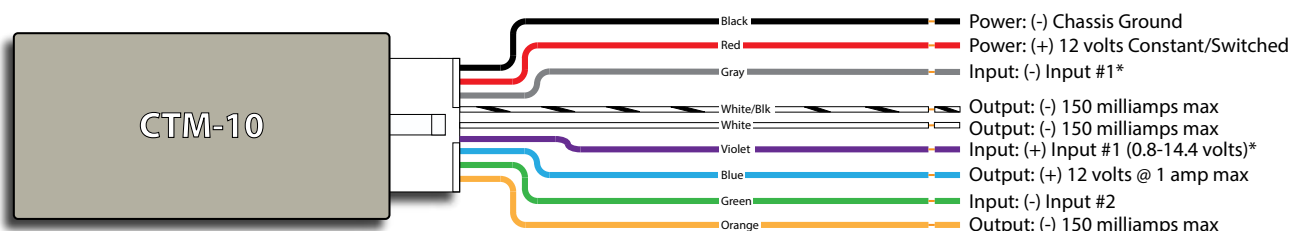


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Product Features:

The CTM-10 is a universal trigger module with multiple features built into one module. The CTM-10 has 3 trigger inputs that can take a constant or pulsed input. The CTM-10 has 3 outputs that are either Constant, Timed, Pulsed, Latching or toggle outputs. The features are selectable using a rotary switch.

Wiring Diagram:



* Both the Gray and Violet wires are tied together internally so they are essentially the same trigger input #1.

Rotary Switch Settings:

Use a small flat head screw driver to select the different features indicated in the chart below. Besure the CTM-10 is not connected to power when making changes to the rotary switch.

Rotary Switch position	Feature	Description
1	Alpine Video bypass	Emulates setting of foot brake and the parking brake when triggered from the Alpine's remote wire.
2	Pioneer Video bypass	Emulates setting of parking brake after 5 seconds when triggered from the Pioneer's remote wire.
3	Clarion Video bypass	Emulates setting of parking brake after 10 seconds when triggered from the Clarion's remote wire.
4	Low voltage sense	The Input (+) wire can sense voltages as low as 0.8 volts. When the Input senses a voltage, the Blue and White/Blk wire will turn on after a 1 second delay. • Good for turning on an aftermarket amplifier after the aftermarket radio has turned on to eliminates turn on pops. • Good for turning on an aftermarket amplifier by sensing voltage on speaker wire of factory radio when it is turned on.
5	Door lock/unlock pulse generator	When the Gray or Purple wire sees a constant trigger for 3 seconds the White wire will pulse for 200 milli seconds. When the Gray or Purple wire does not see a constant trigger the White/Blk will pulse for 200 milli seconds. • Good for older vehicles to auto lock and unlock doors via ignition trigger.
6	Closed Loop Circuit	If the Gray input trigger loses ground, the Blue and White wire will turn on and stay on until the Gray wire sense ground again. Use the Blue or White wire to trigger an LED, buzzer or alarm. • Good for monitoring a trailer on a hitch.
7	Linear Actuator Controller	Using the Gray or Purple wire input, you can send a pulse to it to START, STOP, REVERSE, STOP using the White and White/Blk outputs. The Green wire input trigger is for limit switches which is used to stop the Linear Actuator motor when the limit switches are triggered. • Good for car shows where you want to open an amp rack or control some other type of DC motor using a trigger like from an alarm's 2nd output.
8	Latching output	When the Gray or Purple wire sees a pulse, the Blue and White/blk wire output will latch. On the next input pulse on the Gray or Purple wire, the Blue and White/Blk wire outputs will unlatch.
9	Pulse extender	When the Gray or Purple wire sees 2 pulses withing 1 second, the Blue and White/blk wire will turn on. The Blue and White/blk will stay on as long as there are 2 pulses on the Gray or Purple wire within 1 second. • Good for needing a constant output while the factory alarm is triggered and the parking lights are flashing at least 2 times within 1 second. Some aftermarket vehicle tracking systems need to see a constant trigger for more than several seconds.

Wiring information:

- Step 1: Connect the CTM-10's Black wire to chassis ground.
Step 2: Set the rotary switch to the feature you like to use.
Step 3: Follow the wiring information according to switch position below.

