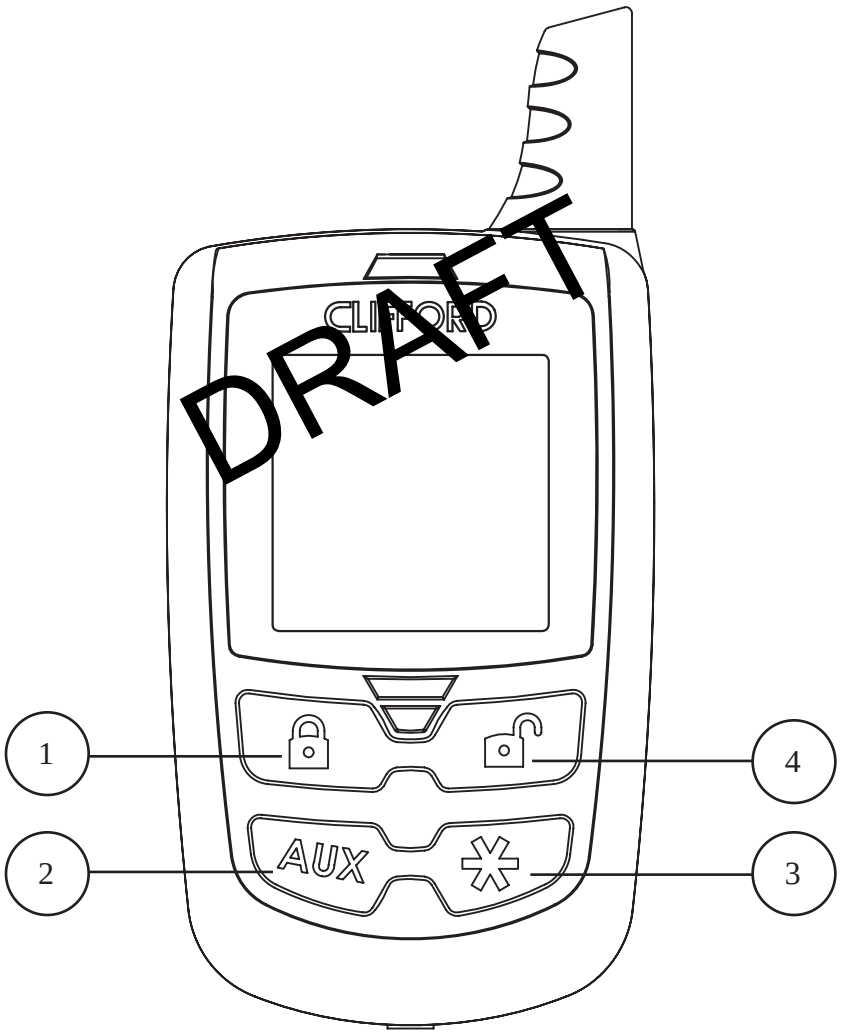
and AUX ..... operate.....Channel 5

and * and AUX operate .....rear defogger

and * ..... operate.....Channel 6

remote control button/animation locations



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standard mode configuration

1. Arm Button
2. Auxiliary Button
3. Remote Start Button
4. Disarm Button
5. Programming button

DRAFT

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remote control programming

The remote control has programmable features that can be changed to fit the users preferences. Programming can be performed anytime using the programming and function buttons to select the feature menus and change feature settings.

Function button operations during programming:

- Press the  or  button to scroll and highlight menu and feature items.
- Press the  button to choose the highlighted item
- Press the  button to exit programming anytime

Enter programming:

Press and hold for 3 seconds the round programming button on the rear of the remote control. The programming main menu will appear. Use the function buttons as described above to navigate and change the features.

DRAFT

Exit Programming:

Press the  button anytime to save the settings and exit programming, or, if more than 10 seconds lapses between button presses, the remote control will automatically save the settings and exit programming mode.

Power off sleep mode:

This setting will make the remote control go to sleep. It will not respond to any RF signals or function button presses.

1. Enter programming mode
2. Scroll to highlight the Clock icon
3. Press the  button to choose the Clock and access Clock set screen
4. Scroll and highlight a digit or A/P and then press the  button to change the digit.
5. Press the  button anytime to save the new setting and exit.

Wake Up the remote control:

To wake up the remote control press and hold the program button for 3 seconds. The display will cycle through all available animations and icons before becoming active.

Set the 12 hour Clock:

1. Enter programming mode

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2. Scroll to highlight the Clock icon
3. Press ✱ to choose the Clock and access Clock set screen
4. Scroll and highlight a digit or A/P and press ✱ to change the digit.
5. Press AUX anytime to save the new setting and exit.

Page mode on/off:

When Page is off, the remote control will not receive Pages or output Page Notifications or Alerts. It will only receive Command Reponses.

1. Enter programming mode
2. Scroll to highlight OPERATION
3. Press ✱ to choose the operation menu screen
4. Scroll to highlight PAGE and press ✱ to choose.
5. Scroll to highlight the desired setting.
6. Press ✱ to save and return to the Operation menu or AUX to save the setting and exit.

Beeps on/off:

When Beep is off, the remote control will only show animations or icons for Page Notifications. Alarm Page Alerts will be eliminated.

DRAFT

1. Enter programming mode
2. Scroll to highlight OPERATION
3. Press the ✱ button to choose the operation menu screen
4. Scroll to highlight BEEP and press ✱ to choose.
5. Scroll to highlight the desired setting.
6. Press ✱ to save and return to the Operation menu or AUX to save the setting and exit.

Custom zone ID:

Use this menu item to select which sensor or input information will be displayed when a particular zone is triggered.

1. Enter programming mode
2. Scroll to highlight OPERATION
3. Press ✱ to choose the operation menu
4. Scroll to highlight ZONE and press ✱ to choose the zone menu.
5. Scroll to highlight the desired zone and press ✱ to choose.
6. Scroll to highlight the icon to be displayed for that zone and press ✱ to choose.
7. Press ✱ to save and return to the zone menu or AUX to save the setting and exit.

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Status Icon Descriptions:

Each time the remote control plays any animation due to an Alarm Page or Command Response, icons will be displayed to indicate the current system status. Below is a list of icons and the system characteristics they represent.

