up to and including version 2.0.1

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Customer Support

Technical questions should be directed to:

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Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville, MN 55337 USA
Telephone: 877-863-4169
Fax: 800-323-0498
info@rtsintercoms.com

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Please include a note in the box which supplies the company name, address, phone number, a person to contact regarding the repair, the type and quantity of equipment, a description of the problem and the serial number(s).

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8601 East Cornhusker Hwy.
Lincoln, NE 68507 U.S.A.
Attn: Service

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CHAPTER 1

Introduction

Welcome to RVONedit

RVONedit is a Windows-based **GUI** (Graphical User Interface) application for configuring and displaying RVON (VoIP) devices connected to your Matrix system. RVONedit is to the VoIP products as AZedit is to ADAM, ADAM CS, Cronus, and Zeus. The RVON devices included are:

- RVON-8
- RVON-I/O
- RVON-Keypanel
- RVON-C
- RVON-16

To fully use the RVONedit application, you must have the following minimum version installed:

FIRMWARE	VERSION
RVON-8	V 2.0.0 or later
RVON-Keypanel	V 2.0.0 or later
RVON-I/O	V 2.0.0 or later
RVON-C	V 2.0.0 or later
RVON-16	V 2.1.3 or later

NOTE: RVONedit can download firmware to older versions, but requires these versions in order to automatically detect the devices and to view or modify the device configurations. For more information, see “How to Update Older Version RVON Devices Using RVONedit” on page 84.

Getting Started with RVONedit

Once you have updated the firmware for each RVON device through AZedit, serially, or by using Telnet, you can start using RVONedit by itself.

NOTE: When RVONedit is setup, you will be able to download firmware upgrades from the RVONedit Window.

Step 1

Using the RVONedit installation wizard, install RVONedit on the PC connected to the Intercom System (ADAM, ADAM CS, Cronus, or Zeus).

Step 2

Add Devices to the RVONedit application. This can be done manually or automatically. For more information, “How to Add Devices to RVONedit” on page 54.

Step 3

Using the Device Configuration section of the RVONedit Window configure your RVON device.

RVONedit Field Types

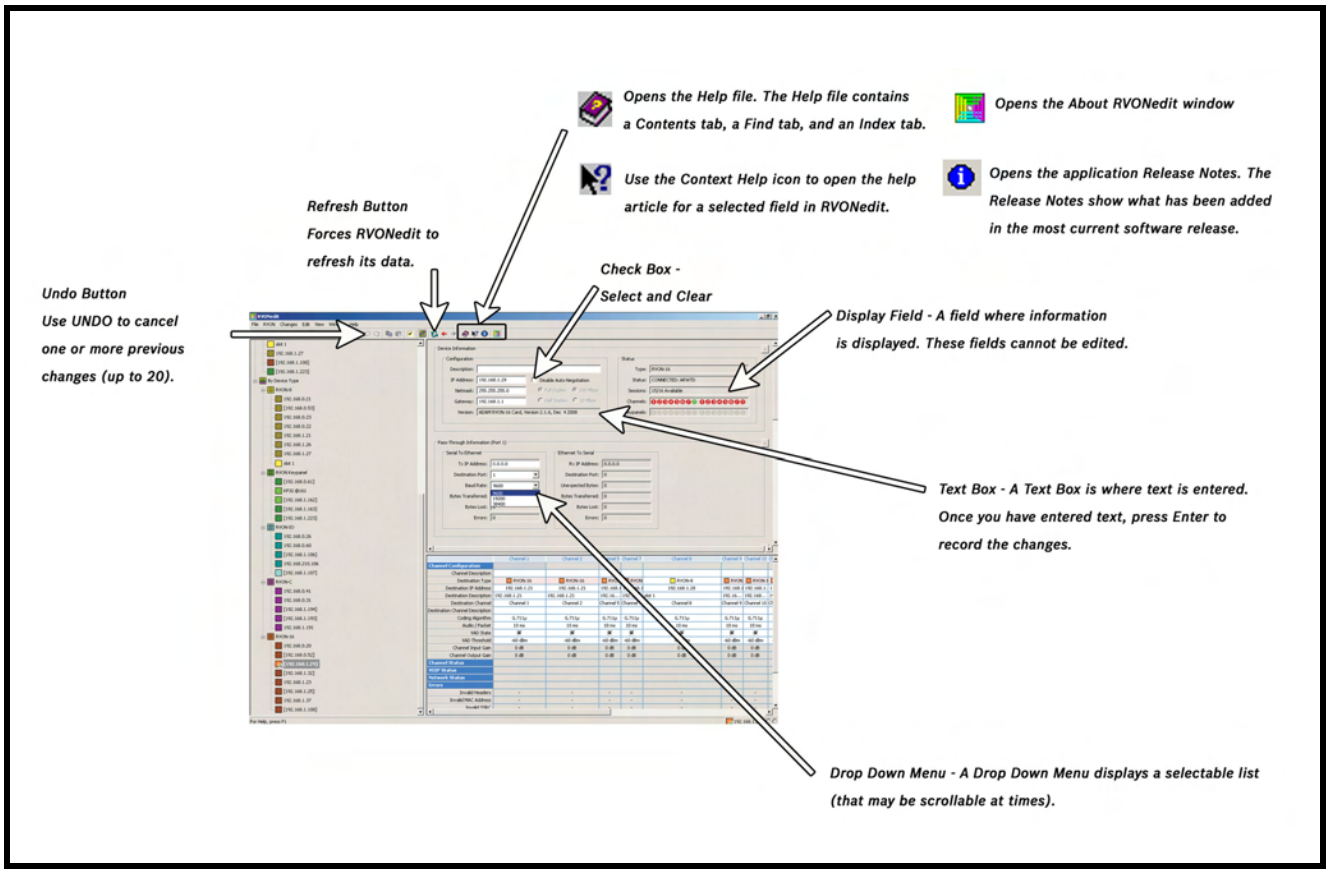


FIGURE 1. RVONedit Field Types

CHAPTER 2

Application Window Descriptions

RVONedit Main Application Window

The **Main Application** window, shown in Figure 2, is split into three (3) areas which are described in detail on the following pages.

NOTE: RVONedit version 2.0.0 and higher is now able to open more than one window at a time. You can now view or edit multiple devices at the same time. For more information, see “How to Open Multiple Windows in RVONedit” on page 53.

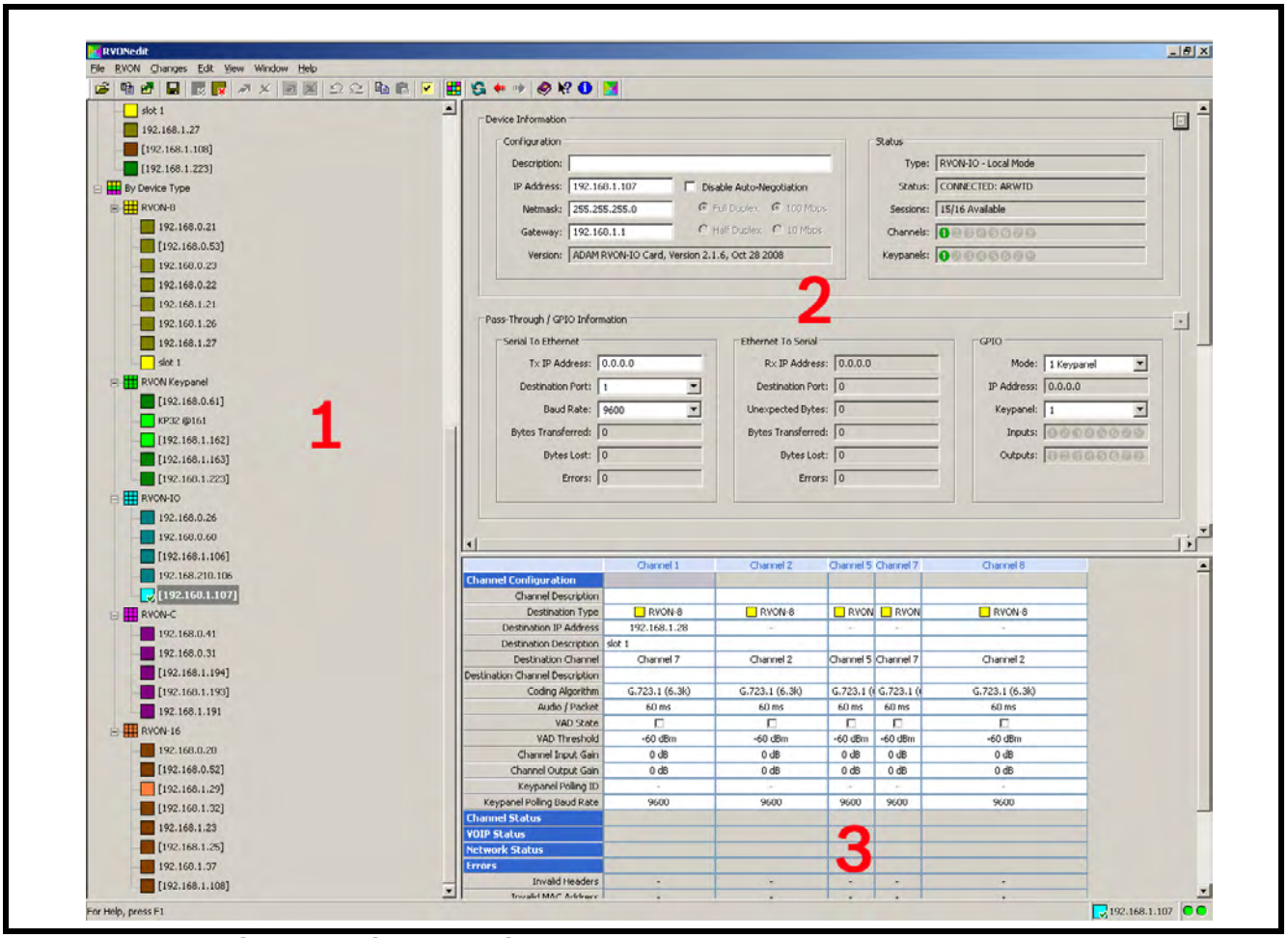


FIGURE 2. RVONedit Main Application Window

Device Catalog

The **Device Catalog**, shown in Figure 3, is used to view the RVON devices you have selected and connected to your Intercom System.

NOTE: You can also double-click *By Device Type* or *All Devices* to open and close the catalog tree.

- When displaying All Devices, RVONedit, by default, displays the RVON devices in order of how the devices were added to the application.
- When displaying the RVON devices *by Device Types*, color-coded squares appear to distinguish between the different RVON devices.

RVON-8 RVON-Keypanel RVON-I/O RVON-C RVON-16

NOTE: Initially, when RVONedit is installed, the device catalog is empty. Remember to update your RVON firmware to the minimum requirements (see page 3) before you add devices to RVONedit.

There are two ways to view these devices: **All Devices** or **by Device Type**.

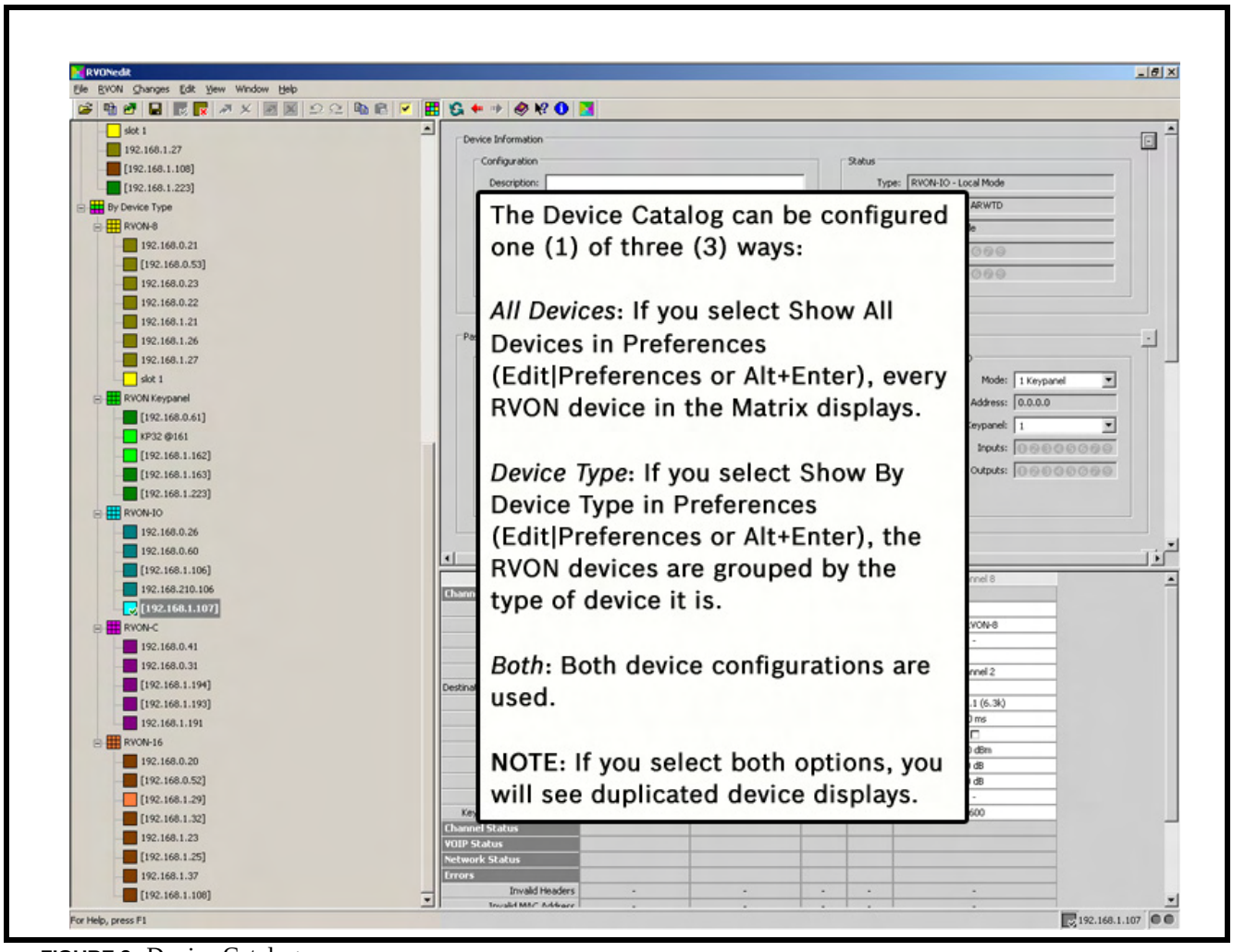


FIGURE 3. Device Catalog

The Device Catalog uses expandable/collapsible  trees. By clicking the + symbol, you can expand a catalog, or click - to collapse the catalog.

Once you have finished adding the RVON devices to the catalog, you can now display its configuration and status section in the RVONedit window.

Device Configuration and Status Field

The **Device Configuration and Status** section, shown in Figure 5, is used to enter information about the selected device.

Device Information is grouped into four (4) sections:

Device Information and Status

Pass-Through and/or GPIO Support Information

SNMP Information

Authentication Information

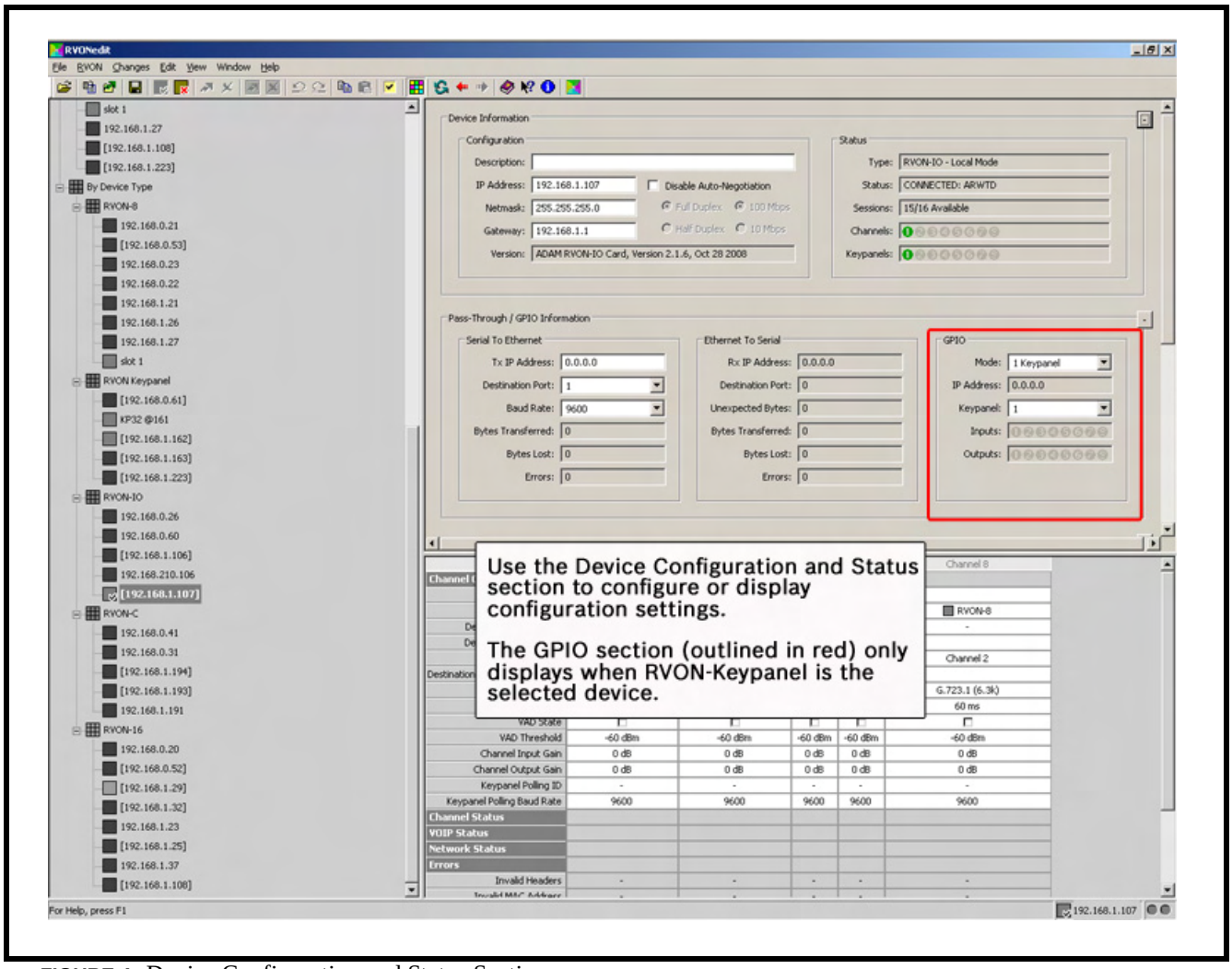


FIGURE 4. Device Configuration and Status Section

Device Information and Status Section

The **Device Information and Status** section, shown in Figure 5, is used to configure and display your RVON device configuration.

NOTE: Using the Expand/Collapse button [+] [-], you can expand or collapse each section of the Device Configuration and Status section. When collapsed, only the section heading appears.

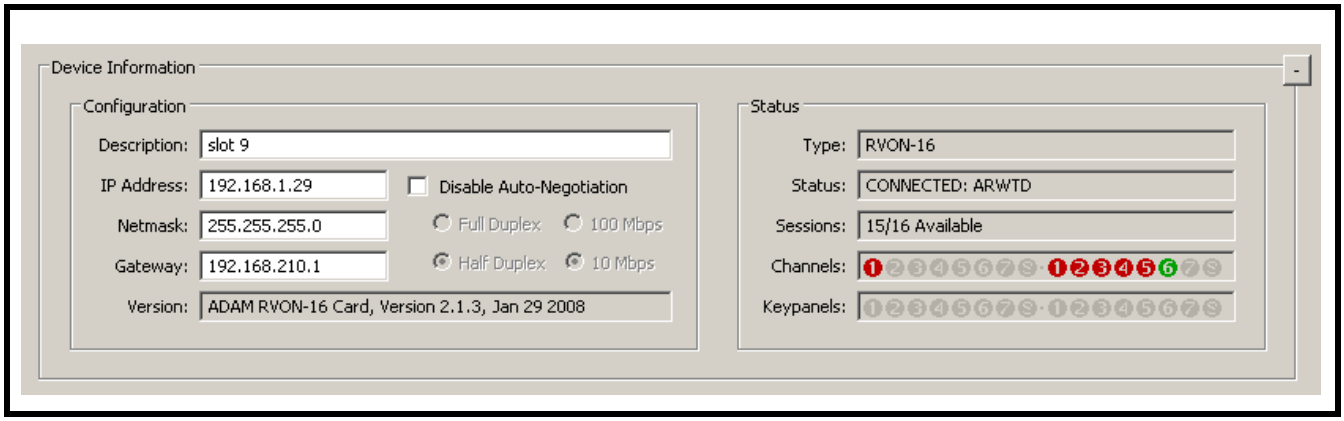


FIGURE 5. Device Information and Status window

Configuration Group Box

NOTE: All of the following fields, except Description, require *Admin Privileges* to modify their contents. Changing the IP Address, Netmask, or Gateway causes the device to reboot when the changes are sent.

Description Field

The **Description** field is used to enter a text description of the device. This description can be displayed instead of the IP Address in the Device Catalog, see “Use Device Descriptions in the Device Catalog” on page 65.

This field can contain *up to 63 characters*.

IP Address Field

The **IP Address** field is used to enter the IP Address for the selected RVON device.

Netmask Field

The **Netmask** field is used to enter the Network Mask Address[1] to which the device is connected.

Gateway Field

The **Gateway**[2] field is used to enter the default Gateway Address, if applicable, of the network to which the RVON device is connected.

1. *A 32-bit mask which shows how an Internet Address is to be divided into network, subnet and host parts.*
2. *The computer or device onto which the first hop needs to go to get out of your network and onto another network or the Internet. The gateway, as it relates to TCP/IP, is tried when a resource is not found on the local network*

Version Field

The **Version** field displays the current firmware version of the RVON device.

Disable Auto-Negotiation Check Box

The **Disables Auto-Negotiation** check box is used to disable the auto-negotiate feature and activate the Mode and Speed radio buttons.

Available selections for this field are:

Full Duplex - data moves both directions simultaneously
Half Duplex - data moves in one direction at a time
100 Mbps
10 Mbps

Status Group Box

Type Field

The **Type** field displays the type of RVON device being configured and what mode it is running in.

Status Field

The **Status** field displays the current status of the RVON device and the current access rights of the user.

Sessions Field

The **Sessions** field displays the number of RVONedit sessions the device supports and how many are available (for example, 15/16 Available).

Channels Field

The **Channels** field displays the VoIP connection states for each channel.

green—connected

red—disconnected

grey—not configured

Keypanels Field

The **Keypanels** field displays the keypanel connection states for each channel

green—connected

red—disconnected

grey—not configured

Pass-Through and/or GPIO Information Section

The **Pass-Through and/or GPIO Information** section, shown in Figure 6, is used to configure the pass-through GPIO settings for an RVON device (if applicable).

NOTE: Using the Expand/Collapse button [+] [-], you can collapse or expand each section of the Device Configuration and Status section. When collapsed, only the section heading appears

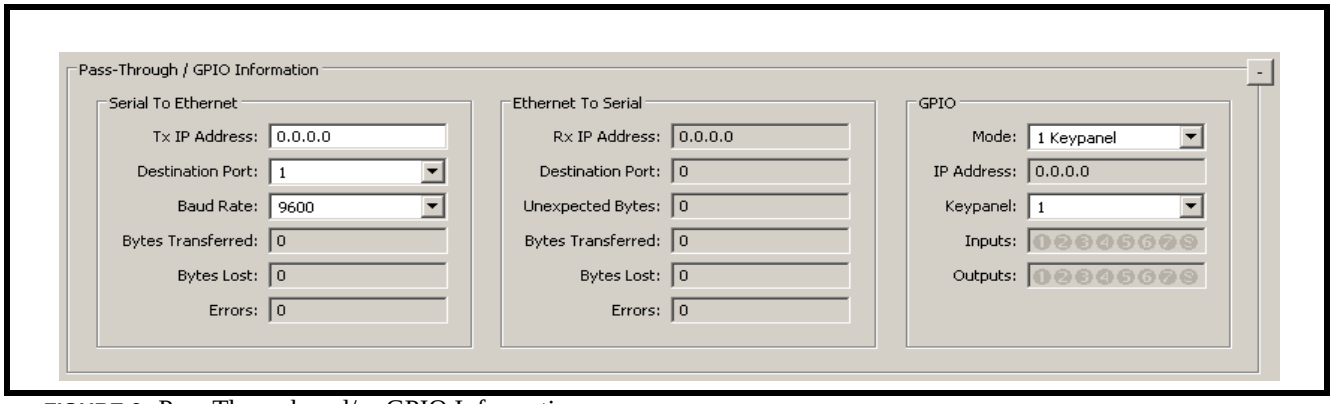


FIGURE 6. Pass Through and/or GPIO Information.

Serial To Ethernet Group Box

The **Serial To Ethernet** group box displays the serial data received on the serial connection and transferred to the Ethernet Address of the device to which the serial data is sent.

Tx IP Address Field

The **TX IP Address** field is used to enter the IP Address of the device the serial data is sent.

Destination Port Drop Down Menu

The **Destination Port** drop down menu is used to select which port is assigned as the destination port when connecting to an RVON-16.

Available selections for this field are *1* and *2*.

NOTE: The RVON-16 provides two (2) virtual serial connections via an IP connection. Which, if used while trunking, may eliminate the need for multiple IP resources.

Baud Rate Drop Down Menu

The **Baud Rate** drop down menu is used to select the baud rate of the serial connection.

Available selections for this field are:

9600

19200

38400

Bytes Transferred Field

The **Bytes Transferred** field displays the number of bytes transferred from the serial connection to the Ethernet.

Bytes Lost Field

The **Bytes Lost** field displays the number of bytes that could not be transferred.

Errors Field

The **Errors** field displays the number of errors that occurred during transfer.

Ethernet To Serial Group Box

The **Ethernet To Serial** group box displays the serial data received on the Ethernet connection and transferred to the serial connection.

Rx IP Address

The **Rx IP Address** field displays the IP Address from which data was last received via Ethernet (this address should match the Tx IP Address).

Destination Port Field

The **Destination Port** field displays which port is assigned as the destination port when connecting to an RVON-16.

NOTE: The RVON-16 provides two (2) virtual serial connections via an IP connection. Which, if used while trunking, may eliminate the need for multiple IP resources.

Unexpected Bytes Field

The **Unexpected Bytes** field displays the number of unexpected bytes of data. Unexpected bytes is data that comes from any IP Address that is not the Tx IP Address.

NOTE: These bytes of data are considered invalid bytes and are not transmitted.

Bytes Transferred Field

The **Bytes Transferred** field displays the number of bytes transferred to the serial port.

Bytes Lost Field

The **Bytes Lost** field displays the number of bytes that could not be transferred.

Errors Field

The **Errors** field displays the number of errors that occurred during the transfer.

GPIO Group Box

Mode Drop Down Menu

The **Mode** drop down menu is used to select the mode in which the GPIO are to be used.

When configuring the GPIO mode on the RVON-I/O, there are three (3) different mode options you may choose from:

Pass-Through Mode:	In pass-through mode, GPIO status is sent over Ethernet, therefore you must set the IP Address of the destination GPIO pass-through port.
1 Keypanel Mode:	In 1 keypanel mode, also referred to as single port mode, all GPIOs with a keypanel allow you to access/address the GPIO in UPL statements.
All Keypanel Mode:	In all keypanel mode, also referred to as multiple port mode, each keypanel is associated to its corresponding GPIO. For example, if keypanel 1 is connected to GPIO 1, it is associated with the corresponding GPIO port. When using All Keypanel Mode, an additional GPIO is available. This means that each keypanel has four (4) GPIOs and then a GPIO associated with port 9.

