

CS400 DIRECTSTART  
REMOTE CAR STARTER + ALARM

# CS423

## DIRECTSTART REMOTE CAR STARTER w/ 3 ZONE INTRUSION ALARM OPTIONS



## INSTALLATION MANUAL



# DIRECTSTART

MANUFACTURED FOR I2VOLT DIRECT  
Div. of TRILOGIX ELECTRONIC SYSTEMS INC.

[www.i2voltdirect.com](http://www.i2voltdirect.com)

## INSTALLATION INFO

System Wiring

Transmitter Programming: How to

System Programming: How to, Example,

Bank I Programming: Basic features.

Bank II Programming: Remote start features

Tach Programming: Tach Setting, Adjusting, Engine Crank Protection

Diesel Installation: Description of Options

Safety device Connections: Automatic & Manual transmission Vehicles

Parking Light Status indicators: Flash Codes, # of light flashes & description

Main Wiring Diagram: Wiring Schematic

## SYSTEM CONTENTS

1-Base Control Module

1-6 Pin Main Power Harness & Connector

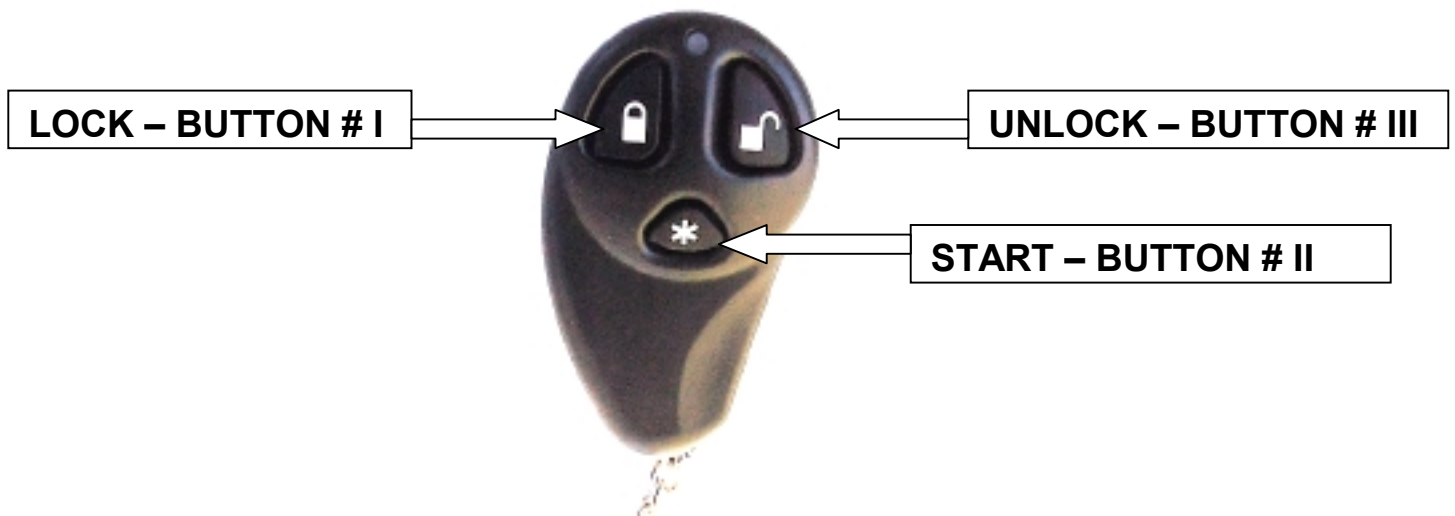
1-3 Button Transmitter (Optional 2<sup>nd</sup> Transmitter)

1-Instructions - Owners, Install, Warranty

1-14 Pin Input/Output Harness & Connector

1-3 Pin RF Powered Antenna

**WARNING:** THIS UNIT MUST BE INSTALLED WITH ALL SAFETY DEVICES SUPPLIED!!



### Transmitter Battery Replacement

1) Remove screw(s) from back of transmitter. 2) Remove front cover and remove old battery carefully. 3) Replace with new GPA23A 12 volt battery. Verify polarity (+ -). Normal battery life is approximately two years but can vary depending on use. For best performance change battery once a year.