	This icon indicates the DOOR is open or has triggered the alarm
	This icon indicates the TRUNK is open or has triggered the alarm
	This icon indicates the system status is ARMED or LOCKED
	This icon indicates the system status is DISARMED or UNLOCKED
	This icon indicates the BATTERY charge level
	This icon indicates the REMOTE START is on and the engine is running
	This icon indicates the GARAGE DOOR is open
	This icon indicates the GARAGE DOOR is closed
	This icon indicates the HOOD is open or has triggered the alarm
	This icon indicates the IGNITION is on or has triggered the alarm
	This icon indicates the SIREN is active
	This icon indicates a SENSOR is active or has triggered the alarm
	This icon indicates an alarm FULL TRIGGER event has occurred
	This icon indicates an alarm WARN TRIGGER event has occurred
	This icon indicates a CALL PAGE from a vehicle occupant was received
	This icon displays the current TIME

DRAFT

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multi-level security arming

Multi-Level Security Arming is a feature that allows the user to select which of the system's inputs or sensors will be active and which will be bypassed when the system is armed. (See *Table of Zones* section of this guide.) Multi-Level Security Arming can only be accessed from a standard configuration transmitter. Pressing the arm button of the standard configuration transmitter again within five seconds of arming the system will activate the Multi-Level Security feature. Each time the arm button is pressed again, a different security level is selected. The different levels of security are selected as follows:

- Pressing  one time: The siren chirps once. The system is armed.
- Pressing  a second time within five seconds: The siren chirps twice followed by a long chirp. Zone Two is now bypassed.
- Pressing  a third time within five seconds: The siren chirps three times followed by a long chirp. Zone Four is now bypassed.
- Pressing  a fourth time within five seconds: The siren chirps four times followed by a long chirp. Zones Two and Four are now bypassed.
- Pressing  a fifth time within five seconds: The siren chirps five times followed by a long chirp. All input zones, except the ignition, are now bypassed.

DRAFT

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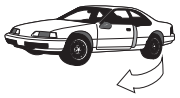
system features learn routine

The System Features Learn Routine dictates how the unit operates. It is possible to access and change any of the feature settings using the Valet/program switch. However, this process can be greatly simplified by using the Bitwriter®. Any of the settings can be changed and then assigned to one of up to four transmitters. This feature is called Owner Recognition. Each time that particular transmitter is used to disarm the system, the assigned feature settings will be recalled. Owner Recognition is only possible when programming the unit via the Bitwriter®.

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

To enter the System Features Learn Routine™:

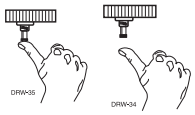


1. **Open a door. (**The GREEN wire, H1/8, or the VIOLET, H1/6 must be connected.)

2. **Ignition.** Turn the ignition on, then back off. (The heavy gauge PINK wire of the relay satellite must be connected.)

DRAFT

3. **Select a Menu.** Press and **HOLD** the Valet/Program switch. (The Valet/Program switch must be plugged into the blue port.) After three seconds the siren will chirp once indicating entry to the Basic Features Menu. If this is the menu you wish to access, release the button and go on to Step 4. If the button is not released, you will jump to the next menu and the siren will chirp twice. There are three possible menus. Once you have selected the desired menu, release the Valet/Program switch.



4. **Select a Feature.** Press and release the Valet/Program switch the number of times corresponding to the feature you wish to change. For example, to access the third feature, press and release 3 times. Then press the button once more and **HOLD** it. The siren will chirp the number of times equal to the feature you have accessed.

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5. **Program the Feature.** While holding the Valet/Program switch, you can toggle the feature on and off using the remote transmitter. Pressing the button that arms the system will select the one chirp or default setting. Pressing the button that disarms the system (or the Channel Two button when in the single button arm/disarm configuration) will select the two chirp setting.

Note: *Some features have more than two possible settings. Pressing*  *will select the one chirp setting, pressing*  *will toggle through the two-chirp and higher settings.)*

6. **Release.** Release the Valet/Program switch.

Once a feature is programmed:

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

To access another feature in the same menu:

1. Press and release the Valet/Program switch the number of times necessary to advance from the feature you just programmed to the next one you want to program.
2. Then press the Valet/Program switch once more and **HOLD** it.

DRAFT

For example, if you just programmed the third feature in the menu and you would like to program the seventh feature in the menu, you would press and release the Valet/Program switch four times and then press it once more and **HOLD** it. The siren would chirp seven times to confirm access to the seventh feature.

To select another menu:

1. Press and hold the Valet/Program switch.
2. After three seconds, the unit will advance to the next menu and the siren will chirp, indicating which menu has been accessed.

For example, if you just programmed some features in the first menu and you want to program a feature in the third menu, press and **HOLD** the Valet/Program switch. After three seconds, the siren chirps twice indicating access to the second menu. Continue to **HOLD** the button and three seconds later the siren will chirp three times indicating access to the third menu. Features in the third menu are then programmable following steps 4 through 6 of the System Features Learn Routine procedure.

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To exit the learn routine:

The learn routine will be exited if any of the following occurs:

1. Close the open door.
2. Turn the ignition on.
3. There is no activity for longer than 15 seconds.
4. The Valet/Program switch is pressed too many times.

feature menus

The default settings are indicated in **bold** type. Features that have additional settings that can be programmed using the Bitwriter® are indicated with an asterisk (*).

menu #1 - basic features

DRAFT

FEATURE NUMBER	ONE-CHIRP SETTING (DEFAULT)	TWO-CHIRP SETTING
1-1	**Active arming**	Passive arming
1-2	**Arm/disarm chirps on**	Arm/disarm chirps off
1-3	**Ignition lock ON**	Ignition lock OFF
1-4	**Ignition unlock ON**	Ignition unlock OFF
1-5	**Active locking only**	Passive locking
1-6	**Panic with ignition on**	No panic with ignition on
1-7	**0.8 second door lock pulses** (1)	3.5 (2), 0.4 (3) seconds
1-8	**Forced passive arming on**	Forced passive arming off
1-9	Automatic engine disable on	**Automatic engine disable off**
1-10	**Armed When Driving (AWD) on**	AWD off
1-11	**Code Hopping on**	Code Hopping off
1-12	**Horn Output Pulsed**	Constant
1-13	**Horn function Full Alarm Only** (1)	Siren function - chirp length 20mS (2)/30mS (3)/40mS (4)/50mS (5)
1-14	Comfort Closure ON	**Comfort Closure OFF**

