AMERICAN
FLOW CONTROL
THE RIGHT WAY

AFC SEMPER™ RPM

WITH TRIMBLE UNITY REMOTE MONITORING

User Guide

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Overview

The AFC SEMPER Remote Pressure Monitor (RPM) is a wireless, battery-powered pressure recorder designed for installation on virtually any fire hydrant. The RPM can measure and record water pressure and is capable of providing high-resolution impulse data.

Trimble Unity Remote Monitoring provides the capability to view and analyze pressure data, configure and manage the RPM as well as manage monitoring sites.

A Trimble Unity® Remote Monitoring account is required before installing and using the **AFC SEMPER RPM** on a fire hydrant.

The RPM is shipped dormant. Following the instructions in this Quick Start Guide will be necessary to make a device wake-up call.

Item	Description
1	AFC SEMPER RPM
2	A-MAG Tamper Magnet (not shown)
3	Trimble Unity on mobile device
4	Trimble Unity Remote Monitoring on desktop/PC

What You Need

- AFC SEMPER RPM – Self-contained remote telemetry unit (RTU) with integrated wireless modem that mounts on a 2 ½ inch hydrant hose nozzle outlet.

- A-MAG – The tamper magnet is used to force a call from the RPM to the Trimble Unity Remote Monitoring Cloud database. Required equipment – order separately.

- Trimble Unity Remote Monitoring Software (latest version) – Install Trimble Unity Remote Monitoring software on a mobile device or access on the web via PC to provide remote access to RPM data and configuration from the Cloud.

Before You Start

- Have the RPM and an A-MAG Tamper Magnet on hand.

- Ensure you can log into the Trimble Unity Remote Monitoring web and/or mobile applications.

Adding an RTU to the RTU List

(*Helpful Hint: Rotate mobile devices to landscape orientation for full display function*)

Quick Setup Method:

After removing RPM and the contents from the box, use the magnet provided with the RTU, place the face of the tamper magnet on the bullseye located on the side of the AFC Semper RPM. When in place a beep will sound 1X per second. Keep the magnet in place for 5 seconds. You hear a beep every 3 seconds. Once the beeping stops, open the Trimble Unity (web or mobile) app select the **Remote Monitoring** option. Within Remote Monitoring, tap the menu icon and select RTUs and verify the RPM has been added to the RTU list.

Alternate Setup Method:

1. Tap **RTUs** from the menu to open the RTU list.

2. Tap the plus icon in the bottom-right corner of the screen.

3. Tap **Bluetooth** or **Tampering a call manually**. If using Bluetooth, skip step 4 and select the appropriate device being added and tap **Confirm**. (Best Practice is for the initial taper call to be performed manually.)

4. Enter the **Serial Number** in the field or **Scan** the barcode on the RTU.

5. Tap **Next**.

6. Select the **Enable Dormant Mode after calling** check box if you are not installing the device right after adding it. This will preserve the RTU battery.

7. Tap **Next**.

8. Using the magnet provided with the RTU, place the face of the tamper magnet on the bullseye located on the side of the AFC Semper RPM. When in place a beep will sound 1X per second. Keep the magnet in place for 5 seconds. You hear a beep every 3 seconds. Once the tamper call has connected, the **Verifying Communication** screen displays the progress of the call. The **Communication Verified** message displays.

9. Tap **Done.**

Install the RTU Using the Mobile App (New Site)

1. Make sure to follow all safety procedures. Be sure to ensure the fire hydrant is not under pressure before removing existing fire hydrant caps. Special care should be taken in the installation, inspection and repair of pressure containing devices such as fire hydrants. FAILURE TO FOLLOW PROPER PRACTICE AND GUIDELINES CAN RESULT IN SERIOUS INJURY OR DEATH. High pressure and water hammer, due to rapid opening or closing of a hydrant or valve, can also cause major damage to the hydrant, valve, water main, fire hose, or other attached equipment. Install **AFC Semper RPM** on the hydrant using your company's standard operating procedures. Care should be taken to flush the hydrant and remove any debris or residual matter that could block the sensor.

