



G4S Justice Services, Inc.

PATROL SUITE[®] RF Monitoring Reference Manual



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Chapter 1: G4S Justice Services Company Background

G4S Justice Services, Inc. is a wholly owned subsidiary of G4S (formerly Group 4 Securicor), a global security solutions provider with operations in over 100 countries, employing over 500,000 people. G4S is quoted on the London Stock Exchange (GFS.L) and also on the Copenhagen Stock Exchange. G4S is the world's leading security solutions provider with a strong emphasis on security and valuables transportation. However G4S was also the first company to provide outsourced justice services when it ran an immigration detention center for the UK Government in the 1960s. Now our Justice Services experience includes prison management, juvenile rehabilitation and treatment programs, immigration detention, transportation and repatriation services, community supervision and we are a leading information, technology and services provider for electronic monitoring and tracking.

G4S Justice Services is dedicated to providing solutions to Federal, State and Local Governments, focusing on the outsourcing of non-critical Government tasks particularly in the Justice and Public Safety sectors. We develop, market and provide electronic monitoring services using the latest technology in Radio Frequency (RF) and GPS monitoring. As an example, G4S Justice Services, Inc. was the first to introduce a web-based caseload management system, allowing officers to instantly view, evaluate, and make changes to information they need to manage their caseload. Through continual evaluations and upgrades to our systems, G4S Justice Services offers the most advanced and user-friendly program on the market.

The primary goal of G4S Justice Services, Inc. is to ensure that public safety is protected and that our customers are delighted with the service we provide them. This means we must provide accurate, timely and reliable information and services. Each and every one of our employees plays a vital part in the delivery of these services and we should all be proud to play our part in creating and maintaining safer societies.



Figure 1: G4S Justice Service's Headquarters located in Southern California

Vision

To be recognized as the global leader in providing security solutions

Values

The values of the organization focus clearly on customers. Integrity runs throughout our operation and by employing and developing the best people in the industry, we can use our security expertise to develop solutions to customer needs. This enables us to drive performance - service performance for customers and financial performance for the organization and its shareholders.

The Values Model



Figure 2:G4S Justice Services Vision and Values

- We always focus on the needs of our customers
- We are experts in security solutions and know what makes a difference
- We have absolute integrity in everything we do
- Our customers get the service they demand
- Our business gets the profit performance it requires
- Our staff are proud to be part of the organization
- Our Shareholders get the returns they desire

Chapter 2: How to Use the PATROL SUITE RF Monitoring Manual

Purpose and Organization of this Manual

The purpose of this manual is to assist Officers with the setup and monitoring of PATROL SUITE RF products so that electronically monitored participants are under close, accurate supervision thus enabling program officers to focus their emphasis on casework.

The manual is organized to guide the Officer through the sequence of steps to install and monitor PATROL SUITE RF products.

It is very important that the Officer read this section prior to enrolling and setting up a participant for the selected program. Setup and operation includes completing any necessary agency instructions and forms, preparing the PID (Personal Transceiver) and PHMU (Personal Home Monitoring Unit), and placement of the equipment in the participant's home.

Range Testing of the equipment should be done at the participant's home to ensure the equipment is functioning properly and thereby correctly signaling if the participant is within the previously designated area (i.e., usually inside their home). These procedures are presented in "Range Testing."

After reading the sections above, G4S Justice Services suggests the following sequence for finding needed information concerning the use of the PATROL SUITE RF products.

- Review the Table of Contents to find the item of interest.
- After finding the item of interest, the introductory paragraphs of the selected chapter should give the reader a good overview of the chapter's contents.

Chapter 3: PATROL SUITE RF Equipment

This chapter describes the use and features of the PATROL SUITE RF Equipment.

How Electronic Monitoring Works

Electronic monitoring, under a house arrest program typically includes:

- A PID (Personal Transceiver) fitted to a participant
- A PHMU (Personal Home Monitoring Unit) installed in the intended location of Monitoring
- A Monitoring Center to receive transmissions from the PHMU (Personal Home Monitoring Unit), so that the case officer can be informed of any program violations

The illustration below shows the participant and other basic components in a house arrest program.