## MANUAL TRANSMISSION VEHICLES:

If remote starter is installed on a manual transmission vehicle, a "READY MODE" safety procedure must be followed EACH time you exit the vehicle. The safety procedure is in place to REMIND the user to leave the vehicle in NEUTRAL and NOT in gear before remote starting. If safety procedure is not completed, vehicle WILL NOT remote start but all other options will function normally.

\* AN ON-BOARD JUMPER MUST BE REMOVED TO ACTIVATE MANUAL TRANSMISSION PROGRAMMING AND SAFETY FEATURES. FAILURE TO DO SO WILL RESULT IN UNSAFE OPERATION WHICH COULD RESULT IN INJURY OR DEATH. INSTALLATION IN MANUAL TRANSMISSION VEHICLES IS AT THE SOLE DISCRETION OF THE USER. TRILOGIX ELECTRONIC SYSTEMS INC. CANNOT VALIDATE NOR ENSURE THAT ANY OR ALL SAFETY REQUIREMENTS ARE MET DURING INSTALLATION AND THEREFORE ACCEPTS NO RESPONSIBILITY FOR THE INSTALLATION OF ANY REMOTE CAR STARTER IN A MANUAL TRANSMISSION VEHICLE. DO NOT INSTALL IN CONVERTIBLES, SOFT-TOPS OR VEHICLES IN WHICH DOORS CAN BE REMOVED AND DOOR SWITCH DISABLED.

## **TACH PROGRAMMING (MANDATORY)**

\*NOTE THIS IS THE FIRST THING YOU SHOULD DO AFTER ALL WIRE CONNECTIONS HAVE BEEN MADE. At least one transmitter must be programmed in order to proceed with TACH programming. If transmitter is not programmed proceed to Transmitter programming (page #4) then return to complete tach programming first before changing any function settings or adding additional transmitters.

To enter Tach Programming:

- A) Open the hood. - Violet Hood switch wire (J2-Pin#14) must see a ground.
- B) Start the vehicle manually using the key and let the engine reach a normal idle.
- C) Press and hold the brake, then press and hold (START) button # II for 4 seconds or until the parking lights go off. Park lights should come back on to indicate system has detected proper tach wire connection. \* Continue to hold the brake down.
- D) Turn the ignition key off but DO NOT RELEASE THE BRAKE. Parking lights will flash 2 time fast then 2 time slowly.

\* If vehicle over or under cranks follow Tach Adjustment instructions below.

\*\* If parking lights flash 8 times then vacuum mode was selected (Bank II, Function 6, Option 2) and the system will exit tach programming.

**TACH ADJUSTMENT** : If engine overcranks or undercranks, follow steps below:

- 1) With the hood open and the Ignition key in the ON position, Press and hold the brake, then press and hold button II (Start) for 4 seconds or until the parking lights go off.
- 2) Turn ignition off but do not release the brake. Parking lights will flash 1 to 7 times according to actual programmed tach setting.
- 3) Press and release (LOCK) button I between 1 and 7 times to select the actual tach setting you wish to program. Eg. Press Lock 3 times to select a tach setting of 3.
- 4) To save new setting Press and release the (START) button II to save that setting. The parking lights will flash 1 to 7 times according to the new tach setting. 1 second later, the parking lights will flash 2 times fast then 2 times slowly to confirm and exit tach programming.

Note: To cancel setting, release brake or close hood before saving the entered setting.

## **ENGINE OVER-CRANK PROTECTION** :

The ENGINE OVER-CRANK PROTECTION feature will prevent the remote starter from operating if the engine cranks the entire crank time or if the system does not detect a tach pulse during the first crank cycle. **The diagnostic for this condition is 3 fast flashes when a remote start attempt is made.**

If the unit goes into ENGINE PROTECTION OVERRIDE, verify that the tach wire is properly connected and start the engine using the key and let the motor run for a few minutes. Stop the engine and retry using the remote transmitter. If the unit still goes in Tach Protect, redo the Automatic Tach Setting and/or Tach Adjustment programming and/or try a different tach wire.

## **DIESEL ENGINE INSTALLATION**

When CS400 is programmed for Diesel Time Out (BANK II, FUNCTION 1, OPTION 2) the system initiates a Glow-Plug Time-Out phase which powers up the ignition when the remote start button is pressed, then waits for a period of 12 seconds before attempting to (crank) start the engine.

