Pub. 42004-533G

GAI-TRONICS®
A HUBBELL COMPANY

HUBBCOM™ GSC3100/GSC4100
Dual-Port Flush-Mount Smart Controllers

TABLE OF CONTENTS

GAI-TRONICS®
A HUBBELL COMPANY

HUBBCOM™ GSC3100/GSC4100 Dual-Port Flush-Mount Smart Controllers

Confidentiality Notice

This installation manual contains sensitive business and technical information that is confidential and proprietary to GAI-Tronics. GAI-Tronics retains all intellectual property and other rights in or to the information contained herein, and such information may only be used in connection with the operation of your GAI-Tronics product or system. This manual may not be disclosed in any form, in whole or in part, directly or indirectly, to any third party.

General Information

This guide covers the installation of the HUBBCOM Dual-Port Flush-Mount Smart Controller, Models GSC3100 and GSC4100. The Model GSC3100 Smart Controller includes a handset. The Model GSC4100 Smart Controller is designed for hands-free operation and is not equipped with a handset (see Figure 1)). See the GAI-Tronics website at https://www.gai-tronics.com for applications, system specifications, warranty information, and the GUDA (GAI-Tronics Universal Device Application).

HUBBCOM smart controllers require configuration when placed into service. Use the GUDA (GAI-Tronics Universal Device Application) software to configure the smart controller for its intended purpose. Pub. 42004-531 provides instructions to obtain, install, and run the GUDA software. Refer to Pub. 42004-551 for information on HUBBCOM smart controller configuration parameters (see the Reference Documents section).

Important Safety Instructions

Important Safety Instructions

- **Read, follow, and retain instructions**—Read and follow all safety and operating instructions before installing or operating the unit. Retain instructions for future reference.
- **Heed warnings**—Adhere to all warnings on the unit and in the operating instructions.
- **Attachments**—Do not use attachments not recommended by the product manufacturer, as they may cause hazards.
- **Servicing**—Do not attempt to service this unit. Opening or removing covers may expose dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

⚠ **ATTENTION** ⚠ —Install equipment without modification and according to all applicable local, national, and international electrical codes. North America - Consult the National Electrical Code (NFPA 70), Canadian Standards Association (CSA 22.1), and local codes for specific requirements regarding your installation. Install Class 2 circuit wiring in accordance with the NEC.

Only trained, qualified, and competent personnel must install these devices. Installation must comply with state and national regulations, as well as safety practices for this type of equipment.

⚠ **WARNING** ⚠—Use only 24 V dc power supplies that conform to UL/CSA/CE Class II, Double Insulated supplies with over voltage and short circuit protection. Use only a dc source with a 50-watt maximum output or fuse the supply with a 2-amp fuse. EMI standards to Class B.

- **Onderhoud**—Probeer dit apparaat niet zelf te repareren. Het openen of verwijderen van afdekkingen kan u blootstellen aan gevaarlijke spanning of andere gevaren. Laat alle onderhoud over aan bevoegd onderhoudspersoneel.
- HUBBCOM Smart Controllers zijn alleen bedoeld voor gebruik binnenshuis.

⚠ AANDACHT ⚠—Gebruik alleen 24 VDC-voedingen die voldoen aan UL / CSA / CE Klasse II, dubbel geïsoleerde voedingen met overspanning en kortsluitbeveiliging. Gebruik alleen een DC-bron met een maximale output van 50 W of fuseer de voeding met een 2-ampère zekering. EMI-normen voor klasse B.

- **Dépannage**—N'essayez pas de réparer cet appareil vous-même. Ouvrir ou retirer les capots peut vous exposer à des tensions dangereuses ou à d'autres dangers. Confiez toute réparation à un personnel qualifié.
- Les contrôleurs intelligents HUBBCOM sont conçus pour une utilisation en intérieur uniquement.

