Product Features

Security and safety is an essential feature for this product. Hence, it is extremely critical to ensure the unit is able to make the SOS call and send the timely and accurate GPS location to the dedicated party.

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The GPS tracker shall be able to send GPS location, making emergency voice call by pressing SOS button. In order to provide quick and accurate GPS location, cell ID and AGPS technology is incorporated in this device. The data (GPS location, remaining battery capacity etc.) shall be sent by both GPRS and SMS (the choice will be determined in the detail logic flow and MMI document).

GSM frequency. Quad band 850/900/1800/1900.
GPRS type – Class 10, TCP/IP build in
GPS sensitivity - 159 dBm

Industrial Design

Physical Specifications

Item	Description	Specifications
Dimension (Products)	Length	66 mm
	Width	43mm
	Thickness	20 mm
Antenna	GPS	Internal
	GSM/GPRS	Internal

Handset

Item	Description	Specification
Case Material		PC
Dimensions	Handset	66x43x20mm.
Weight	Handset	< 60 g
Water Resistance	Handset	IP57

Environmental Specifications

Item	Description	Specification
Temperature	Operating range	-10 °C to 55 °C
	Storage range	-20 °C to 80 °C

Charging Cradle Specifications

Item	Description	Specification
Charging Cradle	SentryPal Speaker and Logo must be visible when in charging cradle. We have a concern that the base needs to have a bigger size so that it will not tip over easily when the person is putting the hand-held unit into the charger.	Uses standard AC Wall adaptor.
AC Adaptor	Standard AC Wall Adaptor	Tip _____ 110/220 Volts at 500 mA
Battery Charging	Via two metal prongs that make contact to Charging Station	
Charging time – estimated from dead battery		2 hours

Detail feature list

Physical dimension

1. Size (outside dimension include plastic) : 66x43x20mm (maximum)
2. Water proof and dust proof standard: IP57. The unit shall be robust enough for sudden impact (fall down action by end customer).
3. 4 pin connector for data
4. 1 button for SOS call, and 1 small button for other functions (e.g. power on/off, cancel)
5. Separate standalone charger for device.

Volume level. The device shall be set at maximum level. Speakerphone mode is automatic when the device is connected. It shall be over 90dB at 0.1m from speaker.

LED indication
1 for battery, 1 for GSM, 1 for
GPS Power specification

1. Talk time : continuous not less than 2 hours (base on 700mAH Li-Polymer or Li-ION battery. We continuously finding higher capacity battery e.g. 800mAH Li-Ion)
2. Battery life for GPS sending data (location / battery level) every 15 mins. : not less than 4 days in sleeping mode. Not less than 1 day in standby mode.
3. GPRS Data amount in 30 days base on GPS sending data (location / battery level) every 15 mins. : not more than 5M byte
4. Total charging time : 2 hours

5. Charging circuit. Protection circuit for battery and for the device shall be included. This is to ensure that there will not be over-charging, or not able to charge when the device is not charged for long period of time.

GPS

1. GPS Time to first fix – cold start (autonomous) 36 sec, warm start (autonomous) 36 sec, hot start (autonomous) < 1 sec.
2. Cell ID and AGPS technology shall also be integrated. During in-door condition where GPS is not obtainable, the last valid GPS location or cell ID location (whichever is more accurate) will be sent.
3. Geo-fencing

Voice prompt

1. Voice prompt provided for different application
2. DTMF detection for answering machine

User case / server control

1. During SOS emergency call, when connected, the device will be in speakerphone mode automatically. Sound level for speakerphone : 90dB in 0.1m from device
2. OTA command from dedicated server and dedicated SMS number, in particular sending configuration.
3. Motion sensor (3 axis accelerometer) is employed for detecting no motion in order to save power, as well as man down detection

Initial set up

See MMI below.

