



Navigil S1 User Guide

How to use the Navigil S1 wearable personal safety device

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Complementary reading

The following Navigil reference documents are complementary reading for this document. All operating and firmware related documentation is also available at navigil.com/resources

Ref. #	Document Name
1	Rafael service user guide

S1 device HW and SW requirements

This document describes features of the following S1 device HW and SW version.

HW version	SW version
S1 HW revision D or later	S1 SW version 1.6.37 or later

Instructional icons



Warning: situations that could cause injury to yourself, others or may damage a device



Note: notes, usage tips, or additional information

1 S1 at a glance

1.1 S1 overview

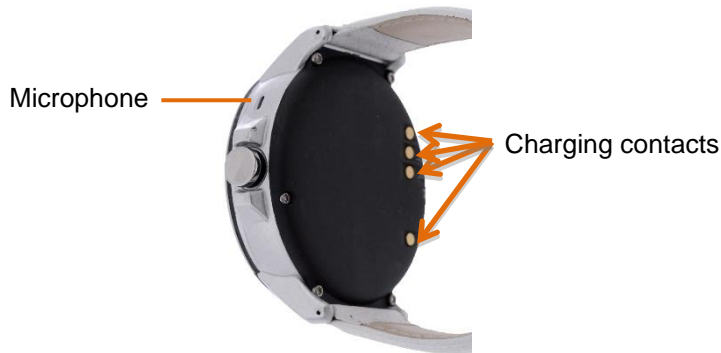
This user guide describes the use of the Navigil S1 wearable personal safety wristwatch. Please refer to the Rafael service user guide [Ref #1] for instructions on how to configure and manage the S1 wristwatch. The S1 wristwatch is primarily designed for assisting persons who may require help in order to manage their day to day life. It is also well suited for lone workers. There are four profiles which are each designed for a specific assistee groups:

- Track profile for persons with dementia or Alzheimer's disease
- Auto profile for persons with poor dexterity
- Easy profile for persons with fair dexterity
- Full profile for persons with good dexterity including lone workers

The most commonly function of the S1 wristwatch is to show the time. The safety requirements are catered for by mobile phone capabilities for making help request calls, normal calls and receiving calls as well as the mobile data communications with the Rafael service. S1 wristwatch has an inbuilt GPS/GLONASS receiver enabling accurate location information of the S1 wearer to be sent to the Rafael service when the wearer is outdoors. In the event that GPS/GLONASS location cannot be acquired mobile network cell location or home beacon location can be reported to the Rafael service.

The S1 wristwatch features such as color, type of strap and language may vary depending on the model and software version of the S1 wristwatch. Some of the features available depend on your location and mobile network carrier. Key features of the S1 wristwatch are:





The S1 also has a Bluetooth Low Energy link that can be used to detect the proximity of a home beacon and more importantly the loss of contact with the home beacon.

S1 also has a vibrator to assist persons with hard of hearing or poor eye sight with the use of the S1. The S1 speaker is also used as part of the user interface.

1.2 Accessories

The following accessories are provided with S1 (these may vary depending on model and region).

Home beacon



USB cable



Charger



1.3 Buttons

The S1 wristwatch has four buttons and a crown. The four buttons on the watch bezel are hidden inside the watch mechanics and there are no mechanical buttons visible. Press firmly the watch bezel at 3, 6, 9 or 12 o'clock and when the button is activated the watch gives a haptic feedback and the selected action is activated. The crown button is the only visible mechanical button.

The help request button is located at 6 o'clock in the wristwatch bezel and/or in the crown button. In some versions it is marked with a red or green area. The UP button is located at 12 o'clock in the bezel. The CALL / YES button is located at 3 o'clock in the bezel. The CANCEL / NO button is located at 9 o'clock in the bezel. The buttons and crown are enabled or disabled depending on the profile selected.



1.3.1 Help request call

User can make a help request call by pressing the bezel at 6 o'clock OR by pressing and holding down the Crown button. Available function and button delay may vary depending on used device profile.

Make help request call – Crown button

Press the Crown button and hold down to initiate a help request call. The S1 vibrate shortly and the display will show SOS with background animation. This function is active in Auto, Easy and Full profiles.



The Crown button is also used to access Menu in Easy and Full profiles. The default time limits for Crown button are:

Profile	Crown delay	Action
FULL / EASY	< 0,3 sec	Access Menu
FULL / EASY	> 0,8 sec	Make Help Request call
AUTO	> 0,3 sec	Make Help Request call
TRACK	Disabled	None

Make help request call – Bezel 6 o'clock

Press the bezel at 6 o'clock to initiate a help request call. When the button is pressed the S1 will vibrate shortly and the display will show SOS with background animation. When the button has been pressed down for 0,3 seconds the help request call is made. This button is active in Auto, Easy and Full profiles.



1.3.2 Menu button

Press the crown with your finger to access the menu. The menu is active in Easy and Full profiles. When the crown is pressed briefly the YELLOW and RED LEDs start blinking to indicate that buttons near them can be pressed.



The Crown button is also used to make a help request call by pressing it more than 0,8 seconds. See details on Crown button delays in chapter 1.3.1.

1.3.3 Function buttons in the watch bezel

Buttons are located at 3 o'clock (CALL/YES), at 9 o'clock (CANCEL/NO) and at 12 o'clock (UP).



Please note that button functions are enabled or disabled depending on selected S1 profile. In Track profile none of the buttons are operational. In Auto profile the 3 o'clock, 9 o'clock and 12 o'clock buttons show the battery level in the display. In Easy and Full profile all buttons are operational.



Note: In some device configuration in the Auto profile the help request call is done with the crown button only.

1.4 LEDs

The S1 has three LEDs that indicate the charging level of the internal battery and that help the wearer to use the S1.

When the S1 is in idle state one of the three LEDs blinks at five second intervals. The blinking GREEN LED at 3 o'clock indicates that the S1 internal battery status is OK. The blinking YELLOW LED at 12 o'clock indicates that battery status is low and that the S1 should be charged soon. The blinking RED LED at 9 o'clock indicates that the S1 battery status is critical and that it should be charged immediately. The respective statuses are also sent to the Rafael service so that caregivers know the state of the S1 battery.

When the S1 is in active state the blinking LED indicates that a button near the LED can be pressed.

