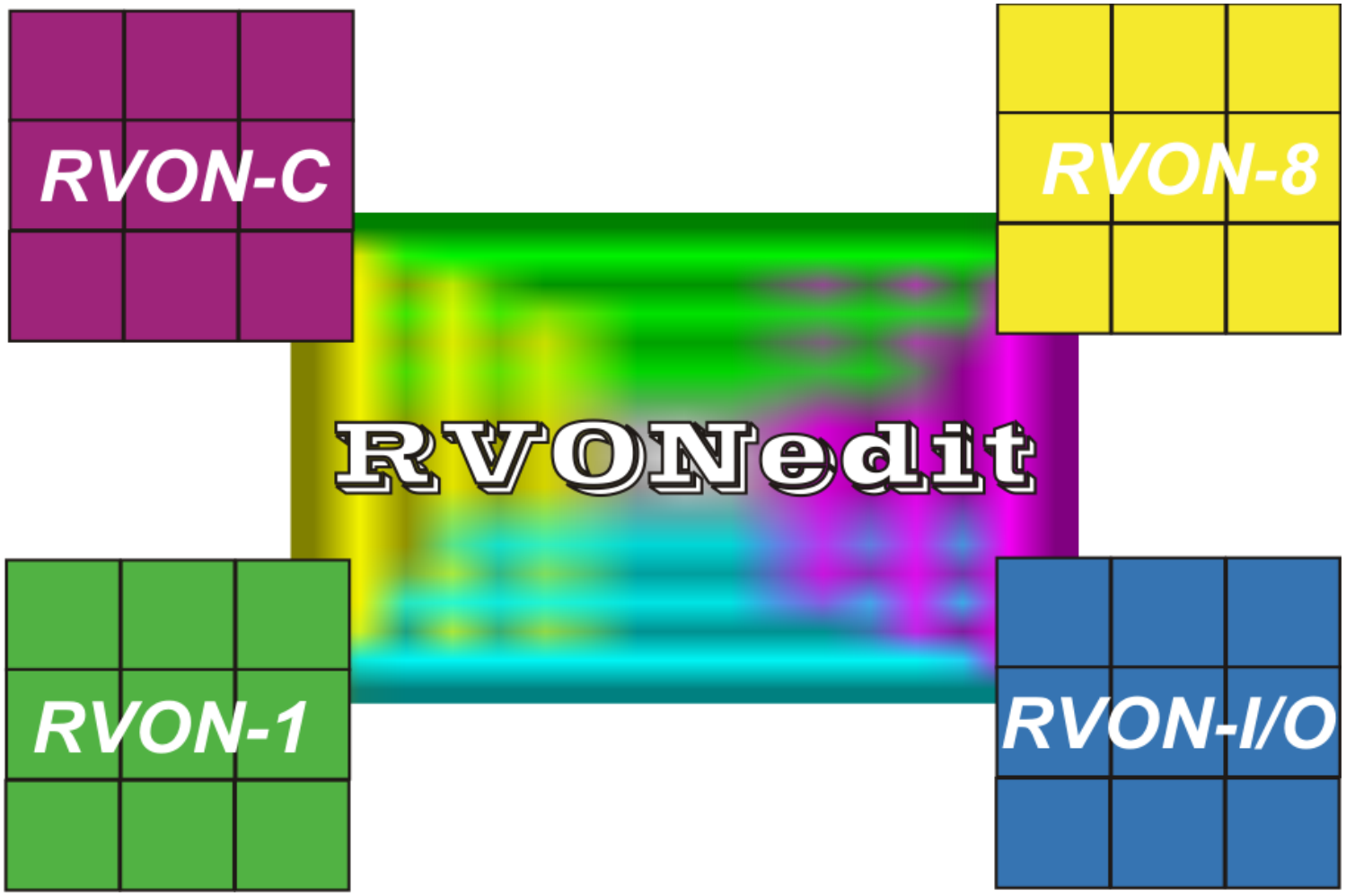
RTS® Digital Matrix Series
Intercom Systems



User Manual

version 1.0.0

Table Of Contents

Chapter 3

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, Cronus, and Zeus. The RVON devices included are:

- RVON-8
- RVON-I/O
- RVON-1
- RVON-C

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-1	V 2.0.0 or later
RVON-I/O	V 2.0.0 or later
RVON-C	V 2.0.0 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.

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

Step 1

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

Step 2

Add Devices to the RVONedit application. This can be done manually or automatically. For information on how to add devices to RVONedit see, “How to Add Devices to RVONedit” on page 44.

Step 3

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

RVONedit Field Types

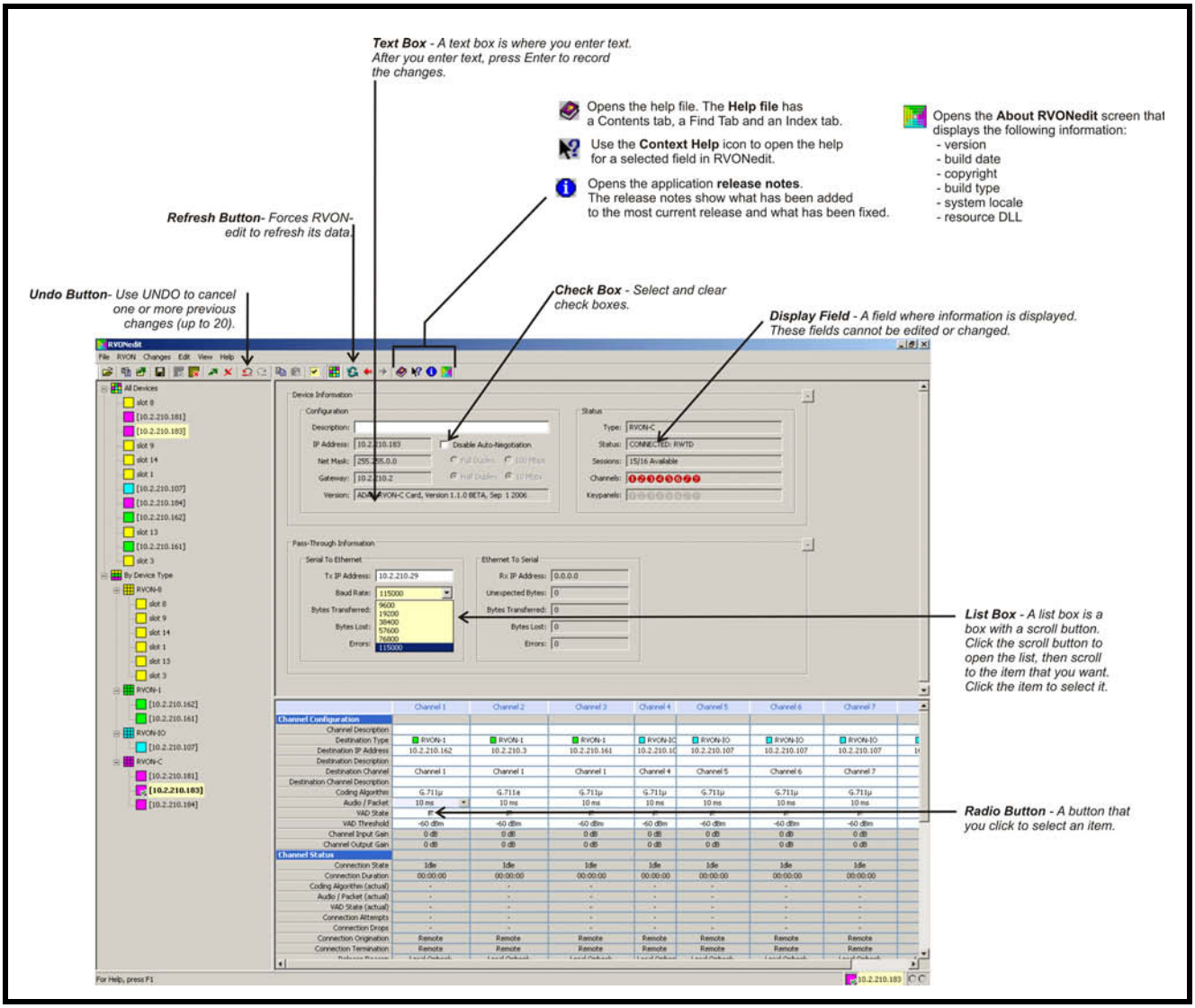
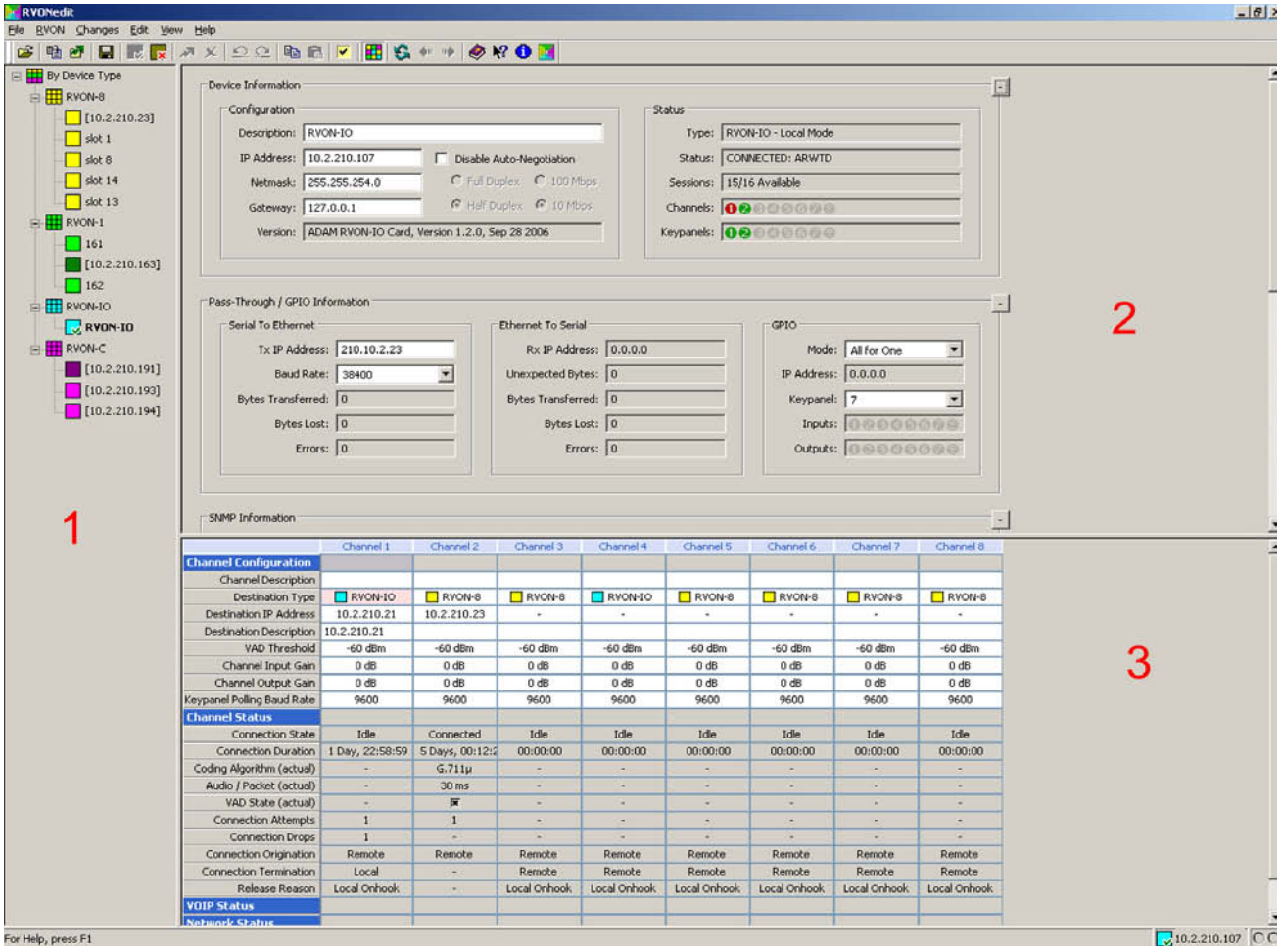


FIGURE 1. RVONedit Field Types

Screen Descriptions

RVONedit Main Application Screen

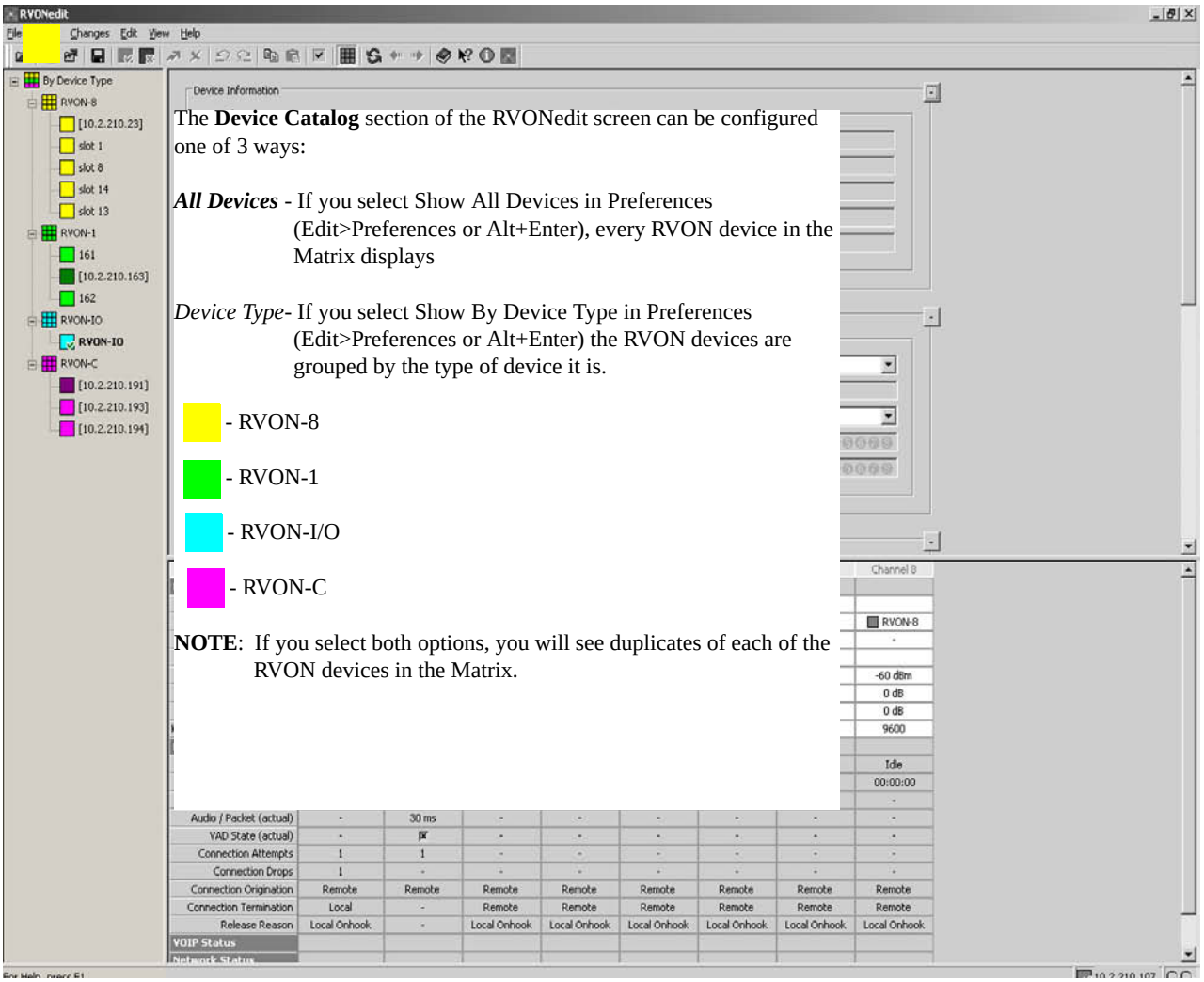
The **Main Application** screen in RVONedit is split into three (3) main areas:



1. **Device Catalog** - Displays the RVON devices currently configured in your Intercom System.
2. **Device Configuration** - Displays the Device Status and Configuration options of each device.
3. **Channel Configuration** - Displays the Channel Status and Configuration options of each device.

Device Catalog

Use the Device Catalog to view the RVON devices you have connected to your Intercom System. There are two ways to view these devices: **All Devices** or **by Device Type**.



The **Device Catalog** section of the RVONedit screen can be configured one of 3 ways:

All Devices - If you select Show All Devices in Preferences (Edit>Preferences or Alt+Enter), every RVON device in the Matrix displays

Device Type- If you select Show By Device Type in Preferences (Edit>Preferences or Alt+Enter) the RVON devices are grouped by the type of device it is.

- RVON-8

- RVON-1

- RVON-I/O

- RVON-C

NOTE: If you select both options, you will see duplicates of each of the RVON devices in the Matrix.

The Device Catalog uses expandable/collapsible trees. By clicking the "+" icon, you can open a catalog, or click "-" to close the catalog.

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*, you will see color coded squares to distinguish between the different RVON products.

