Introduction

The Axon Signal Unit (ASU) is part of a communications platform that alerts the user when hardware is activated. When that hardware is used, the ASU sends a message recognizable by other Axon equipment. For example, the ASU can be set up to work with an emergency vehicle’s light bar. When the light bar activates, all properly equipped Axon systems within range begin recording. Systems that work with the ASU currently include the Axon Body 2 camera, Axon Fleet system, and some Axon Flex systems.

For automatic recording to occur with Axon Flex, an Axon Flex camera must be attached to an Axon Flex controller equipped with Axon Signal technology. A controller equipped with this technology has an Axon logo on the lower-left side of the front of the device (see below). See the TASER Axon Flex System User Manual for more information.

![Axon Signal Unit and Axon Flex controller with Axon Signal technology]

Failure to follow the instructions in this manual may result in the ASU not working properly or cause damage to the ASU or the vehicle. Save these instructions.

The technician who installs the ASU must be qualified to work with automotive electronics.

If mounting the ASU requires drilling holes, ensure that drilling will not damage the emergency vehicle’s equipment or other vital parts. Remove all burrs and debris after drilling. Install grommets into all wire passage holes.

Ensure there is a good electrical ground to the vehicle chassis.

If the ASU is installed in the cab of the vehicle (in a location other than under the center console), it should be permanently mounted to avoid injury.

Do not install the ASU anywhere that will interfere with airbag deployment.

Do not install the ASU where it will be exposed to the elements or extreme heat. Do not install the ASU in the vehicle’s engine compartment.
Characteristics

Secure Bluetooth broadcast (30 seconds).
Activates all enabled cameras in range (30+ feet/9.1+ meters).

Installation Instructions

- An ASU is typically installed near the siren or light bar controller (trunk or console). The ASU is not intended to be installed in the engine compartment of a vehicle.
- The ASU can be installed using robust double-sided tape, Velcro, or by bolting the ASU through its mounting flanges (mounting hardware and electrical supply wiring not included). If using an adhesive to mount the equipment, thoroughly clean the surface with a 50/50 mixture of isopropyl alcohol and water before installation.
- Wires should be connected to the GPIO terminal block interface.
- Wires should be no smaller than 18 American wire gauge (AWG) and no larger than 16 AWG.
- 1A fuse is recommended, either inline or on a fuse block.
- No programming of the ASU is required for operation.

Electrical Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Voltage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation Input Voltage</td>
<td>5.0 VDC – 13.6 VDC</td>
</tr>
<tr>
<td>Ignition Enable/Auxiliary Enable Voltage</td>
<td>3.6 VDC – 13.6 VDC</td>
</tr>
<tr>
<td>Trigger Input Voltage</td>
<td>3.6 VDC – 13.6 VDC</td>
</tr>
<tr>
<td>Stand-by Current</td>
<td></td>
</tr>
<tr>
<td>Ignition On:</td>
<td>25 mA (typ)</td>
</tr>
<tr>
<td>Ignition Off:</td>
<td>25 µA (typ)</td>
</tr>
<tr>
<td>Trigger Input Timing (J2-5 thru J2-10)</td>
<td></td>
</tr>
<tr>
<td>Low to High Transition</td>
<td>130 ms</td>
</tr>
<tr>
<td>High to Low Transition</td>
<td></td>
</tr>
<tr>
<td>Trigger Input Timing (J2-11 &amp; J2-12)</td>
<td></td>
</tr>
<tr>
<td>Low to High Transition</td>
<td>130 ms</td>
</tr>
<tr>
<td>High to Low Transition</td>
<td>2.5 s*</td>
</tr>
</tbody>
</table>

*This feature is intended to reduce the likelihood of nuisance videos from extraneous triggers caused by some progressive slide switch control modules. These controllers can cause the input voltage of the ASU to drop below 3.6 VDC when transitioning between switch positions.
**Axon Signal Unit**  
*Installation Manual*

**Wiring Reference and Illustration**

<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J2-1</td>
<td>+12VDC (Fuse @ 1A)</td>
</tr>
<tr>
<td>J2-2</td>
<td>GND</td>
</tr>
<tr>
<td>J2-3</td>
<td>Ignition Enable</td>
</tr>
<tr>
<td>J2-4</td>
<td>Auxiliary Enable</td>
</tr>
<tr>
<td>J2-5 thru J2-10</td>
<td>Trigger Input</td>
</tr>
<tr>
<td>J2-11 thru J2-12</td>
<td>Trigger Input – Delayed Turn Off</td>
</tr>
</tbody>
</table>

**Diagnostic LED Indicators**

**Power Indicator LED:**

- **Steady**: ASU is powered and enabled.
- **Off**: ASU is either not powered or not enabled.

