



Active Maintenance User Manual

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Introduction

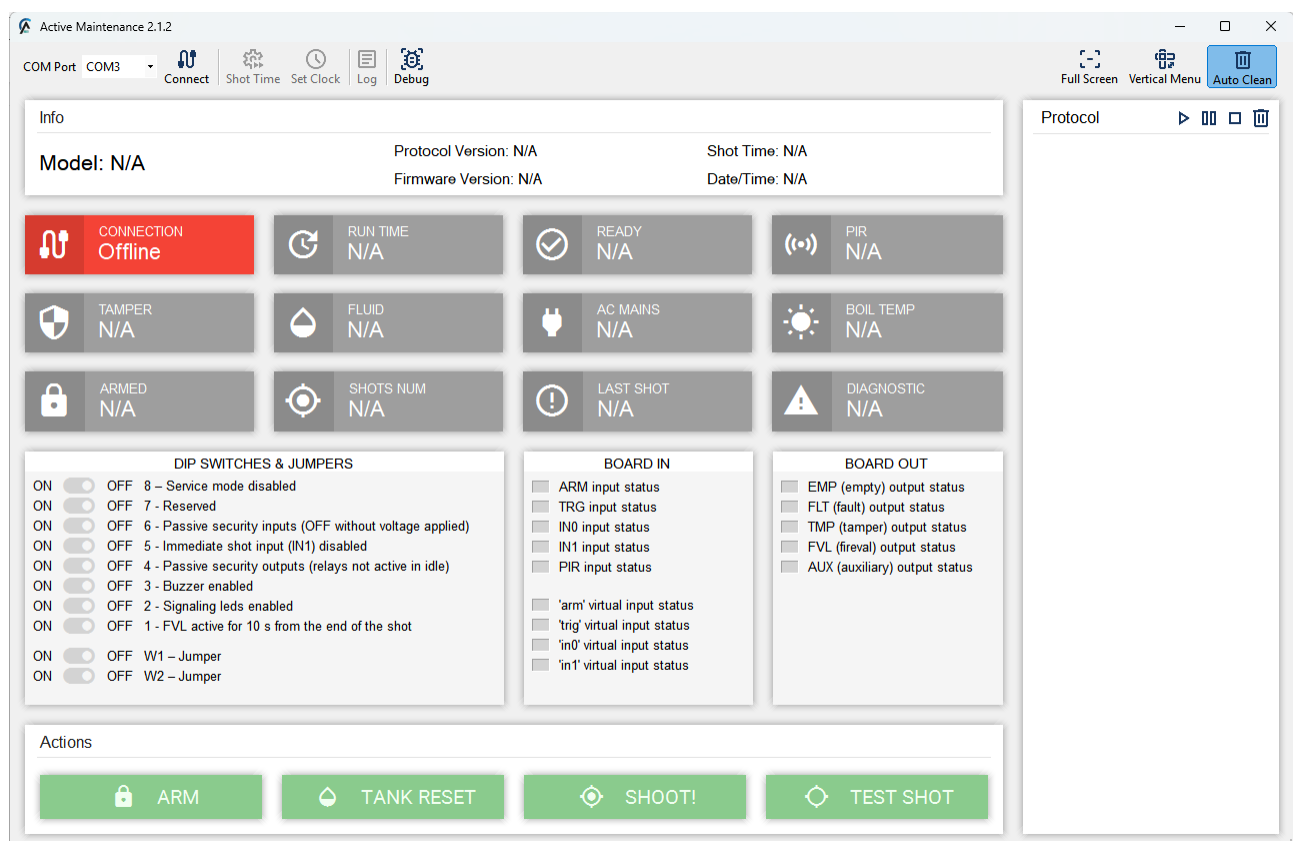
Active Maintenance is a Windows application designed to monitor and control a security fogging device directly from a PC running **Microsoft Windows 11**.

Note: **Active Maintenance** is not compatible with all fogging devices. Contact the supplier to confirm whether **Active Maintenance** is supported by your specific model.

To operate **Active Maintenance**, the fogging device must be connected to the PC using the custom **USB-to-serial cable** provided by the supplier.