The blinking LEDs can be disabled if desired with a parameter change in a configuration file.

1.5 Speaker and microphone

S1 has a powerful speaker directed towards the wearer. The microphone is located in the side of the watch body at 2 o'clock. During a phone call please keep the S1 approximately 25 cm away from your mouth if possible. This is an optimum position for best sound quality for the S1 speaker and microphone. The speaker volume can be easily adjusted using the Rafael service.

1.6 Analog watch









The S1 has an analog watch function. The time shown by the S1 is synchronized with the Rafael service. The time zone selection can be easily done with the Rafael service. The watch hands will move away from the display area if there is something to be shown in the display. When the display is turned off the watch hands resume their correct locations. Please note that there is a watch hand position sensor near the 9 o'clock LED in the watch face. Occasionally the S1 checks the position of the watch hands by moving the hands over the sensor. The watch hand calibration may fail if a bright light impairs the sensor during calibration. The watch will recalibrate the hands later automatically. It is also possible to initiate the calibration process with the Rafael service if the time shown by the watch is incorrect.




1.7 Wearing the S1

The S1 has been built so that it can be used in everyday life without too many limitations. The wristwatch itself is splash water proof but like any wristwatch it may fog up if exposed to extreme temperature changes or submerged in water. It is not recommended that the S1 is worn in sauna or other environments where similar extreme temperatures changes can occur. It is recommended that the S1 is kept clean and dry. The mineral glass of the wristwatch may break if a direct impact hits the glass.

1.8 S1 display status icons

The S1 has a two row OLED display. The display is operational when a call is being made and when the crown has been pressed in Easy and Full profiles. It is also operational for a short period of time when the S1 is placed into the charging dock. The display icons are explained in the table below.

Status icon	Icon name	What it means
	Battery	Shows S1 battery level or charging status.
	Charging interrupted	Shown when S1 is removed from charger before battery is fully charged.
	Home beacon	Device has a connection to a home beacon.
	GPS	When the icon is steady the S1 has successfully acquired a GPS location. When this icon is blinking, it means that S1 is in the process of acquiring a GPS location.
	Tracking	The icon is shown when tracking is activated.
	Emergency tracking	This icon is shown when emergency tracking is activated.
	Call	You have an active voice call ongoing.
	Data transfer	When the icon is shown the device is uploading or downloading data.

	Mobile network	You are in range of the mobile network. S1 can make and receive phone calls and it has connection to Rafael service. Number of the coverage bars indicates the strength of mobile network signal; more bars indicate better signal strength.
	Mobile network	If the S1 is not connected to a GSM network you will see a network icon with a cross.
	Flight mode	Your S1 is set to flight mode and all S1 radios are turned off.
NAMES	Names menu	Access to speed dial name list (Easy and Full profiles).
MODE	Mode menu	Access to device mode menu (Full profile).
SERVICE	Service menu	Access to installer mode (Full profile, Service menu enabled).

2 Getting Started



Warning: To avoid injury read section 4 Safety, Handling and Support before using S1.

2.1 Charging

The S1 has an internal battery that provides power to the device. It must be charged regularly in order for the S1 to work properly.

- Connect the charger with the provided USB cable to the home beacon.
- Connect the charger to a power outlet. The blue LED on the right will be lit for couple of seconds when home beacon is first powered to indicate that the home beacon is working normally. The blue LED will turn off automatically in order not to disturb the wearer during sleep if the home beacon is placed on a night stand.
- Place the home beacon onto a steady flat surface such as a table. Please keep the home beacon dry and where possible away from direct sunlight and excess heat sources.
- Do not touch the charging contacts in the charging dock as excess force may deform them.

Prior to using the S1 device for the first time it must be charged. The initial charging time is approximately one and half hours if the battery is completely empty.



- Please place the S1 into the home beacon charging dock as shown in the picture above. Please make sure that the S1 straps are folded back as shown so that the S1 will be properly seated in the charging dock. The S1 will beep when it has been properly seated in the dock. The left home beacon LED will be lit.

- When the S1 is placed into the charging dock for the first time the S1 display will show **SETUP**. During charging the S1 YELLOW LED at 12 o'clock is lit and the battery icon will show an animated charging sequence. The left LED of the home beacon is RED when charging is taking place.
- When the battery is fully charged in the battery icon all four battery level bars are lit and the S1 GREEN LED at 3 o'clock is lit. The left LED of the home beacon will turn GREEN when the S1 battery is fully charged. Please note that the left LED of the home beacon may remain RED for a period of time after S1 display shows **BATT FULL**.
- When the S1 has been setup in the Rafael service the **SETUP** display will change either to **CHARGING** or to **BATT FULL**. Please note that the S1 will calibrate the watch hands when leaving from the **SETUP** state. Please refer to section 2.2 for instructions on how to set the S1 up in the Rafael service by using the user name and password provided in the label inside the S1 delivery box lid.
- When the S1 is placed in the charging dock all bezel button functions are disabled and device screen turns OFF after 10 seconds. By pressing the crown button the S1 display is turned ON for 10 seconds to show the S1 status, network and battery level.

2.2 Taking S1 into use

In order to use the S1 it must be configured using the Rafael service. A new S1 has been put into a **SETUP** mode at the factory and powered off for shipment. The S1 will remain in **SETUP** mode until it has been configured for use with the Rafael service.

2.2.1 Making S1 ready for configuration

During the initial charging period the S1 display will show **SETUP**. This indicates that S1 is in a setup mode. Please note that if you remove the S1 from the charging dock in **SETUP** mode the S1 will turn itself off automatically for safe shipment. Please keep the S1 in the charging dock for the duration of the configuration. Please wait until the S1 mobile network icon shows at least one bar and the battery is fully charged. The fully charged state is indicated by GREEN LED on S1 dial near 3 o'clock and by steady battery icon with all four bars visible. Please note that it is normal for the S1 to move the watch hands during the setup period.

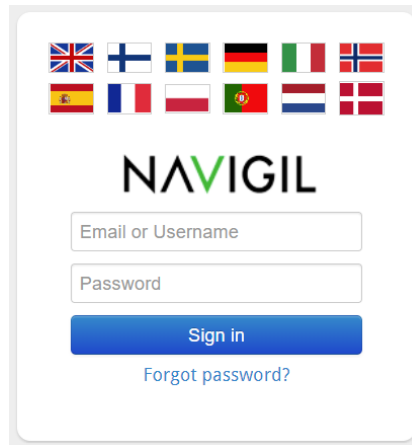


NOTE: Connection to a mobile network is required in order to complete the S1 setup. If mobile network is not available for S1 in a couple of minutes please move the S1 to another location where mobile network is available.