If CS400 is programmed for Diesel Glow Plug Monitoring, (BANK II, FUNCTION 1, OPTION 3) the system will monitor the glow-plug light using J2-PIN #12 (Brake Input) and crank the engine as soon as the glow plug light goes out.

## **TRANSMITTER (DESCRIPTION & OPERATION)**

### **BUTTON #1 "LOCK" Icon**

**Button #I** (*Lock Icon*) is used to **LOCK** (*Optional*) electric door locks and/or **ARM** engine interrupt circuit and/or intrusion alarm. A **LOCK/ARM** signal is sent each time the **Button #I** is pressed. Parking lights flash **once** to confirm. (Horn chirp is *Optional*).

### **BUTTON #2 "START" Icon**

**Button #II** is used to **Remote Start** your vehicle.

### **BUTTON #3 "UNLOCK " Icon**

**Button # III** is used to **UNLOCK** (*Optional*) electric door locks and/or **DISARM** engine interrupt circuit and or intrusion alarm options. Parking Lights flash **twice** to confirm . (Horn chirp is *Optional*)

### **NOTES:**

\* You cannot arm the system if the IGNITION KEY is in the ON position.

\*\* Engine Interrupt Circuit can be programmed for **PASSIVE** or **ACTIVE Arming**. **Bank I, Function 2**

\*\*\*Door Locks can be programmed for **PASSIVE** or **ACTIVE ARMING**. **Bank I , Function 1.**

\***Note** Alarm Settings must be enabled (**Bank I, Function 8**) in order to activate the Intrusion Alarm features to be programmed for **ACTIVE** or **PASSIVE ARMING** (**Bank I, Function 1**)

## **TRANSMITTER PROGRAMMING**

1. Open the hood. (J2-PIN#14 Violet hood switch wire must see ground )
2. Toggle the Ignition Key ON and OFF 8 times...(Start and Finish in the OFF position) Parklights will come on solid to indicate system is in Transmittter learning mode.
3. Press 'LOCK' Button to program (learn) the transmitter. System will confirm transmitter is programmed correctly by flashing the parking lights (1) one time if Tx is new to the system or (2) twice if Tx has previously been learned (programmed).
4. Transmitter is now programmed to operate the system. At this point you have the option of
  - A) Exiting programming mode by turning the IGNITION KEY to the ON position.
  - B) Proceeding directly into Function programming by pressing (LOCK) Button I to select Bank I Function Settings or (START) Button II to select Bank II Function Settings.

**\*NOTE: ONLY ONE TRANSMITTER CAN BE PROGRAMMED AT A TIME, THE TRANSMITTER PROGRAMMING SEQUENCE MUST BE REPEATED FOR EACH NEW TRANSMITTER.**

**\*\*NOTE: A MAXIMUM OF 6 TRANSMITTERS CAN BE LEARNED PER SYSTEM.**

System Programming Automatically follows after each transmitter is programmed unless the ignition is turned to the ON position to exit programming mode altogether.

## **CHANGING FUNCTION SETTINGS**

**TO ENTER FUNCTION PROGRAMMING YOU REPEAT THE TRANSMITTER PROGRAMMING SEQUENCE:**

1. Open the hood. (J2-PIN#14 Violet hood switch wire must see (-) ground )
2. Toggle the Ignition Key ON and OFF 8 times...(Start and Finish in the OFF position)  
Parklights will come on solid to indicate system is in Transmittter learning mode.
3. Press 'LOCK ' Button to learn the transmitter. System will confirm transmitter is programmed correctly by flashing the parking lights (1) one time if Tx is new to the system or (2) twice if Tx has previously been learned (programmed)
4. After the parking lights flash to confirm Tx are programmed you must immediately select the programming BANK you wish to enter. BANK I or BANK II
  - BANK I is selected by pressing the 'LOCK' button # 1 confirmed by (1) one park light flash
  - BANK II is selected by pressing the 'START' button #2 confirmed by (2) park light flashes

## **FUNCTIONS PROGRAMMING**

- IMMEDIATELY AFTER BANK SELECTION CONFIRMATION YOU ARE AUTOMATICALLY PROMPTED TO THE FIRST FUNCTION SETTING IN THAT BANK.
- TO CHANGE BETWEEN THE (3) THREE OPTIONS OF EACH FUNCTION YOU PRESS THE "STAR" BUTTON (B) BETWEEN 1-3 TIMES AND THEN PRESS THE "LOCK " BUTTON (A) TO 'SAVE' THE SELECTION.