2. Tap the RTU you want to install from the RTU list.

3. Tap **Install** on the RTU details panel. The **Where to install?** message appears.

4. Tap **Install on a new site**
.
5. Tap the fields to change **Site Name**, **Site type**, and **Site group**.

6. Tap the icons under **Location** to **Capture** the GPS location of the mobile device, manually digitize the location from the **Map**, or **Clear** the location data.
7. Select a **Time Zone** for the new site.

8. Tap **Install**.

The new site details panel is shown.

Install the RTU Using the Mobile App (Existing Site)

1. Make sure to follow all safety procedures. Be sure to ensure the fire hydrant is not under pressure before removing existing fire hydrant caps. Special care should be taken in the installation, inspection and repair of pressure containing devices such as fire hydrants. FAILURE TO FOLLOW PROPER PRACTICE AND GUIDELINES CAN RESULT IN SERIOUS INJURY OR DEATH. High pressure and water hammer, due to rapid opening or closing of a hydrant or valve, can also cause major damage to the hydrant, valve, water main, fire hose, or other attached equipment. Install **AFC Semper RPM** on the hydrant using your company's standard operating procedures. Care should be taken to flush the hydrant and remove any debris or residual matter that could block the sensor.

2. Tap the RTU you want to install from the RTU list.

3. Tap **Install** on the RTU details panel. The **Where to install?** message appears.

4. Tap **Install on an existing site. The RTU serial number** populates in the field**.**

5. Tap **Select site** to select an existing monitoring site from the list.

6. Tap **Auto match** to automatically select a channel, or manually select one from the drop-down list.

7. Tap **Install**.

    The monitoring site details screen displays with the RTU installed on the site.

    To install an RTU on an existing site that is already in service, the **Replace current RTU**? message appears.

8. Select the **Copy settings from existing RTU** check box to copy the existing RTU settings to the replacement RTU.

9. Tap **Yes, replace it** to replace the RTU.

10. Enter the information in the fields, then tap **Install**.

Install the RTU Using the Web App (New Site)

1. Make sure to follow all safety procedures. Be sure to ensure the fire hydrant is not under pressure before removing existing fire hydrant caps. Special care should be taken in the installation, inspection and repair of pressure containing devices such as fire hydrants. FAILURE TO FOLLOW PROPER PRACTICE AND GUIDELINES CAN RESULT IN SERIOUS INJURY OR DEATH. High pressure and water hammer, due to rapid opening or closing of a hydrant or valve, can also cause major damage to the hydrant, valve, water main, fire hose, or other attached equipment. Install AFC Semper RPM on the hydrant using your company's standard operating procedures. Care should be taken to flush the hydrant and remove any debris or residual matter that could block the sensor.

2. Click the RTU you want to install from the RTU list.

3. Click **Install on New Site** on the RTU details panel.

4. Alternatively, select the check box for the RTU and click **Install on New Site** on the top menu.

5. In the **Create a new site** section, enter the **Site Name**, select a **Site type**, and select a **Site group**. *NOTE: The site type is determined by the RTU type, and creates specific reports, measurements, and data points for that site type.*

6. Click **Select from Map** to zoom to and select the location of the new site on the map.

7. Alternatively, enter an address in the search bar to find and select the location on the map.

8. Click **Use Location**. The location coordinates are added for the new site.

9. Click **Use Current Location** to use your current location as the location of the new site.

10. Select a **Timezone** from the drop-down list.

11. Enter any data you want in the **Custom Fields**.

12. Click **Install**. The selected RTU status changes to **Installed**, and the new site shows on the map. *BEST PRACTICE: It is a best practice to tamper an RTU after every installation to confirm communications and data transfer. See Tamper an RTU to Force a Test Call for more information.*

