



CUSTOMER SUPPORT

Distributed by United Yoram Inc. | Brooklyn, NY 11236
drfranklyns.com
support@drfranklyns.com
Instagram: @drfranklyns

DOCUMENT CONTROL

Brand: Dr. Franklyn's
Product: Transcutaneous Electrical Nerve Stimulator / Joint Stimulator
Model: JS-2
Factory reference: KTR-2492
Revision: 3.2
Issue date: September 2026
Limited warranty: 1 year
Expected product lifespan: 3 years

SCAN FOR PRODUCT DETAILS



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Keep this manual for future reference. The patient is the intended operator.

IMPORTANT BATTERY WARNING

This product includes battery-powered components. Follow all battery directions exactly.

- Remove and immediately recycle or dispose of used batteries according to local regulations. Keep batteries away from children.
- Do not dispose of batteries in household trash or incinerate them.
- Even used batteries may cause severe injury or death. Call a local poison control center for treatment information.
- Compatible button-cell battery type: CR2032. Nominal voltage: 3 V.
- Do not recharge non-rechargeable batteries.
- Do not force-discharge, recharge, disassemble, heat above the manufacturer's specified temperature, or incinerate. Venting, leakage, or explosion may cause chemical burns.
- Install batteries according to correct polarity (+ and -).
- Do not mix old and new batteries or different brands/types, including alkaline, carbon-zinc, and rechargeable batteries.
- Remove batteries from equipment not used for an extended period and dispose of them according to local regulations.
- Always secure the battery compartment completely. If it does not close securely, stop using the product, remove the batteries, and keep them away from children.

BUTTON-CELL INGESTION HAZARD

- A swallowed button cell or coin battery can cause internal chemical burns in as little as 2 hours and may result in death.
- Keep new and used batteries out of reach of children.
- Seek immediate medical attention if a battery is suspected to have been swallowed or inserted into any part of the body.



TRANSCUTANEOUS ELECTRICAL NERVE STIMULATOR

JOINT STIMULATOR



MODEL JS-2
KTR-2492

USER MANUAL

READ ALL INSTRUCTIONS COMPLETELY BEFORE USE

HEALTH | SUPPORT | RECOVERY

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READ BEFORE FIRST USE

Read the entire manual before operating the device. Keep it where it can be consulted during future use. The warnings, contraindications, electrode-placement restrictions, maintenance directions, and electromagnetic-compatibility information are part of the operating instructions.

The factory source uses both 'electronic' and 'electrical' terminology. This updated guide consistently uses the recognized term Transcutaneous Electrical Nerve Stimulator while retaining model KTR-2492 and the source-specified technical data.

PRODUCT AT A GLANCE



Actual Dr. Franklyn's main unit and LCD remote control.

Component	Purpose
JS-2 main unit	Generates the programmed electrical stimulation and provides Power / Intensity controls.
LCD remote control	Displays mode and treatment time; provides Power, +/-, and F controls.
Interchangeable electrode pad	Transfers the electrical pulses to the selected treatment area.
Battery / charging items	Power the main unit and remote according to the supplied configuration.

PACKAGE CONFIGURATION

The source manual identifies the device, electrode pad(s), batteries, remote control, charging cable, and electrode connecting wire. The exact pad shape and included accessories may vary by configuration; use only manufacturer-specified accessories.

UPDATED BATTERY CLARIFICATION

The source documentation identifies a rechargeable 3.7 V / 200 mAh lithium battery for the main unit, a CR2032 3 V button cell in its button-cell warning, and three AAA LR03 batteries for an applicable accessory configuration.

- Use only the battery type and polarity marked inside the battery compartment of the component supplied with your unit.
- Never substitute a battery merely because a different battery appears elsewhere in this manual.
- Do not recharge a non-rechargeable CR2032 or AAA battery.
- Recharge the main lithium-powered unit only from the specified 5 V DC / 100 mA input.

TREATMENT OVERVIEW

Setting	Source-specified value
TENS frequency	20-100 Hz
Pulse width	120 µs
Intensity	0-16 adjustable levels
Main-unit modes	3
Remote programs	6 Auto / 9 Manual
Session timer	15 minutes
Idle shutdown	Approximately 60 seconds

COMFORT AND CONTACT

Begin at intensity 0 or 1 and increase gradually only after the pad has full contact with clean, dry skin. The intelligent contact-detection function allows the unit to increase output toward the selected level when good contact is detected. Stimulation should remain comfortable; stop immediately if it becomes painful or causes skin irritation or other discomfort.