Setup

1. Connect the USB end of the **USB-to-serial cable** to an available USB port on your PC.
2. Connect the 6-way connector to the device's serial port. Refer to the device user manual to locate the 6-pin serial port on the fogging device main control board. Ensure the connector is properly aligned and fully inserted (the connector is keyed with a polarized plastic tab to prevent incorrect orientation).
3. Power on the fogging device on and launch the **Active Maintenance** application.
4. Select the appropriate COM port from the dropdown list, then click **Connect** on the toolbar.

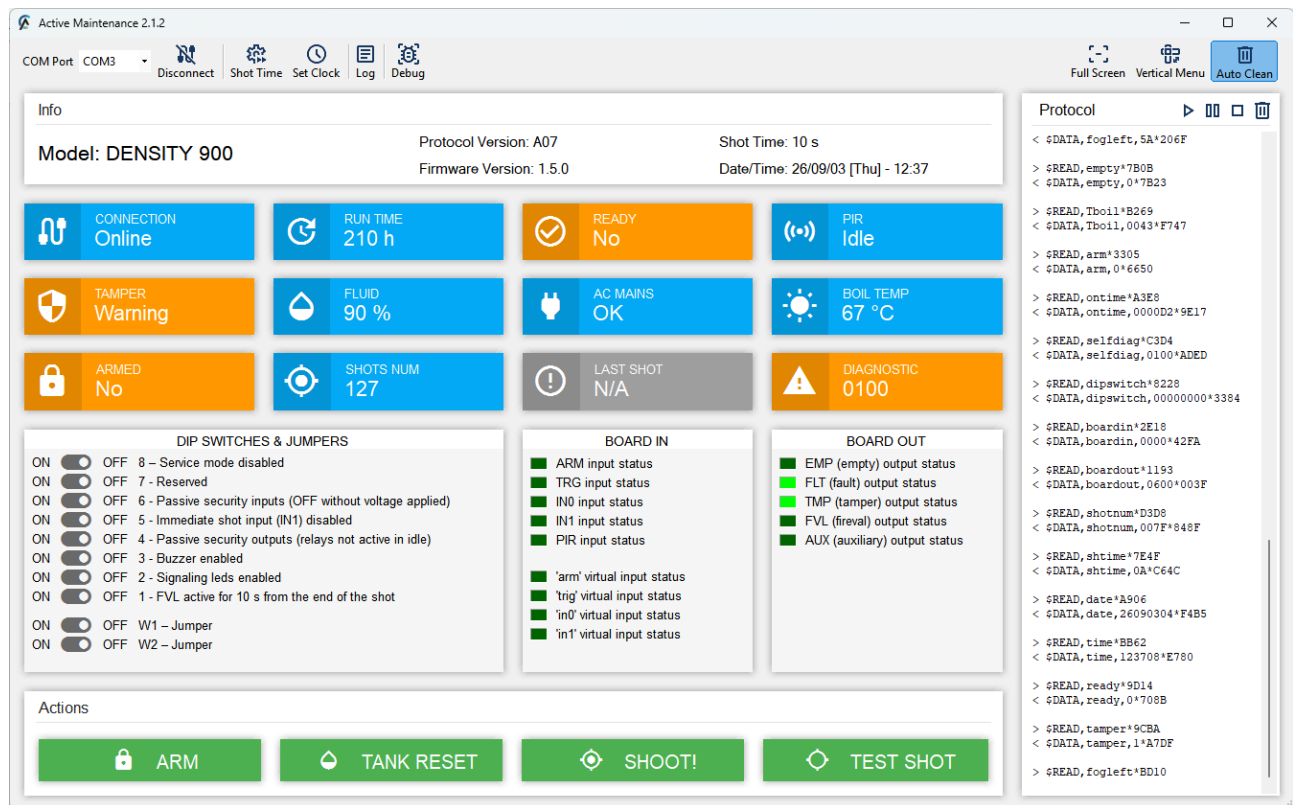


Once the connection with the fogging device is established, the **Info** panel will display device details, the **Status Widgets** will initialize and show real-time states and the **Actions** panel controls will be enabled.

The **Protocol** panel will start streaming real-time communication messages exchanged between the software and the device.

Depending on the fogging device model and protocol, the **DIP Switches and Jumpers**, **Board In**, and **Board Out** panels will also populate.