*EXAMPLE : TO CHANGE THE DOORLOCK FUNCTION TO PASSIVE DOORLOCKS (BANK I - FUNCTION #1- OPTION #2)*

*PRESS THE 'STAR' BUTTON (B) TWICE THEN PRESS THE "LOCK' BUTTON (A) TO SAVE SELECTION. PARK LIGHTS WILL CONFIRM WITH (2) TWO FLASHES.*

- SYSTEM AUTOMATICALLY PROMPTS YOU TO THE NEXT FUNCTION SETTING ONCE THE LAST FUNCTION SETTING HAS BEEN CONFIRMED.

## **TO SKIP A FUNCTION**

- YOU CAN ADVANCE FORWARD TO A SPECIFIC FUNCTION WITHOUT CHANGING PREVIOUS FUNCTIONS BY PRESSING THE "UNLOCK' BUTTON (C).
- EVERYTIME THE UNLOCK BUTTON IS PRESSED THE SYSTEM ADVANCES ONE FUNCTION (PARKLIGHT WILL FLASH BETWEEN 1-3 TIMES JUST TO TELL YOU WHAT OPTION IS SAVED IN MEMORY ON THE FUNCTION YOU ARE BYPASSING.)

You may exit programming and save changes any time by turning the key to the ON position!

# BANK 1 PROGRAMMING

## FUNCTIONS

## OPTIONS

### 1 - Door lock

**\*Option 1 :: Active door lock**

Button 2 : Passive door lock (Doors/Alarm lock w/ Interrupt Circuit)

Button 3 : Erase all learned code and reset to original default

Note Option #3 will (A) erase all transmitters. (B) Reset factory defaults (C) Exit programming & enter armed state.

### 2 - Interrupt Circuit

J2-PIN#6 (BROWN)

**\*Option 1 : Active Arming**

Option 2 : Passive arming (arm after 30 sec. Ign. off)

Option 3: Passive arming (arm after 60 sec. Ign. off)

### 3 - Lock/Unlock Timing

**\*Option 1 : Lock 1 sec. / Unlock 1 sec.**

Option 2 : Lock 1 sec. / Unlock 2 pulses of 0.5 sec.

Option 3 : Lock 4 sec. / Unlock 4 sec

### 4 - Prog. Output #1

J2 -PIN#4 (GREY)

**\*Option 1 : Button 3 (#) - 1 sec. output only if ign. off (trunk)**

Option 2 : Button 3 (#) - 1 sec. output (garage door)

### 5 - Ignition Lock

**\*Option 1 : Ignition Lock Off**

Option 2 : Ignition Lock and Unlock

Option 3 : Ignition Lock only

### 6 - Cold start

**\*Option 1 : Cold start mode enable with 2 hours intervals**

Option 2 : Cold start mode enable with 4 hours intervals

Option 3 : Cold start disable

### 7- Run time

**\*Option 1 : 15 minutes**

Option 2 : 20 minutes

Option 3 : 10 minutes

### 8 - \*Alarm Setting

**\*Option 1 : Alarm & Ignition Tamper OFF**

Option 2 : Alarm & Ignition Tamper ON

### 9 - Ext. trigger

J2-PIN#3(Wh/ Purple)

**\*Option 1 : External Start trigger enable. No Alarm zone3.**

Option 2 : Ext. trigger input used as alarm trigger zone 3.

\*Note- This input acts as an alarm input trigger only on automatic transmission vehicles. In Manual transmission mode this input is used as the safety hand brake connection and overrides all other options.

\*Alarm Settings must be enabled in order to activate intrusion alarm features. Function 8 above.

\*\*To enable Passive Arming Intrusion Alarm features you must change doorlock option to passive locking (Bank I, Function 1, OPTION 2).

# **BANK 2      PROGRAMMING**

## **FUNCTIONS      OPTIONS**

### **1- Fuel setting/ Diesel timeout**

J2-PIN#12 (Green)~

**\*Option 1 : Gasoline engine**

Option 2 : Diesel engine 12 sec. Glow-Plug time-out

Option 3 : Diesel engine, Glow-plug monitor on brake input

### **2- Groundout**

J2-PIN#8 (WHITE/GREEN)

**\*Option 1 : 500mA constant (-) output when running**

Option 2 : 1.0 Disarm output

Option 3 : : 500mA constant (-) output & J2-PIN#5 will provide a double pulse whenever start, unlock or trunk release is used.

