RVON I/O Serial Set-Up
Using Hyper Terminal

PRELIMINARY

rvon I_O serial.doc
8/16/06
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RVON I/O Serial Set-Up Using Hyper Terminal

Not Intended As a Substitute for the Telex RVON I/O User Manual

System Requirements

Before you install the RVON-I/O, verify the following devices are updated:

Product	***Firmware Ver Required***
RVON-I/O	*1.0.0 or higher*
RVON-1	*1.1.0 or higher*
RVON-8	*1.2.0 or higher*
Master Controller	*9.22.0 or higher*
KP-32	*2.0.2 or higher*
AZedit	*2.08.0 or higher*
VKP	*1.6 or higher*

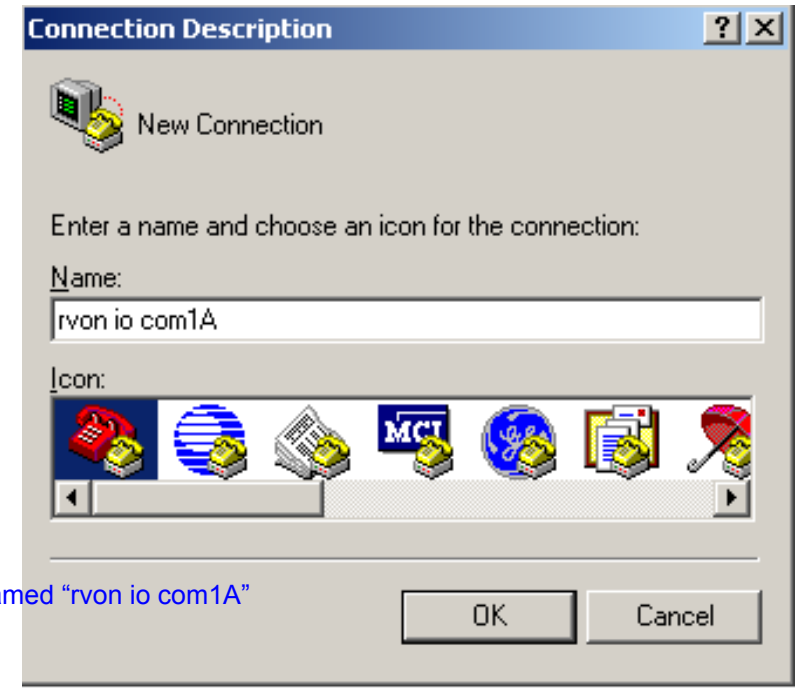
To access an RVON I/O for Serial setup, the following is required:

Null Modem Serial cable.
USB to Serial converter for those computers without hard Serial ports.

Note: com ports may change from time-to-time when using USB/Serial converters. Windows Device Manager may have to be used to determine what COM port the USB device is on and a new profile may need to be created.

For editing, the RVON I/O must have **dip switch #2** in the "**closed**" (down) position, and then power cycle. After editing the RVON I/O, type "**activate**" to send changes and **return dip switch #2** to the "**open**" (up) position and power cycle the RVON again.

To run Hyper Terminal from Windows go into <*programs\accessories\communications\hyper terminal*>.
Make a new connection should pop up. Make a new profile from this screen by naming it. Additional profiles can be made using different com ports.



This profile is named "rvon io com1A"

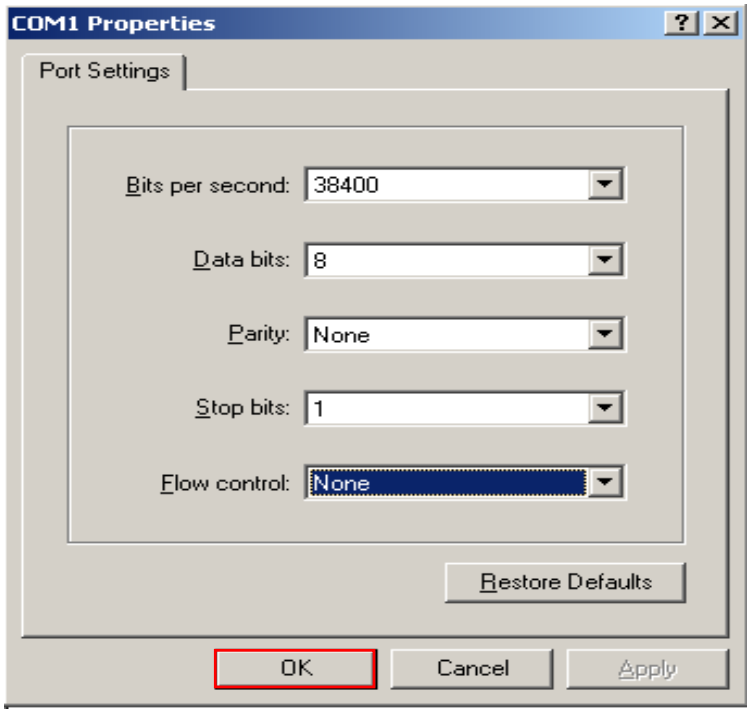
Next in the “Connect using” window, select the proper com port (in this case com 1). Then click ok. Recognized com ports can be determined under *System Properties\Hardware\Device Manager*.

Next, under Port Settings, set the com port parameters to read as follows

Bits per second = 38400
Data bits = 8
Parity = none
Stop bits = 1
Flow control = none

Then click ok.