Appendix 5 Technical specification

GSM/GPRS Specifications

Item	Description	specification
Air Interface	GSM or GPRS Quad Band	GSM 850 / 900 / 1800 / 1900 MHz class 4 (2 W) for 850/900 bands class 1 (1 W) for 1800/1900 bands
	GPRS	Class 10 (4 downlink, 2 uplink, max. 5) Mobile Station Class B PBCCH supported CS 1…CS 4 supported
	Power Consumption	Power Off - < 90 µA Idle Mode - <1.6 mA

		Telephony GSM - < 300mA GPRS class 10 - 410 mA
GSM Sensitivity	850/900 MHz	-110 dBm
	1800/1900 MHz	-109 dBm
Messaging	SMS	PDU / Text mode / Cell broadcast
	AT Commands	3GPP 27.005, 3GPP 27.007 3GPP 27.010 MUX Protocol

GPS Specifications

Parameter	Description	Specification
GPS Tracking	Tracking location	Handset MUST be ON in order to be tracked (MCU and GSM must be ON in order to receive OTA command from server)
	Tracking ON/OFF Factory setting OFF	Controlled by Web Dashboard/User
Time between Pings	This is the time between each ping of the location.	This is a variable set by the user on the web dashboard. The web dashboard will send the variable minutes between pings.
Chipset	U-blox	AMY-6M
Receiver type	50 Channels GPS L1 frequency, C/A Code SBAS: WAAS, EGNOS, MSAS	
Time-To-First-Fix2	Cold Start (Autonomous)	<36 sec.
	Hot Start (Autonomous)	<36 sec.
Data packet size - GPS update		128 bytes of data per transmission re: eo-locating
Sensitivity4	Tracking & Navigation	-159 dBm
	Reacquisition	-159 dBm
	Cold Start (Autonomous)	-146 dBm
Maximum Navigation update rate		5Hz
Accuracy	Position	2.5 m CEP - Circular Error Probability
	SBAS - Satellite-Based Augmentation Systems	2.0 m CEP - Circular Error Probability
Time pulse frequency range	Configurable	0.1 Hz to 1 kHz
Operational Limits	Dynamics	≤ 4 g
	Altitude6	50,000 m
	Velocity6	500 m/s

Appendix 6 MMI

Input

Item	Description	Specification
Mic 		
4 pin connector	Update firmware Debug message	
EMERGENCY button Recessed into case to help prevent accidental pushes 	Hold for 1 second - SentryPal must be ON to initiate EMERGENCY call	Initiate Emergency call: Voice Prompt [**EMERGENCY call is being placed - please stand by**] ***prompt 3.1, 3.2*** Prompt played 1 time
	Hold for 1 second during incoming call/ringing.	Answering Incoming Call
Small Dark Gray button 	Hold for 1 second – during an active call	Ends call and resets the handset Voice Prompt [**Hanging UP**] ***prompt 3.3***
	Hold for 4 seconds – when phone is ON Hold for 4 sec. – when phone is OFF	Turn SentryPal **OFF** Voice prompt [**Power OFF**] ***prompt 1.2*** Turn SentryPal **ON** Voice prompt [**Power ON**] ***prompt 1.1***
	Hold for 1-4 seconds – when phone is ON	System Check: ➢ Announce battery status - **[Battery OK]** ***prompt 2.1*** > 25% battery capacity - **[Recharge Battery Soon]** ***prompt 2.2*** < 25% battery capacity - **[Lone Worker ON]** ***prompt 5.3*** IF - Lone Worker option is set (This option is controlled via the web and OTA programming) - **[No Service Coverage]** ***prompt 2.4*** **IF** - No GSM Service Signal - **[No Current GPS Fix]** ***prompt 2.5*** If - Not able to track GPS satellites - **[Version # X]** **prompt 6.7**

		To announce software version during system check
	Hold for 1 second Lone Worker is a feature used when someone is working in a remote area by themselves. The handset watches for movement (normal activity of the person), if no movement is detected in some period of time an alarm is sounded. If the person does not manually reset the alarm, it is assumed an accident has happened and the handset automatically places an Emergency call. The Lone Worker feature is controlled via the Web dashboard then settings are OTA to the handset	Reset Lone Worker Alarm Lone Worker is a special use feature that uses the 3 axis accelerometer to measure NO movement. If movement is not detected in n period of time, an alarm in the handset sounds – if the alarm is not reset with the Test button (How many sec.? n period is selected via the web dashboard and OTA programming) the SentryPal will automatically initiate an EMERGENCY call and reporting current position via SMS. During charging? same