NOTE: *The numbers in parentheses indicate the number of times the siren will chirp and the LED will flash.*

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FEATURE NUMBER	ONE-CHIRP SETTING (DEFAULT)	TWO-CHIRP SETTING
2-1	**30 second siren duration***	60 second siren duration*
2-2	**Nuisance Prevention Circuitry ON**	Nuisance Prevention Circuitry OFF
2-3	**Progressive door trigger**	Instant door trigger
2-4	**Disarm from Valet, 1 pulse**	Disarm from Valet, 2-5 pulses
2-5	**Door sensor bypass chirp ON**	Door sensor bypass chirp OFF
2-6	**Ignition controlled domelight ON**	Ignition controlled domelight OFF
2-7	**Unlock output 1 pulse**	Unlock output 2 pulses
2-8	**Lock output 1 pulse**	Lock output 2 pulses
2-9	**Factory disarm with Channel Two ON**	Factory disarm with Channel Two OFF
2-10	**FAD function with Unlock** (1)	Before Unlock (2), Remote Start only (3)
2-11	**FAD 1 pulse**	2 pulses
2-12	**Channel 4 validity** (1)	Latched (2), Latch reset with ignition (3), 30-sec. timed (4)
2-13	**Channel 4 linking None** (1)	Arm (2), Disarm (3), Remote Start (4)
2-14	**Channel 5 validity** (1)	Latched (2), Latch reset with ignition (3), 30-sec. timed (4)
2-15	**Channel 5 linking None** (1)	Arm (2), Disarm (3), Remote Start (4)
2-16	**Channel 6 validity** (1)	Latched (2), Latch reset with ignition (3), 30-sec. timed (4)
2-17	**Channel 6 linking None** (1)	Arm (2), Disarm (3), Remote Start (4)

DRAFT

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menu #3 - remote start options

FEATURE	ONE-CHIRP SETTING (DEFAULT)	TWO-CHIRP SETTING
3-1	**Engine checking ON**	Engine checking OFF
3-2	**Engine checking TACH**	Engine checking VOLTAGE
3-3	**Run time: 12 minutes** (1)	Run time: 24 (2) or 60 (3) minutes
3-4	**Parking lights flashing**	Parking lights constant
3-5	**Crank time: 0.6 seconds** (1)	0.8 (2), 1.0 (3), 1.2 (4), 1.4 (5), 1.6 (6), 1.8 (7), 2.0 (8), 4.0 (9) sec.
3-6	**Voltage check - high**	Voltage check - low
3-7	**Short Run/Turbo–1 min.** (1)	3 (2), 5 (3), 10 (4) min.
3-8	Activation pulse count–1	**Activation pulse count: 2**
3-9	**2nd Ignition/Acc output: ignition**	Accessory
3-10	**Acc state during wait to start: OFF**	ON
3-11	**2nd status output: Normal** (1)	Rear defogger: latch 10 min. (2)/ pulse (3)
3-12	**Anti grind: ON**	Anti grind: OFF
3-13	**Diesel timer Wait-to-Start output** (1)	Timed 15 (2), 30 (3), 45 (4) seconds*
3-14	**Timer mode–Timed Starts**	Temperature Starts
3-15	**Run Time (Timer Mode) 12 minutes** (1)	3 (2), 6 (3), 9 (4) minutes**

DRAFT

NOTE: *The Bitwriter® can set 1-90 seconds.*

***NOTE:** *The Bitwriter® can set 1-16 minutes.*

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feature descriptions

The features of the system are described below. Features that have additional settings that can be selected only when programming with the Bitwriter® are indicated by the following icon: 

menu #1 - basic features

1-1 ACTIVE/PASSIVE **ARMING:** When active arming is selected, the system will only arm when the transmitter is used. When set to passive, the system will arm automatically 30 seconds after the last door is closed. To alert the consumer of passive arming, the siren will chirp 20 seconds after the door is closed. This provides the consumer with an audible warning prior to the system actually arming. At the 30 second mark, the system will arm, but the siren will not chirp.

1-2 CHIRPS ON/OFF**:** This feature controls the chirps that confirm the arming and disarming of the system.

1-3 IGNITION LOCK ON/OFF**:** When turned on, the doors will lock three seconds after the ignition is turned on and unlock when the ignition is turned off.

1-4 IGNITION UNLOCK ON/OFF**:** When ON this feature will unlock the doors when the ignition is turned off.

DRAFT

1-5 ACTIVE/PASSIVE **LOCKING:** If passive arming is selected in Feature 1-1, then the system can be programmed to either lock the doors when passive arming occurs, or only lock the doors when the system is armed via the transmitter. Active locking means the system will not lock the doors when it passively arms. Passive locking means that the system will lock the doors when it passively arms.

> ***NOTE:*** *Remember, when passive arming is selected, the unit will chirp 20 seconds after the last door is closed. The system does not actually arm or lock the doors until 30 seconds after the door has been closed.*

1-6 PANIC WITH IGNITION ON: This feature controls whether or not the panic mode is available with the ignition ON. In some states, there are laws prohibiting a siren sounding in a moving vehicle. This feature makes the system compliant with these regulations.

1-7 DOOR LOCK PULSE DURATION: Some European vehicles, such as Mercedes-Benz and Audi, require longer lock and unlock pulses to operate the vacuum pump. Programming the system to provide 3.5 second pulses, will accommodate the door lock interface in these vehicles. The default setting is **0.8** second door lock pulses. Some modification to the door lock harness (H2) is also necessary. (Refer to TechTip 1041 for wiring information regarding (+/-) Door Lock Outputs Harness (H4)section, Type E - Mercedes-Benz and Audi -1985 and Newer" diagram.) The 0.4 second pulse is required on some of the newer Chrysler and Ford vehicles.

1-8 FORCED PASSIVE ARMING ON/OFF**:** To use this feature, passive arming must be selected in Feature 1-1. When

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turned on, forced passive arming will ensure that the system will passively arm, even if a zone is left open or invalid. Forced passive arming occurs one hour after the ignition is turned off.