### **3- Disarm Setting**

J2-PIN#5 BLUE/WHITE

**\*Option 1 : 0.5 sec. disarm pulse**

Option 2 : 1.0 sec. disarm pulse

Option 3 : Defrost Output:2 sec.(-) pulse 4 sec after remote start

### **4 – ReArm/ Horn**

J14-PIN#7 (Orange wire)

**\*Option 1 : Re-Arm Output**

Option 2 : Horn output

Option 3 : Not Implimented yet

### **5- Chirp Mode**

J2-PIN#7 (ORANGE)

**\*Option 1 : Chirp(s) on second press of Lock & Unlock**

Option 2 : Chirp on first press of Lock button

Option 3 : Chirp on first press of Lock and Unlock

### **6- Relock**

DOORLOCK WIRE

J2-PIN#9 or PIN#10

**\*Option 1 : Lock pulse 6 sec. after remote start turns off**

Option 2 : Lock pulse 4 sec. after starting and 6 sec.after turns off

Option 3 : Relock on doorlock wire off

### **7- Tach mode**

J2-PIN#13 (BLACK/WHITE)

**\*Option 1 : Tach pulse count sensing**

Option 2 : Vacuum mode sensing

\*\* Option 3 : Voltage monitoring , NOT IMPLEMENTED

### **8- Horn Timing**

J2-PIN#7 (ORANGE)

**\*Option 1 : 10mSec. Chirp Timing**

Option 2 : 50mSec. chirp timing

Option 3 : Not Implimented

\* Default setting

\*\* Must be equipped with voltage sensing circuitry. CS500

## Parking Light Status (Flash Codes)

<u>#Flash</u>	<u>Rate</u>	<u>Description</u>
- 1	<b>fast</b>	Doors <b>Lock</b> ; <b>Armed</b> ; End of run time; <b>Exiting Service</b> mode
- 1	<b>slow</b>	<b>Cold weather</b> mode <b>cancel</b> ed; <b>Low voltage</b> start <b>cancel</b> led
- 2	<b>fast</b>	Doors <b>Unlock</b> ; Disarm Disabler; Entering <b>Service</b> mode;
- 2	<b>slow</b>	Power-up <b>reset automatic</b> transmission; Car in <b>Ready</b> mode (manual transmission mode only)
- 3	<b>fast</b>	System in Engine Crank Protect
- 3	<b>slow</b>	Entering <b>Timed Cold Start</b> mode
- 4	<b>slow</b>	Power-up <b>reset manual</b> transmission, Enter <b>Low voltage</b> start
- 4	<b>fast</b>	<b>End</b> of programming mode or Remote Starter stop because <b>brake pressed</b> or <b>hood open</b> Car <b>not</b> in <b>ready</b> mode: <b>hand brake not on</b> , door/hood open
- 5	<b>fast</b>	Remote start <b>attempt</b> made while in <b>Service</b> mode
- 8	<b>fast</b>	<b>Error</b> during programming or remote start attempt made with tach signal detected
-ON	<b>steady</b>	Engine in running mode, Programming mode

NOTE: THERE WILL BE NO PARKING LIGHT FLASH ON POWER UP IF THE EXTERNAL TRIGGER LINE IS GROUNDED.



# WIRE HARNESS DESCRIPTION

## J1: 6 PIN MAIN WIRING HARNESS

<u>PIN#</u>	<u>COLOR</u>	<u>POLARITY</u>	<u>DESCRIPTION</u>
-------------	--------------	-----------------	--------------------

**J1-PIN#1- RED(30A FUSE) : + 12 VDC Main Power Source Input** : Connect the **Red** wire to main constant +12 VDC power source or to the positive terminal of the battery. If there are two constant 12 volt sources at the ignition switch, then the RED input wires must be connected to a one source each.

**J1-PIN#2- GREEN: + Accessory Output (Heater/ A/C)** :Connect this **Green** wire to the accessory wire which supplies +12VDC when the ignition key is in the ignition "on" position but not during "start" (crank) cycle. If vehicle uses more than one accessory wire to power up heater & A/C controls, relays will be required.

