

Crestron **CEN-TRACK**
TunerRack Modular Multi-Tuner

Operations Guide



This document was prepared and written by the Technical Documentation department at:



Regulatory Compliance

As of the date of manufacture, the CEN-TRACK has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following 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.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

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

Industry Canada (IC) Compliance Statement

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.

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The specific patents that cover Crestron products are listed at patents.crestron.com.

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TunerRack Modular Multi-Tuner: CEN-TRACK

Introduction

The CEN-TRACK is a modular multi-tuner capable of providing up to six independent radio tuners for use in a Crestron® multiroom audio distribution system. Control of each tuner is available through the LCD front panel, as well as from Crestron touch screens, computers and mobile devices via a Crestron control system.

The CEN-TRACK is available in three different models.

Models

| MODEL NUMBER | DESCRIPTION |
|--------------------|---|
| CEN-TRACK-AMFM2 | TunerRack Modular Multi-Tuner with Dual AM/FM Tuner Card |
| CEN-TRACK-AMFMXMD | TunerRack Modular Multi-Tuner with AM/FM & XM® Satellite Radio Tuner Card |
| CEN-TRACK-AUDIONET | TunerRack Modular Multi-Tuner with Internet Radio Tuner Card |

For simplicity within this guide, the term “CEN-TRACK” is used except where noted.

Features and Functions

- Rack-mountable modular multi-tuner
- Accepts up to three ATC-Series tuner cards
- Tuner card options include dual AM/FM, AM/FM + XM® satellite radio¹, or Internet radio
- Enables interactive control using touch screens and mobile devices
- Rich search capabilities find favorite radio stations, programs, and music with ease
- Support for metadata enables display of station names, song titles, artists, and other details
- Includes balanced, unbalanced, and digital audio outputs²
- Native Crestron system integration via Ethernet
- Easy setup from front panel or software

1. XM Satellite Radio and SiriusXM Internet Radio each require a paid subscription. Contact Sirius XM Radio Inc. for details.
2. The number of outputs and digital output capability are dependent upon the tuner cards installed. Consult the specifications for each tuner card model for complete details.

Modular Tuner Cards

Up to three ATC-Series tuner cards can be installed in the CEN-TRACK to enable combinations of AM/FM terrestrial radio, XM satellite radio, and Internet radio tuners. The modular card-based design makes it easy to change or expand the tuner configuration as needs change, or upgrade any tuner card as new features and services become available. Each CEN-TRACK model comes with one tuner card included.

Choose any combination of up to three tuner cards:

- **Dual AM/FM Radio** — Each ATC-AMFM2 tuner card provides two completely independent AM/FM tuners with RDS/RBDS to support two separate listening zones.
- **AM/FM & XM[®] Satellite Radio** — Each ATC-AMFMXMD tuner card provides one XM satellite radio tuner and one AM/FM tuner with RDS/RBDS to support two separate listening zones.¹
- **Internet Radio** — Each ATC-AUDIONET tuner card provides a single Internet radio tuner for streaming over 15,000 available online radio stations and podcasts from around the world including Pandora[®] and SiriusXM[®] Internet Radio.¹

Multiple Outputs

Up to six independent audio outputs allow for connection to any multi-room audio distribution system, letting listeners in different rooms each enjoy their own choice of music, news, sports and talk. Both balanced and unbalanced analog outputs are provided, making the CEN-TRACK ideal for use in all types of professional and commercial applications as well as the finest residential installations. Digital outputs are also included to deliver the highest quality audio interface from satellite and Internet radio sources.²

Metadata Display

Satellite radio services, as well as many FM and Internet radio stations, send text information called “metadata” as part of their broadcast signals. Metadata can include the radio station name, program or song title, artist name, category, traffic, weather, and phone numbers. All of this information is displayed on the TunerRack’s front panel LCD screen. Furthermore, it can also be displayed on any Crestron touch screen or APAD controller, providing useful information to the listener at any location throughout the home or office.

Program Guide

Each satellite and Internet radio tuner supports powerful browsing capabilities through an extensive program guide, which can be customized for display on any Crestron touch screen or computer, listing every available channel and what is currently playing on each channel. Versatile search options make it fun and easy to locate whatever users want to hear. Multiple users can each have full access to browse any of the available tuner program guides simultaneously without conflict, and favorite stations can be saved as presets for quick and easy recall.

1. XM Satellite Radio and SiriusXM Internet Radio each require a paid subscription. Contact Sirius XM Radio Inc. for details.
2. The number of outputs and digital output capability are dependent upon the tuner cards installed. Consult the specifications for each tuner card model for complete details.

Ethernet Control

The CEN-TRACK communicates with a Creston control system via high speed Ethernet, ensuring full bandwidth to support multiple users and touch screens. The control system’s clock may also be synchronized to any digital radio tuner card that provides a time signal. Full setup and diagnostics may be performed from the front panel or Creston Toolbox™ software. Additionally, the antenna signal strength and subscription activation codes can also be displayed on a touch screen for easy troubleshooting.

Specifications

Specifications for the CEN-TRACK are listed in the following table.

CEN-TRACK Specifications

| SPECIFICATION | DETAILS |
|--|---|
| Communications | |
| Ethernet | 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP |
| USB | USB device port for computer console |
| Power Requirements | |
| Power Pack | 2 Amps @ 24 Volts DC; 100-250 Volts AC, 50/60 Hz power pack, included |
| Minimum 2-Series Control System Update File ^{1,2} | Version 3.155.1240 or later |
| Environmental | |
| Temperature | 41° to 104° F (5° to 40° C) |
| Humidity | 10% to 90% RH (non-condensing) |
| Heat Dissipation | 110 BTU/Hr |
| Enclosure | |
| Chassis | Metal, black finish, convection-cooled, vented top and sides |
| Faceplate | Extruded aluminum, black finish with polycarbonate label overlay |
| Mounting | Freestanding or 2U 19-inch rack mountable (adhesive feet and rack ears included) |
| Dimensions | |
| Height | 3.56 in (91 mm) with feet 3.47 in (88 mm) without feet |
| Width | 17.03 in (433 mm) without ears 19.00 in (483 mm) with ears |
| Depth | 10.30 in (262 mm) |
| Weight | 6.8 lbs (3.1 kg) including one tuner card |

(Continued on following page)

CEN-TRACK Specifications (Continued)

| SPECIFICATION | DETAILS |
|-----------------------|---|
| Available Models | |
| CEN-TRACK-AMFM2 | TunerRack Modular Multi-Tuner with Dual AM/FM Tuner Card |
| CEN-TRACK-AMFMXMD | TunerRack Modular Multi-Tuner with AM/FM & XM Satellite Radio Tuner Card |
| CEN-TRACK-AUDIONET | TunerRack Modular Multi-Tuner with Internet Radio Tuner Card |
| Included Accessories | |
| ATC-AMFM2 | Dual AM/FM Radio Tuner Card; Included quantity for CEN-TRACK-AMFM2: 1 |
| ATC-AMFMXMD | AM/FM and XM Satellite Radio Tuner Card; Included quantity for CEN-TRACK-AMFMXMD: 1 |
| ATC-AUDIONET | Internet Radio Tuner Card; Included quantity for CEN-TRACK-AUDIONET: 1 |
| Power Pack | Included quantity for CEN-TRACK-AMFM2, CEN-TRACK-AMFMXMD, CEN-TRACK-AUDIONET: 1 |
| Available Accessories | |
| ATC-AMFM2 | Dual AM/FM Tuner Card |
| ATC-AMFMXMD | AM/FM and XM Satellite Radio Tuner Card |
| ATC-AUDIONET | Internet Radio Tuner Card |
| C2N-TXM-C50 | Antenna Extension Cable for XM Radio |
| CBL-Series | Crestron Certified Interface cables |
| SRD Series | Satellite Radio Antenna Distribution Products |

1. The latest software versions can be obtained from the Crestron Web site. Refer to the NOTE following these footnotes.
2. Crestron 2-Series control systems include the AV2 and PRO2. Consult the latest Crestron Product Catalog for a complete list of 2-Series control systems.

NOTE: Crestron software and any files on the Web site are for authorized Crestron dealers and Crestron Authorized Independent Programmers (CAIPs) only. New users must register to obtain access to certain areas of the site (including the FTP site).

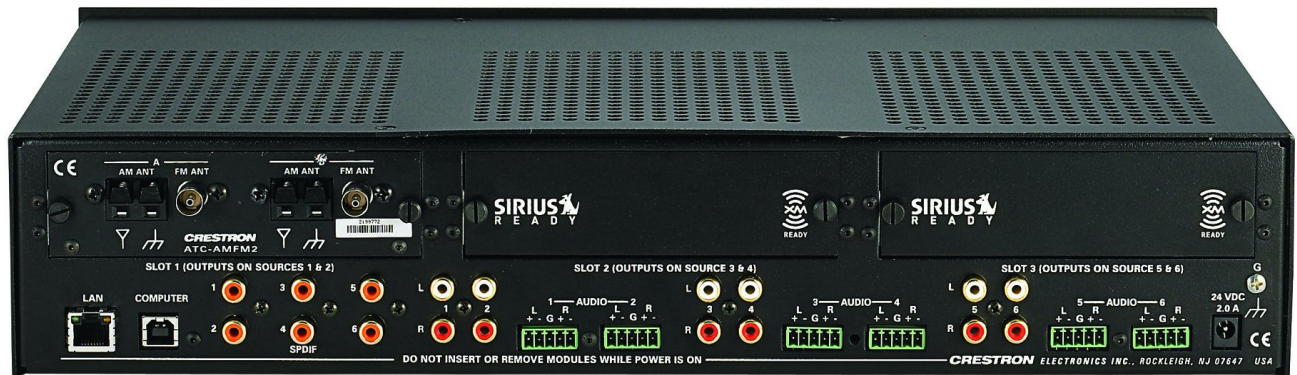
Physical Description

This section provides information on the connections, controls and indicators available on the CEN-TRACK.

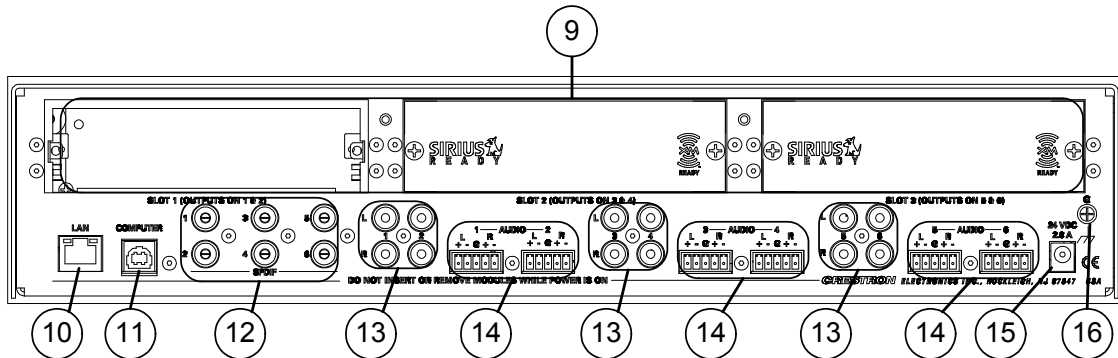
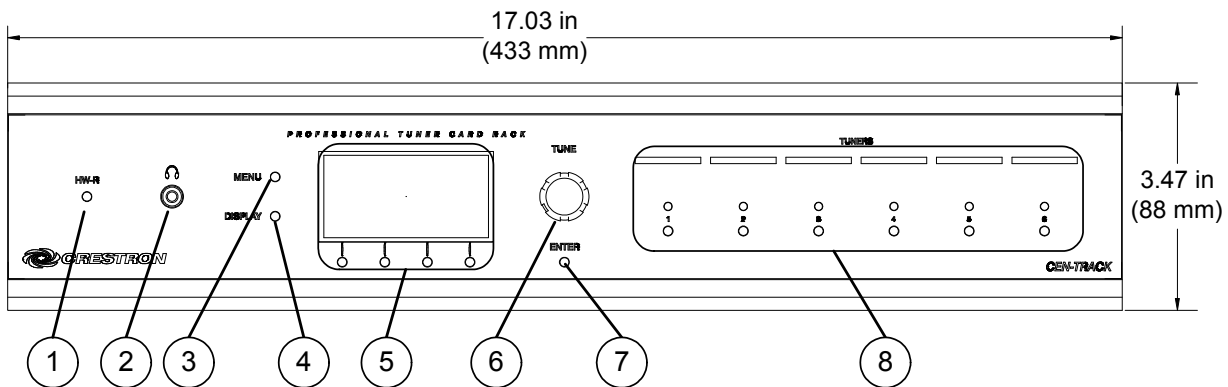
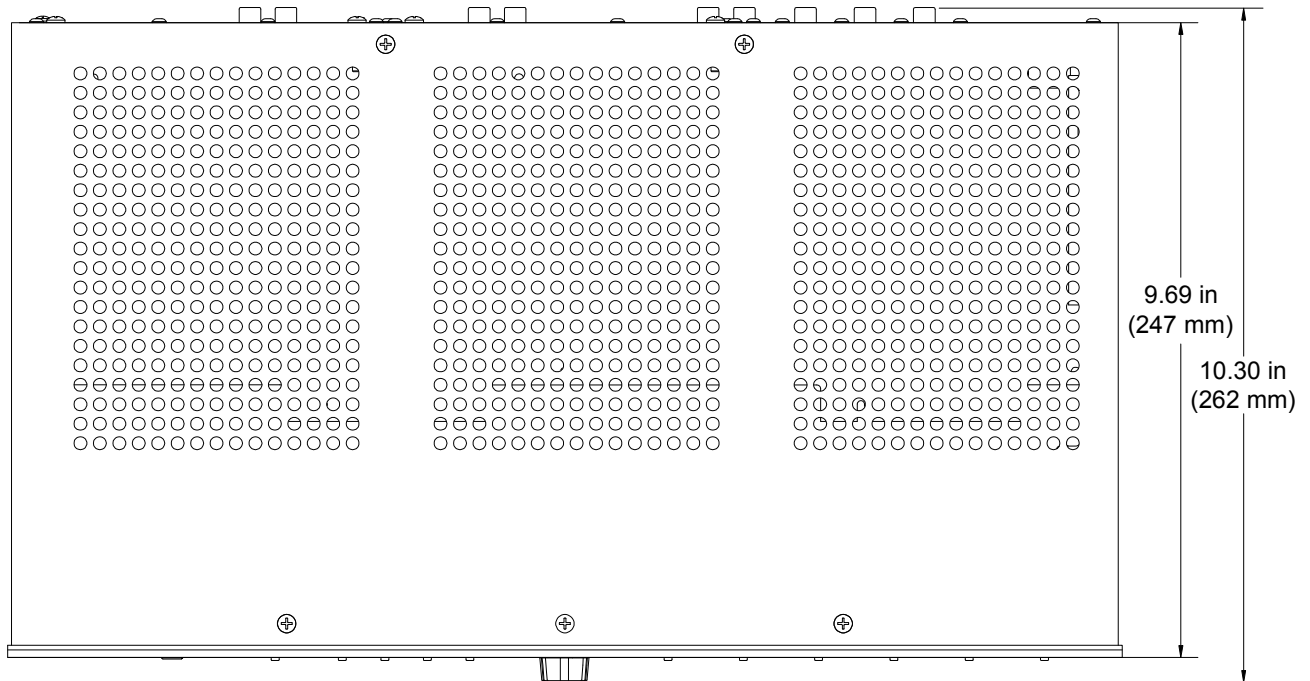
CEN-TRACK Physical View (Front)