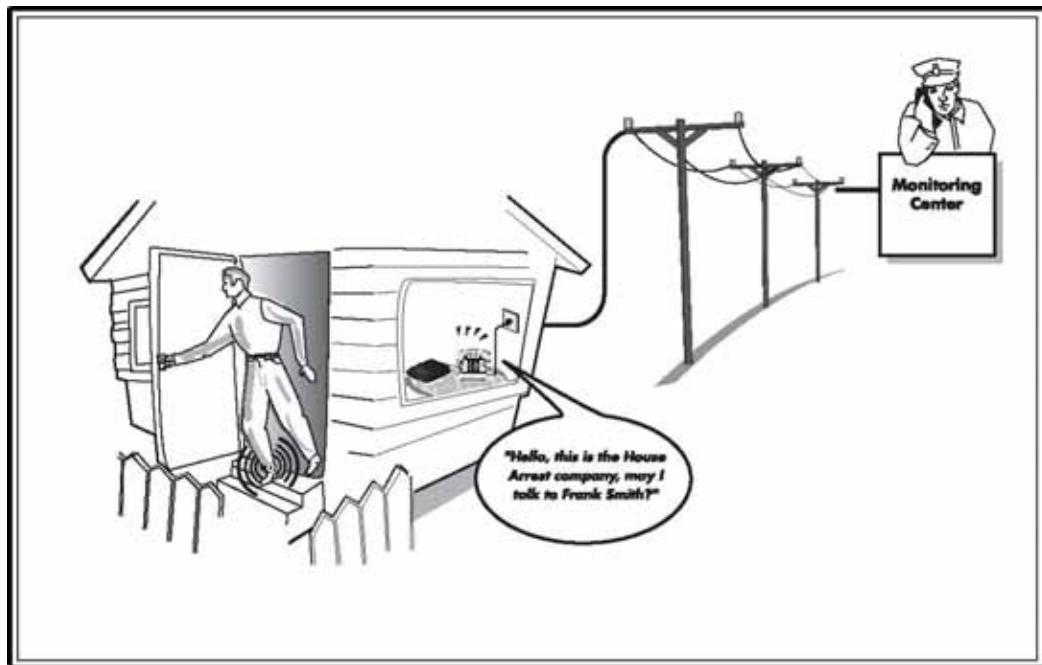


Figure 3: Basic elements of a house arrest program

PATROL SUITE RF Monitoring Components

PATROL SUITE RF Monitoring Products consist of the following:

- PID (Personal Transceiver)
- PHMU (Personal Home Monitoring Unit)
- PID Band
- PID Retaining Pin
- PID Sleeve
- Installation & Removal Tools
- PHMU Power Adaptor
- Telephone Cord (Landline Monitoring Only)
- PHMU Menu Key
- OPID (Officer Identification Device)

PID Descriptions & Features

The PID or Personal Transceiver is worn by the participant and can not only transmit signals, but also receive signals from the PHMU, making monitoring results more robust.

- The PID can be worn on either the ankle or wrist.
- The PID will only blink its LED when commanded by the PHMU during range test or decommission.
- The PID blinks its LED during range test allowing the Officer to accompany the participant throughout the residence.
- While in the Enrollment Mode, the PID continues to blink its LED for approximately 30 minutes. This gives the Officer plenty of time to size and close the band properly and an indication if there is an issue with band closure.
- Each tamper is recorded and reported as a separate event to alert the Officer of the frequency level.
- The participant's record will stay in the tamper status until the appropriate device has been reset or replaced.



Figure 4: PID

PHMU Descriptions & Features

The PHMU or Personal Home Monitoring Unit is installed in the location the participant is to be monitored and records and reports all related activity to our Monitoring Systems via telephone line.

- The Setup Menu options can only be accessed with a supplied PHMU Menu Key and OPID.
- PHMU programming is guided by easy to follow prompts on the LCD screen.
- The PHMU can be enrolled after the PID has already been installed on the participant.
- The standard leave window is 5 minutes, but is easily modified upon request.
- The PHMU indicates RF signal strength during range test.
- The length of the range test is determined by the Officer.
- Information regarding the equipment's programming and monitoring statuses is available through the Setup Menu options.



Figure 5: PHMU

- The PHMU records and reports any time its menu options have been accessed.
- Simple decommission procedures offers a variety of methods to power down one or both devices.
- LED lights provide a clear indication of connection and/or pending alerts to assist during programming or troubleshooting.
- A telephone line is not required to complete the enrollment process.
- Digital Phone Systems (PBX) that can be found in many office buildings supply more electrical current than analog telephone lines, so the PHMU should never be plugged into one.
- The PHMU contains a backup battery that should last approximately 48 hours in the case of an outage.
- The two telephone outlets on the PHMU are interchangeable, simplifying the connection process and allowing the participant to hook up a personal telephone to the PHMU in the event that only one phone jack is available.
- The PHMU calls in Key Insertion events every 10 minutes while it is in the Menu Mode as a precaution.

PID Band Descriptions & Features

The PID Band attaches to both ends of the PID when placed on the participant, creating a closed circuit.

- As a tamper evident measure, the center of the PID Band contains fiber optic cables that transmit light throughout its circuitry.
- The length of the PID band can be easily customized to fit each participant appropriately.
- In order to avoid erroneous tamper events, the PID band should only be sized using the supplied tools.



Figure 6: Band

PID Retaining Pin Descriptions & Features

The Retaining Pin secures the PID Band to the PID when placed on the participant, ensuring the PID cannot be removed without evidentiary support.

- The Retaining Pin is designed for easy installation.
- The Retaining Pin is tamper evident and cannot be removed from the PID without damaging the barbs set in place during installation.



Figure 7: Retaining Pin

PID Sleeve Descriptions & Features

The PID Sleeve locks in place over the Retaining Pin on the PID when placed on the participant, ensuring the Retaining Pin cannot be accessed without evidentiary support.

