

GemOne®

A company of **TVH**

EN

Sapphire V2SC Hardware Operation

Procedure Manual

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1 - Introduction

Purpose

The purpose of this document is to explain how to use the Sapphire V2SC to allow access to a piece of equipment.

Scope

This will affect personnel who use the Sapphire V2SC module to access equipment.

2 - Turning On the Equipment

Turn the key from OFF position to ON position and wait for the Sapphire module to power on. This will take 25 seconds to boot up completely. It will cycle between Sapphire, Android, and the Sapphire login screen.



Turn the key to the accessories position for internal combustion equipment.
Do not attempt to start the equipment without logging into the Sapphire module.

Once powered on, the Sapphire Logo will appear on the screen.

It will say TOUCH SCREEN TO START on the display.

Touch the display to bring up the keypad.



3 - Logging In

There are different levels of access for different personnel.
Under normal operating conditions, the type of access will stay as a driver.



Access levels can be changed using the selections on the right hand side.

Enter the relevant PIN or swipe an RFID card on the right hand side of the screen.
The module will try to authenticate the attempt by connecting to the server.



Contact GemOne staff if the PIN or card does not work.

If access is granted and a checklist is due, the module will go directly to the checklist questions. See section below for more information.

If access is granted and a checklist is not due, the module will go directly to the main menu.



RFID Access

If equipped, the RFID reader can be found on the right hand side of the Sapphire V2SC device.

Touch the screen to go to the keypad screen and present the RFID card roughly 5cm away from the reader.

The RFID reader will beep and if successful, it will log into the home page.



4 - Answering Checklist Questions

If access has been granted and a checklist is due, the checklist will start immediately

Pre-start questions must be answered before the machine can be started.

The machine can be started after pre-start questions have been completed.

Post-start questions must be answered after the machine has been started.



The back arrow can be used to go back to the previous question.





If the unexpected answer is selected for a critical question, the screen will prompt the operator asking if they would like to submit the answer. Confirming the answer will lock out the display.



The module will go back to the main menu after a checklist is completed.

5 - Logging out of the Equipment

This is controlled via the ignition sense from the Sapphire V2SC cable. Assuming the GemOne yellow wire is connected to the key switch, turning the key to Off will log the operator out of the module.

This takes approximately 5 seconds to log the operator out. The module will return to the logo page once logged out.



The screen will remain On even with the key at the Off position. It will shut down after 15 minutes if no one logs into the module. Please contact GemOne staff if this timer needs to be adjusted.



6 - Locking a Sapphire V2SC Module

The Sapphire V2SC module will lock out if any of the following occur:

1. Impact exceeding threshold.
2. Answering critical question unexpectedly.
3. Using Lockout feature.

Lockout via Impact

If an impact occurs above the set threshold, the following image will appear on the Sapphire V2SC screen:



The following will occur when locked out via Impact:

- Normal driver codes will not allow access to the module.
- An override code must be used to unlock the equipment.
- If a device is connected to the auxiliary relay, the device will activate and remain active until the equipment is turned off.

Changing Impact Threshold

The impact lockout threshold can be adjusted using the 'Settings' menu. This can only be accessed after using a supervisor code.



A normal operator code cannot access the Settings menu.

Lockout via Critical Question

If a critical question is answered unexpectedly, the equipment will lockout.
The following image will appear on the Sapphire V2SC screen:



The following will occur when locked out via answering a critical question unexpectedly:

- Normal driver codes will not allow access to the module.
- An override code must be used to unlock the equipment.

Lockout via Lockout Feature

The Sapphire V2SC module can be locked out via the Lockout feature if a supervisor code is used to log into the screen.

1. Log in as a Supervisor.

Contact the system administrator or GemOne if supervisor access is required.

2. There will be a 'Lock' button on the home screen. Press the 'Lock' button.



3. Touching the Lock button will prompt the user for a confirmation.
If yes is selected again, the module will be locked out.



The following will occur when locked out:

- Normal driver codes will not allow access to the module.
- An override code must be used to unlock the equipment.

7 - Unlocking a Sapphire V2SC Module

When a module is locked out, the driver access option on the keypad screen will be gone and it will say the module is locked.



Normal operator codes cannot be used to access the equipment when locked out. Only supervisor codes can access the equipment.

1. Enter the supervisor PIN or swipe an override.
2. Press the Unlock button on the home screen and the module will be unlocked.

Ensure to turn the key Off to log out of the session.



A checklist will be required for the first operator that logs back into the module if it was locked out.

8 - Camera Application

General Information

Cameras on the V2SC can be accessed via the camera app. This is accessible after logging into the Sapphire V2SC device and can be found on the top right corner of the display. There are two types of views:

1. **Driver view** - only allows for viewing of cameras
2. **Supervisor view** - allows for viewing, playing back footage, and also changing settings



Application Settings

Mast & Rear View Cameras

1. Log into Sapphire using a supervisor code and then touch the camera icon
2. A capacity reminder for the SD card can be set. This will prompt the operator when the SD card has reached a certain capacity. The percentage value can be adjusted and an option to remind the operator once or continuously can be set up.



- a. Capacity reminder enable = whether or not the prompt will appear when the SD card is getting full
- b. Percentage value = how much of the SD card needs to be filled before the prompt appears
- c. Reminder once = activate this to only remind the operator once



The SD card will still be overwritten if this prompt is not enabled.

3. Touch the settings button and then configure the amount of cameras depending on the type of camera kits to be installed.

Change the Preview Number to suit the amount of cameras.