This will open the Hyper Terminal command screen on next page.



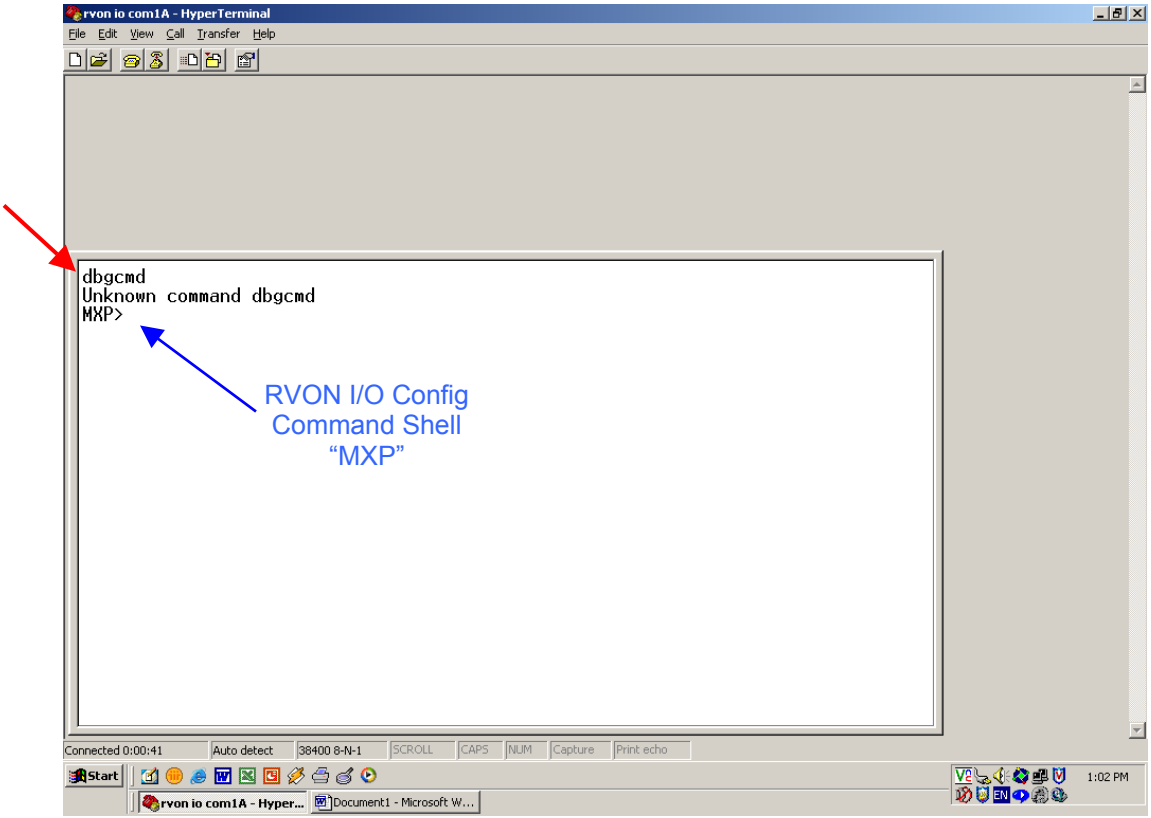
Entering Debug Command Mode

In the clear Hyper Terminal screen type <dbgcmd>. This will get you into the command shell “MXP”.

Now you can enter the Rvon I/O commands listed in the “show” & “set” command table.

NOTE: If you experience constant scrolling of polling messages, see page 19, “SPY” Commands.

Hyper Terminal Command Screen



When you eventually exit the edit session, you can save your profile via the file save command in the Hyper Terminal File pull-down for later use.

To exit Debug, click on File, and then Exit.

To recall a saved profile run Hyper Terminal, cancel out of New Connection & from the File pull down, select Open. Now select the profile desired and double click on it. At the debug command prompt (MXP) type in the desired RVON command to begin.

RVON I/O Serial Setup

This paper pertains to programming the RVON I/O via Hyper Terminal, NOT Telnet.

The main difference between the two procedures is the Serial setup. The command structure is the same used in Hyper Terminal as Telnet. The advantage to Hyper Terminal setup is that you do not need a network, having to know the RVON I/O's IP address or a password.

DIP Switch Settings

DIP Switch 1:	**RVON I/O Mode**
Default Position:	**OPEN**
Switch Positions:	OPEN = Local Mode CLOSED = Remote Mode
Description:	There are two modes in which the RVON-I/O can run: LOCAL and REMOTE mode. In **LOCAL** mode, keypanels are directly connected to the RVON-I/O. For example, a KP-32 is connected Serially to the RVON-I/O which is connected via Ethernet to an RVON-8 in the ADAM system. The connection between the KP-32 and the RVON-I/O is called LOCAL. In **REMOTE** mode, a digital keypanel (such as a KP-32 with RVON-1) is connected to an RVON-I/O via Ethernet, which is then connected to an ADAM CS, Zeus, Cronus or an ADAM with AIO cards via Serial audio cross-over cables.
DIP Switch 2:	** **Serial Debug Shell** (**Serial setup via Hyper Terminal**)
Default Position:	**OPEN**
Switch Positions:	OPEN = Serial Pass-through port enabled. **CLOSED** = Serial Debug Shell enabled, allowing Hyper Terminal Setup.
Description:	The Pass-through Port is used to send Serial port data over Ethernet. The Serial Debug Shell provides the user access to a command shell (this is similar to Telnet, except the connection is made through a Serial cable).
Special Note:	The IP configuration on I/O Port 8 allows users to connect and configure the IP Address of the RVON-I/O using a compatible keypanel (KP-32, KP-632, KP-832, and KP-812) connected Serially to I/O Port 8 on the back of the RVON-I/O. IP Configurations are made from the keypanel service menu. Note, you must have keypanel firmware version 2.02 or higher to configure the IP Address.