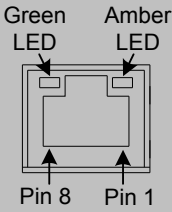
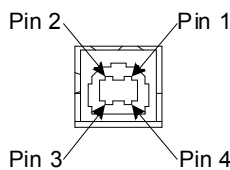
CEN-TRACK Physical View (Rear – Shown with ATC-AMFM2 Card Installed)



CEN-TRACK Overall Dimensions (Top, Front, and Rear View)



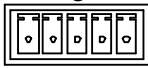




Connectors, Controls & Indicators

| # | CONNECTORS ¹ , CONTROLS & INDICATORS | DESCRIPTION | | | | | | | | | | | | | | | | | | | | |
|------------------|---|---|------|-------------|---------|------------------|---|--------|---|--------|---|--------|---|--------------------|---|--------------------|---|-----|---|--------------------|---|--------------------|
| 1 | HW-R | (1) Recessed miniature push button for hardware reset, reboots the unit | | | | | | | | | | | | | | | | | | | | |
| 2 | Headphones  | (1) 3.5 mm mini TRS phone jack | | | | | | | | | | | | | | | | | | | | |
| 3 | MENU ² | (1) Push button, steps menu back one level | | | | | | | | | | | | | | | | | | | | |
| 4 | DISPLAY ² | (1) Push button, toggles information displayed on the LCD screen | | | | | | | | | | | | | | | | | | | | |
| 5 | LCD Display & Buttons | Green LCD dot matrix, 128 x 64 resolution, adjustable LED backlight; Displays tuner settings, metadata, and setup menus (4) LCD display driven push buttons, select/activate various menu functions | | | | | | | | | | | | | | | | | | | | |
| 6 | TUNE | (1) Continuous turn rotary encoder; scrolls through channels, presets and other menu lists; adjusts selected parameters | | | | | | | | | | | | | | | | | | | | |
| 7 | ENTER ² | (1) Push button, executes value set by the TUNE knob | | | | | | | | | | | | | | | | | | | | |
| 8 | TUNERS | (6) Push buttons, (6) red LEDs and (6) 3/8" label slots; select which tuner is being displayed and adjusted | | | | | | | | | | | | | | | | | | | | |
| 9 | SLOT (1-3) | (3) Tuner card slots; Accept choice of ATC-series tuner cards | | | | | | | | | | | | | | | | | | | | |
| 10 | LAN  | (1) 8-wire RJ-45 female (8P8C modular jack); 10BASE-T/100BASE-TX Ethernet port; Green LED indicates link status; Yellow LED indicates Ethernet activity <table border="1"> <thead> <tr> <th>TYPE</th> <th>PIN</th> <th>SIGNALS</th> </tr> </thead> <tbody> <tr> <td rowspan="8">8-Position RJ-45</td> <td>1</td> <td>TD+</td> </tr> <tr> <td>2</td> <td>TD-</td> </tr> <tr> <td>3</td> <td>RD+</td> </tr> <tr> <td>4</td> <td>Connected to pin 5</td> </tr> <tr> <td>5</td> <td>Connected to pin 4</td> </tr> <tr> <td>6</td> <td>RD-</td> </tr> <tr> <td>7</td> <td>Connected to pin 8</td> </tr> <tr> <td>8</td> <td>Connected to pin 7</td> </tr> </tbody> </table> | TYPE | PIN | SIGNALS | 8-Position RJ-45 | 1 | TD+ | 2 | TD- | 3 | RD+ | 4 | Connected to pin 5 | 5 | Connected to pin 4 | 6 | RD- | 7 | Connected to pin 8 | 8 | Connected to pin 7 |
| TYPE | PIN | SIGNALS | | | | | | | | | | | | | | | | | | | | |
| 8-Position RJ-45 | 1 | TD+ | | | | | | | | | | | | | | | | | | | | |
| | 2 | TD- | | | | | | | | | | | | | | | | | | | | |
| | 3 | RD+ | | | | | | | | | | | | | | | | | | | | |
| | 4 | Connected to pin 5 | | | | | | | | | | | | | | | | | | | | |
| | 5 | Connected to pin 4 | | | | | | | | | | | | | | | | | | | | |
| | 6 | RD- | | | | | | | | | | | | | | | | | | | | |
| | 7 | Connected to pin 8 | | | | | | | | | | | | | | | | | | | | |
| | 8 | Connected to pin 7 | | | | | | | | | | | | | | | | | | | | |
| 11 | COMPUTER  | (1) USB Type B female; USB computer console port (cable included) <table border="1"> <thead> <tr> <th>PIN</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+5 VDC</td> </tr> <tr> <td>2</td> <td>Data -</td> </tr> <tr> <td>3</td> <td>Data +</td> </tr> <tr> <td>4</td> <td>Ground</td> </tr> </tbody> </table> | PIN | DESCRIPTION | 1 | +5 VDC | 2 | Data - | 3 | Data + | 4 | Ground | | | | | | | | | | |
| PIN | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | |
| 1 | +5 VDC | | | | | | | | | | | | | | | | | | | | | |
| 2 | Data - | | | | | | | | | | | | | | | | | | | | | |
| 3 | Data + | | | | | | | | | | | | | | | | | | | | | |
| 4 | Ground | | | | | | | | | | | | | | | | | | | | | |

(Continued on following page)

Connectors, Controls & Indicators (Continued)

| # | CONNECTORS ¹ , CONTROLS & INDICATORS | DESCRIPTION |
|----|--|---|
| 12 | SPDIF (1-6) ³  | (6) RCA female; S/PDIF coaxial digital audio outputs |
| 13 | AUDIO (1-6, RCA)  | (12) RCA female; Provide (6) unbalanced stereo line level audio outputs; Output impedance: 100 Ohms; Maximum output level: 2 V _{rms} |
| 14 | AUDIO (1-6, Terminal) + - G - +  | (6) 5-pin 3.5 mm detachable terminal blocks; Balanced/unbalanced stereo line level outputs; Output impedance: 200 Ohms balanced, 100 Ohms unbalanced; Maximum output level: 4 V _{rms} balanced, 2 V _{rms} unbalanced |
| 15 | 24 VDC 2.0A  | (1) 2.1 mm barrel DC power jack; 24 Volt DC power input (power pack included) |
| 16 | G  | (1) 6-32 screw, chassis ground lug |

1. Interface connectors for **AUDIO** (1-6 terminal) ports are provided with the unit.
2. Pressing and holding **MENU**, **DISPLAY** and **ENTER** for five seconds initiates a software reset.
3. The number of outputs and digital output capability are dependent upon the tuner cards installed. Consult the specifications for each tuner card model for complete details.

Setup

Network Wiring

When wiring the Ethernet network, consider the following:

- Use Crestron power supplies for Crestron equipment.
- Provide sufficient power to the system.

CAUTION: Insufficient power can lead to unpredictable results or damage to the equipment. Please use the Crestron Power Calculator to help calculate how much power is needed for the system (www.crestron.com/calculators).

Unlike other Crestron network devices, the CEN-TRACK does not use Cresnet[®] for communications between the device and the control system. The CEN-TRACK requires the use of a high-speed Ethernet connection for control system communications.

For information on connecting Ethernet devices in a Crestron system, refer to the latest version of the Crestron e-Control[®] Reference Guide (Doc. 6052), which is available from the Crestron Web site (www.crestron.com/manuals).

Identity Code

IP ID

The IP ID is set within the CEN-TRACK's table using the CEN-TRACK's Installer Tools utility or Crestron Toolbox. For information on setting an IP ID using Installer Tools, refer to "Network Settings" which starts on page 21. For information on setting an IP table, refer to the Crestron Toolbox help file. The IP IDs of multiple CEN-TRACK devices in the same system must be unique.

When setting the IP ID, consider the following:

- The IP ID of each unit must match an IP ID specified in the SIMPL Windows program.
- Each device using IP to communicate with a control system must have a unique IP ID.

NOTE: If an ATC-AUDIONET is installed, it also requires an IP ID to be assigned. Its IP ID is set using the CEN-TRACK's Installer Tools utility or Crestron Toolbox. For information on setting the IP ID with Installer Tools, refer to "Network Settings" which starts on page 21 or the Crestron Toolbox help file. The IP IDs of multiple ATC-AUDIONET devices in the same system must be unique.

Installation

Ventilation

The CEN-TRACK should be used in a well-ventilated area. The venting holes should not be obstructed under any circumstances.

To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications. Consider using forced air ventilation, incrementing the spacing between units, or both to reduce overheating. Consideration must be given if installed in a closed or multi-unit rack assembly since the operating ambient temperature of the environment may be greater

than the room ambient temperature. Contact with thermal insulating materials should be avoided on all sides of the unit.

Rack Mounting

The CEN-TRACK can be mounted in a rack or stacked with other equipment. Two “ears” are provided with the CEN-TRACK so that the unit can be rack mounted. These ears must be installed prior to mounting. Complete the following procedure to attach the ears to the unit. The only tool required is a #1 or #2 Phillips screwdriver.

WARNING: To prevent bodily injury when mounting or servicing this unit in a rack, observe the following guidelines:

- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

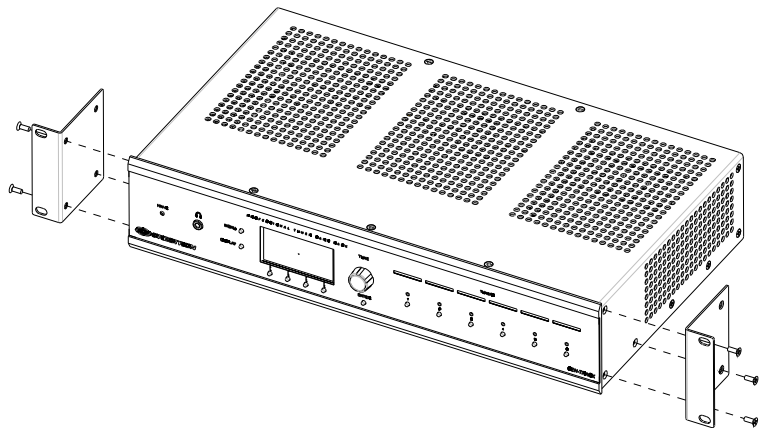
NOTE: If rack mounting is not required, rubber feet are provided for tabletop mounting or stacking. Apply the feet near the corner edges on the underside of the unit.

