **(N/C) Trunk INPUT:** This setting allows any PIC programmed with value 9 to be used as a Normally closed circuit Trunk pin INPUT. The CM will consider the zone open when ground is removed or the circuit status changes from (-) ground to power. This can be used as a single trunk zone input for security or remote start

SV 10 - **(N/C) Key Sense INPUT:** This setting allows any PIC programmed with value 10 to be used as a Normally closed circuit Key Sense Input. The CM will consider the key to be in the key cylinder if when ground is removed or the circuit status changes from (-) ground to power. Keysense is recommended when remote starting manual transmission vehicle.

SV 11 - **(N/C) Hood Status:** This setting allows any PIC programmed with value 11 to be used as a normally closed circuit hood pin INPUT. The CM will consider the zone open when ground is removed or the circuit status changes from (-) ground to power. This can be used as a single hood zone input for security or remote start

SV 12 - **(N/C) Door INPUT:** This setting allows any PIC programmed with value 12 to be used as a normally closed circuit door pin INPUT. The CM will consider the zone open when ground is removed or the circuit status changes from (-) ground to power. **This can be used as a SINGLE (1) door zone input for security or remote start.**

****There are several benefits to using the PIC inputs:**

Example 1: 4 N/C door inputs would be available for Manual transmission scenario without requiring a module, wire cutting, resistors, diodes, or relays

Example 2: 4 individual (-) door inputs could be connected (with no diodes) eliminating the need for diodes to isolate the door pins from each other when connecting multiple door pins to 1 door input on the CM

Example 3: Allow for a N/C hood pin or Trunk pin input that doesn't require a module, wire cutting, diodes, resistors, or relays

Example 4: will make the CM an install more efficient by allowing for unused inputs to be reprogrammed for other functional inputs

Copyright 2016 Firstech, LLC.

Option Programming

How to Program Options

There are two ways to set options on the CM7 control modules. You can use the FT-OP500-KIT or most Firstech remotes. The remotes include 4 or 5 button 1 and 2 Way remotes.

Option Programming Using the FT-OP500-KIT

The OP500 can be used to change anything in the Option Tables. It is required to change settings in Special Option Groups 1 and 2.

STEP 1: Make sure system is unlocked/disarmed. Connect the antenna cable to the 4 or 6 pin port on the top of the OP500. Once connected, the OP500 will power up as long as CN1 or CN3 on the control module is connected properly.

STEP 2: Use the left or right arrow keys on the OP500 to select option. Use the up or down arrow buttons to select the option setting. "1" is the default setting, "2", "3", and "4" are the optional settings.

Special Option Group 1: Change the timed output of the Diesel Timer or Auxiliaries 1 through 7.

Special Option Group 2: Change the Programmable Output Connections on the grey 20 pin harness.

STEP 3: Hold the "W" (Write) button for 3 seconds. This finalize option changes to the control module. Wait until OP500 displays "Success" before disconnecting.

To reset the options, hold the "R" (Reset) button and "W" (Write) buttons for 3 seconds. Then hold the "W" button for 3 seconds.

Option Programming Using a Remote

Using a remote is a timed process so review this section before beginning. Options cannot be programmed with 1 button remotes. **IMPORTANT:** Special Option Groups cannot be programmed with remotes – OP500 must be used.

STEP 1: Select the option you wish to program. Use the correct remote table below:

Copyright 2016 Firstech, LLC.