- The PID Sleeve can be easily installed by hand.
- The PID Sleeve is tamper evident and can be used as an additional measure to deter participants from tampering with the Retaining Pin.



Figure 8: Sleeve

Installation and Removal Tools Descriptions & Features

The Installation and Removal Tools are supplied to assist the Officer during the installation and removal of the PID. Each Tool Kit consists of:

- Band Alignment Tool (Top Right)
- Band Cutting Tool (Top Left)
- Removal Tool (Bottom)



Figure 9: Tools

PHMU Power Adaptor Descriptions & Features

The AC Power Adaptor is used to supply the PHMU with a power source during monitoring.

- The AC Power Adaptor can be used universally with all Patrol Suite PHMUs.
- The connection process is simple enough for a participant to connect when necessary.



Figure 10: Power Adaptor

Telephone Cord Descriptions & Features

The Telephone Cord is used to connect the PHMU to an analog telephone line which is used to transmit recorded information.

- The Telephone Cord can be used universally with all Patrol Suite Landline PHMUs.
- The connection process is simple enough for a participant to connect when necessary.



Figure 11: Telephone Cord

PHMU Menu Key Descriptions & Features

The PHMU Menu Key is used in combination with the OPID in order to gain access to the Setup Menu options.

- The Setup Menu options can only be accessed with a supplied PHMU Menu Key, ensuring the utmost security when leaving the PHMU with the participant.
- The PHMU Menu Key can be attached to standard key chains, so Officers can easily carry it with them.
- The PHMU Menu Keys are universal, so Officers do not have to carry more than one.
- The intricate barrel design of the PHMU Menu Key is extremely difficult to duplicate and manipulate.



Figure 12: Menu Key

OPID Descriptions & Features

The OPID is used in combination with the PHMU Menu Key in order to gain access to the Setup Menu options.

- An active and authorized OPID must be present in order for the user to access the Setup Menu with the PHMU Menu Key.
- The OPID serial numbers is verified by the PHMU and invalid or unauthorized OPIDs will not permit access to the Setup Menu.



Figure 13: OPID

Chapter 4: PATROL SUITE RF Installation

This chapter presents procedures for equipment preparation and installation to monitor participant activities under a PATROL SUITE RF program.

Installation Preparation

Prior to installation, the participant should complete all necessary agency forms, instructions and installation requirements. In order to review all monitoring activity, the participant's information must first be enrolled in the appropriate Monitoring System. For questions concerning enrollment, please call the G4S Justice Services Monitoring Center at 1(800) 589 6003.

Installation Requirements Checklist

Prior to installation, the Officer should review the following items with the participant to ensure optimal performance of the equipment in the designated monitoring location:

Telephone Line Requirements

- No Call Forwarding on Telephone Line
- No Toll/Long Distance Blocking on Telephone Line
Must be able to dial a full 10 digit phone number with a prefix of '1'
- No Privacy Director/Manager on Telephone Line
This service requires anonymous callers to verbally identify themselves to a recording before the call is accepted or declined.
- No Caller ID on Telephone Line
- No Caller ID Blocking on Telephone Line
- No Call Waiting on Telephone Line
- No Three Way/Conference Calling on Telephone Line
- No answering machines, fax machines or computers with modems on Telephone Line
- No Digital or PBX Type Systems
Commonly found in offices
- Use a Telephone Line with adequate volume that is clear and static free.
- Voltage levels should be 50 volts on the hook and 5 volts off the hook
If uncertain, we recommend the local phone carrier perform a voltage check inside the home.

Monitoring Requirements

- Do not use the telephone for 10 minutes when entering the home.
- Do not move the PHMU after installation is complete.
- Do not unplug the telephone cord after installation is complete.
- Do not unplug the power cord after installation is complete.
- Do not answer the phone on the first ring.
- Do not place anything on top of the PHMU.
- Do not place anything in front of, to the side of or in back of the PHMU.
- Do not hang any mirrors, pictures or metallic signs near the PHMU.

Equipment Positioning Requirements

- The PHMU should be installed in a central location in the home nearest to where the participant sleeps.
- If a telephone must utilize the same jack, plug the cord into the phone and the other available outlet on the PHMU.
- Do not install the power adaptor to a power outlet that is controlled by a switch.
- Do not install the PHMU on the floor. The PHMU should be installed at least 3 feet off of the floor on a non-metallic surface.

- Do not install the PHMU on or within 4 feet of any large metallic/reflective objects, devices or appliances such as mirrors, TVs, stereo systems, video/gaming systems, computers, refrigerators, microwaves or washers and dryers.
- Do not install the PHMU in front of a window or in direct sunlight.
- Avoid installing the PHMU on an outside wall of a home.

PID Preparation

PATROL SUITE RF has a PID that must be installed on the participant to monitor their activity with continuous signaling Radio Frequency (RF). To prepare the PID Band for installation, refer to the procedures/figures below:

1. Slide the Alignment Tool along the PID Band until the line on the tool coincides with the first cut-line on the PID Band.