There are two ways to initiate the S1: by using the configuration wizard (described in section 2.2.2) or by using Rafael service administration functions (described in #Ref 1, section 3.2 of Rafael Service User Guide). The configuration wizard is designed to be used by consumer customer who do take the device into use on their own. In other cases it is recommended that the configuration is done by a customer support or administrative person using the Rafael service setting page.

2.2.2 Taking S1 into use with Rafael service wizard

If the S1 is to be taken into use by caregiver or an end user this can be done using the Rafael service configuration wizard. Please login to the Rafael service (<https://sf11.navigil.com/>) using the username and password which are printed on the label inside the lid of the S1 package. The Rafael language can be select by clicking the language flag.



2.2.2.1 Device wearer name

Please fill in the first and the last name of the person wearing the device and click next.

FIRST ACTIVATION - Define name of the device wearer

- Define name of the person who is using the device.

ASSISTEE

FIRST NAME

LAST NAME

NEXT

2.2.2.2 Define speed dial numbers

Define phone numbers which can receive help request calls from S1 and which can make calls to S1. Define the name and phone number of the first person in the list of help request call recipients. Fill in the name of the person into **NAME** field and the phone number into the **TEL.** field. The name is shown in the log for calls and events. The phone number should be entered in the format cccnnnnnnn where the ccc is the country code and the nnnnnnn is the phone number (for example 358400999999). Please don't use international call prefixes such as + or 00. Please click **HELP REQUEST** toggle **ON**. Click **ADD NEW SPEED DIAL NUMBER** to enter additional speed dial entries.

FIRST ACTIVATION - Define speed dial and help request numbers

- Add device speed dial phone numbers.
- Enter phone number in the format like 358441234567
- Turn on Help request for numbers what you like to be included in the Help request call list.

NOTE: Call centre service OR at least one Help Request number must be turned on.

SPEED DIAL					
1.	<table border="1"> <tr> <td>NAME</td> <td>HELP REQUEST</td> </tr> <tr> <td>TEL.</td> <td>OFF</td> </tr> </table>	NAME	HELP REQUEST	TEL.	OFF
NAME	HELP REQUEST				
TEL.	OFF				
ADD NEW SPEED DIAL NUMBER +					

BACK

NEXT

You may add up to eight persons to speed dial list and individually define whether a person will be receiving help request calls. Click **ADD NEW SPEED DIAL NUMBER** and enter required information. Turn **ON** help request toggle for persons who wish to receive help request call. The help request call routing logic will attempt to reach the persons in the order they appear in the speed dial list unless availability and unavailability settings remove a person from the call routing sequence.

2.2.2.3 Activate call centre service

You may also activate the **CALL CENTRE SERVICE** by clicking the toggle to **ON**. A help request call will be forwarded to a call centre in the event that none of the caregivers defined in the **SPEED DIAL** list is reachable. Please note that this option is available only if your service provider offers such a service.

ACTIVATE CALL CENTRE SERVICE

	tel. +358447345790 Navigil test phone	OFF
---	--	-----

BACK

NEXT

2.2.2.4 Define home beacon name and location

The S1 wristwatch uses the signal transmitted by a home beacon to determine if the assistee is at home. The home beacon nickname will be shown in the event log. Please define the home beacon nickname by entering it into the **NICKNAME** field and the home beacon location by entering the **STREET ADDRESS** where it is located. The street address will be used to position the home beacon icon in the map view. Please note that in order to correctly position the home beacon the map also city and country information may be required in the **STREET ADDRESS** field.

FIRST ACTIVATION - Define home beacon nickname and street address

- Define home beacon nickname / location name.
- Define street address where the home beacon is located (type in like this: Klovinpellontie 1 Espoo Finland).

HOME BEACON

Nickname
11:22:33:44:55:66
Street address

BACK

NEXT

2.2.2.5 Create user account

You need to create a user account for yourself in order to use the Rafael service after the set up. Please enter your first name into **FIRST NAME** field and your last name into the **LAST NAME** field. Please enter your e-mail address to the **EMAIL** field. The e-mail address will be used as your user name in subsequent login into the Rafael service. Please define a password for yourself by entering you chosen password into the **PASSWORD** field and **REPEAT THE PASSWORD** fields. The minimum length of the password is 6 characters. You may ask the Rafael service to send you the login and password information to you e-mail by selecting the **SEND LOGIN AND PASSWORD BY EMAIL**.

FIRST ACTIVATION - Create an user account to manage the device in the service

- Define your first and last name.
- Type into email field your valid email address. This will be used as an user name to login to service.
- Define a password what you use to login to service.

NAME	FIRST NAME
	LAST NAME
EMAIL	
PASSWORD	
	repeat the password

SEND LOGIN AND PASSWORD BY EMAIL

BACK

ACTIVATE DEVICE

2.2.2.6 Activation of the S1

Once you have entered required information and clicked **ACTIVATE DEVICE** Rafael service will send the configuration information to the S1 and change the S1 state from setup to in use.



Note: Make sure that the S1 is fully charged and is showing a minimum of one bar in the mobile network icon prior to clicking the **ACTIVATE DEVICE** button.

The Rafael service will send instructions to the S1 to download the speed dial list and other relevant settings. This may take a few minutes. During this process the S1 will calibrate the watch hands. Once the setup process is complete the S1 display will show either **BATT FULL** or **CHARGING** depending on the state of the battery level.



Note: Depending on network carrier used by the S1 it may take few minutes to complete the activation. If S1 is not activated after 5 minutes please login to Rafael service and reinitiate the activation.



Note: The S1 display is automatically turned off after 10 seconds. Press the crown button to turn on the display.

2.2.3 Taking S1 into use using Rafael setting page

If a monitoring service is used in conjunction of the S1 watch usually it is best to configure the S1 using the setting page functions in the Rafael service. This enables customer support to make a test call to the monitoring phone number as well as putting the ready configured S1 into POWER OFF mode for safe shipping. Please see Ref #1 section 3.2 for further information.