NOTE: Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

To install the ears:

1. There are screws that secure each side of the CEN-TRACK top cover. Using a #1 or #2 Phillips screwdriver, remove the three screws closest to the front panel from one side of the unit. Refer to the diagram following step 3 for a detailed view.
2. Position a rack ear so that its mounting holes align with the holes vacated by the screws in step 1.
3. Secure the ear to the unit with three screws from step 1, as shown in the following diagram.

Ear Attachment for Rack Mounting



4. Repeat procedure (steps 1 through 3) to attach the remaining ear to the opposite side.

Stacking

Four “feet” are provided with the CEN-TRACK so that if the unit is not rack mounted, the rubber feet can provide stability when the unit is placed on a flat surface or stacked. These feet should be attached prior to the hookup procedure.

NOTE: No more than two CEN-TRACK units should be stacked.

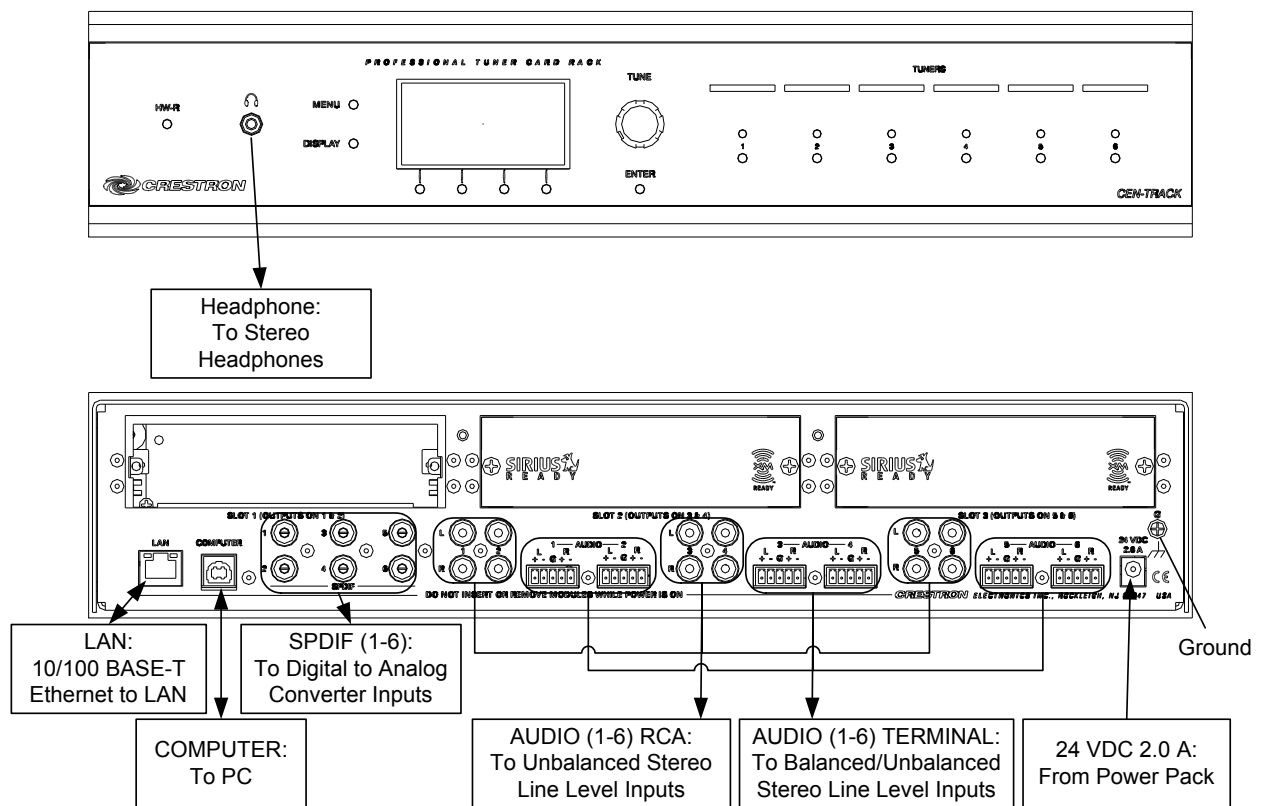
Hardware Hookup

Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Apply power after all connections have been made.

When making connections to the CEN-TRACK, use Crestron power supplies for Crestron equipment.

Hardware Connections for the CEN-TRACK



NOTE: Ensure the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).

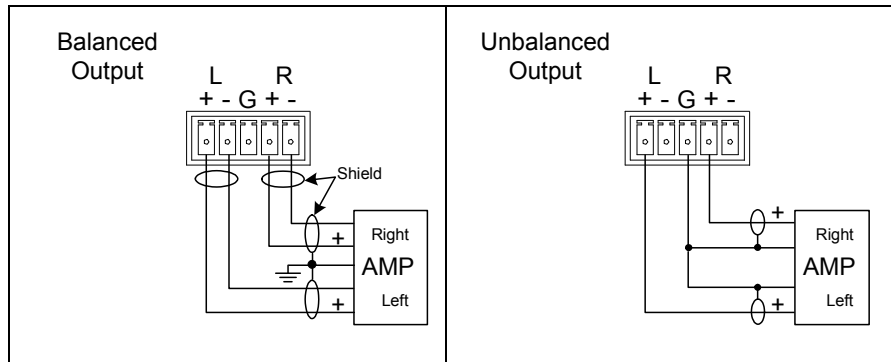
NOTE: To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

Six balanced/unbalanced audio outputs are provided, utilizing five-pin terminal block connectors. For connection details, refer to the following table and diagrams.

Audio Connections

| SIGNAL NAME | BALANCED AUDIO OUTPUT | UNBALANCED AUDIO OUTPUT |
|-------------|-----------------------|-------------------------|
| + | L + | L + Out |
| - | L - | Open |
| G | Shield/ground | Common ground |
| + | R + | R + Out |
| - | R - | Open |

Typical Balanced/Unbalanced Outputs



Label the Buttons

Use Crestron Engraver software to print custom labels for the CEN-TRACK's front panel buttons and LEDs. Crestron recommends printing on 100-pound paper. Paper weighing less than 100 pounds tends to crumple while sliding in, while paper weighing more than 100 pounds may not fit.

Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron Web site. To post a question or to view questions submitted to Crestron's True Blue Support, log in at www.crestron.com/onlinehelp. First-time users must establish a user account to fully benefit from all available features.

Earliest Version Software Requirements for the PC

NOTE: The latest software can be downloaded from the Crestron Web site (www.crestron.com/software).

Crestron provides an assortment of Windows®-based software tools to develop a customized system. Use SystemBuilder™ or SIMPL Windows to create a program to control the CEN-TRACK.

Programming with SystemBuilder

SystemBuilder is a comprehensive programming environment. Appropriate for most systems, it can quickly and easily generate a complete working program including both control processor logic and touch screen graphics.

Programming with SIMPL Windows

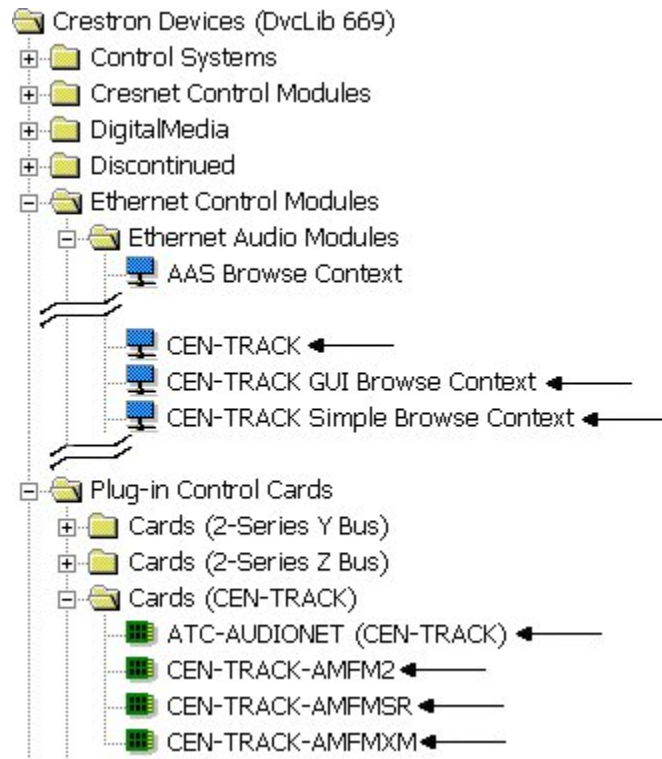
NOTE: While SIMPL Windows can be used to program the CEN-TRACK, it is recommended to use SystemBuilder for configuring a system.

SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate but equally important "Managers": Configuration and Program.

Configuration Manager

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

1. To incorporate the CEN-TRACK into the system, drag the CEN-TRACK from the Ethernet Control Modules | Ethernet Audio Modules folder of the *Device Library* and drop it in the *System Views*.

Locating the CEN-TRACK and Tuner Cards in the Device Library

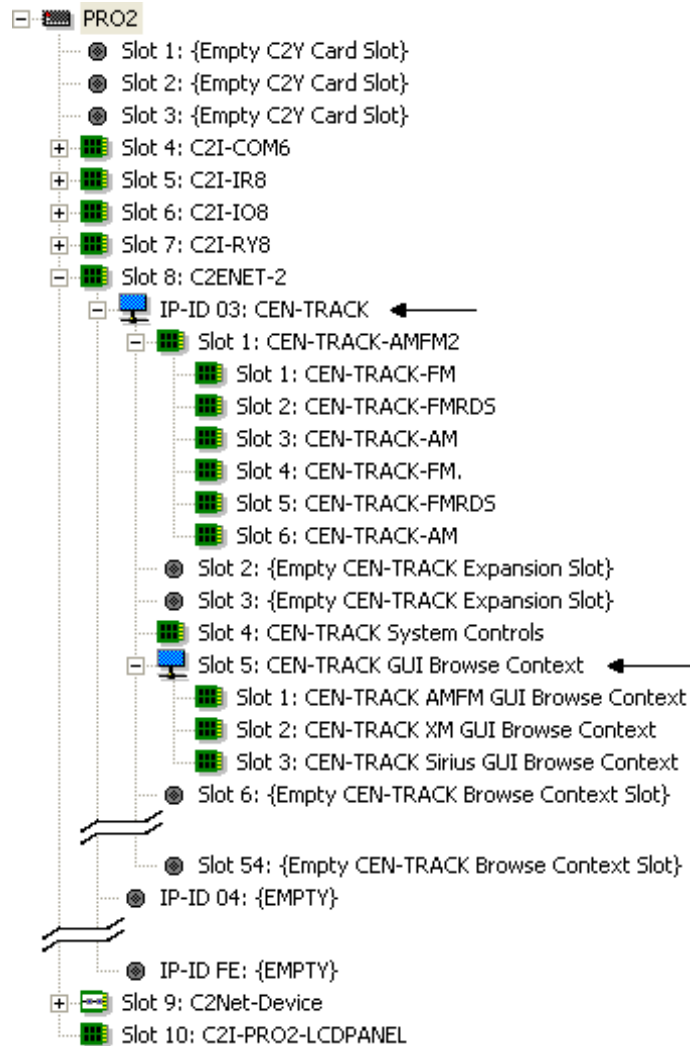
Tuner cards and Browse Context modules must also be added:

- **Tuner Cards:** Drag the control cards for the installed tuner(s) from the Plug-in Control Cards | Cards (CEN-TRACK) folder of the *Device Library* and drop it (or them) on the CEN-TRACK.
- **Browse Context Modules:** Drag one or more CEN-TRACK Browse Contexts from the Ethernet Control Modules | Ethernet Audio Modules folder of the *Device Library* and drop it (or them) on the CEN-TRACK.

NOTE: The Browse Contexts are designed to communicate with a single user interface, either a touch screen or an APAD. If necessary, add a Browse Context for each interface. Use CEN-TRACK GUI Browse Context(s) for touch screens. Use CEN-TRACK Simple Browse Context(s) for the APAD.

The system tree of the control system displays the device in the appropriate slot with a default IP ID as shown in the following illustration.

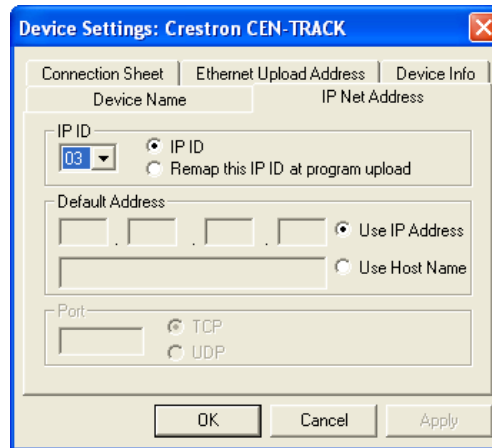
C2ENet-2 Device, Slot 8



- If additional CEN-TRACK devices are to be added, repeat step 1 for each device. Each CEN-TRACK is assigned a different IP ID number as it is added.

