



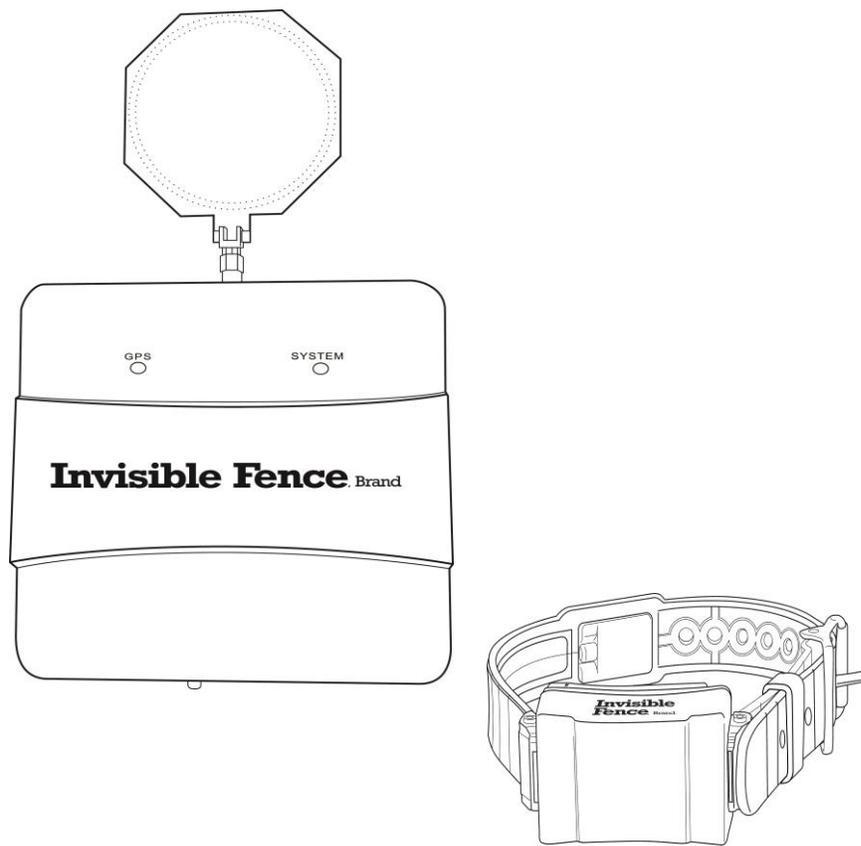
Invisible Fence[®] Brand

The Brand Vets Recommend Most
For Dog Safety and Freedom

GPS

Pet Containment System

Owner's Manual



Important Precautions

- Invisible Fence® Brand pet containment systems have contained over two million pets. However, there are some precautions you should take.
- Read and retain manuals; Read the entire Owner's Manual before using your new Invisible Fence® Brand pet containment system.
- Adhere to all warnings and cautions contained in any Invisible Fence® Brand manual.

⚠ WARNING

WARNING indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION used without the safety alert symbol, indicates a hazardous situation, which, if not avoided, could result in harm to your pet.

NOTICE

NOTICE is used to address safe use practices not related to personal injury.

⚠ WARNING

- Not every pet can be trained to avoid the established boundary. Sometimes even a properly trained pet may cross the boundary. Therefore, Invisible Fence, Inc., as well as Invisible Fence® Distributors and Dealers, cannot guarantee the system will, in all cases, keep a customer's pet within the established boundary. Accordingly, if a customer has reason to believe that their pet may pose a danger to others, or harm itself, the customer should not rely solely upon the Invisible Fence® Brand pet containment system to keep the pet from crossing the boundary.
- Do not install, connect, or remove your system during a lightning storm. If the storm is close enough for you to hear thunder, it is close enough to create hazardous surges.
- This device contains Lithium-Ion (Li-Ion) batteries; never incinerate, puncture, deform, short-circuit, or charge with an inappropriate charger. Fire, explosion, property damage, or bodily harm may occur if this warning is not followed.
- Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the regulations in your area.
- Batteries should never be removed from the battery compartment for charging.
- Taking your product apart can cause damage and void your warranty.
- Do not charge the batteries in areas with high temperature (100° F+).
- Keep batteries away from children.

CAUTION

Read and follow the important instructions on how to avoid pressure necrosis. Proper fit of the GPS Mobile Unit is important. A GPS Mobile Unit worn for too long or made too tight on the pet's neck may cause skin damage. Ranging from redness to pressure ulcers; this condition is commonly known as bedsores.