⚠ **ATTENTION** ⚠—Utilisez uniquement des alimentations 24 Vcc conformes à UL / CSA / CE Classe II, des alimentations à double isolation avec protection contre les surtensions et les courts-circuits. Utilisez uniquement une source cc avec une sortie maximale de 50 watts ou fusionnez l'alimentation avec un fusible de 2 ampères. Normes EMI à la classe B.

- **Manutenzione**—non tentare di riparare l'unità da soli. L'apertura o la rimozione dei coperchi potrebbero esporre a tensioni pericolose o altri rischi. Rivolgersi a personale qualificato per l'assistenza.
- Gli HUBBCOM Smart Controller sono progettati esclusivamente per uso interno.

⚠ **AVVERTIMENTO** ⚠—Utilizzare solo alimentatori a 24 V cc conformi a UL / CSA / CE Classe II, alimentatori a doppio isolamento con protezione da sovratensione e cortocircuito. Utilizzare solo una fonte di corrente continua con un'uscita massima di 50 watt o collegare l'alimentazione con un fusibile da 2 A. Standard EMI per la classe B.

- **Mantenimiento**—no intente reparar esta unidad por sí mismo. Abrir o quitar las cubiertas puede exponerlo a un voltaje peligroso u otros peligros. Remita todo el servicio a personal de servicio calificado.
- Los controladores inteligentes HUBBCOM están diseñados para uso en interiores solamente.

⚠ **ADVERTENCIA** ⚠—Utilice solo fuentes de alimentación de 24 V cc que cumplan con UL / CSA / CE Clase II, fuentes con doble aislamiento con sobretensión y protección contra cortocircuitos. Utilice solo una fuente de CC con una salida máxima de 50 vatios o fusione la fuente con un fusible de 2 amperios. Estándares EMI a Clase B.

Security Hardware

The HUBBCOM smart controllers described in this manual are vandal resistant. Security screws attach the front panel of each smart controller to its enclosure. Use a GAI-Tronics Model 233-001 security screwdriver or Torx T-25 security head tip (sold separately) to install the telephone.

Installation

Flush mount HUBBCOM smart controllers in a wall or stanchion using the included backbox or surface mount them using a GAI-Tronics Model 236 Series or Model 238-001 Stainless-Steel Surface-Mount Enclosure (sold separately).

NOTE: HUBBCOM devices require access to an NTP (network time protocol) server.

