Siren Activated Gate (SAG-M) Installation and Testing Instructions

A. General notes on SAG-M Siren Installation

1) Always observe local installation and safety regulations when installing the SAG-M sensor.
2) Install sensor 2 to 4 ft. above the ground level at a location away from any noisy area where it could interfere with the sensor recognizing the siren during an emergency.
3) Install sensor away from any known water puddles to prevent any water splashes on the unit during rain.
4) Install sensor with logo of the front cover of the unit facing upright. Signal and Power wire connection will face the ground.
5) Ensure that there is no interference or obstacle of any kind between the sensor and approaching vehicle.
6) Install the SAG-M sensor onto the wall of the fence with the 3 screws provided with the unit.
7) Install the labels provided with the unit onto the gate or fence or anywhere appropriate. The labels should be clearly visible to the emergency vehicle personnel so that they know to turn ON the YELP signal for the gate to OPEN during an emergency.
8) SAG-M unit has two options of routing power and signal wires to the unit. Option 1 is to route the wires through a conduit. A 3/4" hole is located at the bottom of the unit to route wires through a conduit. Option 2 is to route the signal and power wires through the ¼" hole located besides the conduit hole. Once the wires are routed, use silicone to plug the hole to prevent any water ingress.

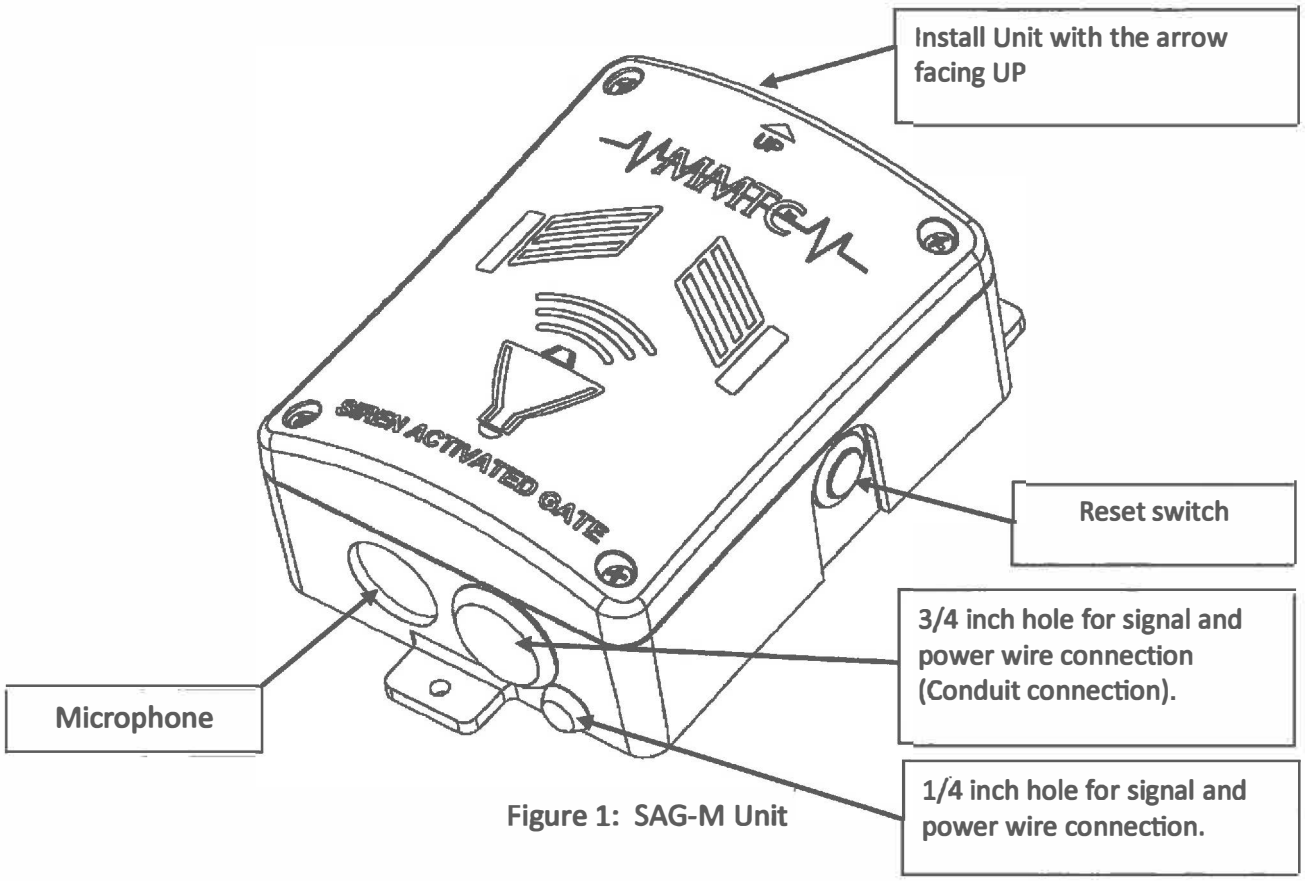


Figure 1: SAG-M Unit

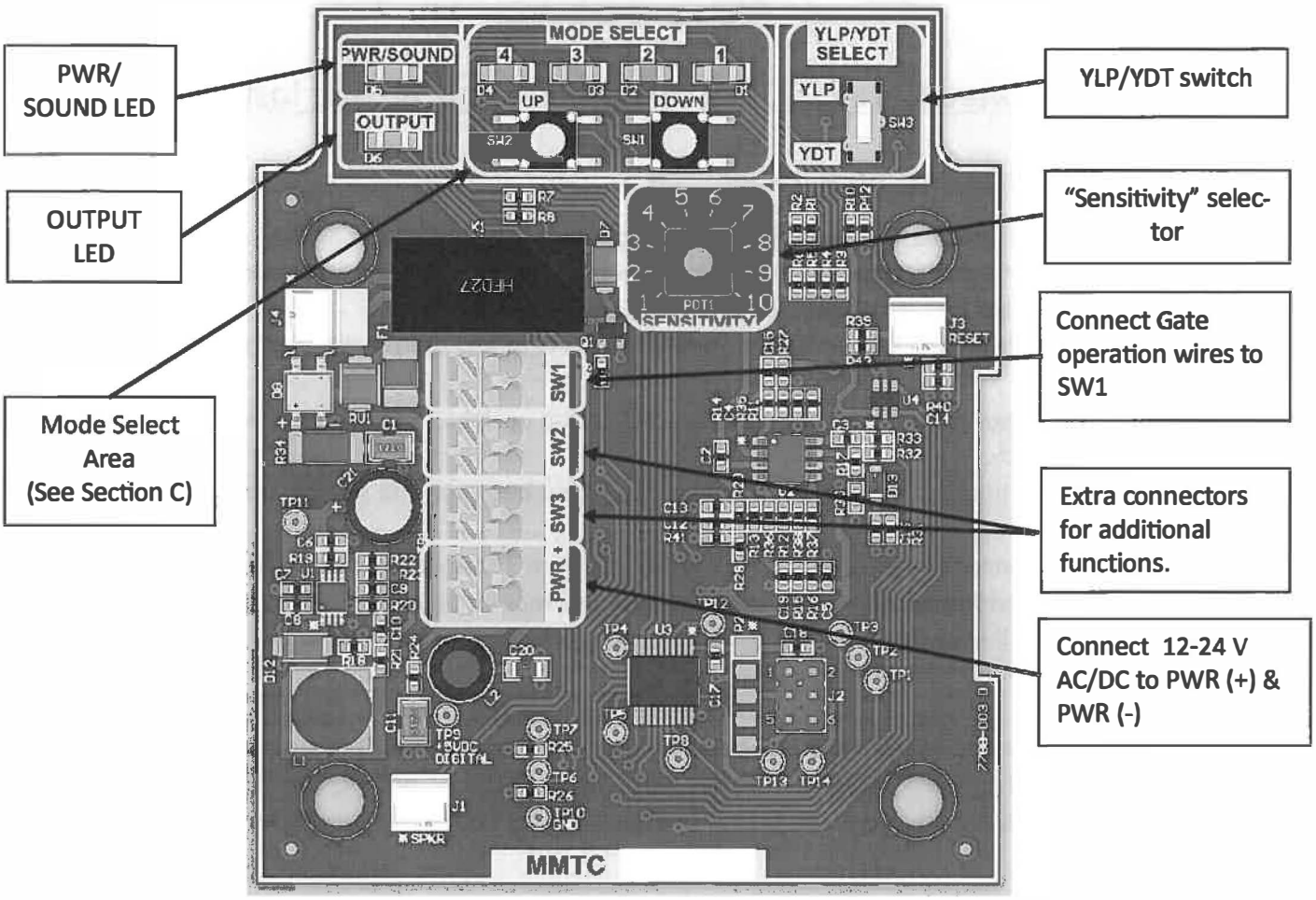


Figure 2: SAG-M Circuit Board

B. Power Installation, Setup and Operation

1) Open the front housing of the SAG-M enclosure.
2) Connect 12-24 V AC/DC power wires to connector at PWR (+) & PWR (-). Refer to Figure 2 for connector location.
3) Connect the Gate operator relay signal wire to the connector at SW1. Refer to Figure 2 for connector location.
4) Set "YLP/YDT" switch to the desired position.
   - If the "YLP/YDT" switch is in the "YLP" position, the unit will listen for a "yelp" siren and if detected will activate the gate.