1. FOREWORD

Thank you for choosing the Dr. Franklyn's Transcutaneous Electrical Nerve Stimulator. Our goal is to help you live more comfortably with less pain. Read this manual carefully before use so you can operate the device correctly and obtain the best results. Keep this guide for future reference.

2. WARNINGS

- The long-term effects of chronic electrical stimulation are not known.
- Do not use if you have a cardiac pacemaker.
- Do not use if you have suspected or confirmed epilepsy or heart disease, or during pregnancy or menstruation.
- Do not use over hemorrhage following acute trauma or fracture, or over a wound that is still healing after surgery.
- Do not use on skin that is insensitive to heat or electrical stimulation.
- Do not use on a person with impaired consciousness or on a child who cannot communicate discomfort.
- Do not use over swelling, skin infection, skin disease, or phlebitis.
- Do not use on wet skin after showering, while sweating, or while sleeping.
- Do not use while driving or moving.
- Do not use if you have a metal allergy.

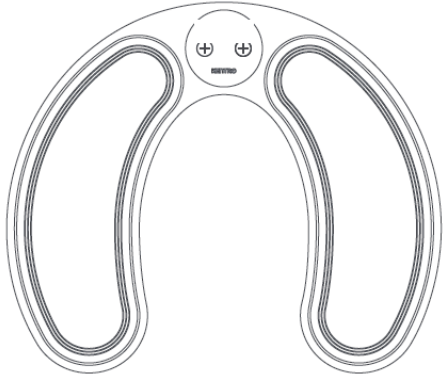
3. INTENDED USE

The device is indicated for temporary relief of pain associated with sore and aching muscles in the shoulders, waist, back, neck, upper extremities (arms), and lower extremities (legs) due to strain from exercise or normal household activities. It is intended for symptomatic relief and management of chronic, intractable pain and relief of pain associated with osteoarthritis.

4. PRODUCT INTRODUCTION

The KTR-2492 is a portable, battery-powered, multifunctional transcutaneous electrical nerve stimulation device. It delivers electrical pulses through electrode pads placed on the skin. The device can be operated from the main unit or the included remote control. The remote LCD displays the selected mode and treatment time. The remote provides 6 automatic modes and 9 manual modes: long-press F to select automatic or manual operation; short-press F to select a mode. The main stimulation module integrates Power, Intensity, and Mode controls. Accessories include electrode pads, batteries, and a remote control. Accessories should be changed only by an appropriately qualified person. The electrode pads comply with ISO 10993-5 (cytotoxicity) and ISO 10993-10 (irritation and sensitization) biocompatibility standards and are interchangeable.

5. PRIMARY STRUCTURE



Primary structure and representative electrode-pad arrangement.

6. MAIN FEATURES

- Portable design for personal health care.
- Intelligent electrode-pad contact detection and protection.
- Adjustable electrical pulse output with 16 intensity levels.
- Integrated body design with simple, clear controls.
- Rechargeable lithium battery with built-in power-protection circuit.
- Multiple stimulation programs for varied massage needs.

7. REQUIREMENTS & SPECIFICATIONS

Power source: Rechargeable lithium battery, 3.7 V / 200 mAh
Input: 5 V DC, 100 mA
Safety: Class II, Type BF / internally powered equipment
Impulse frequency: TENS 20-100 Hz
Pulse width: TENS 120 μs
Waveform: Square wave
DC component: None
Open/short circuit: Output is designed to tolerate open- and short-circuit conditions without degradation of performance.
Output amplitude: 0-16 levels
Treatment timer: 15 minutes
Main unit dimensions: Ø49.8 × 16 mm
Software version: A/0
Device service/shelf life: 2 years
Electrode-pad useful life: up to 50 uses; shelf life 2 years

ENVIRONMENTAL REQUIREMENTS

Condition	Temperature	Humidity	Pressure
Operation	+5°C to +40°C	0-80% RH	700-1060 hPa
Storage	-25°C to +55°C	0-93% RH	700-1060 hPa
Transport	-25°C to +55°C	0-93% RH	700-1060 hPa

At 20°C ambient temperature, allow approximately 2 hours for the product to become ready for intended use after storage at either the minimum or maximum specified storage temperature.