#1: Alpine Video Bypass

- Connect the CTM-10's Red wire to the vehicle switched accessory +12v wire.
- Connect the CTM-10's Violet wire to the Alpine's blue/wht remote out wire.
- Connect the CTM-10's Blue wire to the Alpine's footbrake input wire.
- Connect the CTM-10's White wire to the Alpine's parking brake input wire

#2: Pioneer Video Bypass

- Connect the CTM-10's Red wire to the vehicle switched accessory +12v wire.
- Connect the CTM-10's Violet wire to the Pioneer's blue/wht remote out wire.
- Connect the CTM-10's White wire to the Pioneer's parking brake input wire

#3: Clairion Video Bypass

- Connect the CTM-10's Red wire to the vehicle switched accessory +12v wire.
- Connect the CTM-10's Violet wire to the Clarion's blue/wht remote out wire.
- Connect the CTM-10's White wire to the Clarion's parking brake input wire

#4: Low Voltage Sense

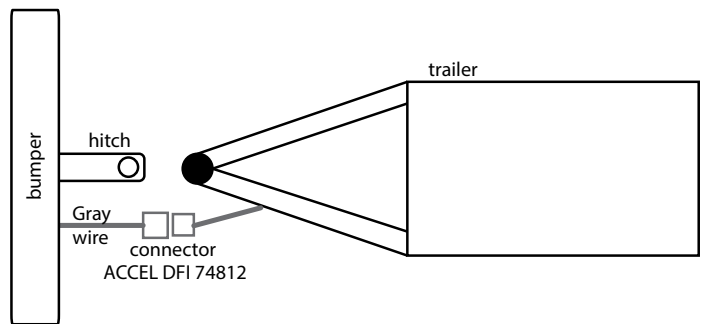
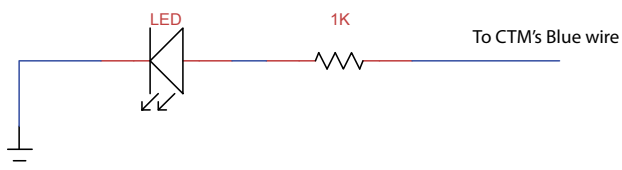
- Connect the CTM-10's Red wire to the vehicle switched accessory +12v wire.
- Connect the CTM-10's Violet wire to the aftermarket radio's remote wire -OR- connect the Violet wire to the positive speaker wire coming from the factory radio.
- Connect the CTM-10's Blue wire to the aftermarket amplifier's remote input.

#5: Door Lock/Unlock Pulse Generator

- Connect the CTM-10's Red and Purple wire to switched accessory +12v wire.
 - Connect the CTM's White wire to the factory Door Lock trigger wire.
 - Connect the CTM's White/Blk wire to the factory Door Unlock trigger wire.
- Note: This setup will only work in vehicles that have a separate Lock and Unlock negative trigger wires for the central locking system.

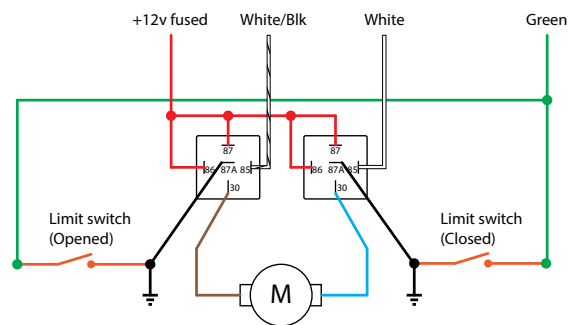
#6: Closed Loop Circuit

- Connect the CTM's Red wire to switched accessory +12v wire if monitoring during driving or to constant +12v if you want to trigger an alarm.
 - Connect the Gray wire to trailer's chassis. Using a connector (ACCEL DFI 74812) with the gray wire is recommended. It keeps the connection clean and easily removable.
 - Connect the Blue wire to a positive +12v circuitry like and LED.
 - or -
 - Connect the White wire to a negative trigger like an alarm negative trigger input.
- Note: If using an LED, the LED must be a +12v type or if using a 2v LED a 1k resistor will need to be added in series of the LED's positive lead (see wiring below).



#7: Linear Actuator Controller

- To control an Linear actuator or other type of DC motor, you'll need 2 SPDT relays (Bosch 332209150 *optional). You'll also need two limit switches if you like to have the motor stop if the actuator reaches a certain position.
- Connect the CTM's Gray or Purple wire to a pulsed output like from an alarm's 2nd channel output. You can also use a momentary push button.
 - Connect the CTM's White and White/Blk wire to relay's terminal 85.
 - Connect the 87A terminals to ground.
 - Connect the 87 and 86 terminals to +12v fused supply.
 - Connect 2 limit switches SPST, one side to ground and the other side to the CTM's green wire.
 - Connect the 30 terminals to the DC motor being controlled.



#8: Latching output

- Connect the Purple or Gray wire to a trigger output like an alarm's 2nd channel output.
- Connect the Blue or White wire to the device that needs to be controlled like LED lights. A optional relay is recommend when controlling high current devices (Bosch 332209150).

#9: Pulse Extender

- Connect the CTM's Red wire to constant +12v.
- Connect the CTM's Purple wire to vehicle's parking light wire.
- Connect the CTM's Blue or White wire to device to be triggered like an vehicle tracking module that needs to see a constant trigger for more than several seconds.