2.3 Using the Rafael service

Please check Ref #1 for more detail information how to use the Rafael service.

3 Using S1

This section describes how the S1 wristwatch is operated and features of the four S1 profiles.

3.1 S1 profiles

The S1 has four profiles which are tailored for each wearer group.

- **Track** profile is best suited for persons with dementia or Alzheimer's disease.
- **Auto** profile is suited for persons with poor dexterity.
- **Easy** profile is suited for persons with fair dexterity.
- **Full** profile is suited for persons with good dexterity including lone workers.

3.1.1 Track profile

Track profile is intended for assistees who suffer from dementia or Alzheimer's disease. In this profile the device user interface is disabled. Thus the assistee can press any button as many times as they wish without causing help request calls to be initiated and without concern on assistee being able to change the device settings.

In the Track profile the device will automatically receive calls made by persons on the speed dial list or by the alarm centre service personnel. The call can be only terminated by the caller.

In the Track profile the S1 will regularly check if a home beacon is in range. If no home beacon is found the S1 will send an alarm to the Rafael service and turns the GPS receiver on. The S1 will send location reports to the Rafael service so that a caregiver or a professional alarm centre operator can locate the assistee using the map view.

When the assistee returns to the range of the home beacon the home beacon alarm is automatically cleared.

It is also possible to use geofence regions as a source of automatic location alarms. In this case it is advisable to turn off the **HOME BEACON ALARM** toggle in the advanced settings and rely on geofence alarms. When using geofences please make sure that **TRACKING OUTSIDE OF HB RANGE** and **REPORT LOCATION ALWAYS** toggle are turned ON (see more details on Ref #1).

Geofence areas are geographical areas defined by points that make up polygons, circles or paths. A geofence can also be a combination of these elements. One polygon geofence area can have up to 4.000 points. Geofences can also have additional attributes such as time. Please refer to Ref #1 for further details on how to use the geofence feature.

3.1.2 Auto profile

Auto profile is intended for assistees who have their full faculties but have poor dexterity. In this profile the device user interface has just bare minimum functions enabled. The assistee can press either the alarm button or the crown in the S1 to initiate a help request call. Other buttons in the S1 can be used to check the battery status of the S1. As the assistee has no access to settings there is no concern on the assistee being able to change the device settings by mistake.

In the Auto profile the device will automatically receive calls made by persons on the speed dial list or by the alarm centre service personnel. A received call or a help request call can be terminated only by the caregiver or the call centre operator.

By default the reports sent by the S1 include location information only in the help request call reports.

3.1.3 Easy profile

Easy profile is intended for assistees who have their full faculties and have good dexterity. In this profile the device user interface has additional functions enabled. The assistee can press the alarm button or the crown button to initiate a help request call. In idle state other buttons in the S1 can be used to check the battery status of the S1. The assistee can press the crown briefly in order to access the speed dial **NAMES** list. This enables the assistee to make normal calls to persons in the speed dial list. Please refer to section 3.3 for further information on how to use this feature. As the assistee has no access to settings there is no concern on the assistee being able to change the device settings by mistake.

In the Easy profile the assistee has the option to either accept an incoming call by pressing YES or to reject it by pressing NO. Please refer to section 3.4 for further information on how to answer calls. A call can be terminated either by the assistee or by the other party.

By default the reports sent by the S1 include location information only in the help request call reports.

3.1.4 Full profile

Full profile is intended for lone workers and other S1 users. In this profile the S1 user interface has all functions enabled. The end user can press the alarm button or the crown button to initiate a help request call. In idle state other buttons in the S1 can be used to check the battery status of the S1. The S1 user can press the crown briefly in order to access the speed dial **NAMES** list and **MODE** menus. This enables the end user to make normal calls to persons in the speed dial list. Additionally the S1 user has the possibility to set the S1 into **SILENT**, **FLIGHT**, **NORMAL** and **STEALTH** modes. Please see section 3.5 for further information on how to change the mode.

In the Full profile the S1 user has the option to either accept an incoming call by pressing YES or to reject it by pressing NO. A call can be terminated either by the S1 user or by the other party.

By default only the help request call reports include location information.

3.1.5 Profile default values

The Rafael service and the S1 software main features and their default values in each profile are described in the tables below. User can modify the Rafael defaults value on device settings page. More information can be found in Ref #1.

Rafael device settings profile default values:

Feature	Track	Auto	Easy	Full
Emergency Tracking (toggle on the device front page banner)	OFF	OFF	OFF	OFF
Home beacon alarm	ON	OFF	OFF	OFF
Tracking outside of HB range	ON	OFF	OFF	OFF
Speed dial	OFF	OFF	ON	ON
Report location always	ON	OFF	OFF	OFF
Report emergency location	ON	ON	ON	ON
Always on-line	ON	ON	ON	ON
Help request call confirmation	OFF	OFF	OFF	OFF
Statistics reporting enabled	OFF	OFF	OFF	OFF
Man down alarm enabled	OFF	OFF	OFF	OFF
No movement alarm enabled	OFF	OFF	OFF	OFF

The default values for the S1 device user interface settings are defined the in the table below.

Device profile default values:

Feature	Track	Auto	Easy	Full
Help request call enabled User can make a help request call by pressing the help call button	OFF	ON	ON	ON
Help request call crown button User can make a help request call by pressing the S1 device crown	OFF	ON	ON	ON
Call auto answer S1 answers automatically to all incoming calls	ON	ON	OFF	OFF
S1 Mode menu S1 user can press the crown button to access the S1 Mode menu	OFF	OFF	OFF	ON
Disconnect call S1 user can disconnect call	OFF	OFF	ON	ON



Note: The default values of the S1 can't be changed by the wearer.

3.2 Making Help Request calls

S1 supports two different ways of connecting a help request call. The first one is a normal phone call as described later in this section. The second one is to send a request to the server. The latter method is commonly used when the monitoring is done by an ARC (alarm receiving centre) using SCAIP (Social Care Alarm Internet Protocol) to interface with Navigil S1 and Navigil Rafael service.

3.2.1 Initiating a help request call

One of the most useful features of the S1 is the ability to make help request calls by a single push of a button. A help request call can be made by pressing the Help request call button located at 6 o'clock in the S1 bezel or by pressing the crown. Please note that in the Track profile the Help request button has been disabled and no help request calls can be made.