LED Outputs

Item	Description	Specification
	**BATTERY - RED LED**	Off: When battery is > 25% capacity Blinking: 0.3 seconds On – 2 seconds off When battery is < 25% capacity Charging – when in cradle: Sinusoidal Pattern - On/Off/On (1 second from Off to Full Brightness, 1 second from Full Brightness to Off): Solid– when in cradle: When battery is fully charged
	GPS - BLUE LED Only ON during: • During Emergency call	Solid: SOS to activate GPS, and GPS signal is OK Blinking: • 0.3 seconds On – 0.3 seconds Off • When SentryPal is

		acquiring GPS signal or NO GPS signal is available. GPS will be sent via SMS during Emergency Call Handset will send last known position right away, then send current position as soon as it is updated
	GSM – GREEN / yellow LED GSM LED will be on anytime the phone is powered ON. This will allow the user to know that they have GSM service coverage with just a quick glance	Flashing Green (0.3 sec. ON + 0.3 sec. OFF) x 2 cycles for every 5 sec: Anytime the SentryPal has a GSM connection Flashing Yellow (0.3 sec. ON + 0.3 sec. OFF) x 2 cycles for every 5 sec: When SentryPal is acquiring GSM service signal or NO GSM service available

SPEAKER - Voice Announcements

Item	Description	Specification
Speaker 	RING TONE	We will supply **WAV file**. Will be more a traditional mechanical ring sound rather than electronic
	Speaker Volume	Always set to maximum
	Voice Announcements: Power: 1.1 - Power ON 1.2 - Power OFF 1.3 - Version X 1.4 - Lone Worker ON System Check: 2.1 - Battery OK	The handset will have flash memory large enough to store 4 minutes of voice prompts –this will include Spanish and French languages Languages will be selected via Web and OTA Turning SentryPal On Turning SentryPal OFF Announces software version Confirms Lone Worker features is ON Battery > than 25% capacity

	Soon	
	2.3 - Warning Tone #1	Battery < than 25% capacity *Low battery alarm?*
	2.4 - No Service Coverage	No GSM Service/Signal
	2.5 - No current GPS Fix	Not able to track GPS satellites
	EMERGENCY SentryPal Call:	
	3.1 - EMERGENCY call is being placed	Unit is starting the EMERGENCY call
	3.2 - Please stand by	Standby
	3.3 - Hanging Up	Ending the call process
	3.4 - Hanging up & dialing next number	Call was not successful, moving to next number
	EMERGENCY FamilyPal Call:	
	3.1 - EMERGENCY call is being placed	Unit is starting the EMERGENCY call
	3.2 - Please stand by	Standby
	3.3 - Hanging Up	Ending the call process
	4.5 - Dialing 911	Dialing local 911
	4.6 - Please wait for call back	Prompt played during wait for call back
	Lone Worker:	
	5.1 - Are you OK? – Press test button	Lone Worker timer expiration warning
	5.2 - Warning Tone #1	Tone played between warning voice prompts
	5.3 Lone Worker ON	Announces the Lone Worker feature is ON
	Misc:	
	6.1 - . - Point	Point to separate numbers
	6.2 - Ringing tone	Ring for incoming tone – Will be a traditional mechanical ring sound rather than electronic
	6.3 - Beep tone #1	
	6.4 - Failed to connect – trying again	
	6.5 - Call unsuccessful	
	6.6 – Dialing	
	6.7 – Version #	The version number is the software revision that is currently installed in the handset. The number is manually increased each time the software is changed – to help tech support differentiate different software versions in the field.
	Numbers: 1A – One 2A – Two 3A – Three 4A – Four 5A – Five 6A – Six 7A – Seven 8A – Eight 9A – Nine 0A - Zero	During system check.

