



Wanderless System - Instruction Manual

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NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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 INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Introduction

Thank you for purchasing the Wanderless System by Locator Systems Corp., a proactive tool for the prevention and locating of Alzheimer's and Dementia patients who wander or hide.

What is the Wanderless System?

The Wanderless System gives care providers the power to monitor and locate wander-prone Alzheimer's residents.

Alzheimer's and Dementia Resident Wandering

Where did they go? How long ago they leave? Where to start searching? Should the authorities be contacted? 65% of Alzheimer's patients will wander out of caretaker control at least once a year. (Source: www.alz.org)

Why Wanderless is important for your facility or care home?

As the caregiver, Wanderless gives you real-time notification if a resident leaves your the facility, and more importantly the ability to locate and return a resident if they have wandered away or have hidden.






How Wanderless works

The Personal Locator Transmitter (PLT) worn by a wander-prone resident transmits the location back to the Wanderless Receiver using the proven technology of VHF directional radio frequency. Wanderless provides two-stage protection:

Stage One - Safety Zone Monitor and Prevent: Wanderless notifies you if your patient has left a preset safety zone,

Stage Two - Locate and Return: Find a resident with VHF radio directional finding if they have wandered away.

The Wanderless System

Personal Locator Transmitter(s) (PLT) Wrist PLT featured			
Personal Locator Transmitter (PLT) AC Adaptor battery charger			
Wanderless receiver (on right) AC wall adaptor recharger (on left) With Stage One – Safety Zone antenna Capable of monitoring 15 PLT's			
Stage One Safety Zone – Monitor and prevention antenna. (Omni Directional antenna)			
Stage Two – Locator Antenna (Yagi antenna with 6 ft cable.) 6-foot cable connects antenna to Wanderless receiver.			

Implementing Wanderless

Ensure key staff has received adequate training. Assign at least two or three staff to be completely trained and comfortable in using the Wanderless System.

Ensure that key staff trained to use Wanderless covers all shifts.

Practice – For care facilities, practice the exercises to maintain tracking and locating skills at least once a month. Have key staff members train other staff to use the equipment

Notify all care providers that the resident is using Wanderless

- ☐ Create a master list of residents wearing a PLT
- ☐ Ensure that the following information is on the ADL sheet and care routines
- ☐ When to put it on and remove it; where it is being worn; where is it stored at night.
- ☐ Notify the Managing Registered Nurse (MRN) for each resident to update the care plan

Personal Locator Transmitter battery recharging schedule

All Personal Locator Transmitters have a rechargeable lithium ion battery must be charged every two weeks. Determine how often you want to recharge the Collect all the transmitters and prepare a charging schedule for nights

Emergency Response to missing resident from facility

- ☐ Review your facility Standard Operating Procedure response to resident elopement scenarios.
- ☐ Integrate Wanderless into Facility Policy and procedure Manual

Ongoing training

Arrange weekly and monthly “Skills and Drills” times for staff to practice tracking people. Refer to Wanderless Training Exercises for tracking skills development.

Setup of Wanderless Receiver in a Care Facility

- Plug Attach the Stage One – Monitor and Prevent Antenna to the Wanderless Receiver (plug in and turn in to make a connection)
- Place Wanderless Receiver into drop in charger
- Plug in AC adaptor to the drop in charger base station
- Setup Wanderless Receiver in a central location of the facility. (Typically a Nursing Station or an Office where staff are close by.)

TIP: AC plug in adaptors may cause limited radio frequency interference. To improve Wanderless receiver reception, setup the Receiver/Base station away from the AC Adaptor.

- Plug AC adaptor into power source
- Set up Wanderless base station
- Turn on Receiver power
- If the transmitters are not charged – the Receiver alarm will sound.

Setup and Charge Personal Locator Transmitter

The PLT has an internal Lithium Ion rechargeable battery. The battery has a life of two weeks before it needs recharging.