NOTE: The extra port 9 is only available in ADAM intercom systems.

IP Address Field

The **IP Address** field is used to enter the IP Address of the device with which GPIO states are transferred. This option is only valid when the GPIO mode is set to Pass-Through.

Keypanel Drop Down Menu

The **Keypanel** drop down menu is used to select the device port/keypanel number with which all GPIOs are associated. This option is only valid when GPIO mode is set to All Keypanel Mode.

Available selections for this field are *1 through 8*.

Inputs Field

The **Inputs** field displays a summary of the current GPIO input states.

GPIO input states are as follows:

purple .....asserted

gray .....output not asserted

Outputs Field

The **Outputs** field displays a summary of the current GPIO output states

GPIO output states are as follows:

purple .....asserted

gray .....output not asserted

SNMP Information Section

The **SNMP Information** section, shown in Figure 7, is used to configure the **SNMP** (Simple Network Management Protocol) options for your RVON device, if applicable.

NOTE: This section is only shown if the device has SNMP support and the preference to Hide SNMP Configuration is not enabled (see "How to Show/Hide the SNMP Configuration Information" on page 66).

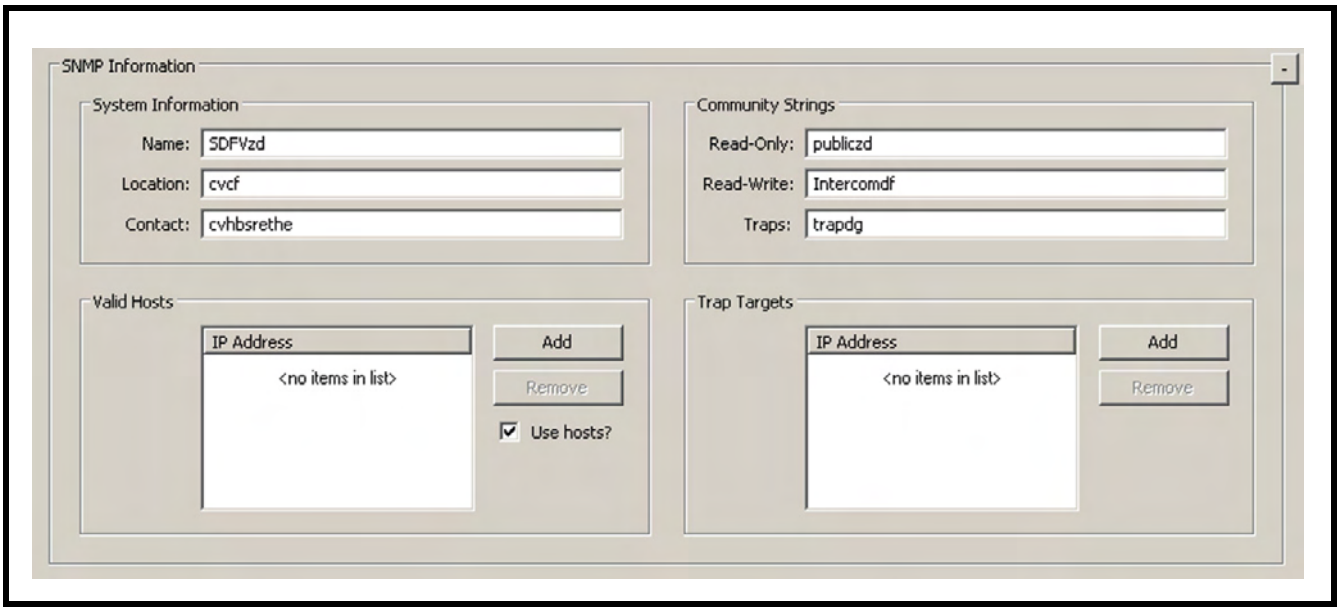


FIGURE 7. SNMP Information

Using the Expand/Collapse button  , you can expand or collapse each section in the Device Configuration section. When collapsed, only the section heading appears.

There are four (4) areas within the SNMP Sections:

- System Information
- Community Strings
- Valid Hosts
- Trap Targets

System Information Group Box

The **System Information** group box is purely for documentation purposes. This information displays which device is configured and where it is physically located.

Name Field

The **Name** field is used to enter the name of the RVON device in which SNMP is being configured.

This field can contain *up to 100 characters*.

Location Field

The **Location** field is the physical location of the intercom system (for example, 3rd floor, Sacramento).

This field can contain *up to 100 characters*.

Contact Field

The **Contact** field allows you to enter the name of the person responsible for the specified SNMP device.

This field can contain *up to 100 characters*.

Community Strings Group Box

Read-Only Field

The **Read-Only** field allows you to set the password that provides read-only access via SNMP.

The default entry is *public*. Public allows everyone every access to Read the SNMP structure.

Read-Write Field

The **Read-Write** field allows you to set the password that provides read-write access via SNMP.

Traps Field

The **Traps** field is used to enter the trap identifier for SNMP event monitoring.

A *SNMP Trap* is a notification event issued by a managed device (the Intercom System) to the network management station when an event or error occurs. When an event or error occurs, a message is sent to the SNMP monitoring software with the Trap Community String description.

The Traps Community String specifies the community string included in all SNMP traps generated by the intercom

Valid Hosts Group Box

IP Address Field

The **IP Address** field allows you to add up to five (5) IP Addresses of host machines that accept SNMP requests. You must enter a valid IP Address structure for the Add button to become active.

Use List of Valid Hosts? Check Box

The **Use list of valid hosts?** check box is used to allow queries to the specified SNMP monitoring machines. You can specify the IP Address of these machines in the Valid Host IP Address list.

Add Button

The **Add** button adds the IP Address of the SNMP monitoring machine to a list of approved IP Addresses.

Remove Button

The **Remove** button removes the selected IP Address of the machine.

Trap Target Group Box

A list of up to five (5) targets the device sends SNMP traps to when they occur.

IP Address Field

The **IP Address** field allows you to add up to five (5) IP Addresses of host machines that accept SNMP requests. You must enter a valid IP Address structure (xxx.xxx.xxx.xxx) for the Add button to become active.

Use List of Valid Hosts? Check Box

The **Use List of Valid Hosts?** check box is used to allow queries to the specified SNMP monitoring machines. You can specify the IP Address of these machines in the Valid Host IP Address list.

Add Button

The **Add** button adds the IP Address of the SNMP monitoring machine to a list of approved IP Addresses.

Remove Button

The **Remove** button removes the highlighted IP Address of the machine.

Authentication Information Section

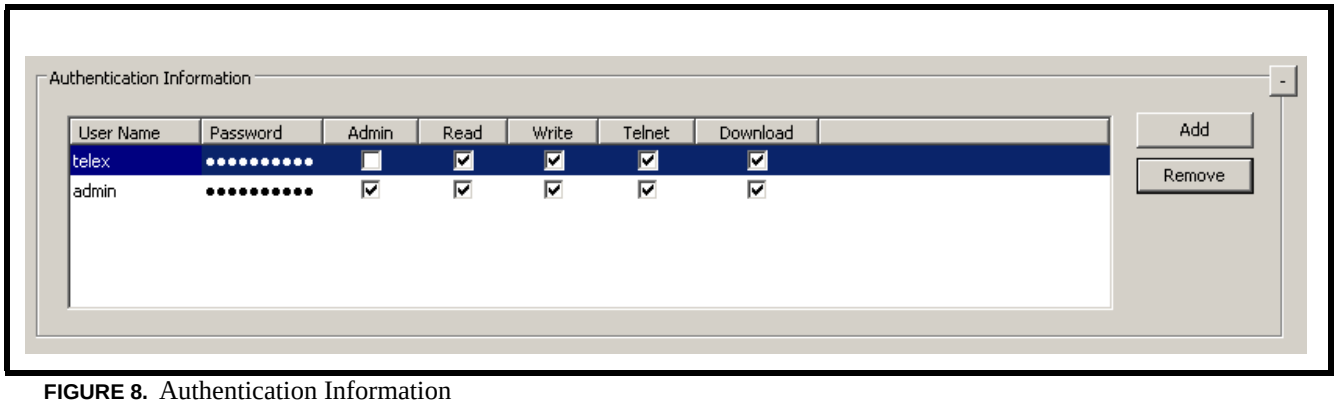


FIGURE 8. Authentication Information

The **Authentication Information** section, shown in Figure 8, is used to configure up to five (5) user profiles for the selected device. Each profile can be given different access rights or privileges: *Admin, Read, Write, Telnet, and Download*.

NOTE: Access rights, also called privileges, are an identified set of rights an individual user or group of users has to a particular resource. The RVON devices support an authentication table that can contain up to five (5) entries (each with a user name, password, and access rights).

Access Rights for the RVON devices are as follows:

R	Read (user can view status and configuration)
W	Write (user can modify most configurable elements)
A	Admin (user can modify advanced configuration elements)
T	Telnet (user can connect to the device via Telnet)
D	Download (user can download new firmware to the device)

CAUTION: It is possible to create an empty authentication table, disabling RVONedit, Telnet, and firmware downloads. If this occurs, do the following:

1. Using Table 1 on page 16, turn **ON** the appropriate DIP switch.
2. Restart the **device**.
3. Once the device has been restarted, turn the DIP switch **OFF**.
4. Restart the **device**.

The following is a list of the DIP switch numbers for each RVON device type:

TABLE 1. DIP Switch for Resetting Authentication Table

RVON-8	DIP Switch 5
RVON-Keypanel	DIP Switch 2
RVON-I/O	DIP Switch 3
RVON-C	DIP Switch 5
RVON-16	DIP Switch 5

NOTE: This section is only shown if the current access rights include *admin* and the preference option *Hide Authentication Table* is not enabled (see "How to Show/Hide the Authentication Table" on page 67).

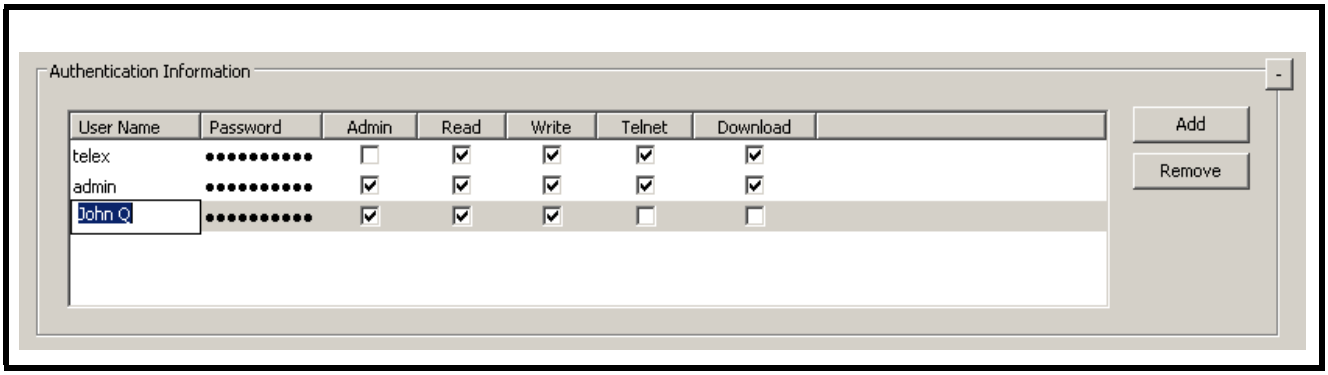


FIGURE 9. Edit Authentication Information

NOTE: Using the Expand/Collapse button  , you can expand or collapse each section in the Device Configuration section. When collapsed, only the section heading appears.

When creating the profiles, the following must be observed:

User Name — Can be up to *40 characters* long

Password — Can be up to *40 characters* long

Access Rights — Select the access for the user you are creating.

Recommendations:

- For security purposes, it is recommended you change the authentication table default user names and passwords so they are not easily accessible by anyone on your network.
- We also recommend you set an application default login user name and password when logging onto different devices. By enabling this feature, RVONedit remembers the user names and passwords to logon to each device, especially if you are planning to make different authentication tables for each device. By having RVONedit store the logon information, you will eliminate having to logon to each device.

Channel Configuration And Status Section

The **Channel Configuration and Status** section, shown in Figure 10, is used to configure or view the channels for each RVON device. Channel Configuration and Status is divided into five sections:

Channel Configuration

Channel Status

VOIP

Network Status

Error

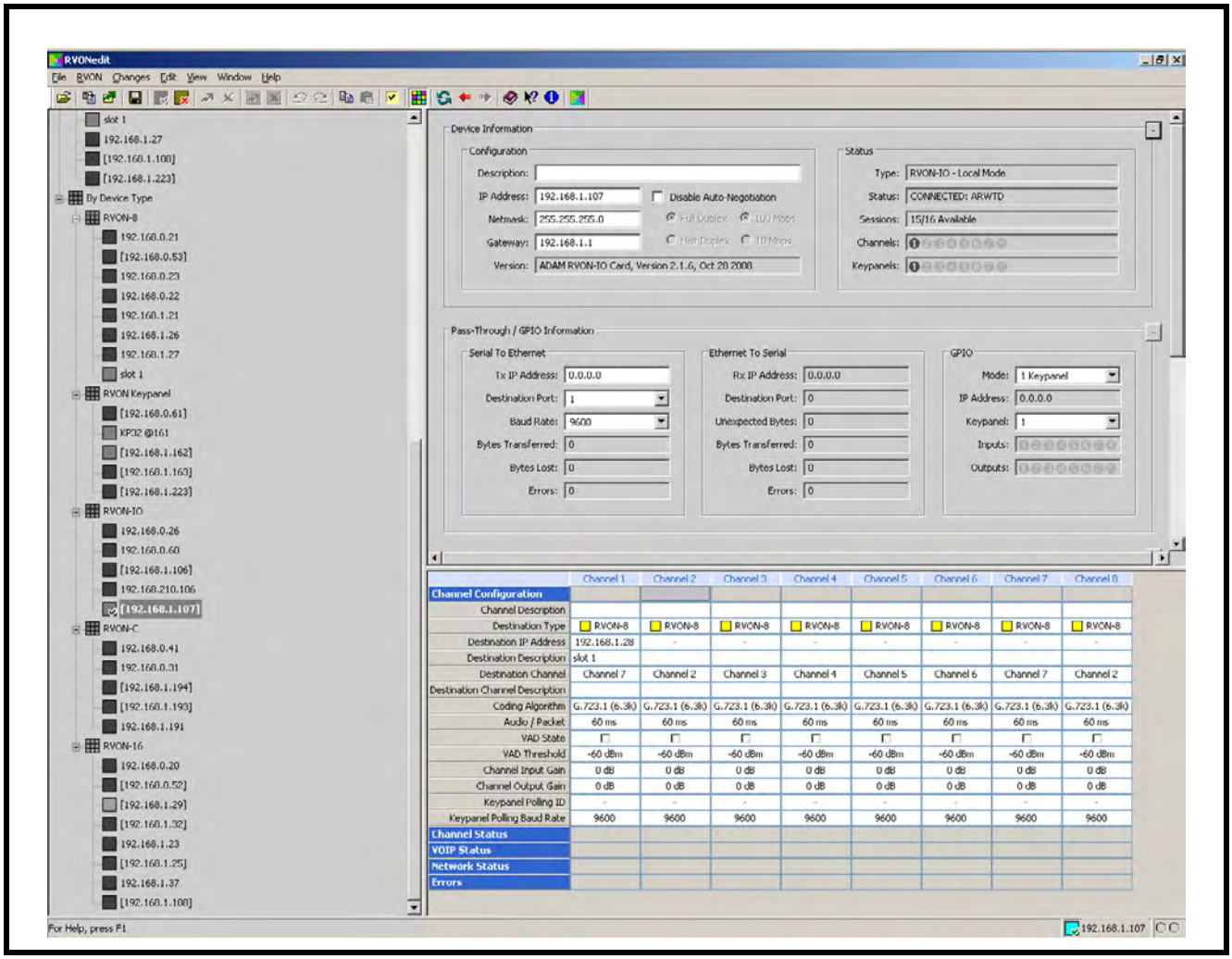
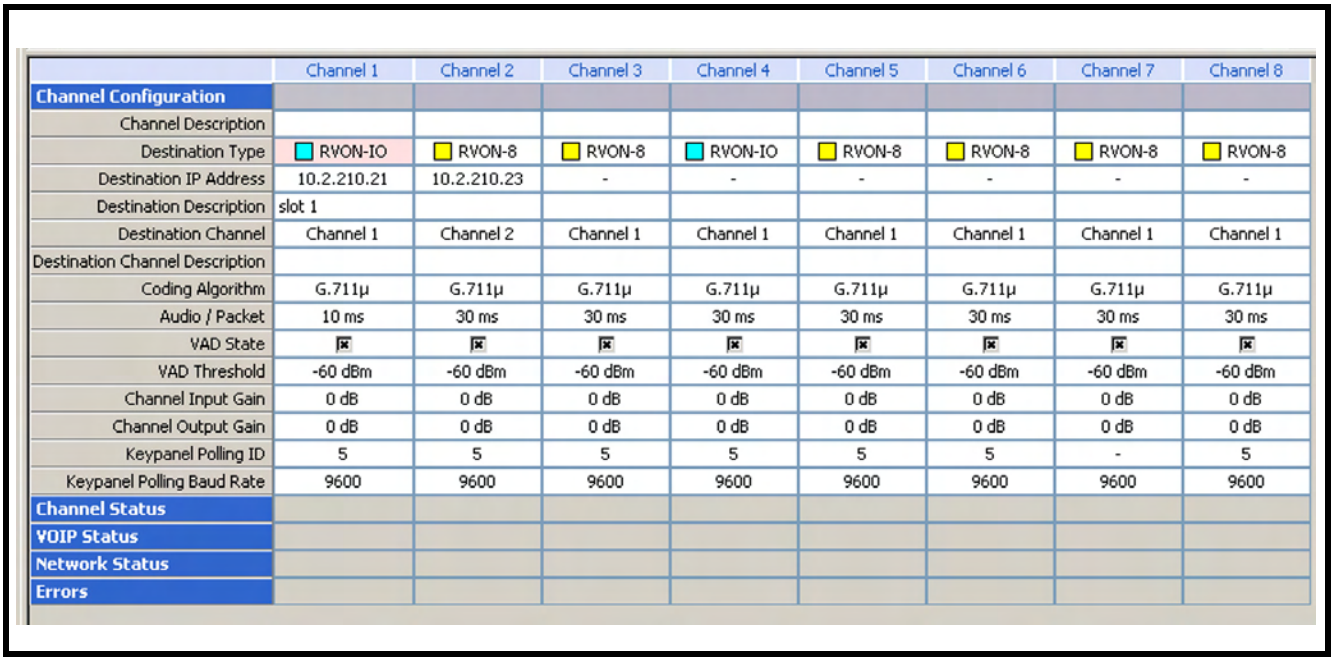


FIGURE 10. Channel Configuration and Status

Channel Configuration

Use the **Channel Configuration** section of the grid to configure channel settings for each applicable device channel.The channel configuration displays the following fields: Channel Description, Destination Type, Destination IP Address, Destination Description, Destination Channel, Destination Channel Description, Coding Algorithm, Audio/Packet, VAD State, VAD Threshold, Channel Input Gain, Channel Output Gain, Keypanel Polling ID, and Keypanel Polling Baud Rate.

NOTE: If you are connected to a device with *Write* or *Admin* privileges, a context menu is available that allows you to *Tear Down Channels* (right-click in the left title column) or *Tear Down Individual Channels* (right-click the channel column header). For information on how to tear down channels, see “How to Tear Down a Channel” on page 79.



	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Channel Configuration								
Channel Description								
Destination Type	RVON-IO	RVON-8	RVON-8	RVON-IO	RVON-8	RVON-8	RVON-8	RVON-8
Destination IP Address	10.2.210.21	10.2.210.23	-	-	-	-	-	-
Destination Description	slot 1							
Destination Channel	Channel 1	Channel 2	Channel 1	Channel 1	Channel 1	Channel 1	Channel 1	Channel 1
Destination Channel Description								
Coding Algorithm	G.711µ	G.711µ	G.711µ	G.711µ	G.711µ	G.711µ	G.711µ	G.711µ
Audio / Packet	10 ms	30 ms	30 ms	30 ms	30 ms	30 ms	30 ms	30 ms
VAD State	☒	☒	☒	☒	☒	☒	☒	☒
VAD Threshold	-60 dBm	-60 dBm	-60 dBm	-60 dBm	-60 dBm	-60 dBm	-60 dBm	-60 dBm
Channel Input Gain	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB
Channel Output Gain	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB
Keypanel Polling ID	5	5	5	5	5	5	-	5
Keypanel Polling Baud Rate	9600	9600	9600	9600	9600	9600	9600	9600
Channel Status								
VOIP Status								
Network Status								
Errors								

FIGURE 11. Channel Configuration

Channel Description Field

The **Channel Description** field is used to enter the channel description, if applicable. To change the description, we recommend you use the description field in Device Information on page 8.

This field can contain *up to 63 characters*.

Destination Type Drop Down Menu

The **Destination Type** drop down menu is used to select the type of RVON device to which the channel is connected.

Selections available for this field are: *RVON-8, RVON-Keypanel/VKP, RVON-I/O, RVON-C, and RVON-16*.

NOTE: When the RVON device is initially added to RVONedit, these fields automatically populate with the current channel status.

Destination IP Address Field

The **Destination IP Address** field is used to enter the IP Address for the device at the other end of the connection.

IMPORTANT: This is an editable field. You can enter another IP Address. However, by changing this IP Address, the destination type changes ifthe destination device type can be determined.

Destination Description Field

The **Destination Description** field displays the destination channel’s description, if applicable.

This field cannot be modified.

Destination Channel Drop Down Menu

The **Destination Channel** drop down menu is used to select the channel at the destination device to which the RVON device is connected. Use Table 2 on page 19 to determine the number of channels available for every device type.

NOTE: When <default> is selected, the channels match 1 to 1. For example, you may have all channels selected, and by choosing <default>, Ch1 matches to Ch1, Ch2 matches Ch2, etc. This option is a time saver so you do not have to manually assign each channel.

TABLE 2. Destination Channel Drop Down Menu Options

RVON-8	RVON-Keypanel/ VKP[a]	RVON-I/O	RVON-C	RVON-16
Channel 1	Channel 1	Channel 1	Channel 1	Channel 1
Channel 2	Channel 2	Channel 2	Channel 2	Channel 2
Channel 3	<default>	Channel 3	Channel 3	Channel 3
Channel 4		Channel 4	Channel 4	Channel 4
Channel 5		Channel 5	Channel 5	Channel 5
Channel 6		Channel 6	Channel 6	Channel 6
Channel 7		Channel 7	Channel 7	Channel 7
Channel 8		Channel 8	Channel 8	Channel 8
<default>		<default>	<default>	Channel 9
				Channel 10
				Channel 11
				Channel 12
				Channel 13
				Channel 14
				Channel 15
				Channel 16
				<default>

a. The VKP device works on channel 1 only.

Destination Channel Description Field

The **Destination Channel Description** field displays the destination channel's description, if available.

This field cannot be modified.

Coding Algorithm Drop Down Menu

The **Coding Algorithm** drop down menu is used to select the coding algorithm used to transmit audio packets.

Available selections for this field are *G.711μ law, G.711A law, G.729AB, G.723 (5.3k), and G.723 (6.3k).*

NOTE: A **Codec**[3] (Coder/Decoder) is an algorithm used to compress audio. There are 5 codecs supported by Telex: G.711μ law, G.711A law, G.729AB, G.723 (5.3k), and G.723 (6.3k).

The type of codec chosen dictates the quality of audio you hear and the network bandwidth used. The packet size determines how much audio data is carried across the network in each transmitted packet. The codec type and packet size chosen require different amounts of bandwidth from the network. As with the codec type, the packet size you choose for the audio transfer affects the audio you hear and the bandwidth you use over the network. The larger the audio packet you choose to use, the lower the bandwidth used. However, the larger packet size can result in a higher delay and longer gaps if the packet is lost. On the other hand, smaller packet sizes result in larger bandwidth use, but lower delays and smaller gaps if the packet is lost. The Intercom System Engineer and the Network Administrator may want to work together in choosing the codec type and packet size suitable for the size of the network, so degradation of network resources does not happen

Audio/Packet Drop Down Menu

The **Audio/Packet** drop down menu is used to select the audio packet size to transmit.

Field options available are: *30ms and 60ms*.

NOTE: A **Codec**[4] (Coder/Decoder) is an algorithm used to compress audio. There are 5 codecs supported by Telex: *G.711μ law, G.711A law, G.729AB, G.723 (5.3k), and G.723 (6.3k)*.

The type of codec chosen dictates the quality of audio you hear and the network bandwidth used. The packet size determines how much audio data is carried across the network in each transmitted packet. The codec type and packet size chosen require different amounts of bandwidth from the network. As with the codec type, the packet size you choose for the audio transfer will affect the audio you hear and the bandwidth you use over the network. The larger the audio packet you choose to use, the lower the bandwidth used. However, the larger packet size can result in a higher delay and longer gaps if the packet is lost. On the other hand, smaller packet sizes result in larger bandwidth use, but lower delays and smaller gaps if the packet is lost. The Intercom System Engineer and the Network Administrator may want to work together in choosing the codec type and packet size suitable for the size of the network, so degradation of network resources does not

VAD State Check Box

The **VAD State** check box is used to enable **VAD**[5] (Voice Activity Detection)on the RVON device. VAD saves network bandwidth by stopping the flow of audio packets when silence is detected.

VAD Threshold Scroll Arrows

The **VAD Threshold** scroll arrows are used to configure the VAD threshold (for G.711) codec). Setting the VAD threshold tells the channel at what level to start the flow of audio packets. Otherwise, the channel remains silent.

The range for this field is *-60dBm to -30dBm, or Adaptive*.

NOTE: The *Adaptive* option configures its own threshold based on the background noise it determines.

---

3. This type of codec combines analog-to-digital conversion and digital-to-analog conversion functions in a single chip.
4. *This type of codec combines analog-to-digital conversion and digital-to-analog conversion functions in a single chip.*
5. *VAD allows a data network carrying voice traffic over the Internet to detect the absence of audio and conserve bandwidth by preventing the transmission of silent packets over the network.*

Channel Input Gain Scroll Arrows

The **Channel Input Gain** scroll arrows are used to configure the channel input gain for the channel.

The range for this field is -*14dB to 14dB.*

NOTE: This field is not editable for devices that get input gain from the intercom.

Channel Output Gain Field

The **Channel Output Gain** scroll arrows are used to configure the channel output gain for the channel.

The range for this field is -*14dB to 14dB.*

NOTE: This field is not editable for devices that get output gain from the intercom.

Keypanel Polling ID Drop Down Menu

The **Keypanel Polling ID** drop down menu used to select the keypanel polling ID for the channel.

Available selections for this field are -, *1, 2, 3, 4, 5, 6, 7, 8, 9, 10*. The dash represents no polling ID.

NOTE: This field is only used with the RVON-I/O in remote mode.

Keypanel Polling Baud Rate Drop Down Menu

The **Keypanel Polling Baud Rate** drop down menu is used to select the baud rate at which communication is expected to operate.