**J1-PIN#3- YELLOW: + 12VDC Starter Output** :Connect this **Yellow** wire to the solenoid side of the wire which provides +12 VDC when the ignition key is in the ignition "Start" position only.

**J1-PIN#4- BLACK: NEG. (-) : CHASSIS GROUND Input** : Connect this BLACK wire SECURELY TO A CLEAN GROUND source.

**J1-PIN#5- BLUE: +12 VDC True Ignition Output** :Connect **Blue** wire to the primary ignition wire supplying +12 VDC when the ignition key is in the ignition "On" & "Start" positions. Vehicles that have a 2nd ignition wire, to supply power to 2nd ignition connect to J2-PIN# 2 Red/White.

**J1-PIN#6- RED : + 12 VDC (fused) Main Power Source Input** : Connect **Red** wire to a main constant +12 VDC power source or to the positive terminal of the battery.

## J2 : 14 PIN WIRE HARNESS

<u>J2-PIN#1</u>	<u>WHITE</u>	<u>POSITIVE</u>	<u>+12 VDC PARKING LIGHT OUTPUT</u>
-----------------	--------------	-----------------	-------------------------------------

Connect this **White** wire to positive side of the parking lights wire. This is a Relayed output

<u>J2-PIN#2</u>	<u>RED/WHITE</u>	<u>POSITIVE</u>	<u>IGNITION #2 +12 VDC (6 Amp Max) for 2nd Ign. Wire</u>
-----------------	------------------	-----------------	--

Connect this **Red/White** wire to the second Ignition wire that doesn't draw more than 6 amps of current. If the second ignition requires more than 6 amps, Connect an automotive relay as follows: Pin 85 to **Red/White** wire, pin 86 to Ground, Pin 87 to constant **Fused** 12VDC and Pin 30 to the second ignition wire of vehicle.

<u>J2-PIN#3</u>	<u>WHITE/VIOLET</u>	<u>NEG</u>	<u>EXT. TRIGGER (Auto / Hand Brake Input (Manual Trans.))</u>
-----------------	---------------------	------------	---

There are three uses for this wire:

- (A) As the 3<sup>rd</sup> trigger zone when alarm features are enabled
- (B) As handbrake input for Manual Transmission vehicles (Mandatory)
- (C) To initiate start up from an auxillary device such as a remote alarm, a Timer, or Temp. Sensor

<u>J2-PIN#4</u>	<u>GRAY</u>	<u>NEGATIVE</u>	<u>CHANNEL #3 OUTPUT (Trunk Release or Other Option)</u>
-----------------	-------------	-----------------	--

This **Gray** wire will provide a Negative 500 mA Output when the # "POUND" button (III) is pressed for 1.0 second. It is programmable to activate even when ignition is "ON" or only when ignition is "OFF".

<u>J2-PIN#5</u>	<u>BLUE/WHITE</u>	<u>NEGATIVE</u>	<u>DISARM OUTPUT / DEFROST</u>
-----------------	-------------------	-----------------	--------------------------------

This **Blue/White** wire is a programmable negative output: **BANK 2 FUNCTION 3**

Option 1 : 0.5 sec. Neg. Disarm Pulse before remote starting & unlocking & trunk release

Option 2 : 1.0 sec. Neg. Disarm Pulse before remote starting & unlocking & trunk release

Option 3 : Defrost- Neg Pulse 4 sec after remote start

\* Note when Option 1 or 2 is selected, system will provide Disarm pulse before confirmation parking light flash and before unlocking or starting the vehicle. This does add 0.5 sec delay to the unlock function but is necessary to disarm many 1999 & up factory security systems. e.g.. '99 Grand Prix GT.

## WIRE HARNESS DESCRIPTION

**J2-PIN#6 BROWN NEGATIVE STARTER KILL 500 mA Negative Output**

FUNCTION 2 -Connect this **Brown** wire to Pin 86 of the Starter Interrupt Relay. Programmable for:  
Option 1 : Active Arming (Transmitter must be used to Arm & Disarm system)  
Option 2 : Passive Arming (will arm automatically 30 sec. after Ignition turns off)  
Option 2 : Passive Arming (will arm automatically 60 sec. after Ignition turns off)