How to Program Options with 5 Button 2-Way Remotes							
	Wait for chirp between each tap	**Scroll Through Menu (Wait for flash between each tap)**	**Wait for corresponding parking light flash and/or siren chirp before selecting option**	**Select Option 1**	**Select Option 2**	**Select Option 3**	**Select Option 4**
Option Menu 1	(F + Trunk) for 3 seconds then (F + Trunk) for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Tap Trunk Button	Tap Key Button
Option Menu 2	(F + Trunk) for 3 seconds then (F + Key) for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Tap Trunk Button	Tap Key Button
Option Menu 3	(F + Key) for 3 seconds then (F + Trunk) for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Tap Trunk Button	Tap Key Button
Option Menu 4	(F + Key) for 3 seconds then (F + Key) for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Tap Trunk Button	Tap Key Button

How to Program Options on 2-Way Remotes with Separate Lock and Unlock Buttons							
	Wait for chirp between each tap	**Scroll Through Menu (Wait for flash between each tap)**	**Wait for corresponding parking light flash and/or siren chirp before selecting option**	**Select Option 1**	**Select Option 2**	**Select Option 3**	**Select Option 4**
Option Menu 1	Lock + Unlock for 3 seconds then Lock + Unlock for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Hold Trunk Button for 3 seconds	Tap Key Button
Option Menu 2	Lock + Unlock for 3 seconds then Lock + Key for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Hold Trunk Button for 3 seconds	Tap Key Button
Option Menu 3	Lock + Key for 3 seconds then Lock + Unlock for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Hold Trunk Button for 3 seconds	Tap Key Button
Option Menu 4	Lock + Key for 3 seconds then Lock + Key for 3 seconds	Tap Key Button		Tap Lock Button	Tap Unlock Button	Hold Trunk Button for 3 seconds	Tap Key Button

Copyright 2016 Firstech, LLC.

How to Program Options with 2-Way Remotes with Roman Numerals							
	Wait for chirp between each button hold	Scroll Through Menu (Wait for flash between each tap)	Wait for corresponding parking light flash and/or siren chirp before selecting option	Select Option 1	Select Option 2	Select Option 3	Select Option 4
Option Menu 1	(1 + 2) for 3 seconds then (1 + 2) for 3 seconds	Tap Button 4		Tap Button 1	Tap Button 2	Tap Button 3	Tap Button 4
Option Menu 2	(1 + 2) for 3 seconds then (1 + 4) for 3 seconds	Tap Button 4		Tap Button 1	Tap Button 2	Tap Button 3	Tap Button 4
Option Menu 3	(1 + 4) for 3 seconds then (1 + 2) for 3 seconds	Tap Button 4		Tap Button 1	Tap Button 2	Tap Button 3	Tap Button 4
Option Menu 4	(1 + 4) for 3 seconds then (1 + 4) for 3 seconds	Tap Button 4		Tap Button 1	Tap Button 2	Tap Button 3	Tap Button 4

How To Program Options With 1 Way Remotes							
	Wait for chirp between each button hold	Scroll Through Menu (Wait for flash between each tap)	Wait for corresponding parking light flash and/or siren chirp before selecting option	Select Option 1	Select Option 2	Select Option 3	Select Option 4
Option Menu 1	Lock + Unlock for 3 seconds then Lock + Unlock for 3 seconds	Hold Trunk + Key for 3 seconds		Tap Lock Button	Tap Unlock Button	Tap Key Button	Hold Trunk + Key for 3 seconds
Option Menu 2	Lock + Unlock for 3 seconds then Lock + Key for 3 seconds	Hold Trunk + Key for 3 seconds		Tap Lock Button	Tap Unlock Button	Tap Key Button	Hold Trunk + Key for 3 seconds
Option Menu 3	Lock + Key for 3 seconds then Lock + Unlock for 3 seconds	Hold Trunk + Key for 3 seconds		Tap Lock Button	Tap Unlock Button	Tap Key Button	Hold Trunk + Key for 3 seconds
Option Menu 4	Lock + Key for 3 seconds then Lock + Key for 3 seconds	Hold Trunk + Key for 3 seconds		Tap Lock Button	Tap Unlock Button	Tap Key Button	Hold Trunk + Key for 3 seconds

Copyright 2016 Firstech, LLC.

STEP 2: Scroll through menu waiting for 1 parking light flash and/or siren chirp per line.