 = RVON-8

 = RVON-1

 = RVON-I/O

 = RVON-C

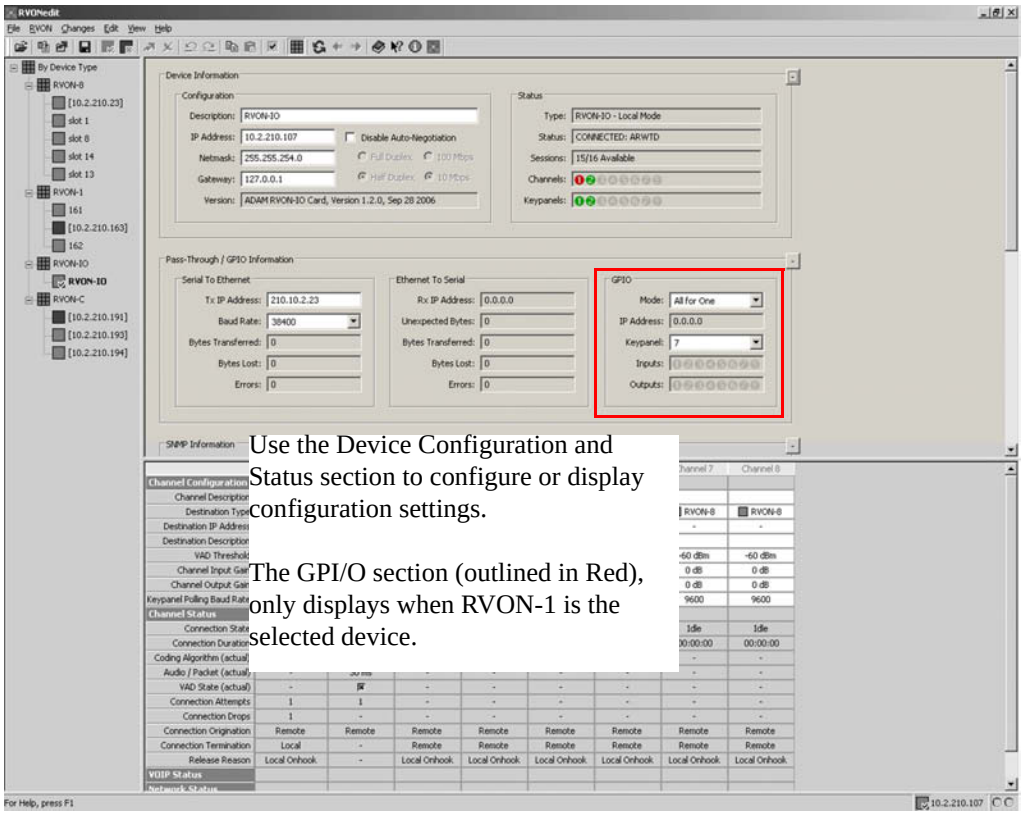
NOTE: Initially, when RVONedit is installed, the device catalog will be empty. Remember to update your RVON firmware to the minimum requirements (see page 3) before you Add Devices to RVONedit.

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

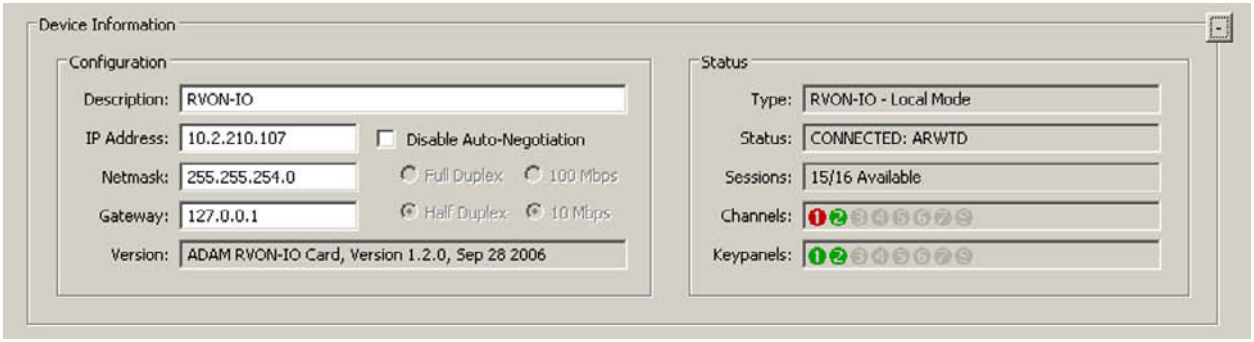
Device Configuration and Status

The **Device Configuration and Status** section displays information about the selected device. Device Information is grouped into four(4) sections:

- Device Information and Status
- Pass-Through and/or GPI/O Support Information
- SNMP Information
- Authentication Information



Device Information and Status



Use the **Device Information** section to configure and display your RVON device. 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.

UNDER CONFIGURATION

Description — A text description (up to 63 characters) 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 55

IP Address — The IP (Internet Protocol) Address for the RVON device.

Netmask — The Netmask of the network to which the RVON device is connected.

Gateway — The default Gateway address (if applicable) of the network to which the RVON device is connected.

Version — Displays the current firmware version of the RVON device.

Disable Auto-Negotiation — Disables Auto-negotiate and activates the Mode and Speed ratio buttons.

- Full Duplex - data moves both directions
- Half Duplex - data moves in one direction
- 100 Mbps
- 10 Mbps

NOTE: All of the above fields, except Description, require 'Admin' privileges to modify. Changing the IP Address, Netmask, or Gateway will cause the device to reboot when the changes are sent.

UNDER STATUS

Type — Displays the type of RVON device being configured and what mode it is running in (if applicable).

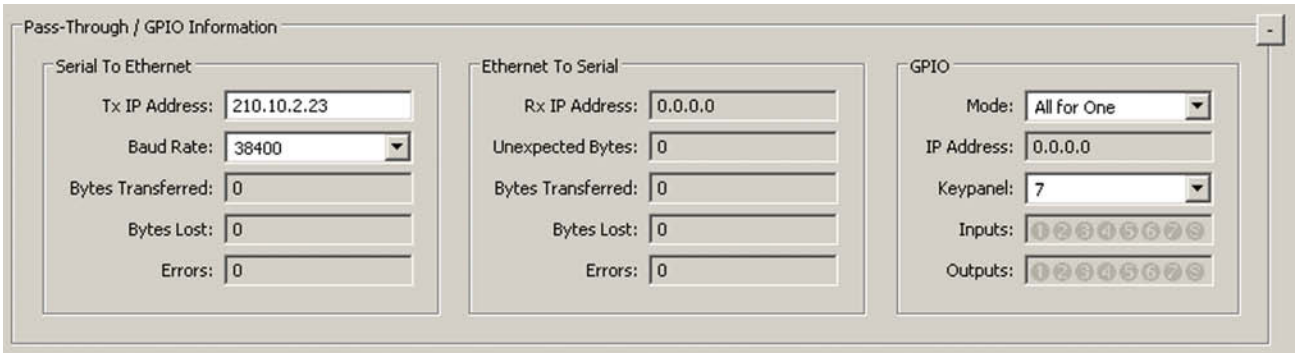
Status — Displays the current status of the RVON device and the current access rights of the user.

Sessions — Displays the number of RVONedit sessions the device supports and how many are available (for example, 15/16 Available).

Channels — Displays the VoIP connection states for each channel (green = connected, red = disconnected, gray = not configured).

Keypanels — Displays the keypanel connection states for each channel (green = connected, red = disconnected, gray = not configured).

Pass-Through and/or GPI/O Information



Use the **Pass-Through and/or GPI/O Information** section to configure the pass-through GPI/O settings for an RVON device (if applicable).

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.

UNDER SERIAL TO ETHERNET — The Serial to Ethernet information shows the serial data that is received on the serial connection and transferred to the Ethernet address of the device to which the serial data is sent.

Tx IP Address — Displays the IP Address of the device the serial data is sent.

UNDER SERIAL TO ETHERNET	The Serial to Ethernet information shows the serial data that is received on the serial connection and transferred to the Ethernet address of the device to which the serial data is sent.
Baud Rate	Displays the baud rate of the serial connection.
Bytes Transferred	Displays the number of bytes transferred from the serial connection to Ethernet.
Bytes Lost	Displays the number of bytes that could not be transferred.
Errors	Displays the number of errors that occurred during transfer.

UNDER ETHERNET TO SERIAL	The Ethernet to Serial information shows the serial data that is received on the Ethernet connection and transferred to the serial connection.
Rx IP Address	Displays the IP Address from which data was last received via Ethernet (this address should match the Tx IP Address).
Unexpected Bytes	Displays the number of unexpected bytes of data. *Unexpected Bytes* are data that has come from any IP Address that is not the Tx IP Address. The bytes of data are considered invalid bytes and are not transmitted.
Bytes Transferred	Displays the number of bytes that have been transferred to the serial port.
Bytes Lost	Displays the number of bytes that could not be transferred.
Errors	Displays the number of errors that occurred during the transfer.

UNDER GPI/O

Mode: The mode in which the GPIO are to be used (*Pass-Through* forwards GPIO status to another device, otherwise the GPIO can be associated with *All For One* keypanel or *One For Each* keypanel).

1. From the drop down list, select the **mode** in which you want the device to operate.

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

*Pass-Through Mode***:** In pass-through mode, GPI/O Status is sent over Ethernet, therefore you must set the IP Address of the destination GPI/O pass-through port.

*1 Keypanel (single port) Mode***:** In 1 keypanel mode, also referred to as single port mode, all GPI/Os with a keypanel allows you to access/address the GPI/O in UPL Statements.

*All Keypanel (multiple port) Mode***:** In all keypanel mode, also referred to as multiple port mode, each keypanel is associated to its corresponding GPI/O. For example, if keypanel 1 is connected to GPI/O 1, it is associated with the corresponding GPI/O port. When using All Keypanel Mode, an additional GPI/O is available. This means that each keypanel has four (4) GPI/Os and then a GPI/O associated with port nine (9).

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

IP Address: The IP Address of the device with which GPI/O states are transferred (only valid when the GPIO mode is set to Pass-Through).

1. In the IP Address field, enter the **IP Address** of the destination GPI/O pass-through port.

Keypanel: The device port/keypanel number with which all GPIOs are associated (only valid when GPIO mode is set to All For One).

1. From the Keypanel drop down list, select the **port** that all GPIOs are associated.

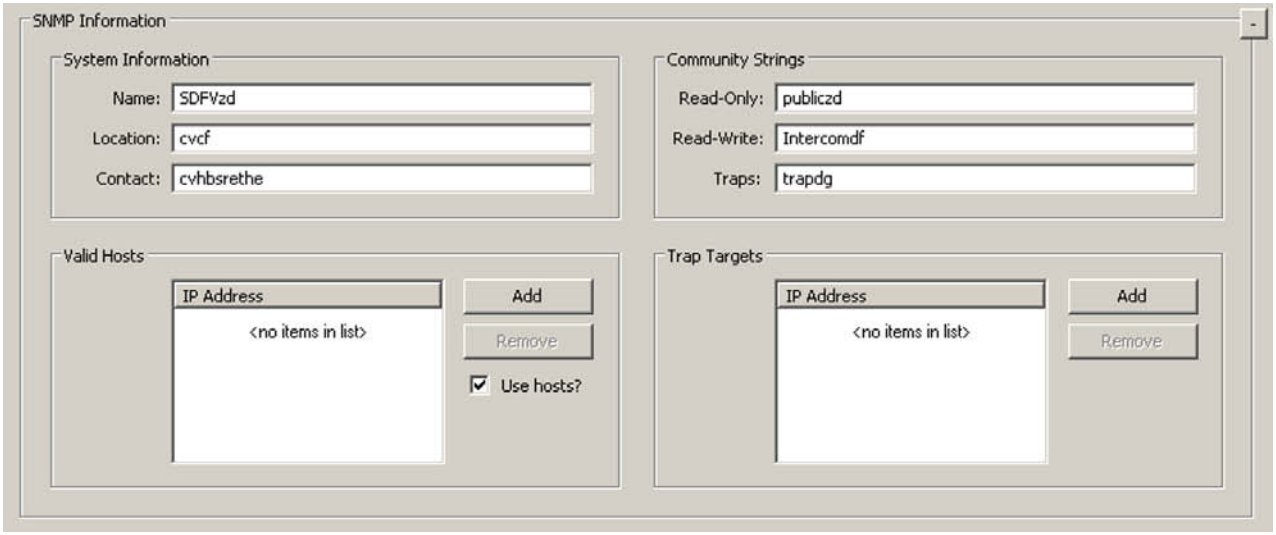
Inputs: Displays a summary of the current GPI/O input states (purple = asserted, gray =input not asserted.

Outputs: Displays a summary of the current GPI/O output states (purple = asserted, gray = output not asserted.

SNMP Information

Use the **SNMP Information** section to configure the SNMP options for your RVON device (if you are using SNMP).

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 56).



Using the Expand/Collapse button  , you can collapse or expand 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

The **System Information** area is purely for documentation purposes. This is so the user knows which device is configured and where it is physically located.

UNDER **SYSTEM INFORMATION**

Name: The name of the RVON device (up to 100 characters) in which SNMP is being configured.

1. In the Name field, enter the **name** of the device being configured.

Location: The location of the device (up to100 characters) with SNMP configured.

1. In the Location field, enter the **physical location** of the device (for example, Intercom Room, right rack).

Contact: The name (up to 100 characters) of the person responsible for the specified SNMP device.

1. In the Contact field, enter the **name** of the person responsible for the SNMP device.

Community Strings

UNDER **COMMUNITY STRINGS**

Read-Only: The password (up to 64-characters) providing read-only access.

1. In the Read-Only field, enter a **password** to allow read-only access.

Read-Write: The password (up to 64-characters) providing read-write access via SNMP.

1. In the Read-Write field, enter a **password** to allow read-write access.

Traps[a] The community string (up to 64-characters) that is included in any TRAP PDU (protocol data unit) generated by the device.

a. *An **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. By uniquely identifying these traps, you can quickly see which event or error takes precedence.*

Valid Hosts

UNDER **VALID HOSTS**:

Valid Hosts: A list of up to five (5) hosts from which the device will accept SNMP requests (only used if *Use Hosts?* is selected).

1. In the IP Address field, enter an **IP Address** for a valid host.
2. Click **Add**.

Use Valid Host?: Enables or disables the valid hosts list.

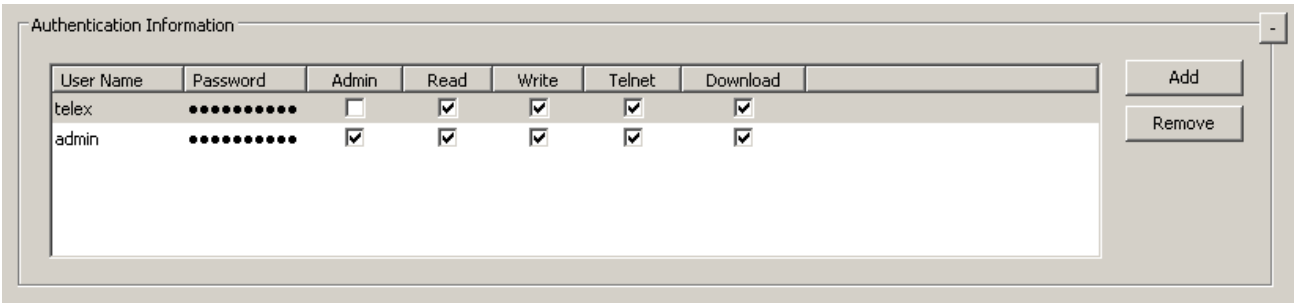
Trap Targets

UNDER **TRAP TARGET**

Trap Targets: A list of up to five targets the device will send SNMP traps to when they occur.

1. In the IP Address field, enter the **IP Address** of a target to which a trap will be sent.

Authentication Information



Use the **Authentication Information** section to configure up to five (5) profiles for the selected device. Each profile can be given different access rights or privileges: Admin, Read, Write, Telnet, 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).

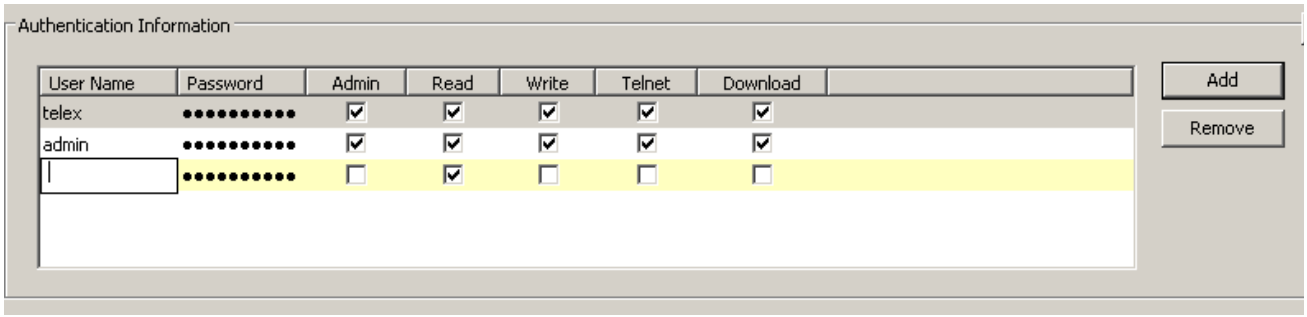
The Access rights for the RVON devices are as follows:

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)

Warning! It is possible to create an empty authentication table, disabling RVONedit, Telnet, and firmware downloads. If this occurs, you can restore the default authentication table by turning ON a DIP switch for the specific RVON device and restarting the device. Once the device has been restarted, then turn the DIP switch to the OFF position and restart the device again.

The following is a list of the DIP Switch number for each RVON device type:

RVON-8	DIP Switch 5
RVON-1	DIP Switch 2
RVON-I/O	DIP Switch 3
RVON-C	DIP Switch 5



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

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 57).

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.