**J2-PIN#7 ORANGE NEGATIVE RE-ARM / HORN 500 mA Negative Output**

This Orange wire is a programmable negative 500 mA output: **BANK 2 FUNCTION 4**  
Option 1 : 2.0 sec 500 mA Re-Arm pulse 4 seconds after remote starter turns off & before, during and after doors lock pulse.(Horn off)  
Option 2 : Horn Output - 1 (.25 sec.) 500 mA pulse after locking - Horn chirp or Re-arm (No unlock chirp)  
Option 3 : Horn Output - 1 (.25 sec.) horn chirp after locking & 2 horn chirp when unlocking  
\*Note: With Option # 1 selected, Pin #7 provides a 500 mA neg. pulse beginning 0.5 sec **before** and **finishing** 0.5 sec after doorlock pulse.

**J2-PIN#8 WHITE/GREEN NEGATIVE GROUND OUTPUT (when remote start is running)**

This **White/Green** wire is programmable 500 mA output: **BANK 2 FUNCTION 2**  
Option 1 : Ground Output while running under remote control. For bypassing factory immobilizers.(PATS)  
Option 2 : 500 mA pulsed output before starting & unlocking & trunk  
**Option 3 : same as Option #1 + Changes Disarm Output to a double pulse (Pin # 5 Blue /White)**  
**Important:** When using multiple relays it is recommended to use a diode with the cathode end **towards** module. 500 mA output do not exceed 3 relays.

**J2-PIN#9 YELLOW NEG/POS NEGATIVE Unlock Pulse / POSITIVE Lock Output**

Connect this **Yellow** wire to the **Negative Unlock** wire or the **Positive Lock** wire of Doorlock relay circuit.

**J2-PIN#10 WHITE/BLUE NEG/POS NEGATIVE Lock Pulse / POSITIVE UnLock Output**

Connect this **White/Blue** wire to the **Negative Lock** wire or the **Positive Unlock** wire of the Doorlock relay circuit

**J2-PIN#11 NOT IMPLEMENTED –September 2000**

**J2-PIN#12 GREEN POSITIVE +12 VDC Input for Brake Switch**

Connect this **Green** wire to switched positive side of the Brake Switch.  
DIESEL OPTION: **FUNCTION 10, OPTION 3:** System will monitor Glow Plug through Brake Input wire. see diagram page 10

**J2-PIN#13 BLACK/WHITE NEGATIVE Tach or Vacuum**

Connect the **Black/White** wire to the Tach or vacuum wire. Tach Programming must be followed.

**J2-PIN#14 VIOLET NEGATIVE Hood Pinswitch / Door Trigger Input**

**Important:** This **Violet** wire must be connected to the hood pinswitch circuit.  
**For Manual Transmission :** When jumper is removed for manual transmission vehicles this wire must also be connected to the door pinswitch which supplies ground when the door is opened. Use diode to isolate hood pin switch from door otherwise you will turn domelight on when hood is opened. See diagram on last page, for proper installation. Relay may be needed if ground from door pinswitch is too weak to trigger system. ( some Hondas)

\*Thin Blue wire coming directly off the PCB above the 14 pin connector is a (+) 3 volt LED output. Connect to positive side of a non flashing 3 volt LED. Provides system status such as : Programming, service mode etc..

## MANUAL TRANSMISSION VEHICLES INSTALLATION & OPERATING INSTRUCTIONS

It is essential that ALL Safety connections are installed, tested and functioning properly for safe operation. Installation of any remote start system into a manual transmission vehicle is entirely at your own risk. The manufacturer assumes no risk or liability. Improper installation of a remote car starter may result in injury or death.

### TO CONVERT UNIT TO MANUAL TRANSMISSION MODE

1. Unscrew and remove the top portion of the main control module's plastic casing.
2. Locate and REMOVE JUMPER that is found directly on the circuit board beside the large microchip.

### SAFETY CONNECTIONS FOR REMOTE CAR STARTER MODELS: CS100, CS300, CS400

- ↙ J2-PIN#14 : HOOD PIN INPUT wire must be split and diode isolated to run a parallel negative (-) Door Input and Hood Input. It is necessary that ALL DOORS be connected on this circuit.
- ↙ J2-PIN#3 : External Trigger Input wire MUST BE CONNECTED to the wire which provides a negative (-) signal when the hand brake is engaged.

