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# GPS 3.0

## Wire-Free Pet Fence Solution



### Owner's Manual and Operating Guide



**Invisible  
Fence** Brand

**My Invisible Fence Brand Dealer:**

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

[InvisibleFence.com](http://InvisibleFence.com) | 800-578-3647

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# IMPORTANT PRECAUTIONS

Invisible Fence® Brand pet containment systems have contained over three 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.

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## **⚠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 Brand 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.
- 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**

### **Pressure Necrosis**

Millions of pets are comfortable while they wear the stainless steel contact points. Some pets can be sensitive to contact pressure. According to the Gale Encyclopedia of Medicine, pressure necrosis is defined as "open wounds that form whenever prolonged pressure is applied to skin covering bony outcrops of the body." Pressure necrosis is also known as pressure ulcers and bed-sores. Read and follow the important instructions on how to avoid pressure necrosis. Proper fit of the GPS 3.0 Mobile Collar Unit is important. If the collar is worn for too long or made too tight on your pet's neck, pressure necrosis could develop.

### **How to Prevent Pressure Necrosis**

These steps will help keep your pet protected and comfortable:

- Avoid leaving the GPS 3.0 Mobile Collar Unit on the pet for more than 12 hours per day.
- When possible, reposition the GPS 3.0 Mobile Collar Unit on the pet's neck every 1 to 2 hours.
- Check the fit to prevent excessive pressure, following the instructions in this manual.

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- Never connect a leash to the GPS 3.0 Mobile Collar Unit; it will cause excessive pressure on the GPS 3.0 Mobile Collar Unit. It may also break the GPS antenna cable.
  - Wash the pet's neck area and the stainless steel Contact Points of the GPS 3.0 Mobile Collar 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 until the skin is healed.
  - If the condition persists beyond 48 hours, see your veterinarian.

You may find after some time that your pet becomes accustomed to the GPS 3.0 Mobile Collar Unit. If so, you may relax some of these precautions. It is important, however, 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 contact points or switch to the longer contact points 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 3.0 Mobile Collar Unit should not be on your pet when the system is tested.
- Remove the GPS 3.0 Mobile Collar Unit before leaving the property.
- Before placing the GPS 3.0 Mobile Collar Unit on your pet, test the boundary area.
- 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 becomes 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.
- The GPS 3.0 Base Station has visual and audible signals to warn of a system malfunction. The GPS 3.0 Base Station should be installed where such signals may be easily seen and heard.
- 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 new GPS 3.0 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 3.0 System, call your Invisible Fence Brand Dealer immediately.



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Thank you for your purchase our exclusive GPS containment solution! When professionally installed and serviced, the System is covered by a 1-year money back guarantee and a 2-year warranty.

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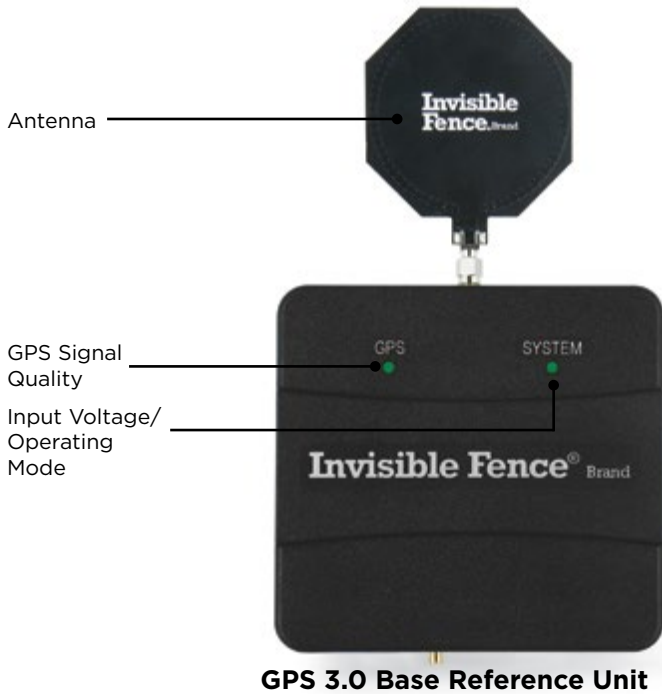
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# COMPONENTS



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## HOW DOES IT WORK?

When your pet approaches an established boundary (either the perimeter or internal Boundary), the GPS 3.0 Mobile Collar Unit generates warning beeps or, if necessary, a solid 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 poor pet behavior. Corrections are used in combination with rewards to alter their behavior.

