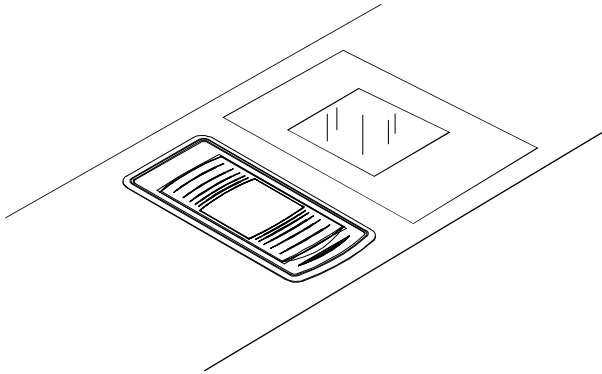


Scan-Thru™ Platform Proximity Deactivator

ZBSTP-PK-1 Power Pack

ZBSTP-PP Power Pad Antenna



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About this Guide

This guide explains installation configurations, requirements, and specifications for the Scan-Thru Platform (STP) proximity deactivator. Other related documents are:

- Installation Guide, 8000-2599-02
- Setup and Service Guide, 8000-2599-11

Note: The exact placement of the deactivator will depend on customer requirements. See your Sensormatic representative for this information.

If you need assistance...

Call Sensormatic Customer Support at:

1-800-543-9740

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About the Deactivator

The STP Deactivator (Figure 1) reliably deactivates Sensormatic UltraStrip II and Ultrastrip III security labels during the bar-code scanning process when:

- Installed immediately downstream from the bar-code scanner.
- UltraStrip II and III security labels are properly applied to items
- Labeled items are moved properly across the antenna on their way to the bag well or bagging station.

The deactivator consists of a hidden power pack, a countertop antenna with interconnect cable.

- **ZBSTP-PK-1 power pack** controls antenna operation. At the rear of the pack is an ac receptacle for an 3m (10') power cord. In front is a power on LED; connections for the interconnect cable, an optional remote LED board or remote indicator module (see options), a laptop configurator, POS integration, and RS485 port; and DIP switches (SW1) for phase and sensitivity adjustments. A bracket enables the pack to attach to the underside of a countertop.
- **ZBSTP-PP Power Pad antenna** generates a 15cm (6") (???-to be verified) high by 20cm (8") wide magnetic field above its surface to detect and deactivate UltraStrip II security labels.

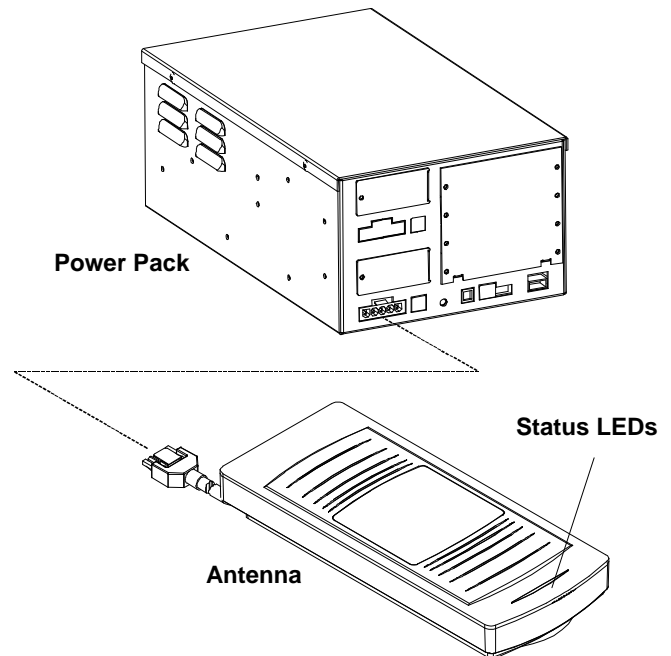
The antenna can be placed on the countertop, or using various brackets, mounted flush with the countertop, under the countertop, or when counter space is not available, over or on the side of the bagwell.

The attached 2.5m (8') interconnect cable carries the label signal to the pack and the deactivate pulse to the antenna.

CAUTION: The antenna cannot deactivate through metal. Do not place the antenna on, under, or near ferrous metal or cold-rolled steel.