Note: Removing the Black jumper cancels the External Trigger function and converts the input to a hand brake input. DO NOT use this unit as a slave starter on manual transmission vehicles. DO NOT install on convertibles or vehicles in which entry to the vehicle cannot be monitored. E.g. convertibles, JEEPS, vehicles the doors can be removed etc.

## What Is "Remote Start Ready Mode"

When the remote starter is installed on a manual transmission vehicle a "Remote Start Ready Mode" safety procedure must be followed EACH time the vehicle is exited. The safety procedure is in place to remind the user to leave the vehicle in NEUTRAL and NOT in gear before remote starting. If the safety procedure is not completed, the vehicle WILL NOT remote start but all other options will function normally. The remote start system monitors the doors and handbrake at all times. It is essential that all doors and handbrake connections are functioning properly to ensure safe operation. This is the responsibility of the installer!

\*Installers must make sure all the entry points are monitored via the doorpin connection.

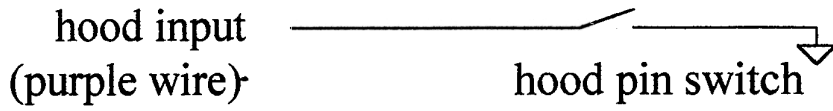
\*\* Users must also make sure that all safety connections are operational and should also periodically test to ensure that all entry point connections are in fact functioning correctly.

## OPERATING INSTRUCTIONS: Entering "Ready Mode"

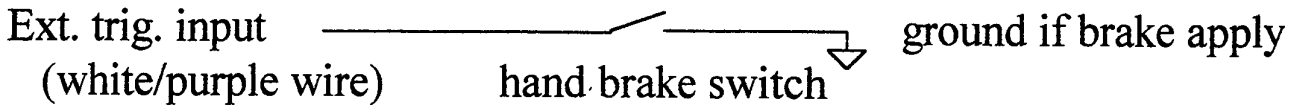
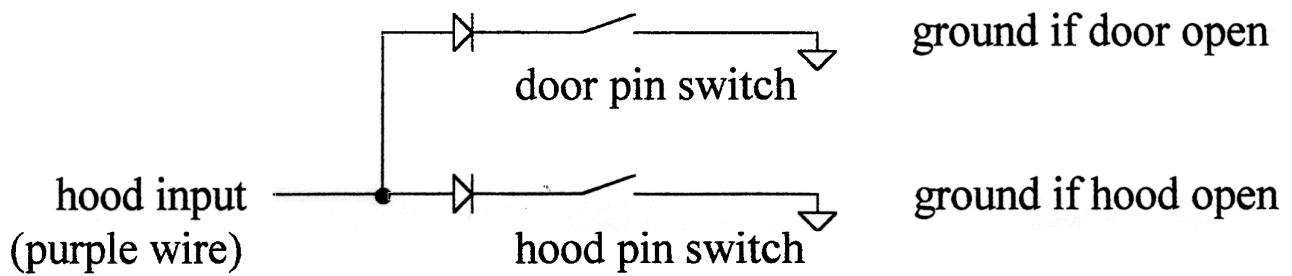
- 1) Make sure ALL doors and hood are shut and vehicle is running by the ignition key.
- 2) Place vehicle in Neutral and set Parking Brake.
- 3) Press START Button #2 (\*) for 2 seconds. Parking lights will flash then come back ON.  
(You should hear Parking light relay "click" twice)  
\* If a RED LED is installed, the LED light will begin flashing to confirm "Manual Transmission Ready Mode" is enabled.
- 4) Turn key to OFF position and remove key. Vehicle engine should remain running.
- 5) Open door and Exit vehicle. Close the door then press the START Button #2 (\*) to shut off engine.  
(Parking lights will confirm with 2 slow flashes)
- 6) System is now in "READY MODE" and will allow vehicle to be remote started by pressing the START Button # 2 (\*) for 2 seconds.
- 7) To remote start vehicle press the START Button for 2 seconds and release. System will flash Park lights once to confirm signal received then attempt to start engine. Engine start is confirmed when Parking lights come back ON. As long as engine is running under remote start Park lights will remain ON.
- 8) NOTE: Any time the vehicle is re-entered (door is opened) the remote starter will EXIT ready mode. If "Ready Mode" has not enabled parking lights will flash 4 times if a remote start attempt is made.

## Safety device connection:

### Automatic transmission:



### Manual transmission:



# CS400 WIRING DIAGRAM