- The GPS 3.0 System is installed using a computer; there are no wires to bury.
- Your pet's perimeter boundary can be customized to any shape and there is no maximum size limitation.
- Up to two internal boundaries can be set to protect your pets from special areas such as gardens and livestock areas.
- Your pet's boundaries are created using GPS coordinates to set posts along the specified boundary; these posts are obtained from online mapping services and are entered and stored in your pet's GPS 3.0 Mobile Collar Unit.
- The GPS 3.0 Mobile Collar Unit determines your pet's position, speed and course.
- This data determines if your pet is in danger of crossing an established boundary.
- If this is the case, the GPS 3.0 Mobile Collar Unit will issue a warning or static correction when any of the following occur:
  - **Anti-Linger Notification** – Your pet is lingering too close to a boundary.
  - **Time-To-Boundary Notification** – Your pet is approaching a boundary at a speed and course such that the anticipated time to the boundary is 3 seconds or less. This implies intent to cross an established boundary.
  - **Crossed-Boundary Notification** – Your pet is not in the designated safe area and is either outside of the perimeter boundary or inside an internal boundary.

# OPERATING GUIDE

## GPS 3.0 BASE REFERENCE UNIT

### How does it work?

The GPS 3.0 Base Unit's primary function is to obtain and supply the GPS 3.0 Mobile Collar Unit with GPS assistance data. Assistance data improves the GPS 3.0 Mobile Collar Unit's accuracy and includes differential range corrections for all visible satellites, approximate GPS time, positioning data, and the ionosphere correction model. The GPS 3.0 Base Unit will also provide an alert tone for a GPS 3.0 Mobile Collar Unit escape in distress (i.e. warnings and corrections are disarmed). See Tone Indicators below.



### Tone indicators

The GPS 3.0 Base Unit uses tones to communicate the following notifications:

Tone	Meaning
Two Tones	In response to holding down push button to start reference acquisition (button should be release after tone sounds)
Three Tones	Escape Distress Alarm (indicates that a GPS 3.0 Mobile Collar Unit is outside the boundary by more than 30 ft and that its warnings and corrections are disarmed) The GPS 3.0 Mobile Collar Unit must be within RF range.

### Light indicators

The GPS 3.0 Base Unit's Left LED reflects GPS signal quality:

Light Display - Left Light	GPS Signal Quality
Solid Green	Excellent
Fast Flash Green (4/second)	Good
Slow Flash Green (1/second)	Average
Fast Flash Yellow/Orange (4/second)	Fair
Slow Flash Yellow/Orange (1/second)	Poor
Solid Red	Signal quality is not usable
Fast Flash Red (4/second)	Awaiting usable fix

The GPS 3.0 Base Unit's Right LED reflects base input voltage and mode:

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

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# GPS 3.0 MOBILE COLLAR UNIT

## How does it work?

The GPS 3.0 Mobile Collar Unit protects your pet from crossing the perimeter and internal boundaries. The Collar Unit acquires its position using GPS satellites and applies a set of rules to arrive at your pet's actionable position and speed. The Collar Unit also determines if the actionable position and likely future position are within your pet's safe area.



The GPS 3.0 Mobile Collar Unit requests GPS assistance data from and provides status information to reference Base Units. To extend its battery life, the Collar Unit's radio is active only when necessary. Under certain conditions it will also stop navigation in order to conserve power and extend battery life. Motion is required to re-start navigation.

## Fitting the GPS 3.0 Mobile Collar Unit

To work properly, the stainless steel contact points of the GPS 3.0 Mobile Collar Unit must touch your pet's skin.

1. Position the collar strap high on your pet's neck with the GPS 3.0 Mobile Collar Unit under your pet's jaw.
2. To avoid having a collar that is too tight on a thick-haired pet, thin some hair away in order to allow the contact points to touch the skin. Do not shave your pet's neck.
3. Tighten the collar strap of the GPS 3.0 Mobile Collar Unit appropriately. Adjust the collar strap so it is snug enough to slide only one finger between a contact point and your pet's skin.
4. Adjust the fit of the GPS 3.0 Mobile Collar Unit as your pet's coat, weight, and age change. Your pet's coat may change from season to season.
5. Allow your pet to become accustomed to his new GPS 3.0 Mobile Collar 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.
6. After training is complete, remove your pet's GPS 3.0 Mobile Collar 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 two flash Battery and GPS status indicators.

The first LED flash indicates Battery Status

Indicator Flash	Battery Life Remaining (Approximate)
Green	More than 16 hours remaining
Yellow	12-16 hours remaining
Red	Less than 12 hours remaining

The second LED flash indicates GPS signal quality. If navigation is NOT started, the indicator will always be RED. To insure that navigation has been started, gently shake the unit.