Each profile has a unique help request call initiation delay. This delay defines how long the user has to press the help request or the crown button to make a help request call.

Profile	Help request call initiation delay
---------	------------------------------------

FULL	0,8 seconds
EASY	0,8 seconds
AUTO	0,3 seconds
TRACK	0,3 seconds

3.2.2 Help requests call in normal mobile network conditions

3.2.2.1 Help request call with MAKE A PHONE CALL method

If the help request call method is MAKE A PHONE CALL the Navigil S1 user interface operates as described below.

Press firmly the bezel at the 6 o'clock area or the crown. The S1 will vibrate briefly when the button has been actuated. The display will show SOS with an animation turning the background white from left to right. When the button has been pressed for the required time the animation reaches the right side of the display and the help request call is initiated. If the button is released prior to the end of the animation the help request call is not placed. This purpose of the short delay is to avoid accidental help request calls.



When the help request call is initiated the S1 will vibrate for a second to tell the wearer that the call is being made. At the same time the display will show that the SOS call initiation is in progress.



Shortly afterwards the S1 speaker will play a beeping sound sequence until the dial tone is available from the mobile network. Depending on the mobile network connection time and number of caregivers that are being reached the call connection time may vary. Typical call connection time is a few seconds if the first number in the call sequence is reachable.

3.2.2.2 Help request call with SEND A MESSAGE TO SERVER method

If the help request call method is SEND A MESSAGE TO SERVER the Navigil S1 user interface operates as described below.

Press firmly the bezel at the 6 o'clock area or the crown. The display will show SOS with an animation turning the background white from left to right. When the button has been pressed for the required time the animation reaches the right side of the display and the help request call message to server is sent. If the button is released prior to the end of the animation the help request call message to server is not sent. This purpose of the short delay is to avoid accidental help request calls.



During the message delivery to Navigil Rafael server the display will show **Sending SOS request.**




Once the Rafael server has confirmed successful receipt of the request the S1 display will show **SOS request sent.**

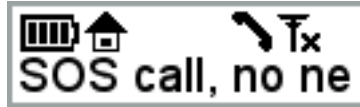


Once the SOS request sent message has been displayed the display will be turned off in order to conserve power while the Navigil S1 waits for the ARC operator to issue to command to connect the call.

3.2.2.3 Help request call with MAKE A PHONE CALL method when no network

In the event that the S1 is outside of mobile network coverage help request calls cannot be successfully connected. The mobile network icon in the S1 display will show **Tx** as shown in the picture below.


If the **ALWAYS ON-LINE** toggle in the Rafael service has been turned **OFF** the S1 turns off its mobile network module in order to save power. This is also indicated by the  icon. When a call is initiated the S1 will attempt to connect to the GSM network. If the network connection can't be achieved in 10 minutes an error message will be displayed.




If the call cannot be immediately connected it is advisable that the S1 user moves to a location where mobile network coverage is available if at all possible. If the connection cannot be established during the 5 minutes period the help request call attempt will be given up and **NO NETWORK** will be shown in the S1 display.



3.2.2.4 Help request call with SEND A MESSAGE TO SERVER method no network

In the event that the S1 is outside of mobile network coverage help request messages cannot be successfully connected. The mobile network icon in the S1 display will show  as shown in the picture below.

If the **ALWAYS ON-LINE** toggle in the Rafael service has been turned **OFF** the S1 turns off its mobile network module in order to save power. This is also indicated by the  icon. When delivery of a help request message is initiated the S1 will attempt to connect to the mobile network.

When the user presses the crown or the bezel down button to initiate a help request the display will show **SOS Request, no network, please wait.**



If the request cannot be immediately sent it is advisable that the S1 user moves to a location where mobile network coverage is available if at all possible. If the mobile network connection can't be achieved in 5 minutes the message will be placed in the message pool and the display will be turned off in order to conserve power. The help request message will be sent from the message pool once the GSM network connection has been restored.

3.3 Making a speed dial call

In the Easy and Full profiles the S1 is enabled to make speed dial calls. Please press the crown to access the **NAMES** menu. The S1 display will light up and show **NAMES** and the YELLOW and RED LEDs will start blinking.



Press the UP button at 12 o'clock to scroll through the speed dial list entries. If the speed dial list has just one entry only that name will be displayed.



When the correct name is displayed press CALL button at 3 o'clock to place the call. The call icon will appear to the left of the mobile network signal strength icon and the S1 plays a connect sound.



The call is terminated by pressing the CANCEL button at 9 o'clock. The call can also be terminated by the other party. The S1 display will be turned off.



3.4 Answering a call

S1 can also receive calls. The S1 will automatically accept the calls when Track and Auto profile is selected. In the Easy and Full profiles the wearer has the option to either accept or reject an incoming call. The call is accepted by pressing the YES button at 3 o'clock as shown in the picture below left. The call can be rejected by pressing NO as shown in the picture below right.



Accept a call



Reject a call

3.5 Changing the S1 mode

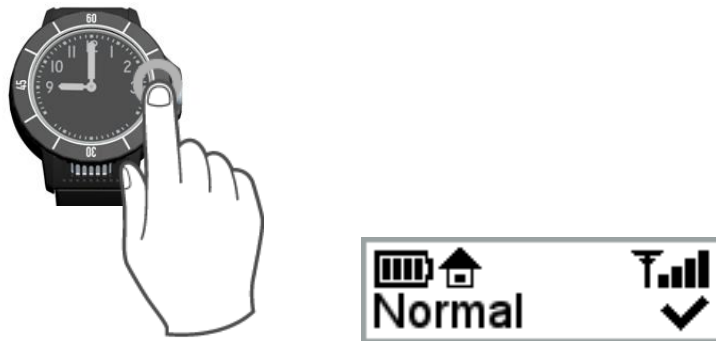
In the Full profile the S1 user can change the S1 mode. The available modes are normal, silent, flight and stealth. By default the S1 is in the normal mode. In the silent mode the S1 does not play the ring tone when making or receiving calls. The speaker works normally in the silent mode. In the flight mode the GSM modem is turned off. In the stealth mode the speaker is disabled so that a silent alarm can be made without any visible or audible user interface actions. The vibrator indicates the user that a stealth help request call has been initiated. You can change the mode by pressing the crown twice in order to access the **MODE** menu.