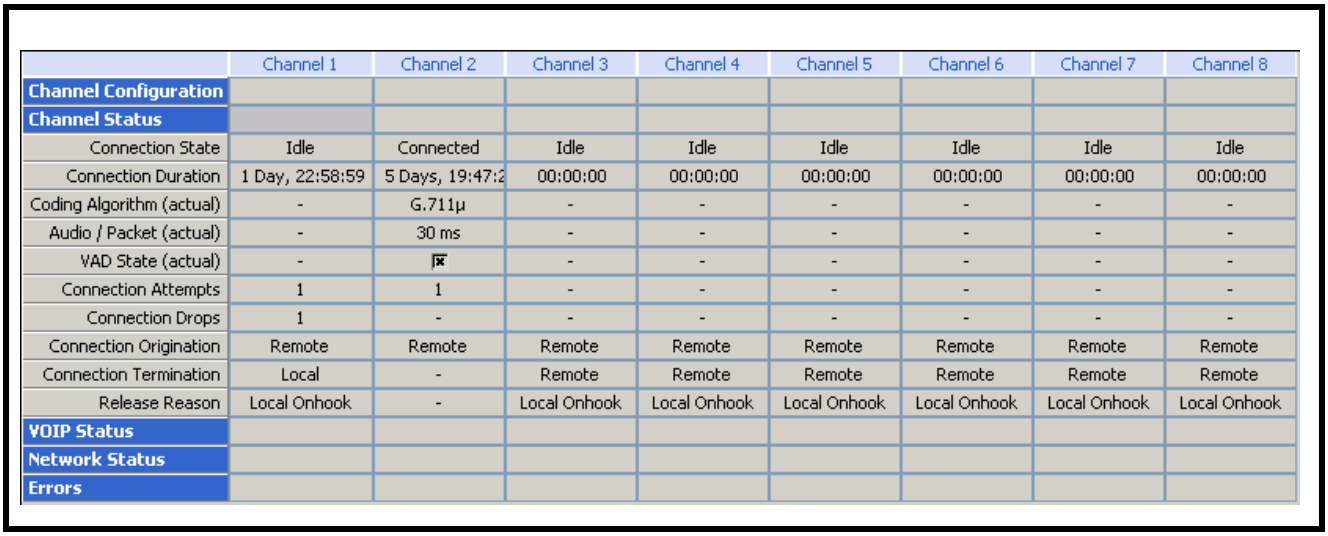
Selections for this field are *9600, 19200, or 38400*.

NOTE: This field is only used with the RVON-I/O in remote mode.

Channel Status

The **Channel Status** displays read-only status information on the channel's connection and communication status.

NOTE: If you are connected to a device with *Write* or *Admin* privileges, a context menu is available that allows you to *Clear Connection Statistics for all channels* (right-click in the left title column) or *Clear Connection Statistics for Individual Channels* (right-click in the channel column).



	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Channel Configuration								
Channel Status								
Connection State	Idle	Connected	Idle	Idle	Idle	Idle	Idle	Idle
Connection Duration	1 Day, 22:58:59	5 Days, 19:47:2	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Coding Algorithm (actual)	-	G.711µ	-	-	-	-	-	-
Audio / Packet (actual)	-	30 ms	-	-	-	-	-	-
VAD State (actual)	-	☒	-	-	-	-	-	-
Connection Attempts	1	1	-	-	-	-	-	-
Connection Drops	1	-	-	-	-	-	-	-
Connection Origination	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Remote
Connection Termination	Local	-	Remote	Remote	Remote	Remote	Remote	Remote
Release Reason	Local Onhook	-	Local Onhook	Local Onhook	Local Onhook	Local Onhook	Local Onhook	Local Onhook
VOIP Status								
Network Status								
Errors								

FIGURE 12. Channel Status

Connection State Field

The **Connection State** field displays the state of the connection.

There are two connection states: *Connected or Idle.*

Connection Duration Field

The **Connection Duration** field displays the duration of the current connection or the previous connection, if in an idle state.

The connection duration is shown in *hh/mm/ss*.

Coding Algorithm (actual) Field

The **Coding Algorithm (actual)** field displays the coding algorithm negotiated for use with the connection. When this is displayed in red, it is different from the configured algorithm.

Audio/Packet (actual) Field

The **Audio/Packet (actual)** field displays the audio per packet size of the current connection. When this is displayed in red, it is different from the configured audio/packet value.

VAD State (actual) Field

The **VAD State (actual)** field displays the current VAD state. When this is displayed in red, it is different from the configured VAD state.

Connection Attempts Field

The **Connection Attempts** field displays the number of times a call has been made.

NOTE: The number of attempts should always be one greater than the number of drops.

Connection Drops Field

The **Connection Drops** field displays the number of times a connection has been dropped.

Connection Origination Field

The **Connection Origination** field displays the end of the connection that originated the call.

Connection Termination Field

The **Connection Termination** field displays the end of the connection that terminated the call.

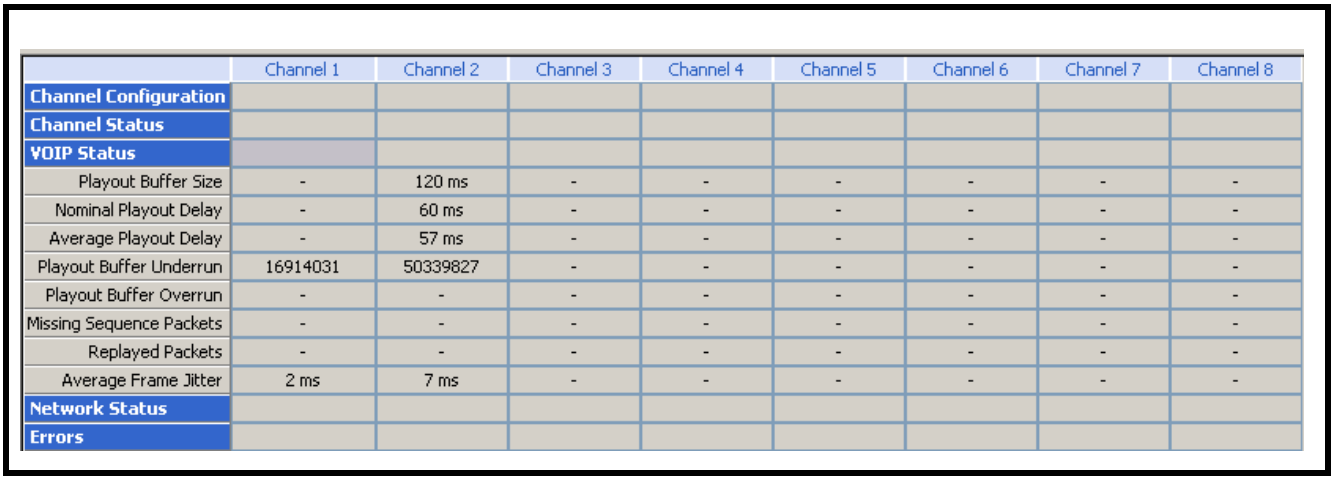
Release Reason Field

The **Release Reason** field displays why the connection was terminated. For example, congestion, network error, local release, or remote release.

VOIP Status

The **VOIP Status** displays read-only statistics and counters related to VOIP.

NOTE: If you are connected to a device with *Write* or *Admin* privileges, a context menu is available that allows you to *Clear VOIP Statistics for all channels* (right-click in the left title column) or *Clear VOIP Statistics for Individual Channels* (right-click in the channel column).



	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Channel Configuration								
Channel Status								
VOIP Status								
Playout Buffer Size	-	120 ms	-	-	-	-	-	-
Nominal Playout Delay	-	60 ms	-	-	-	-	-	-
Average Playout Delay	-	57 ms	-	-	-	-	-	-
Playout Buffer Underrun	16914031	50339827	-	-	-	-	-	-
Playout Buffer Overrun	-	-	-	-	-	-	-	-
Missing Sequence Packets	-	-	-	-	-	-	-	-
Replayed Packets	-	-	-	-	-	-	-	-
Average Frame Jitter	2 ms	7 ms	-	-	-	-	-	-
Network Status								
Errors								

FIGURE 13. VOIP Status

Playout Buffer Size Field

The **Playout Buffer Size** field displays how much audio can be received from the network before packets are lost. This is four (4) times bigger than the configured packet size.

This is a *static system setting*.

Nominal Playout Delay Field

The **Nominal Playout Delay** field displays how much audio is collected before playout begins. Playout begins at half the playout buffer size, which is two (2) times the configured packet size.

This is a *static system setting*.

Average Playout Delay Field

The **Average Playout Delay** field displays the actual average audio collected before packets are played out. The average playout delay is measured over the length of the connection.

Playout Buffer Underrun Field

The **Playout Buffer Underrun** field displays the number of times that packets were not played because the playout buffer was empty.

Playout Buffer Overrun Field

The **Playout Buffer Overrun** field displays the number of packets discarded because the playout buffer was full.

Missing Sequence Packets Field

The **Missing Sequence Packets** field displays how many audio packets were missed in the sequence.

Replayed Packets Field

The **Replayed Packets** field displays how many audio packets were replayed.

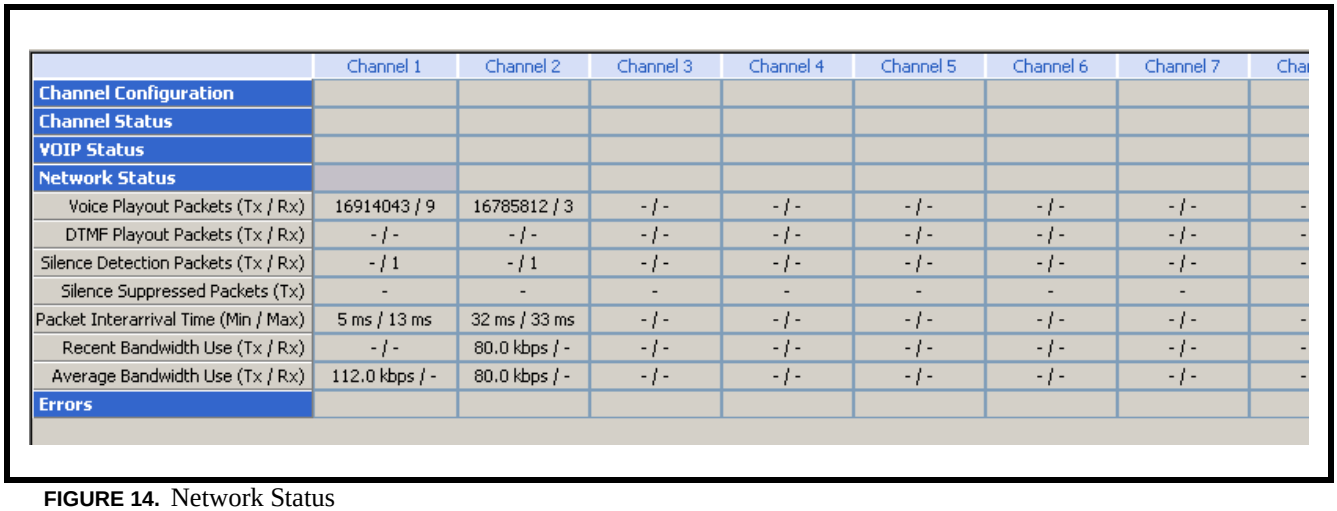
Average Frame Jitters Field

The **Average Frame Jitters** field displays the measure of consistency of packet arrival time. Lower jitter is better.

Network Status

The **Network Status** displays read-only network statistics and counters.

NOTE: If you are connected to a device with *Write* or *Admin* privileges, a context menu is available that allows you to *Clear Network Statistics for all channels* (right-click in the left title column) or *Clear Network Statistics for Individual Channels* (right-click in the channel column)



	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Cha
Channel Configuration								
Channel Status								
VOIP Status								
Network Status								
Voice Playout Packets (Tx / Rx)	16914043 / 9	16785812 / 3	- / -	- / -	- / -	- / -	- / -	-
DTMF Playout Packets (Tx / Rx)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	-
Silence Detection Packets (Tx / Rx)	- / 1	- / 1	- / -	- / -	- / -	- / -	- / -	-
Silence Suppressed Packets (Tx)	-	-	-	-	-	-	-	
Packet Interarrival Time (Min / Max)	5 ms / 13 ms	32 ms / 33 ms	- / -	- / -	- / -	- / -	- / -	-
Recent Bandwidth Use (Tx / Rx)	- / -	80.0 kbps / -	- / -	- / -	- / -	- / -	- / -	-
Average Bandwidth Use (Tx / Rx)	112.0 kbps / -	80.0 kbps / -	- / -	- / -	- / -	- / -	- / -	-
Errors								

FIGURE 14. Network Status

Voice Playout Packets (Tx/Rx) Field

The **Voice Playout Packets (Tx/Rx)** field displays the number of voice packets transmitted and received from the other side of the connection.

DTMF Relay Packets (Tx/Rx) Field

The **DTMF Relay Packets (Tx/Rx)** field displays the number of **DTMF** (Dual Tone Multiple Frequency) relay packets transmitted and received. DTMF relay packets are a bandwidth and quality saving feature within RVON products.

Silence Detection Packets (Tx/Rx) Field

The **Silence Detection Packets (Tx/Rx)** field displays the number of times a silence detection packet has been sent or received. VAD must be enabled.

Packet Interarrival Time (Min/Max) Field

The **Packet Interarrival Time (Min/Max)** field displays the minimum and maximum time elapsed between packets being sent.

Recent Bandwidth Use (Tx/Rx) Field

The **Recent Bandwidth Use (Tx/Rx)** field displays the amount of bandwidth used, in Kbytes/sec, over the length of the call.

Average Bandwidth Use (Tx/Rx) Field

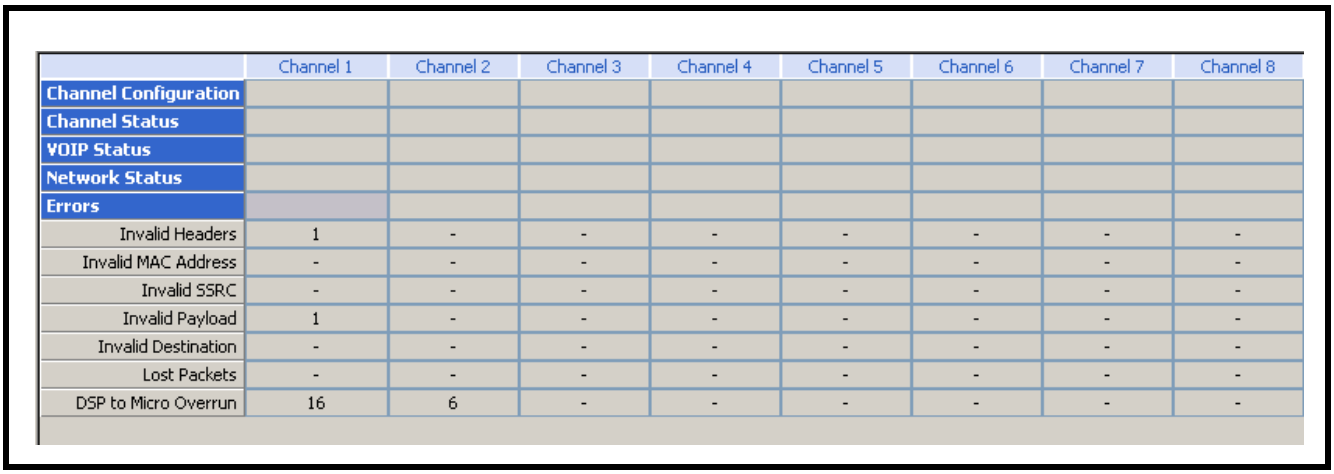
The **Average Bandwidth Use (Tx/Rx)** field displays the amount of bandwidth used, in Kbytes/sec, over the length of the call.

This is a calculation of the number of voice packets transmitted and received and the length of the connection.

Errors Grid

The **Errors Grid** displays the read-only error counters.

NOTE: If you are connected to a device with *Write* or *Admin* privileges, a context menu is available that allows you to *Clear Error Statistics for all channels* (right-click in the left title column) or *Clear Error Statistics for Individual Channels* (right-click in the channel column).



	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Channel Configuration								
Channel Status								
VOIP Status								
Network Status								
Errors								
Invalid Headers	1	-	-	-	-	-	-	-
Invalid MAC Address	-	-	-	-	-	-	-	-
Invalid SSRC	-	-	-	-	-	-	-	-
Invalid Payload	1	-	-	-	-	-	-	-
Invalid Destination	-	-	-	-	-	-	-	-
Lost Packets	-	-	-	-	-	-	-	-
DSP to Micro Overrun	16	6	-	-	-	-	-	-

FIGURE 15. Errors Grid

Invalid Headers Field

The **Invalid Headers** field displays how many IP packets could not be parsed.

Invalid MAC Address Field

The **Invalid MAC Address** field displays how many invalid MAC Addresses tried to connect.

Invalid SSRC Field

The **Invalid SSRC** field displays the number of packets with an invalid SSRC.

Invalid Payload Field

The **Invalid Payload** field displays how many incorrectly formatted packets were received.

Invalid Destination Field

The **Invalid Destination** field displays how many invalid destinations were received.

Lost Packets Field

The **Lost Packets** field displays how many packets were lost.

DSP to Micro Overrun Field

The **DSP to Micro Overrun** field displays the number of packets that were lost because the micro was too busy to receive.

Change User Window

The **Change User** window, shown in Figure 16, is used to logon to RVON devices in RVONedit as different preestablished users. RVONedit administrators have the ability to create up to five (5) different user profiles with unique access rights/ privileges (see page 3). This gives administrators the power to limit access to change device configuration values to a few users. User profiles are created in the Authentication area of the Device Configuration and Status section. For more information, see "How to Add/Remove a User Profile To/From the Authentication Table" on page 71.

NOTE: By default, RVONedit is shipped with two default user profiles: *admin* and *telex*. They both have the same default password: *password*. We highly recommend you give each user profile a unique password to prevent a security risk to your RVON device configurations.

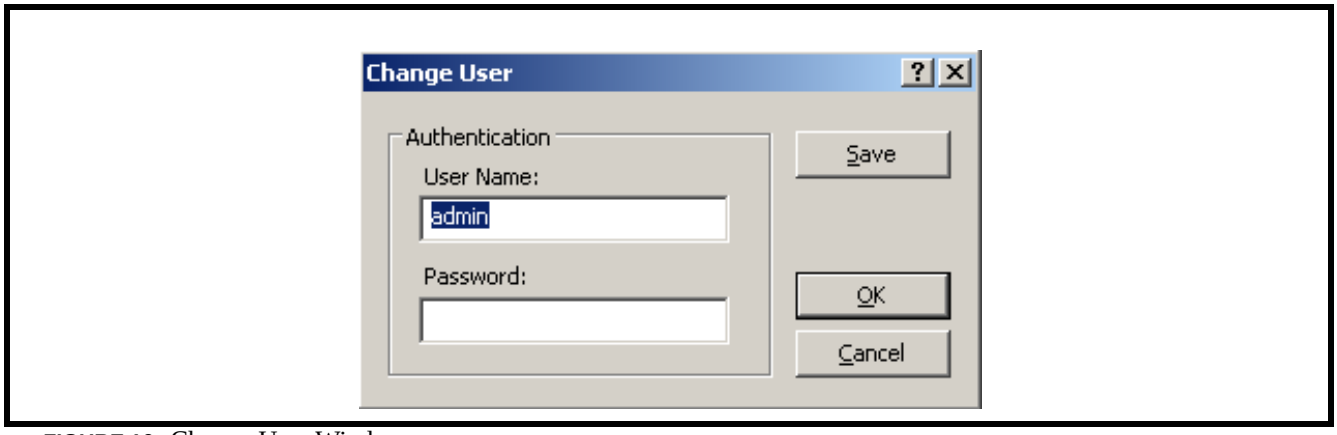


FIGURE 16. Change User Window

Authentication Group Box

NOTE: User names and passwords must be setup in Authentication Information in the Device Configuration window. For more information, see "Authentication Information Section" on page 15.

The **Authentication** group box contains the following information:

User Name Field

The **User Name** field is used to enter a user name.

This field can contain *up to 40 characters*.

Password Field

The **Password** field is used to enter the password assigned to the user name entered.

This field can contain *up to 40 characters*.

Save Button

The **Save** button saves the user name and password for future logons to the RVON device. The save function remembers the user name and password for the next time the RVON device is accessed, allowing the user to forego entering a user name and password. This is convenient when there are many RVON devices accessed on a routine basis.

IMPORTANT: You must click **OK** after the save is performed to store the user name and password for the RVON device.

OK Button

The **OK** button submits the user name and password entered to the intercom system.

- If correct, the RVON device is accessible with the user rights assigned to the user name.
- If incorrect, the Change User window reappears with the user name field populated with no password entered.

Cancel Button

The **Cancel** button disregards the information entered in the fields and closes the Change User window.

Manage Logins Window

The **Manage Logins** window, shown in Figure 17, is used to manage the login for one (1) or more RVON devices at a time. The Manage Logins window is similar to the Change User window except you can set user names and passwords for multiple RVON devices without having to individually select the RVON device.

Depending on how you want to configure your user name and password configurations, there are three (3) ways to open the Manage Logins window:

For one device

For all devices

For all devices of a certain device type

For more information, see “How to Open the Manage Logins Window” on page 86.

NOTE: By default, RVONedit is shipped with two default user profiles: *admin* and *telex*. They both have the same default password: *password*. We highly recommend you give each user profile a unique password to prevent a security risk to your RVON device configuration.

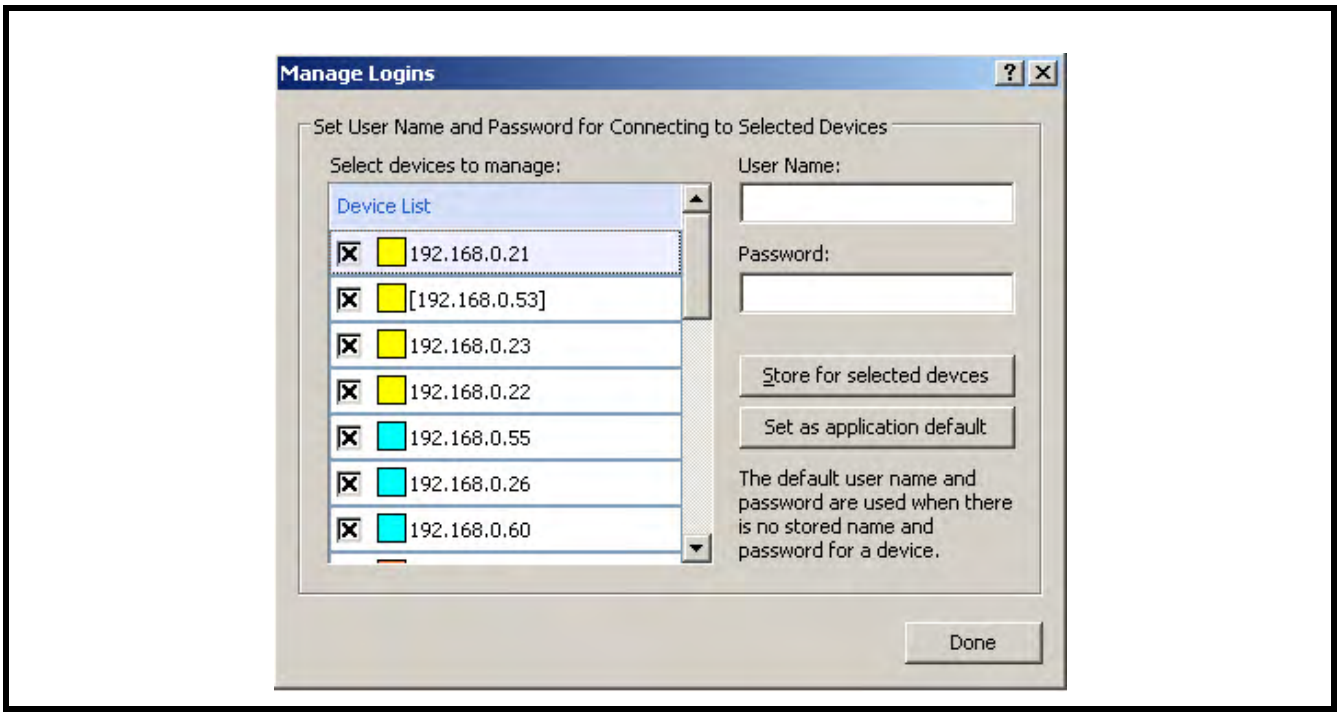


FIGURE 17. Manage Logins Window

Set User Name and Password for Connecting to Selected Devices Group Box

Select Devices to Manage List

The **Select Devices to Manage** list displays a selectable list of devices in which user names and passwords can be configured.

User Name Field

The **User Name** field is used to enter the user name for the selected devices.

This field can contain *up to 40 characters*.

Password Field

The **Password** field is used to enter a password for the user name specified. Passwords are a string of characters a user must enter to gain access to a resource.

This field can contain *up to 40 characters*.

Store For Selected Devices Button

The **Store for Selected Devices** button stores the specified user name and password for the device selected in the Select Devices to Manage list. If this option is utilized, when the device is accessed, the configured user name and password is required to gain access to the device. This feature can be used as a security feature when allowing remote access to your RVON devices.

Example: For example, if a remote truck is configuring an RVON 8 device and wants to verify the correct configuration with the studio location's RVON 8 device, the studio location can assign a user name and password that has Read Only access to the information. Once the RVON device is added to the remote location RVONedit application, the remote truck technician can logon and view the configuration settings.

NOTE: When configured, the *Stored* user name and password always supercedes the application default user name and password. If there is no stored user name and password established, the RVON device looks for the default user name and password. If there is no default user name and password established, the RVON device uses the user name: *telex* and password: *password*.

Set as Application Default Button

The **Set as Application Default** button sets the entered user name and password as the default for the selected devices in the Select Devices to Manage list. This feature allows the user to assign the same default user name and password to many devices simultaneously. This can save time when configuring login information for many devices.

Example: For example, you can assign a specific user name and password to each RVON device type in your device catalog, as shown in Figure 18. You can also set a global user name and password that applies to all RVON device types.

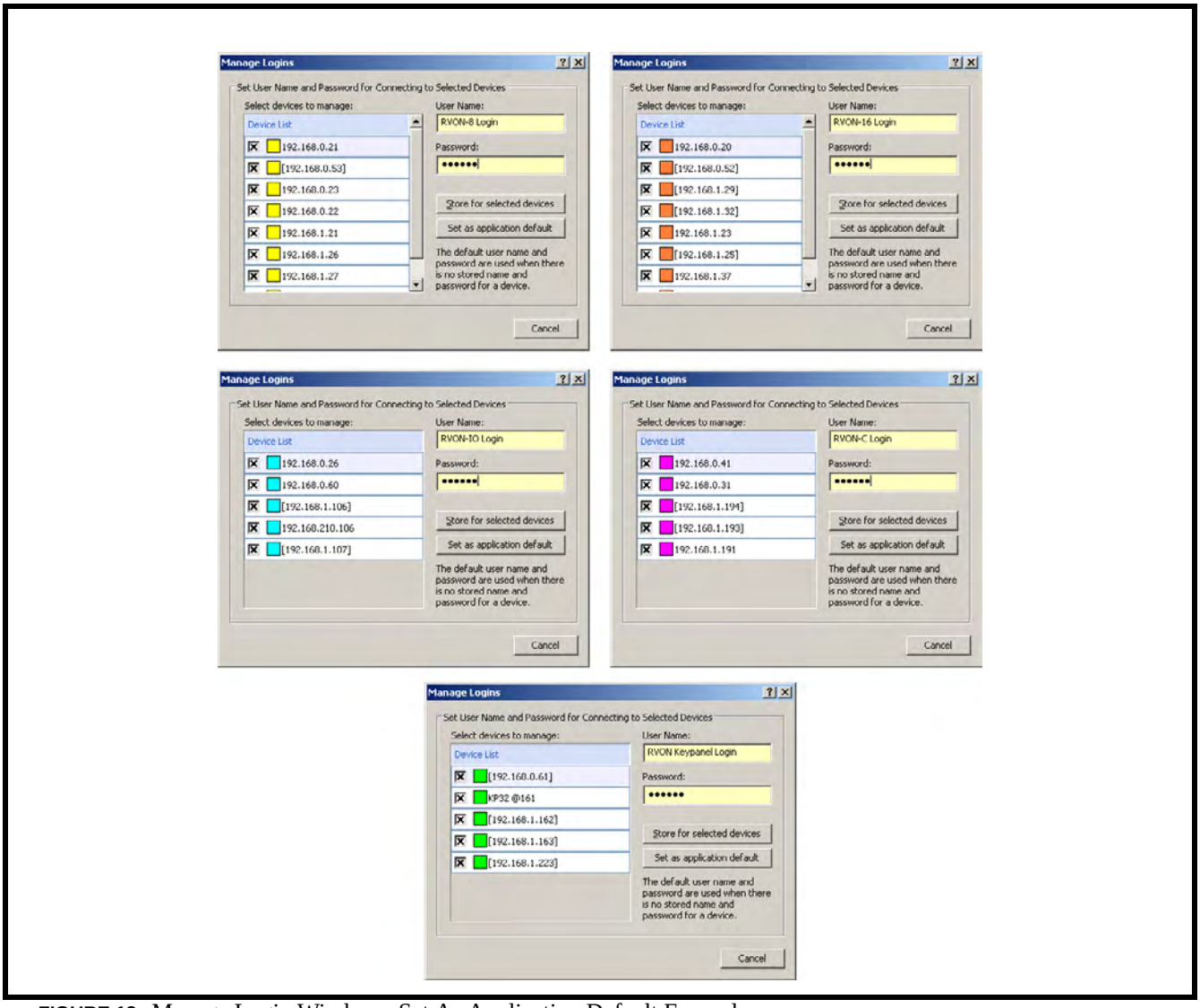


FIGURE 18. Manage Login Window - Set As Application Default Example

NOTE: You must have each user name and password defined in the Authentication Information window (see “Authentication Information Section” on page 15). For more information, see “How to Add/Remove a User Profile To/From the Authentication Table” on page 71.