1-9 AUTOMATIC ENGINE DISABLE (AED) ON**/OFF**: AED is a full-time, passive starter disable that works independently of the security system. When turned on, the orange, ground-when-armed output (H1/1) will activate 30 seconds after the ignition is turned off. The LED will flash at half its normal rate when the ignition is turned off to indicate that AED is active and will interrupt the starter in 30 seconds. AED does not occur in Valet mode and can be bypassed using the emergency override procedure. The transmitter can be used to disarm AED, however, the system must be armed and then disarmed, using the transmitter, to disarm AED.

1-10 ARMED WHILE DRIVING (AWD) ON/OFF**:** In the default setting (Armed While Driving), the system can be armed with the ignition on. When armed, the ground-when-armed is not active and the sensors are bypassed. The door triggers will remain active.

1-11 CODE HOPPING® ON/OFF: The system uses a mathematical formula to change its code each time the transmitter and receiver communicate. This makes the group of bits or "word" from the transmitter very long. The longer the word is, the easier it is to block its transmission to the unit. Disabling the Code Hopping® feature lets the receiver ignore the Code Hopping® part of the transmitted word. As a result, the unit may have better range with Code Hopping® off.

DRAFT

1-12 HORN OUTPUT PULSED/CONSTANT**:** Program for either a pulsed output or a continuous output when triggered.

1-13 HORN FUNCTION (FULL ALARM ONLY) SIREN FUNCTION (20mS, 30mS, 40mS, 50mS): Program for output when the alarm is fully triggered or as the siren (arming/disarming and warnaway and full trigger with timing options).

1-14 COMFORT CLOSURE—ON**, OFF:** The system can be programmed to close the windows when the system is armed. A 20-second output starts 200mS after the last lock pulse. The Comfort Closure output will be canceled if the unlock button is pressed. If programmed ON, the lock output wire provides this function.

menu #2 - advanced features

2-1 SIREN DURATION 30/60 **SECONDS:** It is possible to program the unit to sound for 30 or 60 seconds during the triggered sequence. Some states have laws regulating how long a security system can sound. When using the Bitwriter®, the siren can be programmed to sound for any length of time from 1 second to 180 seconds.

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2-2 NUISANCE PREVENTION® CIRCUITRY (NPC) ON/OFF**:** NPC stops repeated triggering of the same zone. If one zone is triggered three times in one hour, that zone is bypassed for one hour, starting from the time of the third trigger. During that hour, if the system sees a trigger on that zone again, the system resets the one hour timer. If one hour passes and the zone has not triggered again, the zone is activated and can trigger the system again. NPC only monitors sensor inputs, and does not bypass the door trigger or the ignition trigger at any time. If NPC is turned off, the system will respond to repeated triggers on the sensor inputs and will do so indefinitely. Some states have laws regulating how many times a security system can trigger before it is considered a nuisance and the vehicle is towed away.

2-3 PROGRESSIVE DOOR TRIGGER ON/OFF**:** The system responds to a door trigger input with a progressive response. When the door is opened with the system armed, the siren will chirp 10 times prior to the full triggered sequence. The door trigger is still treated as an instant trigger and closing the door quickly will not prevent full triggered sequence from occurring. If the progressive door trigger is programmed off, the full siren output will occur the moment the door is opened.

2-4 VALET DISARM PULSE COUNT 1 TO 5 **PULSES:** The system can be programmed to count the number of presses of the valet switch before disarming the security system. The factory default setting is one pulse. The unit can also be set for two to five pulses.

Ghost Switch option: For added security, the GRAY wire on the two-pin Valet/Program plug can be connected to any switch in the vehicle that provides a positive (+) momentary pulse.

DRAFT

2-5 DOOR SENSOR BYPASS CHIRP ON/OFF**:** This feature controls the error chirp that is generated if the system is armed with the door trigger active. This is useful in vehicles that have a long dome light delay after the door has been closed. If the system is armed before the dome light has turned off, the security system will generate the door trigger error chirp. If this error chirp is not desired, use this feature to disable the door open error chirp. If the bypass chirp is turned off, no bypass chirp will be generated, even if a door is accidentally left open.

2-6 IGNITION CONTROLLED DOME LIGHT SUPERVISION ON/OFF**:** If turned on, the system will turn on the dome light for 60 seconds when the ignition is turned off. The optional dome light supervision feature must be installed as described in the Wire Connection Guide.

2-7 UNLOCK OUTPUT—1, 2 **PULSES:** This will program the unlock output to one or two pulses. When the double pulse unlock feature is turned on, the BLUE door lock harness wire will supply two negative pulses instead of a single pulse. At the same time, the GREEN door lock harness wire will supply two positive pulses instead of a single pulse. This makes it possible to directly interface with double pulse vehicles without any extra parts for unlock and lock outputs (see below).

2-8 LOCK OUTPUT—1, 2 **PULSES:** This will program the lock output to one or two pulses. When the double pulse lock feature is turned on, the BLUE door lock harness wire will supply two positive pulses instead of a single pulse. At the same time, the GREEN door lock harness wire will supply two negative pulses instead of a single

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pulse.

2-9 FACTORY ALARM DISARM WITH CHANNEL 2: In the default setting the factory alarm disarm output will disarm the factory alarm system any time the button(s) controlling Channel Two is pressed.

2-10 FACTORY ALARM DISARM—WITH UNLOCK, BEFORE UNLOCK, REMOTE START ONLY**:** In the default setting the factory alarm disarm output will disarm the factory alarm system any time the button(s) controlling Unlock is pressed. The "Before Unlock" output to disarms the factory alarm before the unlock output activates and before remote start is activated. The "Remote Start Only" output disarms the factory alarm only before the remote start is activated.

2-11 FACTORY ALARM DISARM PULSES—SINGLE, DOUBLE**:** Selectable for a single or double-pulse for the vehicle's factory alarm disarm input requirements.

2-12 CHANNEL 4 VALIDITY/LATCHED/LATCHED RESET WITH IGNITION/30 SECOND TIMED **OUTPUT:** This wire provides a (-) 200mA output whenever the transmitter button(s) controlling Channel 4 is pressed. This output can be programmed to provide the following types of outputs (see also the *Feature Menus* section):

- **Validity:** Output that will send a signal as long as the transmission is received.
- **Latched:** Output that will send a signal when the Channel 4 button(s) is pressed and will continue until the same button(s) is pressed again.
- **Latched, reset with ignition:** Similar to the latched output, this type of output turns on the first time the Channel 4 button(s) is pressed and turns off the next time the same button is pressed. This type of output additionally stops and resets whenever the ignition is turned on and then off.
- **30-second timed:** Output that will send a continuous signal for 30 seconds.