Optional status LEDs on the antenna indicate power on (green), security label deactivation (orange), and errors (red). An adjustable audio tone provides additional feedback that deactivation occurred. A second cable carries deactivator status signals to the LEDs in the antenna, or to a remote alarm, if used.

Figure 1. STP deactivator



Magnetic Media Safe Mode

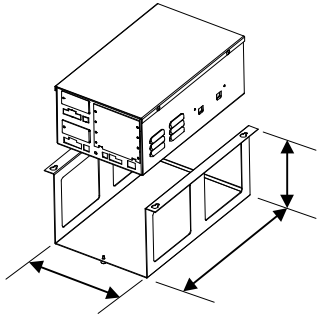
The magnetic field can be reduced before passing labeled magnetic media over the antenna, thus protecting the media from the deactivation field. This can be done manually using an optional footswitch. Status LEDs do not indicate when the field is reduced.

Options

The following options can be ordered:

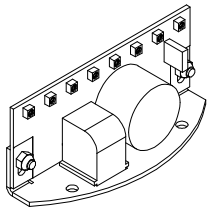
ZBSTP-PP-B power pack mounting bracket (Figure 2) enables the power pack to attach to the underside of a countertop.

Figure 2. Power pack mounting bracket



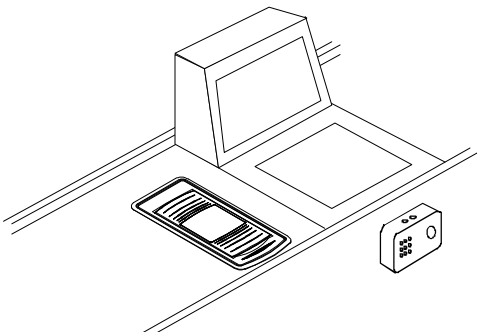
ZBSTP-PP-IB indicator board (Figure 3) plugs into the bottom of the antenna to provide an audio/visual indication of operation. LEDs are visible through the top of the antenna. A cable connects the board to the power pack.

Figure 3. Indicator board



Remote Alarm Module (Figure 4) replaces the indicator board to position status LEDs closer to the operator. A cable connects the module to the power pack.

Figure 4. Remote indicator module

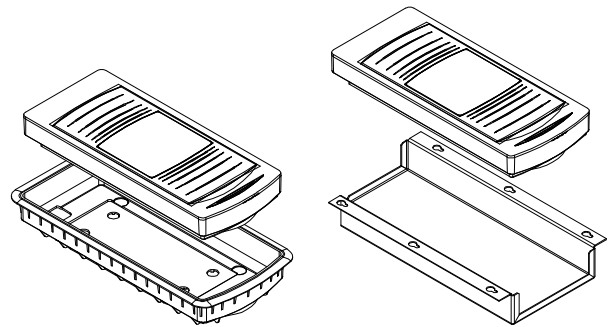


Antenna mounting brackets (Figure 5) are used to mount the antenna flush with the countertop, under the countertop, or when counter space is not available, over or on the side of the bagwell. These brackets are as follows:

- ZBSTP-PP-B1 flush mount tray
- ZBSTP-PP-B2 under counter bracket
- ZBSTP-PP-B3 cantilever bracket (for bagwell)
- ZBSTP-PP-B4 flip bracket (for bagwell)

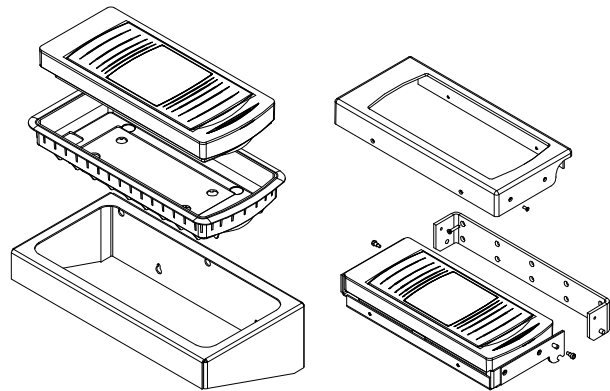
Note: Countertop mounting requires no additional bracketry.

