610

Internet Radio Monitor

Installation & User Guide

November, 2013
Rev. 2 Firmware/Software Upgrade
Expanded E-mail & Time Server Options
SNMP Functionality

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Section I

INTRODUCTION

Product Description

The Inovonics 610 provides uninterrupted monitoring of "Internet Radio" streaming quality and performance. The 610 is easily set up and operated with the front-panel jog wheel and OLED display, and a full-featured Web interface is accessible using any PC, tablet or smart phone with a browser.

Product Features

Features of the Inovonics 610 include:

- Automatically decodes MP3, Ogg Vorbis and AAC Internet streaming audio formats as used with both Icecast and SHOUTcast Internet radio protocols.*

- Displays stream metadata: Station ID, Song/Program Info, Quality (format and bitrate).

- Easy setup using the OLED screen and jog-wheel navigation of the monitor's menu tree.

- Full-function Web interface works with any computer, tablet or mobile device browser.

- Self-logging alarms for audio loss, stream loss and Internet loss. Provides alarm 'tallies' for remote indication and sends e-mail or text message alerts.

- Seamless integration with network management protocols via SNMP.

- +4dB analog L/R and AES-digital program line outputs extend the utility of the 610 for point-to-point program audio distribution as well.

- Accurate front-panel LED metering.

* The Model 610 Internet Radio Monitor will not directly decode MMS, RTMP, RTSP or HLS streaming.

Product Specifications

Network Connection: LAN (RJ-45) jack accepts universal TCP/IP connection to Local Area Network, and via router to the Internet.

Popular Streaming Formats Supported: Icecast and SHOUTcast streaming formats using these encoding standards and rates: MP3 (32kbps – 320kbps); Ogg Vorbis (32kbps – 500kbps); AAC (32kbps – 384kbps).

Metadata Decoded/Displayed: Station (streamer's ID); Song/Title (artist and title or program name); Quality (streaming rate, encoding format, mono or stereo and original sampling rate).

Program Audio Output(s): +4dBu balanced analog Left/ Right (XLR), 200-ohm source impedance; AES digital (XLR), 48kHz sampling rate; Front-Panel Headphone Jack (3.5mm TRS), adjustable.

Alarm Tallies: Individual open-collector NPN transistor outputs for Audio Loss, Stream Loss and Internet Loss.

Power Requirement: 12VDC at 450mA (2.1mm x 5.5mm coaxial); a 'wall-outlet transformer' (WallWart®) switching-type power supply appropriate to the destination AC mains voltage is provided.

Mounting Options: An optional rack adapter mounts one or two 610s in a standard 19-inch 1U rack space.

Size and Weight: 1.6"H x 8"W x 6."D; 5 lbs. shipping weight.

Section II

GETTING STARTED

Unpacking and Inspection

Immediately upon receipt of the 610 Internet Radio Monitor, inspect for any possible shipping damage. If damage is found or suspected, notify the carrier at once, and then contact Inovonics.

We recommend that you set aside the original shipping carton in the event that return for Warranty repair is required. Shipping damage sustained as a result of improper packing for return may invalidate the Warranty!

Warranty Registration

Please complete the Warranty Registration process. Not only does registration assure coverage of the equipment under terms of the Warranty, which is printed inside the back cover of this manual, but the user is assured of receiving specific service and modification instructions, including software and firmware updates. Register online at:

www.inovonicsbroadcast.com/product-registration

Mounting

The Model 610 Internet Radio Monitor is packaged in a compact, half-rack format. It comes with rubber feet so that it may sit on a desktop, or it may be placed atop an existing piece of rack-mounted equipment as long as at least 1U of panel space is left open to access the 610 front panel.

An optional rack-mount kit is available that can accommodate either a single or a pair of 610s. The kit comes with a blanking panel for unused space, and with a 'daisy-chain' power cable so that two 610s may share a single supply.

AC Mains Power

The 610 is supplied with an outboard switching-type power supply suited to the destination mains voltage. The actual power consumed is 450mA at 12 volts DC. A second DC connector on the rear panel of the 610 allows the user to 'daisy-chain' two units to share a common AC power supply. Do make sure that the total input power specification does not exceed the current rating noted on the power supply label.

Radio Frequency Interference (RFI)

Although we have anticipated that the 610 may find a home in radio broadcasting environments, please do practice reasonable care in locating the unit away from *abnormally* high RF fields.

The Front-Panel Displays and Controls

The left- and right-channel program level bargraphs are peak-indicating meters. The top-most 0dB segments represent digital full-scale (0dBFS) of the incoming stream, the program audio clipping point. The meters then have a 3dB-per-step linear resolution down to –21dB. The last two segments, –30dB and –50dB, will indicate the presence of very low-level program audio components that otherwise would show up as 'dead air.' Although the *resolution* of this metering is limited by the number of segments provided, the *range* covers the broad 'zero-VU operating level' variations expected among streaming sources.