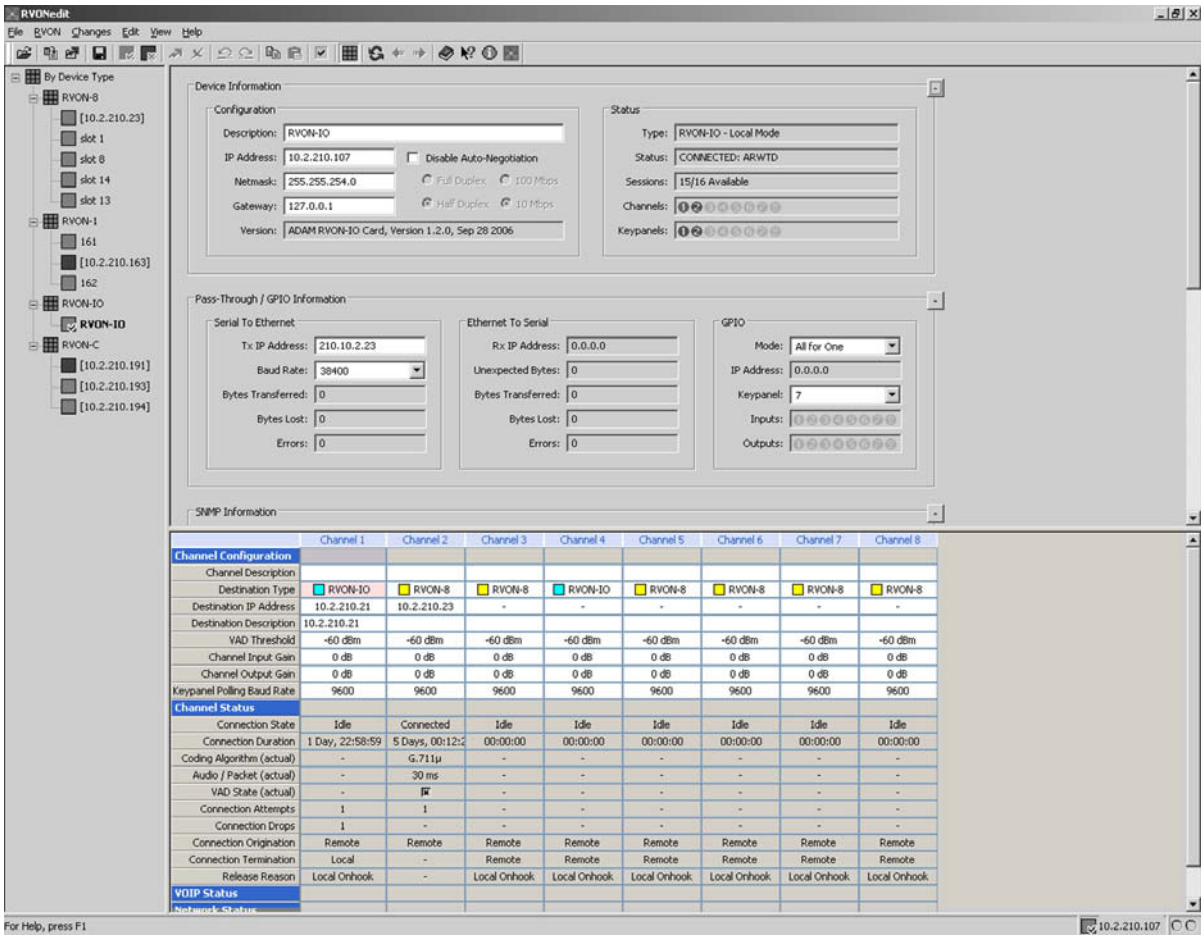
Recommendations:

- 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 that you select “Remember for this device” 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

Use the **Channel Configuration and Status s**ection to configure or view the channels for each RVON device. Channel Configuration and Status is divided into five sections:

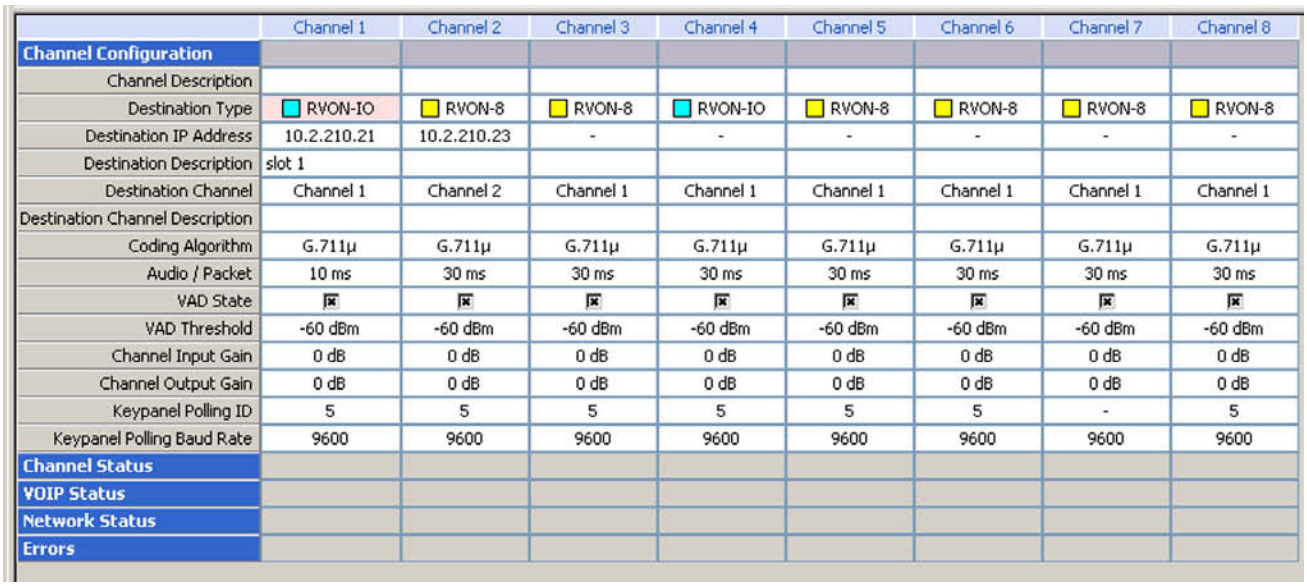
- Channel Configuration
- Channel Status
- VOIP
- Network Status
- Error



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 69.



	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								

Channel Description

Displays the channel description, if applicable. To change the description, use the description field in the *Device Information Section on page 9*.

Destination Type

Displays the type of RVON device the channel is connected to.

1. Use the drop down list to select the **type of device** that is connected to the channel.

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

Destination IP Address

Displays the IP Address for the device at the other end of the connection.

This is an editable field. You can enter another IP Address. However, by changing this IP Address, the destination type will change if it can be determined.

Destination Description

Displays the destination channel's description, if applicable.

This field cannot be modified.

Destination Channel

Displays the channel at the destination device to which the RVON device is connected.

1. Using the drop down list, select the **channel** at the destination that the RVON device is connected.

NOTE: When *<default>* is selected, the channels match 1 to 1. For example, you may have all channels selected, and by choosing <default>, Ch 1 matches to Ch 1, Ch 2 matches to Ch2. This options is a time saver so you do not have to manually assign each channel.

Destination Channel Description

Displays the destination channel's description, if available.

This field cannot be modified.

Coding Algorithm

Displays the coding algorithm used to transmit audio packets.

1. Using the drop down list, select the **coding algorithm** to use for the selected channel.

Audio/Packet

Displays the audio packet sizes for the selected coding algorithm.

1. Using the drop down list, select the **audio packet size**.

Values for this field are as follows: *10ms, 20ms, 30ms, 40ms, 60ms.*

VAD State

Displays whether VAD is enabled or disabled. Select the **checkbox** to enable or **clear** the checkbox to disable VAD.

NOTE: VAD (voice activity detection) saves network bandwidth by stopping the flow of audio packets when silence is detected.

VAD Threshold

Displays 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 will remain silent.

1. Using the up and down arrows select the **VAD Threshold** for the channel.
   The VAD threshold range is -30dB to -60dB or Adaptive.

Channel Input Gain

Displays the channel input gain for the channel.

1. Using the up and down arrows, select the **channel input gain**.
   Select values between -14dB to 14dB.

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

Channel Output Gain

Displays the channel output gain for the channel.

1. Using the up and down arrows select the **channel output gain**.
   Select values between -14dB and 14dB.

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

Keypanel Polling ID

Displays the keypanel polling ID for the channel.

1. From the drop down list, select the **keypanel polling ID** (choose from *1 to 10*, or select the *dash* to assign no polling ID).

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

Keypanel Polling Baud Rate

Displays the keypanel polling baud rate for the channel.

1. From the drop down list, select the **keypanel polling baud rate**. *The option for this field are 9600 or 76.8 kbps*.

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

NOTE: A *Coding Algorithm* is an algorithm used to compress audio. There are five (5) codices supported by Telex: G.711ms law, G.711A law, G.729AB, G.723 (5.3k) and G.723 (6.3k). The type of coding algorithm you choose will dictate 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 coding algorithm, 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 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 coding algorithm and packet size suitable for the size of the network, so degradation of network resources does not occur.

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								

Connection State	Displays the state of the connection. There are two connection states: *Connected* or *Idle*.
Connection Duration	Displays the duration of the current connection or the previous connection, if in an idle state. This is shown in *hh/mm/ss*.
Coding Algorithm (actual)	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)	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)	Displays the current VAD state. When this is displayed in red it is different from the configured VAD State.
Connection Attempts	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	Displays the number of times a connection has been dropped.
Connection Origination	Displays the end of the connection that originated the call.
Connection Termination	Displays the end of the connection that terminated the call.
Release Reason	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)

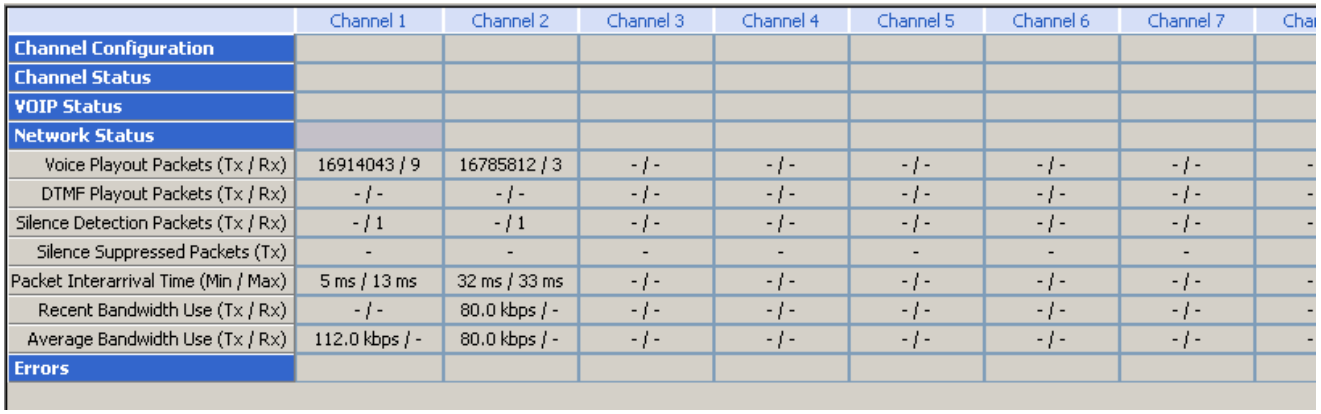
	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Channel Configuration								
Channel Status								
VOIP Status								
Playout Buffer Size	-	120 ms	-	-	-	-	-	-
Nominal Playout Delay	-	60 ms	-	-	-	-	-	-
Average Playout Delay	-	57 ms	-	-	-	-	-	-
Playout Buffer Underrun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

Playout Buffer Size	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	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	Displays the actual average audio collected before packets are played out. This is measured over the length of the connection.
Playout Buffer Underrun	Displays the number of times that packets were not played because the Playout Buffer was empty.
Playout Buffer Overrun	Displays the number of packets that were discarded because the Playout Buffer was full.
Missing Sequence Packets	Displays how many audio packets were missed in the sequence.
Replayed Packets	Displays how many audio packets were replayed.
Average Frame Jitter	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								

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

DTMF Relay Packets (Tx/Rx)
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)
Displays the number of times a silence detection packet has been sent or received. VAD (voice activity detection) must be enabled.

Packet Interarrival Time (Min/Max)
Displays the minimum and maximum time elapsed between packets being sent.

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

Average Bandwidth Use (Tx/Rx)
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	-	-	-	-	-	-

Invalid Headers Displays how many IP packets could not be parsed.

Invalid MAC Address Displays how many invalid MAC addresses tried to connect.

Invalid SSRC Displays the number of packets with an invalid SSRC

Invalid Payload Displays how many incorrectly formatted packets were received.

Invalid Destination Displays how many invalid destinations were received.

Lost Packets Displays how many packets were lost.

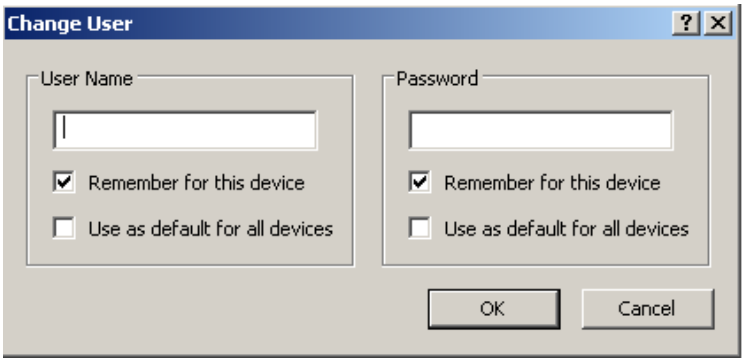
DSP to Micro Overrun Displays the number of packets that were lost because the Micro was too busy to receive.

Change User Screen

Use the **Change User** screen to logon to RVONedit/RVON devices as a different user. 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 61.

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.



FIELD	DESCRIPTION
User Name area:	The User Name area contains the following: • User Name entry field • Remember for this device check box • Use as default for all devices check box
User Name field	User names can be up to 40-characters long. 1. In the User Name field, enter a **valid user name**.
Remember for this device check box	The Remember for this device check box allows you to set the default user name or password used anytime a user is logging onto the specified RVON device. **Select** the Remember for this device check box to have RVONedit remember the user name or password for future logon attempts. **Clear** the Remember for this device check box to disable this option.
Use as default for all devices check box	The Use as default for all devices check box allows you to set the default user name or password for all devices in RVONedit. **Select** the Use as default for all devices check box to have RVONedit remember the user name or password for future logon attempts. **Clear** the Use as default for all devices check box to disable this option.
Password area:	The Password area contains the following: • Password entry field • Remember for this device check box • Use as default for all devices check box

FIELD	DESCRIPTION
Password field	Passwords can be up to 40-characters long. 1. In the Password field, enter a **valid password**.
Remember for this device check box	The Remember for this device check box allows you to set the default user name or password used anytime a user is logging onto the specified RVON device. **Select** the Remember for this device check box to have RVONedit remember the user name or password for future logon attempts. **Clear** the Remember for this device check box to disable this option.
Use as default for all devices check box	The Use as default for all devices check box allows you to set the default user name or password for all devices in RVONedit. **Select** the Use as default for all devices check box to have RVONedit remember the user name or password for future logon attempts. **Clear** the Use as default for all devices check box to disable this option.

Preferences Dialog

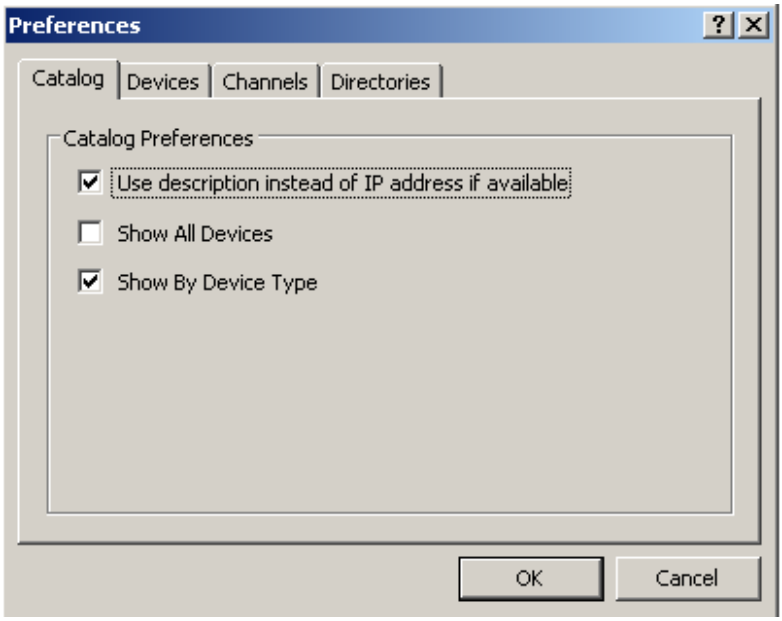
The **Preferences** dialog allows you to set application, device and channel options for RVONedit.

The Preferences dialog 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-1 aux channel.
- *Directories page* - Allows you to set file locations for save and load directory defaults

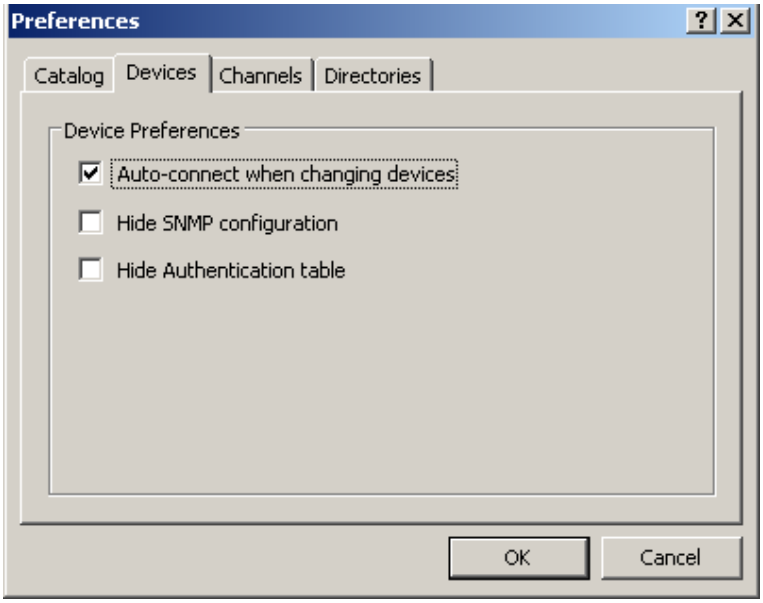
You can also open preferences by selecting **Edit>Preferences**, by pressing **Alt+Enter**, or clicking the preferences icon  .

Catalog Page



FIELD	DESCRIPTION
Use description instead of IP address if available check box	This preference allows the user to see the RVONedit device description (if available), instead of the device IP Address. For example, if you have an RVONedit device with an IP Address, 10.2.210.10, and a description, slot 2; in the Device Catalog (page 6) the description, slot 2, will be seen instead of the IP Address.
Show All Devices check box	This preference allows the user to see all RVONedit devices in the Device Catalog under All Devices.
Show By Device Type check box	This preference allows the user to see all RVONedit devices in the Device Catalog grouped by device type (for example, RVON-8, RVON-1, etc.).