Done Button

The **Done** button closes the Manage Login window.

Preferences Dialog

The **Preferences** window allows you to set application, device and channel options for RVONedit.

The Preferences window has four pages:

- *Catalog page* - Allows you to set display options for the device catalog, such as the way RVON devices are seen.
- *Devices page* - Allows you to set options for device preferences, such as auto-connecting and displaying device configuration areas.
- *Channels page* - Allows you to set options for channel configurations such as, column and row adjustments and display options for RVON-Keypanel aux channel.
- *Directories page* - Allows you to set file locations for save and load directory defaults.

You can also open preferences by selecting ***Edit|Preferences,*** by pressing **Alt+Enter**, or clicking the preferences icon .

Catalog Page

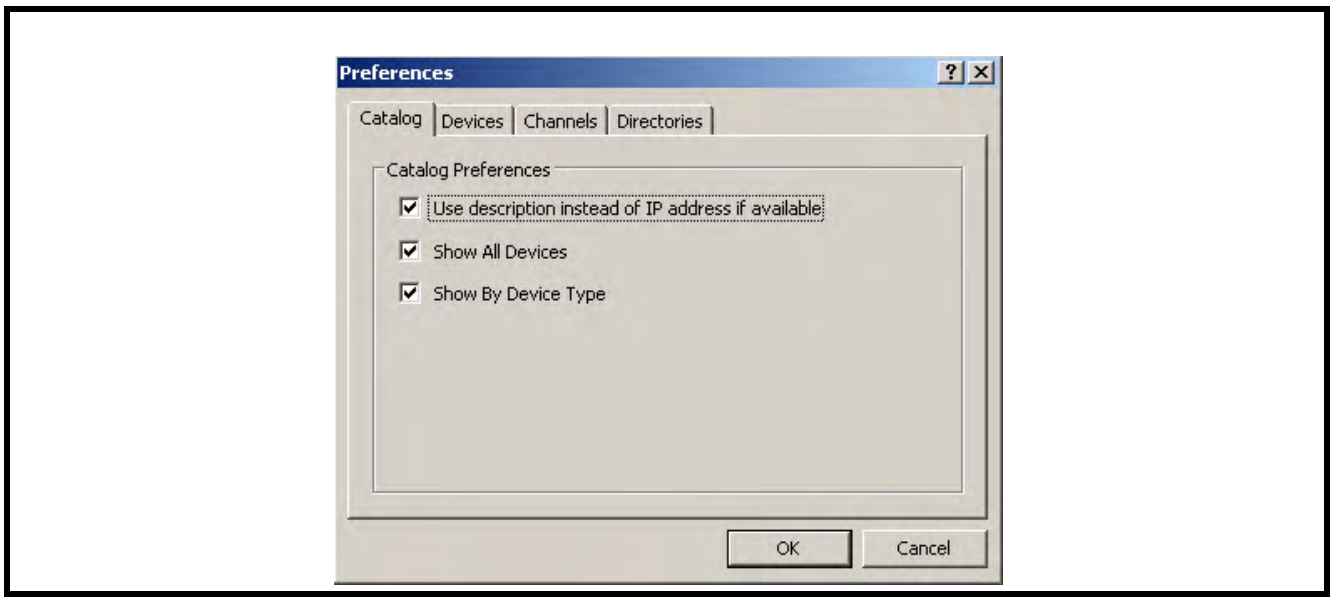


FIGURE 19. Catalog Page - Preferences Window

Use Description Instead of IP Address If Available Check Box

The **Use Description Instead of IP Address If Available** check box allows the user to see the RVONedit device descriptions, instead of the device IP Address. For example, if you have an RVON device with an IP Address, 10.2.210.10, and a description, *slot 2*; in the Device Catalog, the description, *slot 2* will be seen instead of the IP Address.

Show All Devices Check Box

The **Show All Devices** check box allows the user to display all RVONedit devices in the Device Catalog, under the All Devices heading.

Show By Device Type Check Box

The **Show By Device Type** check box allows the user to display all RVONedit devices grouped by device type. For example, RVON-8, RVON-Keypanel, etc.

Devices Page

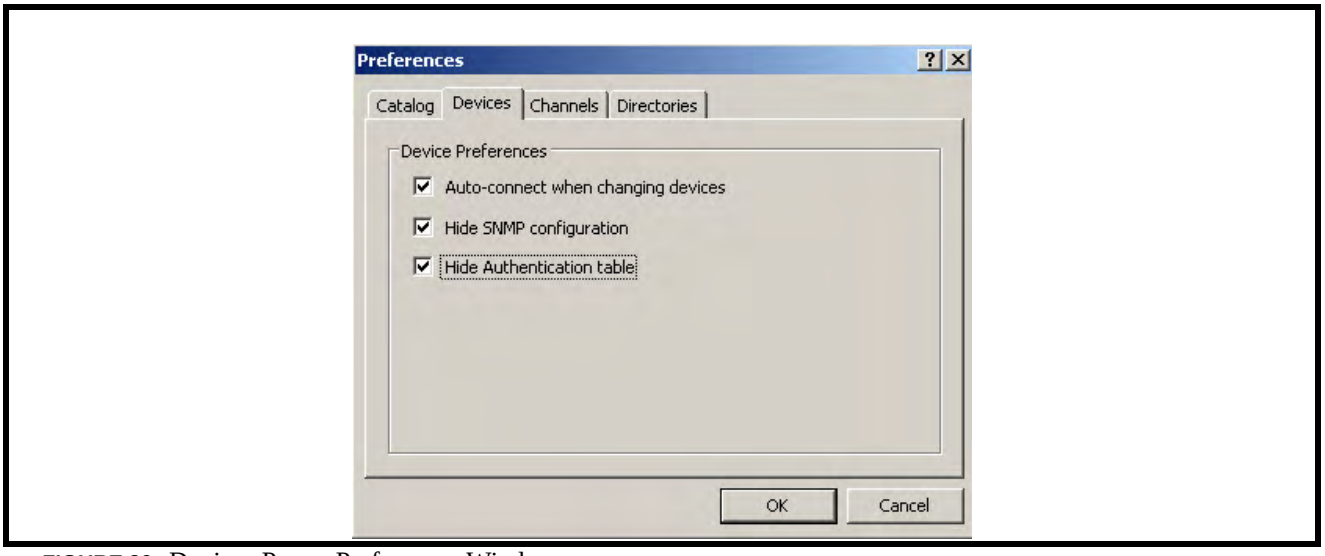


FIGURE 20. Devices Page - Preferences Window

Auto-Connect When Changing Devices Check Box

The **Auto-Connect When Changing Devices** check box allows the user to auto-connect to RVONedit devices. This means that when devices are changed within the device catalog, RVONedit automatically connects the device or the user name and password window automatically displays for logon.

Hide SNMP Configuration Check Box

The **Hide SNMP Configuration** check box allows the user to hide the SNMP configuration area. If you do not use the SNMP feature, you can hide the configuration options located in the *Device Configuration and Status* section.

For more information, see “How to Show/Hide the SNMP Configuration Information” on page 66.

Hide Authentication Table Check Box

The **Hide Authentication Table** check box allows the user to hide the Authentication table area. If you do not use the authentication feature, you can hide the configuration options located in the *Device Configuration and Status* section. For more information see, “How to Show/Hide the Authentication Table” on page 67.

NOTE: SNMP and Authentication information is only visible with logged in as *admin*.

Channels Page

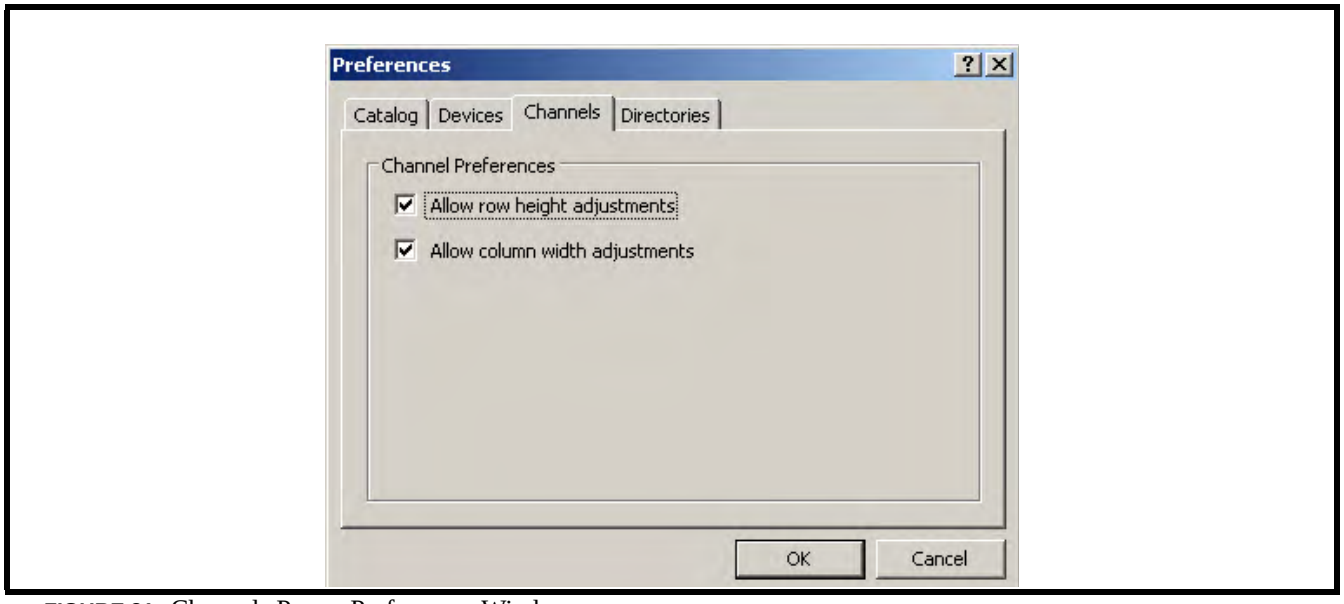


FIGURE 21. Channels Page - Preferences Window

Allow Row Height Adjustments Check Box

The **Allow Row Height Adjustments** check box allows the user to make row height adjustments to the channel configuration grid.

Allow Column Width Adjustments Check Box

The **Allow Column Width Adjustments** check box allows the user to make column width adjustments to the channel configuration grid.

Directories Page

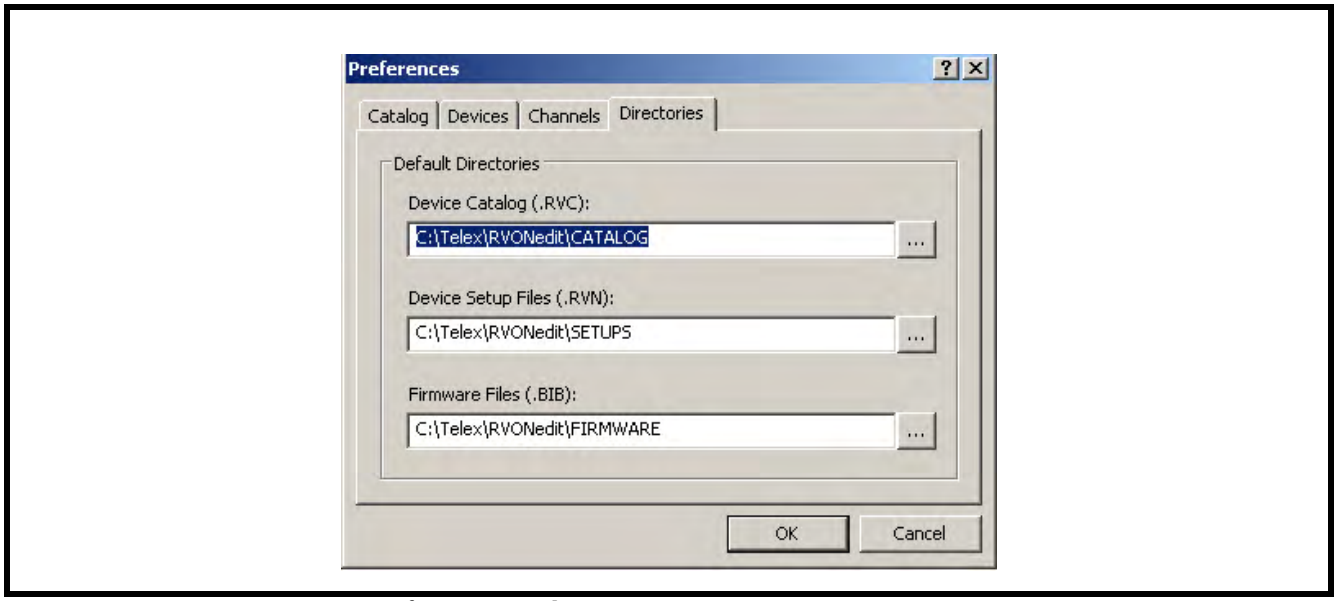


FIGURE 22. Directories Page - Preferences Window

Device Catalog (.RVC) Field

The **Device Catalog (.RVC)** field allows you to set the file location where the device catalog settings are stored. By default, the device catalog settings are stored in *C:\Telex\RVONedit\CATALOG*. Use the browse button ... to navigate to where you want to store these files.

Device Setup Files (.RVC) Field

The **Device Setup Files (.RVC)** field allows the user to set the file location where the device setup files are stored. By default, the device settings files are stored in *C:\Telex\RVONedit\SETUPS*.Use the browse button ... to navigate to where you want to store these files.

Firmware Files (.BIB) Field

The **Firmware Files (.BIB)** field allows the user to set the file location where the firmware files are stored. By default, the firmware files are stored in *C:\Telex\RVONedit\FIRMWARE*.Use the browse button ... to navigate to where you want to store these files.

Add Device Window

The **Add Devices** window, shown in Figure 23 to add RVON devices to RVONedit. There are two ways to add devices on the Add Device window:

- You can manually enter the device information. Use the Add page to perform a search for a specific RVON device by manually entering the IP Address.
- You can search through a list of IP Addresses. Use the Search page to look through a list of all configured RVON devices. When you highlight a device in the Available Devices list, the device information auto-populates the right portion of the window.

For more information, see “How to Add Devices to RVONedit” on page 54.

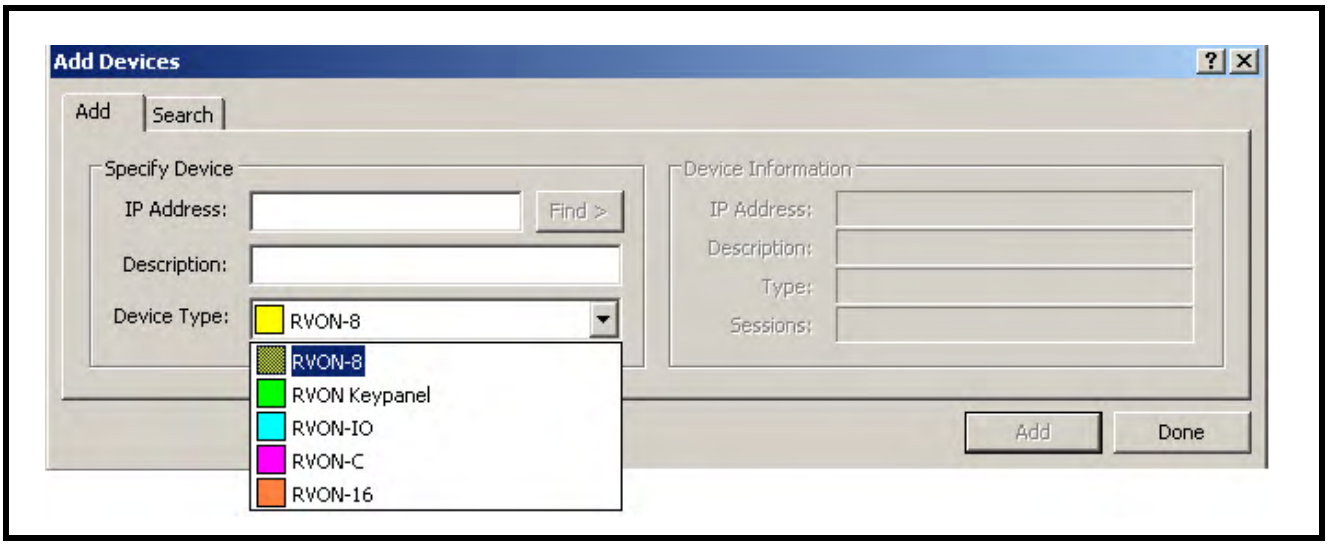


FIGURE 23. Add Pages - Add Devices Window

Add Page

Specify Device Group Box

Use the **Specify Device** group box to enter specific information about the RVON device you are adding to the application, such as IP Address, Description, and Device Type.

IP Address Field

The **IP Address** field is used to enter the IP Address of the RVON device you want to add to RVONedit. Once the IP Address is entered, the Find button becomes active.

Find Button

The **Find** button is used to search and find the IP Address you enter in the IP Address field.

Description Field

The **Description** field is used to enter a description of the RVON device you are adding to the application.

NOTE: If the description is different from the configured RVON device, the description is overwritten with the original description.

Device Type Drop Down List

The **Device Type** drop down list is used to select the type of RVON device for which you are searching.

Available selections for this field are *RVON-8, RVON-Keypanel, RVON-I/O, RVON-C, and RVON-16.*

Device Information Group Box

The **Device Information** area on the Add Device window displays information for the selected devices. Information includes:

IP Address

Description

Type

Sessions

NOTE: This information is for display only, you cannot modify the information in the window.

Add Button

The **Add** button is used to add the selected device to the device catalog.

Done Button

The **Done** button is used to close the *Add Device* window.

Search Page

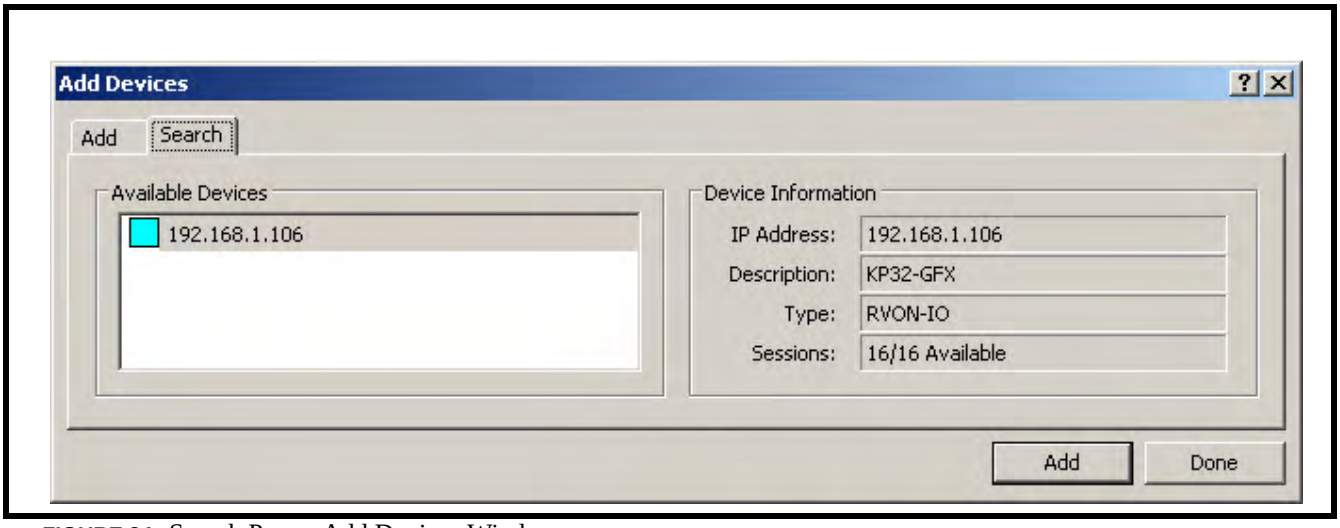


FIGURE 24. Search Page - Add Devices Window

Available Devices Group Box

The **Available Devices** list displays every configured RVON device in the intercom system.

NOTE: You can add multiple RVON devices by holding down the **Ctrl** button and selecting each device individually or hold the **Ctrl+Shift** and highlight the entire block of devices.

Device Information Group Box

The **Device Information** area on the Add Device window displays information for the selected devices. Information includes:

IP Address

Description

Type

Sessions

NOTE: This information is for display only, you cannot modify the information in this window.

Add Button

The **Add** button is used to add the selected device to the device catalog.

Done Button

The **Done** button is used to close the *Add Device* window.

Send Changes

The **Send Changes** window, shown in Figure 25, is used to select RVON devices and configuration modifications made to RVON devices and send them to the device. Send Changes allows you to verify and confirm the modifications about to be implemented and allows you to clear any of the device or configuration check boxes to cancel specific modifications from being sent.

NOTE: RVONedit version 2.0.0 and higher is now able to open more than one window at a time. In turn, you can modify and send multiple device modifications simultaneously. For more information, see “How to Send Changes” on page 59.

This window only shows those items that have had changes made to them. If no changes have been made, the grid item will not appear. For example, if you make changes to the IP Address on the RVON device, but make no changes to the description, the IP Address check box appears, but the Description check box does not appear.

NOTE: To send changes to the intercom, you must have *Write* or *Admin* access rights for the data being sent.

Channel Configuration Page

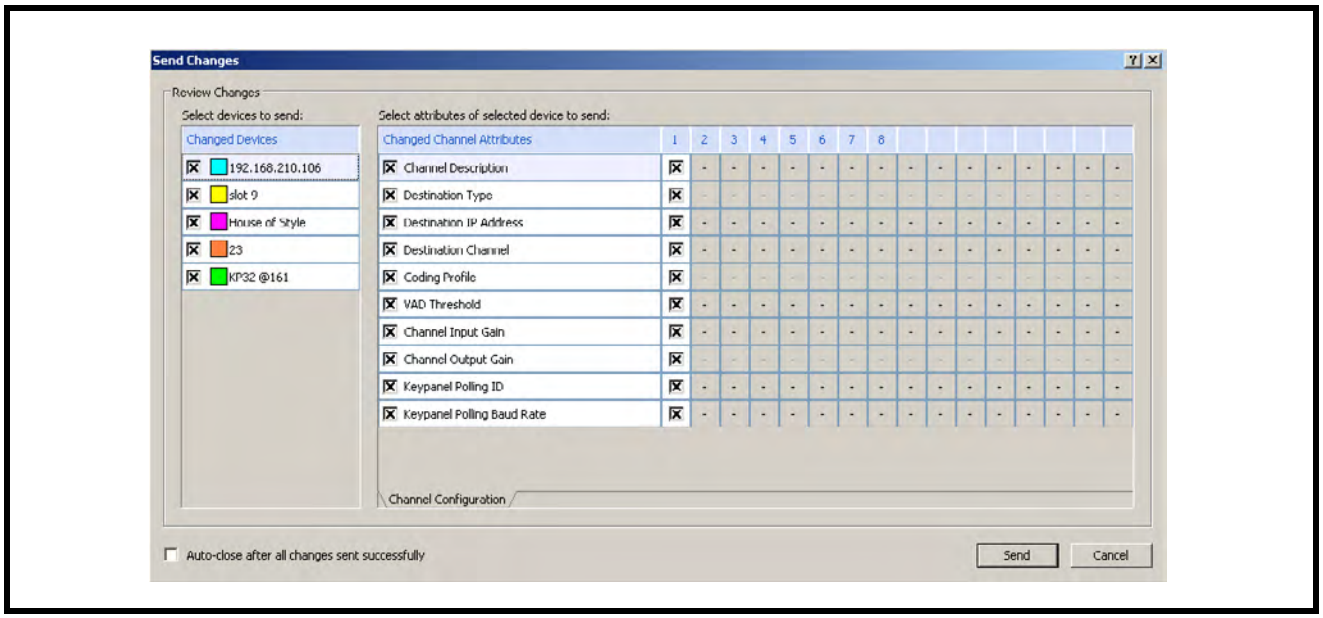


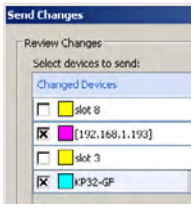
FIGURE 25. Channel Configuration Page - Send Changes Window

Review Changes Group Box

Select Devices To Send Box

Changed Devices List

The **Changed Devices** list displays a list of RVON devices with modifications made to their configurations. When the check box next to the device is selected, the device changes will be sent to the device.



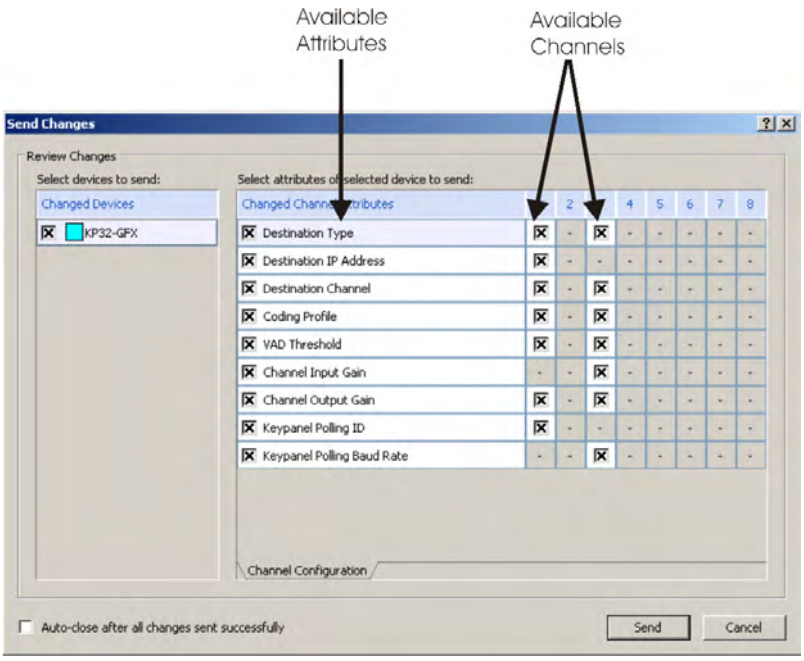
Select Attributes of Selected Device to Send

Changed Channel Attributes

The **Changed Channel Attributes** list displays a list of channel attributes and channels that have modifications made to them. Depending on the RVON device you select, the number of displayed channel columns varies from 8 to 16.