The front-panel OLED graphic display screen presents the setup/operate menu tree in an easy-to-read format, and all setup can be done with jog wheel entry. The display does employ a screen saver, so when the screen goes dark, simply push the jog wheel or Back button once to bring the screen back to life. No selection or change is made with this wake-up call.

Navigating the Menus

Basically, you *turn* the jog wheel knob to cycle among and highlight menu items, and then *push* the knob to select/edit the highlighted item. To further clarify:

1) If you land on a menu item that requires a text or numerical entry, a text-entry screen appears. *Turn* and *push* the knob to select and input characters, punctuation, backspace, etc. Then select Save and *push* the knob to commit, or press the Back button next to the knob to cancel the operation.

2) If the selection is a checkbox or a 'radio button,' *push* the knob to toggle it.

3) If the screen shows a 'slider,' *turn* the knob to change the value and then *push* the knob or press the Back button to commit.

You may always press the Back button repeatedly to return to the Main Menu screen shown here.

Headphone Monitoring

The front-panel PHONES jack will accommodate both low- and high-impedance stereo headphones with a 3.5mm stereo plug. When headphones are plugged in, the display will automatically go to the Headphone Volume screen, and the jog wheel knob will adjust the listening level. When the volume has been set at a comfortable level, push the Back button to return to the previous menu. The Headphone Volume screen may also be reached via the last item on the Main Menu.

Rear Panel Connections

NETWORK — The rear-panel RJ-45 jack connects with your local network (LAN), and from there through your network router to the Internet and the rest of this big, beautiful world. The network connection conforms to standard TCP/IP protocol.

G A S I — These are alarm "tally" outputs for remote indication of fault conditions. Designations are also noted on the rear panel and stand for: Ground, Audio Loss, Stream Loss and Internet Loss.

The three alarm outputs are the collectors of NPN transistors that saturate to ground for an alarm condition. Up to 100mA may be 'sunk' by each of these outputs to operate relays or LED indicators using an external voltage source up to 24VDC. The negative side of the external power source must be returned to the G (Ground) terminal on the rear panel of the 610.

The plastic connector body may be unplugged from the chassis to make connection easier and for quick disconnect.

ANALOG LINE OUTPUTS L/R — The active-balanced analog line outputs supply a program level of +4dBu at 0dBFS, the digital-full-scale value of the incoming stream. These outputs have a 200-ohm source impedance.

AES DIGITAL AUDIO OUTPUT — The balanced, transformer-isolated AES digital audio output has a fixed sampling rate of 48kHz. An incoming stream level of 0dBFS gives a 0dBFS AES digital output.

+12VDC POWER I/O — Two paralleled 'coaxial' connecters allow 'daisy-chaining' two 610s that share a common rack adapter, provided that the rating of the supply is not exceeded. A short 'pigtail' cable is provided with each rack adapter for power loop-through.

The Model 610 Internet Radio Monitor draws a maximum of 450mA. Check the rating on the label of the power supply to make sure it's gutsy enough for the modules it must support.

These power connectors are not a locking type, and the mating plugs pull out rather easily. A Ty-Wrap® will secure power cables to the plastic anchor positioned above the power connectors if you foresee this as a problem.

Section III

CONNECTING TO THE INTERNET

Front Panel vs. Web Interface

The 'responsive' design of the 610 Web interface provides an optimal viewing experience across a wide range of devices. From desktop computer monitors to tablets to mobile phones, a minimum of resizing, panning or scrolling is required. Data entry using a real keyboard will almost always prove easier than knob-and-button menu navigation, and the Web interface is thoroughly covered in a later section.

Initial 610 configuration (setup) is presented using front-panel 'knob and button' data entry, since this is necessary to get the unit online in the first place. However, other setup programming of the unit is easier and faster with a conventional keyboard, once the 610's Webpage can be brought up in a computer's browser (see Section VII).

DHCP IP Assignment

With the LAN jack on the back of the 610 connected to your network, navigate from the Main Menu to Setup / Network / IP Settings. Here you may select: ⊙ DHCP to have your router automatically assign an IP address to the 610. Once DHCP connection is established, the fields on the right-hand side of the screen will populate automatically.

Manual IP Setup

For any of several reasons you may need to set the IP address of the 610 manually. Select the ⊙ Static IP radio button and continue to turn the knob to bracket the various network options shown on the right. Push the knob to bring up each data-entry field, and then turn and push to enter the proper decimal-delineated numbers. Use Backspace to erase an entry or to make corrections, and when you're finished be sure to Save the new entry.

It is not within the scope of this discussion to detail the manual-IP setup procedure, but a competent IT professional should be familiar with the intricacies of this operation.

Assigning a Host Name

Hostname is the second item on the Network menu. It allows the user to assign a unique name to a particular Internet Radio Monitor, and will identify the 610 when accessing it via the network. The factory-default name is INOVONICS-IRM (note the hyphen!). You may change this to personalize the equipment name, or to differentiate one 610 from another on a common network. The Hostname assignment cannot include spaces.