DRAFT

> ***Note:*** *All auxilary channel timed outputs can be programmed using the Bitwriter® (1-90 seconds).*

2-13 CHANNEL 4 LINKING (NONE)/ARM, DISARM, REMOTE START**:** When programming to validity or timed output this can be programmed to activate when arming or disarming (or remote start) with the transmitter.

2-14 CHANNEL 5 VALIDITY/LATCHED/LATCHED RESET WITH IGNITION/30 SECOND TIMED **OUTPUT:** Channel Five can be programmed for these output configurations. The unit is set to the default validity output. To change the configuration, use the two-chirp setting to toggle through the different configurations. Refer to feature 2-10 for additional detail.

2-15 CHANNEL 5 LINKING (NONE)/ARM, DISARM, REMOTE START**:** Refer to feature 2-13 for additional detail.

2-16 CHANNEL 6 VALIDITY/LATCHED/LATCHED RESET WITH IGNITION/30 SECOND TIMED **OUTPUT:** Channel Five can be programmed for these output configurations. The unit is set to the default validity output. To change the configuration, use the two-chirp setting to toggle through the different configurations. Refer to feature 2-10 for additional detail.

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2-17 CHANNEL 6 LINKING (NONE)/ARM, DISARM, REMOTE START**:** Refer to feature 2-13 for additional detail.

menu #3 - remote start

3-1 ENGINE CHECKING ON/OFF**:** In the default setting the remote start will monitor either the vehicle's tach wire or voltage depending on the programming of feature 3-2. If programmed OFF the vehicle will crank for the programmed crank time (feature 3-5) and will not verify with tach or voltage that the car is running. In the OFF setting, if the vehicle fails to start, the ignition can stay on for the entire run duration. Using tach or voltage check is always recommended if possible.

3-2 CHECKING TYPE TACH/VOLTAGE**:** Selects the method of engine monitoring. If set to TACHOMETER the unit will reference the learned tach signal to disengage the starter. In addition it will monitor the RPM and shut down if the engine RPM is too high or too low. When set to VOLTAGE, the unit will crank the starter for the programmed time and then attempt to sense that the engine is running by detecting an increase in voltage. The threshold for the voltage check is selectable in feature 3-6.

3-3 RUN TIME 12, 24**,** 60 **MINUTES:** Selects the time in minutes that the system will operate the engine until the system "times out". This is the maximum operation period and the system may be shut down using a shutdown at any time. Using the Bitwriter®, the run time can be programmed for any duration from 1-60 minutes.

DRAFT

3-4 PARKING LIGHTS FLASHING/CONSTANT**:** In the default setting, the unit will flash the vehicle's parking lights (if connected) while remote started. The constant setting will turn the parking lights on solid for the entire run duration.

3-5 CRANK TIME 0.6/0.8/1.0/1.2/1.4/1.6/1.8/2.0/4.0 **SECONDS:** If the unit is programmed for no engine checking or voltage sense, the crank time must be set to the appropriate duration. The default setting is 0.6 second. If a different crank time is desired, select feature 3-5 and select either 0.6 second by using the one-chirp setting or toggle through the higher settings by using the two-chirp settings.

3-6 VOLTAGE CHECK HI/LOW**:** This feature only functions when programmed for voltage sense. Some vehicles have many accessories, which are turned on when remote started. In these vehicles, the variation of voltage between the engine off and the car running is very small and the remote start unit may "think" the vehicle has not started. This can cause the remote start to shut-down after the car has been started. If this happens program this feature to the LOW position.

3-7 SHORT RUN/TURBO 1/3/5/10 **MINUTES:** When the * and AUX buttons on the transmitter are pressed simultaneously, the vehicle will start for the programmed short run time. The factory default is 1 minute.

3-8 ACTIVATION PULSE COUNT 1**/2:** This allows the system to use 1 or 2 pulses to activate the remote start sequence. The default setting is 2-pulses.

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Note: *1 or 2 pulses on the WHITE/BLUE remote start activation input wire as well as the*  *button of the remote control.*

3-9 2nd IGNITION/ACCESSORY **OUTPUT:** This will allow the PINK/WHITE to be used as a 2nd ignition or an accessory. The default is 2nd ignition.

3-10 ACCESSORY STATE DURING WAIT-TO-START OFF/ON**:** This feature will allow the selection of the accessory output to be ON or OFF during wait-to-start.

3-11 2nd STATUS OUTPUT NORMAL/REAR DEFOGGER LATCHED 10-MIN/PULSE**:** This feature will allow selection of status output or a rear defogger mode that turns on ten seconds after the vehicle has started if the vehicle interior temperature is below 55 degrees F. The defogger mode has two selections, latched or pulsed. Latched mode will only stay on for 10 minutes.

3-12 ANTI-GRIND ON/OFF**:** With the anti-grind On (default) the ground-when-armed output will be active during remote start operation. If accessories such as a voice module or window module are added to the unit, it may be necessary to program this feature off.

3-13 DIESEL TIMER—WAIT-TO-START/15, 30, 45 **SECONDS:** Default is the "Wait-to-Start" input control wire, or programmable to ignore the input control wire by a delay of 15, 30, or 45 seconds. This feature can be also programmed with the Bitwriter® and with a delay from 1 to 90 seconds.

DRAFT

3-14 TIMER MODE—TIMED STARTS/TEMPERATURE STARTS: The system will start every 3-hours until canceled by the brake, hood, or neutral safety shut-down wires (a maximum of 6 times). The temperature start mode will not start the vehicle unless the interior temperature of the vehicle is less than 0 degrees F. The temperature start mode will exit after 18 hours.

3-15 RUN TIME (TIMER MODE)—12, 3, 6, 9 **MINUTES:** Selects the time in minutes that the system will operate the engine until the system "times out". This is the maximum operation period and the system may be shut down using a shutdown at any time. Using the Bitwriter®, the run time can be programmed for any duration from 1-16 minutes.

nuisance prevention® circuitry

NPC requires that you change the way you test the system as NPC will bypass an input zone for 60 minutes. If the system "sees" the same zone trigger three times AND the triggers are spaced less than an hour apart, the system will bypass that input zone for 60 minutes. If that zone does not attempt to trigger the system during the 60-minute bypass period, the zone's monitoring will begin again at the end of the hour. If it does attempt to trigger while bypassed, the 60-minute bypass starts over again.