- Avoid leaving the GPS Mobile Unit on the pet for more than 12 hours per day.
- When possible, reposition the GPS Mobile Unit on the pet's neck every 1 to 2 hours.
- Check the fit to prevent excessive pressure; follow the instructions in this manual.
- Never connect a leash to the GPS Mobile Unit; it will cause excessive pressure on the GPS Mobile Unit.
- Wash the pet's neck area and the contacts of the GPS Mobile Unit weekly with a damp cloth.
- Examine the contact area daily for signs of rash or a sore.
- If a rash or sore is found, discontinue use of the GPS Mobile Unit until the skin is healed
- If the condition persists beyond 48 hours, see your veterinarian.

These steps will help keep your pet safe and comfortable. Millions of pets are comfortable while they wear stainless steel contacts. Some pets are sensitive to contact pressure. You may find after some time that your pet is very tolerant of the GPS Mobile Unit. If so, you may relax some of these precautions. It is important to continue daily checks of the contact area. If redness or sores are found, discontinue use until the skin has fully healed.

You may need to trim the hair in the area of the Correction Posts or switch to the longer Correction Posts to ensure consistent contact. Never shave the pet's neck; this may lead to a rash or infection.

To prevent an unintended correction:

- The GPS Mobile Unit should not be on your pet when the system is tested.
- Remove the GPS Mobile Unit before leaving the property.
- Before placing the GPS Mobile Unit on your pet, test the Boundary Area and Width after any change.
- Train your pet according to the instructions in the Invisible Fence® Brand training manuals. Complete all steps before allowing your pet to run free. Do not become overly confident if your pet has become conditioned to the Invisible Fence® Brand pet containment system sooner than expected.
- Your Invisible Fence® Brand Dealer has professionally installed your pet containment system and ensured it is working properly. You will want to perform periodic maintenance checks to make sure the system is properly functioning for your pet's containment.
- Check the Invisible Fence® Brand Base Station periodically to make sure it is operating properly. To do this, simply bring the Computer Collar® Unit to the edge of the containment field to verify function.
- The Base Station has visual and audible signals to warn of a system malfunction. The Base Station should be installed where such signals may be easily seen and heard. If the transmitter is installed by the customer in an enclosed box, or in a place not readily accessible to the customer, the customer will not benefit from the system's warning functions, for which Invisible Fence® Inc., as well as Invisible Fence® Distributors and Dealers, assume no responsibility.
- Do not attempt to service any Invisible Fence® Brand equipment. Refer all service to your authorized Invisible Fence® Brand Dealer. Only your authorized Invisible Fence® Brand Dealer should make adjustments to your GPS pet containment system.
- All Invisible Fence® Brand pet containment systems are designed for domesticated animal use only. Never attempt to use this product for any purpose not specifically described in this manual.

NOTICE

- If you have any questions about any aspect of your Invisible Fence® Brand GPS pet containment system, call your Invisible Fence® Brand Dealer immediately.
-

Congratulations on your purchase of the world’s premier pet containment solution, the Invisible Fence® Brand. When professionally installed, the Invisible Fence® Brand GPS pet containment system is backed with a one-year, money-back guarantee. The support of your Invisible Fence® Brand Dealer gives you peace of mind that your pet remains safe at home. Refer to the back of your sales contract for complete details.

Table of Contents

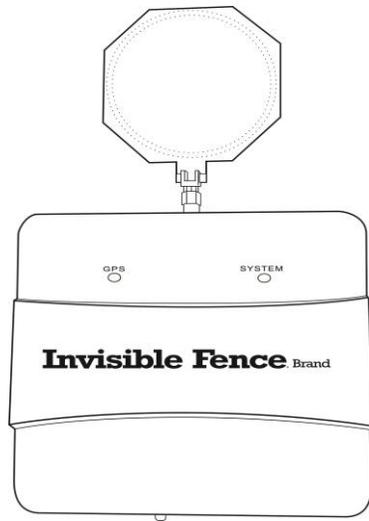
Components.....5

How the System Works.....5

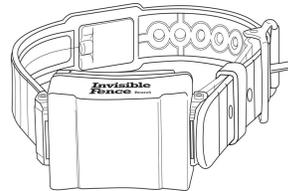
Operating Guide.....6

Troubleshooting.....11

Components



GPS Base Reference Unit



GPS Mobile Unit

How the System Works

When your pet approaches the established boundary, the GPS Mobile Unit generates a tone and correction to remind your pet of the boundary. With training and praise, your pet will quickly learn to avoid the established boundary.