Push and turn the knob to assign a new name and Save the name when finished. Although Host Names are entered in all-capital letters, it is not necessary to use all-caps when addressing the monitor. For instance, under the Windows® operating system you may access the 610 through a Web browser on the same network simply by typing its name and a forward-slash into the browser address bar like this:

Non-Windows browsers may require you to enter the complete IP address of the 610, which may always be brought up by navigating to: Setup / Network / IP Settings.

Accessing the 610 Remotely

On a common local network (LAN), access the 610 Web interface by entering its IP address or, under Windows, its Host Name into your browser address bar (see Section VII).

To address the 610 from outside your LAN (from the Internet) the unit must have a static IP address. If your router makes DHCP assignments for other equipment on the network, simply assign the 610 a static IP that is outside the router's DHCP range. This is an easy matter with the aid of the router's Help utility.

It is also necessary to open a specific port for the 610 on the network router. Within the router's Port Forwarding utility you will be able to enter your static IP address for the 610 (Internal IP), followed by a colon and a port number.

The port number may be any number in the range indicated by the router. If your Internet Service Provider (ISP) assigns you a static IP address, then it is a simple matter to address the 610 from anywhere. Just type the IP address and port number into your browser; for example:

But if your ISP issues you a *dynamic* IP, which is quite often the case, this mandates 'Dynamic DNS' using the services of an IP-forwarding provider.

Dynamic DNS

It would not be possible to address equipment behind a dynamic IP address if it were not for IP-forwarding providers available on the Internet. Their services, which are either free or at a very modest charge, will allow the 610 Internet Radio Monitor to keep the provider apprised of its reassigned IP address each time that address is updated by the ISP. The IP-forwarding provider intercepts data attempting to connect with the 610 and converts the IP address to the updated one.

There are three popular forwarding service providers available on the Internet. Their basic service (all you really need) may be free of charge, but advanced features may command a nominal annual fee. All services require registration on the appropriate Website.

From the Main Menu, navigate to Setup / Network / Dynamic DNS. Disabled is the default selection in the Mode: field, but here you may choose among the three popular providers. Write down these provider names and put a www in front

of each in your Web browser to learn more about their services and to register with whichever provider seems to best meet your needs.

When you register, the provider will issue you a Hostname, Username and Password. Use the front-panel knob to enter the-

se into each of the three fields. When finished the screen should look something like the example.

Network Status

Highlight Status at the bottom of the Network menu and push the knob. This brings up a screen that gives full particulars of the network connection. This screen is useful for troubleshooting or for verifying connection parameters.

Section IV

"TUNING-IN" YOUR AUDIO STREAM

From the Main Menu, navigate to URL Tuner. The Stream Address entry box will be bracketed. Push the knob to bring up the data-entry screen.

This is where you enter the URL of the Internet radio station. There is a full set of alphanumerics here, a few handy URL extensions at the bottom, a Caps Lock option for uppercase characters, and the usual Backspace and Save.

The entry method is self-explanatory, but you may find it necessary to search the station's Website to find the right streaming address, often including a port number as shown in the example above.

When the URL has been entered and saved, turn the knob to bracket Connect and push the knob. The station should begin to play.

The 'Now Playing' Screen

Highlight Now Playing on the Main Menu and push the knob. This information screen displays the metadata that accompanies a Webcast. The Station, Song/Title (program title) and Quality (data rate, coding method and initial sampling rate) are all shown here. Information that overruns the display is scrolled. Internet date and time are also posted.

Saving and Managing Presets

A station that has been tuned-in and is currently playing may be saved as one of ten presets.

From the Main Menu, navigate to Preset Stations. Highlight Save Now Playing Station at the top of the list and push the knob.

This will open a data-entry screen where you can assign a name to the station. Use Backspace to erase the default station name provided by the broadcaster, which may have been truncated as this field will accept only 15 characters, including spaces. Once you have assigned a suitably concise name, Save the name, which will then appear at the bottom of the Preset Stations list.

The list may be re-ordered through a slightly convoluted process. You may move any existing preset to the top of the list by making it the 'Now Playing' station and renaming it with the same name. You'll then have two identical listings, and the duplicate underneath may be deleted. Repeat as necessary to get the list sorted to your satisfaction.

To delete a preset, go to the very bottom of the Preset Stations menu, highlight Delete and push the knob. The flashing X highlight may be positioned over any preset, and when you push the knob again that preset will be deleted.

ALARMS AND NOTIFICATIONS

The 610 Internet Radio Monitor provides alarms for three separate fault conditions: Audio Loss, Stream Loss and Internet Loss.

Three front-panel LEDs signal these faults, and a closure to ground on the rear panel allows the alarms to be monitored remotely. Alarms may be programmed to trigger e-mail or text message alerts as well, and the 610 conforms to SNMP protocols to send alarm 'traps' to other equipment connected to the local network (see Page 19).