Power Specifications

Item	Description	Specification
Battery	Replaceable Industry Standard	3.7 V, 700 mAh Li-Ion
Battery Charging	Via two metal prongs that make contact to Charging Station on bottom side so that logo is facing up.	
Power consumption	Operation mode (GSM)	130mA~ 270mA
	Standby mode (GPS On)	70±5mA
	Power saving mode (GPS Off)	7mA
Talk Time	Around 2 Hours talk time on full charge (GPS off)	GPS off
Standby Time Sleeping mode = MCU ON, GSM OFF, GPS OFF Standby mode = MCU ON, GSM ON, GPS OFF	In Sleep mode – with everything off. How many days will battery life be? Please tell us the wake-up time for the GSM system? Shall be few sec. Wake up the system from sleep mode: EMERGENCY button? Test button? Shall be few sec.	Handset standby time when GPS is transmitting every: (GSM OFF) 10 minutes = ? 15 minutes = target 1 day 30 minutes = ? 60 minutes = ? In sleeping mode, (GSM ON). 10 minutes = ? 15 minutes = ? ~ 4 days 30 minutes = ? 60 minutes = ?
Low Battery Alerts	When Battery < 25%.	▯ Announce battery status -Voice prompt 1 time: **[Recharge Battery Soon]** ***prompt 2.2*** ▯ RED LED starts Blinking ▯ Low battery message is sent via GPRS

3-Axis Accelerometer Specifications

Parameter	Description	Specification
Fall Detector	Not in this generation	
We will use the accelerometer sensor to detect movement.	Unit has not moved at – accelerometer detects NO motion • SentryPal MUST be ON for it to monitor motion. If SentryPal is OFF – NO inactivity messages will be sent	If more than X hours of no movement - an inactivity message is sent via GPRS. *X hours interval is set through the web dashboard*. If Lone Worker feature is set: If movement is not detected in n minutes of time, an alarm in the handset sounds – if the alarm is not reset with the Test button the SentryPal will automatically initiate an EMERGENCY call and reporting current position via GPRS or SMS.
	Accelerometer has detected movement but GPS has not	No inactivity messages are sent

Programmable Phone Variables & Features
(Programmed via the Web Dashboard)

Parameter	Description	Specification
Time Between GPS Pings	The user can customize how often the unit will wake-up and get a new location and send it out.	Can be set to as low as 1 minute - will typically be 15 minute or 30 minute interval. RC command
No Movement - Accelerometer	The user will be able to set X time of "no movement at all" before the phone will then send an inactivity message via GPRS	Can be set to as low as 1 minute - will typically be 12 hours.
Lone Worker	This is a variation on the No Movement feature. When n time (1-1000 minutes – controlled on Dashboard) of inactivity is reached – the phone will beep for x minutes (1-30 minutes controlled on Dashboard) – and if the user has not pushed the gray test to reset – the phone will initiate an EMERGENCY call Lone Worker factory setting is OFF but selectable via OTA	When Lone Worker alarm is triggered for x minutes (1-30 minutes controlled on Dashboard), the unit stops the beeping and an EMERGENCY call is initiated – location being sent via GPRS or SMS.
GSM ON or STANDBY	The user will have the choice of having the GSM be off – and only come on when the EMERGENCY button is pushed. Or, of having the GSM on all the time to take incoming calls as well. When EMERGENCY button is pushed – with GSM either ON or in Standby, the EMERGENCY call is initiated	Set via the Web Dashboard. Each time the handset is put into the charging cradle, the GSM will automatically turn ON to check for OTA changes and updates
SentryPal – Central Station version: Telephone Numbers & Account Code	The Central Station will use the Caller ID information from the SentryPal to access the customer profile and account information. It will be a variation of the Elevator Line.	The SentryPal will have 2 telephone numbers (The second number is a back-up number in case the call cannot go through to the first number). May be preset in factory? No, Controlled via web and OTA All IP address, port no., APN no., mobile carrier network must be preset in the device at factory.
FamilyPa Different software versionl	The user can program the telephone numbers to be used by the phone via the web based dashboard.	The Friends & Family product can learn up to 5 numbers. (4 friends' numbers and the 911 number).