The four posts on the tool should also align with the four holes in the PID Band.

2. Press the PID Band down on these posts to secure it to the Alignment Tool.
3. Place the Cutting Tool in the slot on the Alignment Tool and press down firmly to cut the PID Band.



Figure 14: PID Band, Cutting and Alignment Tool

4. Insert the cut end of the PID band into one end of the PID housing.
5. Secure the PID Band in place by inserting the PID Retaining Pin into the PID housing, making sure the opening on top of the PID Retaining Pin is facing the body of the PID. The insertion piece of the PID Retaining Pin can now be removed.



NOTE: Proper orientation when inserting the Retaining Pin is necessary to secure the Sleeve.

Figure 15: Inserting Retaining Pin

Figure 16: Proper Orientation of Retaining Pin

- Slide the PID Sleeve over the PID Retaining Pin. The PID Sleeve will click when properly secured.



NOTE: The PID Retaining Pin is Tamper-Evident. Once inserted, they cannot be removed without damaging the two barbed vanes on the tip of the PID Retaining Pin.

Figure 17: Attaching sleeve

Figure 18: Window for viewing PID Retaining Pin

- Without inserting the other end of the PID Band, wrap the PID around the participant's ankle until snug.

NOTE: Although the PID can be installed on the ankle or wrist, we strongly recommend Ankle Placement of PID whenever possible. If Wrist Placement is chosen, check the compressed hand size versus wrist size. If they are close in size, this necessitates PID placement on the ankle.

- Take note of the line on the PID Band that is closest to the edge of the face of the PID.



NOTE: In order to ensure that the band is not too tight, we recommend allowing an additional notch when making the initial cut as it can be shortened if necessary, but not lengthened.

Figure 19: Sizing the PID Band

- Use the Cutting and Alignment Tool to cut the PID Band to size.
- Check the fit of the PID Band by wrapping the PID around the participant's ankle and fully inserting the end of the PID Band into the PID housing. It is important that the PID not be completely installed on the participant at this point, in case the PID Band needs to be resized.

NOTE: In order to ensure proper operation of tamper detections, secure fitting of the PID is crucial. The PID and Band must fit snug, but not so tight as to cause discomfort. When checking the fit on the ankle, ask the participant to stand and re-check the PID Band. A proper fit requires a 1/8 to a 1/4 inch slack when the PID Band is pulled away from the participant.

- Once the appropriate fit is established, remove the PID from the participant.

NOTE: G4S Justice Services recommends practicing this process prior to proceeding with an actual installation on a participant.

OPID Operation

G4S Justice Services, Inc. recommends leaving the OPID on at all times while in the field.



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Figure 20: OPID

OPID Activation

1. The OPID is activated at the factory.

OPID Power Down

1. The OPID can only be powered down at the factory or by taking it apart and removing the battery.

PHMU Preparation

PATROL SUITE RF has a PHMU that must be installed with the participant's PID to monitor their activity with continuous signaling Radio Frequency (RF). To prepare the PHMU for installation, refer to the procedures/figures below:

1. Ensure that an active and valid OPID is present prior to beginning the Installation process.
2. Insert the PHMU Menu Key into the back of the PHMU and turn clockwise to the horizontal position.



Figure 21: Turning PHMU Menu Key

3. If installing a Landline PHMU, plug the phone cord into both the phone jack on the wall and one of the two available outlets on the back of the PHMU.

NOTE: The second jack on the back of the PHMU can be used to connect the participant's home telephone if no other phone outlets are available.

WARNING: Connecting the PHMU to a digital phone system with an on hook voltage greater than 55 volts (RJ-45 jacks connected to digital PBX lines) may cause permanent damage to the

PHMU. The enrollment process can be completed without a phone line connection. If unsure of the type of phone system or voltage, inquire with your telecom coordinator or have the voltage level measured prior to connecting the phone line to the PHMU.

4. Plug the PHMU Power Adaptor into both the outlet and the PHMU. The LCD screen will illuminate and display the PHMU Serial Number and Setup Menu while the green LED confirms a power connection.

Installation Process

1. Select **ENRL** from the Setup Menu



If installing a Cellular PHMU, select **GSM** from the Enroll Menu to determine the cellular signal strength and ideal placement of the PHMU.



2. The PHMU will find any active PIDs within range and display their serial numbers on the LCD screen. Enroll the appropriate serial number by selecting **ACEPT**. To bypass other serial numbers, select **IGNR**.



3. Once the correct serial number is accepted, place the second sleeve over the PID Band and install the PID on the participant by inserting the PID Band into the other end of the PID housing, inserting the PID Retaining Pin and securing the PID Sleeve over the PID Retaining Pin.



NOTE: The PID LED will to blink for approximately thirty seconds after band closure. It will then emit a series of short blinks and the LCD screen will display 'Band Close Confirmed'.



4. The PHMU will initiate the enrollment call and the LCD screen will display a series of status messages.



- a. If the enrollment call is successful, select **OK** to acknowledge and return to the Setup Menu.
- b. If unsuccessful, select **RETRY** or **<** to exit and return to the Setup Menu.