   - If the "YLP/YDT" switch is in the "YDT" position, the unit will listen for any loud sound for more than 4 seconds and if detected will activate the gate.
5) When Power is applied, the "PWR/SOUND" LED will initially blink a few times immediately followed by blinks every 4 seconds. When this happens, the SAG-M unit is now in "Listen Mode".
6) Set the desired "Gate relay closure time period" by momentarily pressing the "UP" or "DOWN" buttons on the SAG-M circuit board. Refer to "Gate Relay closure time setup (Mode Select)" for more details.
7) Set the "Sensitivity Selector" to the desired position. Perform instructions in "Sensitivity Selector setting" before continuing

8) The SAG-M unit is now ready for operation.

When SAG-M unit detects the desired sound, the unit will close the output relay. The relay will stay ON per the pre-selected time period. The LED's 1,2,3 or 4 on the circuit board will remain lit until the selected time expires and the relay is opened.
Pressing the "RESET" button will reset (OPEN) the relay. The LED's displaying the programmed time period will turn OFF and the unit will return back to the "Listen Mode".

C. GATE RELAY CLOSURE TIME SETUP (Mode Select):

(Time period for gate to latch Open)

1) By momentarily pressing the "UP" or "DOWN" buttons on the circuit board, the user can select one of 14 different pre-programmed time-periods from 0.5 seconds to 2 hour. During this time-period, the gate relay will stay closed once the SAG-M unit detects the yelp siren. Each new pre-programmed time-periods are indicated by LED's 1,2,3,4 light pattern as shown in table 1 below. Table 1 shown below is also installed on the inner side of the front cover for user convenience. If the "UP" or "DOWN" buttons are not pressed within 5 seconds, the "lighted" LEDs will go off and the last setting displayed will be saved.

LED 4	LED 3	LED 2	LED 1	Mode Select
○	○	○	○	Sleep/ Rest Mode
○	○	○	●	MT – Momentary toggle.
○	○	●	○	5S – Gate OPEN for 5 seconds.
○	○	●	●	15S – Gate OPEN for 15 seconds.
○	●	○	○	30S – Gate OPEN for 30 seconds.
○	●	○	●	1M – Gate OPEN for 1 minute.
○	●	●	○	2M – Gate OPEN for 2 minutes.
○	●	●	●	5M – Gate OPEN for 5 minutes.
●	○	○	○	10M – Gate OPEN for 10 minutes.