Figure 5. Antenna mounting brackets



Flush Mount Tray

Under Counter Bracket



Cantilever Bracket

Flip Down Bracket

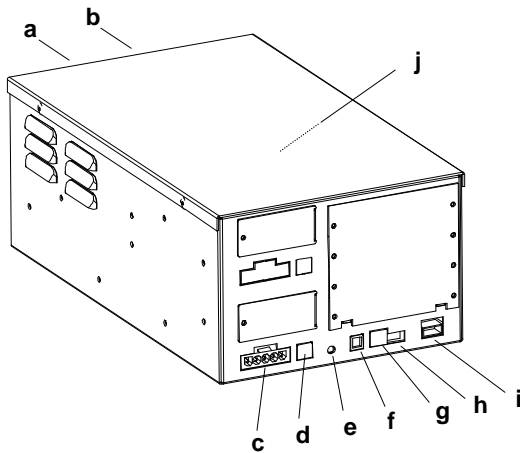
	L	W	H
Flush Mount Tray	430mm	201mm	56mm
Under Counter Brkt	397mm	226mm	57mm
Cantilever Bracket	451mm	236mm	125mm
Flip Down Bracket	425mm	195mm	54mm

Component Description

ZBSTPPK1 power pack (Figure 6). The pack contains the following components:

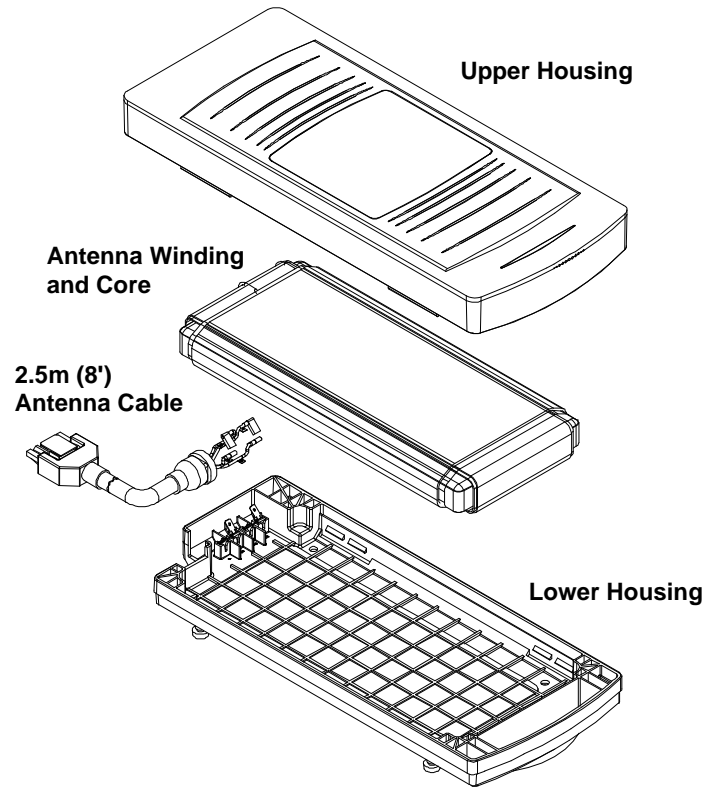
- a. **AC input.** Automatically adjusts for any input voltage from 100 to 250Vac and for 50/60Hz.
- b. **On/Off switch.** Turns power on and off.
- c. **P16.** Deactivation cable receptacle.
- d. **P15.** Indicator board receptacle.
- e. **DS1.** Power on indicator.
- f. **P12.** RS-232 software configurator port.
- g. **P9.** Scan Link I/O port.
- h. **SW1.** DIP switches for ac phase and gain adjustments.
- i. **TB1.** RS485 port.
- j. **Antenna tuning jumpers.** Inside the box.

Figure 6. Power pack components



Power Pad Antenna (Figure 7). Is a non-serviceable iron core assembly inside a plastic shell. The bottom of the antenna contains a well for the optional audio/visual indicator board and a receptacle for the deactivation cable.

Figure 7. Power Pad antenna



IMPORTANT SAFEGUARDS

Please observe the following safeguards before you begin installation or service.

Hazardous areas.

DO NOT install deactivator in hazardous areas where highly combustible or explosive products are stored or used.

RISK OF ELECTRIC SHOCK!

Keep the power cord and interconnect cable away from cash drawers and other items whose operation may pinch or otherwise damage them. Failure to do so can result in damage to equipment or injury to people nearby.

Ac source must be:

- Isolated from neon signs, motors, computers, cash registers, terminals, or data communications equipment
- Unswitched with less than 0.5Vac between neutral and ground
- Within 1.8m (6') of power pack to accommodate 3m (10') long power cord.