Press UP to scroll through the available modes. The current mode has a tick (✓) behind it.



When the desired mode is displayed press YES at 3 o'clock to select the mode.



You can return to the idle state by pressing the CANCEL button at 9 o'clock twice.



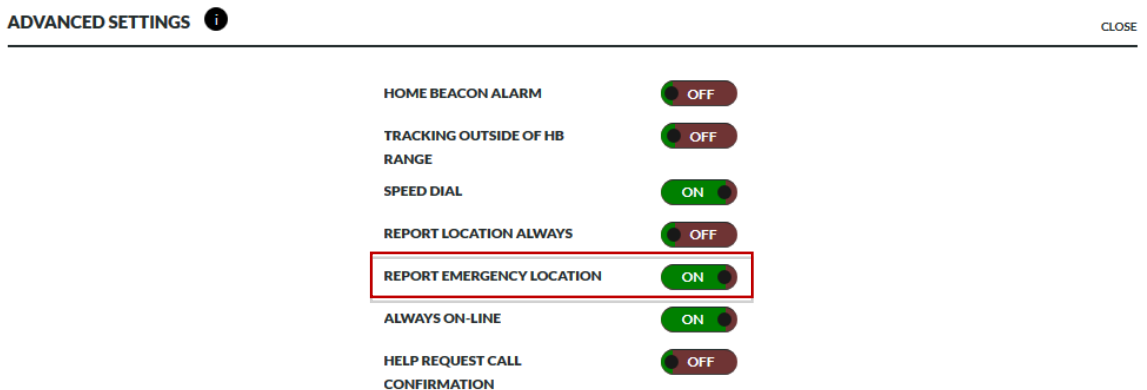
3.6 The S1 location reporting



Note: The S1 location reporting can be activated only when the wearer has given his/her consent for tracking.

3.6.1 Report emergency location

In all profiles the location information is provided by default when the Help request call has been made. This setting can be changed by turning ON / OFF the **REPORT EMERGENCY LOCATION** toggle.

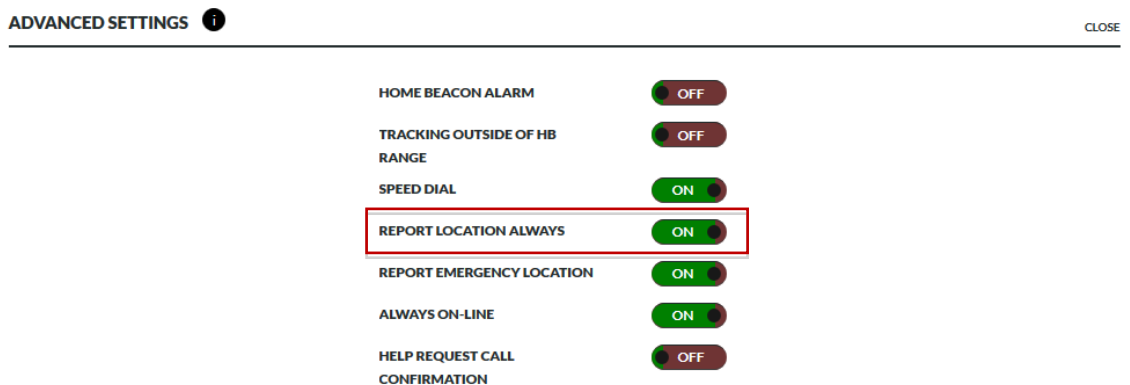


3.6.2 Report location always

Report location always toggle is **ON** by default in the Track profile. The default setting in all other profiles is **OFF**.

When the **REPORT LOCATION ALWAYS** toggle is turned **ON** the device adds location information into messages containing a location field. This toggle also controls the visibility of the emergency **TRACKING** toggle in the Home view banner. If the **REPORT LOCATION ALWAYS** toggle is turned **OFF** the emergency **TRACKING** toggle in the Home view banner is not visible.

If the **REPORT LOCATION ALWAYS** toggle is turned **OFF** location information is sent by the device only when the assistee has initiated a help request call.





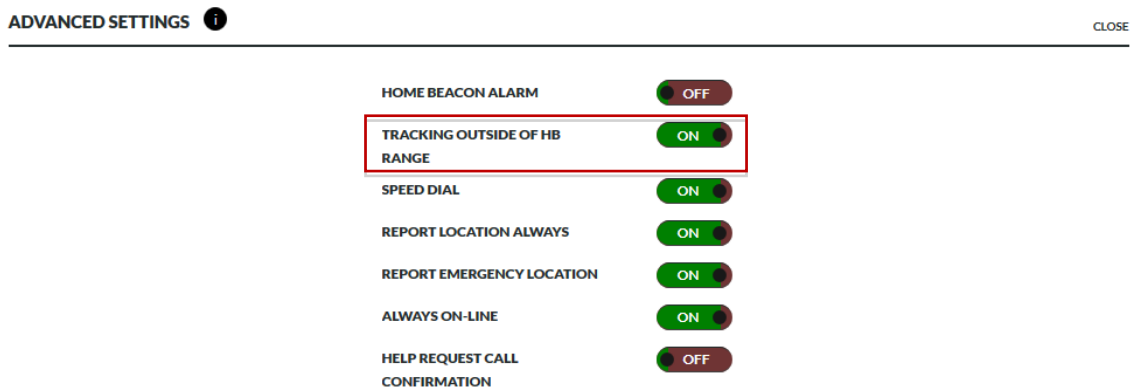
Note: It is recommend that **REPORT LOCATION ALWAYS** is turned **ON** to enable device location reporting.



Warning: It is illegal to track a person without his/her consent. Please make sure that you have the assistee's written consent on file prior to turning the **SEND LOCATION ALWAYS** toggle **ON**.

3.6.3 Tracking outside of home beacon range

The S1 can activate tracking when the S1 is outside of home beacon range. This feature can be used to track the S1 user's location when the user leaves home. When the toggle is turned **ON** the S1 sends location reports at an adaptive interval. A location report is sent at 2 minute intervals when the S1 user is moving actively. In an occasional movement mode the location report is sent every 30 minutes. If the S1 is stationary a location report is sent every six hours. The tracking can be turned **ON** / **OFF** using the **TRACKING OUTSIDE OF HB RANGE** toggle.