Audio Loss Setup

From the Main Menu, navigate to Alarms & Notifications / Audio Loss. There are two settings to be made here.

The Timer slider sets the number of seconds between the onset of 'dead air' and the alarm. How you set this is dictated by the stream format. A classical music or an oral interpretation stream might call for a setting of 30 seconds or more to allow for the soft passages or long pauses that are native to these formats. A high-energy music channel, on the other hand, could be safe with a 10-second setting.

The Audio Threshold slider sets a program peak level, below which audio peaks must remain for the Timer interval before an alarm is registered. Again this may depend on the format, but an all-around setting suggestion is –21dB.

Once the program level falls and remains below the Audio Threshold, for 5 seconds, the front-panel LED will begin to flash at a 1-second rate. At the end of the Timer interval the LED will glow steadily. At this point a closure to ground will be applied to the rear-panel Audio Loss alarm terminal, e-mail and SNMP notifications will be sent, and the alarm will be added to the Alarm Log.

The Alarm Log

Navigate to Alarms & Notifications / Alarm Log, which will display a listing of all alarms, the most recent on top. The type of Alarm, the particular Station tuned, and the Time & Date of the occurrence are shown, both when the fault occurs and when operation is restored. This log may be sent to e-mail recipients and is available through the Web interface as well.

Keep in mind that the Alarm Log will indicate the 'succession of alarms'; that is, if you lose the Internet connection, you will log an Internet Loss and Stream Loss alarm almost concurrently, and then an Audio Loss alarm after the programmed dead-air delay.

E-mail Setup

Once it has been set up properly, the 610 sends e-mails in exactly the same manner that an e-mail 'client' (program) such as Outlook or Thunderbird would. E-mails may be addressed directly to designated recipients, but can as easily be sent as text messages to mobile phones. If you are not familiar with this process, there is a very good tutorial at: http://sms411.net/how-to-send-email-to-a-phone/.

For either e-mails or text alerts, you will have to know and enter the proper setup parameters. These may simply be borrowed from an existing, personal e-mail account if you don't want to set up a separate one just for 610 alarm notifications, or you may use the following example to create a dedicated sender.

Navigate from the Main Menu to Setup / Email Preferences. Under SMTP Server an example might read: smtp.gmail.com. Enter this information by bracketing the SMTP Server box and pushing the knob to bring up the text entry screen. Turn and push the knob to enter the info, and then Save it.

The default ⊠Use SSL and Port 465 would be the proper choices in the cited Gmail case, but other e-mail servers may well have different requirements.

Under Sender, enter the account Username for the account and a Password.

Under Recipients you may enter up to ten e-mail addresses that will receive the fault alerts or logs. (Who gets what is discussed later.) Put in the entire e-mail address, such as: tech@mystream.com, or the proper address for texting to a mobile device.

When all the necessary account information has been entered, you may use the Send Test Email utility to confirm proper setup; the test e-mail will be sent to all recipients.

Some e-mail programs and third-party junk-mail filters may classify messages from the 610 as SPAM. To avoid missing alerts, add the 610's e-mail address to the contact lists of all recipients.

Recipient Preferences for Notifications

Navigate next to Alarms & Notifications / Email Notifications. This brings up a matrix where you specify which e-mail recipient gets what notifications. The system accommodates up to 10 different e-mail addresses. Simply bring up the recipients e-mail address on the top line, and then check whichever boxes apply to that recipient's preference. Any assortment of individual alarms or periodic logs of alarm events may be selected for each recipient independently.
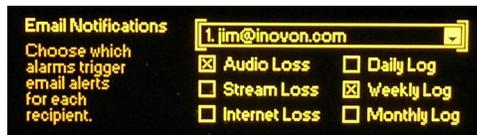
For each of the three checked alarm boxes, the recipient will receive notification when the fault condition occurs and when it is cleared. Keep in mind that e-mail notifications are sent for each and every fault occurrence. If the network is having a bad day, and you're set to receive Internet Loss Alarms, you could quickly be inundated with e-mail or text-message alerts. Consider instead the option of receiving daily, weekly or monthly alarm logs. Of course if the Internet is down, you are not going to receive e-mails from the 610 anyway, are you?

Alternative Notification

There is an alternative to individual e-mail notifications or automatic dispatch of complete logs.

From the Main Menu, navigate to Setup / Alarm Log Settings. A slider labeled Email When: may be set to send an e-mail notification to all listed recipients when the Alarm Log reaches

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a certain percentage of its capacity. So instead of individual e-mail alerts you get just one e-mail after a significant number of alarms has been logged. The log is capable of holding 2000 individual fault incidents, and the slider may be set to any value between 0% and 100%. Setting the slider to 0% disables this notification feature. A Status: notice above the slider shows how full the alarm log is currently.

Below the slider is the Clear Log button. Activating this will clear the Alarm Log completely. There is a second "Are you sure…" screen after this button is activated.