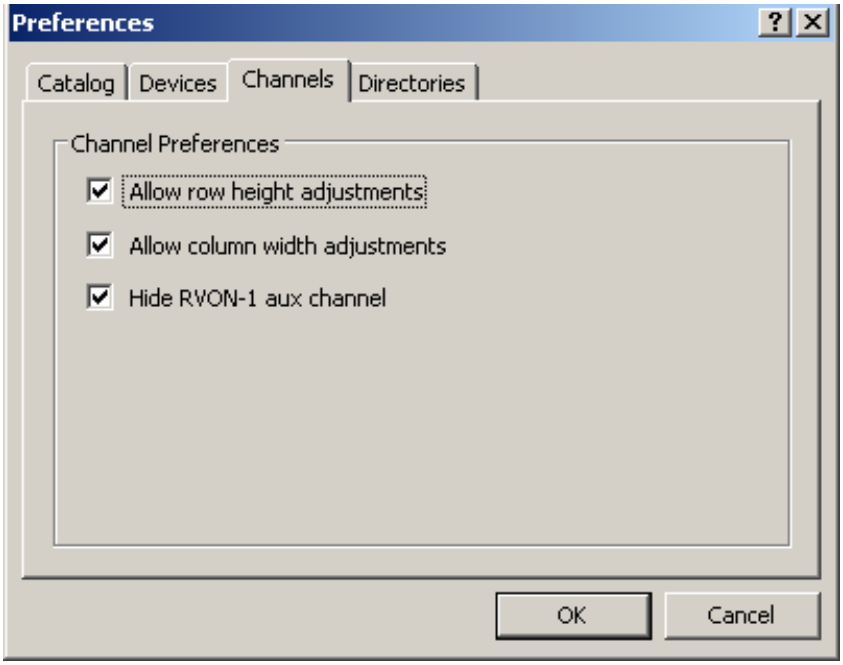
Devices Page



FIELD	DESCRIPTION
Auto-connect when changing devices check box	This preference allows you to auto-connect to RVONedit devices. This means that when you change devices within the device catalog, it will automatically connect you to that device or the user name and password screen will automatically pop-up for logon.
Hide SNMP configuration check box	This preference allows you to hide the SNMP configuration area. If you do not use the SNMP feature, you can hide the configuration options in the Device Configuration and Status section (page 8) For more information, see “How to Show/Hide the SNMP Configuration Information” on page 56.
Hide Authentication Table check box	This preference allows you to hide the Authentication table. 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 57.

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

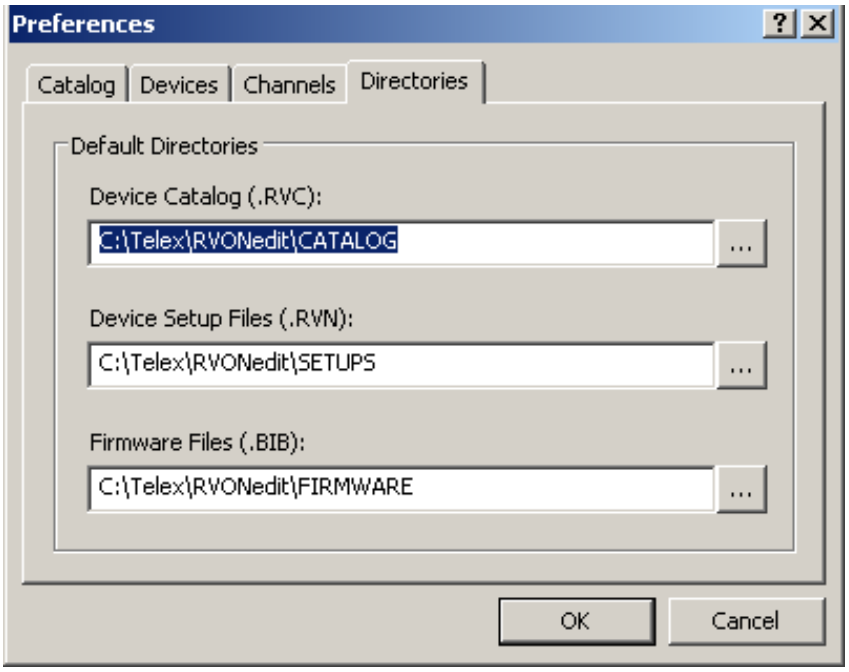
Channels Page



FIELD	DESCRIPTION
Allow row height adjustments check box	This preference allows you to make row height adjustments to the channel configuration grid (page 17).
Allow column width adjustments check box	This preference allows you to make column width adjustments to the channel configuration grid.
Hide RVON-1 aux channel check box	This preference allows you to hide the RVON-1 aux channel[a]. Because this channel is not often used, by default, the channel is hidden.

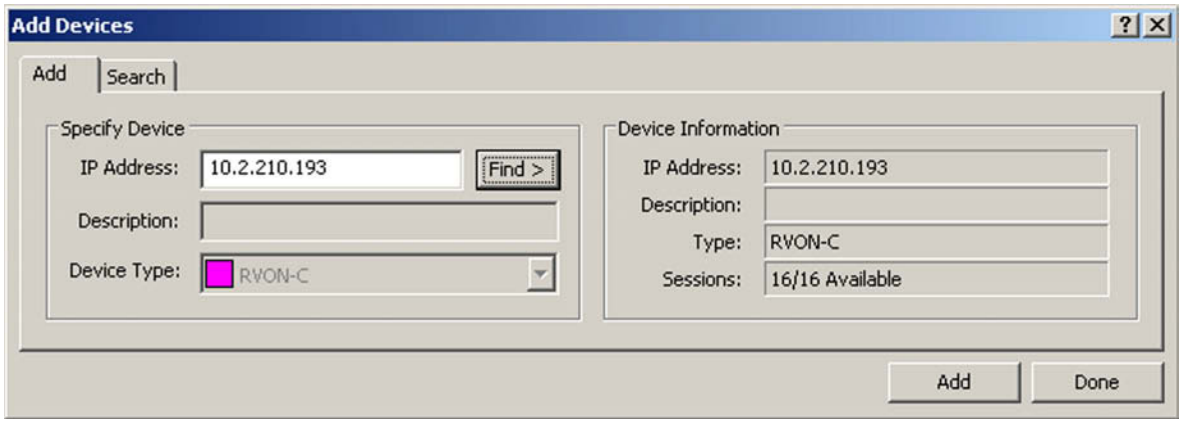
a. An RVON-1 device supports two audio channels. One goes to the keypanel (mic and speaker), the other (the aux channel) allows you to connect to the aux input on the keypanel connected to the RVON-1.

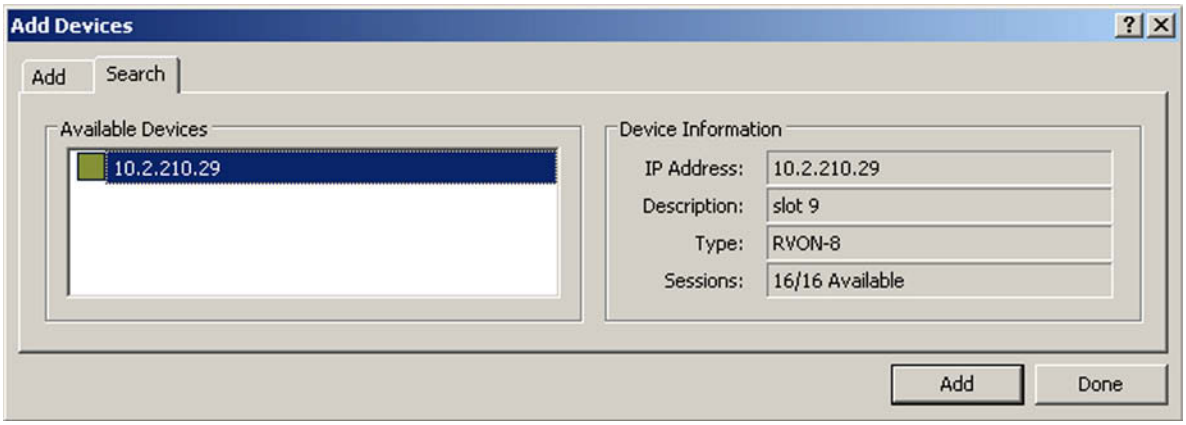
Directories Page



FIELD	DESCRIPTION
Device Catalog (.RVC) field	This preference allows you to set the file location where device catalog settings are stored. By default, it is set to *C:\Telex\RVONedit\CATALOG.*
Device Setup Files (.RVN) field	This preference allows you to set the file location where device setup files are stored. By default, it is set to *C:\Telex\RVONedit\CATALOG\SETUPS.*
Firmware Files field (.BIB)	This preference allows you to set the file location where firmware files are stored. By default, it is set to *C:\Telex\RVONedit\CATALOG\FIRMWARE.*

Add Device





Use the **Add Devices** screen to add RVON devices to RVONedit. There are two ways to add devices on the Add Device dialog:

- You can **manually** enter the device information. Use the Add Tab 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 Tab 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 screen.

For more information, see “How to Add Devices to RVONedit” on page 44.

FIELD	DESCRIPTION
Add Tab	
Specify Device section	Use the **Specify Device** section to enter specific information on the RVON device you are adding to the application, such as: • IP Address • Description • Device Type

FIELD	DESCRIPTION
IP Address field	In the **IP Address** field, 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	Click **Find** for RVONedit to search and find the IP Address you entered in the IP Address field.
Description field	The **description** field describes the RVON device you are adding to the application. **NOTE**: If this description is different than what the RVON device has configured, the description is overwritten with the originally configured description.
Device Type drop down list	Use the **Device Type** drop down list to select the type of RVON device for which you are looking.
Device Information Area:	The **Device Information** area on the Add Device dialog displays information for the selected devices. Information includes: • IP Address • Description • Type • Sessions
Search Tab	
Available Devices List	The **Available Devices** list displays every configured RVON device in the intercom system. 1. Highlight the **RVON device** you want to add to RVONedit, and then click **Add**. **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 Area:	The **Device Information** area on the Add Device dialog displays information for the selected devices. Information includes: • IP Address • Description • Type • Sessions

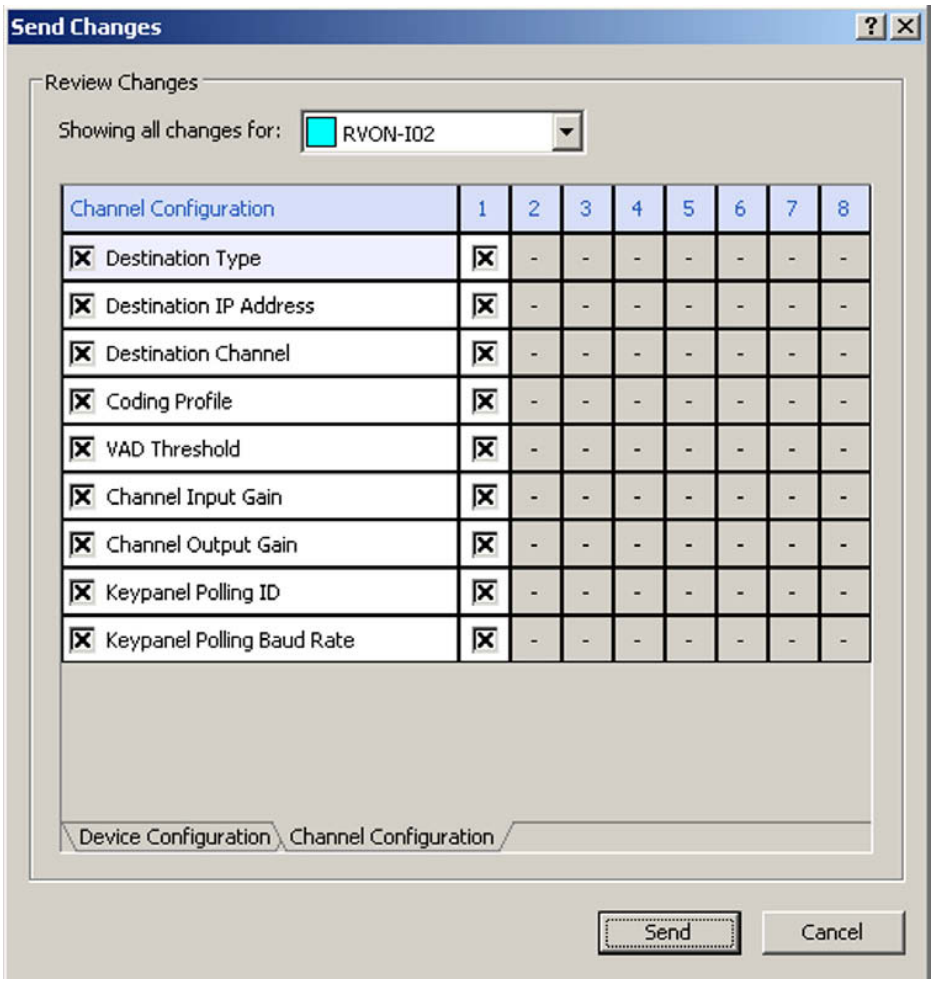
Send Changes

The **Send Changes** dialog box displays the device and channel changes you make in RVONedit. Send Changes allows you to confirm the changes about to be implemented. You can clear any of the configuration check boxes if you want to cancel specific changes from being implemented.

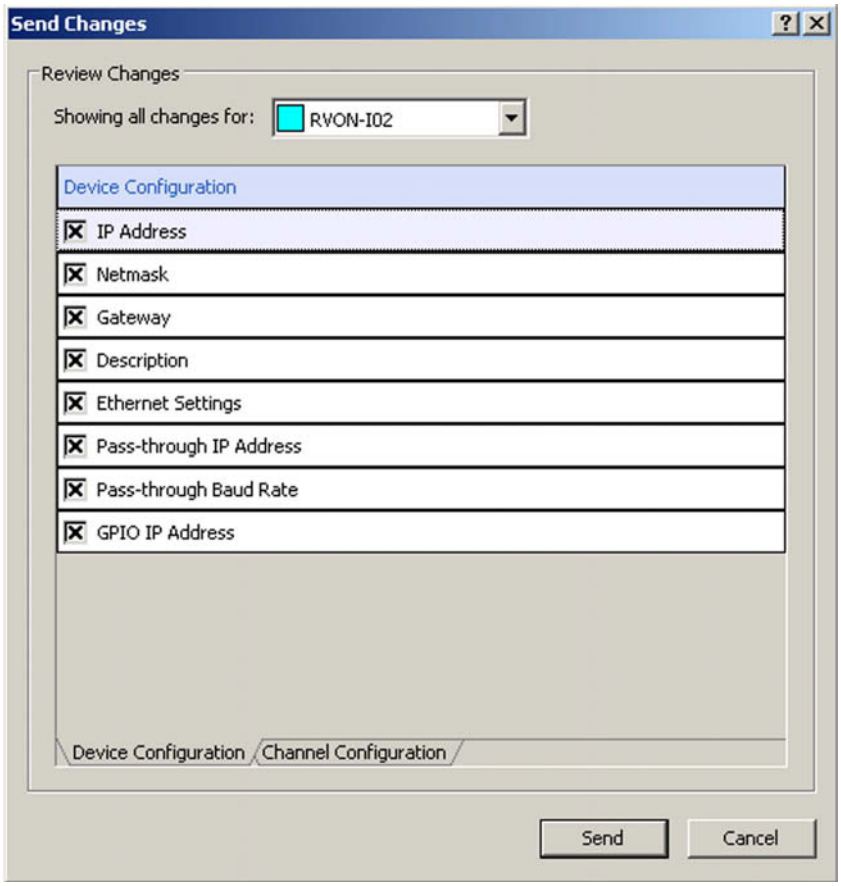
NOTE: You can only view changes to one device at a time. Use the drop down list to change the device you are verifying changes.

This dialog only shows those items that have had changes made to them. If no changes have been made, then 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 will appear, but the Description check box will not appear.

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



FIELD	DESCRIPTION
Showing all changes for: drop down list	The **Showing all changes for:** drop down list displays all the different RVON devices on which changes have been made. **NOTE**: you can only view the changes made on one RVON device at a time.
	DEVICE CONFIGURATION OPTION CHECK BOXES
Destination Type check box	Changes have been made to a Destination Type. **Select** this check box to apply the changes made to the Destination Type. **Clear** this check box to cancel the change.
Destination IP Address check box	Changes have been made to a Destination IP Address. **Select** this check box to apply the changes made to the Destination IP Address. **Clear** this check box to cancel the change.
Destination Channel check box	Changes have been made to the Destination Channel. **Select** this check box to apply the changes made to the Destination Channel. **Clear** this check box to cancel the change.
Coding Profile check box	Changes have been made to the Coding Profile. **Select** this check box to apply the changes made to the Coding Profile. **Clear** this check box to cancel the change.
VAD Threshold check box	Changes have been made to the VAD Threshold. **Select** this check box to apply the changes made to the VAD Threshold. **Clear** this check box to cancel the change.
Channel Input Gain check box	Changes have been made to the Channel Input Gain. **Select** this check box to apply the changes made to the Channel Input Gain. **Clear** this check box to cancel the change.
Channel Output Gain check box	Changes have been made to the Channel Output Gain. **Select** this check box to apply the changes made to the Channel Output Gain. **Clear** this check box to cancel the change.
Keypanel Polling ID check box	Changes have been made to the Keypanel Polling ID. **Select** this check box to apply the changes made to the Keypanel Polling ID. **Clear** this check box to cancel the changes.
Keypanel Polling Baud Rate check box	Changes have been made to the Keypanel Polling Baud Rate. **Select** this check box to apply the changes made to the Keypanel Polling Baud Rate. **Clear** this check box to cancel the changes.



FIELD	DESCRIPTION
Showing all changes for: drop down list	The **Showing all changes for:** drop down list displays all the different RVON devices where changes have been made. **NOTE**: you can only view the changes made on one RVON device at a time.
	DEVICE CONFIGURATION OPTION CHECK BOXES
IP Address Check Box	Changes have been made to a Device IP Address **Select** this check box to apply the changes made to the Device IP Address. **Clear** this check box to cancel the change.
Description check box	Changes have been made to a Device Description **Select** this check box to apply the changes made to the Device Description. **Clear** this check box to cancel the change.

