



INSTALLATION INSTRUCTIONS FOR PART TRIGGER

TRIGGER

APPLICATIONS

N/A - Universal module

KIT FEATURES

The “Trigger” is a universal module that provides 14 different preset functions that are activated from a positive or negative trigger. In addition, to the preset features, the Trigger has 8 custom modes with customizable settings that allows the installer to utilize their imagination.

INTERFACE COMPONENTS

- TRIGGER

TOOLS REQUIRED

- Cutting tool • Crimping tool • Tape • Connectors
- (example: butt-connectors, bell caps, etc.)

CAUTION: *Metra recommends disconnecting the negative battery terminal before beginning any installation. All accessories, switches, and especially air bag indicator lights must be plugged in before reconnecting the battery or cycling the ignition.*

NOTE: *Refer to the instructions included with the aftermarket radio.*



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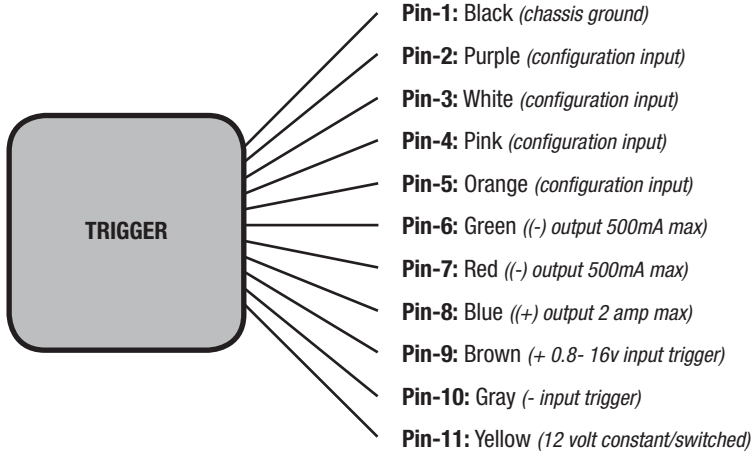
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Pin diagram



Note:

- Pin-1 needs to be attached to ground and pin-11 needs to be attached to 12 volt constant on all configurations listed below.
- Metra recommends using a single pulse double throw relay in every application (Metra part # E-123).

Mode descriptions and wiring instructions

Default: E-brake emulator

Description: Emulates an e-brake signal for use in RV's, off road vehicles, and exhibition vehicles.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-6 (Green)</i>	<i>Aftermarket radios parking brake input</i>
<i>Pin-7 (Red)</i>	<i>Aftermarket radios parking brake input</i>
<i>Pin-8 (Blue)</i>	<i>Foot brake of radio</i>
<i>Pin-9 (Brown)</i>	<i>Vehicles accessory or ignition</i>

(Mode descriptions and wiring instructions continued on next page)



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Mode 1: Retained accessory power

Description: Device will turn on and stay on at all times when the accessory turns on and will not turn off until the door opens or 10 minutes passes, whichever first.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-8 (Blue)</i>	<i>Retained accessory output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Vehicles accessory or ignition</i>
<i>Pin-10 (Gray)</i>	<i>Negative door trigger</i>

Mode 2: Delayed turn-on

Description: When the input is activated, there will be a 2-second delay before pin-8 turn-on.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative delay turn-on output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative delay turn-on output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive delay turn-on output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>12 volt input</i>

Mode 3: Low voltage turn-on

Description: Provides 12 volts turn on from a low voltage source

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-8 (Blue)</i>	<i>12 volt output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Low voltage input</i>

Mode 4: Latched outputs

Description: Allow the capability of making a pulsed signal a latched signal.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive latched output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Positive pulsed input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative pulsed input (use only one)</i>



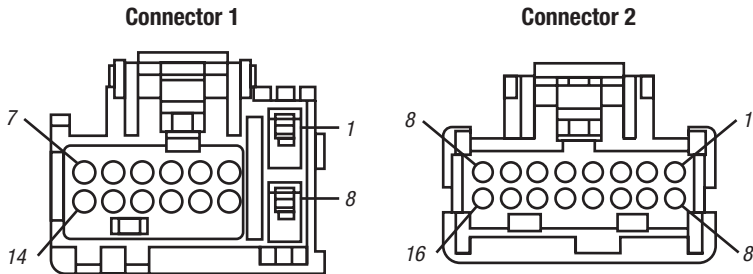
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Mode 5: GMLAN aftermarket amp turn-on

Description: Provides an amp turn on in LAN vehicles for adding an aftermarket amp.