13. Click the new site under **Related Site** on the RTU details panel to open the site details. *NOTE: Some of the information listed on the RTU details panel will populate once the RTU calls in for the first time. For example, last call, internal battery status, measurements, etc.*

Install the RTU Using the Web App (Existing Site)

1. Make sure to follow all safety procedures. Be sure to ensure the fire hydrant is not under pressure before removing existing fire hydrant caps. Special care should be taken in the installation, inspection and repair of pressure containing devices such as fire hydrants. FAILURE TO FOLLOW PROPER PRACTICE AND GUIDELINES CAN RESULT IN SERIOUS INJURY OR DEATH. High pressure and water hammer, due to rapid opening or closing of a hydrant or valve, can also cause major damage to the hydrant, valve, water main, fire hose, or other attached equipment. Install AFC Semper RPM on the hydrant using your company's standard operating procedures. Care should be taken to flush the hydrant and remove any debris or residual matter that could block the sensor.

2. Click the RTU you want to install from the RTU list.

3. Click **Install on Existing Site** on the RTU details panel.

4. Alternatively, select the check box for the RTU and click **Install on Existing Site** on the top menu. If the RTU status **is Available (Dormant),** a message appears.

5. Click **Yes, Install** to continue, or **Don't Install** to cancel.

6. Select a site from the drop-down list or type the name of the site in the field to filter the list of sites, or click **Select from Map** to select the site on the map.

7. If selecting the site from the map, click to select the site on the map and then select the check box next to the site in the list, then click **Add**.

8. *Click **Auto Match** to automatically choose the channels assigned to the RTU type, or manually select them from the **Create New Measurement** drop-down list. NOTE: The number of channels available depend on the type of RTU you want to install. Some have one channel, others have multiple.*

9. Click **Install**. The selected RTU status changes to **Installed or Installed (Dormant)**, and the existing site shows on the map as **In Service**. *BEST PRACTICE: It is a best practice to tamper an RTU after every installation to confirm communications and data transfer. See Tamper an RTU to Force a Test Call for more information.*

10. Click the new site under **Related Site** on the RTU details panel to open the site details. *NOTE: Some of the information listed on the RTU details panel will populate once the RTU calls in for the first time. For example, last call or internal battery status. The historical data for the existing site is listed.*
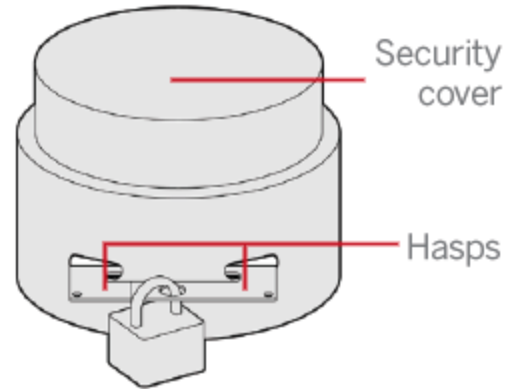
    To install an RTU on an existing site that is already in service, the **Replace current RTU?** message appears. *IMPORTANT: To replace an RTU on an existing site, the new RTU has to be the same type as the one already installed on the site. Otherwise, the existing RTU will have to be uninstalled from the site first.*

11. Select the **Copy settings from existing RTU** check box to copy the existing RTU settings to the replacement RTU.

12. Click **Yes, replace it** to replace the RTU. (continued on next page)

13. Enter the information in the fields, then click **Install.**

Installing the Security Cover - Optional

1. Place the security cover over the recorder and align the slots with a gap under the recorder.

2. Press the cover down firmly while inserting the narrow arm of the security hasp through the slots in the security cover from one direction and the narrow arm of the other security hasp from the other direction, so they overlap.

3. Align the locking holes.

4. Insert a padlock (customer supplied) or other locking device through the hole in both hasps.

Security cover
Hasps