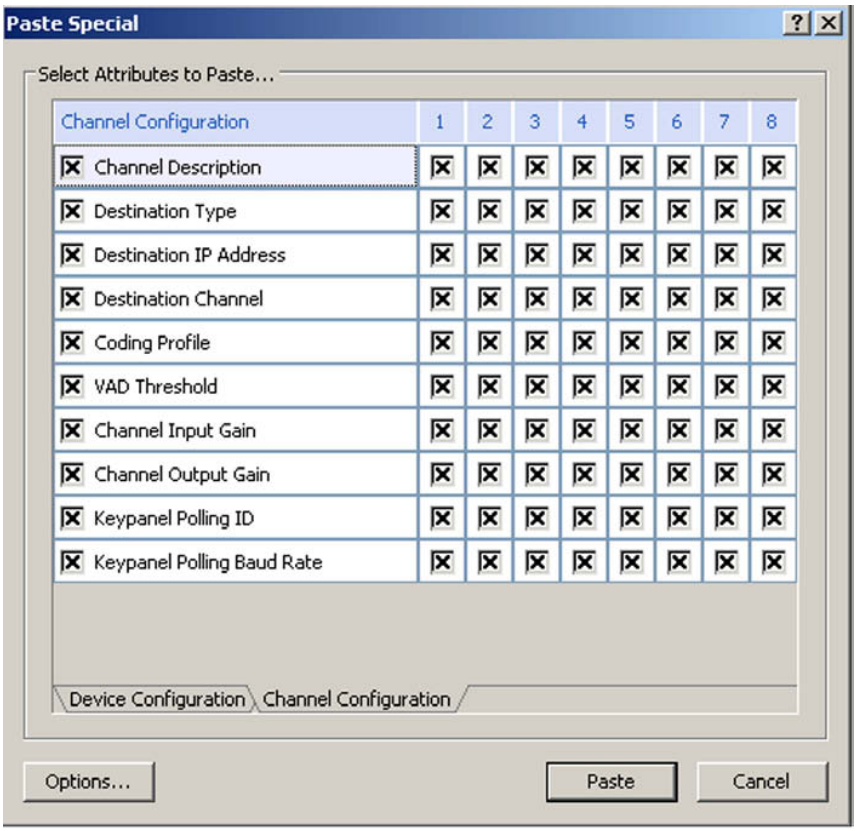
FIELD	DESCRIPTION
Ethernet Settings check box	Changes have been made to the Ethernet settings. **Select** this check box to apply the changes made to the Ethernet settings. **Clear** this check box to cancel the change.
Pass-Through IP Address check box	Changes have been made to the Pass-Through IP Address. **Select** this check box to apply the changes made to the Pass-Through IP Address. **Clear** this check box to cancel the change.
Pass-Through Baud Rate check box	Changes have been made to the Pass-Through Baud Rate. **Select** this check box to apply the changes made to the Pass-Through Baud Rate. **Clear** this check box to cancel the change.
GPIO Mode check box	Changes have been made to the GPIO Mode. **Select** this check box to apply the changes made to the GPIO Mode. **Clear** this check box to cancel the change.
GPIO Mode IP Address check box	Changes have been made to the GPIO Mode IP Address. **Select** this check box to apply the changes made to the GPIO Mode IP Address. **Clear** this check box to cancel the changes.
SNMP Information check box	Changes have been made to the SNMP Information. **Select** this check box to apply the changes made to the SNMP Information. **Clear** this check box to cancel the changes.

Paste Special

Use the **Paste Special** Screen to select different channel and/or device configuration items that have been copied from one device to the current RVON device.

The Paste Special dialog has two pages:

The *Channel Configuration Page* - On this page, 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.



Channel Description check box

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

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

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.

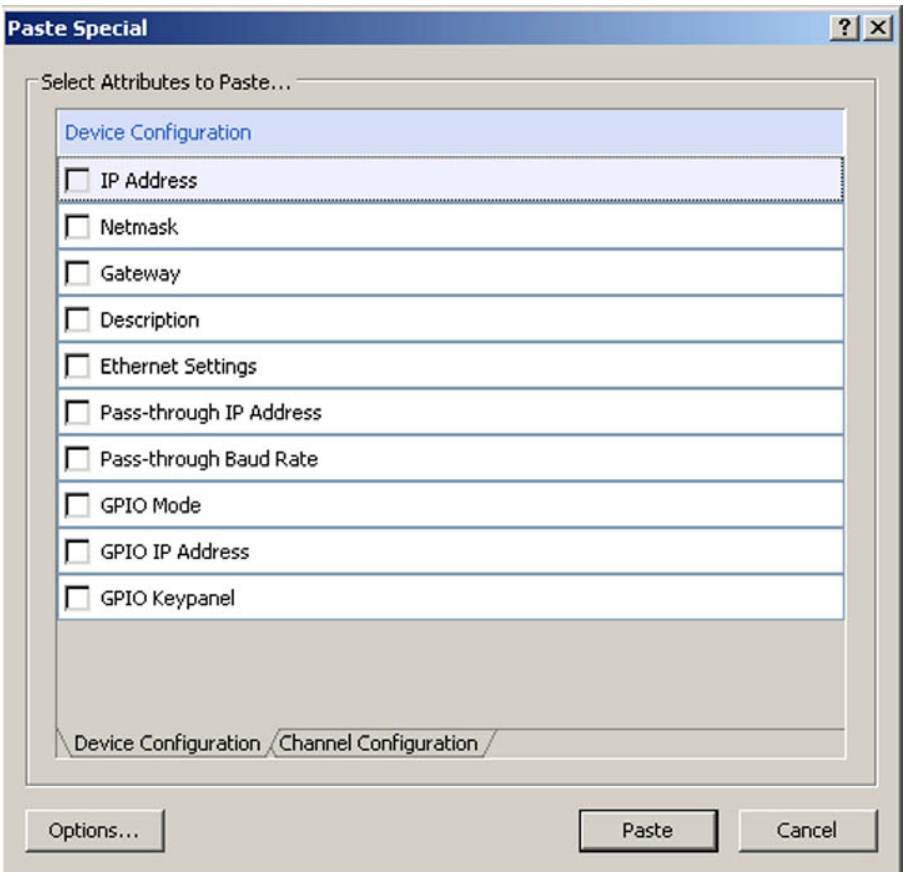
Destination Channel check box	**Select** the Destination Channel check box if you want to paste the Destination Channel information to the new channel configuration. Otherwise, **clear** the check box to do nothing.
Coding Profile check box	**Select** the Coding Profile check box if you want to paste the Coding Profile information to the new channel configuration. Otherwise, **clear** the check box to do nothing.
VAD Threshold check box	**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	**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	**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	**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	**Select** the Keypanel Polling Baud check box if you want to paste the Keypanel Polling Baud information to the new channel configuration. Otherwise, **clear** the check box to do nothing.
1-8 Channel check boxes	The **1-8 columns** represent the channels available to paste the selected channel information into, if applicable. Select each **channel (1-8)** that you want to past the select channel information.

Options button

Pressing the **Options** button displays a context menu that displays the following options:

- *Select*, *Clear* or *Invert* the selections for either the device configurations or channel configurations or both sets of options.
- Toggle the options between the *Clipboard Copy* selections and the *Paste Special Default* options.
- Save the current option set as the Paste Special Default settings. This allows you to configure the standard Paste Special selections and remembers the settings between settings.

The *Device Configuration* Page - displays the different options you can select to paste to the new device configuration.



Using the options on these pages, you can pick and choose what you want to copy to the current device.

IP Address check box	**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	**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	**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	**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	**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	**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	**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 Keypanel check box	**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

Pressing the **Options** button displays a context menu that displays the following options:

- *Select*, *Clear* or *Invert* the selections for either the device configurations or channel configurations or both sets of options.
- Toggle the options between the *Clipboard Copy* selections and the *Paste Special Default* options.
- Save the current option set as the Paste Special Default settings. This allows you to configure the standard Paste Special selections and remembers the settings between settings.

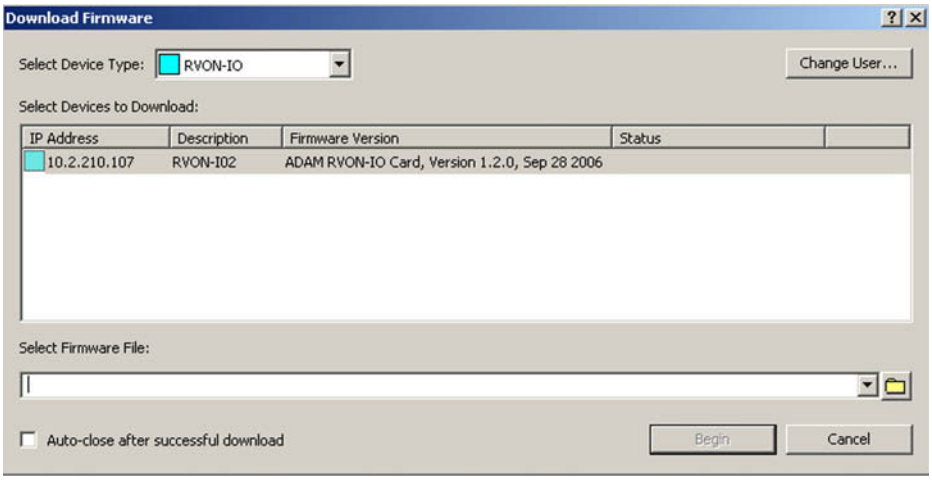
Download Firmware Screen

Use the **Download Firmware** screen to easily upgrade the firmware for any of the RVON devices. Remember, your user profile must have download privileges before you can download firmware to RVON devices.

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

To Open the Firmware Download screen, do the following:

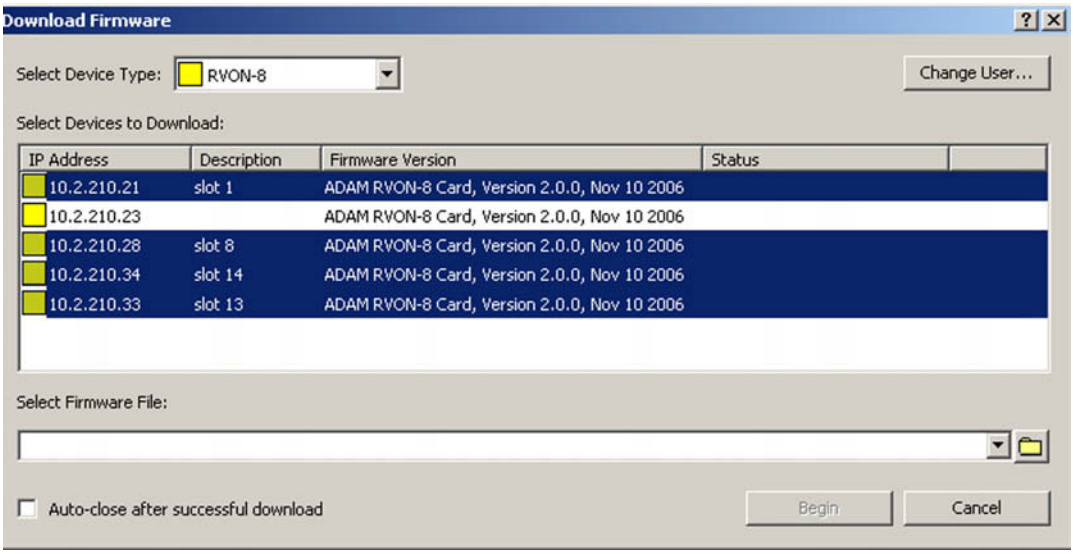
1. From the RVON menu, select **Download Firmware**.
   The Download firmware screen appears.



NOTE: RVONedit can download firmware to any RVON device supporting the older *rvonfile.exe* utility, even those that do not yet support communicating device configuration and status to RVONedit. RVONedit does NOT support download of the ADAM2 bootcode, or any of the flash file system utility programs.

2. You will need to **browse**, using the browse button, for the correct firmware to use. By default, RVONedit looks in the Firmware folder in the application directory (C:\TELEx\RVONedit\FIRMWARE).

NOTE: The default firmware directory can be changed, see "How to set a default folder in RVONedit" on page 72.



FIELD	DESCRIPTION
Select Device Type drop down list	Use the **Select Device Type** drop down list to select the RVON device for firmware upgrade. 1. From the Select Device Type drop down list, select the **RVON device** that you want to upgrade the firmware. The choices are: • *RVON-8* • *RVON-1* • *RVON-I/O* • *RVON-C*
Change User button	Use the **Change User** button to open the Change User screen (page 24). Use the change user button if your current user profile does not have Download Privileges and you want to switch to a user profile that allows for downloading.
Devices to Download columns	The **Devices to Download** columns display the following information. *IP Address*: Displays the IP address of the RVON device (for example, 10.2.210.21). *Description*: Displays the textual description of the RVON device (for example, slot 1). *Firmware Version*: Displays the version of firmware that currently resides on the RVON device.

FIELD	DESCRIPTION
	Status: Displays the status of the download of the firmware to the RVON device. You will see 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 File field	The **Select Firmware File:** drop down list displays the firmware for download. If you have downloaded different versions of the firmware and downloaded them to other RVON devices, then you will be 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	Select the **Auto-close after successful download** check box if you want the Download Firmware window to automatically close when the firmware download is complete. Otherwise, clear the check box to keep the window open after the firmware download.
Begin Button	Click **Begin** to start the firmware download.

CHAPTER 3

Application Tasks

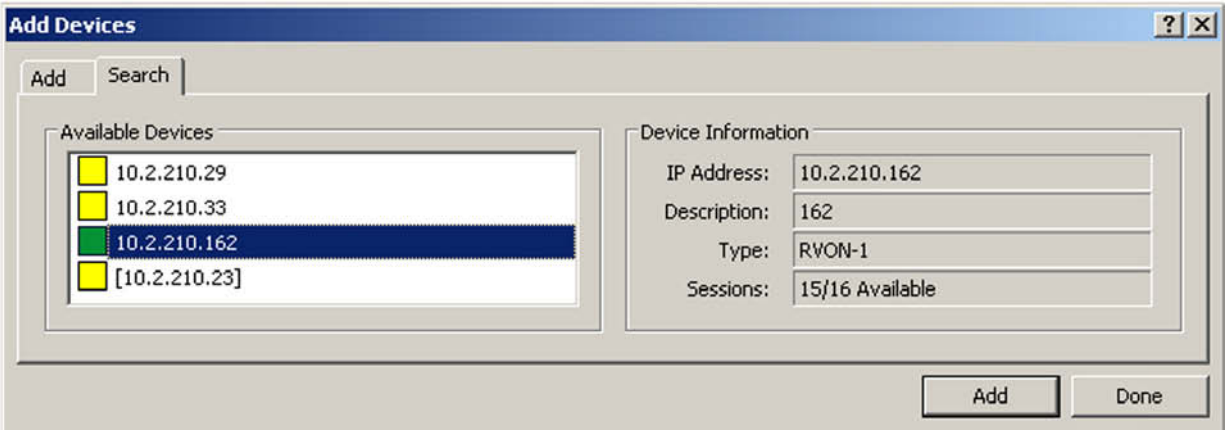
In this chapter you will find many setup and maintenance tasks that you may only perform once or perform on a daily basis:

How to 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 by manually entering the IP (Internet Protocol) Address.

To add devices to RVONedit, do the following:

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



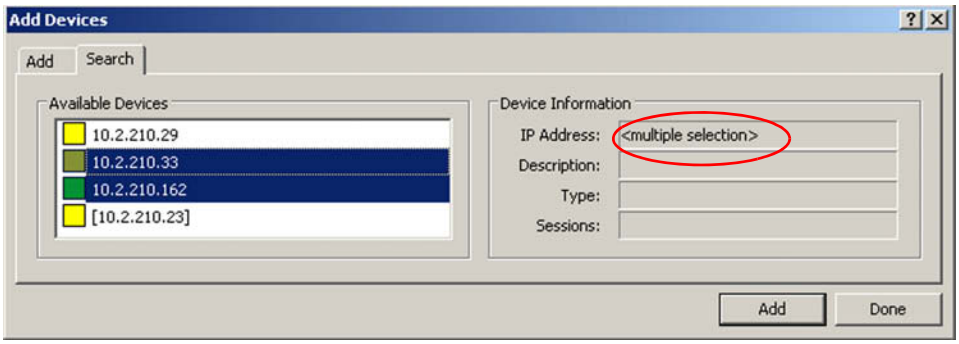
To **Search for the RVON devices**, do the following:

1. Verify you are on the **Search** page of the Add Devices dialog.
2. 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, select (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.

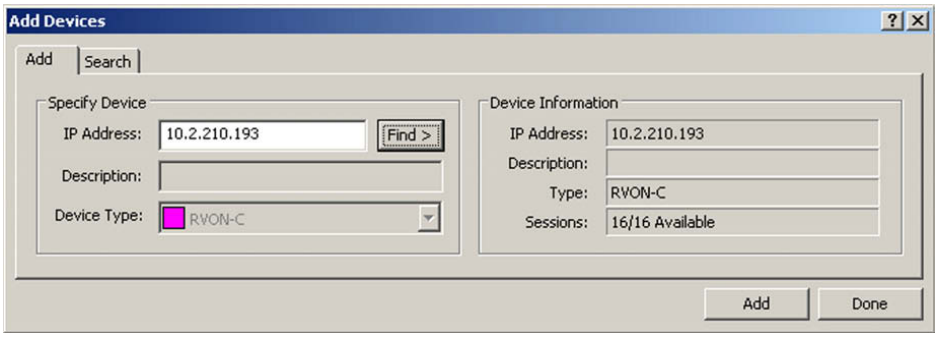
Notice in the IP Address field under Device Information on the right-hand side of the application pane, you can see *<multiple selections>*.



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

To **Add the Device Manually**, do the following:

1. Click the **Add** tab.
   The Add dialog appears.



2. 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.

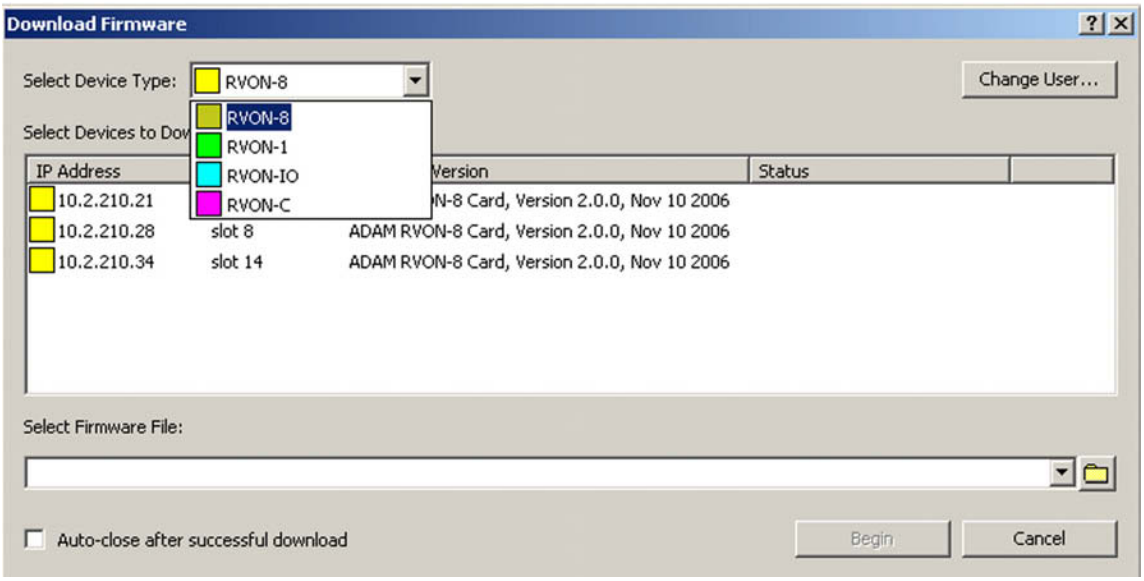
3. Click **Add**.
   The Add Device screen remains open and the RVON device is added to the Catalog view on the main screen.
4. Repeat **steps 1-3** to add more devices manually.
5. Once finished, click **Done**.
   The Add Devices dialog closes.