Definition: A Correction is a training term used to describe an action taken to discourage unwanted pet behavior. The GPS Mobile Unit applies a correction when your pet crosses the boundary of an Invisible Fence® Brand electronic pet containment system. Corrections are used in combination with rewards to alter unwanted pet behavior.

A “Fence” is defined by posts and the line segments that connect consecutive posts. The pet will be contained within the area enclosed by the “Fence”. Each post consists of a pair that defines its location on the Earth (latitude, longitude). Posts are obtained from Google Maps™ mapping service and are entered and stored in the GPS Mobile Unit. The GPS Mobile Unit determines the pet’s position, speed, and course from an internal GPS receiver. These observations determine if the pet is violating one of the boundary tests and requires a warning correction. The Mobile Unit will take corrective action when any of the following occur:

- Anti-Linger Violation – The pet is lingering too close to the containment boundary.
- Time To Boundary Violation – The pet is approaching the containment boundary at a speed and course such that the anticipated time to the boundary is 3 seconds or less.
- Out Violation – The pet is outside of the containment area.

Operating Guide

GPS Base Station

Primary Function

- The GPS Base Station's primary function is to derive and supply GPS Mobile Units with GPS assistance data. Assistance data improves the GPS Mobile Units absolute accuracy and "Time to First Usable Fix". This data includes differential range corrections for all visible satellites, approximate GPS time, ephemeris data, and the ionosphere correction model. The GPS Base Station will also provide and alert tone for a GPS Mobile Unit escape. See **Tone Indicators** below.

Tone Indicators

- The GPS Base Station may emit three possible beep sequences.
 - Two beeps in response to a pushbutton Start Reference Acquisition. (Release button upon hearing the beeps)
 - A two second long beep is a Mobile Unit Escape Alarm and indicates that a Mobile Unit is outside the containment area by more than 30 feet.

Light Indicators

- The GPS Base Station LED (Left Light) reflects GPS signal quality.

<u>Light Display – Left Light</u>	<u>GPS Signal Quality</u>
Solid Green	Excellent
Fast Flash Green (4/second)	Good
Slow Flash Green (1/second)	Par
Fast Flash Yellow/Orange (4/second)	Sub-Par
Slow Flash Yellow/Orange (1/second)	Poor
Solid Red	Un-useable
Fast Flash Red (4/second)	Awaiting Usable Fix

- The Base System LED (Right Light) reflects base input voltage and mode.

<u>Light Display – Right Light</u>	<u>Input Voltage/Mode</u>
Solid Green	Normal Mode
Fast Flash Yellow/Orange (4/second)	Reference Acquisition Mode
Solid Red	Voltage is below acceptable threshold

GPS Mobile Unit

Primary Function

- The primary function of the GPS Mobile Unit is to contain the pet within the fence. It does this by correlating its position using GPS satellites to determine the position of the GPS Mobile Unit within the containment area.

Secondary Function

- The GPS Mobile Unit requests GPS assistance data and provides GPS Mobile Unit status information to the Base and Status Unit.
- The GPS Mobile Unit conserves energy to extend battery life. To conserve energy, the GPS Mobile Unit's radio is active only when necessary. Under certain conditions, the GPS Mobile Unit will also stop navigation in order to conserve energy and extend battery life. Motion is required to re-start navigation.

Fitting the GPS Mobile Unit

To work properly, the correction posts of the GPS Mobile Unit must touch your pet's skin.

- Position the collar strap high on your pet's neck with the GPS Mobile Unit under your pet's jaw.
- To avoid having a collar that is too tight on a thick-haired pet, thin some hair away in order to allow the correction posts to make contact with the skin. Do not shave the pet's neck.
- Tighten the collar strap of the GPS Mobile Unit appropriately. Adjust the collar strap so it is snug enough to slide only one finger between a correction post and your pet's skin.
- Adjust the fit of the GPS Mobile Unit as necessary as your pet's coat, weight, and age change. Your pet's coat may change from season to season.
- Allow your pet to become accustomed to its new GPS Mobile Unit. The collar must be removed each night during the first month of training. This ensures proper fit and avoids the possibility of skin irritation.
- After training is complete, remove your pet's GPS Mobile Unit each night if possible. This will help prevent irritation. However, if this is not possible, please check the tightness of the collar each time you feed your pet by removing the collar and then replacing it back on your pet.