**Status Indicator LED:**

- **Steady**: Operational State (successful boot-up)
- **Off**: Check power LED; if Off, check connections. If On, re-boot device.
Wiring Instructions

System Power (Terminal Position 1 & 2)
1. Using appropriately sized RED wire, connect J2-1 to the Positive (+) battery terminal. Fuse the wire @ 1 Amp.
2. Using appropriately sized BLACK wire, connect J2-2 to the vehicle’s chassis ground. This is typically adjacent to the battery.

Ignition Enable (Terminal Position 3)
Connect J2-3 terminal to the vehicle’s ignition voltage. This will allow the ASU to be turned on with the ignition switch.

Auxiliary Enable (Terminal Position 4)
The J2-4 input is used to provide an alternate signal to the ASU for enabling the system.

Note: Either the ignition or auxiliary enable input on the ASU must be used for the device to turn on. Both inputs may be used simultaneously to allow for greater flexibility in enabling options, but at least one must be utilized. The ASU must be wired in a manner that voltage for ignition and auxiliary enable is removed prior to removal of system power; system power and enable nodes must not be wired from the same source.

Trigger Input (Terminal Positions 5 – 12)
1. Turn on the trigger source (e.g. light bar control signal).
2. Using a voltmeter, verify the wire that is connected to the trigger source has voltage present while the trigger is enabled.
3. Turn the trigger off and verify that the voltage drops to zero. For the ASU to work optimally, the trigger should provide a constant voltage to the ASU when it is activated.
4. Connect the trigger source to one of the input terminals on the ASU J2 connector.
   Up to eight independent trigger sources can be wired directly to the ASU. It is recommended that inputs that originate from progressive slide switches are wired to J2-11 or J2-12.

Test and Troubleshoot the ASU System
1. Verify the ASU has power and turn on the ignition or alternate enabling source.
2. Monitor the diagnostic LED indicators:
   - A green POWER light indicates the ASU is powered up.
   - A green STATUS light indicates a successful startup.
     - If both lights are illuminated, the ASU is ready and working properly.
If neither light is on, use a voltmeter to verify that there is voltage present at the system power input J2-1 and the enabling source(s) J2-3 and/or J2-4.

If only the status LED is not illuminated, turn off the ASU by removing the enabling signal (ignition or auxiliary). Verify the power LED turns off when this action is performed. Re-activate the enabling signal and allow the system to boot for a few seconds. If this does not cause the status LED to turn on, remove power from the ASU by disconnecting system power at J2-1 and reconnecting it.

If either light remains off, contact TASER customer service.

3. Turn on the trigger (for example, activate the vehicle’s light bar).

4. Listen for the two beeps that indicate the Axon camera system now is in EVENT mode.

Note: The ASU is thoroughly tested prior to shipment. However, should an issue be encountered during installation or during the life of the product, follow the steps above for information on repair and troubleshooting. There are no serviceable parts on the ASU.

Radio Waves

Changes or modifications to the equipment not expressly approved by the manufacturer could void the product warranty and the user’s authority to operate the equipment.

This wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to ensure the safety of all persons, regardless of age and health. Before a device model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning
the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult TASER International Customer Service for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

To comply with FCC RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Section 8.4 of RSS-GEN

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Section 8.4 de RSS-GEN

Cet appareil est conforme aux normes d’exemption de licence RSS d’Industrie Canada. Son utilisation est soumise aux conditions suivantes : 1) cet appareil ne doit pas causer de brouillage, et 2) doit accepter tout brouillage, y compris le brouillage pouvant entraîner un fonctionnement indésirable.

Section 8.3 of RSS-GEN

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To comply with IC RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.
Section 8.3 de RSS-GEN

Conformément à la réglementation d’Industrie Canada, le présent émetteur radio ne peut fonctionner qu’au moyen d’une antenne d’un seul type et d’un gain maximal (ou inférieur) approuvé pour l’émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique pour les autres utilisateurs, il faut choisir le type d’antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas celle requise pour établir une communication satisfaisante.

Pour se conformer aux limites d’exposition aux radiofréquences fixées par Industrie Canada relativement aux limites d’exposition humaine, l’antenne utilisée pour cet émetteur doit être installée à une distance d’au moins 20 cm de toutes les personnes et ne doit pas être installée ou exploitée conjointement avec d’autres antennes ou émetteurs.

RSS 210 Warning Statement: The installer of this equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Heath Canada’s Web site www.hc-sc.gc.ca/rpb.

Bluetooth is a trademark of the Bluetooth SIG, Inc., and Velcro is a trademark of Velcro Industries B.V.

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