Note: The **REPORT LOCATION ALWAYS** toggle must be turned **ON** if the **TRACKING OUTSIDE OF HB RANGE** is turned **ON**. Otherwise the S1 is not sending location information.



Note: The S1 tracking is triggered when the S1 is outside of home beacon range. The home beacon must be powered all times and it should not be disconnected from the power when the S1 charging is completed. If the S1 user's home is large it is recommend that additional home beacons will be installed to all main areas inside the home to ensure a good indoor home beacon coverage.

3.6.4 Emergency tracking

When the emergency **TRACKING** toggle is set **ON** the device is set into emergency tracking mode for a 60 minute period and the device sends periodic location reports by default at roughly 30 second intervals. After 60 minutes the emergency tracking is discontinued automatically. The reporting intervals may differ from the above values depending on the choice of your service provider. In the emergency tracking mode the device will discard power saving modes and report location information at set intervals.

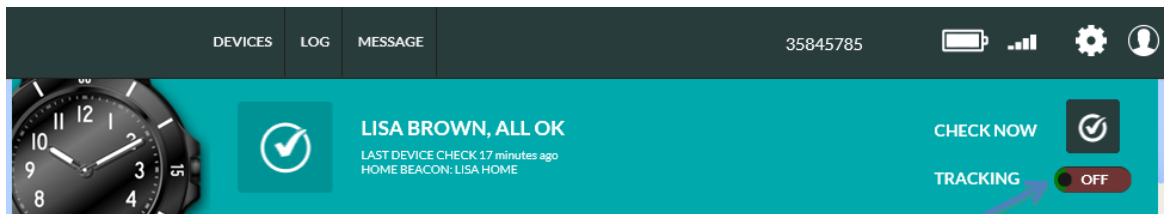
Please note that the **TRACKING** toggle is only visible if **REPORT LOCATION ALWAYS** toggle is turned on in the device settings page. Please note that you have to have the consent of the assistee in order to turn the **TRACKING ON**.



Note: When **TRACKING** is turned **ON** the device keeps GPS always on and battery power save modes are disabled. The emergency tracking mode decreases significantly the device operating time. The feature should be turned OFF as soon as there is no need to trace the device.



Warning: If **ALWAYS ON-LINE** is turned **OFF** the device does not have a continuous connection to the Rafael service and the emergency tracking request is delivered to the device when the device sends the next periodic report what can take up to 6 hours.



Emergency tracking

3.7 S1 Installer mode

The S1 has a special installer mode that can be used to check the GSM network and beacon signal strength.

It is recommended that in areas where GSM network coverage is known or is suspected to be poor the GSM signal strength is checked before taking the S1 into use. If the GSM signal is non-existent or very poor in the area where the watch would be used the S1 cannot perform the help request call, location and alarm reporting functions while it is out of GSM network coverage.

The installer mode can also be used to check that home beacon or mini beacon signal is available in the whole property where the watch is being used when tracking outside of home beacon range is used or when at home statistics are required to be reported room by room.

Please contact Navigil support for further instructions on how to turn on the installer mode. Once the mode has been enabled the Service menu will be available in the S1 user interface in conjunction of Full profile. Service menu can be accessed by pressing the crown three times.



When the service mode is displayed press YES at 3 o'clock to enter the mode. The service mode has three pages: GSM, beacons zones and beacon signal strength. Upon entering the service mode the GSM page is shown. By pressing the watch crown you can toggle between three service pages.



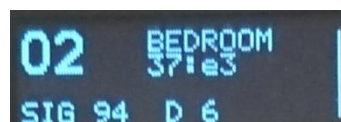
The top line of the display shown the frequency used by the S1 in communication with GSM network. The large number at bottom right is the GSM signal strength at that time. The value shown is percentage where small numbers are poor signal strength and high numbers indicate good signal strength. The three numbers on top of each other on the right are the GSM operator code (MCC and MNC), base station location code (LAC) and base cell ID (CID).

By pressing the crown the beacon zone page is shown:



The number in the top left corner is the beacon zone code (if non-zero). The right-hand side shows the name of the zone and last four digits of the beacon ID. The bottom left side after SIG is the signal strength. The strength is shown as percentage where high numbers are good.

The display shows the result of latest scan. Please note that the displayed beacon may change especially if the beacons have similar signal strength. The D 6 on the bottom line indicates that next best signal in the scan was 6 percentage point lower than the strongest one.



By pressing the crown the beacon page is shown:



The left most column is of age of the beacon information. The second column shows the signal strength of the beacons available. The third column shows the last six digits of the beacon ID. The page may scroll over to additional pages if there are many beacons to be shown. Up to four best signals are shown. If the scan found more than four beacons the weaker ones are not shown.

4 Safety, Handling and Support

4.1 Guidelines for Safe Use

Please follow these guidelines. Failure to do so might be a potential health risk or product malfunction. If you doubt that the S1 is not functioning properly have it checked by a certified service partner prior to using or charging it.

4.1.1 Recommendations for safe use of the S1



Warning: The S1 may explode if exposed to fire.

Handle the S1 with care and keep it clean and dust-free.

Do not use the S1 in environments where relevant IP rating limitations, if applicable, are exceeded (including excess depths) or expose it to excess humidity.

Do not use the S1 or the home beacon in explosive atmosphere.

For optimum performance, the S1 should not be operated in temperatures below -20°C or above +60°C. Do not expose the battery to temperatures above +60°C.

Do not attempt to disassemble the S1 or the home beacon. Only an authorized service partner is allowed to perform service operations.

Do not expose the S1 or the home beacon to flames.

Do not throw or drop the S1.

Avoid volume levels that may be harmful to your hearing.

Do not expose the S1 or the home beacon to prolonged periods to excess heat.

Please use only mild detergents and soft tissue to clear the S1.

Do not expose the home beacon to moisture.

Keep the home beacon charging dock free of any foreign objects.

Please keep the microphone and speaker grills clear of debris and other obstacles.



Warning: Broken glass may create sharp edges that can harmful.

4.1.2 Home beacon power supply

Connect the power supply to power sources as marked on the product. Do not use in damp areas or exposed to elements. Do not subject the cable to stress. Do not use a damaged cable.