DIP Switch 3:	**Telnet Shell**
Default Position:	**OPEN**
Switch Positions:	OPEN = Telnet Shell enabled
	CLOSED = Disabled, user name and password are set to default.
Description:	Using telnet, you can set permissions and configurations within the RVON-I/O application. See Table , “RVON-I/O Command Table,” on page 30 of User Manual.
DIP Switch 4:	**Boot Downloader**
Default Position:	**OPEN**
Switch Positions:	OPEN = Boot Downloader is disabled (runs the native flash program)
	CLOSED = Boot Downloader is enabled (runs the boot downloader)
Description:	Switches to the boot downloader flash program. This program is sent with the RVON-I/O in case the native flash program becomes corrupt.

BASIC INSTALLATIONS

The RVON-I/O can operate in one of two modes; LOCAL mode or REMOTE mode. When operating in **LOCAL** mode, keypanels are directly connected to the RVON-I/O. For example, a KP-32 is connected Serially to the RVON-I/O, which is connected via Ethernet to the RVON-8. The KP-32 RVON-I/O is in LOCAL mode. When operating in **REMOTE** mode, a digital keypanel (such as KP-32 with RVON-1) is connected via Ethernet to an RVON-I/O, which is then connected to an intercom.

On the following pages, installation for *Basic **Local** Mode, **Remote** Mode,* and ***Trunked*** systems will be explained.

NOTE: When using Zeus with RVON-I/O you must **uncheck** the "Configure on-board GPI/Os in FR9528 mode" in Intercom Configuration pull down.

BEFORE you configure your system, **SAVE** your current setup file. If you change this setting after you configure your panels, it will cause the Zeus to perform a “first birthday” and all prior configurations will be lost and must be re-loaded.

Types of Systems

Local Mode

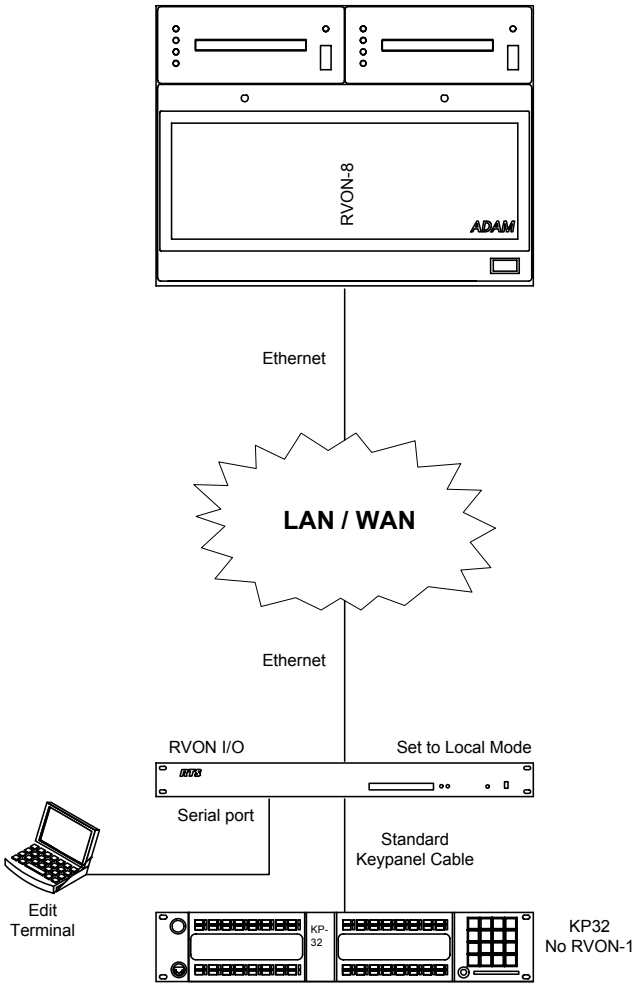


Figure 1. Local Mode – Regular keypanel connected directly to RVON I/O via analog port and to ADAM via RVON-8 card

RVON 1.vsd

Remote Mode

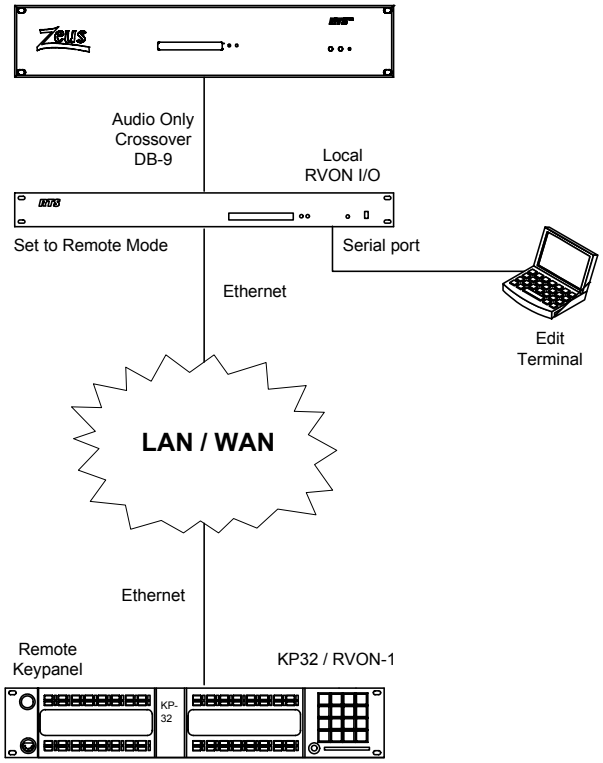


Figure 2. Remote Mode: Keypanel connected to RVON I/O via Ethernet to matrix analog ports