Each power pack requires its own electrical outlet.

Interference with nearby metal and electronic equipment.

- Fields emitted by the antenna cannot pass through metal. Also, ferrous metal surrounding the antenna can distort the field and reduce detection range.

Note: If you must place the antenna on ferrous metal, then place an aluminum plate behind the antenna to minimize absorption of the field.

- Computer monitors, TVs, switching power supplies and neon displays can affect deactivator operation. Keep the antenna away from these devices whenever possible.

Interference with magnetic readers and CRT monitors.

- Antenna fields may affect the operation of magnetic check and card readers (alone or in keyboards).
- Antenna fields may cause CRT images within 1.8m (6') to quiver. LCD and LED displays are not affected.

Note: If antenna fields cause interference, ask the customer if they accept it. If not, move the antenna to eliminate the interference. If this cannot be done, contact your Sensor-matic technical support specialist for guidance.

Pre-Install Preparation

To ensure the deactivator performs reliably:

- Have electrical work comply with latest national electrical code, national fire code, and all applicable local codes and ordinances.
- Coordinate work with other trades to avoid interference.
- Verify existing site conditions and coordinate with the owner's representative and appropriate utilities as required.
- Obtain copies of all related plans, specifications, shop drawings and addenda to schedule and coordinate related work.
- Thoroughly review the project to ensure that all work meets or exceeds the above requirements. Bring alleged discrepancies to the attention of Sensormatic Electronics.

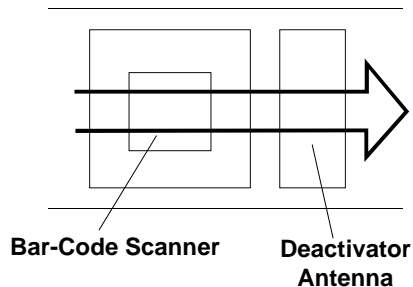
Also, follow procedures listed next in this document:

- Perform a site survey
- Note maximum pedestal separation at exits
- Ensure label application guidelines are followed
- Ensure scanning/deactivation guidelines are followed.

Site Survey

Placing the antenna immediately downstream from the bar-code scanner (Figure 8) places the deactivation field in line with the checker's natural arm movement.

Figure 8. Deactivator antenna location



To determine the best mounting solution, do the following:

- Obtain a drawing showing the dimensions of the checkstand.
- Describe the checkout process. If possible, videotape the process for clarification.
- Photograph the antenna in its installed position.

Also note the following:

- If shelf or countertop is adjacent to the bar-code scanner, install the antenna under or flush in the countertop.
- Is the countertop made of ferrous metal? If it is, and you must install the antenna on the countertop, then place an aluminum plate behind the antenna to minimize absorption of the field.
- If installing the antenna in a bagwell, ensure the prongs holding the bag will not shift and the bag will be as close to the antenna as possible.
If wall of bagwell is steel, use 3/4-inch plywood (not provided) to stiffen it and to provide a solid anchor for bracket's mounting screws (you may have to remove the scanner to do this). Plywood should be at least 22.9cm (9") wide. Determine its length by measuring from top of mounting bracket to base of wall inside counter.
- Metal around the antenna can deflect or distort the deactivate field. Try pre-installing the antenna to see the effects.

- The 2.3m (7.5') power cord cannot interfere with the operation of cash drawers or conveyor belts or interfere with operation, maintenance or removal of equipment.

Forward this information to Corporate Technical Support to establish a library of installations and to facilitate support.

Note: If the mounting brackets available cannot be used, consider a custom solution. A custom solution involves a process that usually takes two to three months from initial request to delivery, and is as follows:

1. You initiate a request for a custom solution and send site-specific data to Corporate Technical Support.
2. Development team analyzes photographs of the checkstand (videos are extremely helpful to demonstrate merchandise handling).
3. In some cases, representatives from the team conduct an on-site analysis to evaluate initial proposals and gather additional data.
4. A Request for Product Modification (RFM) is generated, formally requesting the development of a new installation kit.
5. Engineering Design and Procurement acquires a working prototype.
6. Development and field teams test the prototype.
7. Design modifications occur based on test results.
8. If necessary, a revised prototype is developed and tested.
9. Start-up production includes finalizing documentation, placing orders, and first article approval.

Note: The most effective installation integrates deactivation with the scanning process. However, if circumstances do not allow sufficient lead time for developing a custom solution, consider integrating deactivation with another step in the normal product flow.