		Programmable via dashboard

Communication Software Features

1. GPS Communication Protocol: The wireless service providers and others are pass-through networks; they just send packets in any format, they store nothing. The UDP protocol is likely best for accepting the packets. Key point is we get location data via what amounts to an internal LAN with the wireless service providers except when the voice channel is engaged, in which case we send location data as a text message. TCP/IP
2. Alerts & Notifications: These are sent via GPRS or SMS.

WEB Software Features

This web software is handled by customer. You need to ensure the device can communicate with the server and the server can make all such communication. Format prefer to be XML.

1. WEB Dashboard: Each SentryPal/FamilyPal account has a secure web log-in for the Account Owner where the account ID is an email, and password. Account owner can manage (including change) his name, physical mailing address, email address, office/home/cell phone number, etc.
   test account (user name, password, IP address and port no.) will be provided for testing and development.
2. Account Owner can add his email address(es), and cell phone number(s) for alerts & notifications. Text messages sent to cell phones are sent as SMS
3. Account Owner can add/change/delete other users in the same manner, to receive alerts & notifications.
4. Battery Status: Notifications relating to device battery status go to the Account Owner via SMS
5. Power-on Status: Notifications relating to power On/Off go to the Account Owner via SMS,
6. Device Not Moved Status: Notifications if the handset has not moved substantially (device has a 3-axis accelerometer) go to the Account Owner, via GPRS or SMS, times are customizable on the web dashboard.
7. Lone Worker: This feature is to monitor the activity of the person carrying the device. If the device not having been moved substantially (device has a 3-axis accelerometer) in n minutes/hours, the device sounds an alarm. The user must push the Test button within x (1-30) minutes of the alarm sounding – selectable in the web dashboard. If the alarm is not reset, the device automatically places an EMERGENCY call and reports current

position via GPRS or SMS. The length of the n activity timer is selectable in the customers web based dashboard
Lone Worker is controlled via Web and OTA

8. Bread-Crumb Trail. Account Owner can see where the device is based on the most recent successful ping, on a Google Map, date & time-stamped. The last 1,000 data points are stored and visible on the web dashboard. Below the Google Map that displays the 'dots' on the screen is a slider that goes from the left at 0 to the right at 14 days. Sliding the slider along this screen will display only those points that are up to that point in time on the slider. Also – the 'dots' colored depending on age. The most current dot is the biggest and bright red with a blue ring around it. The other dots have no blue ring – and fade from bright red to gray as time gets older. Holding the mouse over any Dot give the Date and Time stamp as well as the Latitude and Longitude.

   The web designer will figure this out

9. Geofences. 1 Geofence can be created and each given an associated label; alerts go to the Account Owner (and any others as listed in the web dashboard) when a boundary has been crossed.
   We need to be careful to avoid rapid boundary alerts being sent when the person is traveling close or parallel to a boundary. Messages are to be sent via GPRS

10. Geofence Design & Granularity: Down to ¼ mile radius if possible, ideally circle/square/rectangle or "Draw Your Own."
    Web designer will figure this out and will make it as simple as possible. Handset sends GPS location to web server and the web dashboard makes the boundary calculations and then sends our notification messages.

11. Alerts: Alerts are sent out for the following reasons:
    i. Geo-fence boundary crossings. This is only possible when GSM is ON and GPS is ON. When
    ii. EMERGENCY button pushed.

12. Notifications: Notifications are sent out for the following reasons:
    i. Powered OFF
    ii. No Movement in X hours GPS/Accelerometer
    iii. Battery < 25%

13. FamilyPal: Account Owner can configure a call flow – call a list of 4 friends or family members and/or 911, depending on software set-up on the web dashboard.