Indicator Flash	GPS Signal Quality
Green	High
Yellow	Par
Red	Signal quality is not useable

## Tone indicators

When in normal operating mode the GPS 3.0 Mobile Collar Unit will generate tones associated with real time operation. Audible beeps emanating from the GPS 3.0 Mobile Collar Unit are intended to warn the pet that a correction is imminent if the action is not corrected. Training must therefore teach retreat as the desired response to any audible tone. The duration of the warning tone depends on the notification type.

As an additional measure of protection from running through the boundary, there is less warning as the urgency of the violation increases. The length of time for a warning tone accumulates and is inherited by any subsequent violation. Accumulated warning time is discarded only when there is no current violation. Static corrections are always accompanied by a solid tone.

Tone	Meaning
Two tones per second	Anti-Linger Notification
Four tones per second	Time-to-Boundary Notification
Solid Tone	Warning time has elapsed and static correction is being delivered

## Mobile Collar Checks

PERIODIC MAINTENANCE CHECKS		
System Device	How Often	What to look for
GPS 3.0 Mobile Collar Unit	Daily	<ul style="list-style-type: none"> <li>Check battery status light</li> <li>Visual inspection for damage</li> </ul>
Perimeter and internal boundaries	Monthly	<ul style="list-style-type: none"> <li>Verify the GPS signal is active throughout the property</li> <li>See monthly boundary test below</li> </ul>



# GPS 3.0 BATTERY CHARGER AND MODULE

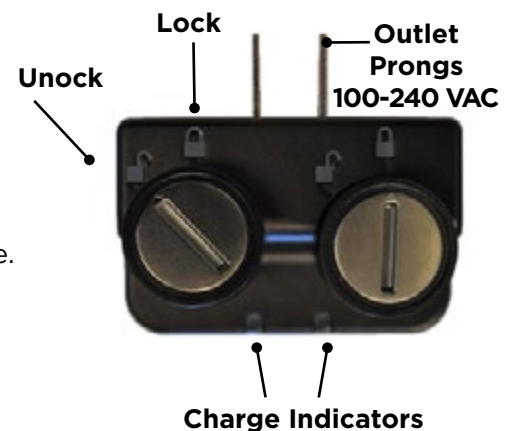
## How do they work?

The GPS 3.0 solution is designed for battery “Hot Swapping” to eliminate any downtime due to charging. One battery module will be powering the GPS 3.0 Mobile Collar Unit while a second module can be charging.

You will be provided with one battery charger per two GPS 3.0 Mobile Collar Units and two battery modules per collar unit. Battery life will vary depending on the activity of your pet. You can expect two to four days of protection per charge cycle and five years of protection before replacement is required. The battery modules, when used as a pair, will provide approximately five years of service before replacement is required. Overall time between charge and battery lifetime is dependent on operation environment. Contact your local Invisible Fence Brand dealership for replacement battery modules (Part# RIF00-15980).

The GPS Battery Module is specifically designed for the fit and power requirements of the GPS 3.0 Mobile Collar Unit. It utilizes a Panasonic Brand, 3.6 Volt 1900 mAh, lithium ion battery cell with safety circuits. The safety circuits provide protection against an overcharge, overdischarge or overcurrent event. DO NOT replace or modify the cell or safety circuits in this module. The use of any unauthorized power sources or modified GPS Battery Modules may damage the Collar Unit beyond repair.

The GPS Battery Charger is a 2-slot wall charger that is specifically designed for charging the GPS Battery Module. One charger is required for every two pets.



## Charging the GPS Battery Module

It is important to charge the GPS Battery Modules fully before first use.

1. Insert the GPS Battery Charger into a standard 120-volt outlet.
2. Place battery module into the charger with the slot pointing to the unlock position as shown.
3. Press down and rotate to the locked position. The charge indicator for that slot will light.

## Light indicators

The Charge Indicators will display the charge status when a battery module is in the charger and the charger is plugged into a working outlet.

INDICATOR	STATUS
Red	Charging in progress
Green	Charging complete

## Monthly boundary test

You should always be aware of your system's boundaries. Check for activation in a minimum of four places throughout the fence system. Always check the boundary at the same four places along the fence boundary. Take the GPS 3.0 Mobile Collar Unit off your pet to check the boundaries.

1. Hold the GPS 3.0 Mobile Collar Unit with the GPS antenna facing up. Do not cover the GPS antenna. See adjacent photo for example.
2. Walk parallel to the boundary in both directions. Gradually move closer to the boundary. The GPS 3.0 Mobile Collar Unit will activate when you reach the Anti-Linger distance to the boundary. DO NOT touch the contact points at this time!