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 straight 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 screen appears.
2. From the Device Type drop down list, select the **type of device** to be upgraded with firmware (for example, RVON-8, RVON-1, RVON-I/O, or RVON-C).



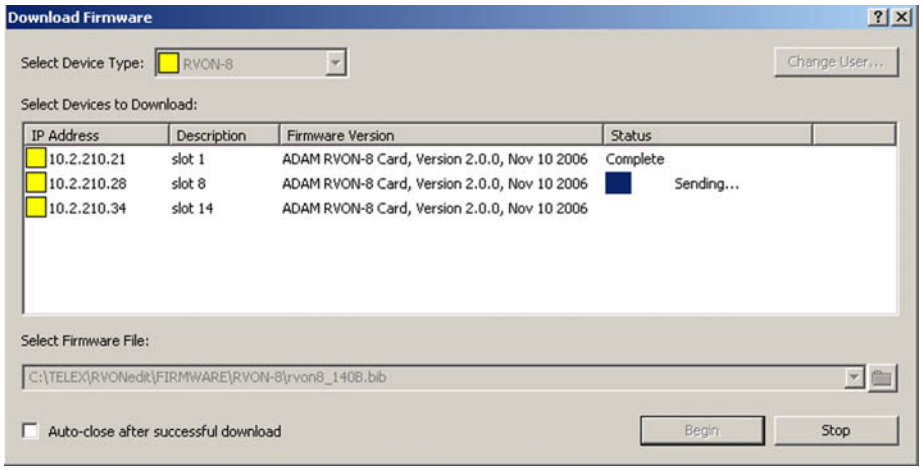
3. From the Select Devices to Download: list, select the **devices** to which you want to apply the firmware.

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

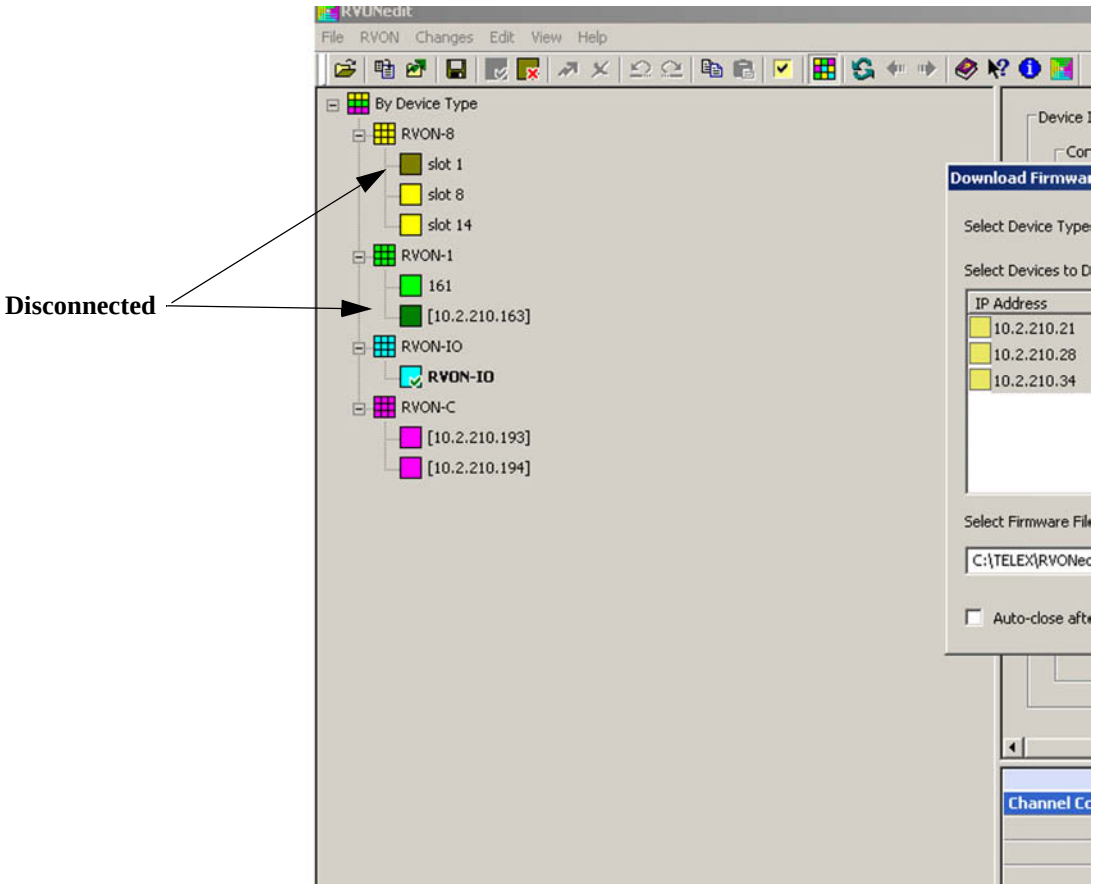
- To select a block of devices, select (highlight) the first device, press and hold **Ctrl+Shift**, and then scroll and select the **last device** in the list.
  All of the devices are selected.
- To select multiple devices that are not in a block, press and hold the **Ctrl** key, then select the devices 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** checkbox, if you want to close the Download Firmware screen immediately after a successful download.
6. 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.



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.

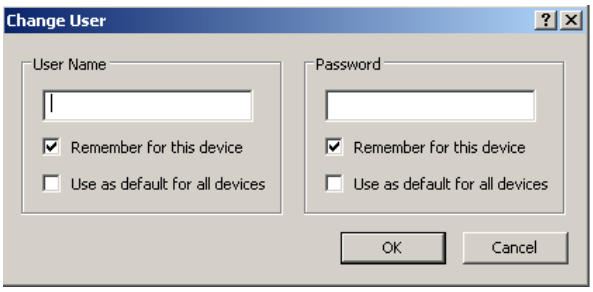


7. Repeat steps **1 through 6** to download firmware to other RVON devices, otherwise click **Done**.

How to Change User

To change user in RVONedit, do the following:

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



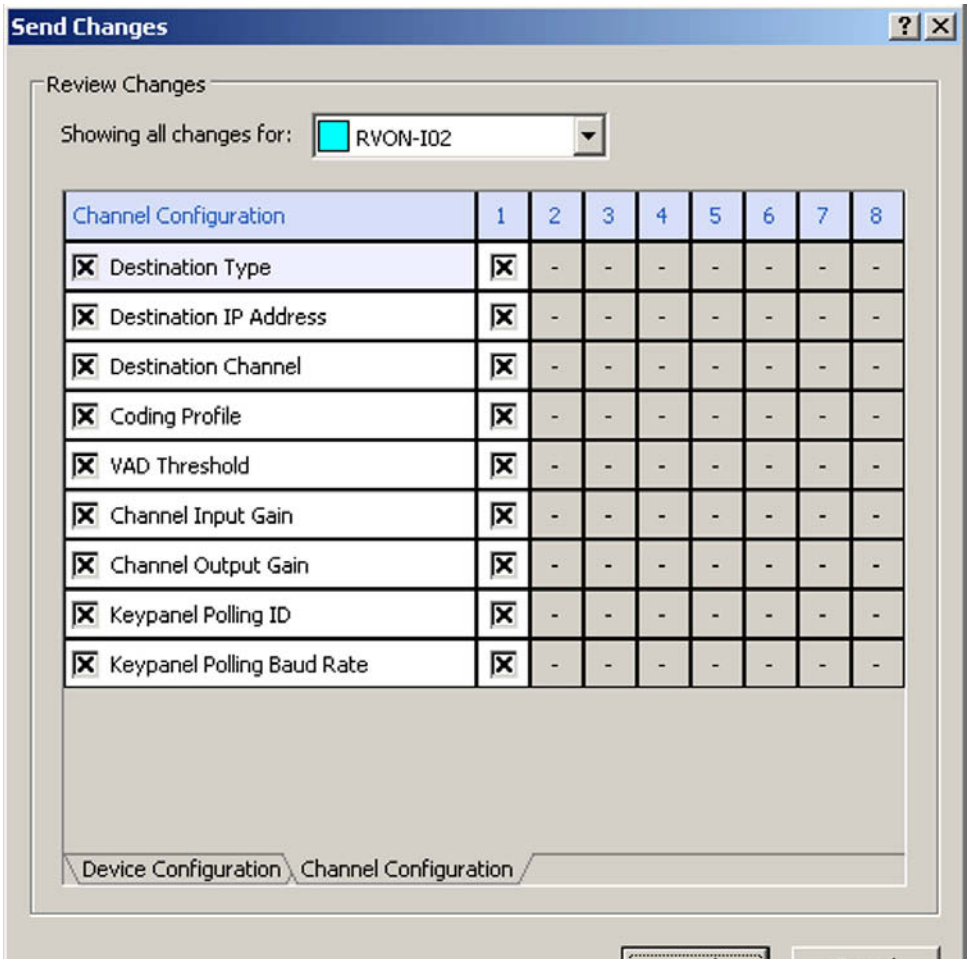
2. In the User Name field, enter the **User Name** of the profile you want to log on to RVONedit.
3. Select the **Remember for this device** checkbox, if you want the device to remember this user name for this device.
4. Select the **Use as default for all devices** checkbox, if you want this to be the default user profile for all devices in the catalog.
5. In the Password field, enter the **password** for the profile you are logging onto RVONedit.
6. Select the **Remember for this device** checkbox, if you want to the device to remember the password for this user profile.
7. Select the **Use as default for all devices** checkbox, if you want this password to be the default for all devices in the catalog.

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.

To send changes to the device, do the following:

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



2. On the Send Changes screen, **review** the changes you are about to send to the device.
3. Make any **modifications** to the Send Changes screens that are 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.

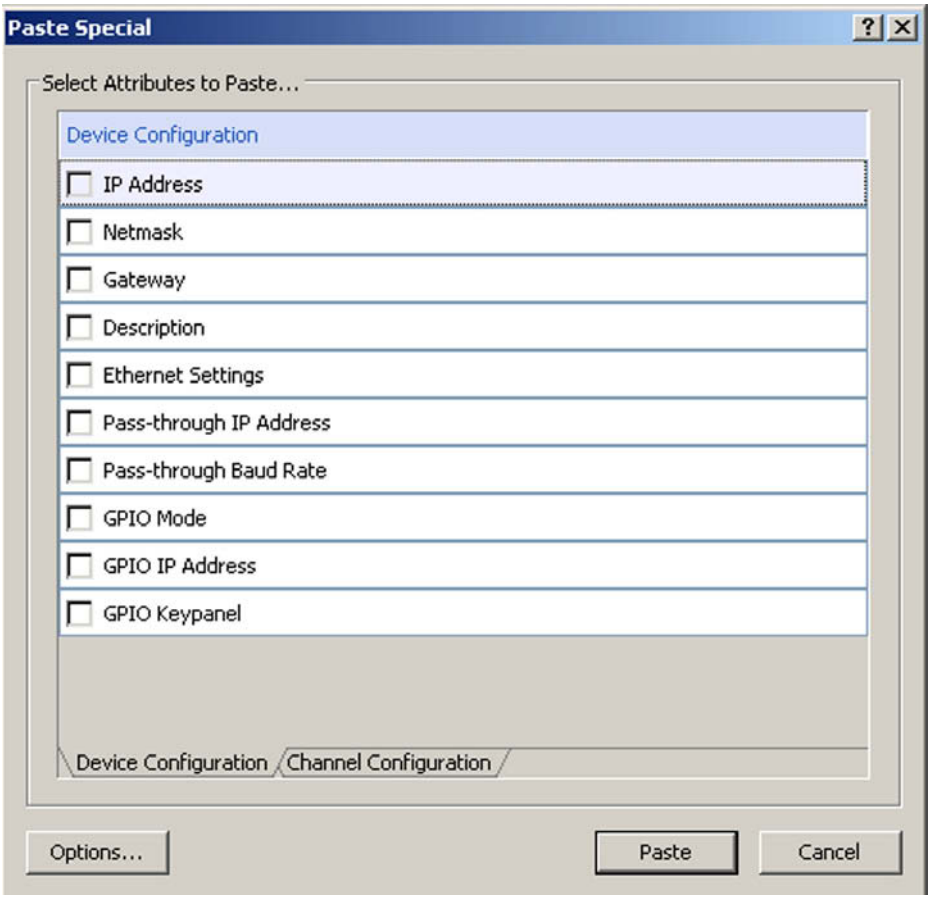
Paste Special allows you to copy entire device configuration settings of a device and then select specific configuration settings to paste to a new device.

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 dialog appears.



5. Clear the **checkboxes** 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

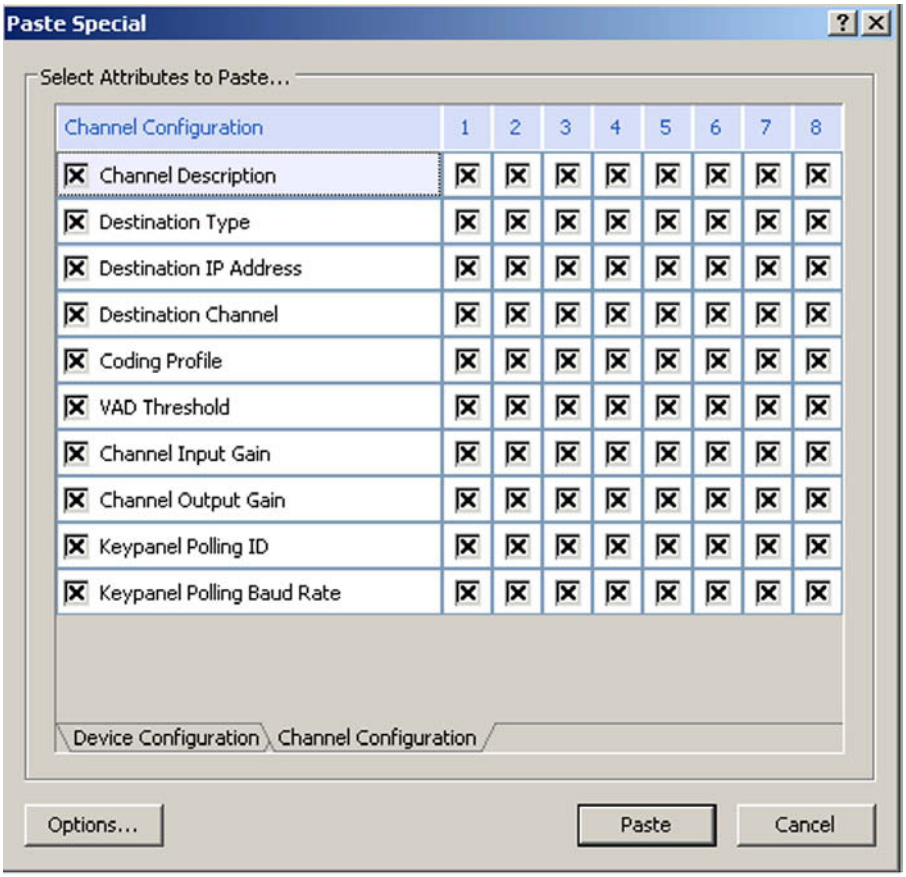
Paste Special allows you to copy channel configuration settings of a device and then select specific channel settings to paste to a new device.

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 dialog opens.



5. Clear the **checkboxes** 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 dialog, 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:

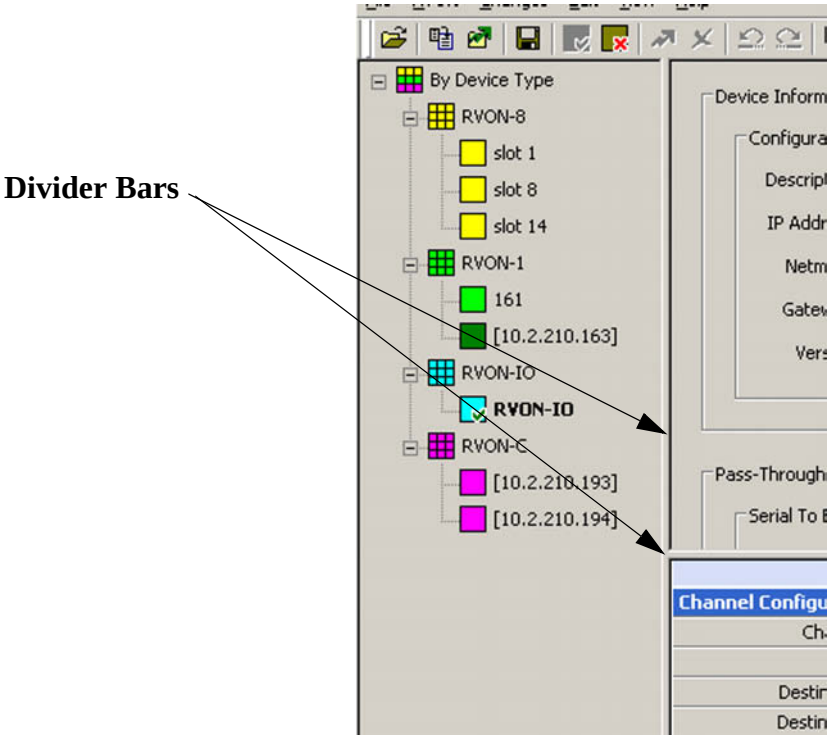
- ***Device Catalog Configurations*** - You can set how you see the devices in the catalog (By Type or All Devices). You can also enable using the Device Description instead of the IP Address in the Device Catalog.
- ***Row and column adjustments***
- ***Show/Hide Informational Areas*** - You can show 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.