Light Indicators

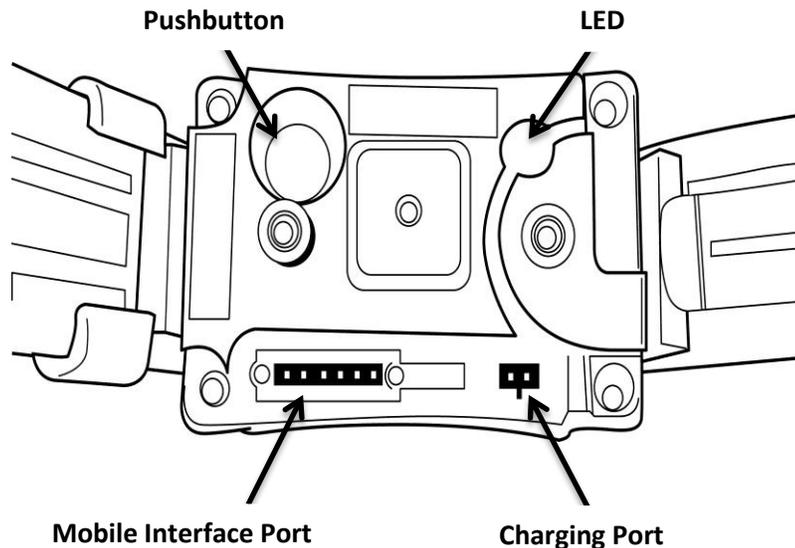
- Under normal operating conditions, the LED will periodically flash the following one or two flash Battery and GPS status indicators.
 - The first LED flash indicates Battery Status

<u>Indicator Flash</u>	<u>Battery Life Remaining</u>
Green	More than 16 hours remaining
Yellow	12 – 16 hours remaining
Red	Less than 12 hours remaining

- If no second LED flash occurs, the GPS Mobile Unit has stopped navigation. If a second LED flash occurs, the GPS Mobile Unit has started navigation; the color indicates GPS signal quality.

<u>Indicator Flash</u>	<u>GPS Signal Quality</u>
Green	High
Yellow	Par
Red	Signal Quality is un-useable

- You may initiate a Battery and GPS LED flash at any time by briefly pressing and releasing the pushbutton.



Tone Indicators

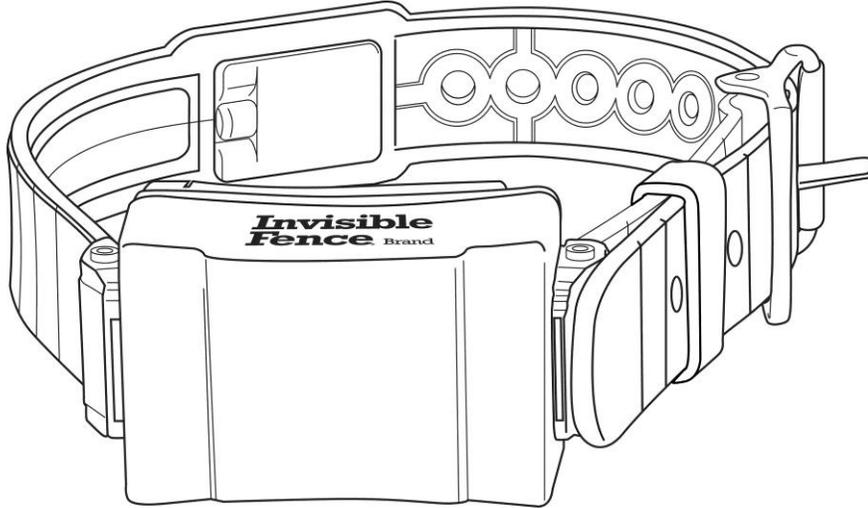
- When in normal containment mode the GPS Mobile Unit will generate tones associated with real time operation. Audible beeps emanating from the GPS Mobile Unit are intended to warn the pet that a static correction is imminent if the violation is not corrected. Training must therefore teach retreat as the desired response to any audible beep or tone. The duration of the warning beeps depends on the violation type. There is less warning as the urgency of the violation increases. Warning time accumulates and is inherited by any subsequent violation. Accumulated warning time is discarded only when there is no current violation, a static correction is always accompanied by a solid tone.
 - Two beeps per second indicate an Anti-Linger warning.
 - An Anti-Linger violation occurs when there has been recent or current movement at a speed greater than 1 foot per second and the pet is adjacent to the boundary.
 - Four beeps per second indicate a Time To Boundary warning.
 - A Time to Boundary violation occurs in response to movement from within and toward the boundary. There must be recent or current movement at a speed greater than 1.5 feet per second and on a course indicating the boundary will be reached within three seconds.
 - A solid tone indicates that the cumulative warning time has elapsed and a Static Correction is being delivered. (The level is dependent on the violation type; Anti-Linger, Time To Boundary, or Out violation)
 - An Out violation occurs when there has been recent or current movement and the pet is 4 or more feet out of the boundary but still within the disarm distance. An Out violation does allow for up to 1 second of accumulated warning time. In practice, however, one or more of the other violation times will likely have accumulated more than one second of warning time. When the accumulated warning time exceeds 1 second, the GPS Mobile Unit will emit a correction until the violation is corrected, the 30 second correction timeout is reached, or the pet is past the Disarm distance for 30 seconds. If either the 30 second continuous correction timeout or the 30 second distance timeout occurs, all warnings and corrections are disarmed.