14. SentryPal: This model always calls a central station, it is 2-way voice communication between the SentryPal and central station and the central station uses the Caller ID, IMEI or SIM card no. (IMSI) information to access the customers account and profile information. This will be up to the central

station to receive this information from the incoming call and access the customer account information.

15. Find Device Now: Account owner can “find device now” which pings without regard to the every “n” minutes ping factory setting, and see a resulting Google map image with a thumbtack saying “device here now” or “cannot get a fix on the device, but it was last here” [show last successful ping, time & date-stamped]. GSM MUST be ON for the “find device now” feature to work.
    Find Device feature factory setting is ON – but selectable via OTA programming Factory setting to update position is every 15 minutes.

    If the handset is POWER OFF and / or the battery capacity is <25%, the handset will send the GPS location and low battery status message via GPRS. This same message will also be sent when the handset is powered OFF - turning off with the power button or if the battery is completely exhausted. This will help find a misplaced handset as well as notify the user of the low battery status.

Emergency Call Flow

Answering incoming calls – SentryPal and FamilyPal:

a. The ability to answer incoming calls is controlled on the user's dashboard. The factory setting will be **NO INCOMING** calls – as it increases the customer's monthly costs dramatically. OTA ability to turn incoming calls ON and OFF

b. If the answer feature is enabled there will be 2 answer modes;

i. **Automatic Mode** – this allows the phone to automatically answer the incoming call without pushing any button. This will be helpful for the family or caregiver to listen in to what the user is doing without any interaction from them

ii. **Manual Mode** – Incoming calls are allowed but the user will have to manually answer any incoming calls by pushing the Emergency button while the phone is ringing. OTA ability to turn incoming calls On and Off

SentryPal

(Handset MUST be powered ON before an Emergency Call can be placed)

1. Emergency Button is pushed - voice prompt [**Emergency Call is being placed, Please standby**] ***prompt 3.1,3.2***
2. SentryPal sends GPS location via GPRS, (if it does not have current location fix, handset will send GPS information via SMS during the Emergency call. The last valid position is sent and then as soon as the current position is fixed, a second SMS GPS location message is sent).
3. SentryPal calls central station via GSM network – Central station phone numbers are programmed via OTA
    a. This is a continuous call cycle until one of the 2 numbers is connected or a total to 9 cycles is completed
4. Central Station receives call – central station receives call and uses Caller ID info to identify customer account and profile. Caller Id information is what the central stations are currently using to identify the incoming call.
5. Central Station operator receives GPS location information – via customer's server
6. Central Station operator talks with customer – half duplex (same communication that current mobile phones use)
7. Call is ended by Central Station operator hanging up – SentryPal and the GSM network will automatically detect the call has ended and the handset automatically hangs up and resets
8. SentryPal hangs up and announces the Battery Status – voice prompts [**Battery OK or Recharge Battery Soon**] ***prompts 2.1 or 2.2*** and returns to standby mode - this is very important for the customer to be reminded what the battery status is every time they use the phone.

FamilyPal:

(Separate software from SentryPal and E911 compliant)

(Handset MUST be powered ON before an Emergency Call can be placed

There are 3 modes of the same FamilyPal version:

1. Friends Only – where is only contacts people on the "friends" list – created on the web dashboard and OTA to the handset
2. Friends + 911 – where all of the friends are contacted via SMS but if no one calls back within 3 minutes the handset automatically calls 911– created on the web dashboard and OTA to the handset
3. 911 Only – where the handset calls 911 immediately after the Emergency button push.