Connections:

Interface wiring	To
Pin-2 (Purple)	Ground
Pin-4 (Pink)	Ground
Pin-8 (Blue)	Aftermarket amplifiers turn on (2 amp max)
Pin-9 (Brown)	Remote turn on from vehicle (see attached diagram)
Pin-10 (Gray)	Vehicle mute (see attached diagram)



(Mode 5 continued)

Vehicle connector #	Vehicle Pin-#	Connect to Trigger
1	1	Pin-11 (Yellow)
1	8	Pin-1 (Black)
1	6	Pin-9 (Brown)
2	8	Pin-10 (Gray)

Mode 6: Active edge pulse generator

Description: Allow the capability of making an input signal a pulse signal.

Connections:

Interface wiring	To
Pin-4 (Pink)	Ground
Pin-6 (Green)	Negative pulsed output (500mA max)
Pin-7 (Red)	Negative pulsed output (500mA max)
Pin-8 (Blue)	Positive pulsed output (2 amp max)
Pin-9 (Brown)	Positive input (use only one)
Pin-10 (Gray)	Negative input (use only one)

(Mode descriptions and wiring instructions continued on next page)



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Mode 7: Turn-off delay

Description: When the output is turned off, the pin-8 will stay active for two additional seconds.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative delay turn-off output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative delay turn-off output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive delay turn-off output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>12 volt input</i>

Mode 8: Double pulse latch

Description: Device will turn on when accessory turns on, and will not turn off until door opens or 10 minutes passes, whichever comes first.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>

<i>Interface wiring</i>	<i>To</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive latched output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Positive double pulse input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative double pulse input (use only one)</i>

Mode 9: Double pulse to one-second output

Description: Converts a double pulse output to a single pulse output

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-5 (Purple)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative single pulse output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative single pulse output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive single pulse output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Positive double pulse input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative double pulse input (use only one)</i>

(Mode descriptions and wiring instructions continued on next page)



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Mode 10: Theft detection/closed loop trigger

Description: When connected, if item loses ground the Trigger will send out a 12 volt constant signal which can be hooked to an audible device.

Connections:

Interface wiring	To
Pin-3 (White)	Ground
Pin-5 (Orange)	Ground
Pin-8 (Blue)	Positive of siren (not included) (2 amp max)
Pin-10 (Brown)	Items ground point

Mode 11: Channel expander

Description: Gives the ability to add additional channels to an alarm, etc.

Connections:

Interface wiring	To
Pin-2 (Purple)	Ground
Pin-3 (White)	Ground
Pin-5 (Orange)	Ground
Pin-6 (Green)	Negative latched output (500mA max) (2 pulses to activate)
Pin-7 (Red)	Negative latched output (500mA max) (1 pulse to activate)

(Mode 11 continued)

Interface wiring	To
Pin-8 (Blue)	Positive latched output (2 amp max) (3 pulses to activate)
Pin-9 (Brown)	Positive pulse input (use only one)
Pin-10 (Gray)	Negative pulse input (use only one)

Mode 12: Simple data detector (amp turn on signal from data)

Description: Produces a positive or negative signal out when data is detected.
Note: Output will stay on 3 seconds after data stops transmitting.