- 1) Plug PLT Charger into wall outlet (note: RED light turns on when AC adaptor powered)
- 2) Plug PLT Charger into Personal Locator Transmitter (note: GREEN light turns on)
- 3) PLT is fully charged when GREEN light is OFF (a full charge takes approx 3 hours)

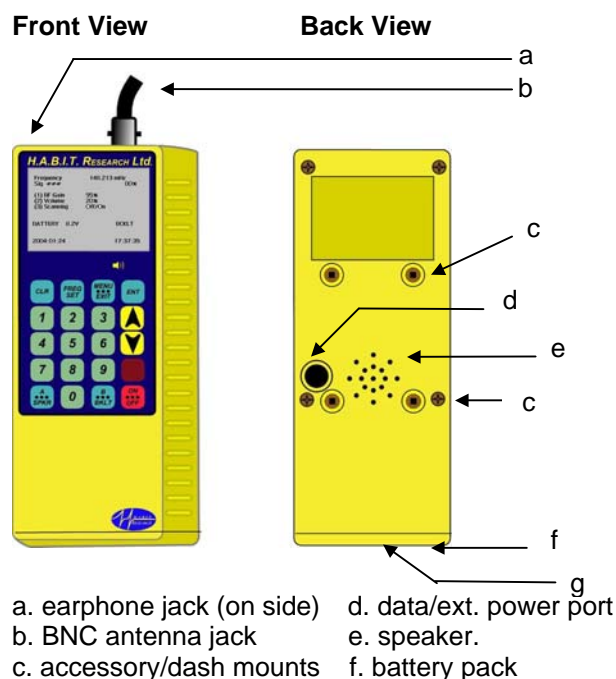
PLT battery charging schedule: Personal Locator Beacon must be charged every TWO WEEKS

For Nursing Home Facilities: add the PLT charging to resident schedule or daily roster, every two weeks, at night (or best time determined by care provider.)

PLT attachment methods

- Attach Wrist PLT with $\frac{3}{4}$ " vinyl wrist or ankle strap (Call Locator Systems Corp to order.)
- Sew a pouch to favorite clothing items

Wanderless Receiver Controls



Keypad Functions

- | | |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------|
| | Clears last entry |
| | Enables the <i>Frequency Set</i> mode |
| | Selects the <i>Menu Screen</i> or exits any other screen |
| | Enters or selects options |
| | Increases the RF gain or audio volume ("*" identifies selection) on the <i>Locating Screen</i> . Increments frequency in <i>Frequency Set</i> mode |
| | Decreases the RF gain or audio volume ("*" identifies selection) on the <i>Locating Screen</i> . Decrements frequency in <i>Frequency Set</i> mode |
| | Turns the speaker ON/OFF (does not affect earphone jack) |
| | Turns the backlight ON/OFF |
| | Press and hold for about 2 seconds to switch the receiver ON/OFF |

Operation


The *Locating Screen* is the default screen displayed when the receiver is turned on; example:

```

Frequency
218.000MHz
Sig #####
45%
(1) RF Gain 75% *
(2) Volume 10%
(3) Scan OFF
7.2V LOG
2004/01/09





```

Receiver ON/OFF

Press and hold  for 2 seconds to turn the receiver on or off. All settings and data will be maintained when the receiver is off.





Frequency Selection

Method 1

1. Press . The frequency display background will become highlighted and the digits will start blinking. The displayed frequency is ready for adjustment.
2. Enter the desired six digit frequency using the keypad (no decimal point).
3. Press  to skip a digit (instead of entering a new digit).
4. Press  to back up and re-enter a digit; each press shifts the cursor one digit to left.
5. The receiver reverts to the *Locating Screen* when six digits are entered or when  is pressed again.

Note: The HR2600 *Wanderless* comes standard 2 MHz bandwidth, or with a 4 MHz option. The last valid frequency is displayed if an invalid (out of range) frequency is entered.

Method 2

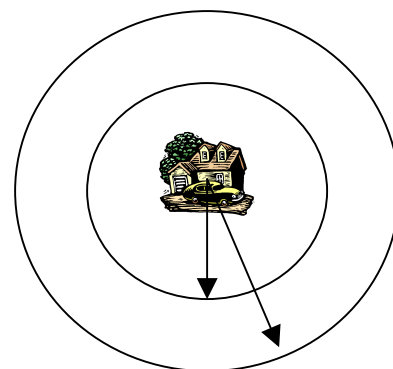
1. Press . The displayed frequency is ready for adjustment.
2. Use  to increase or  to decrease the frequency setting; each arrow press changes frequency by 1 kHz. Press and hold an arrow key to scroll through the frequencies.
3. Press  when finished.

Stage One – Monitor and Prevent

Set the monitor and prevent safety zone:

By increasing the RF Gain, you increase the radius of the safety zone
By decreasing the RF Grain, you decrease the radius of the safety zone


Tip: Setting the range of the safety zone depends on how much safe wandering freedom you want to give your patient(s). Set the safety zone radius around your house, to the property line, or out into the neighborhood.



Setting the safety zone around your home/facility

Turn on/off the monitor and prevent alarm

The Alarm is preset to ON all the time to notify you if a PLT has left the safety zone.