Maximum Detector Separation

The UltraStrip II Label is used with Ultra•Max EAS detectors. Maximum pedestal separation for use with the UltraStrip II label is as follows:

UltraMax Detector	Pedestal Separation
ProMax	2.3m (8')
ProMax II	2.3m (8')
EuroProMax III	2.3m (8')
UltraPost	1.8m (6')
StandAlone/EuroMax	1.3m (4.5')
MAX Checkout (2 pedestals)	1.1m (3.6')

Label Application Guidelines

To ensure reliable deactivation, follow these guidelines when applying UltraStrip II labels:

- Always place label on a flat, clean, dry surface, as close to UPC bar-code as possible, but no more than 5cm (2") from bar-code.
- Apply the label to same surface as the barcode whenever possible.
- Do not cover any part of the bar code or its numbers.
- Do not cover any text printed on the item such as directions, ingredients, lot numbers, or expiration dates.
- Do not bend or pinch the label. Discard all bent or damaged labels.
- Do not apply the label to a curved surface. However, the label can be applied parallel to cylindrical items at least 76mm (3") in diameter. Never apply the label to these items diagonally or horizontally.
- Do not apply the label to vinyl or leather. The label's adhesive can damage these items.
- Use an offset label when applying directly to ferro-magnetic metallic items such as metal fan blades and light fixtures.
- Do not apply the label near strong magnets such as those in loudspeakers, or within 13mm (0.5") of small magnets.

About source tagging...

Source tagging is the process of applying labels during the manufacturing process, typically inside product packaging. All standard source tagging guidelines apply for this deactivator. For more information, contact your Sensormatic account manager.

Scanning/Deactivation Guidelines

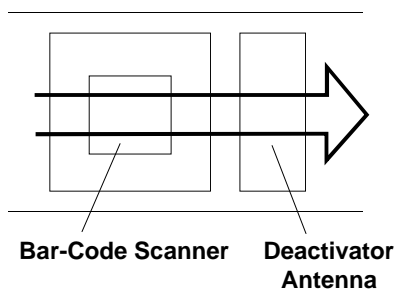
Reliable label deactivation depends on a good scanning technique. Read the following guidelines for routine scanning/deactivation and scanning/deactivation of pre-recorded magnetic media.

Routine Scanning/Deactivation

To help cashiers develop a proper scanning rhythm, select ten "labeled" items that represent a cross section of the store's most frequently sold items. Cashiers should practice scanning and deactivating these items using the steps listed below.

1. Locate the scanner's the sweet spot. The sweet spot provides optimal scanning recognition. Some scanners have markings such as arrows or tightly spaced lines to identify this spot.
2. Position items before presenting them to the scanner. Cashiers should use both hands to position heavy or bulky items. For tall items, they should keep their wrists straight to avoid tipping the item and lifting the bar code out of the scan zone. This technique also eliminates wrist stress.
3. Both the scanner's sweet spot and the antennas's magnetic field are aligned to the cashier's normal scanning motion. The antenna's field extends 15cm (6") above its surface. Move merchandise horizontally along the scan/ deactivation pathway (Figure 9), keeping the label and barcode within 15cm (6") of the countertop; do not lift items away from the scanner.

Figure 9. Scanning/Deactivation pathway



Remember: When a label is detected, the antenna's green LED turns red and it emits a

4. Avoid wasted motion. Avoid turning or repositioning items during scanning/deactivation.
5. Verify deactivation. Have the cashier position the item so that the bar code is close to the antenna surface. If the label was correctly deactivated, the LED will remain green. If the LED turns red, the label was not deactivated initially, but has been deactivated during this verification process.

Note: Use this step for training purposes only. Once a consistent scanning/deactivation technique is developed, cashiers can be confident of reliable label deactivation on the first pass.

6. Repeat the process. Cashiers should practice until a smooth rhythm is developed and they should become familiar with bar code location on high volume items.

Note: A ZKWACT ActivatorWand or ZKCDACT Activator Pad can be used during training to reactivate the label. You can obtain it by contacting your Sensormatic Customer Support Specialist.

A special note about bagwells:

If the antenna is to be located within the bagwell, follow these special steps to ensure deactivation:

1. Position the bag rack so the bag lines up with the antenna (Figure 10).
2. If the bag rack is removeable, check its alignment periodically since it might be moved.