The Alarm Log may also be accessed, cleared and most importantly, downloaded via the Webpage interface, introduced and discussed later.

SNMP Overview

SNMP, or Simple Network Management Protocol, allows other TCP/UDP/IP equipment on the same Local Area Network (LAN) to communicate directly with the 610 Internet Radio Monitor, and for the 610, itself, to initiate an alarm on the network.

The 610 will interface directly with a network controller, which technically is known as the SNMP 'Manager.' The 610 incorporates an embedded ASCII text file called a Management Information Base, or MIB. In setting up for SNMP operation, the MIB file will have to be downloaded from the 610 and uploaded to the SNMP Manager. Downloading the MIB file employs the 610 Web interface and is detailed on Page 25.

SNMP Mode

From the front panel, navigate to Setup / Network / SNMP, and then select Mode & Communities. The default setting for Mode: is Disabled, which inhibits communication between the 610 and the SNMP Manager.

Changing Mode: to Read Only allows the 610 Internet Radio Monitor to be interrogated by the SNMP Manager so that stream metadata, alarms, etc. can be integrated with other equipment on the network.

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Setting the Mode: to Read & Write allows the SNMP Manager to send commands to the 610. At present the only command that the 610 can execute is to change Station Presets, as might be required if a single 610 is shared between multiple streams. This was not a design goal of the 610, however, and this practice would normally result in an inordinate number of alarm messages.

SNMP Security

SNMP 'Communities' serve as passwords for this function. Go into the Read: and Write: boxes to enter text that is specified for the read/write strings on the SNMP Manager monitoring device. As with similar text-entry screens, execute a Save after entering.

SNMP Traps

When the 610 Internet Radio Monitor *initiates* an alarm, rather than being *queried* or *polled* for one, the alarm is known as a 'trap.' Navigate to Setup / Network / SNMP Trap Destinations. Here three local network IP addresses may be entered, each corresponding to other devices on the LAN that want to be apprised of alarms.

SNMP Ports

The default SNMP Ports, General Port 161 and Trap Port 162, are customary for a majority of SNMP operations. These may be changed as required in the usual way.

NOTE: The foregoing discussion of SNMP operation is purposely abbreviated. SNMP is a complex utility, managed exclusively by whatever SNMP Manager (the monitoring equipment) is employed. Refer to all instructions for the SNMP Manager in setting-up the 610 Internet Radio Monitor. From the active 610 browser screen, you can download the MIB file to help unravel mysteries in this regard as well (see Page 24).

Section VI

HOUSEKEEPING FUNCTIONS

Time Server, Time Zone and DST

The 610 Internet Radio Monitor maintains a real-time clock to ensure the accuracy of the Alarm Log. The 610 may download the current date and time from the Internet automatically or utilize an in-house time standard that's on the local network (LAN). In either case the proper time zone must be specified for your location.

From the Main Menu, first navigate to Setup / Network / Time Server. The U.S. Government Internet time server, time.nist. gov, is set as the default. You may enter this field, however, and specify the URL or IP address of a local time server on your network (LAN) if that is preferred.
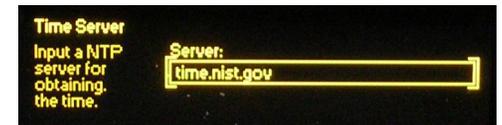
Now navigate to Setup / Time & Time Zone. Bracket the Time Zone slider, push the knob, and then turn the knob to dial-in your offset from UTC, or Coordinated Universal Time.

In the US, the Pacific Coast is UTC –8.0, Mountain Time is UTC –7.0, Central is UTC –6.0 and Eastern is UTC –5.0. And, yes, there are areas in this world that are offset by half-hours too!

Daylight Saving Time is accommodated with the two check boxes. You may check the ☒ Auto DST box to have the Internet do the work for you, or check the ☒ DST box to 'force' Daylight Saving Time. Leaving both boxes unchecked ignores DST completely.

Password Protection

For security purposes you may assign a password to the 610. The password must then be entered for front-panel access, or entered into the Web interface to establish com-

munication between your computer or mobile device and the 610 Internet Radio Monitor.

From the Main Menu, navigate to Setup / Admin / Security. Using the data entry screen (push the knob again), enter and then Save a password of your choosing. You will need to remember this password, not only to get into your Internet Radio Monitor, but to change the password to a new one. From the Security menu, you may choose either to ☒ Enable password protection, or you may leave this box unchecked to allow unbridled access to the unit. The password is retained in non-volatile memory nonetheless.

If you forget the password, then you must perform a complete 610 reset to factory defaults. This is described on Page 22.

Panel Display Brightness

By navigating to Setup / Admin / Brightness, you may change the brightness of the graphic display from the 70% default value to a higher or lower setting. We don't recommend a higher setting because there is little visible difference between 70% and 100%, and a high setting tends to shorten the life of the OLED graphic display. A lower setting may appear sharper and be a bit kinder on the eyes in a darker operating environment.