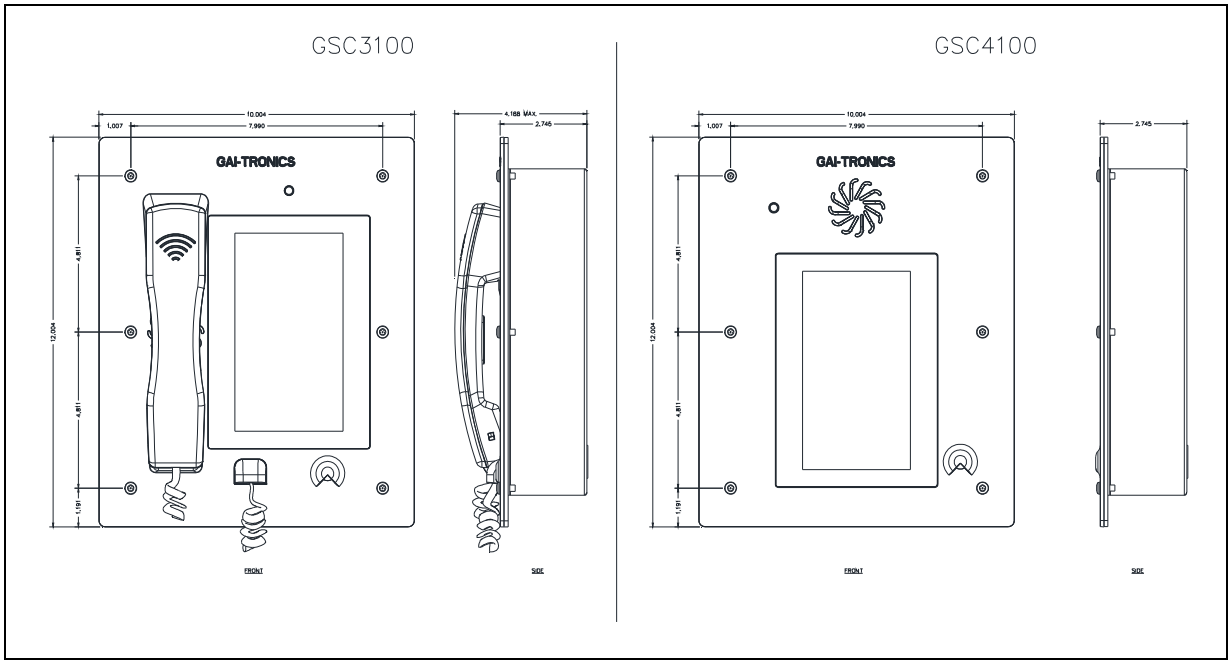

Figure 1. HUBBCOM Model GSC3100 and Model GSC4100 Smart Controllers

Flush-Mount Installations

Use the supplied backbox when mounting the HUBBCOM smart controller in a GAI-Tronics Model 234 Series Tower and for flush-mount installations:

1. Remove the backbox from the smart controller by removing the six #10-32 security screws and washers holding them together.
2. Remove a tapered plug from one of the rear cable entry holes in the backbox.
3. Install a cable strain relief cable fitting to the box.
4. Feed the Ethernet cable and all additional cables through the cable fitting.
5. Mount the backbox to the structure using appropriate hardware (see Figure 3 for cutout dimensions).
6. Complete all necessary cable terminations (see the Wiring section).
7. Secure the smart controller to the backbox mounting flanges using the six security screws with washers removed in Step 1.
8. Tighten the screws to 10–12 in·lb.

Surface Mount Installations

Use a GAI-Tronics Model 236 Series or Model 238-001 Enclosure to surface mount the HUBBCOM smart controller:

1. Refer to Pub. 42004-285 for the Model 236 Series or Pub. 42004-434 for the Model 238-001 backboxes to install the surface-mount enclosure (see the Reference Documents section). GAI-Tronics publications are located on the GAI-Tronics website at https://www/gai-tronics.com.
2. Remove and discard the backbox installed on the smart controller by removing the six security screws and washers. Retain the six security screws and washers.
3. Complete all necessary cable terminations (see the Wiring section).
4. Secure the smart controller to the surface-mount enclosure using the six security screws and washers removed in Step 2.
5. Tighten the screws to 10–12 in·lb.