Press the blue Menu/Exit key 

Press number 6 – Alarm, to turn off Alarm, monitor and prevent.

How to locate wanderer

If a resident wearing a PLT wanders too far away from the Wanderless Receiver, an audible alarm sounds. The care provider can see which PLT has lost contact with the Receiver. The caregiver can then go outside and make line of site of the resident and return them.

- If the alarm sounds, press any key to turn off alarm.
- The Osprey display screen will show which PLT the Receiver lost contact with.
- If the monitor and prevent alarm has sounded, and the caregiver cannot find the wandering patient, go to Stage Two – locate and return.

If a PLT goes beyond the safety zone, the alarm will sound. Press any key to turn off alarm.

For silent monitoring, press the blue “A SPKR” button for silent monitoring. If the PLT goes beyond the safety zone, the alarm will sound.

If the alarm has been activated and turned off by the care provider, the Stage One alarm must be reactivated:

Press the blue Menu/Exit key

Press number 6 – Alarm, to turn on Monitor and prevent

Exercise - Set up the wireless safety zone

The safety zone alarm is defaulted to ON when you turn on the Wanderless receiver. If the receiver cannot pick up the PLT, the audible alarm will sound. Press any key to turn off the alarm. The alarm will sound again in 10 seconds if it still cannot pickup the signal. To turn the Alarm function on/off, press the blue Menu button, you can then toggle the Alarm on or off by pressing (6).

To adjust the safety zone radius, adjust the GAIN setting. Press (1), then use the UP or DOWN arrow to increase the safety zone radius.


Exercise A) set the gain on the receiver to 2% to set up a small safety zone radius. Make sure that the Alarm is turned ON. Take the PLT and walk away from the Receiver. Note how far you can get before the audible alarm sounds. Press any key to turn off alarm.

Increase the gain to create a wider safety zone. Safety zone range can be slightly affected by solid metal structures.

Stage Two – Locate and Return

How to find residents who have wandered away

1. Remove the Monitor and Prevention antenna from the Receiver
2. Attach the **Stage Two Locate and Return antenna** to the receiver's BNC antenna jack (located at the top of the Receiver). (Either a Yagi antenna or a Yagi in an artists portfolio)
3. Turn on the receiver.
4. Set the frequency on the receiver to the Personal Locator Transmitter transmitter being tracked.
5. Adjust the RF gain and Audio Volume to the maximum setting to first acquire radio signal.
6. Then adjust each down to a comfortable listening level; audio will likely be less than 30% and RF gain will likely be less than 80%. Move the antenna slowly around to determine which direction the strongest signal is coming from. If the locator Transmitter signal is weak, move the antenna in a different direction, until the PLT signal strength is stronger. (This is like playing a game of "Getting Warmer", or "Hot and Cold").
7. Follow the direction of the strongest signal to locate the transmitter. Frequently pan the antenna from side to side, to optimize Locating accuracy. Bring the equipment with you to refine your search, in case the wander has changed direction.
8. As you move closer to the transmitter, you need to adjust RF gain down to optimize directional sensitivity and distance perception. This might require reduction to the lowest setting in order to distinguish the direction with the strongest relative signal.

TIP: Use of earphones improves Locating effectiveness in most environments. Plug in earphones and press  (to turn speaker off) if desired.

Exercise A) Learning VHF directionality with the Osprey Receiver and Yagi Locator Antenna

Set up the Personal Locator Transmitter (PLT) about 15 feet away from you. Attach the Yagi locator antenna into the top of the Osprey receiver. Turn the Receiver on. Set the Gain to 15%

With the PLT directly in front of you, slowly do 180-degree sweep with the locator antenna from right to left. Note how the PLT signal increases the closer you get to it, then decreases as you move away.

LISTEN to the PLT "chirp" and SEE signal strength indicator (####) at the top of the Wanderless receiver screen. Locating a PLT is like playing a game of "Hot or Cold": if the PLT signal/sound is weak - you're getting colder, if the PLT signal is strong - you're getting warmer.

REMEMBER: search for the PLT chirp with the locator antenna -look at the receiver for signal strength (obvious, but should be mentioned, just in case)

When you feel comfortable locating the PLT signal, set up the PLT approximately 100 feet away from you, and do the same 180 degree sweep. Note that the PLT signal is slightly weaker. Increase the Gain as required if you cannot hear the "chirp" or see the signal on the display.