Connections:

Interface wiring	To
Pin-3 (White)	Ground
Pin-4 (Pink)	Ground
Pin-6 (Green)	Negative output (500mA max)
Pin-7 (Red)	Negative output (500mA max)
Pin-8 (Blue)	Positive output (2 amp max)
Pin-9 (Brown)	Vehicles data line (see attached diagrams)

(Mode descriptions and wiring instructions continued on next page)



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Mode 13: Long delayed turn-off (for headlights)

Description: This mode will keep headlights on for 1 minute after ignition is turned off.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative 1 minute output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative 1 minute output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive 1 minute output (2 amp max)</i>
<i>Pin-10 (Gray)</i>	<i>Headlight switch (negative signal)</i>

Mode 14: Dome light delay

Description: Keeps dome light on for 30 seconds after ignition is turned off.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>

(Mode 14 continued)

<i>Interface wiring</i>	<i>To</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative 30 second output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative 30 second output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive 30 second output (2 amp max)</i>
<i>Pin-10 (Gray)</i>	<i>Accessory or ignition from vehicle</i>

Mode 15: Custom program

Description: Ability to custom program the Trigger using the Trigger program.
Note: USB-CAB is required and Trigger program is downloadable from www.axsessinterfaces.com.

Custom program modes

Custom Mode 1: Channel expander, latched

Description: Measures pulses that occur during 5 second interval. One pulse per 5 seconds will toggle pin-6 (Green), two pulses per 5 seconds will toggle pin-7 (Red), and three pulses per 5 seconds will toggle pin-8 (Blue).

(Custom program modes continued on next page)



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(Custom Mode 1 continued)

Connections:

Interface wiring	To
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max) (2 pulses to activate)</i>
<i>Pin-7 (Red)</i>	<i>Negative latched output (500mA max) (2 pulses to activate)</i>
<i>Pin-8 (Blue)</i>	<i>Positive latched output (2 amp max) (3 pulses to activate)</i>
<i>Pin-9 (Brown)</i>	<i>Positive pulse input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative pulse input (use only one)</i>

Custom Mode 2: Channel expander, pulsed

Description: Measures pulses that occur during 5 second interval. One pulse per 5 seconds will drive pin-6 (Green) active for XX seconds, two pulses per 5 seconds will drive pin-7 (Red) active for XX seconds, and three pulses per 5 seconds will drive pin-8 (Blue) active for XX seconds. XX is definable between .1 and 300 seconds.

Connections:

Interface wiring	To
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max) (2 pulses to activate)</i>
<i>Pin-7 (Red)</i>	<i>Negative pulsed output (500mA max) (1 pulse to activate)</i>
<i>Pin-8 (Blue)</i>	<i>Positive pulsed output (2 amp max) (3 pulses to activate)</i>
<i>Pin-9 (Brown)</i>	<i>Positive pulse input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative pulse input (use only one)</i>

(Custom program modes continued on next page)



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Custom Mode 3: Delayed turn-off

Description: Connect active high input to pin 9, or active low input to pin 10. Use any output pin. When input goes high, output will turn on immediately. When input goes inactive, output turn-off will be delayed by XX seconds, where XX is definable between .1 and 300 seconds.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive latched output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Positive pulse input (use only one)</i>
<i>Pin-10 (Gray)</i>	<i>Negative pulse input (use only one)</i>

Custom Mode 4: Delayed turn-on

Description: Connect active high input to pin 9, or active low input to pin 10. Use any output pin. When input goes high, output will turn on after a delay of XX seconds. When input goes inactive, output turn-off will be immediate. XX is definable between .1 and 300 seconds.

(Custom Mode 4 continued)

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>
<i>Pin-3 (White)</i>	<i>Ground</i>
<i>Pin-4 (Pink)</i>	<i>Ground</i>
<i>Pin-5 (Orange)</i>	<i>Ground</i>
<i>Pin-6 (Green)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-7 (Red)</i>	<i>Negative latched output (500mA max)</i>
<i>Pin-8 (Blue)</i>	<i>Positive latched output (2 amp max)</i>
<i>Pin-9 (Brown)</i>	<i>Positive input (use only one)</i>

Custom Mode 5: Generic three-output delay/pulse width, edge driven *(for use with linear actuators)*

Description: When either input goes active, each output will go active after a delay, and then stay active for a pulse width. Each output has an independent delay and pulse width, definable between .1 and 300 seconds.