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Disarming and rearming the system does not reset NPC. The only way to reset NPC is for the 60 minutes to pass, without a trigger, or for the ignition to be turned on. This allows the system to be repeatedly triggered, disarmed and rearmed, and still allow NPC to bypass a faulty zone.

When disarming the system, 5 chirps indicate NPC is activated. The LED will report the zone that has been bypassed. (See *Diagnostics* section of this guide.)

valet mode

To enter or exit valet mode with the valet/program switch:

1. Turn the ignition key on and then off.

2. At anytime during the next 10 seconds, press and release the Valet switch. Now the Status LED will light constantly if you have entered Valet® Mode, and go out if you have exited Valet Mode.

DRAFT

To enter or exit Valet mode with the transmitter:

To enter or exit Valet Mode with a transmitter:

1. Open any door.
2. Press  on the transmitter.
3. Press AUX.
4. Press  again. You have now entered or exited Valet Mode (verify by checking your status LED).

rear defogger control

The rear defogger output can be remotely turned on/off any time using the remote control. The default setting is **ON**.

To turn the rear defogger output OFF:

1. Press & release the  and  and AUX buttons of the remote control.
2. The parking lights will flash 2-times.

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3. The rear defogger output will no longer activate when the vehicle is remote started.

> ***NOTE:*** *If the remote start is On the lights will turn off then flash 2-times before returning to their normal output and the defogger output, if active, will cease.*

To turn the rear defogger output ON:

1. Press & release the  and  and AUX buttons of the remote control.
2. The parking lights will flash 3-times.
3. The rear defogger output will once again activate when the vehicle is remote started.

> ***NOTE:*** *If the remote start is On the lights will turn off then flash 3-times before returning to their normal output and the defogger output will activate as programmed.*

timer mode

This unit can be programmed to start and run the engine every three hours, for a maximum of six cycles. The engine will run for the programmed run time and then shut down. After three hours, the system will restart the engine.

DRAFT

> ***IMPORTANT!*** *Timer Mode should be used only in open areas. Never start and run the vehicle in an enclosed space such as a garage or carport.*

To enter or exit timer mode with the transmitter:

The same procedure may be used to enter or exit Timer Mode using the remote transmitter:

1. Remote start the vehicle by pressing  and  simultaneously.
2. The lights will flash 4-times.
3. After 1-second the car will start and the timer mode will run for the specified time period.

The system is in Timer Mode. The engine may be allowed to run for its programmed run time, or the transmitter can be used to shut down the engine. Either way, the remote start system will restart the engine again in three hours. Timer Mode is exited automatically after the sixth run cycle.

To enter or exit timer mode manually:

1. Make sure the remote start system is not operating the engine.
2. Turn the ignition on.

Timer Mode will be exited and the parking lights will flash four times.

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table of zones

When using the Diagnostic functions, use the Table of Zones to see which input has triggered the system. It is also helpful in deciding which input to use when connecting optional sensors and switches.

ZONE NO.	TRIGGER TYPE	INPUT DESCRIPTION
1	Trunk Input	BLUE (H1/7)
2	Multiplexed Shock Sensor Input	Mux BLUE wire.
3	Door Trigger	GREEN (H1/8) and VIOLET (H1/6).
4	Multiplexed Shock Sensor Input	Mux GREEN wire
5	Ignition	Yellow ribbon harness wire
6	Hood Brake Trigger	GRAY on the 6-pin shutdown harness.

NOTE: *The Warn Away® response does not report on the LED.*

shutdown diagnostics

DRAFT

to perform shutdown diagnostics

1. With the ignition OFF, press and **HOLD** the Valet/Program switch.
2. Turn the ignition ON and then back OFF while **HOLDING** the Valet/Program switch.
3. Release the Valet/Program switch.
4. Press and release the Valet/Program switch. The LED will report the last shutdown for one minute or until the ignition is turned on.

LED FLASHES	SHUTDOWN MODE
One	Timed out
Two	Over-rev shutdown
Three	Low or no RPM
Four	Transmitter shutdown (or optional push-button)
Six	(-) Shutdown (H3/4 GRAY) or (+) Shutdown (H3/3 BROWN)
Seven	(-) Neutral safety shutdown (H3/1 BLACK/WHITE)
Eight	Wait-to-start timed out

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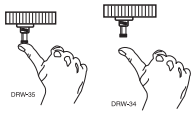
long term event history

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

1. With the ignition off, press and **HOLD** the Valet/Program switch.

2. Turn on the ignition.

3. Release the Valet/Program switch.



4. Press and release the Valet/Program switch within 5 seconds. The LED will flash in groups indicating the last two zones that triggered the unit for one minute or until the ignition is turned off.

NOTE: *The Warn Away triggers are not stored to memory and will not be reported.*

DRAFT

safety check

Before vehicle reassembly, the remote system must be checked to ensure safe and trouble-free operation. The following test procedure must be used to verify proper installation and operation of the system. The installation must be completed before testing, including connection to the brake switch and hood switch.

1. Test the BRAKE shutdown circuit: With the vehicle in Park (P), activate the remote start system. Once the engine is running, press the brake pedal. The engine should shut down immediately. If the engine continues to run, check the brake circuit connection.
2. Test the HOOD PIN shutdown circuit: With the vehicle in Park (P), open the hood. Activate the remote start system. The vehicle should not start. If the starter engages, check your hood pin and connections.
3. Test the NEUTRAL SAFETY shutdown circuit:

IMPORTANT! *Make sure there is adequate clearance to the front and rear of the vehicle before attempting this test.*

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a. Make sure the hood is closed and no other shutdown circuits are active.
b. Set the emergency brake.
c. Turn the ignition key to the run position but do not start the engine.
d. Put the vehicle in Drive (D).
e. Put your foot over the brake pedal but do not press down on it. Be ready to step on the brake to shut-down the remote start system.
f. Activate the remote start system.
   - If the starter engages, immediately step on the brake to shut down the system. If it does engage, recheck the neutral safety input connection. The vehicle may use a mechanical neutral safety switch. (See H3/1 BLACK/WHITE neutral safety switch input in *Remote Start Harness Wire Connection Guide* section of this guide.)
   - If the starter does not engage, the test is complete.