When an attribute and channel have a change pending, the check box next to the attribute oand channel becomes active.

If you clear the check box, the change is not implemented on the device..



> Select each **attribute and channel** you want to allow the changes to be made upon.

Channel Description Check Box

The **Channel Description** check box indicates modifications have been made to the Channel Description field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Destination Type Check Box

The **Destination Type** check box indicates modifications have been made to the Destination Type field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Destination IP Address Check Box

The **Destination IP Address** check box indicates modifications have been made to the Destination IP Address field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Destination Channel Check Box

The **Destination Channel** check box indicates modifications have been made to the Destination Channel field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Coding Profile Check Box

The **Coding Profile** check box indicates modifications have been made to the Coding Profile field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

VAD Threshold Check Box

The **Vad Threshold** check box indicates modifications have been made to the VAD Threshold field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Channel Input Gain Check Box

The **Channel Input Gain** check box indicates modifications have been made to the Channel Input Gain field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Channel Output Gain Check Box

The **Channel Output Gain** check box indicates modifications have been made to the Channel Output Gain field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Keypanel Polling ID Check Box

The **Keypanel Polling ID** check box indicates modifications have been made to the Keypanel Polling ID field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Keypanel Polling Baud Rate Check Box

The **Keypanel Polling Baud Rate** check box indicates modifications have been made to the Keypanel Polling Baud Rate field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Auto-Close After All Changes Sent Successfully Check Box

The **Auto-Close After All Changes Sent Successfully** check box is used to enable the Send Change window to automatically close the when all changes have been sent successfully.

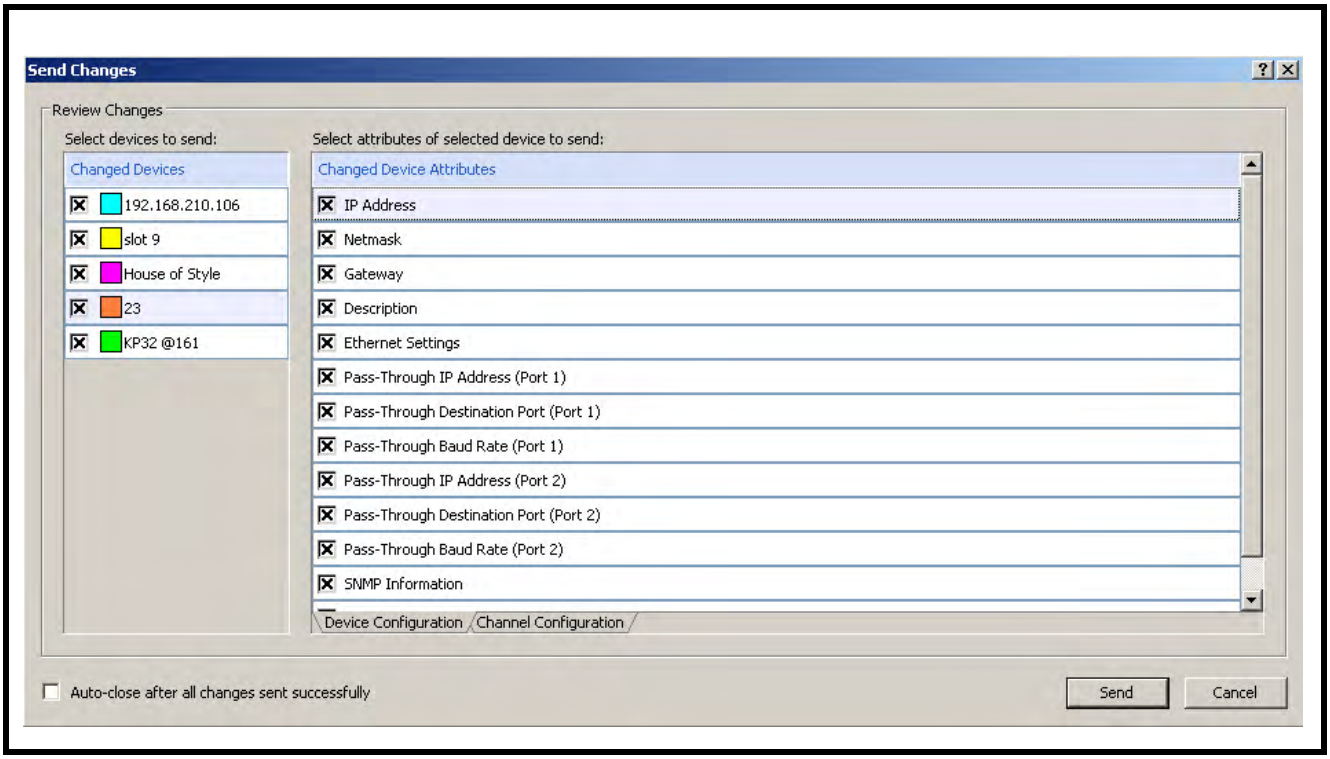


FIGURE 26. Device Configuration Page - Send Changes Window

Review Changes Group Box

Select Attributes of Selected Devices Send List

IP Address Check Box

The **IP Address** check box indicates modifications have been made to the IP Address field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Description Check Box

The **Description** check box indicates modifications have been made to the Description field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Ethernet Settings Check Box

The **Ethernet Settings** check box indicates modifications have been made to the Ethernet Settings field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Pass-Through IP Address Check Box

The **Pass-Through IP Address** check box indicates modifications have been made to the Pass-Through IP Address field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Pass-Through Baud Rate Check Box

The **Pass-Through Baud Rate** check box indicates modifications have been made to the Pass-Through Baud Rate field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

GPIO Mode Check Box

The **GPIO Mode** check box indicates modifications have been made to the GPIO Mode field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

GPIO Mode IP Address

The **GPIO Mode IP Address** check box indicates modifications have been made to the GPIO Mode IP Address field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

SNMP Information Check Box

The **SNMP Information** check box indicates modifications have been made to the SNMP Information field. If selected when a Send Change is performed, the modifications are sent to the device. Otherwise, the modifications are not sent.

Auto-Close After All Changes Sent Successfully Check Box

The **Auto-Close After All Changes Sent Successfully** check box is used to enable the Send Change window to automatically close the when all changes have been sent successfully.

Paste Special Window

The **Paste Special** window, shown in Figure 27, is used to select different channel and/or device configuration items that have been copied from one device to the current RVON device.

The Paste Special window has two pages – Channel Configuration Page and Device Configuration Page.

Channel Configuration Page

The **Channel Configuration Page**, shown in Figure 27, is used to select the options you want to copy to the device and then select the channels on the selected device you want to paste the selected configuration options.

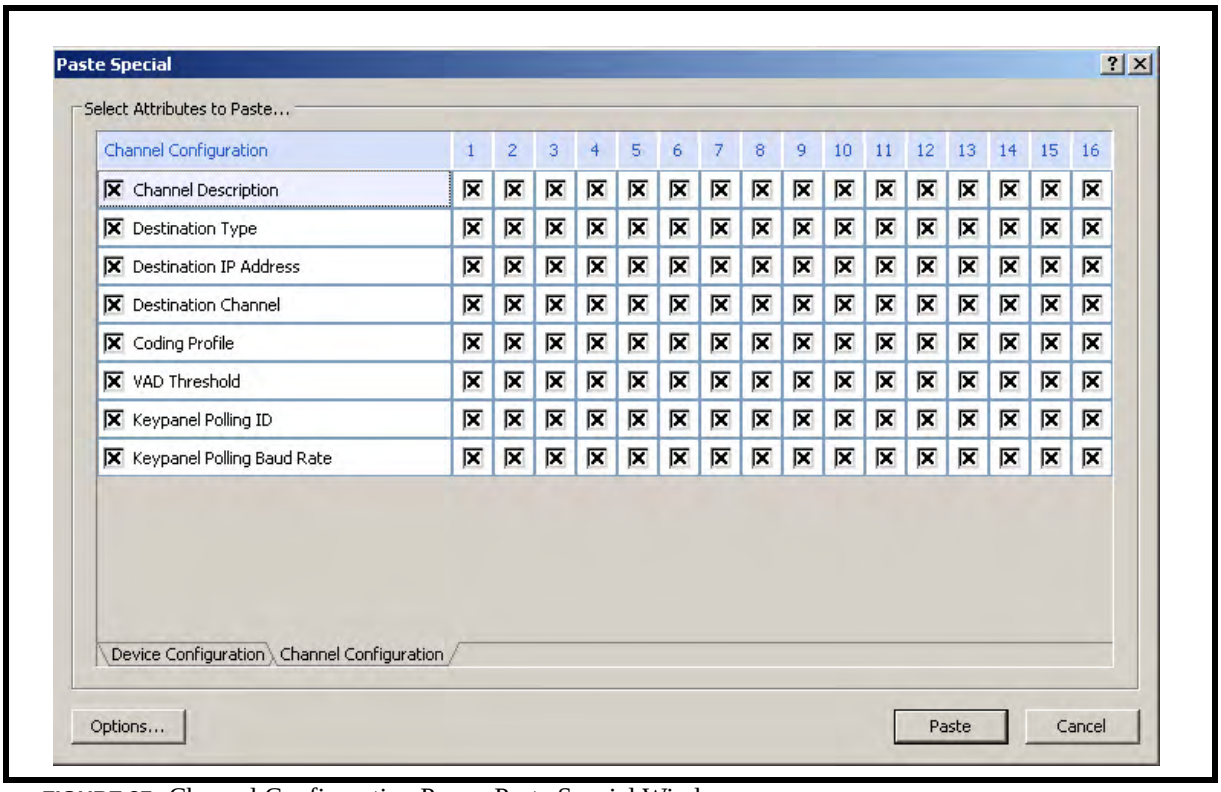


FIGURE 27. Channel Configuration Page - Paste Special Window

Select Attributes to Paste Group Box

Changed Devices List

Channel Configuration List

The **Channel Configuration** list displays the channels available to paste channel information into, if applicable. Depending on the RVON device you have selected, the number of displayed channel columns varies. If you have an RVON-8 device selected, 8 channel columns are shown, if you have an RVON-16 selected, 16 channels are shown.

> Select each **channel** you want to allow the paste to be performed upon.

Channel Description Check Box

The **Channel Description** check box indicates the channel description should be pasted into the new channel configuration.

Select the Channel Description check box if you want to paste the channel description information to the new channel configuration. Otherwise, clear the check box to do nothing

Destination Type Check Box

The **Destination Type** check box indicates the destination type should be pasted into the new channel configuration.

Select the Destination Type check box if you want to paste the destination type information to the new channel configuration. Otherwise, clear the check box to do nothing.

Destination IP Address Check Box

The **Destination IP Address** check box indicates the destination IP Address should be pasted into the new channel configuration.

Select the Destination IP Address check box if you want to paste the destination IP Address information to the new channel configuration. Otherwise, clear the check box to do nothing.

Destination Channel Check Box

The **Destination Channel** check box indicates the destination channel should be pasted into the new channel configuration.

Select the Destination Channel check box if you want to paste the destination channel information to the new channel configuration. Otherwise, clear the check box to do nothing.

Coding Profile Check Box

The **Coding Profile** check box indicates the coding profile should be pasted into the new channel configuration.

Select the Coding Profile check box if you want to paste the coding profile information to the new channel configuration. Otherwise, clear the check box to do nothing.

VAD Threshold Check Box

The **VAD Threshold** check box indicates the VAD threshold should be pasted into the new channel configuration.

Select the VAD Threshold check box if you want to paste the VAD threshold information to the new channel configuration. Otherwise, clear the check box to do nothing.

Channel Input Gain Check Box

The **Channel Input Gain** check box indicates the channel input gain information should be pasted into the new channel configuration.

Select the Channel Input Gain check box if you want to paste the channel input gain information to the new channel configuration. Otherwise, clear the check box to do nothing.

Channel Output Gain Check Box

The **Channel Output Gain** check box indicates the channel output gain information should be pasted into the new channel configuration.

Select the Channel Output Gain check box if you want to paste the channel output gain information to the new channel configuration. Otherwise, clear the check box to do nothing.

Keypanel Polling ID Check Box

The **Keypanel Polling ID** check box indicates the keypanel polling ID information should be pasted into the new channel configuration.

Select the Keypanel Polling ID check box if you want to paste the keypanel polling ID information to the new channel configuration. Otherwise, clear the check box to do nothing.

Keypanel Polling Baud Rate Check Box

The **Keypanel Polling Baud Rate** check box indicates the keypanel polling baud rate information should be pasted into the new channel configuration.

Select the Keypanel Polling Baud Rate check box if you want to paste the keypanel polling baud rate information to the new channel configuration. Otherwise, clear the check box to do nothing.

Device Configuration Page

The **Device Configuration** page, shown in Figure 28, displays the different options you can select to paste to the new device configuration.

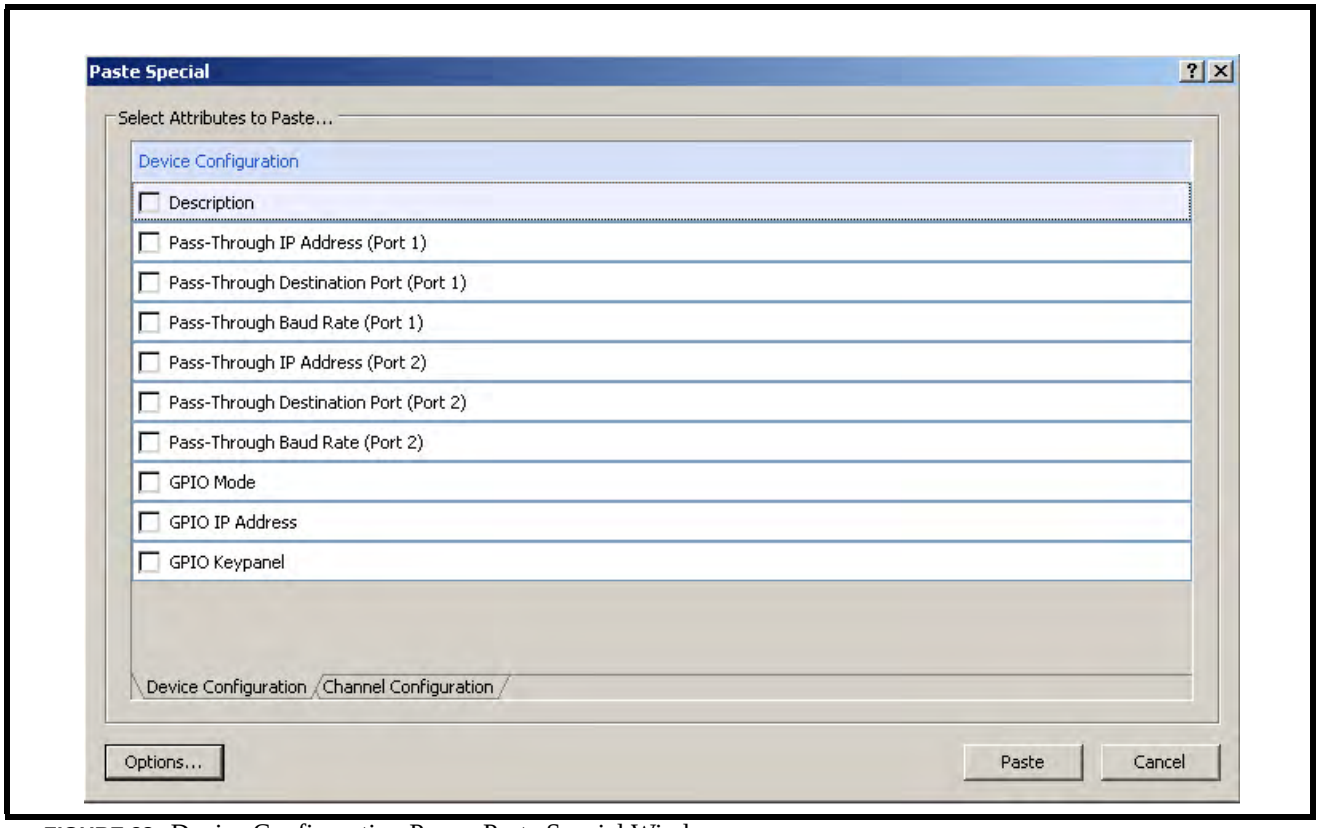


FIGURE 28. Device Configuration Page - Paste Special Window

Select Attributes to Paste... Group Box

IP Address Check Box

The **IP Address** check box indicates the IP Address information should be pasted into the new device configuration.

Select the IP Address check box if you want to paste the IP Address information to the new device configuration. Otherwise, clear the check box to do nothing.

Netmask Check Box

The **Netmask** check box indicates the Netmask information should be pasted into the new device configuration.

Select the Netmask check box if you want to paste the Netmask information to the new device configuration. Otherwise, clear the check box to do nothing.

Gateway Check Box

The **Gateway** check box indicates the Gateway information should be pasted into the new device configuration.

Select the Gateway check box if you want to paste the Gateway information to the new device configuration. Otherwise, clear the check box to do nothing.

Description Check Box

The **Description** check box indicates the description information should be pasted into the new device configuration.

Select the Description check box if you want to paste the description information to the new device configuration. Otherwise, clear the check box to do nothing.

Ethernet Settings Check Box

The **Ethernet Settings** check box indicates the Ethernet settings information should be pasted into the new device configuration.

Select the Ethernet Settings check box if you want to paste the Ethernet settings information to the new device configuration. Otherwise, clear the check box to do nothing.

Pass-Through IP Address Check Box

The **Pass-through IP Address** check box indicates the pass-through IP Address information should be pasted into the new device configuration.

Select the Pass-Through IP Address check box if you want to paste the pass-through IP Address information to the new device configuration. Otherwise, clear the check box to do nothing.

GPIO Mode Check Box

The **GPIO Mode** check box indicates the GPIO mode information should be pasted into the new device configuration.

Select the GPIO Mode check box if you want to paste the GPIO mode information to the new device configuration. Otherwise, clear the check box to do nothing.

GPIO IP Address Check Box

The **GPIO IP Address** check box indicates the GPIO IP Address information should be pasted into the new device configuration.

Select the GPIO IP Address check box if you want to paste the GPIO IP Address information to the new device configuration. Otherwise, clear the check box to do nothing.

GPIO Keypanel Check Box

The **GPIO Keypanel** check box indicates the GPIO keypanel information should be pasted into the new device configuration.

Select the GPIO Keypanel check box if you want to paste the GPIO keypanel information to the new device configuration. Otherwise, clear the check box to do nothing.

Options button

The **Options** button, shown in Figure 29, displays pop-up options for the Paste Special window. These options are explained in detail in the following paragraphs.

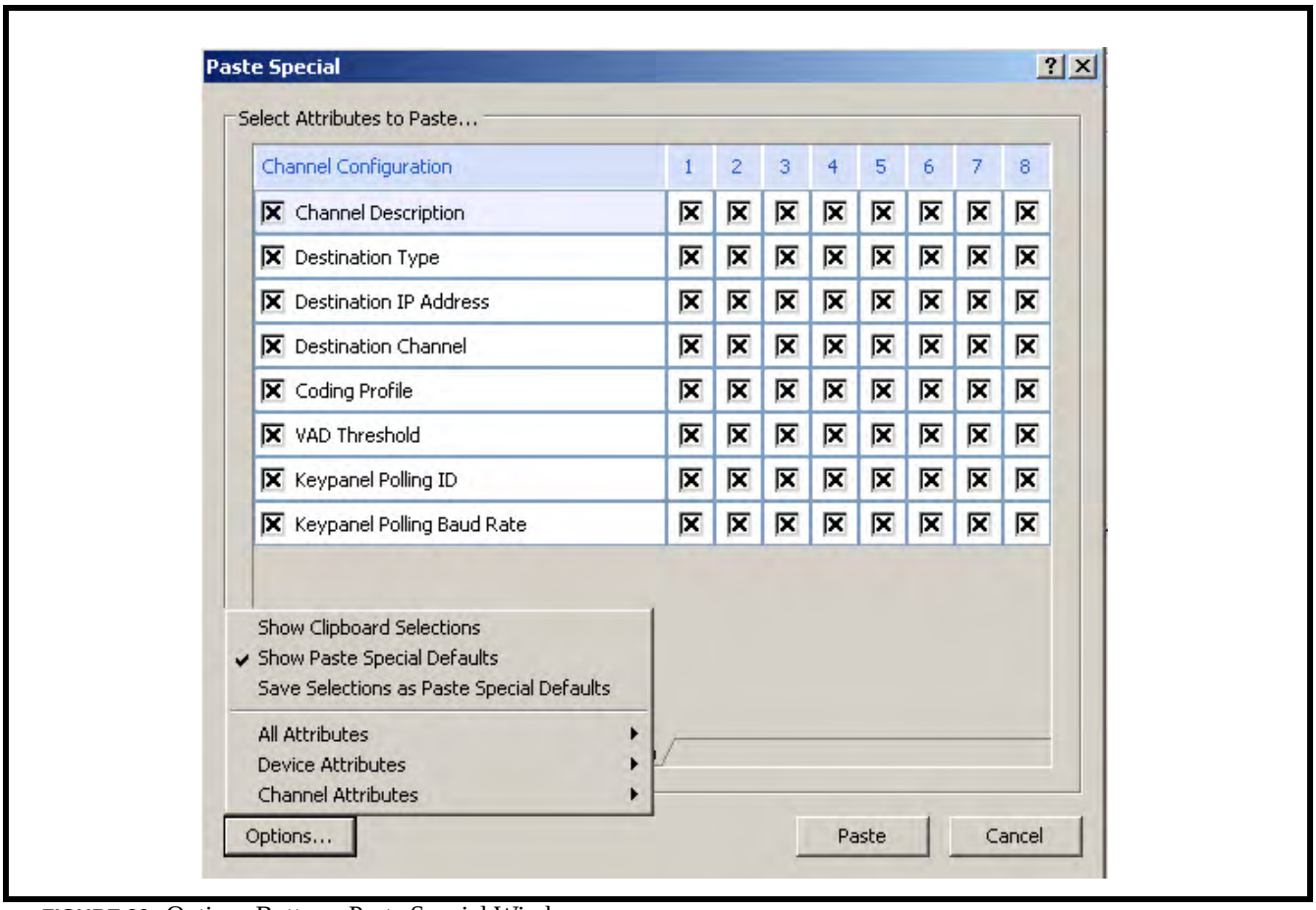


FIGURE 29. Options Button - Paste Special Window

Show Clipboard Selections Pop-up Option

The **Show Clipboard Selections** pop-up option indicates only those items you copied appear in the Paste Special window.

Show Paste Special Defaults Pop-up Option

The **Show Paste Special Defaults** pop-up option indicates the defaults set to show for the Paste Special window appear.

By default, all channels and all configuration options are selected. You can remove the check mark from any of the check boxes you do not want to paste into the new configuration page.

Save Selections As Paste Special Defaults Pop-up Option

The **Save Selections As Paste Special Defaults** pop-up option saves the currently selected options as the paste special defaults.

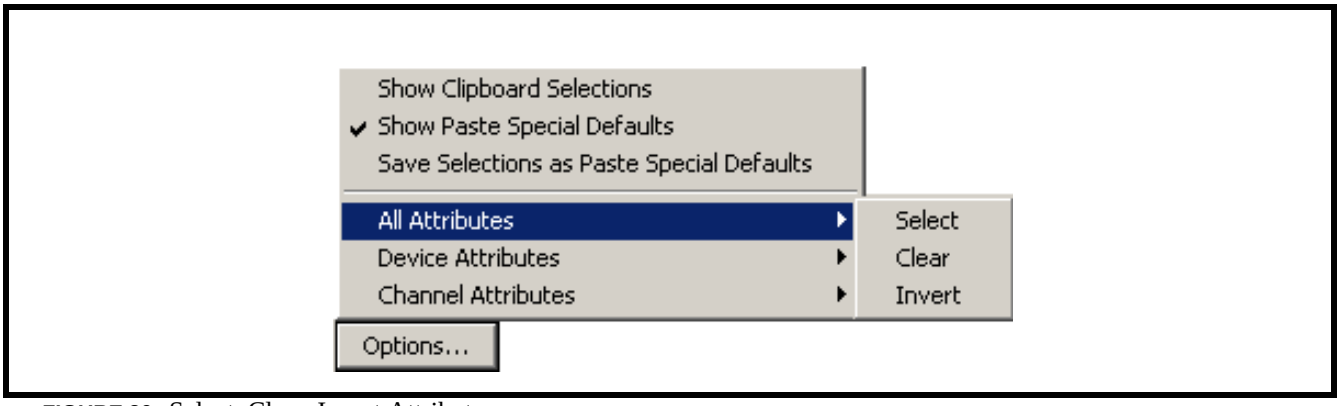


FIGURE 30. Select, Clear, Invert Attributes

All Attributes Pop-up Option

The **All Attributes** pop-up option is used to select, clear or invert all attributes listed on both the Device and Channel Configuration pages.

The available selections are

Select– selects and places a check mark in every check box on all channels.

Clear– clears all check marks from every check box.

Invert– reverses the all selections in the current Device and Channel views. For example, selected check boxes are cleared, while deselected check boxes become selected.

Device Attributes Pop-up Option

The **Device Attributes** pop-up option is used to select, clear or invert attributes listed on Device Attributes page.

The available selections are

Select– selects and places a check mark in every check box on the page.

Clear– clears all check marks from every check box on the page.

Invert– reverses the all selections on the current Device page. For example, selected check boxes are cleared, while deselected check boxes become selected.

Channel Attributes Pop-up Option

The **Channel Attributes** pop-up option is used to select, clear or invert attributes listed on Channel Attributes page.

The available selections are

Select– selects and places a check mark in every check box on the page.

Clear– clears all check marks from every check box on the page.

Invert– reverses the all selections on the current Channel page. For example, selected check boxes are cleared, while deselected check boxes become selected.

Download Firmware Window

The **Download Firmware** window, shown in Figure 31, is used to easily upgrade the firmware for any of the RVON devices. Remember, you must have Download privileges before you can download firmware to RVON devices.

For detailed information, see “How to Download Firmware Upgrades in RVONedit” on page 56.

RVONedit can download firmware to any RVON device with the following firmware versions:

FIRMWARE	VERSION
RVON-8	V 1.2.0 or higher
RVON-Keypanel	V 1.1.0 or higher
RVON-I/O	V 1.0 or higher
RVON-C	V 1.0 or higher
RVON-16	V 2.0.0 or higher

NOTE: You can only download firmware for one type of RVON device at a time. You can download to multiple RVON devices that are the same.