Charge Indicator

- The charge indicator LED will illuminate when the battery charger is plugged into the charge port.
 - Red – Battery charging
 - Green – Battery charge complete (approximately 3.5 hours for a full charge)
 - Battery life should be approximately 36 to 48 hours. It is recommended that the GPS Mobile Unit is charged every 24 hours.

Pushbutton Commands

- The pushbutton is also used to shut down the GPS Mobile Unit. Press and hold the pushbutton for 2 to 3 seconds. During this time you will not hear any beeps. Keep the pushbutton depressed until you hear a repeating one beep per second. Release the pushbutton and the GPS Mobile Unit will shut down. To return the GPS Mobile Unit to normal operation, plug the Power Supply into the battery charge port to initiate a reset. The Power Supply must be plugged into a working AC outlet.



Periodic Maintenance Checks		
System Device	How Often	What to look for
GPS Mobile Unit	Daily	-Check Battery status light -Review chart for status indicators (see page 8).
Containment Boundary	Monthly and after a thunderstorm	-Verify the GPS signal is active throughout the property; see Monthly Containment Boundary Test below.

Monthly Containment Boundary Test

You should always be aware of your system's containment boundary. Check for activation in a minimum of four places throughout the containment system. Always check the boundary at the same four places along the containment boundary. Take the GPS Mobile Unit off your pet to check the containment boundary.

- Hold the GPS Mobile Unit with the GPS Antenna facing up. Do not cover the GPS antenna.
- Hold the GPS Mobile Unit about the same height and at the same angle as it will be when the pet is wearing it.
- Walk toward the containment boundary. The GPS Mobile Unit will activate when you reach the edge of the boundary. **DO NOT** touch the correction posts at this time!
- This system utilizes GPS technology. The boundary will be in a general area. Do not expect activation to occur at an exact spot each time.

If the GPS Mobile Unit does not sound a warning tone where the edge of the signal is supposed to be, immediately call your Invisible Fence® Brand Dealer for service. Use a leash (lead) or other means to contain your pet until all necessary service has been completed.

Troubleshooting

Symptom	Possible Cause	Action
Pet is getting out:	-Battery is dead in the GPS Mobile Unit -GPS Mobile Unit is not fit properly on the pet. -Power is not supplied to the transmitter or power is out. -Pet needs additional training.	-Charge the GPS Mobile Unit -See page 7 for properly fitting the collar. -Make sure transmitter power supply is plugged in. -Contact your Invisible Fence® Brand Dealer for additional pet training.
Pet will not enter the yard.	-Pet needs additional training.	-Contact your Invisible Fence® Brand Dealer for additional pet training.
GPS Mobile Unit will not respond to the Containment Boundary	-Battery is dead in the GPS Mobile Unit -Power is not supplied to the transmitter or power is out.	-Charge the GPS Mobile Unit -Make sure transmitter power supply is plugged in.

Battery Disposal

Separate collection of spent batteries is required in many regions; check the regulations in your area before discarding spent batteries. The GPS Mobile Unit operates on 1 rechargeable Lithium Ion Polymer (Li-ion) battery pack with a 3.7 Volt, 1200 mAh capacity.