Dashboard



Info Panel

Displays essential device data:

- **Model:** the model of the connected fogging device (e.g. DENSITY 900).
- **Protocol Version:** the version of the serial communication protocol used by the device (e.g. A07).
- **Firmware Version:** the firmware version installed on the fogging device (e.g. 1.5.0).
- **Shot Time:** the configured duration of the fog shot, in seconds (e.g. 10 seconds).
- **Date/Time:** the internal clock date and time set on the fogging device (if supported).

Status Widgets

Provide real-time operation status:

- **CONNECTION:** Serial connection state (**OFFLINE** / **ONLINE**).
- **RUN TIME:** Total operating hours of the fogging device.
- **READY:** Indicates whether the device is ready to perform a shot (**YES** / **NO**).
- **PIR:** State of the PIR sensor (**IDLE** / **TRIGGERED**).
- **TAMPER:** Tamper detection status (**OK** / **TAMPERED**).
- **FLUID:** Remaining fluid percentage (%).
- **AC MAINS:** Main power supply status (**OK** / **NO**).
- **BOIL TEMP:** Current boiler temperature in degrees Celsius (°C).
- **ARMED:** Armed state of the device (**YES** / **NO**).
- **SHOTS NUM:** Total count of shots performed by the device.
- **LAST SHOT:** Timestamp of the most recent shot.
- **DIAGNOSTIC:** Current system diagnostic status code (Click the widget to open a pop-up window displaying detailed information about faults and errors).

The widgets are color-coded to reflect operational health:

- **Gray:** Device disconnected or data are unavailable.
- **Blue:** Normal operating condition.
- **Orange:** Warning condition detected.
- **Red:** Critical status or fault detected.

Note: Widget behavior and availability depend on the specific fogging device model and protocol. Unsupported fields display N/A. Refer to your hardware user manual for detailed status codes and conditions.

Actions panel

Provides control functionality:

- **ARM:** Arms or disarms the fogging device.
- **TANK RESET:** Resets the fluid level indicator to 100% after replacing the fluid bag.
- **SHOOT!:** Trigger a fogging shot for the full programmed duration.
- **TEST SHOT:** Triggers a short test shot to verify system functionality.

Dip Switches and Jumpers panel

Displays the real-time **ON/OFF** configuration of DIP switches and jumpers on the device main board (where available). Refer to the hardware user manual for switch and jumper function definitions and availability.

Board In panel

Displays the digital input states on the device main board (where available):

- **Light Green:** Input active (ON).
- **Dark Green:** Input inactive (OFF).

Refer to the hardware user manual for a complete description of the available digital inputs and their functions.

Board Out panel

Displays the digital output states on the device main board:

- **Light Green:** Output active (ON).
- **Dark Green:** Output inactive (OFF).

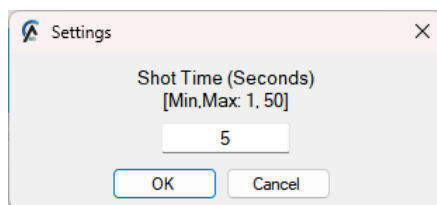
Refer to the hardware user manual for a complete description of the available digital outputs and their functions.

Toolbar buttons

	Connect	Connects to the fogging device via the selected COM port.
	Disconnect	Closes the connection to the connected device.
	Shot Time	Opens the configuration dialog to set shot duration.
	Set Clock	Synchronizes the device's internal clock with the PC date and time (if supported).
	Log	Downloads and opens the device event log window (if supported).
	Debug	Toggles the visibility of the Protocol Panel.
	Full Screen	Toggles application full-screen mode.
	Vertical Menu	Positions the toolbar vertically along the left side of the window.
	Auto Clean	When enabled, automatically clears the Protocol panel upon establishing a new connection.