5. If no other programming is required, turn the PHMU Menu Key to the vertical position and remove from the PHMU. Installation is complete.

Office vs. Residential Installation Procedures

1. If this installation took place in the participant's residence, please proceed with the Range Test.
2. If this installation took place in the office or a location away from the participant's residence:

- a. Review the checklist and sample floor plan with the participant to determine the ideal location for the PHMU.
- b. Provide the participant with the PHMU and any other necessary items to plug it in at their residence.
- c. Instruct the participant on connecting the electrical power, using the supplied PHMU Power Adaptor and the supplied phone cord in the case of a Landline PHMU.

NOTE: We strongly recommend making a visit to the participant's home to perform a range test.

Chapter 5: PATROL SUITE RF Monitoring

This chapter presents procedures for accessing PHMU Menu Options used during Monitoring. For questions concerning monitoring or troubleshooting, please call the G4S Justice Services Monitoring Center at 1(800) 589 6003.

Range Menu

This menu presents the option for testing and setting range of the PATROL SUITE RF equipment.

Range Testing

Range Testing should be performed directly after initial installation of the PATROL SUITE RF equipment to verify that the RF signal from the PID can be properly received by the PHMU in all locations of the participant's residence. During this testing, the PHMU location may be changed to determine the ideal location to assure continuous receipt of the RF signal.

1. Select **RNG** from the Setup Menu. The current range setting displays with options to perform range test and change the range setting.
2. Select **TEST** from the Range Menu. .
3. The LCD Screen will display the serial number being range tested and a scale that ranges from (-) to (+). The bars that fluctuate on the scale offer a real time visual of the receipt of RF signals. The PID will blink its LED approximately every ten seconds during the range test.



- One Blink: Indicates immediate signal reception
 - Two Blinks: Indicates intermittent signal reception
 - Three Blinks: Indicates poor signal reception
 - Four Blinks: Indicates NO signal reception
4. The PHMU Menu Key may now be turned to the vertical position and removed from the back of the PHMU. This leaves the PHMU and Menu Key secure if the participant must be escorted throughout the residence by the Officer.
 5. The participant should walk around the interior of the residence or monitoring location to confirm that the PHMU is in the optimal location.
 - a. Three complete transmissions are recommended in different areas of each room to confirm that the participant will be in range. Please review the following sample residential floor plan with a suggested location for the PHMU and suggested locations to conduct Range Testing.

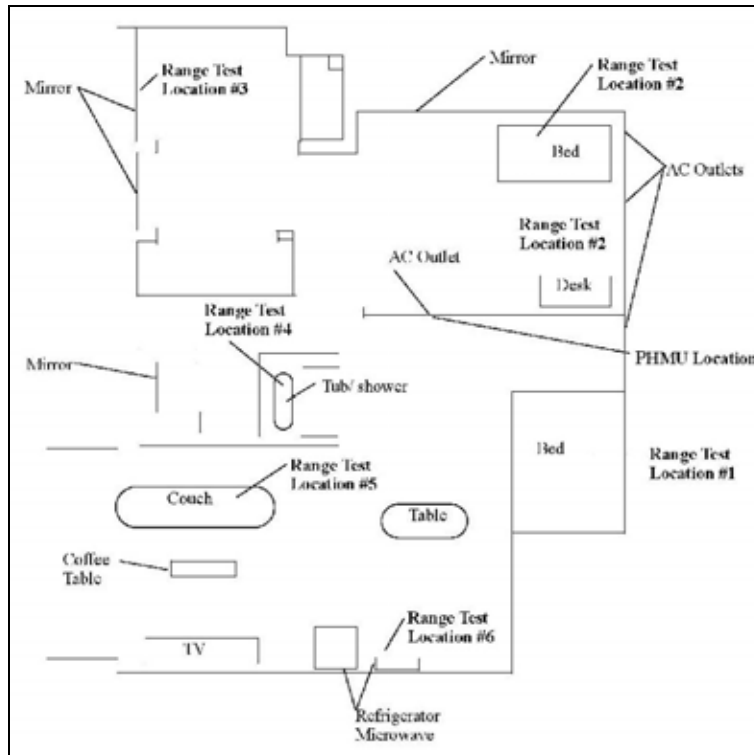


Figure 22: Range Test Floor Plan

- Bedroom or location that the participant sleeps in
 - Kitchen, checking near appliances
 - Bathroom, checking near mirrors and in tub or shower
 - Living Room, checking near electronics
 - Garage (if authorized)
- b. Should range issues occur during the range test, the PHMU or interfering objects may need to be relocated or the range setting may need to be adjusted.
6. When the range test is completed for each room and the best location for the PHMU is determined, insert the Menu Key into the back of the PHMU and turn it to the horizontal position. Select < to exit the Range Test.

Range Setting

Three range settings are available for adjustment on the unit. Please use the following instructions if the equipment range setting must be changed.