3. If necessary, double click a device to open the “Device Settings” window and change the IP ID, as shown in the following illustration.

“Device Settings: Crestron CEN-TRACK” Window



NOTE: The IP ID specified in the SIMPL Windows program must match the IP ID of each unit. Refer to “Identity Code” on page 9.

Program Manager

Program Manager is the view where programmers “program” a Crestron control system by assigning signals to symbols.

The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. Each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication. Once communication has been established, files (for example, programs or firmware) can be transferred to the control system (or device). Finally, program checks can be performed (such as changing the device ID or creating an IP table) to ensure proper functioning.

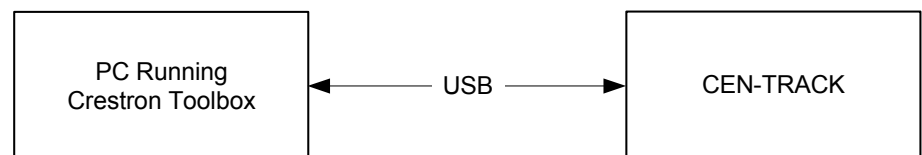
Establishing Communication

Use Crestron Toolbox for communicating with the CEN-TRACK; refer to the Crestron Toolbox help file for details. There are two methods of communication: USB and TCP/IP.


USB

NOTE: Required for initial setup of Ethernet parameters.

USB Communication



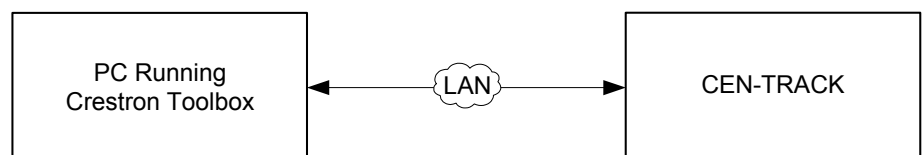
The **COMPUTER** port on the CEN-TRACK connects to the USB port on the PC via the included Type A to Type B USB cable:

1. Use the Address Book in Crestron Toolbox to create an entry using the expected communication protocol (USB). When multiple USB devices are connected, identify the CEN-TRACK by entering "CEN-TRACK" in the *Model* textbox, the unit's serial number in the *Serial* textbox or the unit's hostname in the *Hostname* textbox. The hostname can be found in the "System Info" window in the section marked *Ethernet* however, communications must be established in order to see this information in the "System Info" window.
2. Display the CEN-TRACK's "System Info" window (click the  icon); communications are confirmed when the device information is displayed.

TCP/IP

NOTE: Required for operation with a Crestron control system.

Ethernet Communication




The CEN-TRACK connects to PC via Ethernet:

1. Establish USB communication between CEN-TRACK and PC.

2. Enter the IP address, IP mask and default router of the CEN-TRACK via Crestron Toolbox (**Functions | Ethernet Addressing**); otherwise enable DHCP.

NOTE: Use the Device Discovery Tool in Crestron Toolbox to detect all Ethernet devices on the network and their IP configuration. The tool is available in Toolbox version 1.15.143 or later.

3. Confirm Ethernet connection between CEN-TRACK and PC. If connecting through a hub or router, use CAT5 straight through cables with 8-pin RJ-45 connectors. Alternatively, use a CAT5 crossover cable to connect the two LAN ports directly without using a hub or router.
4. Use the Address Book in Crestron Toolbox to create an entry for the CEN-TRACK with the CEN-TRACK's TCP/IP communication parameters.
5. Display the "System Info" window (click the  icon) and select the CEN-TRACK entry.

Programs and Firmware

Program or firmware files may be distributed from programmers to installers or from Crestron to dealers. Firmware upgrades are available from the Crestron Web site as new features are developed after product releases. One has the option to upload programs via the programming software or to upload and upgrade via the Crestron Toolbox. For details on uploading and upgrading, refer to the SIMPL Windows help file or the Crestron Toolbox help file.

SIMPL Windows

If a SIMPL Windows program is provided, it can be uploaded to the control system using SIMPL Windows or Crestron Toolbox.


Firmware

Check the Crestron Web site to find the latest firmware. (New users may be required to register to obtain access to certain areas of the site, including the FTP site.)

Upgrade CEN-TRACK firmware via Crestron Toolbox.

1. Establish communication with the CEN-TRACK and display the "System Info" window.
2. Select **Functions | Firmware...** to upgrade the CEN-TRACK firmware.

Program Checks

Using Crestron Toolbox, display the "System Info window (click the  icon) and select the **Functions** menu to display actions that can be performed on the CEN-TRACK.

Be sure to use Crestron Toolbox to create the CEN-TRACK IP table.

1. Select **Functions | IP Table Setup**.
2. Add, modify or delete entries in the IP table. The CEN-TRACK can have only one IP table entry.
3. A defined IP table can be saved to a file or sent to the device.

Edit the control system's IP table to include an entry for the CEN-TRACK. The entry should list the CEN-TRACK's IP ID (specified on the CEN-TRACK's IP table) and the internal gateway IP address 127.0.0.1.

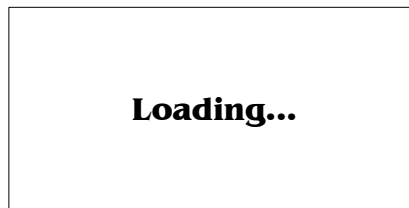
NOTE: If an ATC-AUDIONET is installed, its IP table must also be created.

Configuration

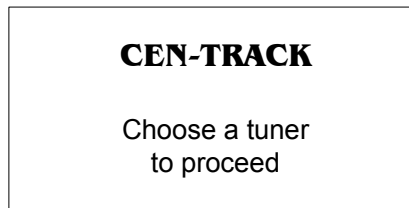
Use Crestron Toolbox or the front panel of the CEN-TRACK to configure the CEN-TRACK for operation.

When the CEN-TRACK is first powered up, the following is displayed:

“Loading...” Screen



“CEN-TRACK Choose a tuner to proceed” Screen



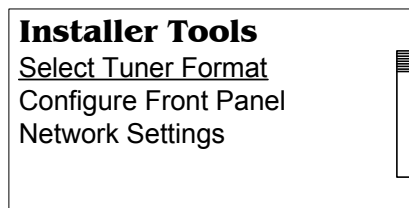
For information on using a tuner, refer to “Operation” on page 34.

“Installer Tools” Menu

Use the “Installer Tools” menu to configure the CEN-TRACK.

To open the “Installer Tools” menu, press and hold **MENU** and **DISPLAY** for five seconds. A menu of options is displayed.

“Installer Tools” Menu



The following controls are used to navigate through the “Installer Tools” menu:

- **TUNE** Knob – Turn the **TUNE** knob to highlight the desired option. The highlighted option is underlined.
- **ENTER** Button – Press the **ENTER** button to select a highlighted item or to store a setting.
- **MENU** Button – Press the **MENU** button to return to the previous menu.

The “Installer Tools” menu presents several parameters to configure. Turn the **TUNE** knob to view the options.

- *Select Tuner Format* – Specifies the North American or European tuning format when using a tuner card.
- *Configure Front Panel* – Used to lock or unlock the front panel.
- *Network Settings* – Configures the CEN-TRACK to communicate with a control system over Ethernet. If an ATC-AUDIONET is installed, this section is also used to configure the card’s network settings.
- *Name Sources* – Allows custom naming of cards installed in the CEN-TRACK.
- *Set Headphone Volume* – Sets the headphone volume level.
- *About* – Provides information about the CEN-TRACK such as IP data and firmware version.

To configure a specific parameter, turn the **TUNE** knob to highlight an option and press **ENTER**.

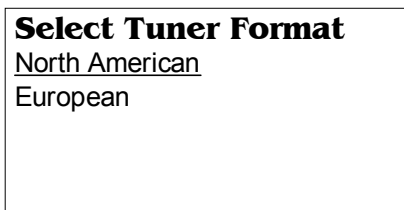
To exit the “Installer Tools” menu and save changes to the CEN-TRACK’s configuration, press the **MENU** button.

Select Tuner Format

Select the tuning format to specify the tuning method used by an installed AM/FM tuner. When using the North American tuner format, the device tunes FM frequencies in 100 kHz steps and AM frequencies in 10 kHz steps. When using the European tuner format, the device tunes FM frequencies in 50 kHz steps and AM frequencies in 9 kHz steps.

1. Open the “Installer Tools” menu as described on page 19.
2. Turn the **TUNE** knob to highlight *Select Tuner Format*, and press **ENTER**.

“Select Tuner Format” Screen



Select Tuner Format
North American
European

3. Turn the **TUNE** knob to highlight a tuner format. To cancel and return to the “Installer Tools” menu, press **MENU**.
4. To confirm, press **ENTER** and return to the “Installer Tools” menu.

Configure Front Panel

The “Configure Front Panel” screen is used to lock or unlock the front panel controls.

1. Open the “Installer Tools” menu as described on page 19.
2. Turn the **TUNE** knob to highlight *Configure Front Panel*, and press **ENTER**.

“Configure Front Panel” Screen



3. Turn the **TUNE** knob to highlight the desired setting. To cancel and return to the “Installer Tools” menu, press **MENU**.
4. To confirm, press **ENTER** and return to the “Installer Tools” menu.

Network Settings

NOTE: Changes to network settings take effect when the “Installer Tools” menu is exited. Refer to the “Exit the “Installer Tools” Menu” on page 27.

The network settings menu is used to configure the CEN-TRACK’s and ATC-AUDIONET’s (if installed) network settings. To display the network settings menu:

1. Open the “Installer Tools” menu as described on page 19.
2. Turn the **TUNE** knob to highlight *Network Settings* and press **ENTER**.

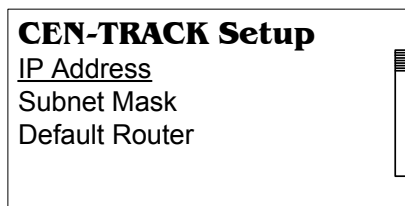
If an ATC-AUDIONET is installed, the menu below is displayed.

“Select Device To Setup” Menu



Otherwise, the “CEN-TRACK Setup” menu is displayed.

“CEN-TRACK Setup” Menu



3. If an ATC-AUDIONET is not installed, skip to step 4.

If an ATC-AUDIONET is installed, turn the **TUNE** knob to highlight the device to configure, press **ENTER**, and continue to step 4.

4. Turn the **TUNE** knob to highlight the parameter to be adjusted or viewed and press **ENTER**.

Set the IP Address

The CEN-TRACK and ATC-AUDIONET use TCP/IP communications for communications between a control system and a PC. The IP address can be manually set or obtained from a DHCP server. For information on enabling DHCP to obtain an IP address, refer to “Enable/Disable DHCP” on page 23. To manually set an IP address:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *IP Address* and press **ENTER**. If DHCP is enabled, the IP address is displayed. Otherwise, the “Edit IP Address” screen is displayed.

“Edit IP Address” Screen

| |
|--|
| <p>Edit IP Address Use Softbutton to select. Then use Knob to edit. Press ENTER to accept.</p> <p>[000] 000. 000. 000</p> |
|--|

3. Turn the **TUNE** knob to set the first octet of the IP address.
4. Press the button under the next octet (or press **ENTER** to move to the next octet) to select it for editing.
5. Repeat steps 3 and 4 for each octet.
6. To save the IP address, move the cursor to the right-most octet and press **ENTER**. To cancel the operation and return to the network settings menu, press **MENU**.

Set the Subnet Mask

The subnet mask can be manually set or obtained from a DHCP server. For information on enabling DHCP to obtain a subnet mask, refer to “Enable/Disable DHCP” on page 23. To manually set the subnet mask:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *Subnet Mask* and press **ENTER**. If DHCP is enabled, the subnet mask is displayed. Otherwise, the “Edit Subnet Mask” screen is displayed.

“Edit Subnet Mask” Screen

| |
|---|
| <p>Edit Subnet Mask Use Softbutton to select. Then use Knob to edit. Press ENTER to accept.</p> <p>[000] 000. 000. 000</p> |
|---|

3. Turn the **TUNE** knob to set the first octet of the subnet mask.

4. Press the button under the next octet (or press **ENTER** to move to the next octet) to select it for editing.
5. Repeat steps 3 and 4 for each octet.
6. To save the subnet mask, move the cursor to the right-most octet and press **ENTER**. To cancel the operation and return to the network settings menu, press **MENU**.

Set the Default Router

The default router can be manually set or obtained from a DHCP server. For information on enabling DHCP to obtain a default router, refer to “Enable/Disable DHCP” below. To manually set the default router:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *Default Router* and press **ENTER**. If DHCP is enabled, the default router is displayed. Otherwise, the “Edit Default Router” screen is displayed.

“Edit Default Router” Screen

Edit Default Router
 Use Softbutton to select.
 Then use Knob to edit.
 Press ENTER to accept.