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



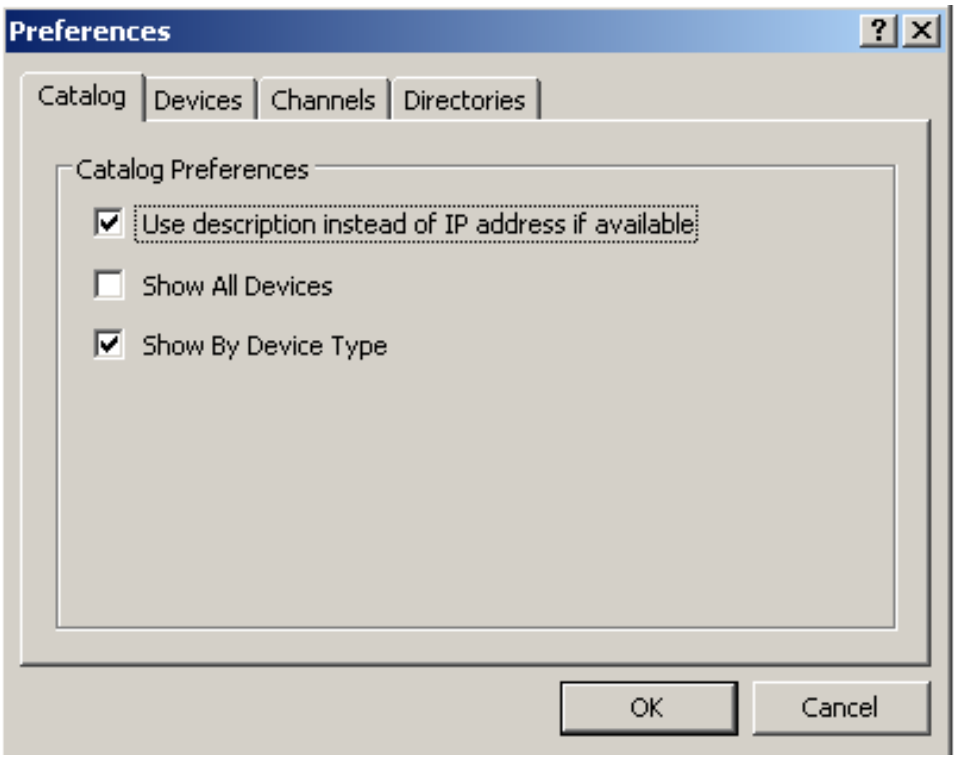
- From the View menu, select **Device Catalog**.
  When a check mark is beside Device Catalog, the catalog is showing. If there is no check mark present, the catalog is hidden.
- Press **Ctrl+T** on the keyboard. to hide the Device Catalog.
  Press Ctrl+T on the keyboard again to open the Device Catalog.

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 dialog appears.
2. Click the **Catalogs** tab.
   The Catalog page appears.



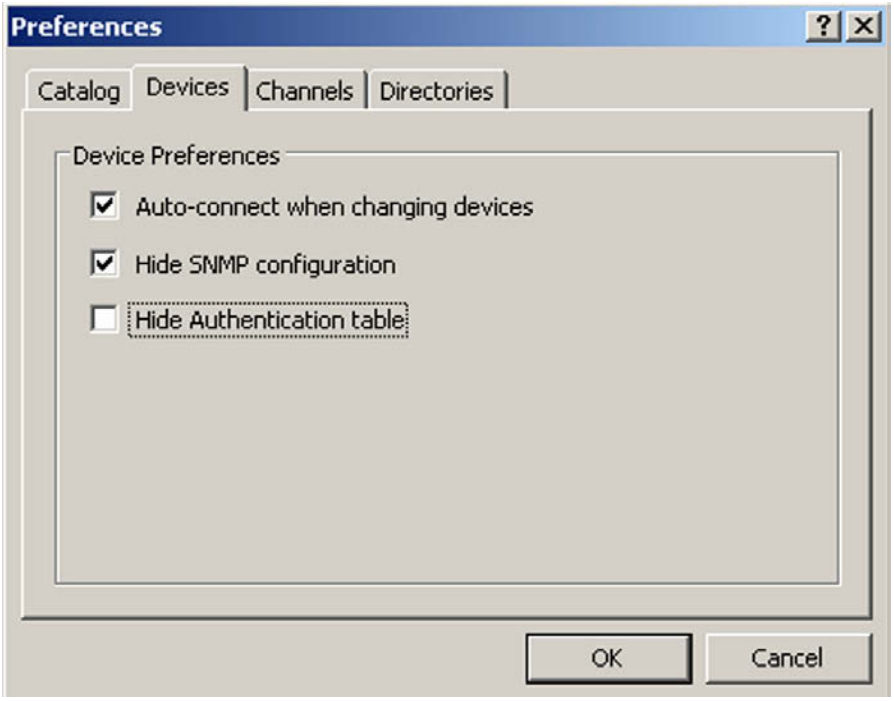
3. Select the **Use description instead of IP address if available** checkbox.
4. Click **OK**.

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 dialog appears.
2. Click the **Devices** tab.
   The Devices page appears.



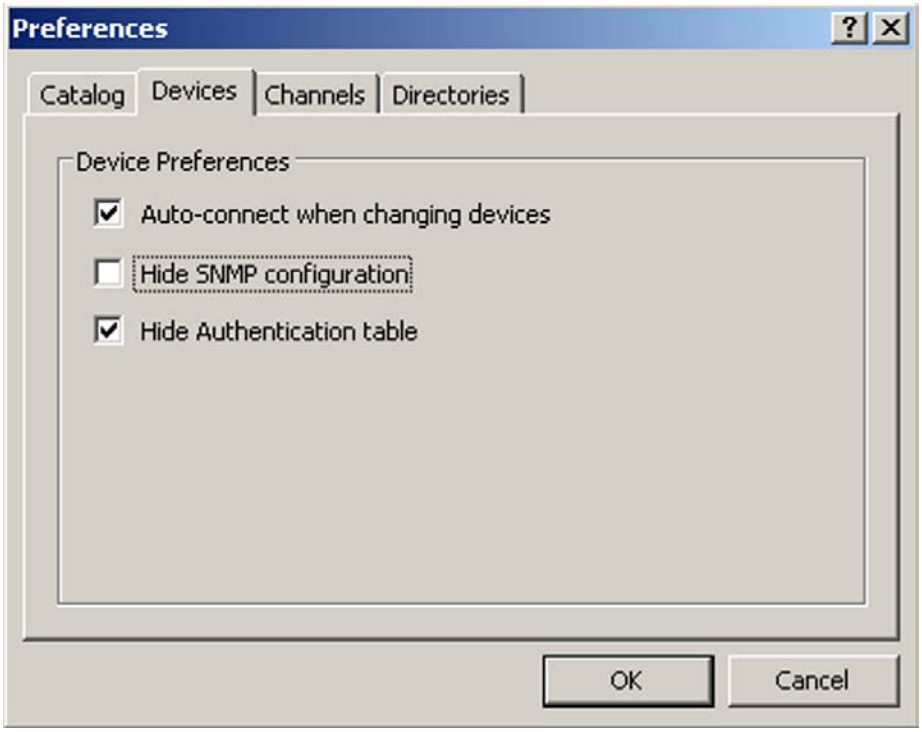
3. Select the **Hide SNMP Configuration** checkbox.
4. Click **OK**.

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 dialog appears.
2. Click the **Devices** tab.
   The Devices page appears.

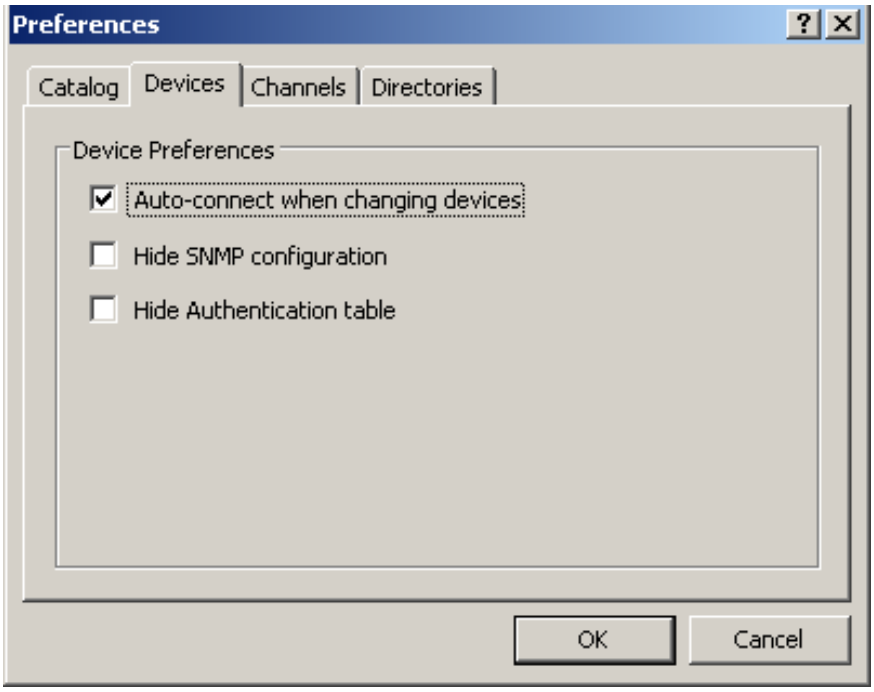


3. Select the **Hide Authentication Table** checkbox.
4. Click **OK**.

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.

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



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

How to Save a Configuration File

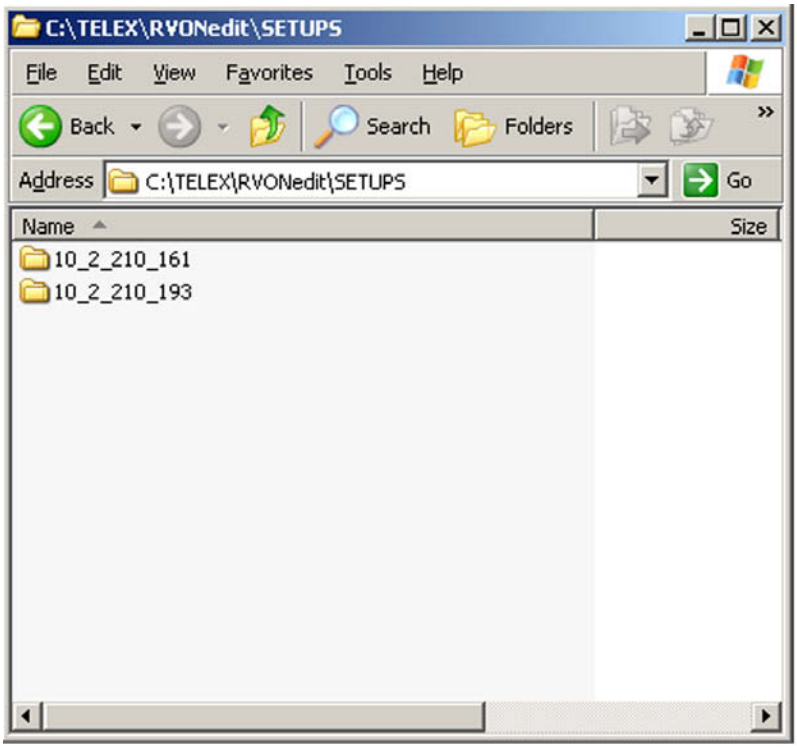
Once you have made changes to a device's configuration (both device and channel), you will want to save the configuration file for later use or to compare with later configuration files.

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 72.
2. Click **Save**.

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 73.

To load a setup file, do the following:

1. From the File menu, select **Load...** or click the load icon  .
   The Load dialog 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.

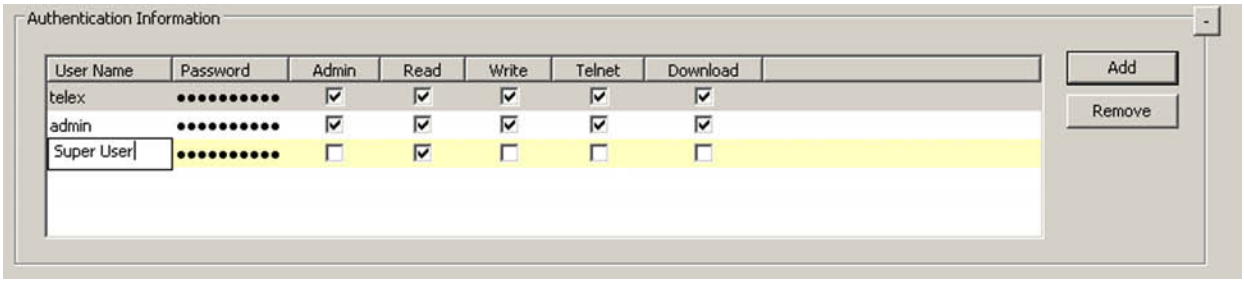
4. From the Changes menu, select **Send** (F10) or click the **send changes** icon  .
   OR
   Save the configuration file.

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" 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** checkboxes 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:

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

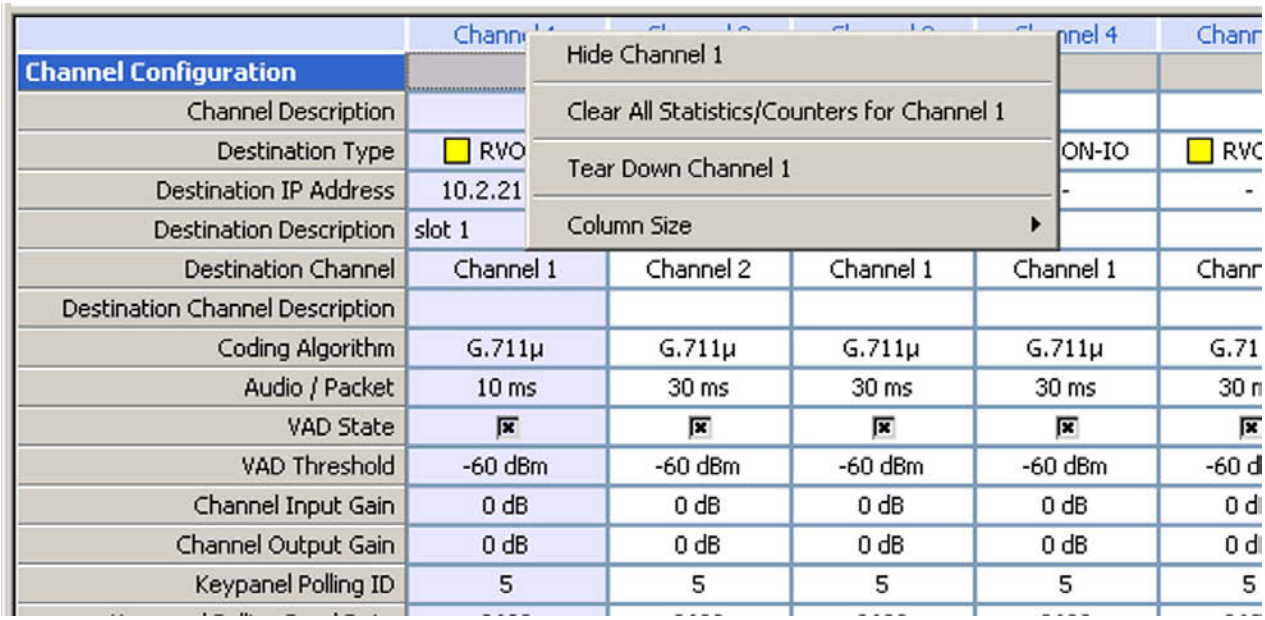
To Expand a section that has been collapsed, do the following:

1. 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:

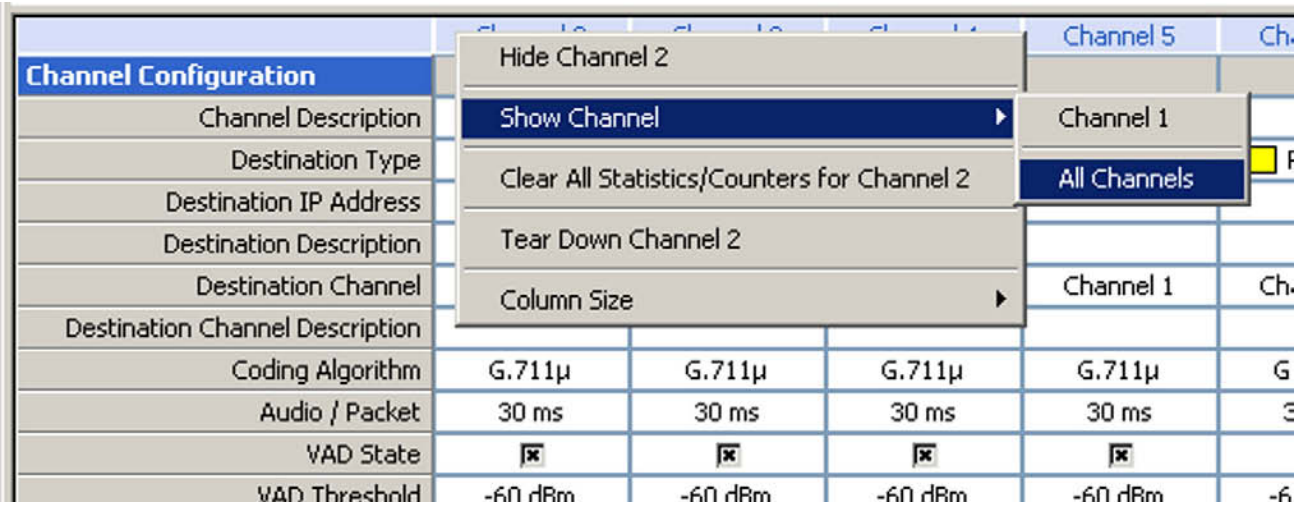
1. Right-click the **channel column header**.
   A context menu appears.



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.