STEP 3: Once finished scrolling through menu, wait for the parking lights and/or siren chirp to confirm the option number. i.e. option 2-04 will flash and/or chirp 4 times. Select your option using the Lock, Unlock, Trunk, or Start buttons.

Resetting to Factory Defaults: To reset the options in a particular menu, enter the menu using your remote. To reset options with a 2 Way remote tap the Trunk button 3 three times. To reset options with a 1 Way remote tap the Key/Start button 3 times. Wait for parking lights to flash and/or siren chirp between each tap. After the third tap, the menu will reset back to default. This must be done for each option menu that must be reset.

Troubleshooting

Remote Start Error Codes

If the remote start fails to start the vehicle, the parking lights will flash three times immediately. Following those two flashes the parking lights will flash again corresponding to the error table below:

Number of Parking Light Flashes	Remote Start Error
1	Motor running or must program tach before 1st remote start
2	Key in ignition on position
3	Door open (manual transmission only)
5	Foot brake on
6	Hood open
7	Reservation off (manual transmission only)
8	Tach or tachless sensing failure
9	DAS sensor shutdown
10	System is in Valet Mode
2 Way remotes will display the error number “Strt Er##” on the LCD.	

Remote Start Shutdown Error Codes

If the remote start sequence has been completed and the vehicle shuts down, the vehicle’s parking lights will flash 4 times, pause then flash again with the error code. Tap button 4 on 2 Way remotes to initiate the shutdown error codes. On 1 Way remotes hold the Trunk and Start buttons together for 2.5 seconds.

Copyright 2016 Firstech, LLC.

Number of Parking Light Flashes	Remote Start Shutdown Error
1	Lost engine sensing signal (Tach/Alternator/Tachless)
2	Lost emergency brake signal (Manual Transmission)
3	Foot brake triggered
4	Hood pin triggered

Alarm LED Diagnostics

When the alarm is triggered the LED on the RPS (if installed), Secure Valet (if installed) and the LED (if installed) will flash a certain amount of times as shown in the table below. This is intended for users with 1 Way remotes.

Priority	Trigger	LED Flash Diagnostic
1	Door/Hood/Trunk/Ign Triggered	2 flashes, break, then repeat
2	2nd Shock Triggered	3 flashes, break, then repeat
3	2nd Auxiliary Input Triggered	4 flashes, break, then repeat
4	Panic with remote	5 flashes, break, then repeat

Frequently Asked Questions

I have everything hooked up and the system will not respond.
A: The remotes need to be programmed. Review the "Common Procedure" section of this manual.

When remote starting, the siren chirps 3 times and parking lights flash 3 then 1 time.
A: You must program tach before remote starting. Also be sure to check the foot brake and ignition wires on the CM7000 and CM7200.

I am trying to program the control module with the OP500 Option Programmer and it flashes "ER 01" when I plug it in to the antenna cable. What should I do?
A: Make sure that the system is not locked/armed. The last thing to check is the antenna cable or antenna extension cable – make sure this is not damaged. Try another antenna or extension cable. When the OP500 is working properly, it will read "success good."

What is the green/white wire loop inside the brain module?
A: This wire determines the transmission mode. With the loop intact, the system is set for manual transmissions. With the loop cut, the system is set for automatic transmission. **Do not install control modules with cut loops in manual transmission vehicles.**

What do I do with the thick blue wire on Connector 1?
A: It is used to power a (+) 2nd Ignition. You can also change the output via jumper within the control module. It can be changed to power a (+) 2nd Accessory or (+) Parking light wire.

Copyright 2016 Firstech, LLC.

I need a ground when armed (GWA) wire, does the control module have one?
A: You can use pin 1-blue/white wire on the Grey Connector 5. You must cut this wire and place a diode in line so that when the ignition on the other side of the relay goes to ground and it doesn't back feed to your accessory. Install the stripe side of the diode facing the control module.