[000] 000. 000. 000

3. Turn the **TUNE** knob to set the first octet of the default router.
4. Press the button under the next octet (or press **ENTER** to move to the next octet) to select it for editing.
5. Repeat steps 3 and 4 for each octet.
6. To save the default router, move the cursor to the right-most octet and press **ENTER**. To cancel the operation and return to the network settings menu, press **MENU**.

Enable/Disable DHCP

The CEN-TRACK and ATC-AUDIONET can obtain an IP address, subnet mask, default router, and DNS server information (ATC-AUDIONET only) from a DHCP server. To enable or disable DHCP:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *DHCP* and press **ENTER**. The “Edit DHCP” screen is displayed.

“Edit DHCP” Screen

Edit DHCP
 * Off
 On

The current setting is indicated with an asterisk (*).

3. Turn the **TUNE** knob to highlight the desired setting and press **ENTER** to select it. The display returns to the previous screen. To cancel the operation and return to the network settings menu, press **MENU**.

View or Set the Hostname

The CEN-TRACK and ATC-AUDIONET can be identified by a hostname instead on an IP address. To view or set the hostname:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *Hostname* and press **ENTER**. The “Edit Hostname” screen is displayed.

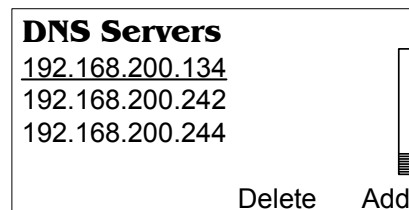
“Edit Hostname” Screen

3. Turn the **TUNE** knob clockwise or counterclockwise to select a new letter (uppercase or lowercase) or number and press **ENTER**. Move the cursor by pressing the buttons labeled < or >. The hostname can be up to 64 characters in length. To delete a character, position the cursor under the character to be deleted and press the button labeled **Del**. To cancel the operation and return to the previous screen, press **MENU**.
4. Press the button labeled **Done** to save the hostname. To cancel the operation and return to the network settings menu, press **MENU**.

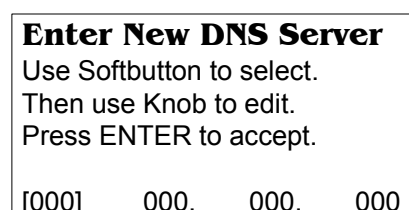
**Specify DNS Servers
(ATC-AUDIONET Only)**

The ATC-AUDIONET uses DNS servers to download Internet radio artwork for display in a touch screen project. DNS servers should only be specified when using static IP addressing (DHCP disabled). To specify a DNS Server:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *DNS Server* and press **ENTER**. The “DNS Servers” screen is displayed.

“DNS Servers” Screen

3. To delete an entry, turn the **TUNE** knob to the entry to be deleted and press the button labeled **Delete**.
4. To add an entry:
 - a. Press the button labeled **Add**.

“Enter New DNS Server” Screen

- b. Turn the **TUNE** knob to set the first octet of the DNS server.
 - c. Press the button under the next octet (or press **ENTER** to move to the next octet) to select it for editing.
 - d. Repeat steps b and c for each octet.
 - e. To save the DNS server address, move the cursor to the right-most octet and press **ENTER**. To cancel the operation and return to the previous screen, press **MENU**.
5. Press **MENU** to return to the previous screen.

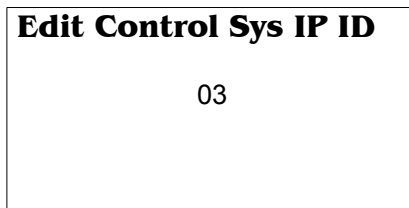
View or Set IP ID

The CEN-TRACK and ATC-AUDIONET are identified to a control system by an IP ID. For additional information on IP IDs, refer to “Identity Code” on page 9.

To set the IP ID:

- 1. Display the network settings menu as described on page 21.
- 2. Turn the **TUNE** knob to highlight *Control System IP ID* and press **ENTER**. The “Edit Control Sys IP ID” screen is displayed with the current IP ID.

“Edit Control Sys IP ID” Screen



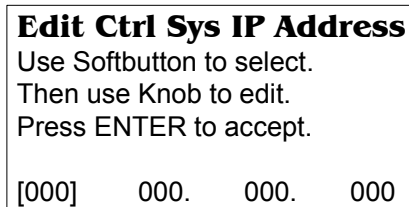
- 3. Turn the **TUNE** knob to display the desired IP ID and press **ENTER** to select it. The display returns to the previous screen. To cancel the operation and return to the network settings menu, press **MENU**.

Set Control System IP Address

The IP address of the master control system must be specified. To specify an IP address:

- 1. Display the network settings menu as described on page 21.
- 2. Turn the **TUNE** knob to highlight *Control System IP Address* and press **ENTER**. The “Edit Ctrl Sys IP Address” screen is displayed.

“Edit Ctrl Sys IP Address” Screen



- 3. Turn the **TUNE** knob to set the first octet of the IP address.
- 4. Press the button under the next octet (or press **ENTER** to move to the next octet) to select it for editing.
- 5. Repeat steps 3 and 4 for each octet.
- 6. To save the IP address, move the cursor to the right-most octet and press **ENTER**. To cancel the operation and return to the network settings menu, press **MENU**.

View MAC Address

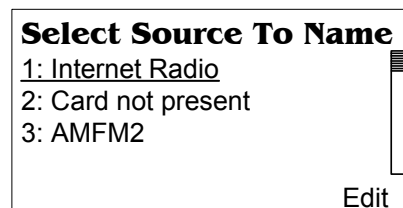
To view the CEN-TRACK or ATC-AUDIONET's MAC address:

1. Display the network settings menu as described on page 21.
2. Turn the **TUNE** knob to highlight *MAC Address* and press **ENTER**. The MAC address is displayed.
3. Press **MENU** to return to the network settings menu.

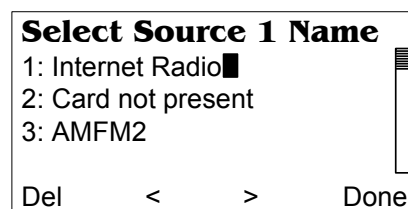
Name Sources

The "Name Sources" tool is used to assign names to cards installed in the CEN-TRACK.

1. Open the "Installer Tools" menu as described on page 19.
2. Turn the **TUNE** knob to highlight *Name Sources*, and press **ENTER**.

"Select Source To Name" Menu

3. Turn the **TUNE** knob to highlight the source to name and press **ENTER** or the button labeled **Edit**. To cancel and return to the "Installer Tools" menu, press **MENU**.
4. Turn the **TUNE** knob to scroll through one of the built-in names and press **ENTER**. To create a custom name, turn the **TUNE** knob to highlight *[Custom Name]* and press **ENTER**.

"Enter Source 1 Name" Screen

To enter a custom name:

- a. Select letters (upper and lower-case), numbers, or other characters by turning the **TUNE** knob until the desired letter, number, or other character is displayed on the LCD. Move the cursor to another position by pressing the buttons labeled < and >. To delete a character, press the button labeled **Del**.

NOTE: The maximum length for any source name is 16 characters.

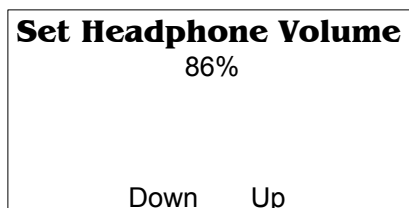
- b. After entering the new source name, press the button labeled **Done** to save the name and return to the list of sources.
5. Rename other sources if desired. If all of the sources have been named/renamed, press **MENU** to return to the "Installer Tools" menu.

Set Headphone Volume

The “Set Headphone Volume” tool is used to adjust the volume level at the headphone jack.

1. Open the “Installer Tools” menu as described on page 19.
2. Turn the **TUNE** knob to highlight *Set Headphone Volume*, and press **ENTER**.

“Set Headphone Volume” Screen



3. To lower the volume, press the button labeled **Down**. To raise the volume, press the button labeled **Up**.
4. Press **ENTER** to return the “Installer Tools” menu.

About

The “About” tool is used to display information about the CEN-TRACK.

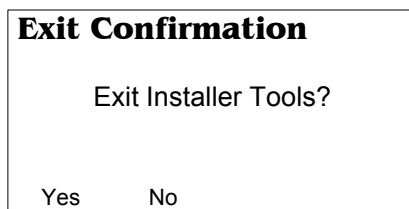
1. Open the “Installer Tools” menu as described on page 19.
2. Turn the **TUNE** knob to highlight *About*, and press **ENTER**.
3. Turn the **TUNE** knob to scroll through the available information.
4. Press **MENU** to return to the “Installer Tools” menu.

Exit the “Installer Tools” Menu

To exit the “Installer Tools” menu:

1. Press **MENU**.

“Exit Confirmation” Screen



2. Press the button labeled **Yes** to exit or press the button labeled **No** to return the “Installer Tools” menu.

Additional Configuration

To use the CEN-TRACK for Internet radio services such as Pandora or SiriusXM Internet Radio, some additional steps are required. Use the front panel controls to setup Pandora and SiriusXM Internet Radio, enable/disable providers, and provide secure access to the ATC-AUDIONET’s multimedia memory card (MMC).

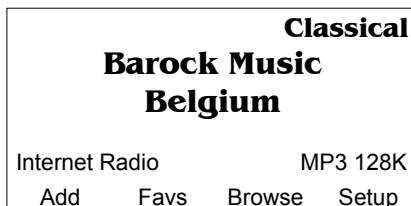
Pandora

Use of the Pandora service requires a user account. The first time the Pandora service is selected for listening, a user account must be entered or created.

1. Press the **TUNERS** button for an installed Internet radio tuner.

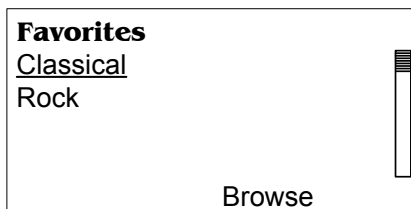
If the tuner is already in use, options are displayed in the following menu.

Internet Radio Tuner Menu



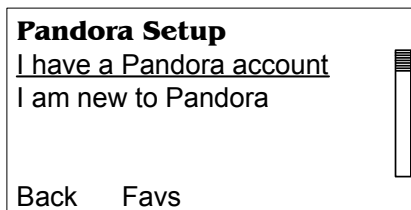
Otherwise, the “Favorites” menu is displayed.

“Favorites” Menu



2. Press the button labeled **Browse**.
3. Turn the **TUNE** knob to highlight *Pandora* and press **ENTER**.
4. Log into the Pandora service using an existing Pandora account (starting below) or create a new one as shown on page 29.

“Pandora Setup” Menu



NOTE: The ATC-AUDIONET can be used to access the free (Pandora) or pay (Pandora One) service. It can also be used to create an account for the free service. However, it cannot be used to create an account for the pay service.

Use an Existing Pandora Account

To use an existing Pandora account:

1. Turn the **TUNE** knob to highlight *I have a Pandora account* and press **ENTER**. The “Enter username (email address)” screen is displayed.

“Enter username (email address)” Screen

Enter username (email a

■

Back Delete

2. Turn the **TUNE** knob to display the first letter of the account’s email address and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
3. Repeat step 2 for each letter in the account’s email address and press **ENTER**.
4. Press the button labeled **Submit** to continue. The “Enter password” screen is displayed.

“Enter password” Screen

Enter password:

■

Back Delete

5. Turn the **TUNE** knob to display the first letter of the account’s password and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.

NOTE: The password is case-sensitive.

6. Repeat step 5 for each letter in the account’s password and press **ENTER**.
7. Press the button labeled **Submit** to continue. A list of Pandora stations is displayed.

Create a New Pandora Account

To create a new Pandora account:

1. Turn the **TUNE** knob to highlight *I am new to Pandora* and press **ENTER**. The display shows an activation code and a Web site address.
2. From a computer, open a Web browser and go to the Web site www.pandora.com/crestron.
3. Enter the activation code and follow the instructions for creating a new account.
4. On the CEN-TRACK, turn the **TUNE** knob clockwise to select the last line of the displayed message and press **ENTER**. The “Pandora Setup” menu is displayed.
5. Log in to the Pandora service as described in “Use an Existing Pandora Account” which starts on page 28.

Log Out from Pandora

To use a different Pandora account, the current user account must be logged out. To log out the current Pandora user account:

1. Select the ATC-AUDIONET as the source to control.
2. Press **MENU**.
3. Press the button labeled **Setup**.
4. Turn the **TUNE** knob to highlight *Setup Pandora* and press **ENTER**.
5. Press **ENTER**. To cancel, press the button labeled **Back**.
6. To confirm, turn the **TUNE** knob to highlight *Yes* and press **ENTER**. To cancel, turn the **TUNE** knob to highlight *No* and press **ENTER**.