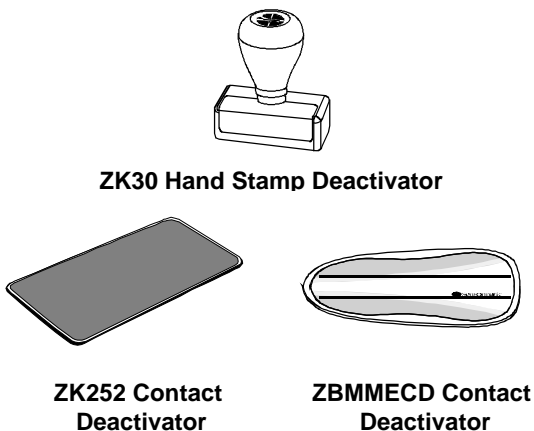
Figure 10. Bag alignment

Scanning/Deactivation and Pre-Recorded Magnetic Media

The antenna's magnetic field can affect pre-recorded magnetic media such as videotapes, audiotapes, computer harddrives, software on floppy disks, and credit cards. Use the following guidelines to reduce the possibility of affecting pre-recorded media:

- Do not place credit cards near the antenna during the deactivation process. Be sure that customers do not place or hold cards near the antenna.
- Do not place laptop computers on the antenna.
- If not using the magnetic media safe mode, then use a contact deactivator to deactivate pre-recorded items—before they are scanned. Examples of contact deactivators are shown in Figure 11.

Figure 11. Examples of contact deactivators



Specifications

Electrical

AC line input	100–250V~ (50/60Hz)
AC line current.....	15Arms (short term operation, 1 deactivation every sec)
	2.0Arms (long term avg, 1 deactivation every 12 sec)

Transmitter

Output.....	Pulsed, synchronized to AC line
Current.....	0.5Apk (nominal)
Operating frequency	58 kHz

Receiver

Center frequency	58 kHz
------------------------	--------

Deactivation

Output.....	Line resonant @ 50Hz or 60Hz (?)
Pulse width	250ms (?)
Current.....	7Arms (+10/-15%) 50Hz (?)
	15Arms (+10/-15%) 60Hz (?)

Line Synchronization

50Hz Settings	75Hz (phase A,B,C)
60Hz Settings	90Hz (phase A,B,C)
Zero line crossing	4000µ from center

RS232 Communication Port:

Settings	9600, 8, N, 1
Connector.....	Four position modular phone jack

Auxiliary I/O

This I/O port is user configurable for internal power or external drive options. Vcc and Ground are available at the port pins.

Inputs (two).....	Opto-coupled diode 10mA, typical /60mA max drive
Output.....	Opto-coupled transistor max capacity 150mA
Connector.....	8-position modular phone jack
RS485	(?)

Environmental

Operating temperature	0°C to 50°C (32°F to 122°F)
Non-operating temp.	-40°C to 70°C (-40°F to 158°F)
Relative humidity	0 to 90% non- condensing

Mechanical

Power pack:

Weight.....	4 kg (9 lbs)
Length	38 cm (14.9")
Width.....	22.6 cm (9")
Height.....	14.4 cm (5.5")

Power cord.....3 m (10')

Power Pad Antenna:

Weight.....	10 kg (22 lbs)
Length	39.3 cm (15.5")
Width.....	17 cm (6.75")
Height.....	5.6 cm (2.2")

Remote Indicator Module:

Length	82.5mm (3.3")
Width.....	59mm (2.3")
Depth	30mm (1.2")

Declarations

Regulatory Compliance

Emissions	47 CFR, Part 15, Class A ETS 300 330 ETS 300 683 Bapt 222 (Germany) EN61000-3-2 EN61000-3-3 VDE 0848
Safety.....	UL1950 CSA C22.2 No 950 EN 60 950

FCC COMPLIANCE: This equipment complies with Part 15 of the FCC rules for intentional radiators and Class A digital devices when installed and used in accordance with the instruction manual. Following these rules provides reasonable protection against harmful interference from equipment operated in a commercial area. This equipment should not be installed in a residential area as it can radiate radio frequency energy that could interfere with radio communications, a situation the user would have to fix at their own expense.

EQUIPMENT MODIFICATION CAUTION: Equipment changes or modifications not expressly approved by Sensormatic Electronics Corporation, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

Other Declarations

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