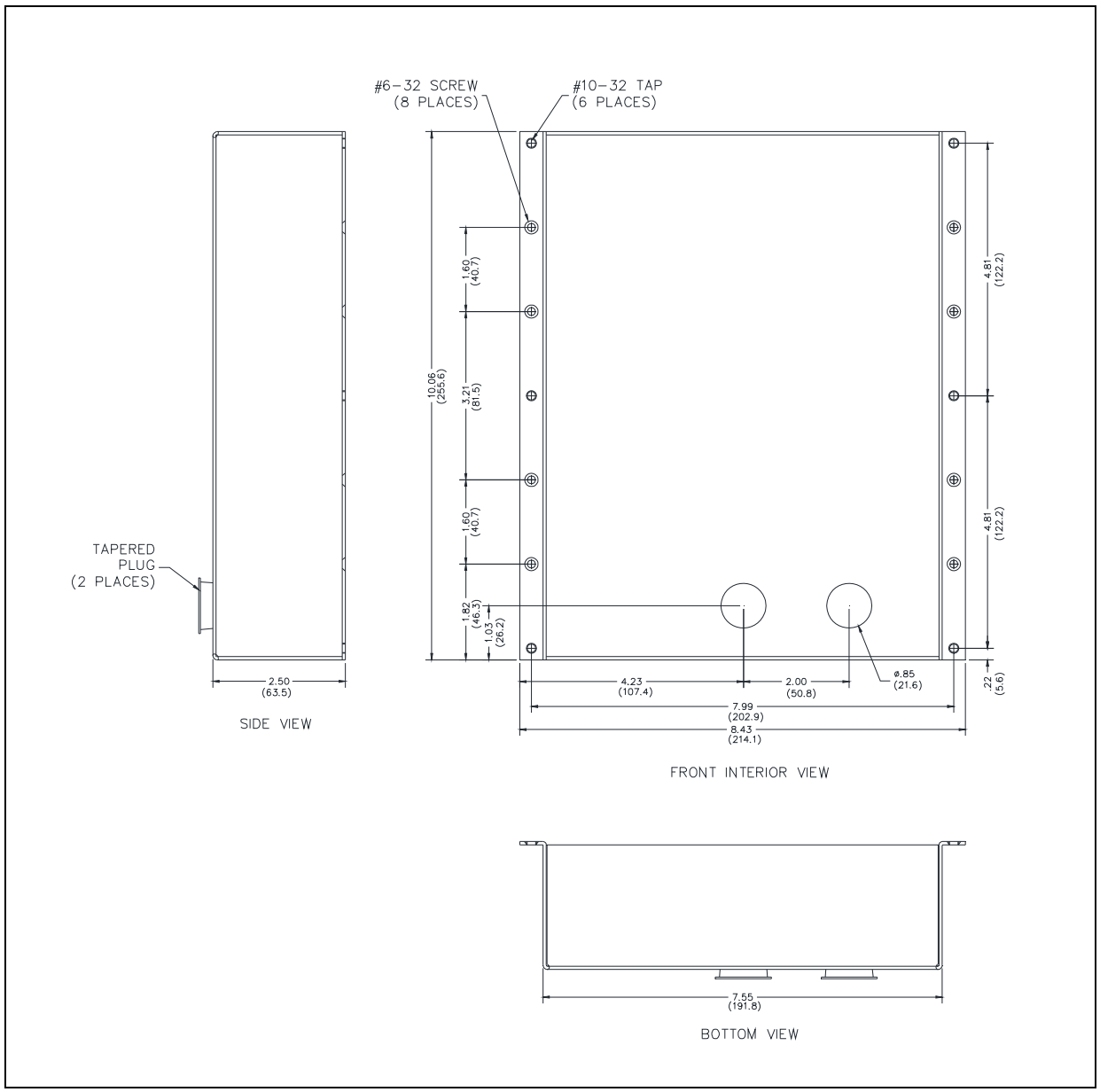

Figure 2. Flush-Mount Smart Controller Back Box Mounting Details

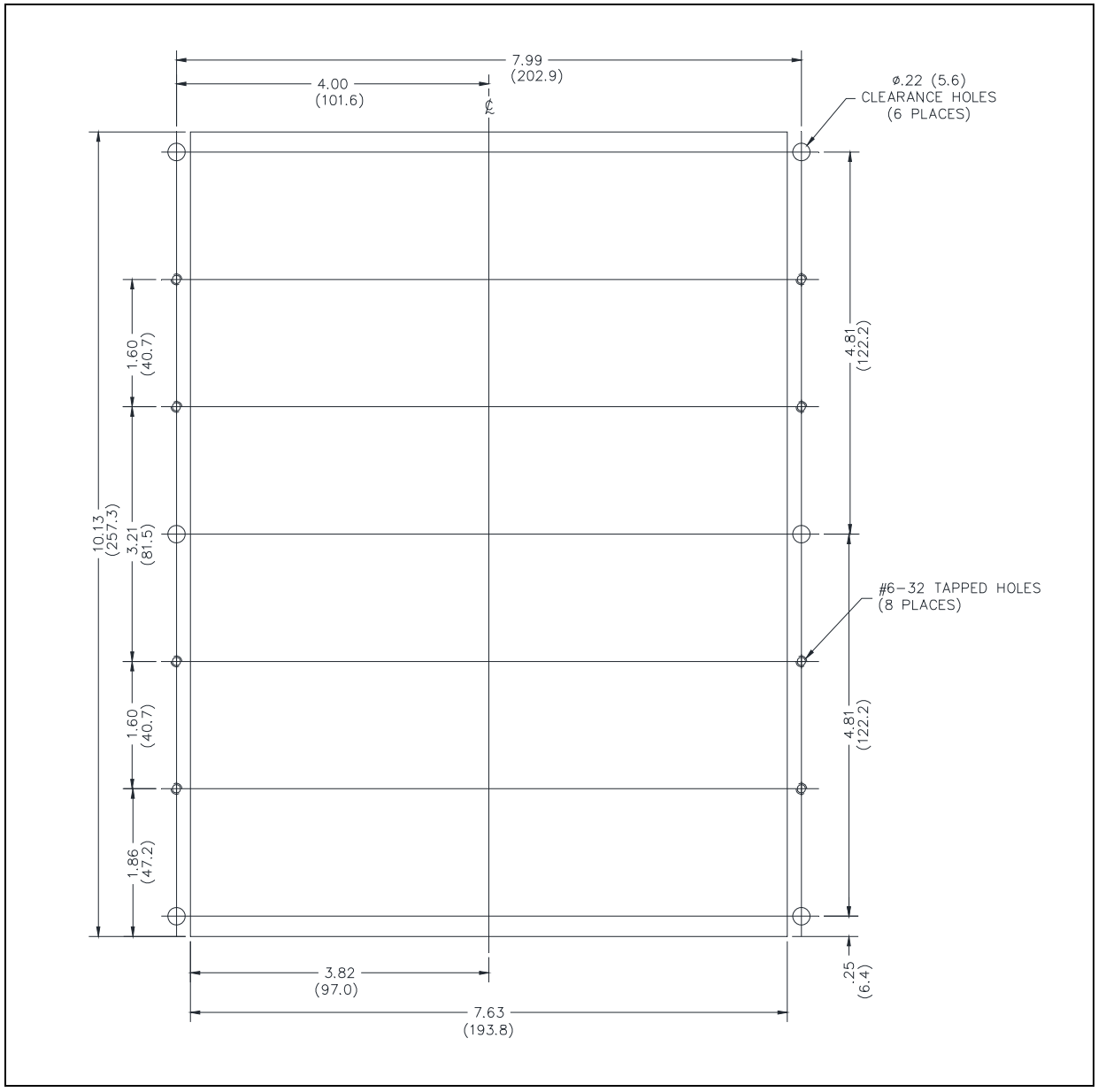

Figure 3. Flush-Mount Cutout Details

Wiring

HUBBCOM smart controllers have quick release terminal blocks that accept 18–24 AWG wires. Release wires from the terminal block by pressing the quick release button above the terminal.

NOTE: Two clamp on ferrite cores are supplied with the smart controller. Double wrap all wires terminating to terminal blocks TB1 and/or TB2 around a ferrite core. Install the clamp on ferrite cores as close as possible to the terminal blocks.

RTU Input/Output

Terminal block TB1 is for optional RTU I/O (Remote Terminal Unit Input/Output) functionality. Complete the following steps to terminate the RTU I/O cables:

1. Install appropriately sized ferrules onto the wire ends.

2. Install a clamp on ferrite core around all wires (double wrap) terminating to TB1 as close as possible to the terminal block.
3. Insert each wire into the correct quick release terminal (see Table 1).