Once the system passes the three tests, the vehicle can be re-assembled and delivered. Do not the use the remote start system or finalize the installation if it fails any of the safety check tests.

troubleshooting

DRAFT

alarm troubleshooting

- **Shock sensor doesn't trigger the alarm:**

Has the NPC® system been triggered? If so, you will hear 5 chirps when disarming. To check this, turn the ignition key on and off to clear the NPC®'s memory, and then retest the shock sensor. For a detailed description of NPC®, see *Nuisance Prevention Circuitry* section of this guide.

- **Door input does not immediately trigger full alarm. Instead, chirps are heard for the first 3 seconds:**

That's how the progressive two-stage door input works! This is a feature of this system. This is an instant trigger, remember, since even if the door is instantly closed again, the progression from chirps to constant siren will continue.

- **Closing the door triggers the system, but opening the door does not:**

Have you correctly identified the type of door switch system? This happens often when the wrong door input has been used. (See *Door Lock Harness Wire Connection Guide* section of this guide.)

- **System will not passively arm until it is remotely armed and then disarmed:**

Are the door inputs connected? Is the H1/6 blue wire connected to the door trigger wire in the vehicle? Either the H1/5 green or the H1/7 violet should be used instead. (See wiring diagrams.)

- **Door input does not respond with the progressive trigger, but with immediate full alarm:**

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Does the Status LED indicate that the trigger was caused by the shock sensor? (See *Diagnostics* section of this guide.) The shock sensor, if set to extreme sensitivity, may be detecting the door unlatching before the door switch sends its signal. Reducing the sensitivity can solve this problem.

■ **The Valet/Program switch doesn't work.**

Is it plugged into the correct socket? See *Plug-In LED and Valet/Program Switch* section of this guide.

■ **Status LED doesn't work.**

You've probably guessed already, but here goes: Is it plugged in? (See *Plug-In LED and Valet/Program Switch* section of this guide.) Is the LED plugged into the correct socket?

■ **Door locks operate backwards.**

This unit has easily-reversed lock/unlock outputs. Recheck wire connections to see if you have reversed these.

remote start troubleshooting

■ **The remote start will not activate.**

1. Check the harnesses and their connections. Make sure that the harnesses are completely plugged into the remote start module. Make sure there are good connections to the vehicle wiring.
2. Check voltage and fuses. Use a meter to check for voltage between the red wire in the 5-pin ribbon harness and the black ground wire. If you have less than battery voltage, check the 3A and both 30A fuses on the relay satellite. Also make sure that the ground wire connects to a good chassis ground point.
3. Check diagnostics. The diagnostics will tell you which shutdown is active or not connected.

DRAFT

■ **The remote start will activate, but the starter never engages.**

1. Check for voltage on the purple starter wire two seconds after the remote start becomes active. If there is voltage present, skip to Step 4. If there is not voltage present, advance to Step 2.
2. Check the 30A fuses.
3. Check diagnostics. If the gray/black wire is detecting ground upon activation, the starter will not crank.
4. Make sure the purple starter wire is connected on the starter side of the optional starter kill/anti-grind relay.
5. Does the vehicle have an immobilizer? Some immobilizer systems will not allow the vehicle to crank if active.
6. Check connections. The two red heavy gauge input wires on the relay satellite should have solid connections. "T-taps" or "scotch locks" are not recommended for any high current heavy gauge wiring. Also, if the vehicle has more than one 12-volt input wire, then connect one red wire to each.

■ **The vehicle starts, but immediately dies.**

1. Does the vehicle have an immobilizer? The vehicle's immobilizer will cut the fuel and/or spark during unauthorized starting attempts.
2. Is the remote start programmed for voltage sense? If so, the start time may not be set high enough, or you

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may have to adjust the voltage threshold in programming. Voltage sense will not work on some vehicles.

3. Check diagnostics. Sometimes a shutdown will become active during cranking or just after cranking.

■ **The vehicle starts, but the starter keeps running.**

1. Is the system programmed for engine checking off or voltage sense? When programmed for either of these features, the engine cranks for the preprogrammed crank time regardless of how long it takes for the vehicle to actually start. Adjust to a lower cranking time.
2. Was the Tach Learn successful? The LED must light solid and bright to indicate a successful learn.
3. Make sure that there is a tach signal at the purple/white tach input wire of the remote start. If there is not a tach signal, recheck the connection to the vehicle's tach wire and make sure the wire is not broken or shorted to ground leading to the remote start.

■ **The vehicle will start, but will only run for 10 seconds.**

1. Is the remote start programmed for voltage sense? Try programming the unit for low voltage reference. If this does not work, a tach wire should be used.
2. Check diagnostics.

■ **The climate control system does not work while the unit is operating the vehicle.**

Either the wrong accessory wire is being energized or more than one ignition or accessory wire must be energized in order to operate the climate control system.