Other Services/Functions

The Internet tuner's "Setup" menu is used to setup SiriusXM Internet Radio and select which Internet radio services are displayed to the user. To use the "Setup" menu for configuration:

1. Press the **TUNERS** button for an installed Internet radio tuner.

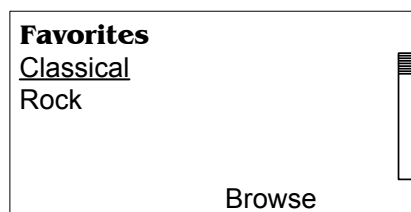
If the tuner is already in use, options are displayed in the following menu.

Internet Radio Tuner Menu



Otherwise, the "Favorites" menu is displayed.

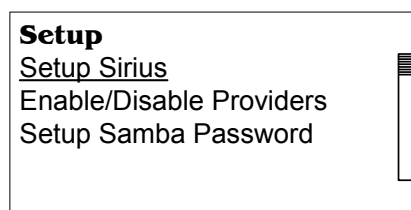
"Favorites" Menu



2. If the tuner is already in use, press the button labeled **Setup**.

If the "Favorites" menu is displayed, press the button labeled **Browse**, then press the button labeled **Setup**. The "Setup" menu is displayed.

"Setup" Menu



3. Turn the **TUNE** knob to highlight the parameter to configure and press **ENTER**.

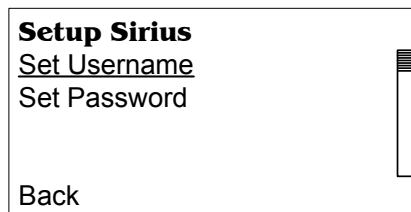
Setup SiriusXM Online

To setup SiriusXM Online, select *Setup Sirius* and press **ENTER**. Then set the username and password used to login to the SiriusXM online service.

NOTE: A paid subscription to online access is required. Free trial accounts are not supported.

NOTE: If the user does not use the SiriusXM online service, disable the service as described in “Enable/Disable Providers” on page 32.

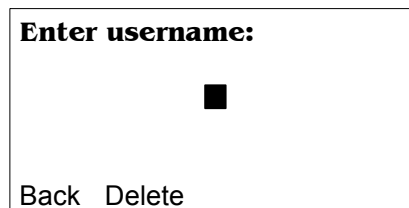
“Setup Sirius” Menu



1. If there is no SiriusXM streaming account, go to www.siriusxm.com to set one up.
2. Turn the **TUNE** knob to highlight *Set Username* and press **ENTER**.
3. Enter the username.

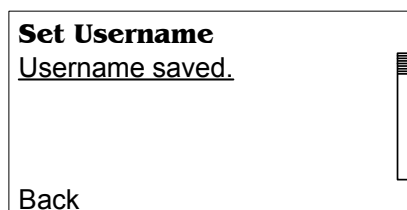
NOTE: The username is case-sensitive.

“Enter username” Screen (SiriusXM Online)



- a. Turn the **TUNE** knob to display the first letter of the username and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
- b. Repeat step a for each letter in the username and press **ENTER**.
- c. Press the button labeled **Submit** to enter the username. A confirmation screen is displayed.

“Set Username (Username Saved)” Screen



- d. Press the button labeled **Back** to return to the “Setup Sirius” menu.
4. Turn the **TUNE** knob to highlight *Set Password* and press **ENTER**.

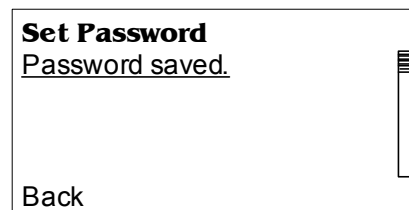
NOTE: The password is case-sensitive.

“Enter password” Screen (SiriusXM Online)



- a. Turn the **TUNE** knob to display the first letter of the password and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
- b. Repeat step a for each letter in the password and press **ENTER**.
- c. Press the button labeled **Submit** to enter the password. A confirmation screen is displayed.

“Set Password (Password Saved)” Screen

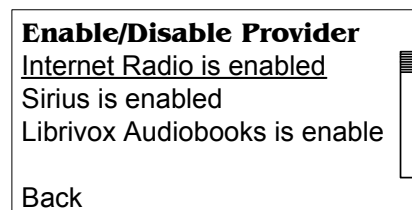


- d. Press the button labeled **Back** to return to the “Setup Sirius” menu.
5. Press the button labeled **Back** to return to the previous screen.

Enable/Disable Providers

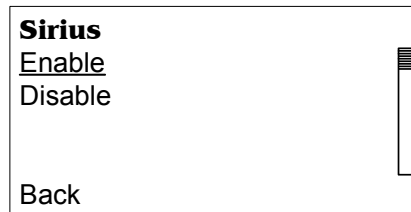
To specify which services are displayed in the Internet Radio tuner’s “Browse” menu, select *Enable/Disable Providers* from the “Setup” menu. A list of providers and their respective status is displayed.

“Enable/Disable Provider” Screen



Enabled providers are displayed in the “Browse” menu while disabled providers are hidden in the “Browse” menu.

1. Turn the **TUNE** knob to highlight the service to be enabled or disabled and press **ENTER**.

Provider Status (Sirius) Screen

2. Turn the **TUNE** knob to highlight the desired setting and press **ENTER**. To return to the previous screen, press the button labeled **Back**.
3. Press the button labeled **Back** to return to the previous screen.

Setup Samba Password

Use the *Setup Samba Password* option from the “Setup” menu to create a password to secure access to the ATC-AUDIONET’s memory card.

“Enter password” Screen (Samba)

1. Turn the **TUNE** knob to display the first letter of the password and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
2. Repeat step 1 for each letter in the password and press **ENTER**.
3. Press the button labeled **Submit** to enter the password.
4. Press the button labeled **Back** to return to the previous screen.

Logout from Pandora

To change the Pandora account that is being used, the current user account must be logged out. To log out the current Pandora user account:

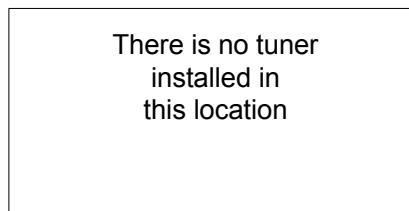
1. Turn the **TUNE** knob to highlight *Setup Pandora* and press **ENTER**. The display shows *Log Out* as the highlighted option.
2. Press **ENTER** to continue or press the button labeled **Back** to return to the previous screen.
3. To complete the log out procedure, turn the **TUNE** knob to highlight *Yes* and press **ENTER**. To cancel, turn the **TUNE** knob to highlight *No* and press **ENTER**.

Operation

This section describes use of the front panel to control a tuner card installed in the CEN-TRACK.

To select a tuner, press one of the six buttons labeled **TUNERS**. The options for the selected tuner are displayed. If there is no tuner installed in the selected slot, the CEN-TRACK displays the following screen:

“There is no tuner installed in this location” Screen

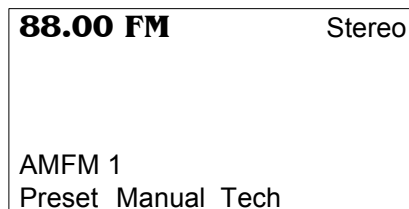


Control the AM/FM Tuner

The AM/FM tuner controls allow the user to tune and scan stations, change bands between AM and FM and store and recall presets.

To select an AM/FM tuner, press the **TUNERS** button for an installed AM/FM tuner card.

AM/FM Tuner Options, FM Station Menu



Manual Tuning

To manually tune a station.

1. Press the button labeled **Manual**.

Manual Tuning Screen



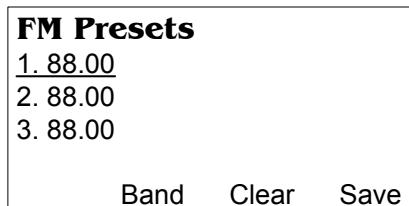
2. Press the button labeled **Band** to switch between the AM and FM bands.
3. Tune a station by either:
 - Turning the **TUNE** knob to the desired station.
 - Pressing the buttons labeled **◀** or **▶** to scan to the next station in either direction.
4. Press **MENU** to exit from manual tuning.

Store and Clear Presets

The store a preset:

1. Tune a radio station as described in “Manual Tuning” which starts on page 34.
2. Press the button labeled **Preset**. The “Presets” screen is displayed. The following illustration shows FM presets.

“FM Presets” Screen



3. Turn the **TUNE** knob to highlight a preset location.
4. Press the button labeled **Save** to store the preset.

“Replace preset with...” Screen

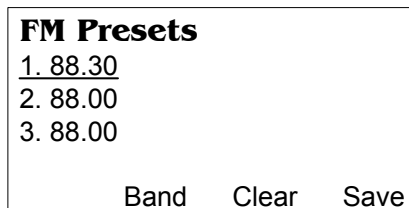


5. Press the button labeled **OK** to store the preset. To cancel, press the button labeled **Cancel**.

To clear an existing preset:

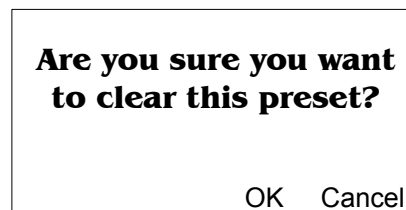
1. Press the button labeled **Preset**. The “Presets” screen is displayed. The following illustration shows FM presets.

“FM Presets” Screen



2. Turn the **TUNE** knob to highlight the preset to be cleared.
3. Press the button labeled **Clear**. The display shows a screen asking for confirmation to clear the preset.

“Are you sure you want to clear this preset?” Screen



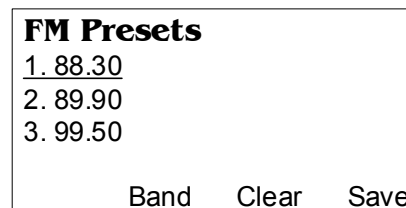
4. Press the button labeled **OK** to clear the preset or press the button labeled **Cancel** to cancel.

Recall Presets

To recall a preset:

1. Press the button labeled **Preset**. The “Presets” screen is displayed. The following illustration shows FM presets.

“FM Presets” Screen



2. To change bands, press the button labeled **Band**.
3. Turn the **TUNE** knob to highlight the preset station to be recalled.
4. Press **ENTER**.

View Signal Strength (ATC-AMFMSRD and ATC-AMFM2 only)

Press the button labeled **Tech** to view the signal strength.

“FM Signal Strength” Screen



NOTE: Signal strength information is not available on the ATC-AMFMXMD.

Control the SIRIUS Tuner

The SIRIUS tuner controls allow the user to tune stations and store and recall presets. It also provides options to apply a parental lock to selected stations or hide selected stations from the channel list.

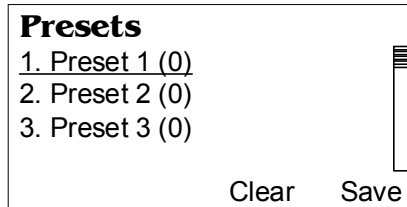
To select a SIRIUS tuner, press the **TUNERS** button for an installed SIRIUS tuner.

Store and Clear Presets

To store a station as a preset:

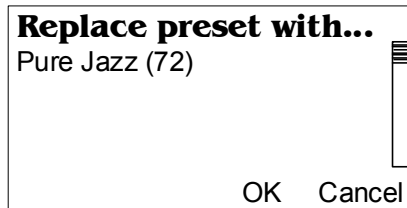
1. Turn the **TUNE** knob to select the desired station.
2. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (Sirius)



3. Turn the **TUNE** knob to highlight a preset location.
4. Press the button labeled **Save** to store the preset.

“Replace preset with...” Screen

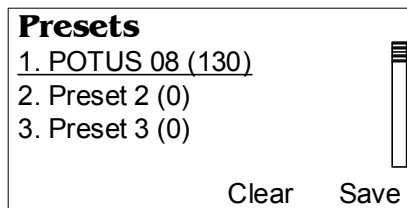


5. Press the button labeled **OK** to store the preset. To cancel, press the button labeled **Cancel**.

To clear an existing preset:

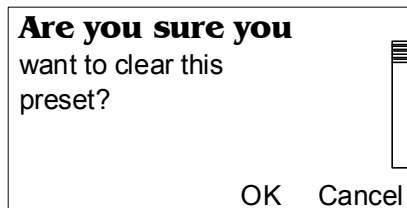
1. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (Sirius)



2. Turn the **TUNE** knob to highlight the preset to be cleared.
3. Press the button labeled **Clear**. The display shows a screen asking for confirmation to clear the preset.