What do I do with the 6 Pin harness on Connector 3?
A: The 6 Pin harness on Connector 3 is used for low current ignition harnesses. DO NOT use this harness with the Connector 1 Harness (the high current power harness) this is ONLY to be used in LOW current applications where High current is not needed for any reason.

Does the CM7 series have tachless mode?
A: Yes. The CM7000 and CM7200 are tachless. For details, review the "Common Procedures" section of this manual.

All my connections are made and remotes programmed, how do I program the tach?
A: Review the "Common Procedures" section of this manual. You must have your remotes programmed, start your vehicle, then hold the remote start button. Vehicle should chirp and/or flash once if it programs, three times if it does not like the tach source.

The vehicle will lock and unlock, but will not remote start or flash the parking lights.
A: The system is in Valet Mode. Tap the Lock and Trunk buttons for a half second to exit Valet Mode. If you have a 1 button remote, turn the key to the ignition on position. Press and release the remote button 5 times, waiting a second between each press.

Whenever I try to arm the vehicle, it chirps the siren 3 times and will not arm.
A: Check the hood and trunk trigger inputs.

Do the door locks flip flop in polarity?
A: No. You can use the FT-DM700 relay pack for high current positive (+) locks, or the FT-DM600 harness used for low current 600mA positive (+) locks.

What are Firmware Version Diagnostics?
A: When you turn the Ignition on and hold buttons 1 and 4 or Lock and Key/Start for 2.5 seconds then the parking lights will flash 1 time on the CM7 series showing V.1.

What is this cartridge slot on the CM7000, CM7200, and CM6300?
A: This is the slot for the Blade cartridge system. This slot is for the Idatalink Blade remote start bypass modules. For more information on the compatibility and install information please visit compustar.idatalink.com. Using this system eliminates many connections between your standard control module and bypass module. **IMPORTANT:** If you are not using the Blade then you will not have or use the black 20 pin connector on the control module.

How do I take the system out of Valet Mode with a 1 Button Remote?
A: Turn the ignition on and tap the foot brake 10 times within 10 seconds.

Copyright 2016 Firstech, LLC.

Why are the ignition controlled doorlocks option not working?
A. Check option 1-09. It should be set on 2 or 3. The option has to also be turn on via the remote. On 2 Way LCD remotes tap the Lock and Start Buttons for a half second, the parking lights will flash once to show the option is turned on. On 1 Way remotes tap the Lock and Start buttons for a half second.

The vehicle remote starts when disarmed, but not when armed.
A: The starter kill relay was installed backwards. Check to make sure the yellow/black wire is going to the ignition side of the wire, and that the yellow wire is going to the engine side.

The vehicle starts and shuts down 3 times in a row.
A: This usually means that the engine sensing mode is not working correctly. If you are using a coil, change to an injector or try alternator sense mode.

On the brain, how do I set the auxiliaries?
A: You must have an Option Programmer (FT-OP500-KIT) to set the auxiliaries on the CM4000, CM4200-DX, CM4300, CM5000, CM5200, CM6000, CM6200, CM6300, CM7000 and CM7200. First choose two POC wires on CN5 that you are not using. With the OP500 go into the Special Option Group 2 and set those POC's to Aux 1 and Aux 2. Review the "Special Option Group" programming section of this manual. On the CM7 Series control modules, Auxiliary 1 is pre programmed on CN5, Pin 3, White Wire.

Technical Support Contacts

Firstech technical support is reserved for authorized dealers only.

Monday - Friday:	888-820-3690 (8:00 am – 5:00 pm Pacific Standard Time)
Email:	techfeed@compustar.com
Web:	www.firstechdata.com

Wiring Diagrams
Go to www.firstechdata.com to access wiring info. If you are an authorized dealer and unable to access this site please contact your sales rep or us call 888-820-3690 Monday through Friday, 8 am to 5 pm Pacific Standard Time.

Copyright 2016 Firstech, LLC.