1. Select **RNG** from the Setup Menu. The current range setting displays with options to perform range test and change the range setting.
2. Select **SET** to adjust the range setting. The default setting is High.
3. Select from **LOW**, **MED** or **HIGH** to adjust the range setting. The 'Current Range' will change with the selection that is made as a confirmation.

NOTE: We highly recommend performing a range test before and after any range setting adjustments are made to ensure the participant will be monitored properly.

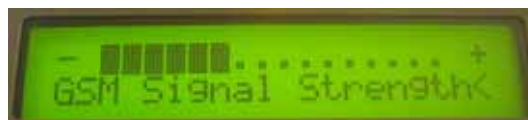


INFO Menu

This menu presents various options that reflect equipment settings and information. Select **PREV** or **NEXT** to scroll through the GSM Menu (Cellular PHMUs Only), Enrolled PID, PHMU Calls, Stored Events, PHMU Battery and PHMU Firmware.

GSM Menu (Cellular PHMUs Only)

1. Select **VIEW** to access Cellular Signal Strength and SIM Card Information.
 - a. Select **SGNL** from the GSM Menu to verify the Cellular Signal Strength. The LCD Screen will display a scale that ranges from (-) to (+). The bars that fluctuate on the scale offer a real time visual of the cellular signal strength.
 - b. Select **SIM** from the GSM Menu to review the IMSI number.

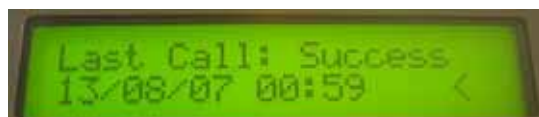


Enrolled PIDs

1. Select **VIEW** to view the Enrolled PID Serial Number.

PHMU Calls

2. Select **VIEW** to access Dial Out Requests and the last Dial Out Status.
 - a. Select **DIAL** to initiate a real time Dial Out call from the PHMU. The PHMU will begin dialing and the LCD screen will display a series of call out status messages.
 - i. If successful, the LCD will display the Last Call Status as Success with the Date and Time.
 - ii. If unsuccessful, the LCD will display this information. Select **RETRY** to attempt the Dial Out again.
 - b. Select **LAST** to review the status of the last call from the PHMU.



Stored Events

3. Select **VIEW** to access any of the PHMU's unreported events and their details. Each Stored Event will scroll back and forth on the LCD Screen from the number order of the event, the date and time of the event, the system assigned event code and the enrolled PID, if applicable.
 - a. Select **PREV** or **NEXT** to scroll through the Stored Events.



PHMU Battery

4. The PHMU Battery displays the current battery voltage of the PHMU. If there is a '*' displayed after the voltage, this indicates that the battery is currently charging.



PHMU Firmware

5. Select **VIEW** to access the PHMU's current Software Versions. The LCD Screen will display all corresponding Firmware versions.



Chapter 6: PATROL SUITE RF Power Down

If the equipment is being removed from the participant, the necessary adjustments should first be made to their record in the appropriate Monitoring System. For questions concerning the termination process, please call the G4S Justice Services Monitoring Center at 1(800) 589 6003. After following the administrative procedures above, you may decommission the participant's equipment.

Power Down Options

There are three Power Down options to choose from. Please select the Power Down Option that is most appropriate.

Option	Description
Power Down: ALL	Powers down the enrolled PID as well as the PHMU (PID must be in range)
Power Down: PHMU	PHMU powers down. Although PID is no longer monitored by the PHMU, it is not powered down.
Power Down: PID	PHMU removes PID from monitoring with the option to power down or just remove.

Power Down: **ALL**

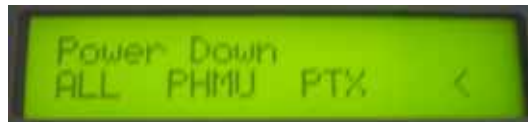
1. Select **OFF** from the Setup Menu to access the Power Down Menu.
2. Select **ALL** from the Power Down Menu.
 - a. If the PHMU has any Stored Events, select **SEND** to report all events or select **SKIP** to bypass and transmit at a later time.
3. Make sure the enrolled PID is within range and cut the PID Band when the instruction displays. The PID will emit a series of short descending LED blinks to indicate that it has been powered down.
 - a. If the PID is not present or the band is not cut after one minute, the LCD Screen will time out and offer the option to **RETRY** or **SKIP** to the next step.
4. Disconnect the power when the instruction displays.



NOTE: Do not turn or remove the PHMU Menu Key until the LCD turns off.

Power Down: PHMU

1. Select **OFF** from the Setup Menu to access the Power Down Menu.



2. Select **PHMU** from the Power Down Menu.
 - a. If the PHMU has any Stored Events, select **SEND** to report all events or select **SKIP** to bypass and transmit at a later time.



3. Disconnect the power when the instruction displays.



NOTE: Do not turn or remove the PHMU Menu Key until the LCD turns off.

Although the PID is no longer enrolled to the PHMU, it is not powered down.