“Are you sure you want to clear this preset?” Screen

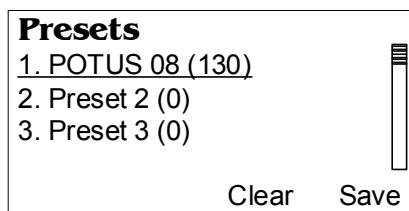


4. Press the button labeled **OK** to clear the preset or press the button labeled **Cancel** to cancel.

Recall Presets

To recall a preset:

1. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (Sirius)

2. Turn the **TUNE** knob to highlight the preset station to be recalled.
3. Press **ENTER**.

View Categories

To view stations by category:

1. Press the button labeled **Cat**. The display shows a list of categories.

“Categories” Menu

2. Turn the **TUNE** knob to highlight the desired category.
3. Press **ENTER** to select the highlighted category.

“Pop Channels” Screen

4. Turn the **TUNE** knob to highlight the desired station.

NOTE: Press the **DISPLAY** button to view any additional information regarding a station in the list.

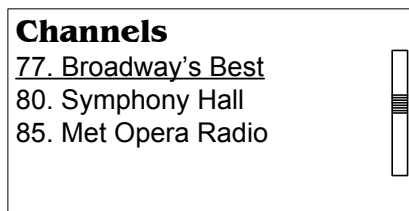
5. Press **ENTER** to select the station.

View Channels

To view stations by channel:

1. Press the button labeled **Chan**. The display shows a list of channels.

“Channels” Screen



2. Turn the **TUNE** knob to highlight the desired station.

NOTE: Press the **DISPLAY** button to view any additional information regarding a station in the list.

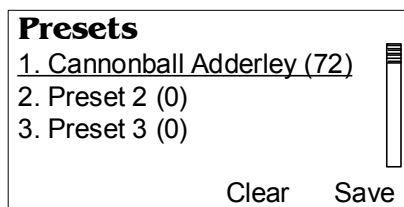
3. Press **ENTER** to select the station.

View Channel Information

To view additional information (artist or song title) about a station:

1. While viewing a list of stations, turn the **TUNE** knob to highlight a station in a station list.
2. Press the **DISPLAY** button to view any additional information regarding a station.

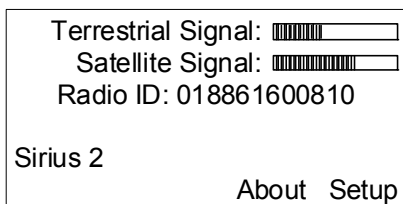
“Presets” Screen (Shown with Additional Station Information)



View Information and Setup

To view the signal strength, information about the tuner, setup channels, or change the Personal Identification Number (PIN), press the button labeled **Tech**. The signal strength and radio ID are displayed.

Technical Information Screen

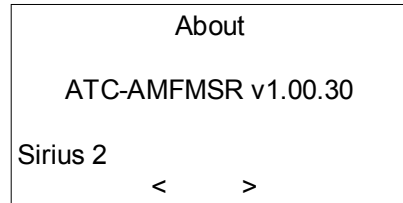


- **About the Tuner:**

To view information about the tuner:

1. Press the button labeled **About**.

“About” Screen



2. Press the buttons labeled < and > to view additional information.
3. Press **MENU** to return to the previous screen.

- **Lock and Hide/Unhide Channels:**

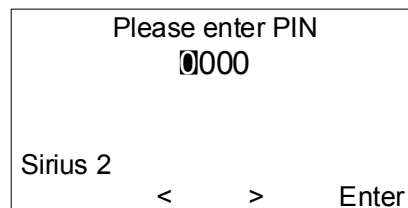
Channels can be locked, hidden, and unhidden from the channel lineup.

NOTE: When a channel is locked, it can be tuned by entering a PIN with the front panel controls. When a channel is hidden, it cannot be tuned.

To lock, unlock, hide, or unhide channels from the channel lineup:

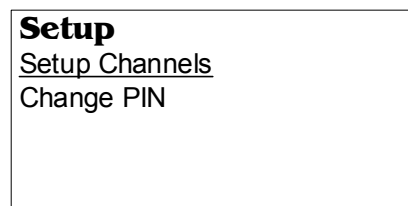
1. Press the button labeled **Setup**. A screen to enter a (PIN) is displayed.

“Please enter PIN” Screen



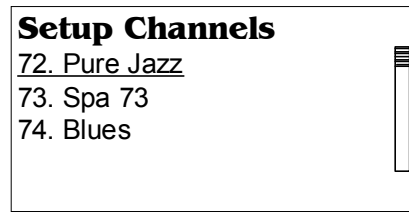
2. Turn the **TUNE** knob to display the first digit of the PIN (the factory default is 1234).
3. Press the buttons labeled < or > to move the cursor to the previous or next digit and enter the rest of the PIN.
4. When the PIN is displayed, press the button labeled **Enter** to open the “Setup” menu.

“Setup” Menu



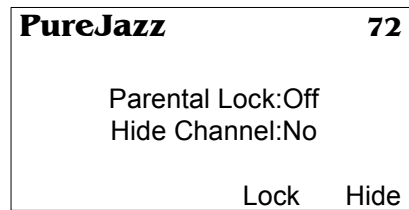
5. Turn the **TUNE** knob to highlight *Setup Channels* and press **ENTER**. The channel list is displayed.

“Setup Channels” Screen



- Turn the **TUNE** knob to highlight a channel for setup and press **ENTER**. The setup screen for the selected channel are displayed.

Channel Setup Screen



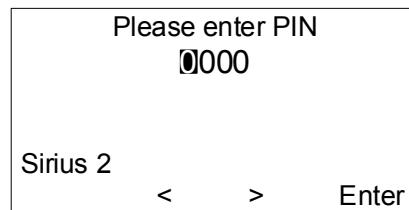
- To lock the channel (if unlocked), press the button labeled **Lock**. To unlock the channel (if locked), press the button labeled **Unlock** (not shown). To hide the channel from the channel lineup (if revealed), press the button labeled **Hide**. To reveal the channel in the channel lineup (if hidden), press the button labeled **Unhide** (not shown).
- Press **MENU** to return to the previous screen.

- Change PIN**

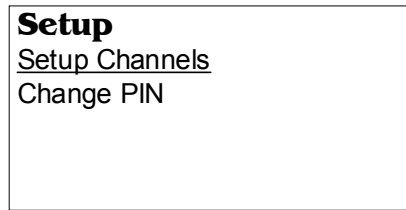
The PIN used to tune a locked station and setup stations can be changed from the front panel. To change the PIN:

- Press the button labeled **Setup**. A screen to enter a Personal Identification Number (PIN) is displayed.

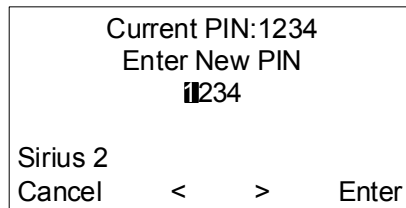
“Please enter PIN” Screen



- Turn the **TUNE** knob to display the first digit of the PIN (the factory default is 1234).
- Press the buttons labeled **<** or **>** to move the cursor to the previous or next digit and enter the rest of the PIN.
- When the PIN is displayed, press the button labeled **Enter** to open the “Setup” menu.

“Setup” Menu

5. Turn the **TUNE** knob to highlight *Change PIN* and press **ENTER**. A screen for changing the PIN is displayed.

Change Pin Screen

6. Turn the **TUNE** knob to display the first digit of the new PIN.
7. Press the buttons labeled < or > to move the cursor to the previous or next digit and enter the rest of the PIN.
8. When the PIN is displayed, press the button labeled **Enter** to save the PIN. To cancel, press the button labeled **Cancel**.
9. Press **MENU** to return to the previous screen.

Control the XM Tuner

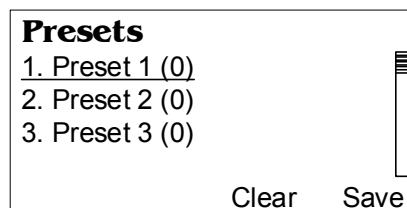
The XM tuner controls allow the user to tune stations and store and recall presets. It also provides an option to hide selected stations from the channel list.

To select an XM tuner, press the **TUNERS** button for an installed XM tuner.

Store and Clear Presets

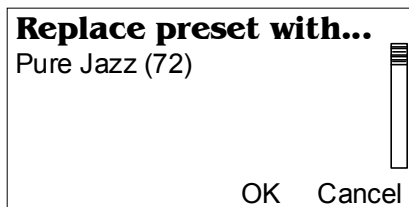
To store a station as a preset:

1. Turn the **TUNE** knob to select the desired station.
2. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (XM)

3. Turn the **TUNE** knob to highlight a preset location.
4. Press the button labeled **Save** to store the preset.

“Replace preset with...” Screen

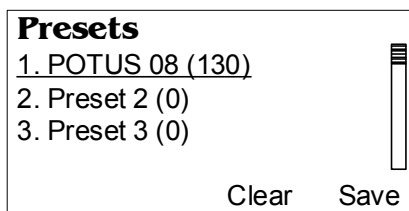


5. Press the button labeled **OK** to store the preset. To cancel, press the button labeled **Cancel**.

To clear an existing preset:

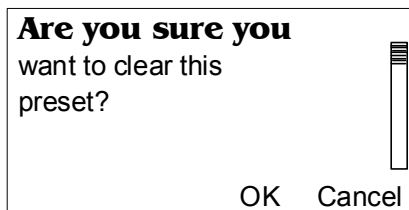
1. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (XM)



2. Turn the **TUNE** knob to highlight the preset to be cleared.
3. Press the button labeled **Clear**. The display shows a screen asking for confirmation to clear the preset.

“Are you sure you want to clear this preset?” Screen



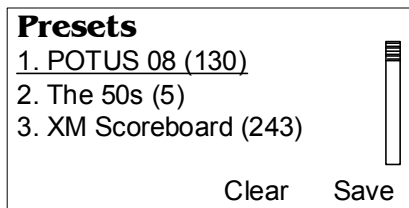
4. Press the button labeled **OK** to clear the preset or press the button labeled **Cancel** to cancel.

Recall Presets

To recall a preset:

1. Press the button labeled **Preset**. The “Presets” screen is displayed.

“Presets” Screen (XM)

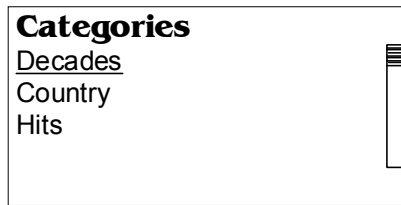


2. Turn the **TUNE** knob to highlight the preset station to be recalled.
3. Press **ENTER**.

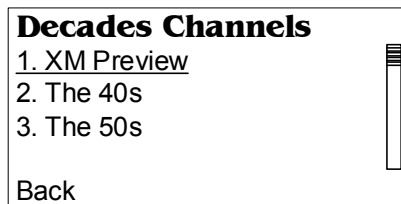
View Categories

To view stations by category:

1. Press the button labeled **Cat**. The display shows a list of categories.

“Categories” Menu

2. Turn the **TUNE** knob to highlight the desired category.
3. Press **ENTER** to select the highlighted category.

“Decades Channels” Screen

4. Turn the **TUNE** knob to highlight the desired station.

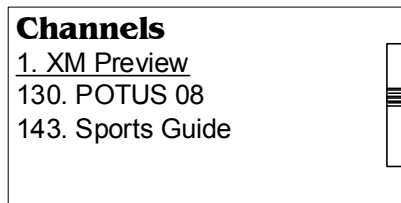
NOTE: Press the **DISPLAY** button to view any additional information regarding a station in the list.

5. Press **ENTER** to select the station.

View Channels

To view stations by channel:

1. Press the button labeled **Chan**. The display shows a list of channels.

“Channels” Screen

2. Turn the **TUNE** knob to highlight the desired station.

NOTE: Press the **DISPLAY** button to view any additional information regarding a station in the list.

3. Press **ENTER** to select the station.

View Channel Information

To view additional information about a station:

1. While viewing a list of stations, turn the **TUNE** knob to highlight a station in a station list.
2. Press the **DISPLAY** button to view any additional information regarding a station.

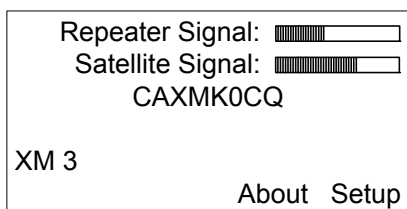
“Presets” Screen (Shown with Additional Station Information)



View Information and Setup

To view information about the signal strength, access information about the tuner, and determine which channels are visible in the channel lineup, press the button labeled **Tech**. The signal strength and radio ID are displayed.

Technical Information Screen

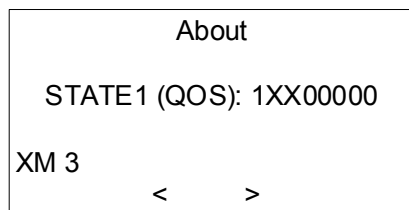


- **About the Tuner:**

To view information about the tuner:

1. Press the button labeled **About**.

“About” Screen

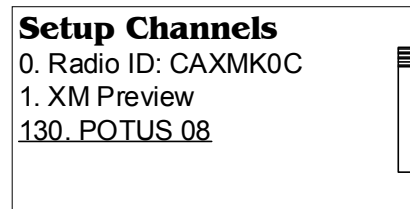


2. Press the buttons labeled < and > to view additional information.
3. Press **MENU** to return to the previous screen.

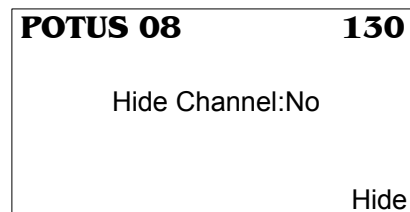
- **Hide/Unhide Channels:**

Channels can be hidden and unhidden from the channel lineup.