Perchlorate Battery

Perchlorate Material – special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate.

Important Recycling Advice

Please respect the Waste Electrical and Electronics Equipment regulations in your country. This equipment must be recycled. If you no longer require this equipment, do not place it in the normal municipal waste system. Please return it to where it was purchased in order that it can be placed in our recycling system. If this is not possible, please contact your Invisible Fence® Brand Dealer.

Compliance

US

Model: Invisible Fence® GPS Containment Base Reference Unit FCC ID: KE3-3001097

Model: Invisible Fence® GPS 1.0 Containment Mobile Unit FCC ID: KE3-3002946

Model: Invisible Fence® GPS 2.0 Containment Mobile Unit FCC ID: KE3-3002946

This equipment utilizes the MURS band to provide data communication between the Base Reference Device, Wireless Diagnostic Tool and GPS Collar. The unlicensed use of the MURS band is authorized under part 95 Subpart J of the FCC rules. To insure continued compliance with FCC limits, Invisible Fence® Brand recommends that you only use antennas provided by Invisible Fence® Brand for use with your GPS Pet Containment System. Refer all servicing to your local Invisible Fence® Brand dealer. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Modification or changes to this equipment not expressly approved by Radio Systems® Corporation may void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a specific installation. If interference does occur to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Contact your local Invisible Fence® Brand dealer for help.

CAUTION: Unauthorized changes or modifications to the equipment may violate FCC regulations and could void the user's authority to operate the equipment.

§ 95.1303 Authorized locations.

(a) MURS operation is authorized:

(1) Anywhere CB station operation is permitted under § 95.405; and

(2) Aboard any vessel of the United States, with the permission of the captain, while the vessel is travelling either domestically or in international waters.

(b) MURS operation is not authorized aboard aircraft in flight.

(c) Anyone intending to operate a MURS unit on the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra in a manner that could pose an interference threat to the Arecibo Observatory shall notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or electronically, of the location of the unit. Operators may wish to consult interference guidelines, which will be provided by Cornell University. Operators who choose to transmit information electronically should e-mail to: *prcz@naic.edu*.

(1) The notification to the Interference Office, Arecibo Observatory shall be made 45 days prior to commencing operation of the unit. The notification shall state the geographical coordinates of the unit.

(2) After receipt of such notifications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections. The operator will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory. If the Commission determines that an operator has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, the unit may be allowed to operate.

[65 FR 60878, Oct. 13, 2000, as amended at 70 FR 31374, June 1, 2005]

§ 95.1307 Permissible communications.

(a) MURS stations may transmit voice or data signals as permitted in this subpart.

(b) A MURS station may transmit any emission type listed in § 95.631(j) of this chapter.

(c) MURS frequencies may be used for remote control and telemetering functions. MURS transmitters may not be operated in the continuous carrier transmit mode.

(d) MURS users shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.

[67 FR 63290, Oct. 11, 2002]

§ 95.1315 Antenna height restriction.

The highest point of any MURS antenna must not be more than 18.3 meters (60 feet) above the ground or 6.10 meters (20 feet) above the highest point of the structure on which it is mounted.

[67 FR 63290, Oct. 11, 2002]

§ 95.653 Instructions and warnings.

(a) A user's instruction manual must be supplied with each transmitter marketed, and one copy (a draft or preliminary copy is acceptable provided a final copy is provided when completed) must be forwarded to the FCC with each request for certification.

(b) The instruction manual must contain all information necessary for the proper installation and operation of the transmitter including:

(1) Instructions concerning all controls, adjustments and switches that may be operated or adjusted without resulting in a violation of the rules.

(2) Warnings concerning any adjustment that could result in a violation of the rules or that is recommended to be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users of those services.

(3) Warnings concerning the replacement of any transmitter component (crystal, semiconductor, etc.) that could result in a violation of the rules.

(4) For a CMRS transmitter, warnings concerning licensing requirements and information concerning license application procedures.

[53 FR 36789, Sept. 22, 1988. Redesignated at 61 FR 28769, June 6, 1996, and further redesignated at 61 FR 46567, Sept. 4, 1996; 63 FR 36610, July 7, 1998]

Dealer Name: _____

Dealer Phone: _____

Notes:

800-578-3647 (USA)
(865) 777-5404 (International)
400-14XX/1
©2013 Radio Systems® Corporation
All rights reserved.
Protected by Patents:
U.S.: #5868100
Patents Pending