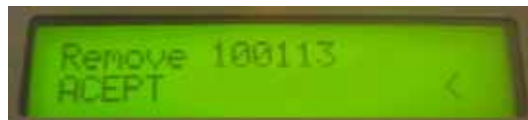
Power Down: PID

1. Select **OFF** from the Setup Menu to access the Power Down Menu.



2. Select **PID (or PTX)** from the Power Down Menu.

3. Select **ACCEPT** to remove the PID.



4. Select **YES** to Power Down the selected PID or select **NO** to bypass this step.



- a. If **YES**, make sure the selected PID is within range and cut the PID Band when the instruction displays. The PID will emit a series of short descending LED blinks to indicate that it has been powered down.



- b. If the PID is not present or the band is not cut after one minute, the LCD Screen will time out and offer the option to **RETRY** or **SKIP** to the next step.

5. The LCD Screen will display when the PID has been removed from the PHMU. Select **OK** to return to the Power Down Menu.



Cleaning Equipment

- We recommend using sanitary cleaning wipes to wipe down the surfaces of the PHMU and the PID prior to installing on a new participant.
- Be sure to check the optical windows on each end of the PID before installing onto a new participant. If the optical windows on the PID are not clean, use a thin cotton swab dipped in rubbing alcohol to gently clean the window.

Chapter 7: PATROL SUITE RF Troubleshooting

This chapter offers suggested actions for troubleshooting a variety of equipment issues. The following table presents the possible scenario on the left and the suggested resolution on the right. NOTE: Band Tamper concerns are addressed in “Troubleshooting Band Tampering Issues.”

If at any point you are unable to resolve the equipment question, please call the G4S Justice Services Monitoring Center at 1(800) 589 6003.

General Troubleshooting Issues

Table 3: General Troubleshooting Issues and Possible Solutions

Verify OPID is active	Verify the OPID is active by putting a PHMU into enrollment mode (by selecting the ENRL → ADD option from the PHMU menu when in officer mode) and then place the OPID on the little crater on the top-center of the PHMU, making sure that the black circle on the top of the OPID label is facing down and centered in the crater on the PHMU. 1. If the OPID was inactive, the OPID will emit a series of short LED blinks to indicate that it is now active 2. If the OPID does not emit LED blinks, the OPID is already active. If the PHMU still does not enter Officer Mode with this OPID nearby, try using another OPID.
Unable to access the Setup Menu on the PHMU	1. Ensure an active and valid OPID is present 2. Use another OPID 3. Re-insert the PHMU Menu Key into the back of the PHMU and turn clockwise to the horizontal position 4. Plug the PHMU Power Adaptor into both the outlet and the PHMU 5. Use another PHMU
PID not found during enrollment	1. Verify serial number and confirm the PID is within range 2. Reattempt ADD to confirm IGNR was not selected 3. Relocate the PHMU to eliminate potential RF interference 4. Use another PID
Band close not confirmed	1. Confirm clean cut, trim ends of band 2. Reattempt with another band 3. Clear/clean inside of PID housing 4. Use another PID

PHMU Landline not calling in (Overdue)	1. Confirm serial numbers of equipment match serial numbers assigned in Monitoring System 2. Verify power connected to working outlet, replace cords if necessary 3. Confirm phone cord connected to working telephone outlet, replace cords if necessary 4. Verify dial tone 5. Confirm calls can be made to 800 numbers by dialing 1 (800) 589-6003 using a telephone on the line 6. The PHMU will not work on a digital telephone system; try using an analog phone line, for example an office fax line. 7. Attempt DIAL option under PHMU Calls in INFO Menu 8. Use another PHMU
PHMU Cellular not calling in (Overdue)	1. Confirm serial numbers of equipment match serial numbers assigned in Monitoring System 2. Verify power connected to working outlet, replace cords if necessary 3. Attempt DIAL option under PHMU Calls in INFO Menu 4. Use another PHMU
Leave time violations	1. Complete a "RANGE TEST" with the participant present to simulate where and what he/she was doing (See "Range Testing"). If enters and leaves occur only at night, review with the participant the possible causes of interference 2. Relocate PHMU, verify appropriate range setting 3. Use another PID
Range Testing Issues	If you have trouble range testing the radio frequency equipment, follow the steps below: 1. If signals are not received approximately every 10 seconds, it is likely that the PHMU should be relocated to a more suitable location in the home. Relocate the PHMU and retest the range. Tip: Sometimes this only requires moving the PHMU a few feet in one direction or another. 2. Verify that the range setting is appropriate for location. 3. If no signals were received after step 2, then replace the PID and verify the range as outlined above. 4. If no signals were received after step 3, then replace the PHMU and verify the range as outlined above.