Updating the 610 Firmware

The Inovonics 610 Internet Radio Monitor is a *firmware*-based product. 'Firmware' refers to the code loaded into the microcontroller that defines not only how the 610 hardware works, but also holds the Web interface for remote operation of the product.

From time to time, and as propriety demands, Inovonics may issue firmware updates, always free of charge. These updates are *bootloaded* into the 610. A bootloader is a simple software routine that runs on a computer connected to the same local network (LAN) as the 610.

When updates are available, they will be issued with complete installation instructions. Until updates and the all-important instructions are received, we recommend against exploring the Firmware Update screen under Setup / Admin. If curiosity overcomes you there are still two warning screens beyond this point. However, should you ever get to the

dreaded 'point of no return' screen shown here, simply power-cycle the unit to cancel the update

and return to normal operation. Further experimentation in this area could render your 610 inoperable and necessitate its return to the factory for a 'hard' firmware reload.

Resetting the 610 to Factory Defaults

You may reset the 610 to factory-default values if there is a good reason to do so. You might want to start afresh with the confidence that no previous settings are hiding somewhere in the bowels of the device or, as mentioned earlier, you might have forgotten the 610's password.

Do make a practice of retaining the user settings as a small file on your computer. That way, if the reason for your factory reset proves fruitless, you can easily restore the prior settings. This involves saving a 'hardware profile,' which is detailed on Page 25.

To perform a full factory reset, first unplug power from the device and count to ten slowly. Next, hold-down the front-panel Back button and, while continuing to hold it down, reconnect the power. This will purge all user-entered data from the 610.

Section VII

THE 610 WEB INTERFACE

Up to this point we've used the front-panel display and 'jog wheel' knob to get the 610 Internet Radio Monitor up and running. Nearly any function may be accessed in this manner, but entering and editing text is much easier using the Web interface screen and a real-live keyboard.

Because the functionality of the Web interface is identical to what can be accomplished from the front panel, this discussion will not detail each Web screen. These details have already been covered where operation is presented from a front-panel perspective. Functions that may be accessed only with the Web interface will be discussed here, of course.

Connecting With the 610

Once connected to the same network as the 610 Internet Radio Monitor, from a Windows-environment browser type
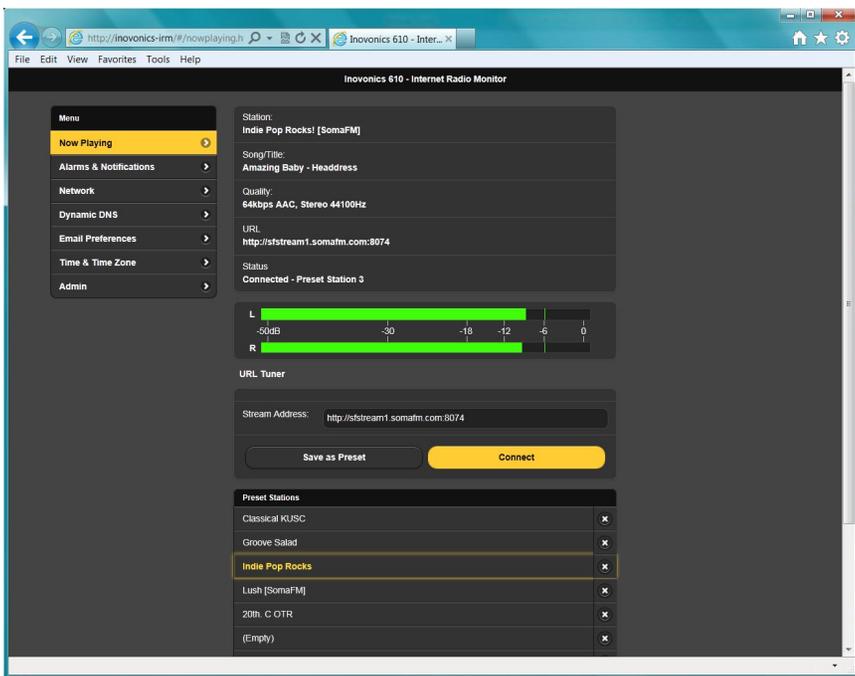
in the Host Name followed by a / (forward slash). Otherwise enter the full IP address of the 610 as shown under Setup / Network / IP Settings. This should take you to the 610's main Webpage, shown here as displayed by Microsoft's Internet Explorer browser.
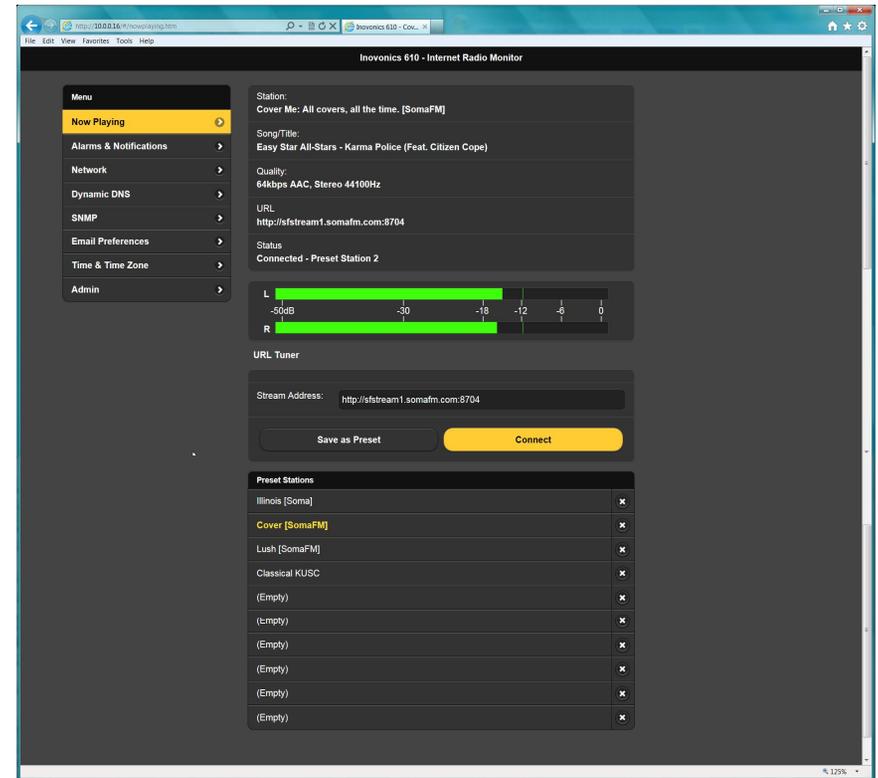
The Web Interface Pages