Once you pick up the signal, walk towards the PLT. Note the increase in the PLT signal strength. As you get closer the signal, you'll notice that it becomes harder to get directionality from the PLT. The signal strength seems to remain constant even when you move the antenna in all directions. Remember to lower the Gain, and do a slow 360 degree sweep. You might have walked past the PLT - if so, lower the gain further, and do a slow 360-degree sweep.

Exercise B) Hide and go seek

Have someone hide the PLT in a stationary location about 200 feet away from you, then go locate it with Wanderless Receiver.

Always start with the Gain at a low setting (15%)

REMEMBER: start with the gain low. If you cannot pick up the PLT signal, then increase the Gain to extend the tracking distance.

Do a slow complete 360-degree sweep using the locator antenna.

If you do not hear or see the PLT signal on the display, turn up the Gain by 10%. Move the locator antenna up

and down slowly while doing the sweep if you are tracking in a multi-level building, or in hilly or mountainous terrain. Repeat the 360 sweeps, remember - do it slowly. Listen and see the signal on the receiver display.

Once you have determined the strongest signal - walk in that direction.

As you get closer the signal, you'll notice that the signal strength remains constant even when you move the antenna in all directions. Remember to lower the Gain, and do a slow 360 degree sweep. You might have walked past the PLT - if so, lower the gain, and complete a slow, 360-degree sweep.

Remember: Always isolate the PLT signal strength by reducing the gain. As you get close to the PLT and the signal gets too strong to determine directionality – turn the Gain down.

TIP: to locate a PLT in a small search area (ie: within a 10 ft area) can require reducing the Gain to 2% or even 0%.

Exercise C) Hide and go seek - slow moving target

Have someone walk slowly and erratically around with the PLT. Locate them.

TIP: Safety First! Remember to look around as you track. Some beginner trackers become focused on the Osprey receiver display signal and don't watch where they are walking.

TIP: use stereo headphones to improve the ability to listen for the PLT signal.


Triangulation – locating a wanderer

Triangulation is a procedure you can use to determine the location of the Personal Locator Transmitter – i.e. produce a “fix” - of your transmitter from a distance. This procedure will require two or more bearings.



1. Choose a site for the first bearing reading.
2. Tune in the transmitter's signal.
3. Determine the direction of the strongest signal.
4. Find a second site and take a bearing reading. This second station should be about 45° - 135° relative to station #1; 90° is ideal.
5. Determine where the two bearings intersect. This is the approximate location of the transmitter. By repeating this from more sites, you will further improve the accuracy of your fix.

How to locate a Wanderer



Procedure

1. Pull cable from back of Receiver to release from charging kit.
2. Unplug the vehicle mounted VHF whip antenna from the BNC connector on the top of the Receiver.
3. Attach the coax cable from the three element Yagi locator antenna to the top of the Receiver.
4. Look up the frequency of the worker who hit the panic mode or is missing.
5. Turn off frequency scanning by using these steps:
 - a. Press the  until you see the following screen


Frequency	XXX. XXXMHZ
SIG ####	45%
(1) RF Gain	90% *
(2) Volume	25%
(3) Scan	01 7.2v
2005/04/30 14:34:53	

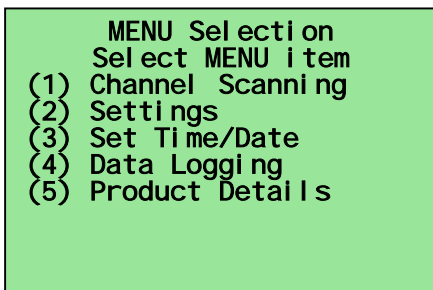
- b. Press . This will toggle between frequency scanning being on or off. Once the line 3 reads (3) Scan OFF. Frequency scanning is off.
6. Enter the frequency into the Receiver using the following procedure:
 - a. Press  until you see the following screen

Frequency	XXX. XXXMHZ
SIG ####	45%
(1) RF Gain	90% *
(2) Volume	25%
(3) Scan	OFF 7.2v
2005/04/30 14:34:53	

- b. press .
 - c. Use the number key pad to enter the frequency (no decimal point required).
 - d. Press  when completed.




7. Turn off Auto Gain using the following procedure:

- a. Press  until you see the following screen




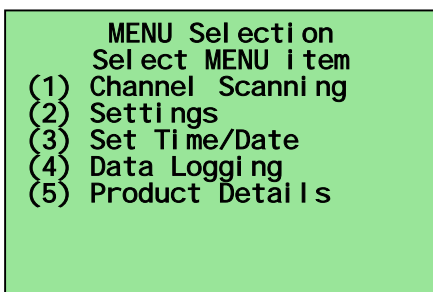
```

MENU Selecti on
Select MENU i tem
(1) Channel Scanni ng
(2) Settings
(3) Set Time/Date
(4) Data Loggi ng
(5) Product Detai ls
  
```

- b. Press .
- c. Press  to toggle Auto Gain [off].
- d. Press  to return to Tracking Screen.