8. METHOD OF APPLICATION

1. Prepare. Before first use, attach the electrode pad to the stimulator main unit. Align the metal snaps, remove the protective film from the electrode pad, and place the assembled device on the intended treatment area.
2. Power on/off. Press the Power key. A beep sounds, output intensity defaults to 0, and the unit starts in its first operating mode. Press Power again to turn the unit off.
3. Charge. If the unit will not turn on, turns off automatically, or the buzzer sounds for 60 seconds, the battery requires attention/charging.
4. Adjust intensity. Press + to increase and - to decrease intensity. Each press changes the setting by one level and sounds a beep. Select the most comfortable level from 0-16.
- The device uses intelligent contact detection. Once good electrode-to-skin contact is detected, output increases gradually to the selected level.

MAIN UNIT QUICK REFERENCE



Control	Function
Power	Turn the unit on or off
+	Increase intensity; long-press changes main-unit mode
-	Decrease intensity

MODE SELECTION

Main unit: Three modes are available: Mode 1 - single-frequency massage; Mode 2 - multi-frequency massage; Mode 3 - multi-frequency kneading. While operating, long-press + to switch modes.

Whenever the mode changes, intensity automatically returns to Level 1 to prevent unexpectedly strong stimulation. Re-adjust to a comfortable level.

Remote control: Six automatic modes and nine manual modes are available. Long-press F to switch between automatic and manual functions. Short-press F to select the mode.

REMOTE CONTROL



Control	Function
+ / -	Increase or decrease intensity
F (short press)	Select mode
F (long press)	Switch Auto / Manual
Power	Turn the device on or off

SHUTDOWN & BATTERY USE

- A treatment lasts approximately 15 minutes; the device shuts down automatically at the end of the session. If the powered-on unit is not used within 60 seconds, it shuts down automatically. Press Power at any time to stop treatment manually.
- Rechargeable battery care
- The main device is powered by a rechargeable lithium battery and may be charged through the specified adapter/cable.
 - If the battery indicator flashes, charge the device promptly.
 - If the unit will not be used for one month or longer, fully charge it first.
 - Do not use the device above 45°C; high temperature can reduce battery performance and life.
 - Dispose of used batteries according to local environmental-protection requirements.

BEFORE EVERY SESSION

- Inspect the unit, pads, wires, and connectors for damage.
- Make sure skin is clean and dry.
- Confirm the electrode pad is firmly attached and in full contact with the skin.
- Start at intensity 0 or 1 and increase gradually.
- Stop immediately if you feel pain, dizziness, skin irritation, or other discomfort.

9. SAFETY PRECAUTIONS

The signal words below help prevent injury and product damage.

Signal	Meaning
Contraindication	Incorrect use presents a danger of death or serious injury.
Warning	Incorrect use may result in death or serious injury.
Attention	Incorrect use may result in personal injury or property damage.

- Do not use simultaneously with high-frequency surgical or therapeutic equipment. Burns may occur under the electrode pads and the stimulator may be damaged.
- Operation within approximately 1 m of shortwave or microwave therapy equipment may make the stimulator output unstable.
- Applying electrode pads near the thorax may increase the risk of cardiac fibrillation.
- Do not modify this equipment without manufacturer authorization.
- Lithium-battery replacement must be performed by service personnel designated and authorized by the manufacturer.
- Do not allow infants, persons unable to care for themselves, or persons with reduced sensitivity to use the device.
- Do not use accessories not specified by the manufacturer.
- Protect the product from sharp objects and prevent inhalation or swallowing of small parts, including the three AAA LR03 batteries specified for applicable accessories.

ELECTRODE PLACEMENT RESTRICTIONS

- Do not apply stimulation across or through the head, directly over the eyes, covering the mouth, on the front of the neck (especially the carotid sinus), across the chest and upper back, or through the chest/heart.
- Turn the unit off before moving it or changing the treatment area; otherwise a strong stimulation may occur.

CONTRAINDICATIONS

People who are pregnant or menstruating, have sensitive skin, heart disease, abnormal blood pressure, malignant tumors, cerebrovascular disease, an acute disease, or are under a physician's care must consult a physician before use.