Table 1. Terminal Block TB1—RTU I/O

Pin	Label	Description
1	GND	RTU Input One Ground
2	IN1	RTU Input One
3	GND	RTU Input Two Ground
4	IN2	RTU Input Two
5	OUT1+	RTU Output One +
6	OUT1(−)	RTU Output One −
7	OUT2(−)	RTU Output Two −
8	OUT2+	RTU Output Two +

RS-485/Weigand and External Speaker Connections

Terminal block TB2 is for optional RS-485 or Weigand D0/D1 and external speaker connections. Complete the following steps to terminate the RS-485/Weigand and/or external speaker connections:

NOTE: Smart controllers with external speakers require external 24 V dc power.

1. Install appropriately sized ferrules onto the wire ends.
2. Install a clamp on ferrite core around all wires (double wrap) terminating to TB2 as close as possible to the terminal block.
3. Insert each wire into the correct quick release terminal (see Table 2).

Table 2. Terminal Block TB2—RS-485/Weigand and External Speaker

Pin	Label	Description
1	GND	RS485 Ground
2	RS485B	RS485 B/Weigand D1
3	RS485A	RS485 A/Weigand D0
4	SPKR−	External Speaker −
5	SPKR+	External Speaker +

Ethernet

HUBBCOM smart controllers have dual Ethernet ports. Use the RJ45 jack furthest from the USB port to connect to the Ethernet network. The RJ45 jack closest to the USB port can be used to connect a PC.

1. Plug the Ethernet cable from the network into the RJ45 jack furthest from the USB port.
2. Install a clamp on ferrite core as close as possible to the RJ45 plug.
3. (Optional) Plug an Ethernet cable from a PC into the remaining RJ45 jack.

24 V DC Power

Use external 24 V dc power in place of POE (*optional*) or for smart controllers with external speaker hook-ups (*required*). Complete the following steps to terminate the 24 V dc power source to the smart controller:

1. Install appropriately sized ferrules onto the wire ends.
2. Insert each wire into the correct quick release terminal (see Table 3).

Table 3. Terminal Block TB3—24 V DC Power

Pin	Label	Description
TB3-1	+24V	24 V dc Positive
TB3-2	GND	Ground

Antenna

Use the provided SMA (Sub-Miniature connector A) coaxial connector to connect an antenna.

NOTE: Connecting a HUBBCOM smart controller via WiFi disables the secondary Ethernet port.

NOTE: Use a customer-supplied antenna in flush-mount installations. FCC, IC, ETSI/CE, and TELEC Certified with PCB, Dipole, Chip, and PIFA Antennae. GAI-Tronics Kit No. 12840-001 (purchased separately) meets the antenna requirements.

Service and Spare Parts

Contact a regional service center for assistance if the equipment requires service or spare parts. A return authorization number (RA#) will be issued for required service. Ship equipment prepaid to GAI-Tronics with an RA# and a purchase order number. Repair or replacement is made in accordance with GAI-Tronics' warranty policy if the equipment is under warranty. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts. Call 800-492-1212 inside the USA or 610-777-1374 outside the USA for help with identifying the regional service center closest to you.

Reference Documents

GAI-Tronics' publications are located on the GAI-Tronics website at https://www/gai-tronics.com.

GAI-Tronics Universal Device Application 42004-531
HUBBCOM Device Configuration Guide 42004-551
Model 236-001 Series Surface-Mount Telephone Enclosures 42004-285
238-001 Series Stainless Steel Surface-Mount Enclosures 42004-434

Specifications

Wi-Fi operating frequency range ..... 2.412–2.462 GHz
Temperature Range ..... 32–122 °F (0–50 °C)

Approvals

Compliance to Standard

CE

EMC emissions to Class B..... EN55032/FCC Part15B/ICES-003

Immunity..... EN55035

Assessment risk of exposure..... EN62311

Product Safety Assessment..... UL/IEC62368-1

Contains FCC ID: Z64-WL18DBMOD and IC: 4511-WL18DBMOD

NOTE: 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 particular installation. If this equipment does cause harmful interference 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 receiver.
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- consult the dealer or an experienced radio/tv technician for help.