8. Turn off Robust Data by using the following procedure:

- a. Press  until you see the following screen




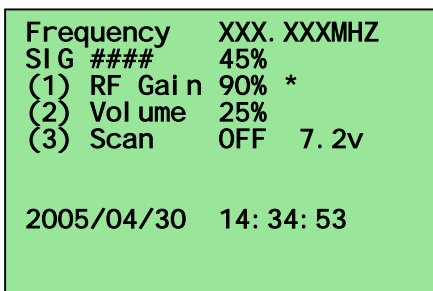
```

MENU Selecti on
Select MENU i tem
(1) Channel Scanni ng
(2) Settings
(3) Set Time/Date
(4) Data Loggi ng
(5) Product Detai ls
  
```

- b. Press .
- c. Press  to toggle Robust Data [off]
- d. Press  to return to Tracking Screen.

9. Adjust volume to desired level by using this procedure


- a. Press  until you see the following screen



```


Frequency XXX.XXXMHZ
SIG #### 45%
(1) RF Gain 90% *
(2) Volume 25%
(3) Scan OFF 7.2v

2005/04/30 14:34:53
  
```

- b. Press .
- c. Use the up/down arrows to adjust the volume.

Note: Earphones can be plugged into the connector on the side to allow for better location tone detection.


Adjust gain using the following method:

- d. Press  until you see the following screen

```

Frequency   XXX. XXXMHZ
SIG #####  45%
(1) RF Gain 90% *
(2) Volume  25%
(3) Scan     OFF  7.2v

2005/04/30  14:34:53
  
```

- e. Press .
- f. Use the up/down arrows to adjust the gain.

Note: The higher % gain number allows the transmitter to be detected from a greater distance. As you get closer the transmitter turn the % gain down to provide more directionality.

Factors Affecting Locating Performance

The following conditions can adversely affect the Locating range of your system:

1. Weather conditions, especially fog and rain, can reduce the range and confound directional accuracy.
2. Thick vegetation and high-density metropolitan areas can reduce the range. You may find that range is better in the fall when there is less foliage.
3. Large objects or landforms between the transmitter and the receiver can reduce the range and directional accuracy.

To improve the Locating performance we suggest the following:

1. Raise the height of the Locating antenna by using a pole.
2. Track from the highest point in the area.
3. Use high quality headphones.
4. Try changing antenna element orientation from vertical to horizontal (i.e. with elements parallel with earth).
5. Learn to adjust RF Gain down as much as is comfortable to retain audible signal
6. Use Locator Systems Corp. transmitters.

Receiver Controls

Signal Strength

The relative signal strength is displayed from weak to strong using 1 to 14 '#' symbols. The numerical value is displayed as a percentage from 0 - 99%. Signal strength should be used as a reference only.

RF Gain Adjustment

1. At the *Locating Screen*, press **1** to select RF gain adjustment ("*" aligns with 1).
2. **▲** increases, **▼** decreases RF gain.

Audio Volume Adjustment

1. At the *Locating Screen*, press **2** to select Volume adjustment ("*" aligns with 2).
2. **▲** increases, **▼** decreases Volume. Typical volume settings are between 10-30.

Channel Scanning Activation

1. At the *Locating Screen*, press **3** to activate scanning
2. Press **3** to turn scanning off.

Battery Level Indication

Indicates the battery voltage. The "LOW" indicator is activated at 6.1 V. When battery voltage is lower than 6 V, the receiver will shut off to assure stored data are retained (DL, DLT versions) or 5.5 V for standard models.

```

Frequency
218.000MHz
Si g #####
45%
(1) RF Gai n 75% *
(2) Vol ume 10%
(3) Scan OFF
LOW LOG
2005/01/09 14:37:35
  
```



Locating screen shown with battery low (LOW).

Speaker ON/OFF

Press **SPKR** to activate/deactivate the speaker. Turning the speaker off will conserve battery life when using the earphone.

Backlight ON/OFF

Press **BKLT** to activate/deactivate the LCD backlight. Use the backlight as little as possible to conserve battery life.