1. Press the button labeled **Setup**.

“Setup Channels” Screen

2. Turn the **TUNE** knob to highlight a channel for setup and press **ENTER**. The channel's setup options are displayed.

Setup Options Screen

3. To hide the channel from the channel lineup (if revealed), press the button labeled **Hide**. To reveal the channel in the channel lineup (if hidden), press the button labeled **Unhide** (not shown).
4. Press **MENU** to return to the previous screen.

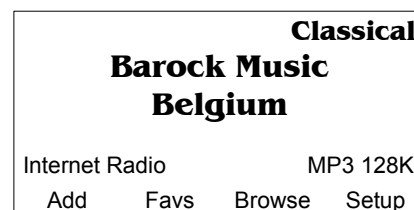
Control the Internet Radio Tuner

The Internet radio tuner controls allow the user to tune Internet radio stations, Pandora Internet Radio, SiriusXM Internet Radio, and listen to audiobooks from Librivox.

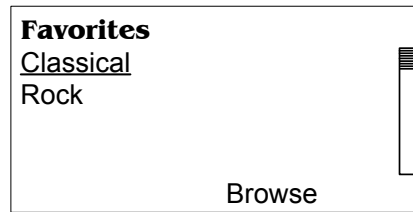
NOTE: To ensure proper operation, download and install the latest CEN-TRACK firmware from <http://crestron.com/firmware>.

To select an Internet radio tuner, press the **TUNERS** button for an installed Internet radio tuner.

If the tuner is already in use, options are displayed in the following menu.

Internet Radio Tuner Menu

Otherwise, the “Favorites” menu is displayed.

“Favorites” Menu

Continue reading below for instructions on browsing Internet radio, Pandora Internet Radio, SiriusXM Internet Radio, and audiobooks from Librivox. For information on favorites, refer to “Favorites (Internet Radio & SiriusXM Only)”, which starts on page 50.

Browse

Browse Internet radio stations, Pandora Internet Radio, SiriusXM Internet Radio, and Librivox audiobooks.

Internet Radio

The *Internet Radio* option allows the user to search for Internet radio stations and podcasts or browse Internet radio stations.

1. Press the button labeled **Browse**.
2. Turn the **TUNE** knob to highlight *Internet Radio* and press **ENTER**.
3. Turn the **TUNE** knob to highlight a browsing method and press **ENTER**.
 - Select *Search Stations* or *Search Podcasts* to search for Internet radio stations or podcasts by name.

“Enter search string” Screen

- a. Turn the **TUNE** knob to display the first letter of the search string and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
- b. Repeat step 1 for each letter in the search string and press **ENTER**.
- c. Press the button labeled **Submit** to begin the search. A list of stations/podcasts matching the search string is displayed.
- d. Turn the **TUNE** knob to highlight the desired station/podcast and press **ENTER** to select.
 - Highlight *Local Stations* and press **ENTER** to display stations near the user’s geographic location.
 - Highlight *Recently Played* and press **ENTER** to display stations that were recently played.

- Highlight *Location* and press **ENTER** to display stations or podcasts near a specific location.
- Highlight *Genre* and press **ENTER** to display stations or podcasts within a specific genre.
- Highlight *Newly Added* and press **ENTER** to display stations that were recently added.
- Highlight *Popular* and press **ENTER** to display the most popular Internet radio stations.

While listening to an Internet radio station, the user can add it to a group of favorite stations, view the list of favorite stations, browse for another station, or configure the ATC-AUDIONET.

- Press the button labeled **Add** to add the current Internet radio station to the list of favorites (not used for Sirius, Librivox, or Pandora).
- Press the button labeled **Favs** to display the list of favorite stations.
- Press the button labeled **Browse** to browse through the available stations and other Internet radio feeds.
- Press the button labeled **Setup** to configure the ATC-AUDIONET.

Pandora Internet Radio

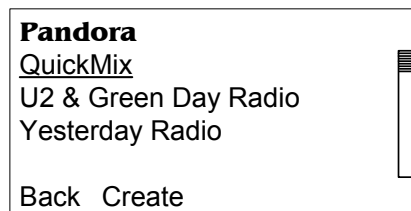
Choose the *Pandora* option to create and listen to Pandora Internet Radio stations.

Create a Station

To create a Pandora station:

1. Press the button labeled **Browse**.
2. Turn the **TUNE** knob to highlight *Pandora* and press **ENTER**. A list of Pandora stations is displayed.

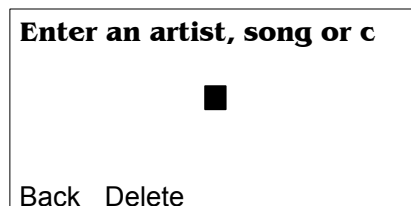
“Pandora” Station Menu



NOTE: If Pandora is being used for the first time (or no one has logged in), options for logging in or creating a Pandora account are displayed. Refer to “Pandora” on page 28 for details.

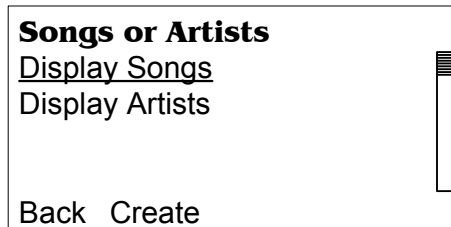
3. Press the button labeled **Create**.

“Enter an artist, song or composer” Screen



4. Turn the **TUNE** knob to display the first letter of the search term and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
5. Repeat step 4 for each letter in the search term and press **ENTER**.
6. Press the button labeled **Submit** to continue. Options are displayed.

“Songs or Artists” Screen



7. Turn the **TUNE** knob to highlight the desired option and press **ENTER**. Selections that correlate to the search term are displayed.
8. Turn the **TUNE** knob to highlight the desired selection and press **ENTER** to add the Pandora station.

Listen to Station

To listen to a Pandora station:

1. Press the button labeled **Browse**.
2. Turn the **TUNE** knob to highlight *Pandora* and press **ENTER**. A list of Pandora stations is displayed.

“Pandora” Station Menu



3. Turn the **TUNE** knob to highlight the desired station and press **ENTER**. The station starts playing.

Rate or Bookmark

While a song is playing, the song can be rated or bookmarked. To rate a song or bookmark the song or artist:

1. Press the button labeled **Rate**.
2. Turn the **TUNE** knob to the desired function and press **ENTER**.

SiriusXM Internet Radio

Choose the *Sirius* option to listen to the online feed from SIRIUS Satellite radio stations (subscription to online access required). To access the SIRIUS online feed:

1. Press the button labeled **Browse**.
2. Turn the **TUNE** knob to highlight *Sirius* and press **ENTER**.
3. Turn the **TUNE** knob to highlight the desired category or channel and press **ENTER**.
4. Press the button labeled **Back** to return to the previous screen.

Librivox Audiobooks

Choose the **Librivox Audiobooks** option to listen to free audiobooks from www.librivox.org. To select a file for listening:

1. Press the button labeled **Browse**.
2. Turn the **TUNE** knob to highlight *Librivox Audiobooks* and press **ENTER**.
3. Turn the **TUNE** knob to highlight the desired file and press **ENTER**.

Favorites (Internet Radio & SiriusXM Only)

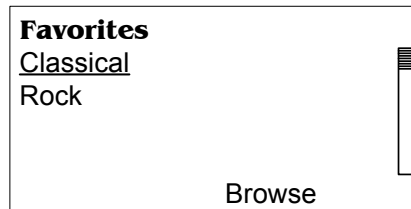
While listening to Internet radio or SiriusXM, favorite stations can be recalled, cleared, and stored.

Recall or Clear Favorite Stations

To recall or clear a favorite station:

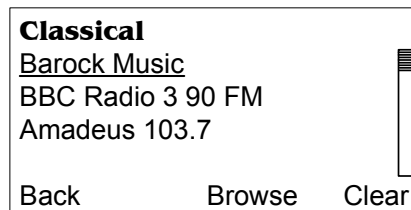
1. Press the button labeled **Favs**. A list of favorite categories is displayed.

“Favorites” Menu



2. Turn the **TUNE** knob to highlight a favorite category and press **ENTER**. A list of stations within the category is displayed.

“Classical” Favorite Stations Screen



3. Turn the **TUNE** knob to highlight the station to be tuned and press **ENTER**.
 - Press the button labeled **Back** to return to the previous screen.
 - Press the button labeled **Browse** to browse stations.
 - Press the button labeled **Clear** to remove the highlighted station from the list of favorites.

Add a Favorite Station

To add a favorite station:

1. Tune an Internet radio station or SIRIUS station as described in “Browse” on page 47. The station information is displayed.

Internet Radio Tuner Menu



2. Press the button labeled **Add**.
3. Turn the **TUNE** knob to highlight the group where the favorite station is to be stored or highlight **Add New Group** to create a new favorite group.

“Enter new group name” Screen



- a. Turn the **TUNE** knob to display the first letter of the group name and press **ENTER**. To delete a letter, press the button labeled **Delete**. To return to the previous screen, press the button labeled **Back**.
 - b. Repeat step a for each letter in the username and press **ENTER**.
 - c. Press the button labeled **Submit** to enter the group name and save the station (skip step 4).
4. Press **ENTER** to save the favorite station.

NOTE: Favorite stations can also be saved online at radio.crestron.com. For more information, refer to the latest versions of the ATC-AUDIONET Operations & Installation Guide (Doc. 6933) or the ATC-AUDIONET Quickstart guide (Doc. 6931).

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

CEN-TRACK Troubleshooting

| TROUBLE | POSSIBLE CAUSE(S) | CORRECTIVE ACTION |
|---|---|--|
| Device does not function. | Device is not receiving power from a Crestron power source. | Use the provided Crestron power source. Verify connections. |
| | Device is not communicating with the control system. | The IP address for the control system is invalid or the IP ID does not match the one defined in the SIMPL program. |
| Tuner card does not function. | Tuner card not properly installed. | Refer to the installation instructions in the guide that came with the tuner card. |
| Cannot access tuner card controls from front panel. | Dusty contacts on tuner card. | Clean contacts with cotton swab or clean cloth. |
| No sound from tuner. | Antenna not connected or not connected properly. | Verify antenna connection. |
| | Station detuned or weak. | Tune station; adjust antenna. |
| | Unsubscribed tuner not on preview channel. | If unsubscribed, be sure tuner is on preview channel. |
| | Subscribed tuner not on a subscribed channel. | If subscribed, be sure tuner is on a subscribed channel. |
| Noisy AM/FM reception. | Improper antenna connection. | Verify antenna connection. |
| Tuned station does not produce sound (Internet radio only). | Firewall settings prevent reception of streaming audio. | Change firewall port settings or contact network administrator. |
| Cannot receive SiriusXM streaming content. | Subscription required to stream SiriusXM content. | Subscribe to SiriusXM streaming content at www.sirius.com . |
| | Incorrect login information entered. | Correctly enter username and password (case-sensitive) on CEN-TRACK front panel. |
| Scan does not operate. | Signal strength too weak. | Check antenna placement and orientation for good signal strength. |
| Loss of functionality due to electrostatic discharge. | Improper grounding. | Check that all ground connections have been made properly. |

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron Web site (www.crestron.com/manuals).

List of Related Reference Documents

| DOCUMENT TITLE |
|------------------------------------|
| ATC-AUDIONET |
| Crestron e-Control Reference Guide |

Notes on Internet Radio

- Internet radio stations can only support a limited number of listeners at any time. If the station's servers have reached their limit of listeners, the ATC-AUDIONET is not able to connect. To resolve the problem try to connect again.
- Some radio station servers that have too much traffic may choose to “bump” people off the stream. If this happens, try to connect to the station again.
- If a station stops broadcasting, it is removed from the list of available stations.
- A station may go offline before it has been removed from the list. Offline stations do not produce a signal.
- Some stations may not appear on the list of stations if they broadcast in a format that is not supported by the ATC-AUDIONET. For a list of supported formats, refer to latest revision of the ATC-AUDIONET Operations & Installation Guide (Doc. 6933).

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or refer to the listing of Crestron worldwide offices on the Crestron Web site (www.crestron.com/offices) for assistance within a particular geographic region.

To post a question about Crestron products, log onto the Online Help section of the Crestron Web site (www.crestron.com/onlinehelp). First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the CEN-TRACK, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron Web site periodically for manual update availability and its relevance. Updates are identified as an “Addendum” in the Download column.

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Version 2, June 1991

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