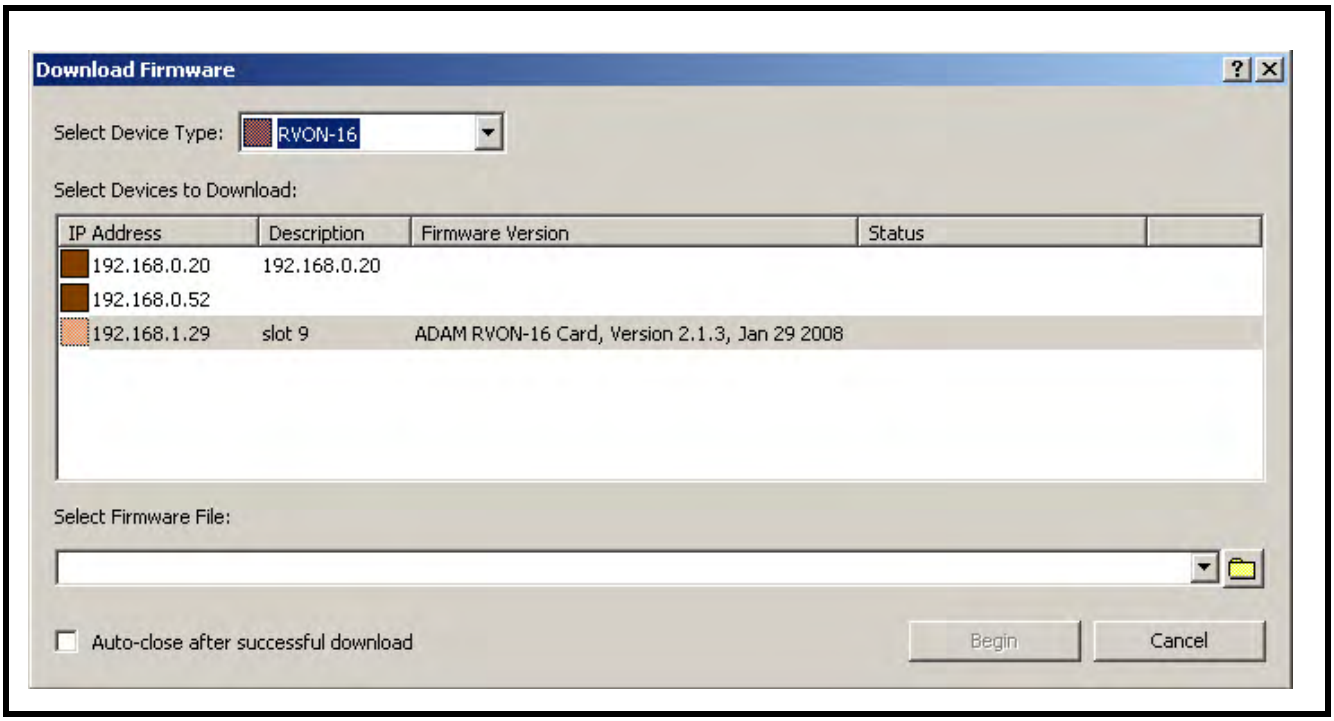


FIGURE 31. Download Firmware Window

Select Device Type Drop Down Menu

The **Select Device Type** drop down menu is used to select the type of RVON device for firmware upgrade.

Options available are: *RVON-8, RVON-Keypanel, RVON-I/O, RVON-C, and RVON-16.*

Select Devices To Download Field

The **Select Devices To Download** field displays the following information:

IP Address- Displays the IP Address of the RVON device (for example, 192.168.1.29).

Description- Displays the textual description of the RVON device (for example, slot 9).

Firmware Version- Displays the version of firmware that currently resides on the RVON device.

Status- Displays the status of the download of the firmware to the RVON device. A blue status bar with each of the following:

- Sending
- Finishing
- Complete

If you click Stop before the download is complete or something did not allow the download to finish, you will see a failed message in this column

Select Firmware Drop Down Menu

The **Select Firmware File** drop down menu displays the firmware for download. If you have downloaded different version of the firmware and downloaded them to other RVON devices, and then you are able to use the drop down list to see the different versions that have been downloaded to other devices.

Auto-Close After Successful Download Check Box

The **Auto-Close After Successful Download** check box is used to indicate the Download Firmware window automatically closes when the firmware download is complete.

Begin Button

The **Begin** button is used to start the firmware download.

For more information, see “How to Download Firmware Upgrades in RVONedit” on page 56.

CHAPTER 3

Application Tasks

In this chapter you will find many setup and maintenance tasks that you may only perform once or perform on a daily basis:

How to Open Multiple Windows in RVONedit

RVONedit version 2.0.0 and higher now allows you to open multiple RVONedit windows and make changes to multiple devices simultaneously. Also, you are able to send changes made to multiple devices at the same time. Before version 2.0.0, you were able to send changes for one device at a time.

There are three (3) ways to open new windows in RVONedit:

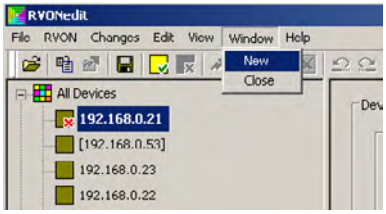
Window|New

Shift + Click in the device catalog

Right-click menu

To **open a new window using the menu bar**, do the following:

> From the Window menu, select **New**.
A new RVONedit window appears.

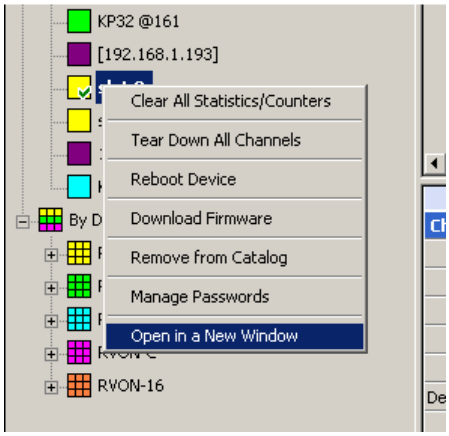


To **open a new window using Shift+click in the device catalog**, do the following:

1. On the keyboard, press and hold down the **Shift** key.
2. Using the mouse, click anywhere in the **device catalog area** of the application window.
A new RVONedit window appears.

To **open a new window using a right-click**, do the following:

1. In the Device Catalog area, right-click on either an **RVON device**, **All Devices**, or **By Device Type** icon.
   A popup menu appears.



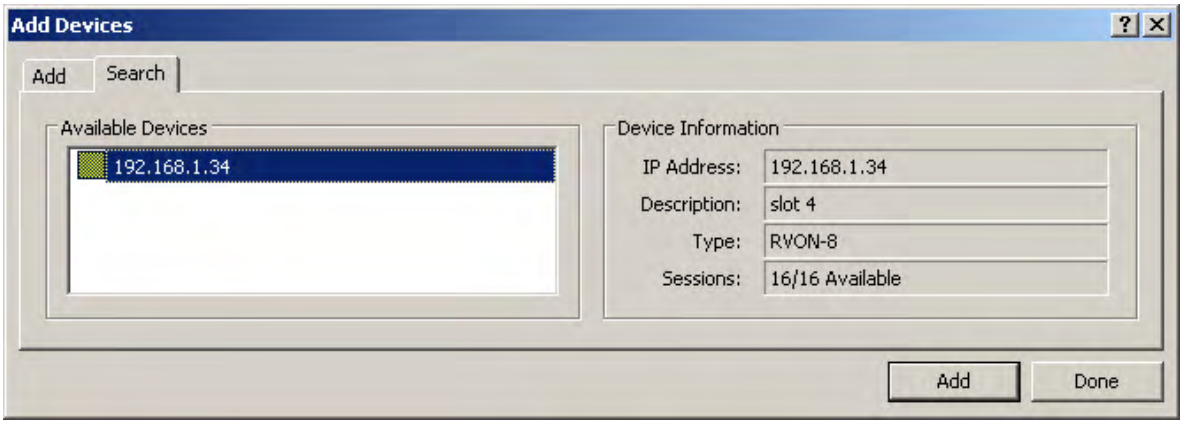
2. From the popup menu, select **Open in a new window**.
   A new RVONedit window appears.

How to Add Devices to RVONedit

Once you have installed the RVONedit application, you must then add the device to be monitored or displayed. This may be done automatically or manually by entering the IP (Internet Protocol) Address.

To **search for RVON devices**, do the following:

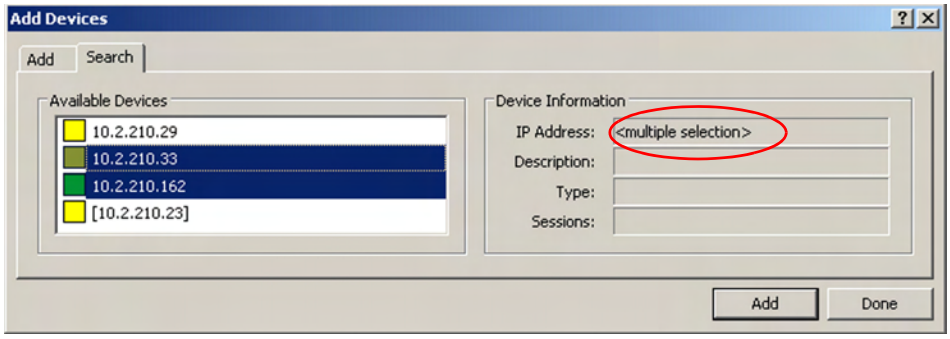
1. From the RVON menu, select **Add**.
   The Add Devices Window appears



2. Verify you are on the **Search** page of the Add Devices window.
3. From the Available Devices list, select the **IP Address** of the device you want to add to RVONedit.

   NOTE: You can add more than one device at a time by doing the following:

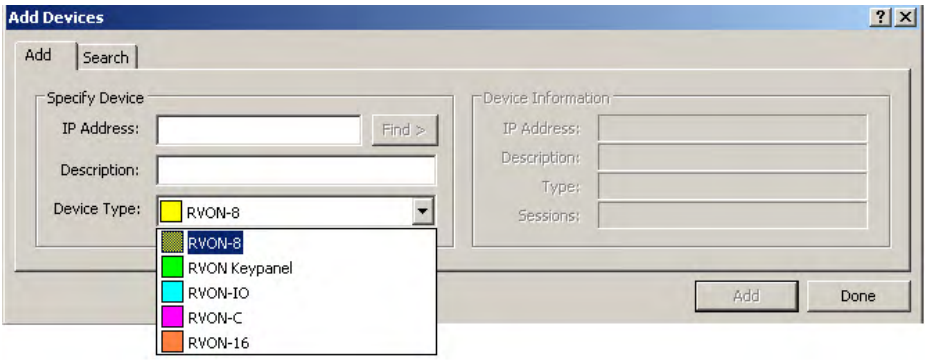
- To select a block of IP Addresses, highlight the **first IP Address**, press and hold **Ctrl+Shift,** and then scroll and select the last **IP Address** in the block you want.
  All of the IP Addresses are selected.
- To select multiple IP Addresses that are not in a block, press and hold the **Ctrl** key, then select the **IP Addresses** you want to add to RVONedit.
- Notice in the IP Address field under Device Information on the right-hand side of the application pane, you can see *<multiple selections>*.



4. Click **Add**.
   The devices are added to the RVONedit Catalog view.
5. Click **Done**.
   The Add Devices Window closes.

To **add a Device manually to RVONedit**, do the following:

1. From the RVON menu, select **Add**.
   The Add Devices Window appears
2. Click the **Add** page.
   The Add Dialog appears.



3. Under Specify Device, add the **IP Address** of the device to which you want to connect.
   Once you have entered the IP Address, the Find button becomes active.

   NOTE: You can only add one device at a time when entering the IP Address manually.

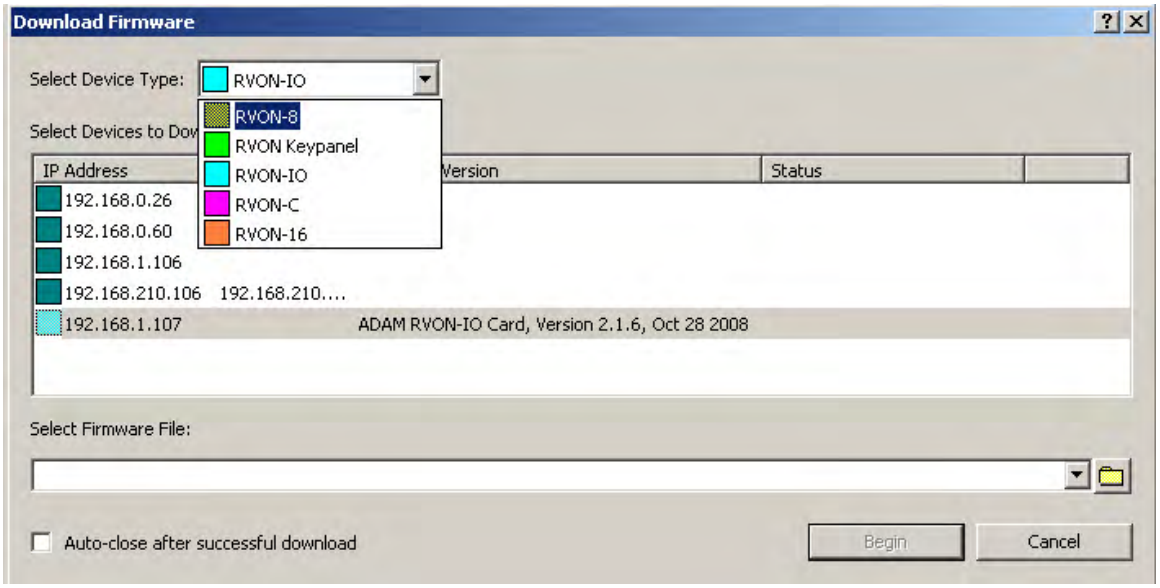
4. Click **Add**.
   The Add Device Window remains open and the RVON device is added to the Catalog view on the main Window.
5. Repeat **steps 1-3** to add more devices manually.
6. Once finished, click **Done**.
   The Add Devices window closes.

How to Download Firmware Upgrades in RVONedit

Occasionally, RVON products have firmware upgrades. Once you have upgraded the RVON products to the required versions (see page 3) through AZedit, Telnet, or serially, you can download firmware from RVONedit directly to the device.

To **download firmware to the RVON cards**, do the following:

1. From the RVON menu, select **Download Firmware**.
   The Download Firmware window appears.
2. From the Device Type drop down menu, select the **type of device** to be upgraded with firmware (for example, RVON-8, RVON-Keypanel, RVON-I/O, RVON-C, or RVON-16).



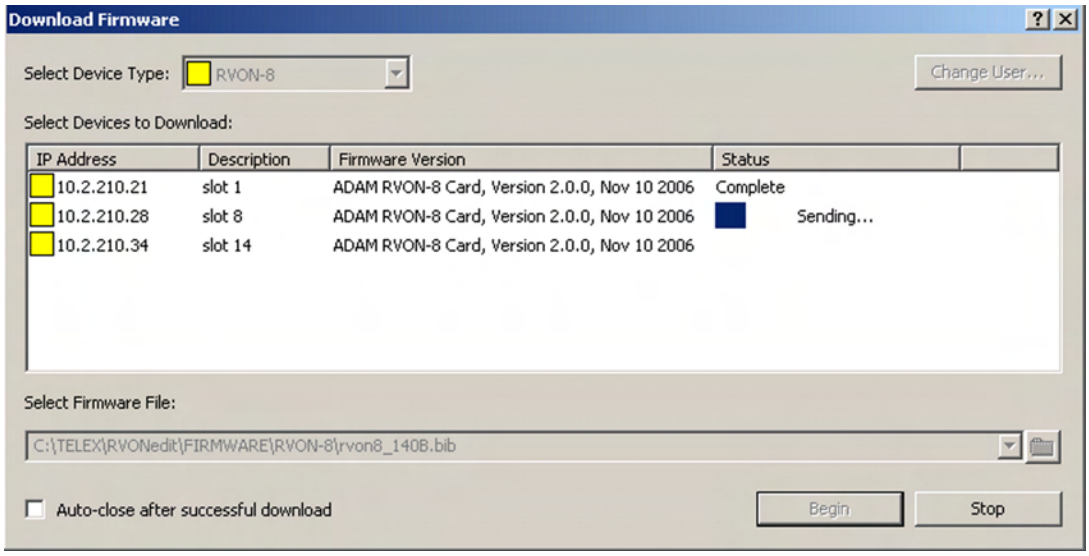
3. From the Select Devices to Download: list, select the **devices** to which you want to apply the firmware.

   NOTE: You can add more than one device at a time by doing the following:

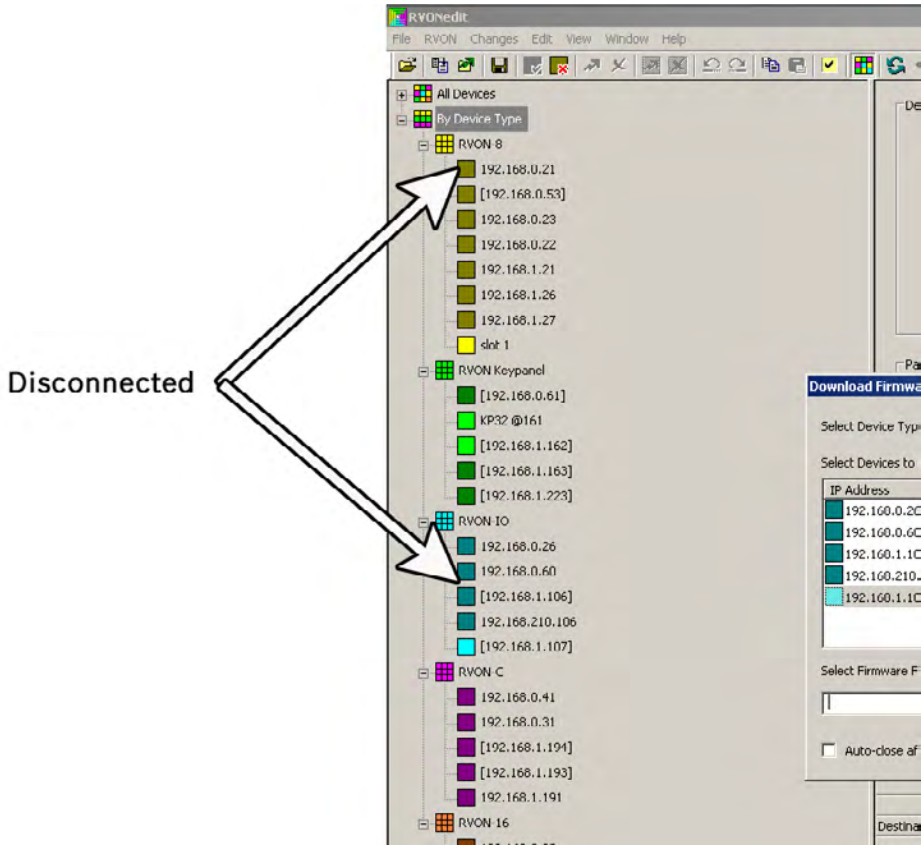
   - To select a block of devices, select (highlight) the first device, press and hold **Ctrl+Shift**, and then scroll and select the **last device** in the list.
     All of the devices are selected.
   - To select multiple devices that are not in a block, press and hold the **Ctrl** key, then select the devices one-by-one to add to RVONedit.

4. In the Select Firmware File field, enter the **path to the firmware update**, or use the browse button ... to navigate to the file.
5. Select the **Auto-close after successful download** check box, if you want to close the Download Firmware Window immediately after a successful download.
6. Click **Begin**.
   The Download begins.

   NOTE: This may take a few minutes. You can watch the download using the RVON device download status bar.



Once the download is complete, it may take a few minutes for the RVON devices to reboot themselves. You can also watch as the device blocks dim, and then re-light with the reboot.

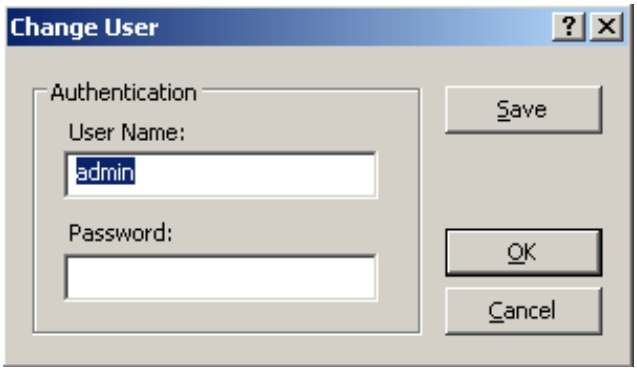


7. Repeat steps **1 through 6** to download firmware to other RVON devices, otherwise click **Done**.

How to Change a User

To **change a user in RVONedit**, do the following:

1. From the RVON menu, select **Change User**.
   The Change User Window appears.



2. In the User Name field, enter the **User Name** (up to 40 characters) of the profile you want to log on to RVONedit.
3. In the Password field, enter the **password** (up to 40 characters) for the profile you are logging onto RVONedit.
4. Click **Save**, if you want the user name and password retained for future logins to this machine.
5. Click **OK** to confirm the user name and password. Otherwise, click **Cancel**.

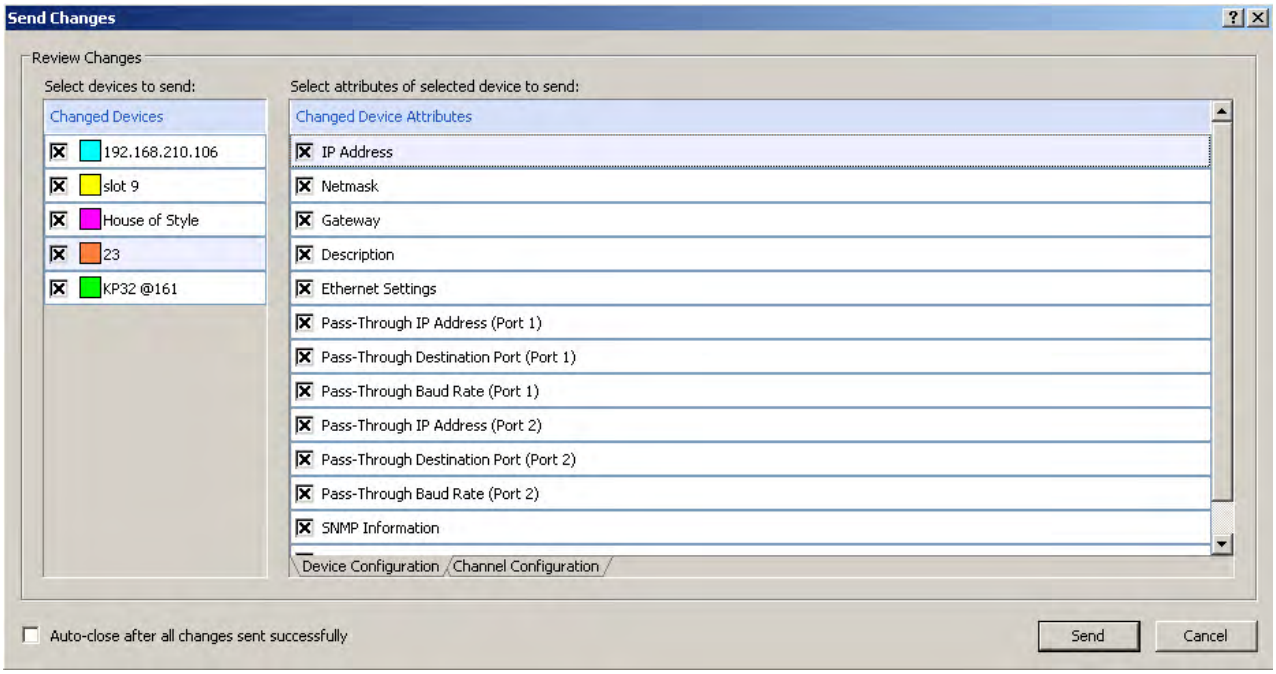
How to Send Changes

When changes or modifications are made to most configuration options in RVONedit, they are not applied to the device until the changes are sent to the device.

NOTE: RVONedit version 2.0.0 and higher, supports making and sending changes for multiple devices.

To **send changes to the device**, do the following:

1. From the Changes menu, select **Send** or click the **Send Changes** icon. 
   The Send Changes window appears.



2. On the Send Changes Window, **review** the changes you are about to send to the device.
3. Make any **modifications** necessary.
4. Click **Send** when you are finished, otherwise click **Cancel**.

How to Copy and Paste Channel Settings

RVONedit supports copying and pasting individual channel configuration setting, making it easy to setup configuration files for different channels on the same device or for channels on different devices.

To **copy and paste channel settings**, do the following:

1. From the Device Catalog, select the **device** you want to copy the channel configuration settings.
2. In the Channel Configurations section, select the **channel column header** of the channel you want to copy.
3. From the Edit menu, select **Copy** or click the copy icon. 
   The channel settings are copied.

   NOTE: You can also copy the settings by pressing **Ctrl+C** on the keyboard.
4. In the same Channel Configuration Grid, select a **different channel column header** on the same device
   OR
   select a **different device's channel column**.
5. From the Edit menu, select **Paste** or click the **paste** icon. 
   The copied information appears in yellow highlight.

   NOTE: You can also paste the settings by pressing **Ctrl+V** on the keyboard.
6. **Send** or **Save** your changes.

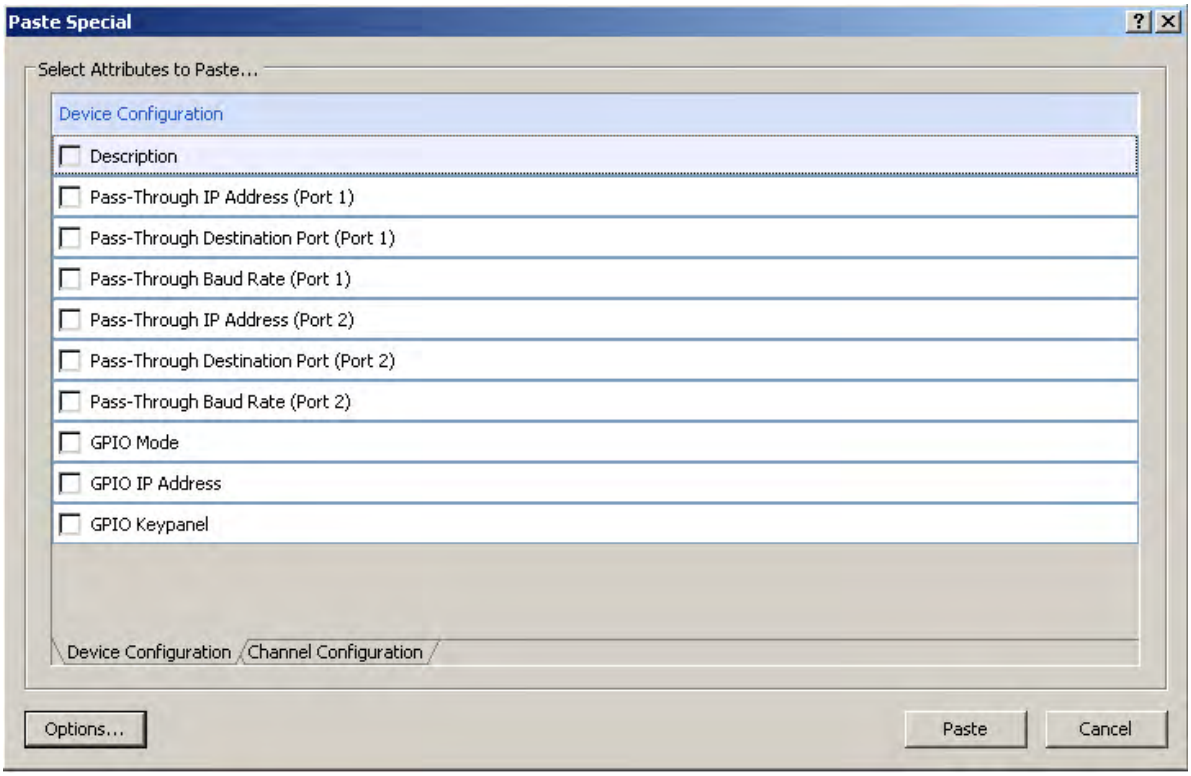
Use Paste Special to Paste Device Settings.

Paste Special allows you to copy entire device configuration settings of a device and then select specific configuration settings to paste to a new device.

To **paste device settings using paste special**, do the following:

1. From the Device Catalog, select the **device** to which you want to copy the device settings.
2. From the Edit menu, select **Copy** or click the **copy icon**. 
   The Device Settings are copied.