Main Menu Selection

Press **MENU/EXIT** from any screen to select the *Main Menu*. Press a number key to select each option.

```

MENU Sel ecti on

(1) Channel Scanni ng
(2) Setti ngs
(3) Set Time/Date
(4) Data loggi ng
(5) Product detai ls
(6) Al arm OFF
  
```

Channel Scanning Settings

Press **1** in the *Main Menu* to set scanning functions. The *Wanderless* receiver can be programmed to automatically scan from 1 - 99 channels for a pre-set length of time. Each frequency that you want to scan must be entered into a channel. Scanning time only needs to be entered once and applies to all channels.

SCANNING MENU	
(1)	00: 00: 03/channel
(2)	Enter channel s
Channel	01
Scan Freq	_ _ _ . _ _
	_

The *Wanderless* receiver will scan consecutive channels until it reaches a blank channel. It will then go back to the first channel of that series and continue scanning.

Groups of channels can be used to separate animal groupings in your study. The last number entered determines the active group of channels. To select a group of channels, re-enter a channel number in that group from the *Scanning Menu*.

For example, if channels 9-23 and 27-38 have frequencies entered, 9-23 is a group and 27-38 is a group. If the last channel entered was 23, then 9-23 is the active group.

There must be a minimum of one blank channel to separate each group of channels. For example you could enter frequencies into channels 1 – 13, then 15 – 20. The fact that channel 14 was not used thus determines that 2 groups existed. The channel numbers and frequencies are retained even if the batteries are removed.

Press **1** to enter the amount of time for scanning each channel. Minimum is 2 seconds.

To enter channels from the *Scanning Menu*:

1. Press **2** to enter the channel number. Enter the digits or use **▲**, **▼**.
2. Press **FREQ SET** and use the "Frequency Selection" procedure (Page 5) to set channel frequency.

Note: entering the channel number and then pressing can clear Channels **CLR**.

If clearing a channel within a bank, a dummy frequency must be entered to allow the full bank to be scanned or all channels above this must be shifted down by one. i.e. all frequencies above the blank will have to be individually re-entered.

Settings: LCD Contrast; Backlight ON Time;

Press **2** in the *Main Menu* to adjust LCD contrast, Backlight delay, Sleep, Wake-up, Duty cycle, and Multi Antenna Options

SETTINGS MENU	
Select Function	
(1)	LCD Contrast
	50%
(2)	BKLT Del ay
	00: 30
(3)	On Off Menu
(4)	Mul ti Antenna
(5)	Robust Data
	1-6-6-1

LCD Contrast **1**

Press **▲** to increase or **▼** to decrease contrast.

Press **ENT** when finished.

Backlight ON Time **2**

Enter ON time in minutes and seconds.

Press **ENT** when finished.

On Off Menu

On Off Menu: Sleep; Wake-up; Duty Cycles

Press **3** in the *Settings Menu* to adjust the Sleep, Wake-up, and Duty cycle timers

ON OFF MENU		
Select Function		
(1) Sleep		
25: 00: 00		
(2) WakeUp		
25: 00: 00		
(3) DutyOn		
00: 00: 00		
(4) DutyOff		
00: 00: 00		

Sleep **1**

Enter a time of day for the receiver to automatically turn off. The valid turn-off times are 00:00:00 through 23:59:59. Press the **ENT** key to advance between the hours, minutes, and seconds.

Warning! If the automatic turn-off option is not required a time of 25:00:00 must be entered into the receiver.

Wake-up **2**

Enter a time of day for the receiver to automatically turn on. The valid turn-on times are 00:00:00 through 23:59:59. Press the **ENT** key to advance between the hours, minutes, and seconds.

Warning: If the automatic turn-on option is not required a time of 25:00:00 must be entered into the receiver. If any valid 24 hour clock time is entered the receiver will turn on automatically.

Duty On **3**

Duty Off **4**

Enter a time duration for the receiver to cycle on and off. The receiver will automatically cycle between turning on and turning off, with the set time interval. Press the **ENT** key to advance between the hours, minutes, and seconds. The valid time for duty cycle is between 00:00:45 seconds and 99:00:00 hours.

Warning: If the automatic duty cycle option is not required a time of 00:00:00 must be entered into the receiver. If any valid cycle time of > 45 seconds is entered the receiver will cycle on and off automatically. Once duty cycle is set, it overrides Sleep and Wake Up settings.

Date/time Set

Press **3** in the *Main Menu* to set the date and time.