1. Emergency Button is pushed- voice prompt **[Emergency Call is being placed, Please standby]** ***prompt 3.1,3.2***
2. FamilyPal send an Emergency Text message via SMS "**There is an Emergency – Please call xxx-xxx-xxxx immediately**" (**xxx-xxx-xxxx** is the FamilyPal mobile number) to all members on the Contact List – up to 4 contacts. All contacts on this list **MUST** have the ability to receive Text – SMS messages
3. FamilyPal sends GPS location via GPRS (not SMS) The message is being sent to the customer's server – both the GPS location and the text messages to be sent to the "friends" list so the "friends" can call back. (if it does not have current location fix, handset will send GPS information via SMS during the Emergency call) to all members on the Contact List. When SOS button is pressed, the device will send the Last valid position to server via SMS. When location is fix, it will send to server via SMS
4. FamilyPal has 3 modes – Friends Only, Friends + 911 and 911 Only (Controlled by the users dashboard):
    a. **Friends Only**
        i. The Emergency button is pushed – voice prompt **[Emergency call is being placed, Please standby]** ***prompts 3.1, 3.2***
        ii. The FamilyPal send out text messages to all numbers on the call list
        iii. The handset plays the voice prompt **[Please wait for call back]** ***prompt 4.6*** every 10 seconds
        iv. The handset waits 3 minutes for the call to be returned.
        v. If the call is not returned within the 3 minute period another text message is sent to all numbers on the call list – it will make a total of 9 attempts (3 minutes apart) to send text messages to the numbers on the call list
        vi. When the call is returned, the handset will automatically answer the incoming call – there is a normal 2-way voice conversation between the caller and the FamilyPal user
        vii. As soon as the FamilyPal answers the next incoming call, it sends out SMS messages to all on the Contact List "**Emergency Call responded by xxx-xxx-xxxx**" (**xxx** is the phone number of person that first called back)
        viii. Call is ended by detecting the far end hanging up, the handset and the GSM network will automatically detect the

call has ended, automatically hanging up the handset. The handset performs a the Battery Status – voice prompts [**Battery OK or Recharge Battery Soon**] ***prompts 2.1 or 2.2*** and returns to standby mode

b. Friends + 911

i. The Emergency button is pushed – voice prompt **[Emergency call is being placed, Please standby]** ***prompts 3.1, 3.2***
ii. The FamilyPal send out text messages to all numbers on the call list (No text message is sent to 911)
iii. The handset plays the voice prompt **[Please wait for call back]** ***prompt 4.6*** every 10 seconds
iv. The handset waits 3 minutes for the call to be returned
    1. If the call is returned within the 3 minute period, the handset will automatically answer the incoming call – there is a normal 2-way voice conversation between the caller and the FamilyPal user.
    2. If the call is not returned within the 3 minute period, the phone automatically calls 911– GPS information is automatically sent during a call to 911 (this is done through cell ID via mobile carrier). Do you want the GPS location also sent to the preset no. by SMS? That means the device will only call the preset no. once, if no answer, it will go straight to 911. This is correct! – it sends the emergency Text message, waits 3 mintues for a call back. If call back is NOT received within 3 minutes, the handset calls 911 directly. The FamilyDial will remain on the 911 call until the handset detects that 911 has hung up.
v. As soon as the FamilyPal answers the incoming call or calls 911, it sends out SMS messages to all on the Contact List "**Emergency Call responded by xxx-xxx-xxxx or 911**" (**xxx** is the phone number of person that first called back or 911).
vi. Call is ended by detecting the far end hanging up, the handset and the GSM network will automatically detect the call has ended, automatically hanging up the handset. The handset performs a the Battery Status – voice prompts [**Battery OK or Recharge Battery Soon**] ***prompts 2.1 or 2.2*** and returns to standby mode

c. 911 Only

i. The Emergency button is pushed – voice prompt **[Emergency call is being placed, Please standby]** ***prompts 3.1, 3.2***.
ii. The FamilyPal calls 911– GPS information is automatically sent during a call to 911 – E911 format (this will be done through cell ID via mobile carrier)
iii. There is a normal 2-way voice conversation between the 911 operator and the FamilyPal user
iv. Call is ended by detecting the far end hanging up, the handset and the GSM network will automatically detect the call has ended, automatically hanging up the handset. The

handset performs a the Battery Status – voice prompts [**Battery OK or Recharge Battery Soon]** ***prompts 2.1 or 2.2*** and returns to standby mode