   NOTE: You can also copy the settings by pressing **Ctrl+C** on the keyboard.
3. From the Device Catalog, select the **device** to which you want to copy the device settings.
4. From the Edit menu, select **Paste Special**.
   The Paste Special window appears.



5. Select the **check boxes** of the device configurations you do NOT want to paste to the new device.
6. Once you are finished, click **Paste**.
   The settings are pasted to the current device.
7. **Send** or **Save** the changes.

Use Paste Special to Paste Channel Settings

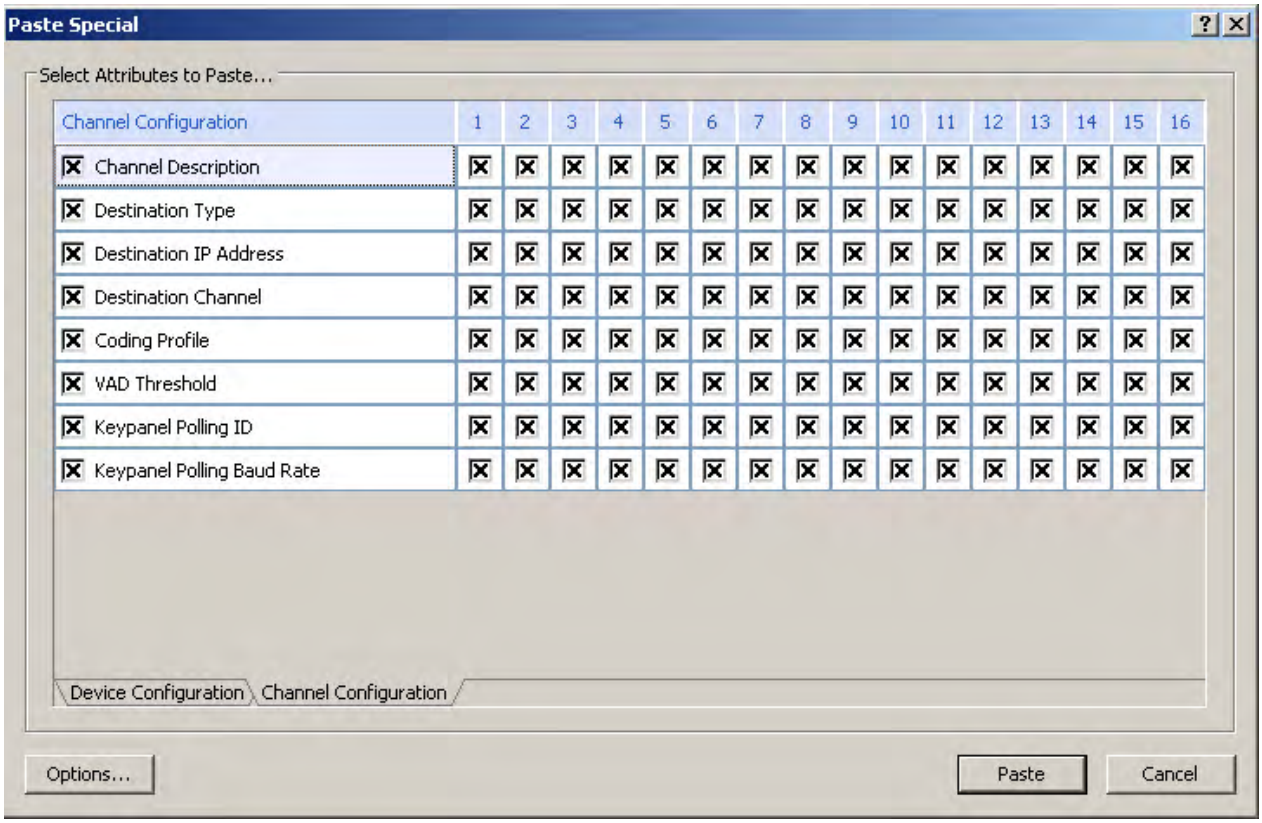
Paste Special allows you to copy channel configuration settings of a device and then select specific channel settings to paste to a new device.

To **paste channel settings using paste special**, do the following:

1. From the Device Catalog, select the **device** to which you want to copy channel settings.
2. From the Edit menu, select **Copy** or click the **copy icon**. 
   The channel settings are copied.

NOTE: You can also copy the settings by pressing **Ctrl+C** on the keyboard.

3. From the Device Catalog, select the **device** to which you want to copy channel settings.
4. From the edit menu, select **Paste Special**.
   The Paste Special window opens.



5. Clear the **check boxes** of the channel settings and the **channels** you do NOT want to paste.
6. Once you are finished, click **Paste**.
   The current settings are pasted to the current device.

How to Open Preferences

You can configure the RVONedit application by setting some of the application configurations to fit your individual business needs.

To **open the Preferences window**, do the following:

1. From the Edit menu, select **Preferences** or click the preferences icon. 

There are four pages in the Preference Dialog notebook. These pages contain the following:

Device Catalog Configurations - You can set how you see the devices in the catalog (By Type or All Devices). You can also enable using the Device Description instead of the IP Address in the Device Catalog.

Row and column adjustments

Show/Hide Informational Areas - You can show or hide SNMP and/or the Authentication area of the Device Configuration section of the application.

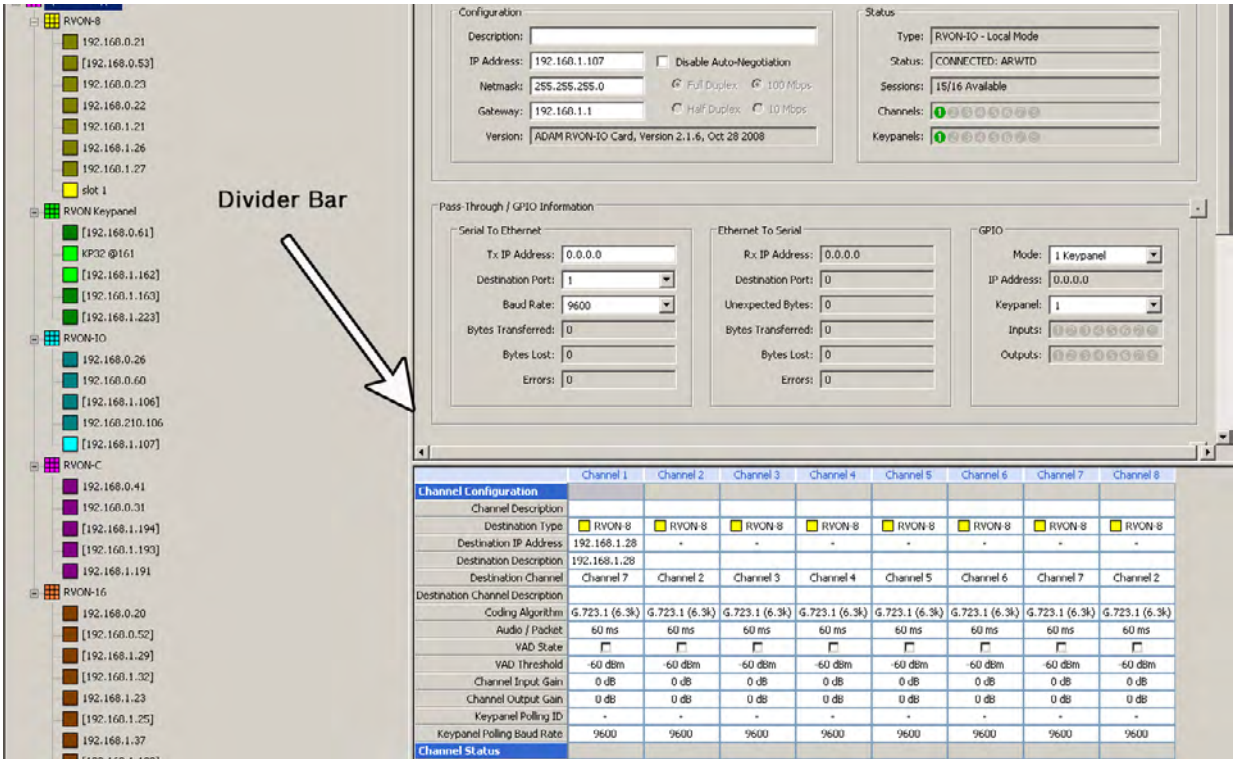
Default Information Folders - You can set the default folders to where RVONedit will save information for Device Catalogs, Setup Files, and Firmware Files.

How to Show/Hide the Device Catalog

Once you have added devices to the device catalog, you are ready to configure them. If you do not have a need to refer to a device in the device catalog, you can hide the whole section, creating more room in the application window.

There are several ways to Hide/Show the Device Catalog, described below:

> Double-click the **divider bar**.



> From the View menu, select **Device Catalog**.
When a check mark is beside Device Catalog, the catalog is showing. If there is no check mark present, the catalog is hidden.

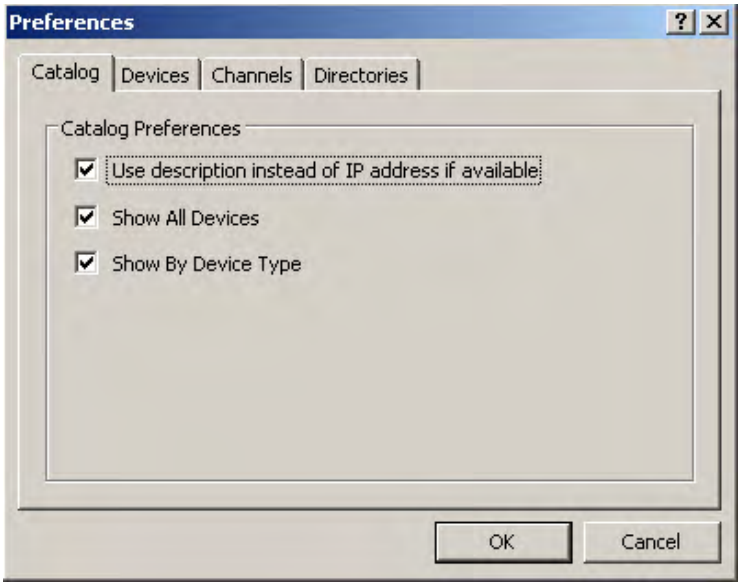
> Press **Ctrl+T** on the keyboard. to hide the Device Catalog.
Press Ctrl+T on the keyboard again to open the Device Catalog.

Use Device Descriptions in the Device Catalog

Sometimes it is easier to recognize a unique name for a device, rather than its IP Address. You can configure RVONedit to show device descriptions (where available) in the device catalog.

To **enable device descriptions in the device catalog**, do the following:

1. From the Edit menu, select **Preferences**. or click the **preferences** icon. 
   The Preferences window appears.
2. Click the **Catalogs** page.
   The Catalog page appears.



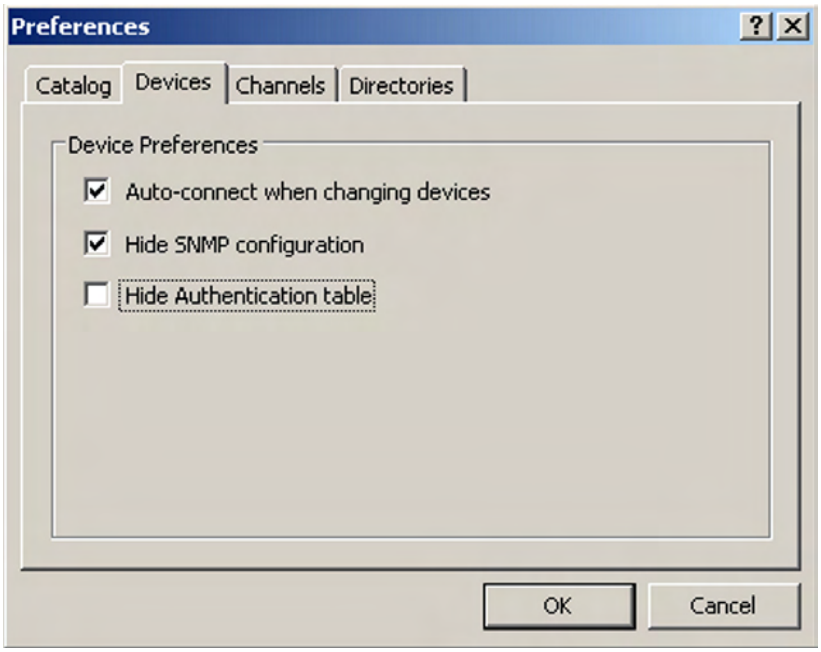
3. Select the **Use description instead of IP address if available** check box.
4. Click **OK**.

How to Show/Hide the SNMP Configuration Information

If you are currently not using SNMP in your Intercom System, you may choose to hide the SNMP configuration area in the Device Configuration and Status section of the application.

To **hide SNMP configuration information**, do the following:

1. From the Edit menu, select **Preferences** or click the **preferences** icon. 
   The Preferences window appears.
2. Click the **Devices** page.
   The Devices page appears.



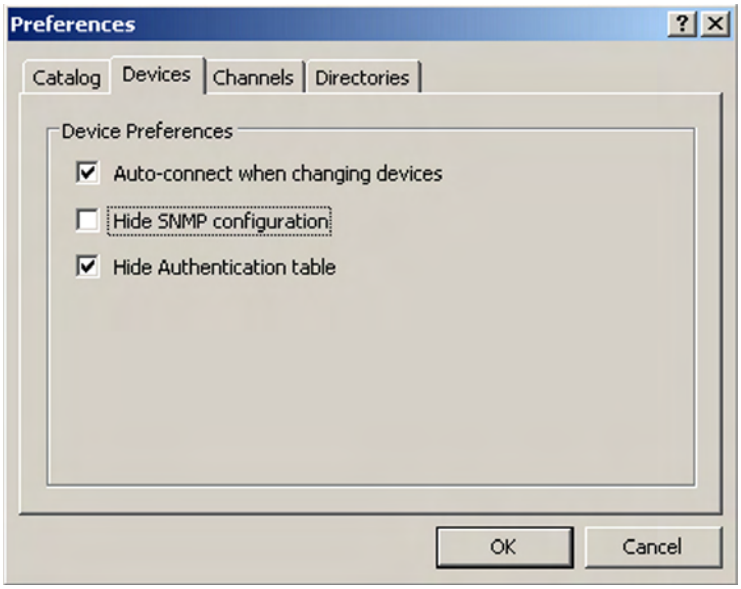
3. Select the **Hide SNMP Configuration** check box.
4. Click **OK**.

How to Show/Hide the Authentication Table

If you are currently not using Authentication in your Intercom Systems, you may choose to hide the Authentication table in the Device Configuration and Status section of the application.

To **hide the authentication table**, do the following:

1. From the Edit menu, select **Preferences** or click the **preferences** icon. 
   The Preferences window appears.
2. Click the **Devices** page.
   The Devices page appears.



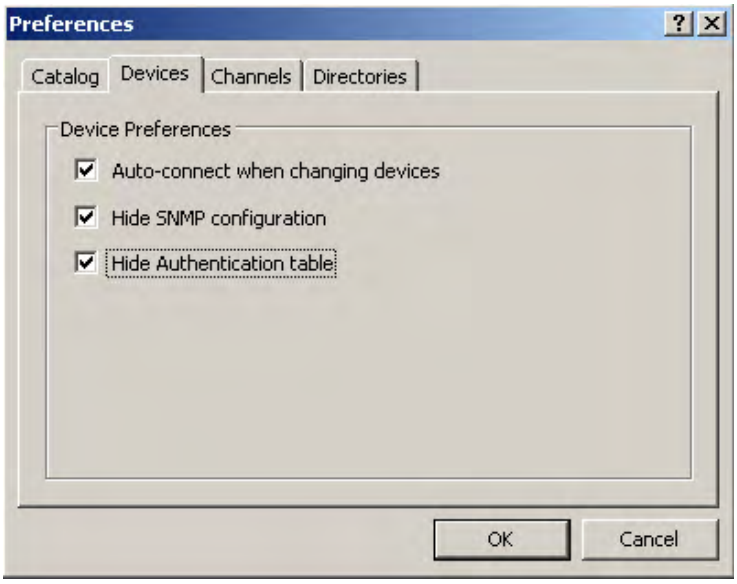
3. Select the **Hide Authentication table** check box.
4. Click **OK**.

How to Enable/Disable "Auto-connect the application when changing devices"

The **Auto-connect the application when changing devices** is a useful setting when you are viewing multiple devices in a session. When enabled, devices automatically connect to RVONedit when selected. This way, you do not have to manually connect the device.

To **enable/disable auto-connect the application when changing devices option**, do the following:

1. From the Edit menu, select **Preferences** or click the **preferences** icon. 
   The Preferences window appears.
2. Click the **Devices** page.
   The Devices page appears.



3. Select the **Auto-connect the application when changing devices** check box to enable. Or, clear the check box to disable the option.
4. When finished, click **OK**. Otherwise, click **Cancel**.

How to Save a Configuration File

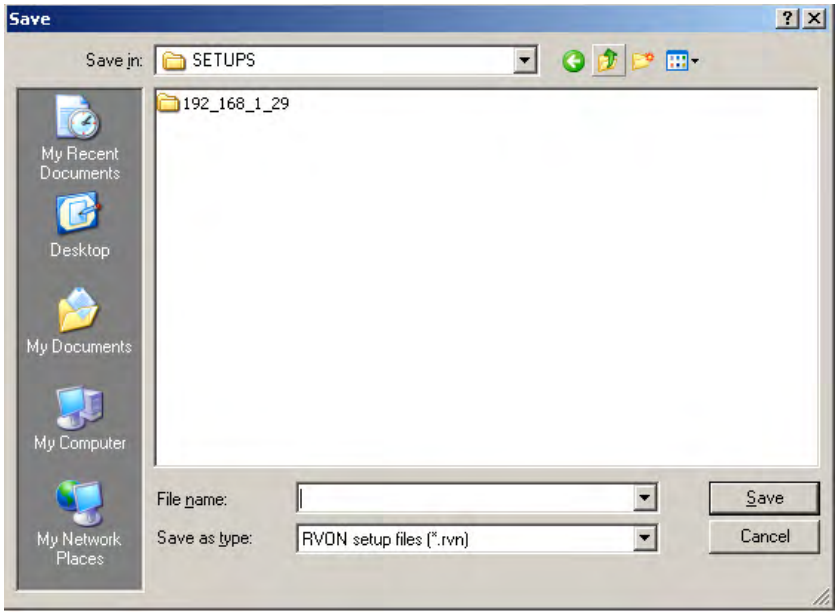
Once you have made changes to a device's configuration (both device and channel), save the configuration file for later use or to compare with later configuration files.

NOTE: Setup files are stored in XML (extensible markup language) format, which makes them viewable and modifiable in a standard text editor (Notepad, MS® Word, etc.) and are viewable in a web browser. The Authentication Table, if saved, is stored in an encrypted format, so a text editor cannot edit it.

To **save configuration files**, do the following:

1. From the File menu, select **Save** or click the **save** icon. 
   By default RVONedit stores all files in the Setups folder under the RVONedit directory. You may change this location by setting the default location. For more information, see "How to Set a Default Folder in RVONedit" on page 81.
2. Click **Save**.

NOTE: Regardless of where the setup files are stored, RVONedit always stores setup files for each device in a separate sub-directory named using the device's IP Address. This keeps the setup files for each device separate from other devices.



NOTE: When saving a setup file, RVONedit does not include the configuration items the device is not capable of supporting (for example, SNMP, Pass-Through, or GPIO information). Also, it will not save the SNMP or Authentication Table unless the current user has admin rights and the preferences to hide these areas is not enabled.

How to Load a File

Load File can be used to preview (and modify) items in a file. Loading a setup file is similar to opening a setup file. For the differences between File|Open and File|Load, see page 83.

To **load a setup file**, do the following:

1. From the File menu, select **Load...** or click the load icon. 
   The Load window appears.
2. Navigate to the **file** you want to load.
3. Click **Open**.
   The file loads on top of the current configuration.

   NOTE: When a file is loaded, the file overlays current device configurations. You can modify the loaded file to suit your needs. Once done making changes (if applicable) to the loaded file, you need to send changes to the device.

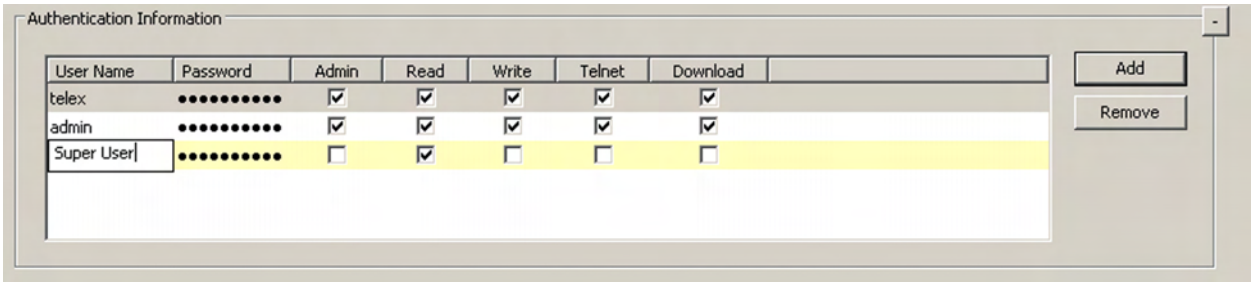
4. From the Changes menu, select **Send** (F10) or click the **send changes** icon. 
   OR
   Save the configuration file.

How to Add/Remove a User Profile To/From the Authentication Table

NOTE: To setup user profiles, you must have 'Admin' rights. For more information, see "Authentication Information Section" on page 15. Also, you cannot have Hide Authentication Table enabled.

To **add user profile to the authentication table**, do the following:

1. In the Device Configuration section, scroll to the **Authentication Information** area.
2. Click **Add**.
   The User Name field becomes active and the table line is highlighted in yellow.
3. In the User Name field, enter a **user name** for the new profile (up to 40 characters long).



4. Double-click the **Password** field to make it active.
5. Enter a **password** (up to 40 characters).
6. Select the **Access Rights** check boxes you want for this profile.
7. **Send** or **Save** your changes.

To **remove a user profile from the authentication table**, do the following:

1. Click the **user profile** you want to remove from the authentication table.
   The profile is highlighted blue.
2. Click the **Remove** button.
   The user profile is removed from the authentication table.
3. **Send** or **Save** your changes.

How to Expand/Collapse the Device Configuration Information Areas

Similar to the Channel Grid, you can hide the four (4) areas (individually) of the Device Configuration section of the application.

To **collapse a section that has been expanded**, do the following:

> In the Device Configuration section, click the **collapse** icon  in the upper right corner of the section you want to close.
> *The section closes*.

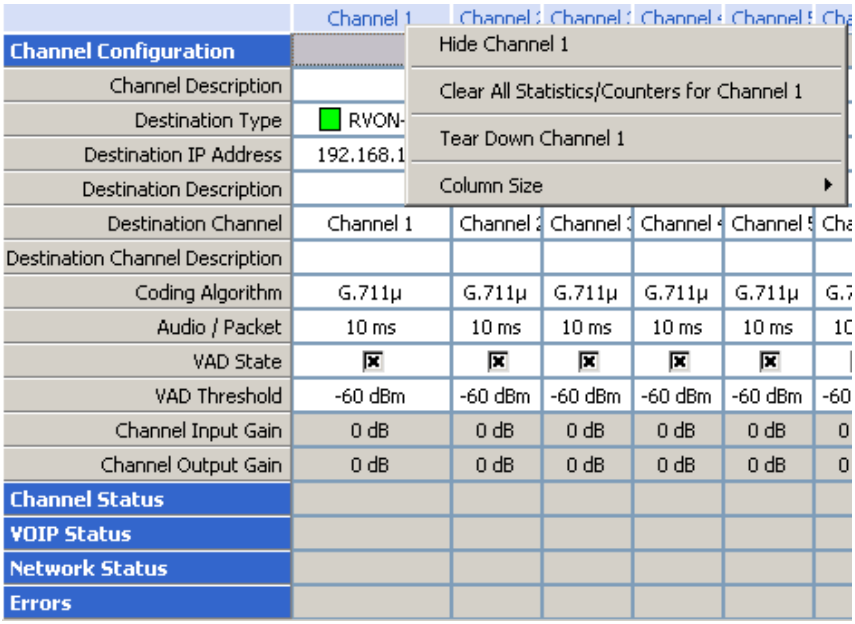
To Expand a section that has been collapsed, do the following:

> In the Device Configuration section, click the **expand** icon  in the upper right corner of the section you want to open.
> *The section opens*.

How to Show/Hide Channel Columns

To **show/hide channel grid columns**, do the following:

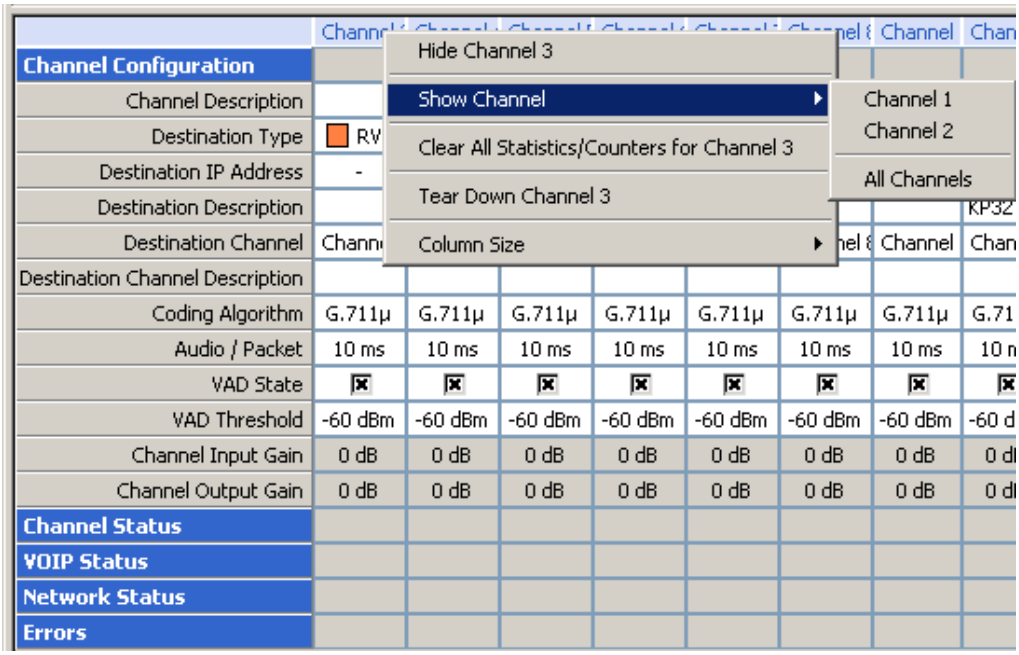
1. Right-click the **channel column header**.
   A context menu appears.



2. Select **Hide Channel X** (*X being the channel column you want to hide*).
3. Repeat **steps 1 and 2** until you are finished hiding columns.

To **show hidden columns**, do the following:

1. Right-click the **channel column header** to open.
   A context menu appears.



2. Select **Show Channel**.
   A context menu appears.
3. Select the **specific channel** you want to open or select **All Channels** to open all hidden channels.

UNDO

Use **Undo** to cancel one or more previous changes. There are no limits on the amount of times you can undo changes.

NOTE: Every time an abort changes, send changes, or File|Open/Load/Send is performed the undo history is cleared to 0 previous actions.

To **undo changes**, do the following:

1. From the Change menu, select **Undo** (Ctrl+Z). Or click the **Undo** icon. 
   The current action performed in RVONedit is undone.

REDO

Use **Redo** to revert one or more previous undo actions that you have done. There are no limits on the amount of times you can redo changes.

NOTE: Every time an abort changes, send changes, or File|Open/Load/Send is performed, the redo history is cleared to 0 previous actions.