Shot time

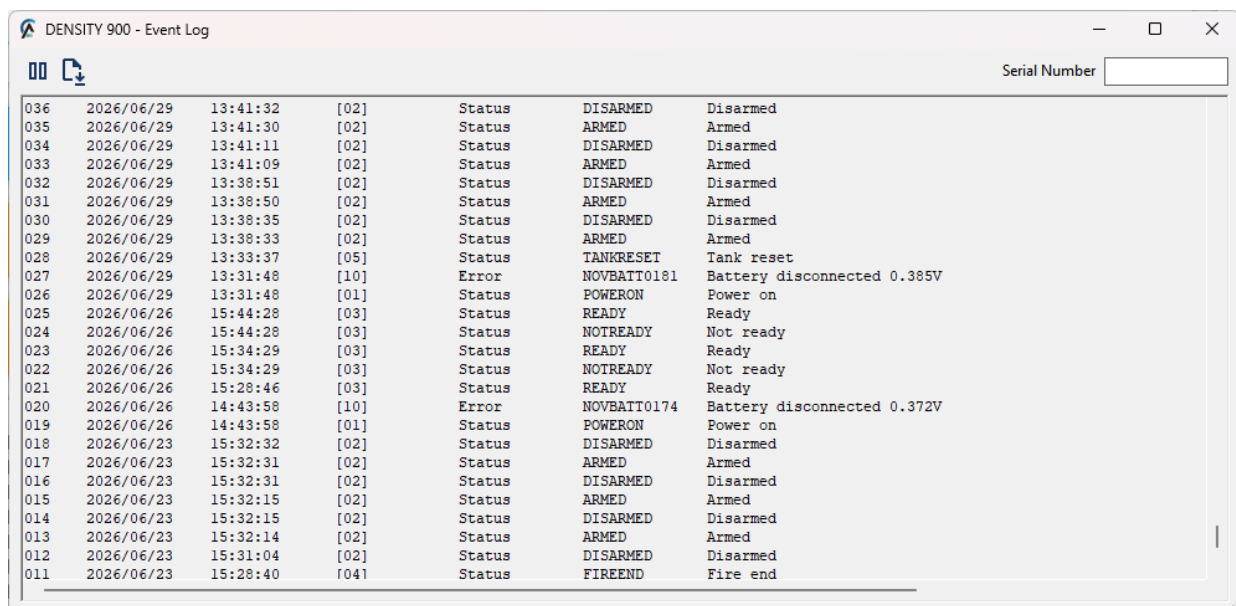
1. Click the **Shot Time** button on the toolbar to open the **Settings** window.



2. Enter the desired duration in seconds (must be within the allowed range, e.g., **1 to 50 seconds**, depending on the model).
3. Click **OK** to apply and confirm.

Event log

Click the **Log** button on the toolbar to retrieve the event log from the device (capable of storing up to 500 records). Events are displayed in descending chronological order.



For each event the log displays:

- **Event Number:** Sequential log index.
- **Date:** Date of the event occurrence.
- **Time:** Time of the event occurrence.
- **Event Code:** Unique identifier code.
- **Event Type:** Event type (e.g. Status, Error, etc.).
- **Event Name:** System label for the event.
- **Description:** Readable details describing the event.

Event code, type and name depend on the device model and protocol. Refer to the hardware user manual for a complete list of supported events, including their event codes, types and names.

Log Controls

-  **Pause** Temporarily stops log refresh/updates.
-  **Play** Resumes log refresh/updates.
-  **Save** Exports the event log into a standard .csv file. In the **Save As** dialog, select the folder where you want to save the event log and click **Save** to confirm.

In the export, the file name is generated automatically and includes the device model name, followed by the date and time of the log export. For example:

Event Log DENSITY 900 2026-09-03 - 11-56.csv

If the serial number is entered in the **Serial Number** text box in the Event log window toolbar, it is automatically added to the file name after the device model name. For example (Serial number 008097):

Event Log DENSITY 900 008097 2026-09-03 - 11-59.csv.

Debug

Displays raw serial communication messages exchanged between the software and the device in the Protocol panel.

- Messages sent from the application to the device are preceded by the > symbol, e.g.:
> \$READ,shotnum*D3D8
- Messages received from the device are preceded by the < symbol, e.g.:
< \$DATA,shotnum,0034*E1EE".

Protocol Controls

-  **Play** Start/Resume streaming raw messages.
-  **Pause** Temporarily pause the stream display.
-  **Stop** Stop streaming raw messages.
-  **Clean** Clear all current messages from the panel.