- d. **One camera:**
Either one mast camera, one rear view camera, or one fork view camera - configure the preview number to one
- e. **Two cameras:**
typically one mast view and one rear view camera. Configure the preview number to two
- f. **Three cameras:**
typically one fork view, one mast view, and one rear view. Configure preview number to three
- g. **Four cameras:**
typically one fork view, one mast view, and two rear view. Configure the preview number to four



The resolution and camera type must be set to **720p** and **NTSC** for mast view and rear view cameras.

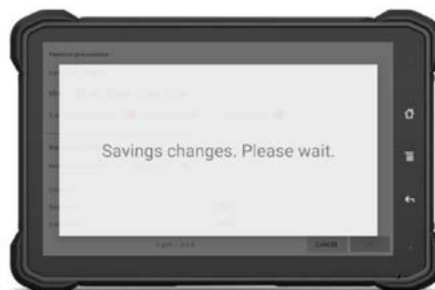
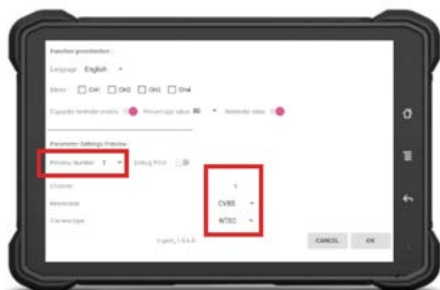
The resolution and camera type must be set to **CVBS** and **NTSC** when using a camera conversion harness to convert an existing V2 camera accessory.



4. Tick the video parameter setting boxes to record footage.
 - a. Tick channel 1 if only one camera is connected to AHD1
 - b. Tick channel 2 as well if there are two cameras connected; one camera to AHD1 and another camera to AHD2
5. Press OK to save changes

Fork View Cameras

See section above for steps to get to this settings screen. When configuring the settings, set the resolution to CVBS and camera type to NTSC for fork view cameras. Press OK to save changes once this has been set.

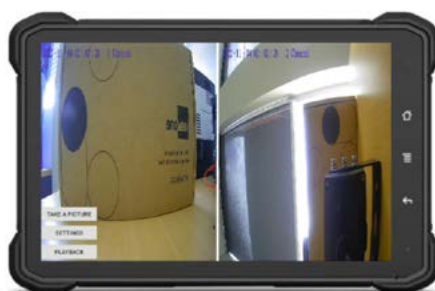
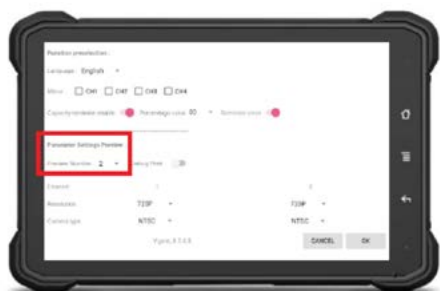


The resolution and camera type must be set to CVBS and NTSC for fork view cameras or it will not operate correctly.

Functions

Preview Number

Changing the preview number will determine how many camera feeds appear on the display. The example below has two selected so it shows two camera feeds.



Camera View

- Touching a camera feed will enlarge that video on the display. This can be done manually or by connecting the inputs from the camera harness. Refer to the camera input section above for more information.
- Touching the feed again will revert back to the previous screen.

Enlarging AHD1



Enlarging AHD2



Take a picture

- This is only available for the supervisor view.
- Selecting TAKE A PICTURE will take pictures of all the active cameras and is dependent on the SD card being inserted and formatted correct. The display will say TAKE PICTURE END if a picture has been successfully taken

Mirror

- This will flip the image of the camera if selected. CH1 corresponds to AHD1, CH2 corresponds to AHD2, CH3 corresponds to AHD3, and CH4 corresponds to AHD4.
- The examples below show the difference between a normal and mirrored image.



Normal Image

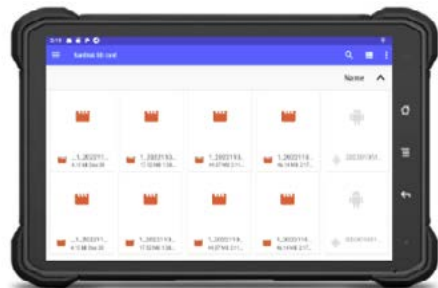
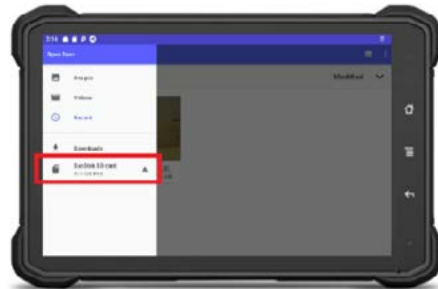
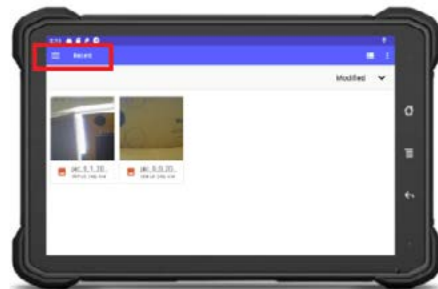


Mirrored Image



Playback

- This is only available for the supervisor.
- Footage and images can be viewed directly from the display.
- Touch the PLAYBACK button to bring up additional options.
- Change the destination from Recent to SanDisk SD Card and then the saved files will appear



9 - Support

In case of issues, questions or feedback, feel free to contact our support team.

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