Connections:

<i>Interface wiring</i>	<i>To</i>
<i>Pin-2 (Purple)</i>	<i>Ground</i>



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(Custom Mode 5 continued)

Interface wiring	To
Pin-3 (White)	Ground
Pin-4 (Pink)	Ground
Pin-5 (Orange)	Ground
Pin-6 (Green)	Negative latched output (500mA max)
Pin-7 (Red)	Negative latched output (500mA max)
Pin-8 (Blue)	Positive latched output (2 amp max)
Pin-9 (Brown)	Positive pulse input (use only one)
Pin-10 (Gray)	Negative pulse input (use only one)

Custom Mode 6: Generic three-output delay/pulse width, level driven *(validity)*

Description: When either input goes active, each output will go active after a delay, and then stay active for a pulse width. Each output has an independent delay and pulse width, definable between .1 and 300 seconds.

Connections:

Interface wiring	To
Pin-2 (Purple)	Ground
Pin-3 (White)	Ground
Pin-4 (Pink)	Ground

(Custom Mode 6 continued)

Interface wiring	To
Pin-5 (Orange)	Ground
Pin-6 (Green)	Negative latched output (500mA max)
Pin-7 (Red)	Negative latched output (500mA max)
Pin-8 (Blue)	Positive output (2 amp max)
Pin-9 (Brown)	Positive pulse input (use only one)
Pin-10 (Gray)	Negative pulse input (use only one)

Custom Mode 7: Square wave-generator *(sounds horns and blinks lights)*

Description: When either input goes active, all three outputs will toggle every XX seconds, where XX is definable between .1 and 300 seconds. Stops when input goes inactive.

Connections:

Interface wiring	To
Pin-2 (Purple)	Ground
Pin-3 (White)	Ground
Pin-4 (Pink)	Ground
Pin-5 (Orange)	Ground
Pin-6 (Green)	Negative latched output (500mA max)

(Custom program modes continued on next page)



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Interface wiring	To
Pin-7 (Red)	Negative latched output (500mA max)
Pin-8 (Blue)	Positive output (2 amp max)
Pin-9 (Brown)	Positive latched input (use only one)
Pin-10 (Gray)	Negative latched input (use only one)

Custom Mode 8: Multiple pulse generator

Description: A single input pulse on either input will produce multiple pulses on all outputs. The number of pulses can vary from 1 to 255, and each pulse will last XX seconds, where XX is definable between .1 and 300 seconds.

Connections:

Interface wiring	To
Pin-2 (Purple)	Ground
Pin-3 (White)	Ground
Pin-4 (Pink)	Ground
Pin-5 (Orange)	Ground
Pin-6 (Green)	Multiple Negative pulsed output (500mA max) (2 pulses to activate)
Pin-7 (Red)	Multiple Negative pulsed output (500mA max) (1 pulse to activate)
Pin-8 (Blue)	Multiple Positive pulsed output (2 amp max) (3 pulses to activate)
Pin-9 (Brown)	Positive pulse input (use only one)
Pin-10 (Gray)	Negative pulse input (use only one)

IMPORTANT WARNING

This product includes instructions for installation which must be carefully followed. The instructions are worded in such a manner to assume that the installer is capable of completing these type of electronic installations. If you are unclear as to what you are instructed to do or believe that you do not understand the instructions so as to properly and safely complete the installation *you should consult a technician who does have this knowledge and understanding.*

Failure to follow these instructions carefully and to install the interface as described could cause harm to the vehicle or to safety systems on the vehicle. Interference with certain safety systems could cause harm to persons as well. If you have any questions in this regard please call the Help line or Metra at 1-800-221-0932 for assistance.



KNOWLEDGE IS POWER

Enhance your installation and fabrication skills by enrolling in the most recognized and respected mobile electronics school in our industry. Log onto www.installerinstitute.com or call 800-354-6782 for more information and take steps toward a better tomorrow.



Metra recommends MECP certified technicians