To **redo actions**, do the following:

1. From the Change menu, select **Redo** (Ctrl+Shift+Z). Or, click the **Redo** icon. 

ABORT

To **abort the changes**, do the following:

1. From the Change menu, select **Abort** or click the abort icon. 
   A message asking “Are you sure you want to abort all pending changes?” appears.
2. Click **Yes** to accept. Otherwise, click **No** to do nothing.
   By clicking Yes, the changes are deleted and the warning message closes. By selecting No, the changes are untouched (and still active to be sent to the device) and the warning message closes.

How to change the IP Address, Netmask, and Gateway

To **change the IP Address, Netmask, and/or Gateway Address for a device**, do the following:

1. In the Device Configuration and Status section, modify the **IP Address**, **Netmask**, and/or the **Gateway** fields.
2. Once finished, **Send** or **Save** the changes to the device.

How to Setup the Pass-Through Port

NOTE: To make changes to the Pass-Through port you must have Write access to make changes to this area.

To **setup the pass-through device**, do the following:

1. In the Device Catalog, select a **device**.
   The Device Configuration displays the current configurations for the device.
2. In the Tx IP Address field, enter the **IP Address** to which the device will transmit audio.
3. From the Baud Rate drop down list, select the **baud rate** at which audio will be transmitted.
4. Once finished, **Send** or **Save** the channels to the device.

How to Setup the GPIO for an RVON-I/O

NOTE: The GPIO section will only display if the device has Pass-Through or GPIO capabilities. To make changes to the GPIO you must have Write access to make changes to this area.

To **setup the GPIO for an RVON-I/O**, do the following:

1. In the Device Catalog, select an **RVON-I/O**.
   The Device Configuration displays the current configurations for the RVON-I/O device.
2. From the Mode drop down list, select the **GPIO mode** the device will run.
3. In the IP Address field, enter the **GPIO IP Address** (if applicable).
4. From the Keypanel drop down list, select the **keypanel or port** in which all GPIOs are associated.
5. Once finished, **Send** or **Save** the changes to the channels.

How to Manually Disconnect from RVONedit

To **manually disconnect from RVONedit**, do the following:

1. From the RVON menu, select **Disconnect**.
   The RVON device is disconnected. The green check mark turns to a red X.

   OR

   From the toolbar, select the **disconnect** icon. 

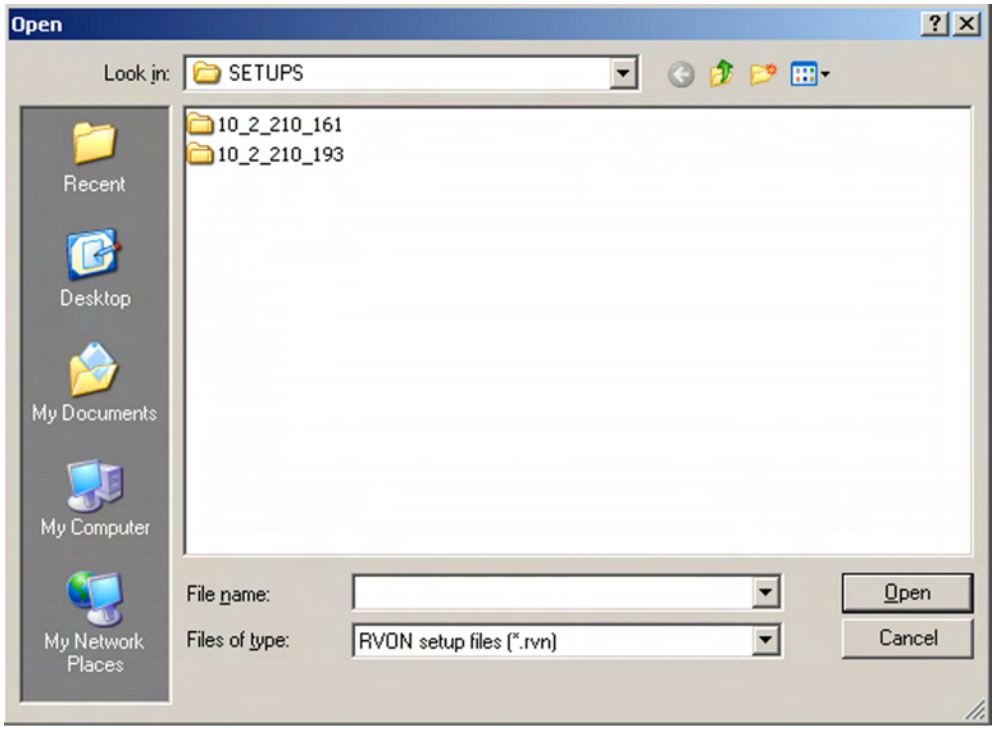
How to Open a File

When a file is opened in RVONedit, the application will disconnect from the current device (if connected) and read the setup file. If the file being opened is for a device other than the current device, RVONedit will create the device in the catalog and switch to it.

To **open a file**, do the following:

1. From the File menu, select **Open** or click the **open** icon. 
   The Setup file window appears.

   NOTE: If a catalog device is currently selected, RVONedit will default to showing you the files in the sub-directory named for the current devices's IP Address. You can also use the File Open window to navigate to a different location to select a different directory to open.



2. Select the **file** you want to open in RVONedit and then click **Open**.
   If the field is for a device other than the current device, RVONedit switches to the new device in the catalog. If the file is for a device that is not in the catalog, RVONedit will create a device in the catalog for the device.
3. Make any **modifications** or **changes**.
4. **Save** the setup file. You can also attempt to connect to the device and Load the file using Send Changes command.

NOTE: RVONedit will not read the SNMP Configuration or Authentication Table from the file unless you have 'Admin' rights, AND the preference to hide these sections is not enabled.

How to Use the Forward and Back button

RVONedit remembers the devices that you view as you use the application (this function can be compared to a web browser's history). Using the **Go Back** button  or the **Go Forward** button  , you can back-track or go forward to devices you have already viewed.

How to Change Devices using the Device Catalog Tree

As with most of the actions in RVONedit, there are many ways to accomplish the same action. Changing devices is no exception. Not only can you use the F3 action, you can simply point and click, as well.

To **use the device catalog tree to change devices**, do the following:

1. In the device catalog, click the **device** you want to configure or view.
   The device configuration and channel configuration for the selected device appear.
2. To move to the device, click the **device** in the catalog.

NOTE: If you do not have the "Auto-connect the application when changing devices" option enabled, you may have to log on to each device when you switch devices. For more information on how to enable this feature, see "How to Enable/Disable "Auto-connect the application when changing devices"" on page 68.

How to Change Devices using F3

RVONedit supports a toggle feature that allows you to toggle between the destination IP Addresses of two connected RVON devices using the F3 function key.

To **toggle between two devices that share a connection**, do the following:

1. While the keyboard focus is on any field containing a destination IP Address, press **F3** on the keyboard.
   The destination IP Address device becomes active allowing you to make configuration changes, if needed.

This action affects the Destination IP Address field in the Channel Configuration Grid and the Tx IP Address field in the Pass-Through and/or GPIO section.

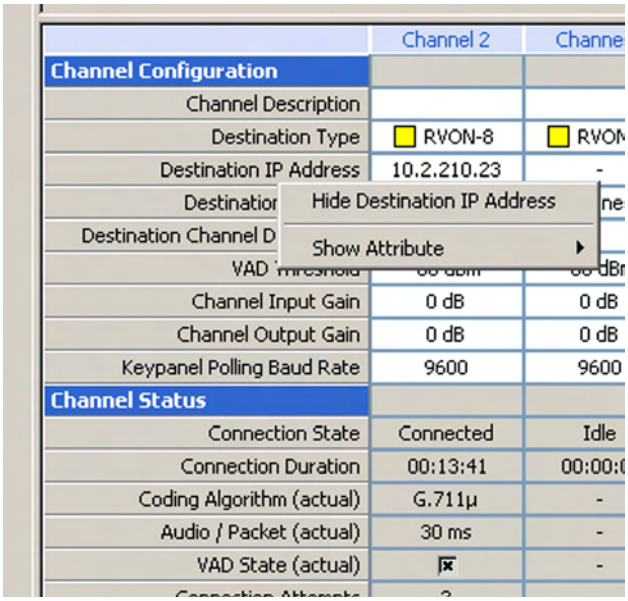
NOTE: The destination device must be configured in RVONedit for this feature to work.

How to Hide Individual Rows in the Channel Configuration Grid

RVONedit supports hiding individual rows within the Channel Configuration Grid. You can easily hide rows of information you do not want to view; leaving only the data you are interested in viewing.

To **hide individual rows in the channel configuration grid**, do the following:

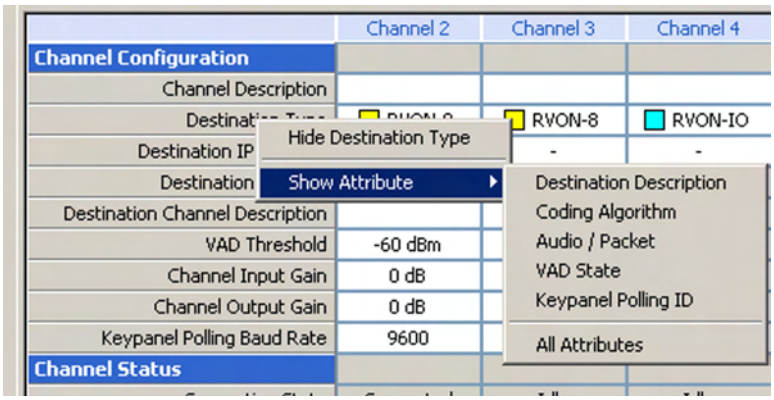
1. Right-click the **row** you want to hide.
   A Hide <specified row> row menu item appears.



2. Select the **Hide <specified row> row** menu item.
   The row is hidden.
3. Repeat steps **1** and **2** until you have hidden all the rows you want.

To **show all the rows you have hidden**, do the following:

1. Right-click the **area where the rows are hidden** and then select **Show Attribute**.
   The hidden rows menu appears.



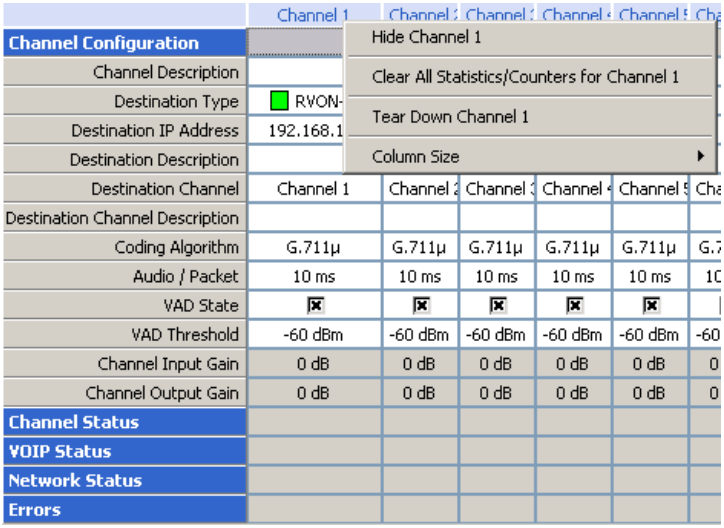
2. You can either select **individual rows** to show or select **All Attributes** to restore all of the rows.

How to Tear Down a Channel

The **Tear Down a Channel** feature is used to reset a channel without rebooting the entire device. When a tear down is performed the device disconnects the audio channel and then reconnects the channel.

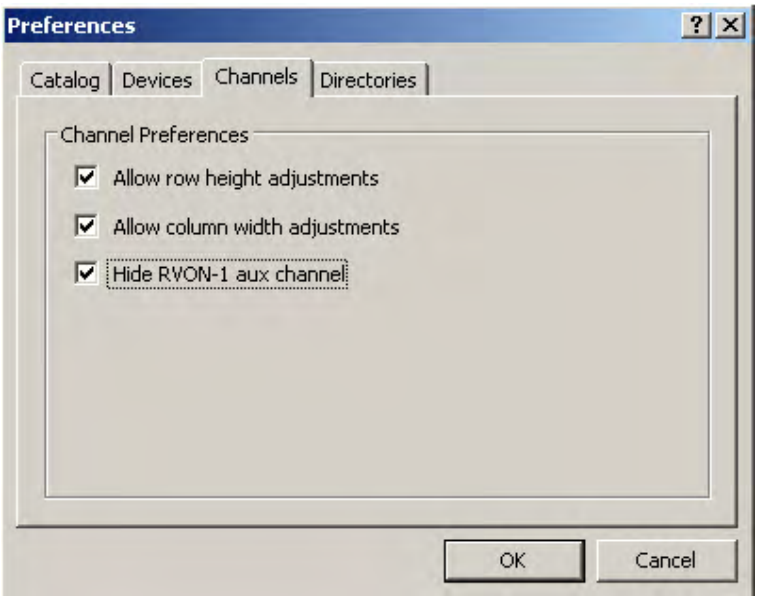
To **tear down a channel**, do the following:

1. In the Channel Configuration Grid, right-click a **channel column header**.
   A context menu appears.
2. From the context menu, select **Tear Down Channel X** (*X being the channel. For example, Channel 1, Channel 2, etc.*).



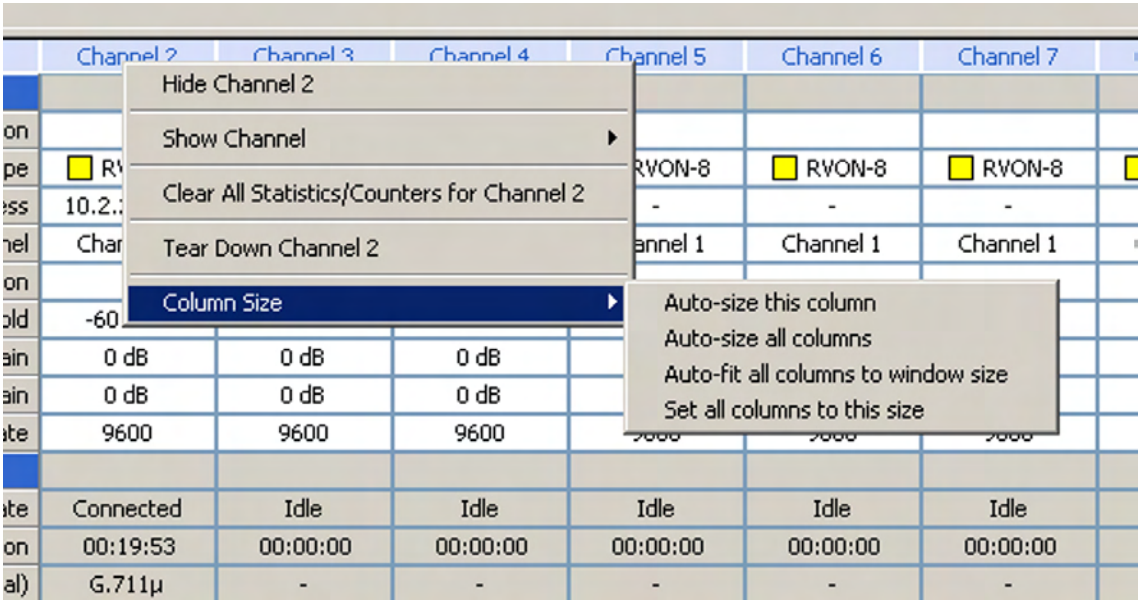
How to Set the Column Size in the Channel Configuration Grid

To set the column size, you must have the *Allow column width adjustments* check box selected. You can find this option on the Channels page of the preferences window (*Edit*|*Preferences*).



To **set the column size**, do the following:

1. Right-click the **column header** where you want to size and then click **Column Size**.
   The column size options menu appears.



2. Choose one of the four column sizing options:

Auto-size this column -	*The column is resized to fit the text in the column.*
Auto-size all columns -	*All columns are resized to fit the text in each column.*
Auto-fit all columns to fit window size -	*The columns are adjusted to fit all columns within the Channel Configuration window.*
Set all columns to this size -	*After manually resizing a column, you can select this option to make all the columns the same size based upon the selected column.*

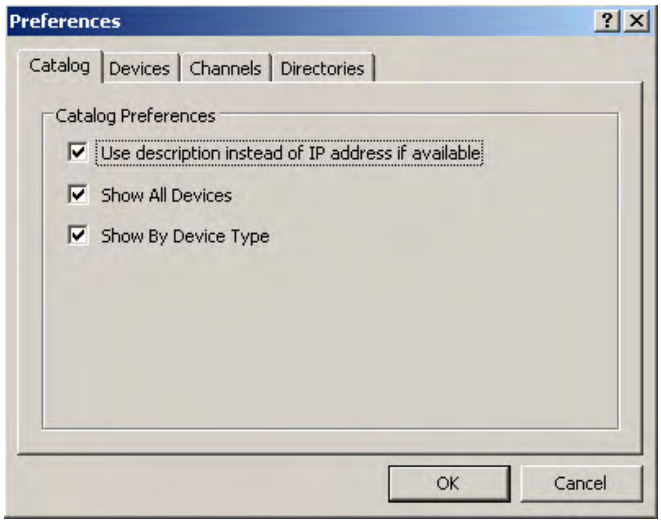
NOTE: As always, you can manually adjust individual columns. Click and drag the outside edge of the column you want to resize.

How to Set a Default Folder in RVONedit

Using the Directories page in the Preferences window (*Edit*|*Preferences*), you can change the folder used to store different RVONedit files, such as Setups, Authentication, and Firmware files.

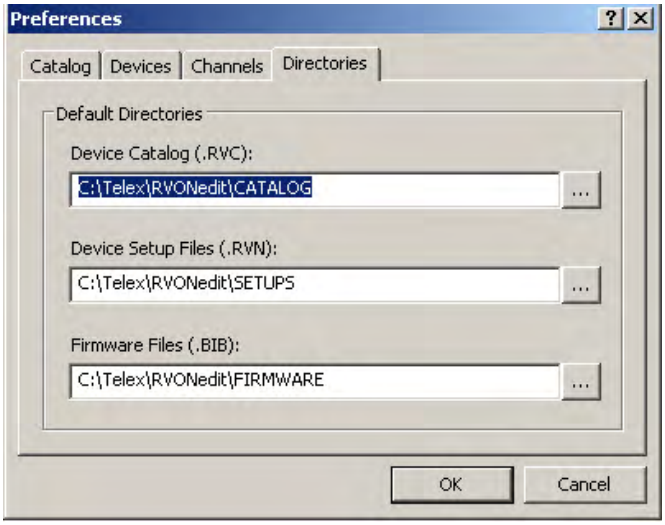
To **change the default folder for RVONedit**, do the following:

1. From the Edit menu, select **Preferences**.
   The Preferences window appears.



NOTE: You can also click the **preferences** icon. 

2. Select **Directories**.



3. In one of the file fields (Device Catalog, Device Setup Files or Firmware Files), enter the **file path** where you want to save each type of file. You can also use the browse button ... to navigate to the folder.
4. Once you are finished, click **OK**.

What is the Difference Between File|Open and File|Load?

While primarily the same, there are distinct differences between File|Open and File|Load.

File|Open

- If the application is connected to a device when File|Open is performed, it automatically disconnects when the file is opened.
- If a catalog device is currently selected when the File|Open is performed, RVONedit will disconnect (if connected) from the current device and read the file.
- If the file that is opened is for a different device, RVONedit will switch to the new device in the catalog. If the new device is not in the catalog, it will create the device with the file parameters.

After a file has been opened, you can view/modify the configuration settings. You can save the changes to the existing file or create a new setup file by performing a File|Save. You can also connect to the device and Send the changes to the device.

File|Load

- The application is not disconnected from the current device (if connected).
- The setup file may contain information for a device other than the device you are currently viewing. RVONedit will not switch to the new device.
- The items in the setup file are overlaid on the current device and marked as changed when they are read.

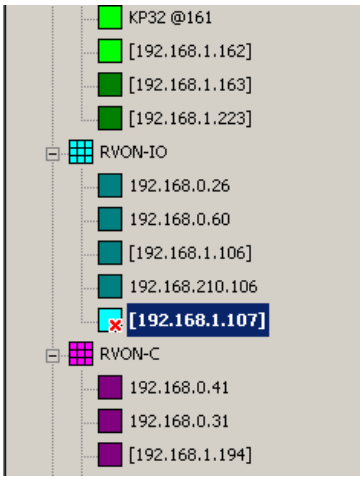
After a file has been loaded, you can modify the file before you sent it to the device using the Send Changes command.

NOTE: Partial loads and partial saves are not supported in RVONedit. This means that all information in a setup file that can be loaded will be loaded.

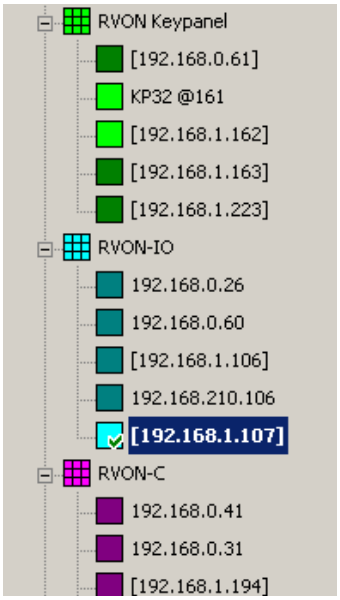
How to Manually Connect an RVONedit device

To **manually connect an RVONedit device**, do the following:

1. Highlight the **RVON device** with which you want to connect.
   Notice the RVON device has a red X signifying that it is not connected.



2. From the RVON menu, select **Connect**.
   *The red **X** changes to a green ✔. If the device does not have any logons associated with it, it will automatically connect. Otherwise, a logon window appears, prompting for you for a user name and password.*



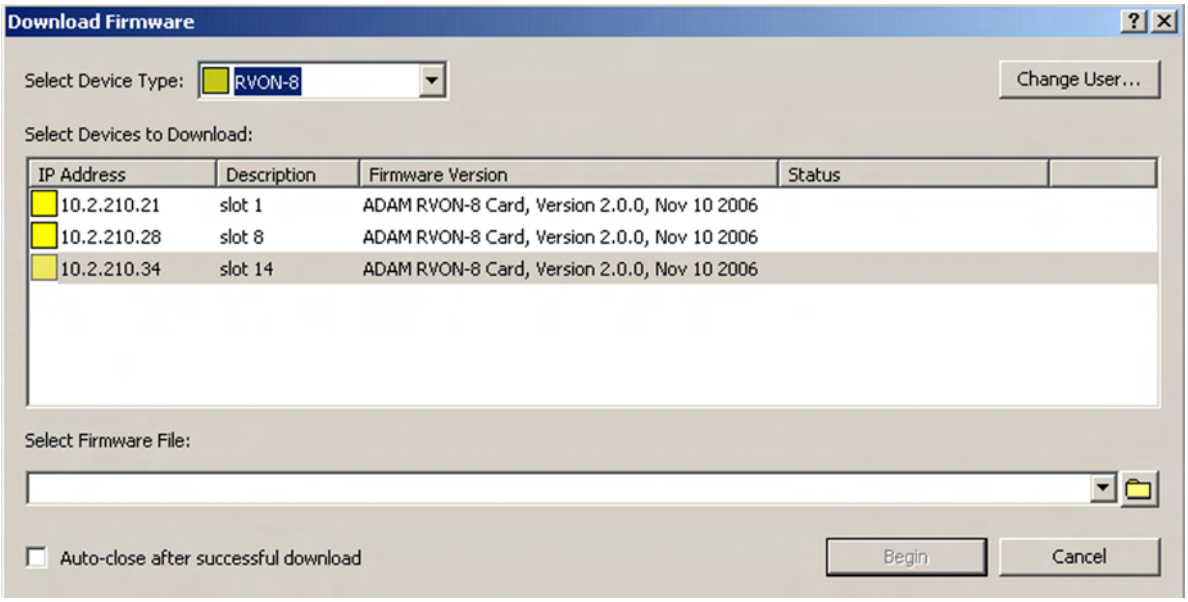
How to Update Older Version RVON Devices Using RVONedit

In RVONedit you can add an RVON device that does not have the required firmware installed, but not be connected to it (the device icon is dimmed). But, if the device is running a lower version firmware (as noted below), you can update to the required firmware version.

To **update older version RVON devices**, do the following:

FIRMWARE	VERSION
RVON-8	V 1.2.0 or higher
RVON-Keypanel	V 1.1.0 or higher
RVON-I/O	V 1.0 or higher
RVON-C	V 1.0 or higher
RVON-16	V 2.0.0 or higher

1. From the RVON menu, select **Add**.
   The Add devices window appears.
2. Click the **Add** page.
3. In the IP Address, enter the **IP Address** of the RVON device without the required firmware.
4. From the Device Type drop down list, select the **type of device** it is (for example, RVON-8).
5. Click **Add**.
   The RVON device is added to the catalog, but the RVON device is dimmed, which means that RVONedit cannot talk with the device.
6. Select/highlight the **RVON device** you just added.
7. From the RVON menu, select **Download Firmware**.
   The Download Firmware window appears.
8. From the Device Type drop down list, select the **type of device** you want to download the firmware (for example, RVON-8).



9. From the Select Device to Download list, select the **device** to which you want to upload the firmware.

NOTE: You can update more than one device at a time by doing the following:

- To select a block of devices, select (highlight) the top device, press and hold **Ctrl+Shift**, and then scroll and select the last device in the block you want.
  All of the devices are selected.
- To select multiple devices that are not in a block, press and hold the Ctrl key, then select the devices one-by-one you want to add to RVONedit.

10. In the Select Firmware File: field, enter the **path to the firmware update**, or use the browse button. 
11. Select the **Auto-close after successful download** check box, if you want to close the Download Firmware window immediately after a successful download.
12. Click **Begin**.
    The download begins.

NOTE: This may take a few minutes. You can watch the download and upgrade of the RVON device download status bar.

How to Open the Manage Logins Window

The **Manage Login** window can be accessed in one of three different ways:

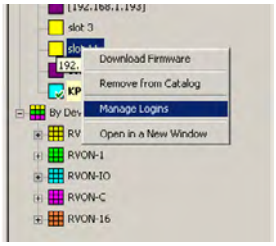
For one (1) device

For all devices

For all devices of a certain device type

To **open the manage logins window for one (1) RVON device**, do the following:

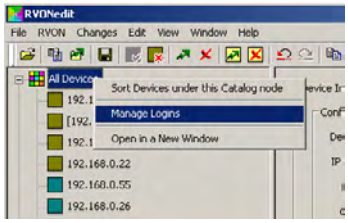
1. In the Device Catalog, right-click an **RVON device**.
   A popup menu appears.



2. From the popup menu, select **Manage Logins**.
   The Manage Logins window appears with the selected RVON device listed.

To **open the manage logins window for all RVON devices**, do the following:

1. From the application menu bar, select **RVON**.
   The RVON menu appears.



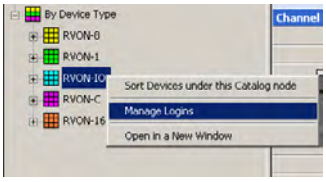
2. From the RVON menu, select **Manage Logins**.
   The Manage Logins window appears with every RVON device listed.

NOTE: You can also:

- Right-click the **All Devices** icon in the Device Catalog.
  The Manage Logins window appears with all of the RVON devices listed in the order in which they were added to the application.
- Right-click the **By Device Type** icon in the Device Catalog.
  The Manage Logins window appears with all of the RVON devices listed by the device type.

To **open the manage logins window for one RVON device type**, do the following:

1. In the Device Catalog, expand the **By Device Type icon**.
   The By Device Type navigation opens.
2. Right-click the **device type icon** for which you want to manage logins.
   A popup menu appears.



Select **Manage Logins**.
The Manage Logins window appears with only the devices for the device type you selected.