Each of the 610 Internet Radio Monitor Webpages will present the Menu, upper-left, which serves the same purpose as the front-panel Main Menu. For higher-resolution computer or tablet browser screens we are able to consolidate functions, so Web interface Menu choices may be greater or fewer for different Web-enabled devices. Everything will be there somewhere, however, so scan the various other screens to determine the correlation with front-panel menu choices.

For example, the Now Playing screen pictured in the example displays the metadata info on the program currently playing, and also hosts the Left/Right Level Meter, the URL Tuner

and the Preset Stations selector. Whatever can be done from the front panel in any of these areas may be done here, and vice-versa. Especially when entering streaming URLs, it's far easier to copy and paste, or to type the Internet address, into the Stream Address box in the Web interface than to twiddle that knob ad nauseam.

The Alarms and Notifications screen contains all three front-panel submenus on the one Webpage. Here you may easily set the notification preferences of each recipient by select-ing the name from the pulldown menu and then checking boxes. The Web interface further enables you to download the Alarm Log to your computer as an alarmlog.csv (comma-separated values) file in typical Windows fashion. The log file may be read using a text editor like Windows Notepad, or brought into a spreadsheet program such as Microsoft Excel, which might be useful in failure analysis.

Between the Network and the Dynamic DNS screens, connec-tion parameters may be set up and confirmed just as they are from the front panel of the 610.

The SNMP screen similarly allows setup of this function, and also enables downloading the MIB file. An outline of SNMP operation begins on Page 18 of this manual. The MIB file is a small text (.txt) file that is required by the SNMP Manager. Click: Download MIB to initiate the process; the file is saved in the typical Windows manner. The MIB file is in plain text and may be read with Windows Notepad.

Email Preferences duplicates the front-panel set-up for the 610 to send e-mail or mobile-device text messages triggered by Audio-Loss, Stream-Loss or Internet-Loss alarms. Notifi-cation recipients are entered here, but notification prefer-ences for these recipients are set on the Alarms and Notifica-tions page.

Time & Time Zone combines the Time Server and the Time Zone / DST entry fields.

The Admin screen is any easy means of setting up a pass-word for the 610, but also has another bonus feature, the Hardware Profile.

Saving the Hardware Profile

The entire 610 setup, which includes selected hardware op-tions, network connection info, notification recipients and

their preferences, SNMP options and the Preset Stations list, may be saved to your computer as a small text file. The Hardware Profile is useful for restoring a previous 610 set-up or for 'cloning' a second unit for backup service.

The Hardware Profile utility is found under the Web interface Admin screen.