Rvon 2.vsd

Local & Remote Mode

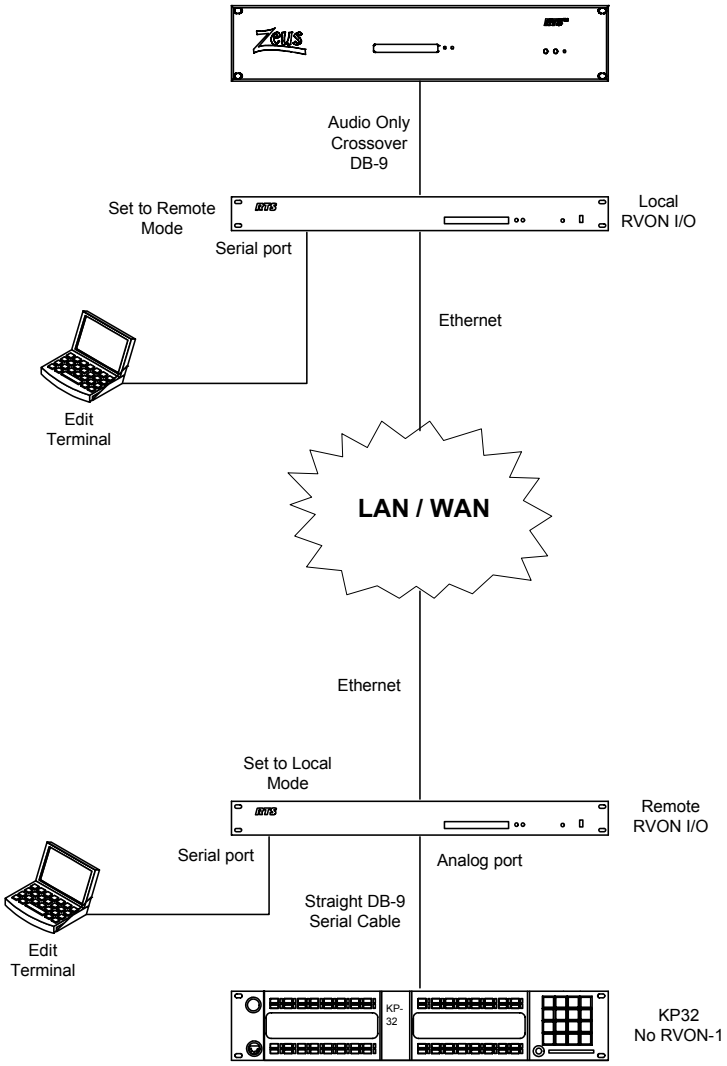


Figure 3. Local and Remote Mode - The lower portion of the graphic shows a local setup (the keypanel is directly connected to the RVON-I/O), while the upper portion of the graphic shows a remote setup. The RVON-I/O works similar to an audio converter box.

In the lower portion of the graphic, the audio coming from the KP-32 going towards the RVON-I/O will be changed from analog to digital audio (and vice versa).

The same holds true for the upper portion of the graphic, where the audio coming from the RVON-I/O going towards the Zeus is converted to analog.

Rvon 3.vsd

Trunking with RVON I/O (non-intelligent)