- Do not use if you have impaired skin sensation or reduced sensitivity to heat/electrical stimulation.
- Do not use while bathing, sweating, or sleeping.
- People with cerebral hemorrhage must not use the product during an unstable phase. A person with sequelae may use it only under physician supervision.
- Do not use with purulent inflammation, acute blood poisoning, persistent high fever, or acute cardiovascular/cerebrovascular disease.
- Stop immediately and consult a physician if you feel unwell or develop a skin reaction.
- Do not use with a cardiac pacemaker, artificial heart-lung equipment, ECG equipment, or other life-supporting/medical electronic equipment.

GENERAL PRECAUTIONS

- Do not permit children or persons unable to communicate discomfort to use the product.
- Disconnect charging/power connections when use is complete or the product is not in use.
- Do not use in direct sunlight or near high heat, flammable materials, strong electromagnetic radiation, or humidity.
- Do not disassemble, repair, or modify the device. Doing so can cause malfunction or electric shock.
- Keep the power connection accessible so it can be disconnected quickly in an emergency.
- Check equipment before each use for exposed wires or accidental damage.
- Dust may affect performance. Clean the unit with a dry, soft cloth as needed.
- Check that the electrode is secure before each use. A loose electrode may affect performance or cause other problems.
- Do not perform maintenance or repair while the equipment is in use.

IMPORTANT

The patient is the intended operator. Use only as described in this manual. If symptoms persist or worsen, stop use and consult a qualified healthcare professional.

10. PRODUCT MAINTENANCE

- Before powering on, confirm the battery is correctly installed/charged and all connections are secure.
- If the unit is running but a key does not respond, turn it off, wait several seconds, and restart. If the issue remains, arrange service.
- If controls operate normally but no stimulation is felt, confirm the electrode pad directly contacts clean, bare skin and is not blocked by hair or clothing.
- Before cleaning, shut down and disconnect charging/power connections. Wipe with a soft cloth or towel slightly dampened with water, then dry.
- After each use, clean the electrode pad as directed. If especially dirty, wipe gently with a soft cloth lightly moistened with 75% medicinal alcohol, then dry.
- Store in a dry, ventilated location with good insulation.
- Handle carefully when moving the product; avoid shock and vibration.
- Periodically check battery condition and output. If operation is abnormal, stop using and arrange service.
- Protect the housing from abrasion.
- Only qualified personnel may disassemble the main unit. Unauthorized disassembly may cause electric shock, damage, or injury.

11. DISPOSAL

This therapeutic equipment is a medical device. When the device reaches the end of its useful life or can no longer be used, dispose of it according to applicable local laws and electronic/medical-device waste requirements.

12. ACCESSORIES & PARTS

Compatible electrode-pad options are listed below. Availability may vary by product configuration.

No.	Model	Size	Effective area	Material
1	EPAD-H01	125×55 mm	26 cm²	Hydrogel
2	EPAD-H02	130×60 mm	22 cm²	Hydrogel
3	EPAD-F01	176×105 mm	73 cm²	Hydrogel
4	EPAD-F02	166×166 mm	80 cm²	Hydrogel
5	EPAD-F03	192×160 mm	78 cm²	Hydrogel
6	EPAD-B01	240×65 mm	50 cm²	Hydrogel
7	EPAD-T01	393×110 mm	92 cm²	Hydrogel
8	EPAD-Z01	380×268 mm	140 cm²	Silver paste

12.2 Remote control
Source-specified accessory remote-control model: KTR-2491A.



Dr. Franklyn's remote-control appearance and screen layout.

13. GRAPHIC SYMBOLS

Symbol / Mark	Meaning
LOT	Production batch
REF	Product catalog/reference code
Factory	Manufacturer
Date	Date of manufacture
!	Caution
BF	Type BF applied part
WEEE	Separate collection of waste electrical and electronic equipment is required
IP22	Protected against solid objects ≥12 mm and dripping water when tilted up to 15°
Book	Refer to instruction manual/booklet
MD	Medical device

14. EXECUTIVE STANDARDS

The product conforms to the following standards and requirements:

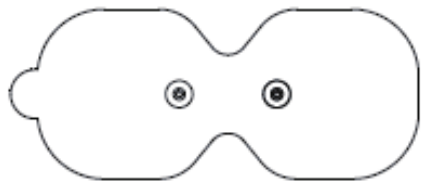
- IEC 60601-1:2005 + AMD1:2012 + AMD2:2020 - Medical electrical equipment, Part 1: General requirements for basic safety and essential performance.
- IEC 60601-1-11:2015 + AMD1:2020 - Collateral standard: Requirements for medical electrical equipment and systems used in the home healthcare environment.
- IEC 60601-2-10:2012 + AMD1:2016 - Particular requirements for the basic safety and essential performance of nerve and muscle stimulators.
- IEC 60601-1-2:2014 + AMD1:2020 - Electromagnetic disturbances: requirements and tests.

APPENDIX: EMC DECLARATION

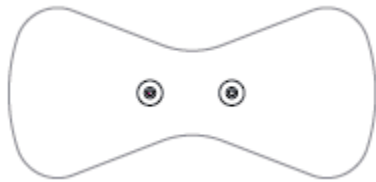
The equipment is intended for use in the electromagnetic environment specified in this manual. The customer or user should ensure that it is used in such an environment. The Transcutaneous Electrical Nerve Stimulator is suitable for use in a home healthcare environment.

- Do not use around strong electric or electromagnetic fields, including MRI rooms, or near mobile wireless communication devices. Improper environments may cause malfunction or damage.
- EMC/EMI compliance cannot be guaranteed with modified or non-specified cables.
- Do not use the system adjacent to or stacked with other equipment unless the recommended configuration is followed.
- Portable RF communication equipment, including antenna cables and external antennas, should be kept at least 30 cm from any part of the system and its specified cables.
- Use the specified electromagnetic environment and follow maintenance recommendations throughout the expected service life.

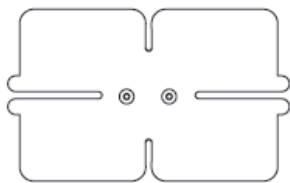
ELECTRODE PAD OPTIONS 1-4



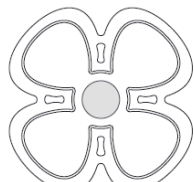
EPAD-H01 125 × 55 mm | 26 cm² | Hydrogel



EPAD-H02 130 × 60 mm | 22 cm² | Hydrogel

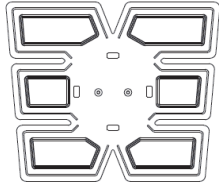


EPAD-F01 176 × 105 mm | 73 cm² | Hydrogel

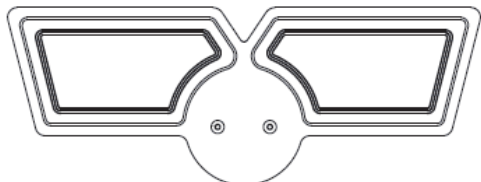


EPAD-F02 166 × 166 mm | 80 cm² | Hydrogel

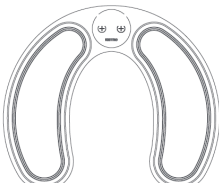
ELECTRODE PAD OPTIONS 5-8



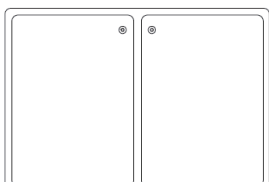
EPAD-F03 192 × 160 mm | 78 cm² | Hydrogel



EPAD-B01 240 × 65 mm | 50 cm² | Hydrogel



EPAD-T01 393 × 110 mm | 92 cm² | Hydrogel



EPAD-Z01 380 × 268 mm | 140 cm² | Silver paste

ELECTRODE PAD SELECTION

The source manual lists eight compatible pad formats so the customer can select a shape suited to the treatment area. Use only a pad specified by the manufacturer and confirm that its snaps/connection match the KTR-2492 main unit.

ATTACH AND APPLY

- Align the main unit's metal snaps with the pad and press together securely.
- Remove the electrode pad's protective film.
- Apply the complete conductive surface to clean, dry, bare skin at the intended treatment area.
- Do not place the pad across the head, eyes, mouth, front of neck, chest/heart, damaged skin, infected skin, or other prohibited locations.