Please note, 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 3.0 Mobile Collar Unit does not sound a warning tone approximately where the Anti-Linger area is supposed to be, check the GPS Status LED. If the GPS Status is RED, gently and continuously shake the Unit to start and maintain navigation. Allow 1 minute for the GPS Status to turn Yellow/Orange or GREEN. Retest the Anti-Linger area. If the GPS Status fails to turn Yellow/Orange or GREEN, 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	<ul style="list-style-type: none"> <li>• Battery level is too low in the GPS 3.0 Mobile Collar Unit</li> <li>• GPS 3.0 Mobile Collar Unit is not fit properly on the pet</li> <li>• GPS 3.0 Mobile Collar Unit's GPS cable or antenna may have failed (Red GPS status indicator)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace GPS Module battery</li> <li>• See page 65 for properly fitting the collar</li> <li>• Contact your Invisible Fence Brand Dealer for service or additional pet training</li> </ul>
Pet will not enter the yard	<ul style="list-style-type: none"> <li>• Pet needs additional training</li> </ul>	<ul style="list-style-type: none"> <li>• Contact your Invisible Fence Brand Dealer for additional pet training</li> </ul>
GPS 3.0 Mobile Collar Unit will not respond to the fence boundary	<ul style="list-style-type: none"> <li>• Battery is dead in the GPS 3.0 Mobile Collar Unit</li> <li>• GPS 3.0 Mobile Collar Unit's GPS cable or antenna may have failed (Red GPS status indicator)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace GPS Module battery</li> <li>• Contact your Invisible Fence Brand Dealer for service</li> </ul>



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# 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 Collar Unit operates on 1 rechargeable Lithium Ion Polymer (Li-ion) battery module with a 3.6 Volt, 1900 mAh capacity.

## 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.

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## Compliance

Model: Invisible Fence GPS Containment Base Reference Unit

FCC ID: KE3-3003048

Model: Invisible Fence GPS 3.0 Containment Mobile Collar Unit

FCC ID: KE3-3003170

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 ensure 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. A separation distance of at least 20 cm must be maintained between the antenna of this device and the body of a nearby person or user. 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.

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### § 95.307 Authorized locations.

Personal Radio Service stations generally may be operated in any location included within the descriptions in the following paragraphs in this section. In certain specific locations, however, coordination procedures or operating restrictions may apply, as set forth in §95.309. Operation of Personal Radio Service stations in any location outside of those described in the following paragraphs is not authorized by this part.

- (a) Within the United States and its territories. Those areas include the fifty United States and the District of Columbia, the Commonwealth of Puerto Rico, Navassa Island, the United States Virgin Islands (50 islets and cays), American Samoa (seven islands), Baker Island, the Commonwealth of Northern Mariana Islands, Guam Island and Howland Island, Jarvis Island, Johnston Island (Islets East, Johnston, North and Sand), Kingman Reef, Midway Island (Islets Eastern and Sand), Palmyra Island (more than 50 islets), and Wake Island (Islets Peale, Wake and Wilkes).
- (b) Aboard any vessel or aircraft registered in the United States. With the permission of the captain, while the vessel or aircraft is within or over the United States or its territories, U.S. territorial waters, or upon or over international waters.
- (c) Aboard any unregistered vessel or aircraft owned or operated by a United States citizen or company. While that vessel or aircraft is within or over the United States or its territories, U.S. territorial waters or upon or over international waters.
- (d) Other locations. Any other area of the world, except within the territorial limits of areas where radio services are regulated by:
  - (1) An agency of the United States other than the FCC. (You are subject to its rules.)
  - (2) Any foreign government. (You are subject to its rules.)

### § 95.2731 Permissible MURS uses.

The operator of a MURS station may use it for the purposes listed in this section.

- (a) MURS stations may be used to transmit voice, data or image signals.
- (b) MURS stations may be used for telecommand and telemetry functions.

### § 95.2741 Antenna height restriction.

The highest point of any MURS station 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. MURS station antennas must also meet the requirements in §95.317 regarding menaces to air navigation. See 47 CFR 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

### § 95.393 Instructions and warnings.

- (a) A user's instruction manual must be supplied with each transmitter that can be used in a Personal Radio Service.
- (b) The manual described in paragraph (a) of this section 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 FCC rules;
  - (2) Warnings concerning any adjustment that could result in a violation of FCC rules or that is recommended to be performed only by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the relevant radio service by an organization or committee representative of users of that service;
  - (3) Warnings concerning the replacement of any transmitter component (crystal, semiconductor, etc.) that could result in a violation of FCC rules; and
  - (4) For a transmitter that can only be operated with an FCC license, warnings concerning compliance with applicable licensing requirements and information concerning license application procedures.





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