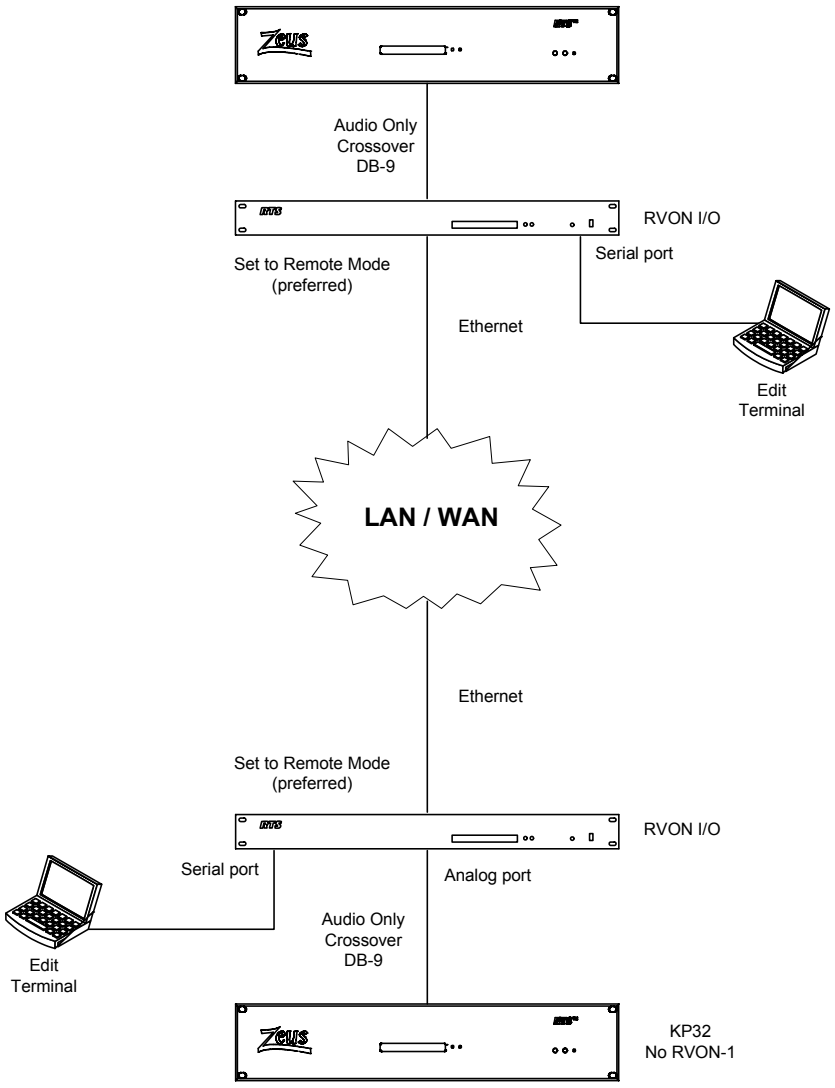


Figure 4. Trunking with RVON-I/O - When you trunk two intercom systems together using two RVON-I/ O's, you can configure one as Remote and the other as Local. However, remote to remote setup is the preferred system setup for trunking.

NOTE: This represents non-intelligent trunking. No tally support without Trunk Master.

Rvon 4.vsd

Serial Pass-Through Trunking

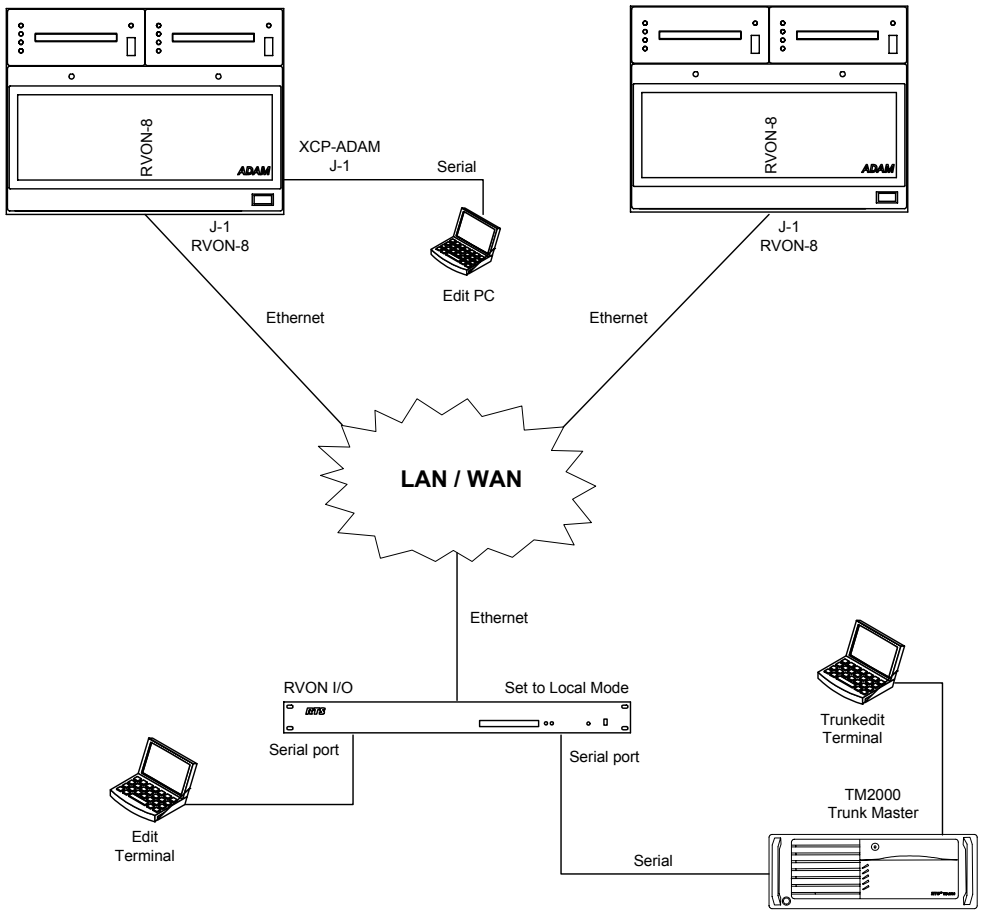


Figure 5. Serial Pass-Through Trunking Connection

RVON 5.vsd

RVON Show and Set Commands

"SHOW" COMMANDS

dbgcmd

MXP>**show**
Displays ALL Show Commands:

MXP>**show rvon**
Displays RVON I/O Card Configuration:

IP Address:	***192.168.0.1***	*FACTORY DEFAULT*
Netmask:	***255.255.0.0***	*FACTORY DEFAULT*
Gateway:	0.0.0.0	*FACTORY DEFAULT*
MAC Address:	00:0b:7c:80:05:e8	
VAD Threshold:	***10*** (dBm)	*FACTORY DEFAULT*
Version:	ADAM RVON-IO Card, Version 1.0.0, Mar 23 2005	
RVON-IO:	***Local Keypanel Mode***	*FACTORY DEFAULT*

MXP>**show channel X** (shows what the Rvon I/O channel is looking for)
Displays RVONI/O Channel X Parameters for (chans 0 - 7):

Destination IP Address:	X.X.X.X
Destination Type:	X (0=RVON-8, 1=RVON-1, 2=RVON I/O)
Destination Channel:	X (chan 0-7, KP32 = 0)
Channel Coding Profile:	**27** (Codec) *FACTORY DEFAULT*
Channel Input Gain:	X
Channel Output Gain:	X

MXP>**show Serial** (Serial port / Serial pass-thru)
Displays RVON I/O Utility Serial Port Configuration:

Serial Mode:	X (0=pass-thru, 1=UIO256)
Serial IP:1:	X.X.X.X
Serial IP 2:	X.X.X.X
Serial Baud:	9600

"SET" COMMANDS (set DIP switch #2 in CLOSED position, power cycle)

MXP>**set rvon**
RVON I/O CARD
set rvon ip_addr X.X.X.X
set rvon netmask X.X.X.X
set rvon gateway X.X.X.X
set rvon user <username> (***telex***) *FACTORY DEFAULT*
set rvon password <password > (***password***) *FACTORY DEFAULT* (8-40 characters)>
set rvon vad_threshold XX (dBm -20 to 10)

MXP>**set channel X** (sets what Rvon I/O chans 0-7 are *looking for*)
RVON I/O CHANNEL 0-7
set channel X dest_ip X.X.X.X
set channel X dest_type X (0-2), 0=**RVON-8**, 1=**RVON-1**, 2=**RVON-I/O**
set channel X dest_chan X **use 0 for KP32's**
set channel X chan_codec X (0 – 27) **VAD only works in G.711**
set channel X input_gain XX (-14 to +14 dB)
set channel X output_gain XX (-14 to +14 dB)
set channel X onhook
set channel X offhook

MXP>**set Serial**
RVON I/O SERIAL PORT
set Serial mode X (0=**Pass-Through**, 1=**UIO-256**)>
set Serial ip_addr X.X.X.X
set Serial ip_addr_2 X.X.X.X
set Serial baud XX (50-115000)>

MXP>**set panel**
KEYPANEL RELATED *(polling)*
set panel X poll_id X (1-8)> **poll i.d. relates directly to actual real matrix port number** (1 – 8, 0 = no response)
i.e. port 25 = 1, port 32 = 8, etc. This does not follow the 0 – 7 convention.
set panel X baud XXXX (9600 or 76800)

Set Panel sets the address at which the RVON-I/O will respond to polls sent by the Intercom. If the RVON-I/O is connecting to a Zeus or AIO-8, you must set a Panel Poll ID. The **panel poll ID** is the data port address from which it communicates. Also, the panel **poll ID is only used in Remote Mode**.

Because the Zeus and AIO-8 share their data across 8 ports, they need to differentiate ports by using addresses. Therefore, to communicate with the right port you need to communicate with the specified address of the matrix port.

EXAMPLE:
2 RVON-I/O units are connected to the same Zeus System (RVON-I/O A and RVON-I/O B)

RVON-I/O A is connected to Zeus ports 1 and 2 on RVON-I/O ports 1 and 2.

RVON-I/O B is connected to Zeus ports 3 and 4 on RVON-I/O ports 1 and 2.

Because the Zeus cannot differentiate either of the RVON-I/O ports 1 and 2, it is necessary to adding an address to the ports:

RVON-I/O (A)	port 1 set to 1 (set panel 0, poll ID 1)
	port 2 set to 2 (set panel 1, poll ID 2)
RVON-I/O (B)	port 1 set to 3 (set panel 0, poll ID 3)
	port 2 set to 4 (set panel 1, poll ID 4)

MXP>"**activate"** (set DIP switch #2 in OPEN position, power cycle)
(saves changes to RVON I/O)

If you are using Cronus or AIO-16 with RVON-I/O in Remote mode for keypanels, you will still have to set a panel poll ID. This is because the RVON-I/O has a default panel poll ID of 0 (zero). This must be changed to a real number.

NOTE: Make sure to set the panel poll ID to 0 when trunking in Remote Mode. Doing this will ensure the RVON-I/O will not respond to polls as a keypanel.

If the RVON-I/O in local mode is directly connected to a keypanel, the panel poll ID does not have to be set. The RVON-I/O through polling will discover the address of the keypanel.

NOTE: If you are getting audio, but cannot see the alphas on the keypanels, verify the set panel ID is set correctly.

If you connect an RVON-I/O in Local mode to an intercom Serially, you must **NOT** connect the data lines.

RVON I/O Serial Set-Up Using Hyper Terminal

Basic Local Mode Setup (set DIP switch #2 in CLOSED position, power cycle)

NOTE: Keypanel version is not relevant in Local Mode.

In **LOCAL** mode, the keypanel is directly connected to the RVON-I/O through the use of a DB-9 Serial cable.