TIME/DATE MENU		
Year		2004
Month	01-12	01
Day	01-31	08
Hour	00-23	20
Minute	00-59	22
Second	00-59	38

1. Press **ENT** to set the date/time.
2. Press **1** for 12 hour clock or press **2** for 24 hour clock.
3. The year will flash. Enter the four digits then **ENT** to increment to next line or **ENT** to skip any line.
4. Follow 3 (above) to enter remaining date/time items.

Product Details

Press **5** in the *Main Menu* for Product Details

PRODUCT DETAILS		
Manufactured		
2004/01		
Model 3.0		
S/w vhfrcv18		
26-May-04		
S/N	HR0107-04	DLT
A		
148-149.999MHz		

Maintenance

Cleaning

Clean the display window and key pad using only a soft cotton cloth with either isopropyl alcohol or mild liquid soap. Make final wipes with a rinsed cloth.

Note: Use of any other cleaning agents may damage plastic parts and void warranty.

Water Proofing

The Wanderless receiver is waterproof to 1 meter of water for 15 minutes. The O-ring seals should be inspected annually and a new film of silicon grease applied (e.g. Dow Corning 111). If receiver is hit on a hard object or dropped onto a hard surface, it should be thoroughly inspected for damage to any sealing component, cracking, etc. Partial disassembly and resealing of O-rings may be necessary to re-establish water sealing.

It is recommended to always dry the unit after use. If exposed to salt water, the receiver should be rinsed with fresh water and then dried.

To maintain the waterproof seal, the case mounting screws, screw seals, face O-ring, and battery case O-ring must all be properly installed. Only the battery pack is intended for user servicing. Disassembly of other receiver components may compromise waterproof seal and void warranty.

Battery Charging

The Wanderless receiver has internal lithium batteries, a built in charging circuit, and room for a backup 9V alkaline battery.

To charge the batteries, remove the circular black base plate on the back of the receiver and applying power to the circular power connector. Either the external AC wall transformer or the DC car cigarette adaptor (both supplied with the receiver) can be used.

When the charging power is applied to the receiver the red lamp will light. The green lamp indicates that the batteries are currently being charged. The green light will turn off when charging is complete. The charging of the internal lithium batteries can be started and stopped at any point in the charge cycle.

The internal lithium battery provides 50 to 75 hours of operation from a full charge.

Backup Battery Power

If the internal lithium batteries run down, the receiver runs on a backup 9V battery. To install the backup 9V, remove the two Phillips screws at the bottom, take off plate, and attach the 9V battery into the base compartment of the receiver. Reattach base plate. The receiver will operate for approximately 20 hours on one 9V alkaline battery.

Precautions

The Wanderless HR2600 is a telemetry receiver with exceptional signal sensitivity. Circuitry is in place to reduce risk of damage due to powerful signals from nearby transmitters. However, it is recommended that the Wanderless be operated at least 3 meters away from any transmitter operating with > ½ watt output. For personal safety and risk of receiver damage, do not use in an electrical storm.

Operating in Extreme Conditions

Cold Weather

All receiver functions except LCD's are designed to operate to -40°C with fresh batteries installed. The LCD is factory specified to operate to -10°C. In extreme cold, placing the receiver against body or inside shirt pocket will

warm it sufficiently to regain LCD contrast. Similarly, this procedure will temporarily revive batteries to lengthen operating time in extreme cold.

Hot Weather

Hot weather conditions will generally not reduce receiver performance. However, never leave the receiver for extended periods near heaters or in direct sunlight e.g. on the dashboard of a vehicle where temperatures can approach 90°C and cause permanent damage to receiver.

******CRITICAL NOTICE******

...READ *BEFORE* FIELD USE...

LOCATING SUCCESS *WILL DEPEND* ON IT, ESPECIALLY FOR SCANNING AND AERIAL LOCATING.

1. When entering transmitter frequencies into receivers from different manufacturers, especially when entering SCANNING frequencies, each receiver might require a slightly different frequency setting for each transmitter. This is especially true for some receivers, that have been used for many years and are out of tune. Therefore, it is very important to optimize the setting for each receiver by listening for the strongest and most comfortable/crisp signal with the antenna attached (doesn't have to be aiming at the transmitter) and at least several meters away from the tag with the receiver on relatively low gain setting. The difference between receivers (any manufacturer) can be several kHz, but usually they are within 2 kHz. Once optimized, it is advised that notes be filed for each receiver for future reference. If optimization is not done, you might interpret signals of previously deployed transmitters as weak or miss them entirely. If possible, conduct optimization settings on all transmitters before entering the field to avoid loss of costly airtime and/or a transmitter

2. This receiver is particularly effective for close-range discrimination of signal direction due to unique circuitry, and "Gain" and "Audio" adjustment design. Use of the full "Gain" and/or "Audio" scale (0 –99) for some applications will be necessary to optimize Locating comfort and effectiveness. If NOT used properly, signal might appear weak and/or be missed altogether.