●	○	○	●	15M – Gate OPEN for 15 minutes.
●	○	●	○	30M – Gate OPEN for 30 minutes.
●	○	●	●	45M – Gate OPEN for 45 minutes.
●	●	○	○	60M – Gate OPEN for 60 minutes.
●	●	○	●	90M – Gate OPEN for 90 minutes.
●	●	●	○	120M – Gate OPEN for 120 minutes.
●	●	●	●	LAT – Gate remains OPEN continuously.

Table 1: LED pattern for Gate Relay Closure Time

D. Sensitivity Selector setting:

1) Sensitivity selector position 10 provides maximum range and position 1 provides minimum range.
2) To properly set the desired range/distance, it is recommended that the SAG-M unit be tested with a CD test and then with a live siren test. Follow the CD test before calling in the emergency responders.

CD Test

1) A CD recorded with a "yelp siren" is provided with the unit to conduct a quick functional test.
2) Set the YLP/YDT switch on the circuit board to the "YLP" mode.
3) Set the "Sensitivity" selector all the way to position 10 (maximum range setting).
4) Verify power is ON by observing the "PWR/SOUND" LED blink every 4 seconds.
5) Place the CD into a portable CD player and set it to its loudest setting. Turn the CD player ON. The yelp siren should be heard playing.
6) Hold the CD player close to the SAG-M unit.
7) The gate should OPEN once the yelp siren is heard. This concludes that the unit is functional and ready for the live siren test.

Live Siren Test

1) Verify if the YLP/YDT switch is set to the "YLP" mode.
2) Set the "Sensitivity" selector to position 1.
3) Request the Emergency Responder to park the vehicle at the desired distance. Request them to turn ON their yelp siren.
4) With the "yelp" siren ON, verify if the gate OPENS at the desired distance. If the gate does not OPEN, increment the "Sensitivity" selector setting to the next position.
5) Consider false activations. If the gate is close to a major road, "Sensitivity" should be lowered or false activations may occur.

Note: If an Emergency Responder is not available to conduct a live siren test, set the "Sensitivity Selector" to position 5.

Maintenance
It is recommended to check the system performance every 3 months with a Live Siren Test.

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