To setup an RVON-IO local mode system, do the following

1. On the back of the RVON-I/O, put DIP switch 1 in the OPEN position (**LOCAL mode**).
2. Power ON the RVON-I/O unit.
3. Connect keypanels to the RVON-I/O (I/O ports), using a straight DB-9 (Serial cable). See page 19
4. Connect the RVON-I/O to the Ethernet.
5. Set the IP Address for the RVON-I/O (see "Set Commands" on page 11).
6. Using Serial programming (see "RVON-I/O Set Command Table" on page 11), configure the RVON-I/O as follows:

   set channel [chan] dest ip_addr (IP Address of the RVON-1, RVON-8, or RVON-I/O that is connected to the RVON-I/O)

   destjype (the type of device, either an RVON-1, RVON-8, or RVON-I/O) see Command table page 11

   dest_chan

   dest_codec (optional)

   (poll_id is only used in Remote Mode)

7. Once you are finished configuring the RVON-I/O, type ACTIVATE at the command prompt to activate the configuration setup on the RVON-I/O. (set DIP switch #2 in OPEN position, power cycle)

Basic Remote Mode Setup (set DIP switch #2 in CLOSED position, power cycle)

In **Remote** Mode, the keypanel with RVON-1 installed is directly connected to the RVON-I/O via Ethernet.

To setup a basic remote mode system, do the following:

1. On the back of the RVON-I/O, put DIP switch 1 in the CLOSED position (**Remote Mode**).
2. Power ON the RVON-I/O unit.
3. Connect the **matrix system to the RVON-I/O** (I/O ports), using a DB-9 crossover cable.
4. Connect the **RVON-I/O to Ethernet.**
5. Set the IP Address for the **RVON-I/O** (see "Set Command Table" on page 11).
6. Using Serial programming (see "RVON-I/O Command Table" on page 11), configure the RVON-I/O as follows.

   set channel [chan] (see command table)

   dest ip_addr (IP Address of the RVON-1, RVON-8, or RVON-I/O that is connected to the RVON-I/O)

   destjype (the type of device, either an RVON-1, RVON-8, or RVON-I/O) dest_chan

   dest_codec (optional)

   set panel [panel]

   poll_id (see "Set Panel" on page 12) baud ?

7. Once you are finished configuring the RVON-I/O, type **ACTIVATE at** the command prompt to activate the configuration setup on the RVON-I/O. (set DIP switch #2 in OPEN position, power cycle)

NOTE: If you do not have a RVON-1 pre-installed, the KP-32 or the KP-812 must have the RVON-1 component installed prior to Remote setup (See the RVON-1 User Manual for details).

RVON-I/O Trunk Setup

RVON I/O Serial Set-Up Using Hyper Terminal

SET DIP SWITCH 2 in the CLOSED position then power cycle.

When trunking two intercom systems over Ethernet using RVON-I/O, you can setup the RVON-I/O on both ends of the trunks in either **LOCAL** or **REMOTE** mode. However, a **REMOTE to REMOTE** mode system is the preferred way of trunking.

To setup remote mode in a trunked system, do the following:

1. On the back of the RVON-I/O, put DIP switch 1 in the **CLOSED** position (Remote Mode).
2. Power ON the RVON-I/O unit.
3. Connect the **Matrix to the RVON-I/O** (via I/O ports), using a DB-9 crossover cable. See page 8 for the different connection diagrams.
4. Connect the **RVON-I/O to Ethernet.**
5. **Set** the **IP Address** for the RVON-I/O (see "Setup IP Addresses" on page 21).
6. Using Telnet or Serial programming, configure the RVON-I/O as follows:

   set channel [chan]
   dest ip_addr (IP Address of the RVON-1, RVON-8, or RVON-I/O that is connected to the RVON-I/O)

   des_type (the type of device, either an RVON-1, RVON-8, or RVON-I/O)

   dest_chan

   dest_codec

   set panel [panel]

   poll_id (see "Set Panel" on page 12)

NOTE: *If the RVON-I/O is in Remote Mode, set the Panel Poll ID to 0, so it will not be seen as keypanel*

   baud.

   To see actual commands, see "RVON-I/O Command Table" on page 11 & 12.

7. Once you are finished configuring the RVON-I/O, type **ACTIVATE** into the command prompt to activate the configuration setup on the RVON-I/O. (set DIP switch #2 in OPEN position, power cycle)

NOTE: To set up the other side of the trunk system, repeat steps 1 through 7.

RVON Configuration

RVON cards use ports for communication audio and control packets. Because routers can be configured to block certain incoming and outgoing requests, you will need to have open the following ports in your network to allow WAN connections to and from a Network Interface Device. See Table below for the ports that need to be opened for the RVON cards to operate properly.

Ports necessary for RVON card functionality:

These ports must be open. (*responsibility of IT administrator*)

Port	Port Description
2076	UDP Call Control Signaling
2077	UDP Audio Packets
2079	UDP Telex Proprietary Signaling
2080	TCP Telex Keypanel Protocol
2081	UDP Pass Through Serial
2082	TCP Firmware Download
2100	Remote Administration
2102	Authentication Server
23	TELNET Access

KP32 RVON-1

KP-32 / RVON Setup (requires ver 2.0.2 or higher)

To set the IP Address on the KP32, do the following:

1. On the KP-32, press **Menu**.
2. Using the scroll keys, scroll to **Service.**
3. Press PGM.
4. Using the scroll keys, scroll to **RVON Setup.**
5. Press PGM.
7. Enter the **first number** in the IP Address.
8. Press PGM.
9. Repeat steps 7 and 8 until the entire IP Address is entered.
10. Press PGM.
11. Enter the **first number** in the Netmask.
12. Press PGM.