3. Related to item "2." : all manufacturers and designs of receivers follow different approaches or formats for "Gain" and "Audio" settings. Comparing for example, 80% gain of this receiver with 80% of another manufacturer's receiver is NOT a valid comparison. Therefore, do not expect to use % or other field number settings for another manufacturer's receiver with this or any other receiver. The Locating and listening comfort and effectiveness WILL BE DIFFERENT if you do so and can result in not locating a transmitter.

Specifications

General	Frequency Range Input Impedance Sensitivity Speaker Frequency Stability Image rejection RF Gain control range Operating voltage range	Any specified 2 MHz range from 135 to 235 MHz for the standard receiver and 4 MHz for extended band 50 ohm -150 dbm, 8 ohms +/- 1 KHz 14°F / 122°F >150 db >60 db 9 to 16 volts dc
Display	Eight line liquid crystal display with backlight	
Controls	19 key touch pad	
Connection	Antenna Earphone jack Battery recharge port Data serial port	BNC 1/8 inch circ. 2.16" x 0.83" DB 9 pin
Power	2 X 3.5 V internal lithium ion rechargeable batteries internal lithium battery charger optional 9V alkaline battery (one) 9-16 volts dc (external source)	
Physical	Dimensions Weight	5.7" H x 1.9" D x 2.75" W 0.99 lbs
Hardware	Base plate screw Accessory/dash mounting lugs	1/4 turn fastener No. 6-32 thread
Environmental	Operating temperature Storage temperature Water proof, as shipped	-40°F to +122°F ; LCD may lose contrast at 14°F -40°F to +122°F Immersed in 3 ft. of water for 15 minutes
Warranty	One year limited warranty covering parts and labor on material defects and workmanship	

Technical Support

Contact Locator Systems Corp. at:

Phone (250) 381-9425 Fax (250) 381-9426

between 09:00 and 17:00 Pacific Time Monday to Friday or e-mail us at info@locatorsystemscorp.com

Wanderless Warranty Information

Introduction

This limited warranty is valid on Locator Systems Corp. telemetry equipment purchased from LOCATOR SYSTEMS CORP Research. This warranty applies to the original purchaser who buys this product in an unused condition from LOCATOR SYSTEMS CORP Research.

Contact Information

Please direct inquiries regarding warranty coverage to:

Customer Service

Locator Systems Corp.

A div. of HABIT Research Ltd.

692 Sumas St

Victoria, BC, V8T 4S6

Canada

info@locatorsystems.corp

www.locatorsystemscorp.com

Tel: +1-250-381-9425

Fax: +1-250-381-9426

Limited Warranty

Subject to the OBLIGATIONS AND EXCLUSIONS below, LOCATOR SYSTEMS CORP Research (the company) warrants this Wanderless Receiver (the product) against defects in materials and workmanship for a period of two years for parts and labor from the date of the first consumer purchase. The Company will repair or replace at its discretion, the Product and any of its parts, which fail during the term of this warranty. The Company may replace or repair the product using new or refurbished parts.

The Company's liability under this Limited Warranty shall in no event exceed the lesser of the cost of (1) authorized repairs (2) replacement with similar features (3) reimbursement for authorized repairs or replacement or (4) the price you, the original purchaser, paid for the Product.

The Company must perform all warranty repairs.

Obligation of Owner

In order to obtain warranty service, the product must be delivered with a Return Merchandise Authorization (RMA) number, detailed description of the problem and freight prepaid (insurance suggested) to the Company, in the original package or equivalent (to avoid shipping damage). The repaired Product will be returned to the owner, freight prepaid.

You may obtain an RMA number by contacting the Company.

Exclusions

This Limited Warranty does not cover the repair of cracked, scratched, broken or modified plastics or other cosmetic damage; parts that have been altered, defaced or removed.

This Limited Warranty does not apply to repairs or replacement necessitated by any cause beyond the control of the Company including, but not limited to, any malfunction, defects or failures which in the opinion of the Company are caused by or resulting from unauthorized service or parts, improper maintenance, operating contrary to furnished instructions, shipping or transit accidents, modification or repair by the user, abuse, misuse, neglect, accident, fire, incorrect battery replacements or normal wear and tear.