4.1.3 S1 Battery


Charge the S1 battery in temperatures between +0°C and +45°C. Do not try to open the S1 nor to change the battery. Battery life depends on temperatures, signal strength, profile chosen and voice calls. Only approved service partners should replace the battery.

4.1.4 Disposal of an used S1 and battery

This symbol on the back of the S1 and its packaging indicates that the S1 has an internal battery and that it should not be treated as ordinary waste. It must be handed over to the applicable collection point for the recycling of electrical equipment. Please don't try to remove the internal battery. The S1 batteries must be removed only by an approved service partner or by a waste treatment facility. The proper recycling of the S1 will help to conserve natural resources.

4.2 Charging of the S1

Please charge the S1 only in the home beacon charging dock. When charging the S1 keep it dry, away from direct sunlight and exposure to dust. Please note that the S1 can be charged in temperatures between +0°C and +45°C.

If the S1 is taken out of the charging dock before the battery is fully charged the S1 will beep and display a blinking half full battery icon . At the same time a warning will be sent to the Rafael service. Once the battery is fully charged the warning will be automatically turned off.

4.3 Repair

The S1 is a delicate piece of electronics and micromechanics. It may only be repaired by an authorized service partner.

4.4 Strap replacement

The S1 strap is a normal watch strap with a 22 mm interface. The strap may be replaced by a qualified store selling straps and providing replacement services.

Please check with Navigil for strap options for wearers suffering from dementia or for persons with poor dexterity.

4.5 Export regulations

The end user shall comply with all national, state, and local laws and regulations governing the use of Binary in the course of the license. In the United States, these may include, but are not limited to, Department of Commerce including U.S. Export Administration regulations, Securities Exchange Commission, Environmental Protection Agency, and Department of Transportation regulations applicable to Hazardous Materials.

GOVERNMENT GPS LIMITATIONS: end user shall, in the use of the S1 shall conform to, all applicable federal, state and local orders, laws, regulations and ordinances, including specifically United States federal government regulations relating to GPS technology.

U.S. GOVERNMENT RESTRICTED RIGHTS: Software is provided with Restricted Rights. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in License Terms available from Navigil at request, pursuant to DFARS 227 7202-3 or subparagraphs (c)(i) and (2) of the Commercial Computer Software- Restricted Rights at 48 CFR 52.227 19, as applicable, or as set forth in the particular department or agency regulations or rules that provide Navigil with protection equivalent to or greater than the above-cited clause. The Manufacturer is Navigil Ltd, Karaportti 5, 02610 Espoo, Finland.

The device or software may be subject to import and export regulations of the European Union, the United States and other countries. The end user will comply with these applicable laws and regulations and will obtain and maintain any export and import license required for the delivery of goods to the end user. Without limiting the foregoing, and as an example, the S1 may not be knowingly export or re-export the S1 to destinations identified pursuant to Articles in Chapter II of European Council Regulation (EC) 428/2009 and specifically, and without limitation, you will also comply with U.S. government Export Administration Regulations ("EAR", 15 C.F.R. §§ 730-774, <http://www.bis.doc.gov/>) administered by Department of Commerce, Bureau of Industry and Security and economic sanctions regulations (30 C.F.R. §§ 500 et. seq., <http://www.treas.gov/offices/enforcement/ofac/>) administered by the U.S. Department of Treasury, Office of Foreign Assets Control.

4.6 End user license agreement

Software delivered with S1 and home beacon is owned by Navigil Ltd and/or its affiliated companies and its suppliers and licensors.

Navigil grants the end user a non-exclusive limited license to use the software solely in conjunction with the S1. Ownership of the software is not sold, transferred or otherwise conveyed. The license grant is subject to the timely and full payment of all fees payable by end user from time to time.

End user may not (i) modify, (ii) reverse engineer, or (iii) for the purpose of reverse engineering, disassemble, decompile or trace the execution of software or any portion of it.

This license grant is valid throughout the useful life of the S1. It can be terminated by transferring your rights to the device to a third party in writing.

Failure to comply with any of these terms and conditions will terminate the license forthwith.

This license is governed by the laws of Finland. When applicable, the foregoing applies to statutory consumer rights.

Navigil and its third party suppliers and licensors retain all rights, title and interest in and to the software. To the extent that the software contains material or code of a third party, such third parties shall be beneficiaries of these terms.

4.7 GPS/GLONASS, home beacon and mobile network location

The S1 features GPS/GLONASS, home beacon and mobile network location based functions. Location determining functionality is provided “As is” and “With all faults”. Navigil makes no representation or gives any warranty to the accuracy of location information.

Location-based information provided by the S1 and Rafael service may not be always available or be error free. It also is dependent on mobile network service availability. Please note that GPS/GLONASS performance may be reduced or prevented in certain environments such as indoors and densely forested areas where GPS/GLONASS signals can't be received reliably.

The home beacon range may vary significantly depending on obstructing structures between the home beacon and the S1.

The mobile networks are in constant flux of change. It may not be possible to derive a mobile network based location in all areas.

4.8 Help request calls

Connection of help request calls cannot be guaranteed under all conditions. Calls may not be possible in all areas, on all networks subject to network capacity limitations, network coverage limitations and building or other similar obstructions.

4.9 Medical devices

The S1 and the home beacon are equipped with radio transmitters that may affect implanted and other medical equipment. In order to reduce risk of interference keep the S1 and the home beacon a minimum distance of 15 cm away from the medical device. Do not use the S1 at your ear if possible. For use in proximity to medical devices, please consult a physician and the medical device manufacturer.

4.10 Specific Absorption Rate (SAR) and Radio Frequency (RF) exposure

The S1 is equipped with a Bluetooth Low Energy link and GSM mobile phone features.

The Bluetooth Low Energy link and the GSM mobile phone emit low levels of radio frequency energy. International safety guidelines have been developed for such emissions. These guidelines establish permitted levels of radio wave exposure. The guidelines include a safety margin designed to assure the safety of all persons and to account for any variations in measurements.

Specific Absorption Rate (SAR) is used to measure radio frequency energy absorbed by the body when using the S1. The SAR value is determined at the highest certified power level in a laboratory. The S1 uses the minimum power necessary to access the chosen network, thus actual SAR level can be well below this value.

4.11 S1 support information

Please visit www.navigil.com/ for more information.

4.12 Battery replacement

The S1 internal battery can only be changed at an authorized service partner. Please check with your nearest service partner location.