INSPECT BEFORE USE

- Check for loose snaps, damaged conductors, exposed wires, dried or contaminated gel, or any other deterioration.
- Do not use a loose or damaged electrode pad; poor contact may affect performance or cause discomfort.

CLEANING AND SERVICE LIFE

- After each use, clean the pad as directed using a soft cloth or towel lightly dampened with water, then allow it to dry.
- If especially dirty, the source permits gentle wiping with a soft cloth lightly moistened with 75% medicinal alcohol, followed by drying.
- Source-specified electrode-pad useful life: up to 50 uses; shelf life: 2 years. Replace sooner if adhesion, contact, cleanliness, or physical condition is no longer acceptable.

ACCESSORY SAFETY

Accessories, electrode pads, batteries, and the remote control should be replaced only by an appropriately qualified person. Do not modify accessories or use non-specified cables, pads, transducers, or internal components.

EMC - SPECIFIED CABLES

Cable	Length	Shielded
Charging cable	0.5 / 1 m	No
Electrode connecting wire	1.2 m	No

TABLE 1 - EMISSIONS COMPLIANCE

Emissions test	Compliance	Electromagnetic environment / guidance
RF emissions CISPR 11	Group 1	RF energy is used only for internal functions; emissions are very low and unlikely to interfere with nearby electronics.
RF emissions CISPR 11	Class B	Suitable for domestic establishments and those connected to the public low-voltage supply network.
Harmonic emissions IEC 61000-3-2	Class A	Suitable for all establishments, including domestic establishments.
Voltage fluctuations / flicker IEC 61000-3-3	Complies	Suitable for connection to the public low-voltage network supplying domestic buildings.

Do not use accessories, transducers, internal component parts, or cables other than those specified by the manufacturer. Doing so may increase emissions, reduce electromagnetic immunity, or result in improper operation.

TABLE 2 - IMMUNITY COMPLIANCE

Phenomenon	Standard	Immunity test / compliance level
Electrostatic discharge	IEC 61000-4-2	±8 kV contact; ±2, ±4, ±8, ±15 kV air
Radiated RF EM fields	IEC 61000-4-3	3 V/m, 80 MHz-2.7 GHz, 80% AM at 1 kHz
RF wireless proximity fields	IEC 61000-4-3	See Table 3
Electrical fast transients / bursts	IEC 61000-4-4	±1 kV, 100 kHz repetition frequency
Conducted disturbances induced by RF fields	IEC 61000-4-6	3 V, 0.15-80 MHz; 6 V in ISM bands between 0.15 and 80 MHz; 80% AM at 1 kHz
Rated power-frequency magnetic fields	IEC 61000-4-8	30 A/m, 50 Hz or 60 Hz

TABLE 3 - RF WIRELESS IMMUNITY

Test MHz	Band MHz	Service	Modulation	Max W	Dist. m	V/m
385	380-390	TETRA 400	Pulse 18 Hz	1.8	0.3	27
450	430-470	GMRS 460 / FRS 460	FM ±5 kHz; 1 kHz sine	2	0.3	28
710/745/780	704-787	LTE 13, 17	Pulse 217 Hz	0.2	0.3	9
810/870/930	800-960	GSM 800/900; TETRA 800; IDEN 820; CDMA 850; LTE 5	Pulse 18 Hz	2	0.3	28

TABLE 3 - RF WIRELESS IMMUNITY (CONT.)

Test MHz	Band MHz	Service	Modulation	Max W	Dist. m	V/m
1720/1845/1970	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE 1, 3, 4, 25; UMTS	Pulse 217 Hz	2	0.3	28
2450	2400-2570	Bluetooth; WLAN 802.11 b/g/n; RFID 2450; LTE 7	Pulse 217 Hz	2	0.3	28
5240/5500/5785	5100-5800	WLAN 802.11 a/n	Pulse 217 Hz	0.2	0.3	9

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to two conditions: (1) this device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could 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 under Part 15 of the FCC Rules. These limits provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses, and can radiate RF energy. If not installed and used according to the instructions, it may interfere with radio communications. There is no guarantee that interference will not occur in a particular installation.

If interference to radio or television reception occurs, try: reorienting or relocating the receiving antenna; increasing separation between equipment and receiver; connecting the equipment to a different circuit; or consulting the dealer or an experienced radio/TV technician.

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