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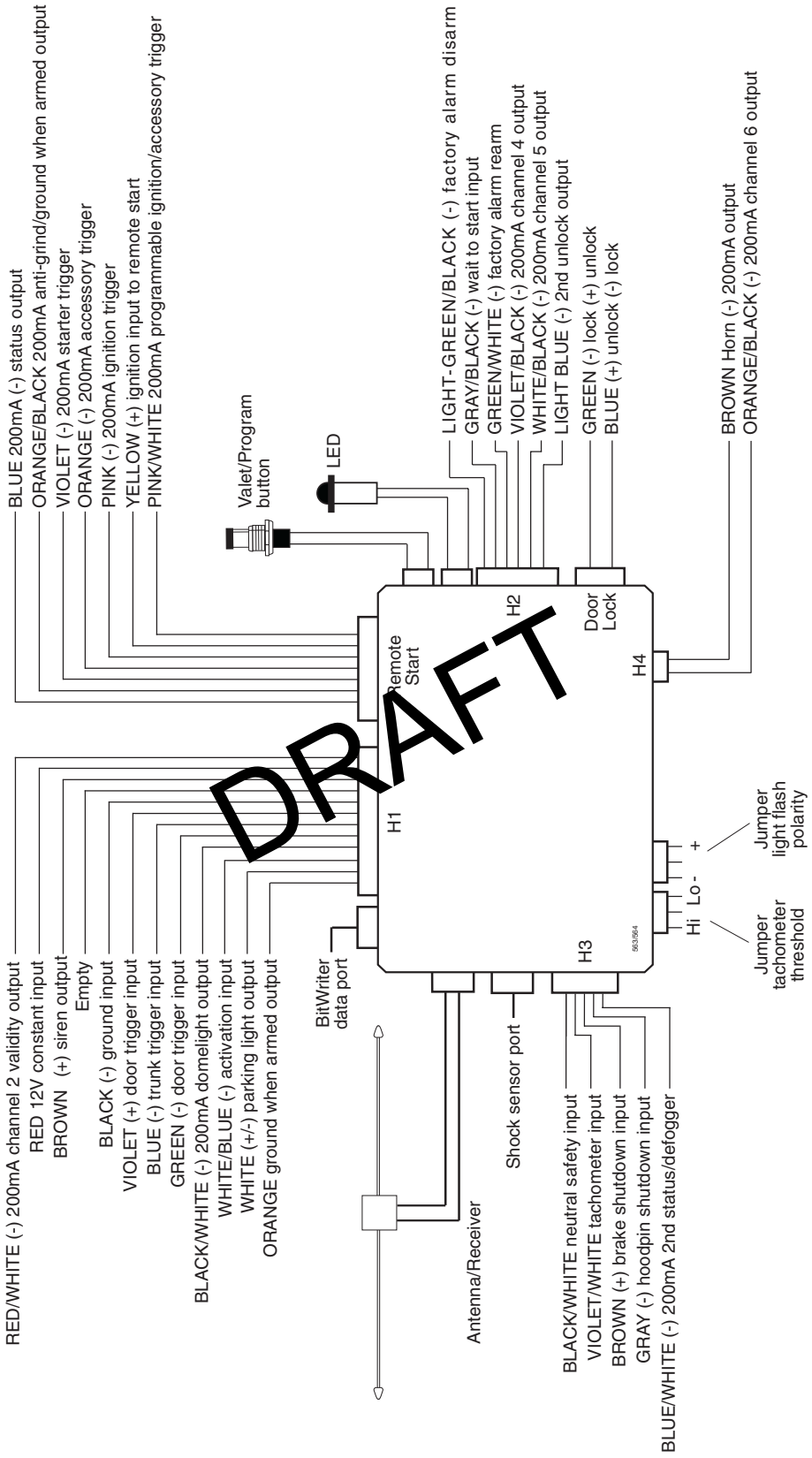
wiring quick reference guide



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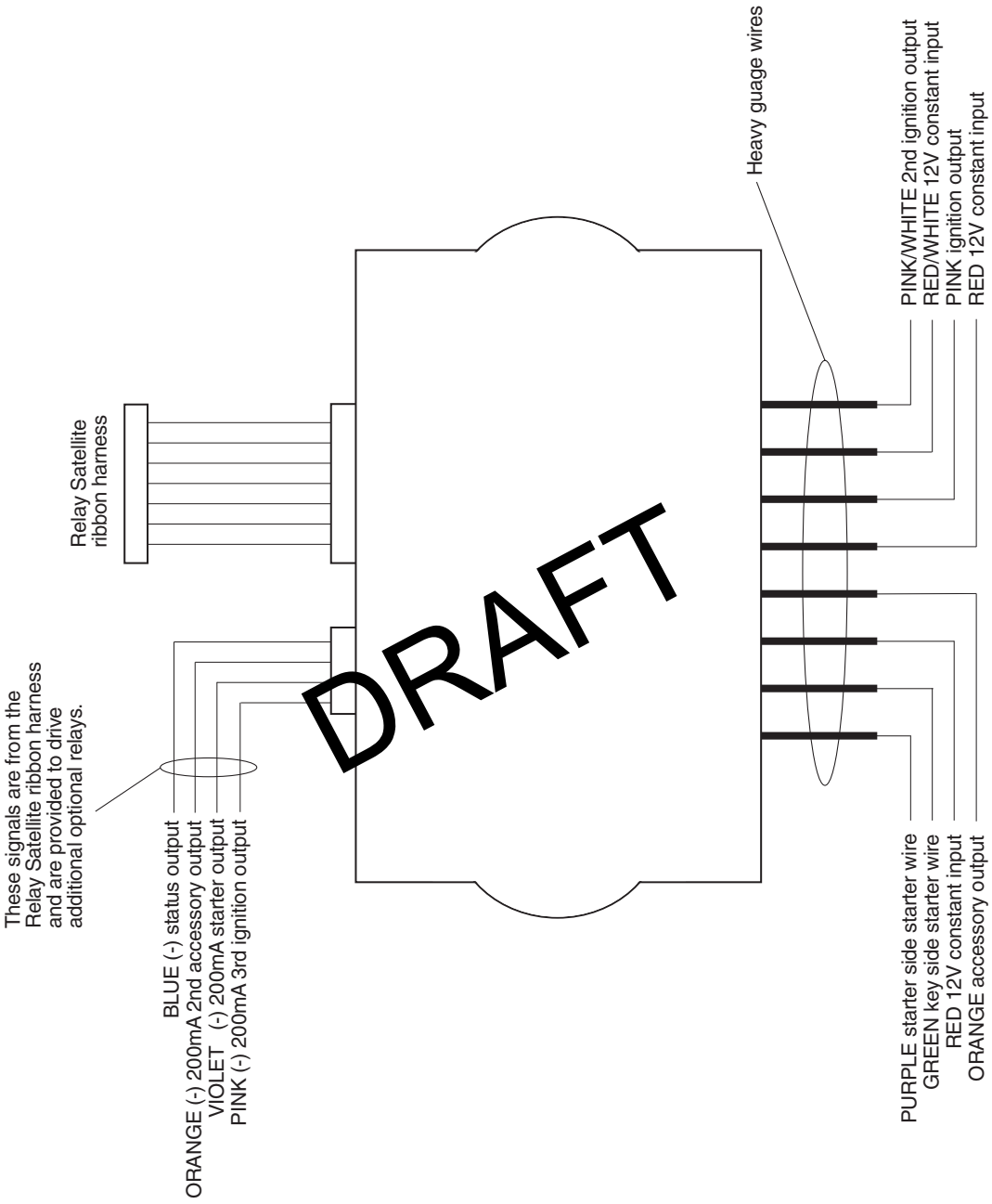
relay satellite wiring quick reference guide



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