Click: Download Hardware Profile to save the profile to your system.
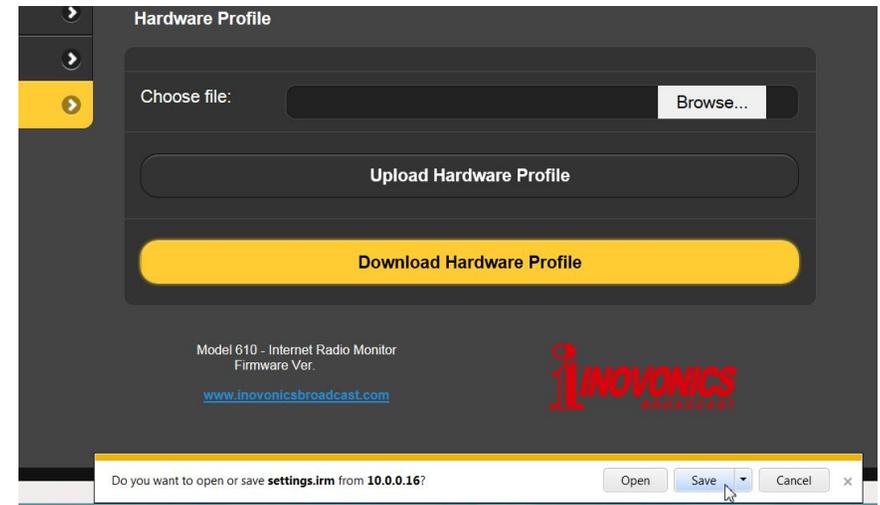
With the version of Windows Internet Explorer used in this example, the file is saved to a Downloads folder. Other browsers may ask you to specify a 'save to' location. The file has a default name of settings.irm; you may specify a custom name if you like.

To upload saved settings to your 610, first click: Browse… to locate your saved profile, and then click: Upload Hardware
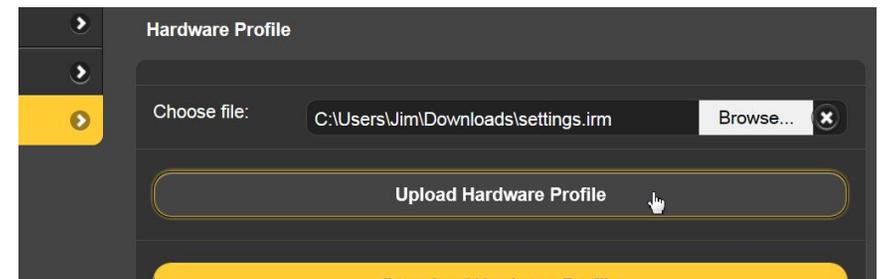
Profile. This will replace the setup parameters that are cur-rently loaded and running in your 610.

Section VIII

TECHNICAL MATTERS

‘Under the Hood’

The Model 610 Internet Radio Monitor is very compact, utilizing mostly surface-mounted (SMD) components. Many of these are ‘application-specific’ and/or pre-programmed at the factory, but all of them are impossibly tiny. This makes servicing the unit in the field a difficult and frustrating proposition at best. For these reasons, and also because of the small format of this manual, we have dispensed with schematic diagrams, servicing instructions and a listing of component parts.

Having said that, our policy has always been one of ‘full disclosure.’ We feel that, unless we are doing something really underhanded, there should never be a reason to hide information from the user. With a clear conscience, and upon request, we will cheerfully provide additional documentation and divulge all but the very darkest secrets concerning any Inovonics product.

Because it is so small and lightweight, returning the 610 for factory servicing or firmware upgrades is an option that we encourage. Inovonics has never considered factory repair charges a significant source of revenue, and we are confident that you will be astonished at how reasonable our rates actually are!

Please feel completely at liberty to use this blank page for your own notes and doodles.

ꞮNOVONICS WARRANTY

I **TERMS OF SALE:** Inovonics products are sold with an understanding of "full satisfaction"; that is, full credit or refund will be issued for products sold as new if returned to the point of purchase within 30 days following their receipt, provided that they are returned complete, and in "as received" condition.

II **CONDITIONS OF WARRANTY:** The following terms apply unless amended *in writing* by Inovonics, Inc.

A. The Warranty Registration Card supplied with the product *must* be completed and returned to Inovonics, or the Warranty registered online at www.inovonicsbroadcast.com, within 10 days of delivery.

B. The Warranty applies only to products sold "as new." It is extended only to the original end-user and may not be transferred or assigned without prior written approval by Inovonics.

C. The Warranty does not apply to damage caused by misuse, abuse, accident or neglect. This Warranty is voided by unauthorized attempts at repair or modification, or if the serial identification tag has been removed or altered.

III **TERMS OF WARRANTY:** Inovonics, Inc. products are warranted to be free from defects in materials and workmanship.

A. Any discrepancies noted within THREE YEARS of the date of delivery will be repaired free of charge, or the equipment will be replaced with a new or remanufactured product at Inovonics' option.

B. Parts and labor for factory repair required after the three-year Warranty period will be billed at prevailing prices and rates.

IV **RETURN OF GOODS FOR FACTORY REPAIR:**

A. Equipment will not be accepted for Warranty or other repair without a Return Authorization (RA) number issued by Inovonics prior to its return. An RA number may be obtained by calling the factory. The number should be prominently marked on the outside of the shipping carton.

B. Equipment must be shipped prepaid to Inovonics. Shipping charges will be reimbursed for valid Warranty claims. Damage sustained as a result of improper packing for return to the factory is not covered under terms of the Warranty and may occasion additional charges.

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