How to Undo, Redo, and Abort Changes

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 GPI/O 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

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

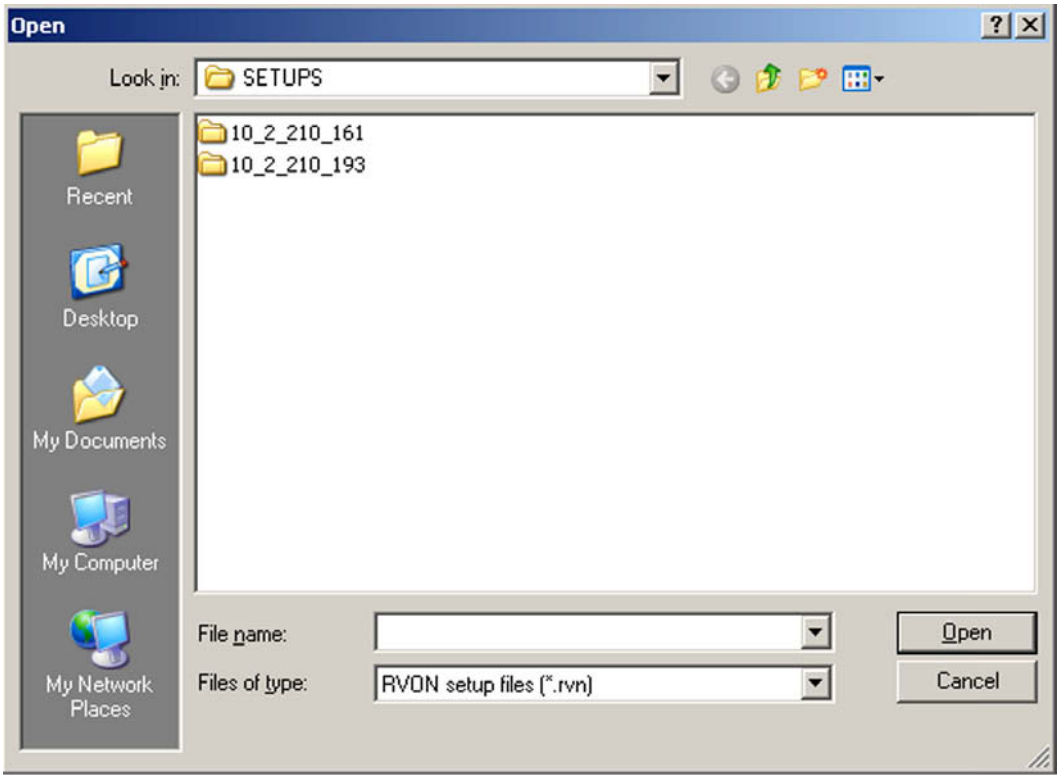
How to Open a File

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 dialog 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 dialog 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 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 58.

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.

The fields where this action will work are Destination IP Address in the Channel Configuration Grid and the Tx IP Address in the Pass-Through and/or GPIO section.

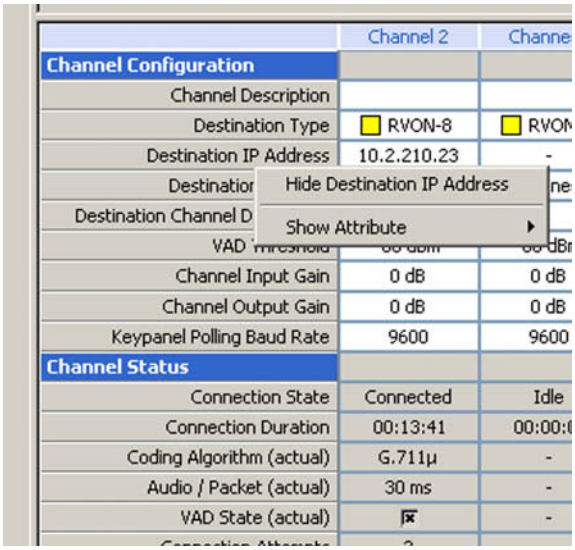
NOTE: The destination device must be configured in RVONedit for this feature to work.

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:

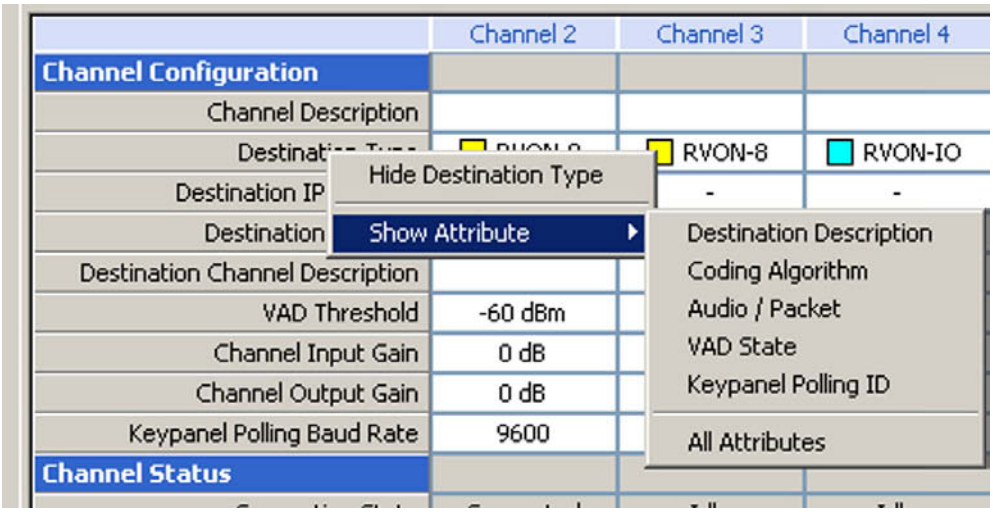
1. Right-click the **row** you want to hide.
   A Hide <specified row> row menu item appears.



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.



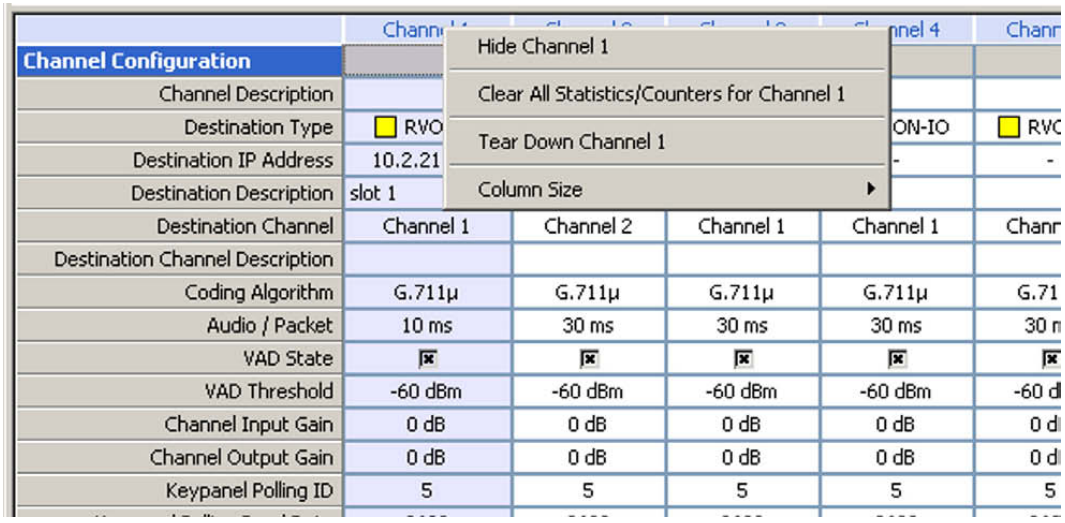
2. You can either select **individual rows** to show or select **All Attributes** to restore all of the rows.

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.

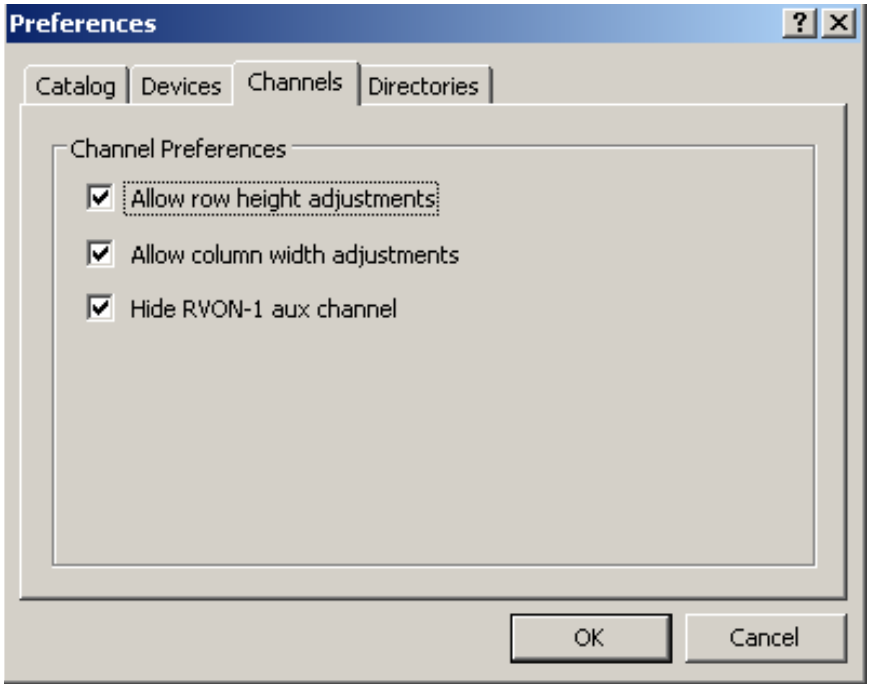
To tear down a channel, do the following:

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.*).



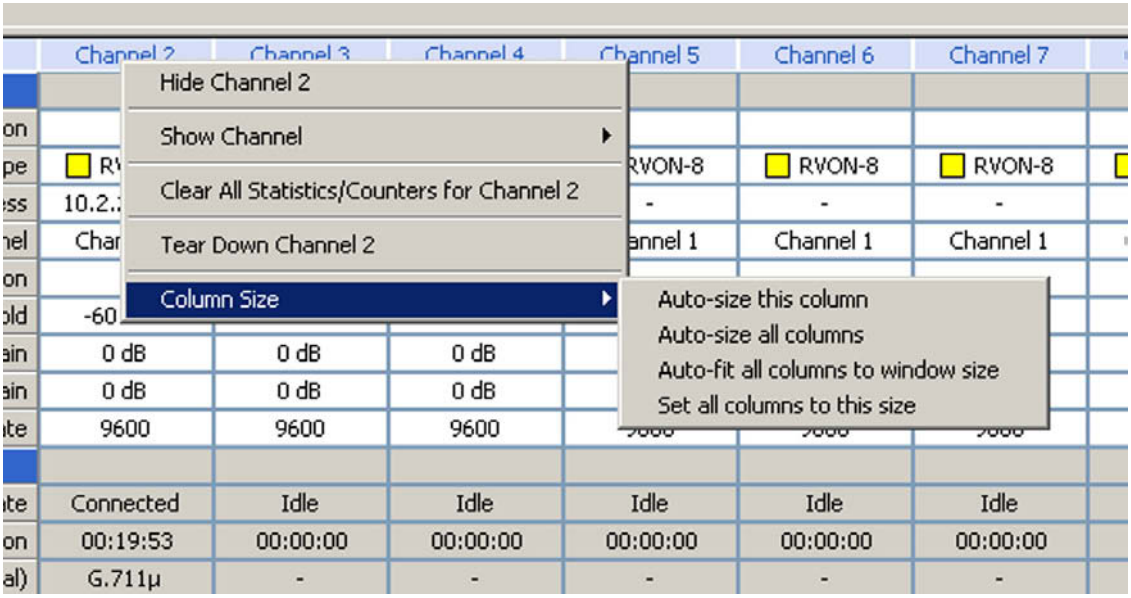
How to Set the Column Size in the Channel Configuration Grid

To Set the Column Size, you must have the *Allow column width adjustments* checkbox selected. You can find this option on the Channels page of the Preferences Dialog (**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.

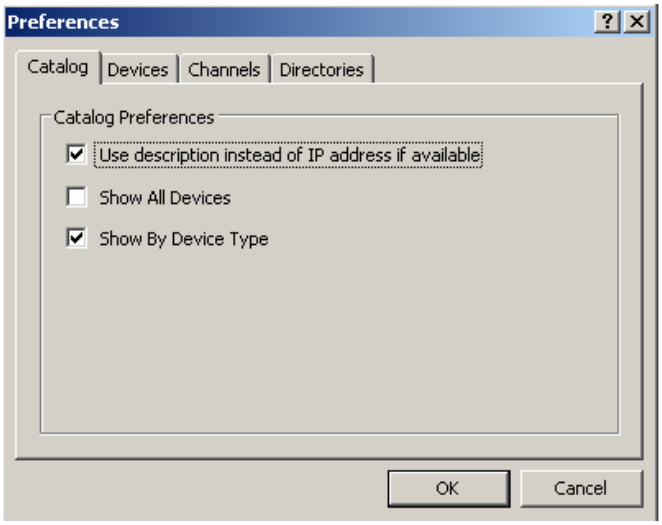
NOTE: As always, you can manually adjust individual columns. Click and drag the outside edge of the column you want to resize.

How to set a default folder in RVONedit

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

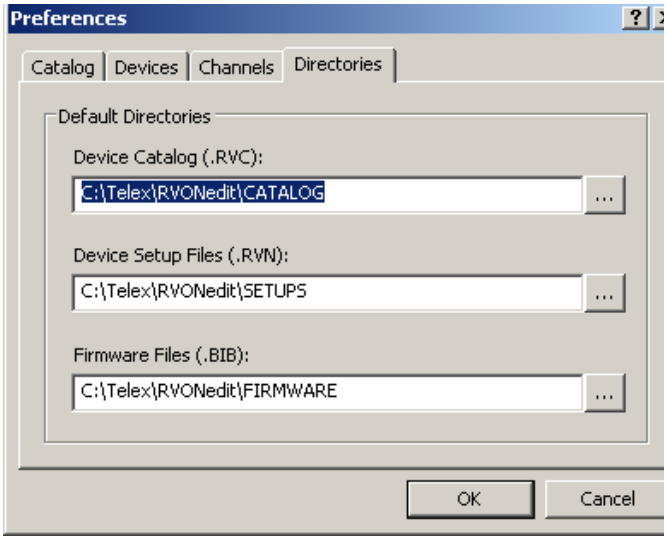
To change the default folder for RVONedit, do the following:

1. From the Edit menu, select **Preferences**.
   The Preferences dialog 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.

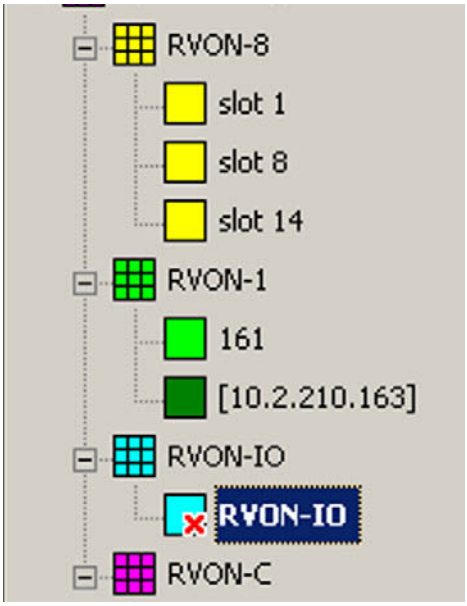
After a file has been loaded, you can modify the file before you sent it to the device using the Send Changes command.

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.

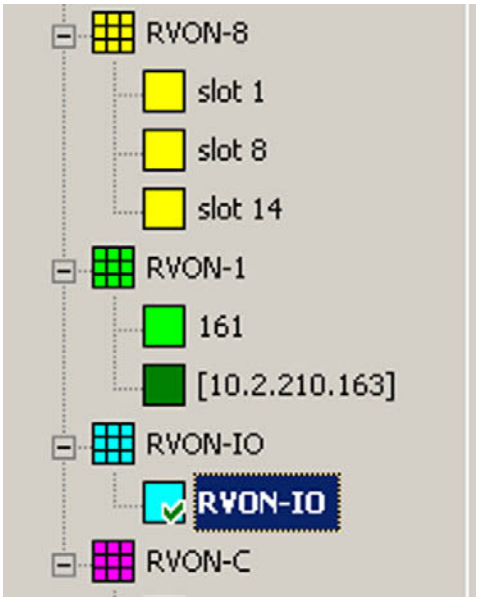
How to manually connect an RVONedit device

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 screen appears, prompting for you for a user name and password.*



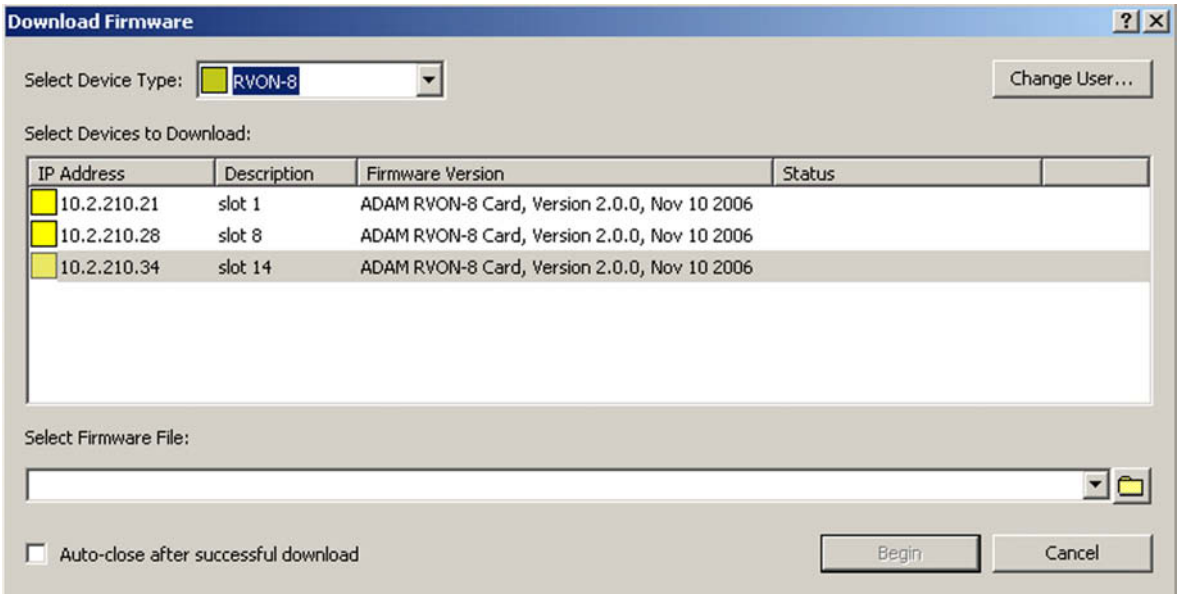
How to Update Older Version RVON Devices Using RVONedit

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.

RVON-8	= version 1.2.0 or higher
RVON-1	= version 1.1.0 or higher
RVON-C and RVON-I/O	= version 1.0 or higher

To update older version RVON devices, do the following:

1. From the RVON menu, select **Add**.
   The Add devices dialog appears.
2. Click the **Add** tab.
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 screen 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 screen 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.

NOTES