General Troubleshooting	Is the PHMU placed 3 to 6 feet off the floor on a stable, nonmetallic surface? Is the phone line that is attached to the PHMU in good visible working order? We provide new phone lines with each PHMU; please utilize the phone lines we provide. Is the phone line fully inserted into the phone jack & PHMU? In order to check the PHMU, attach a telephone handset to the spare socket in the rear of the PHMU...then generate an event by unplugging the unit from both power and telephone for approx 2 minutes, then reconnect. Pause for 15 seconds and lift the telephone handset. It should be possible to hear the unit dialing in to report the events. Wait 5 minutes, then phone the monitoring center and confirm that the events have been received and confirm the correct equipment serial numbers have been assigned Are you cutting the G4S Justice Services fiber optic band with the tools provided? Please do NOT fit the fiber optic band by cutting with standard scissors or wire cutters the cut may not be even (might bend the fibers) and could result in intermittent band tampers. If enters and leaves occur only at night, review with the participant the possible causes of interference Are you confirming proper range by conducting the Range Test?
Troubleshooting Band Tampering Issues	Band tampering can be checked at the office or in the field by performing the following sequence of steps: 1. First, remove the PID by cutting the PID Band. Turn the PID over and inspect the pin barbs through the window. If the pin barbs are broken, tampering has occurred. 2. Perform a visual inspection for scratches and any other sign of tampering. Damage to the PID and/or Band are indicators of tamper. 3. Remove the PID Band and check the cut. The cut must be straight for optimal performance of the light transmissions thru the fiber optics. 4. Check that the optical windows inside the PID housing are clean. Tip: We recommend a thin cotton swab dipped in rubbing alcohol to clean the window found inside the PID housing.

NOTE: If participant equipment is replaced, the serial numbers assigned to the participant must be changed in the Monitoring System.

Appendix: Equipment Specifications

The Appendix includes supplementary information for the PATROL SUITE RF program including Specifications for the PATROL SUITE RF equipment, FCC Guidelines and Notification.

Equipment Specifications

PID

- Body is water proof.
- Uses transceiver technology, which transmits and receives signals to and from the PHMU.
- Average expected life of battery under normal operating conditions is approximately 3 years.

PHMU

- The rechargeable back-up battery under normal operating conditions will continue monitoring for 48 hours while disconnected from A/C power, but may last longer.
- Default Leave Window is 5 minutes, but can be customized. We do not recommend reducing this down below 3 minutes.
- PHMU memory capacity is up to 1,000 events, which are stored in a non-volatile memory.
- Setup Mode duration is indefinite as long as PHMU Menu Key is inserted and an OPID is present.
- Range Test Mode is indefinite as long as an OPID are present and the menu has not been backed out of.
- Monitoring Mode duration is indefinite while PHMU remains connected to power source.
- Default reporting interval is 4 hours, but can be customized.
- Default range setting is High, but can be customized. There are 3 available range settings to choose from:
 - o High (approximately 150 feet)
 - o Medium (approximately 100 feet)
 - o Low (approximately 50 feet)

OPID

- Default range setting is Low.

FCC Guidelines - Customer Information

On the back of this equipment is a label that contains, among other information, the certification number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

Facility Interface Code (02LS2). Service order 9.OY.

A compliant telephone cord and modular plug is provided with equipment. This equipment is designated to be connected to the telephone network or premises wiring using a compatible modular jack, which is Part 08 compliant. See Installation Instructions for details.

If the terminal equipment PHMU causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, the PHMU, for repairs or warranty information, please contact G4S Justice Services at 1(800) 589 6003. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

There are no user repairables with this equipment. This PHMU cannot be used on public coin phone service provided by the telephone company.

Connection to party line service is subject to state tariffs.

The telephone Consumer Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send a message unless such message contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. For programming the equipment, required information can be found in "Installation Checklist for Enrollment."

This equipment does not call out to emergency numbers.

FCC and Industry Canada Notices

The following statement applies to all Plan9 equipment, including the PID, OPID, and both the landline and wireless GSM versions of the PHMU:

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.

Changes or modifications not expressly approved by G4S Justice Services, Inc. may void the user's authority to operate the equipment.

The 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 the dealer or an experienced radio/TV technician for help.

RF Exposure Safety Notice

In the case of the PHMU (both landline and wireless), to satisfy FCC/IC RF exposure safety requirements, a separation distance of 20 cm or more should be maintained between this device and persons. To ensure compliance, operations at closer distance is not allowed."

Additional ACTA and Industry Canada Notices for Landline PHMU

The landline version of the PHMU is in conformity with the Federal Communication's (FCC) Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) – adopted technical criteria, TIA-968-A, Telecommunications-Telephone Terminal Equipment, Technical Requirements For Connection of Terminal Equipment To The Telephone Network, January 2003, TIA-968-A-1; TIA-968-A-2; TIA-968-A-3; TIA-968-A-4, TIA-968-A-5 and TIA-1096-A.

This equipment is also in conformity with the following Technical Specifications:

CS-03 - Specification for Terminal Equipment, Terminal Systems, Network Protection Devices, Connection Arrangements and Hearing Aids Compatibility Issue 9, November 2004.

Document No. CS-03

Applicable Part: Part I

Issue: Issue 9, amendments 1 to 3, October 2006

This product meets the applicable Industry Canada technical specifications/Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five/L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.