NOTE: Press PGM to skip over any octet that does not need modifications.

13. Repeat steps 12 and 13 until the entire Netmask is entered.
14. Press **PGM**.
15. Enter the **first number** in the Gateway IP Address.
16. Press **PGM.**
17. Repeat steps **17** and **18** until the entire Gateway is entered.
18. Press **PGM.**
19. Press **CLR** to exit the menu. *The changes are now enabled.*

NOTE: You can still set the IP Address without being connected to an Ethernet LAN. Once you have entered the IP information, you will be prompted to perform a **Save Cfg.** The address is saved in the keypanel until the RVON-1 is connected to an Ethernet LAN.

KP32 KEYPANEL CONNECTION TO RVON

Select an RVON Connection from the Top Level Menu Select RVON Conn

1. On the KP-32, press **Menu.**

2. Using the scroll keys, scroll to **RVON Conn.**

3. Press PGM.
The currently selected intercom port appears in the CWW window. If you have not previously selected a connection, you will see "none".

4. Using the scroll keys, scroll to the network connection offer that you want to accept.

The RVON Conn menu contains a list of connection offers from intercoms. This menu allows the keypanel to dynamically select an intercom and port to which it will connect. To select a connection offer, do the following:

5. Press PGM.

connection offers appear. The arrow to left of the connection offer designates which connection offer was chosen.

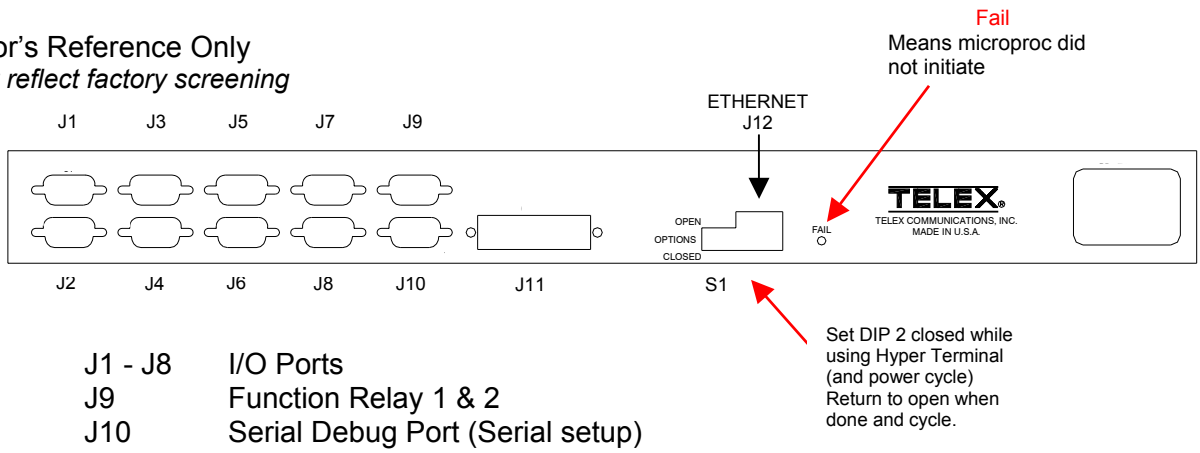
6. Press CLR to exit.
The keypanel will now connect to the selected intercom port. This can take several minutes

REMEMBER - SAVE CFG from the keypad 1st level MENU selections**.**

NOTE: If data connection is made between keypanel and RVON I/O but no audio, log into KP32 and check both "destination type" and "polling i.d." The "device type" in the KP32 should be set to "0", not "2".

Rear Panel View:

Integrator's Reference Only
Does not reflect factory screening



J1 - J8	I/O Ports
J9	Function Relay 1 & 2
J10	Serial Debug Port (Serial setup)
J11	GPI/O 1 - 8
J12	Ethernet Connection
S1	DIP Switch Options

Resetting the Current IP Address to the Default RVON-I/O IP Address Using Telnet
(*this is useful if not setting up via the Serial port & Hyper Terminal*)

If using TELNET, not Hyper Terminal, the RVON I/O may be reset to the default IP address by doing the following. Again, it is not necessary to do this when using Hyper Terminal.

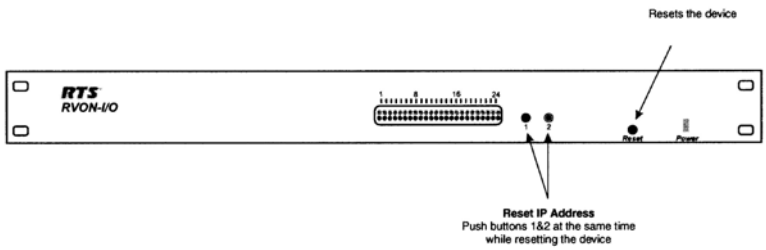
The RVON-I/O is shipped with a default IP Address already configured on the unit. The **default IP Address is 192.168.0.1,** the default **Netmask is 255.255.0.0,** the default **Gateway is set to zero.**

This feature is useful when using an RVON-I/O in the field (i.e.; a mobile truck) where the IP Address is constantly changing from on destination network to the next. By being able to reset the IP Address to a default address, you will be able to connect to the RVON-I/O without having to remember the IP Address of the previous location. For more information on configuring the IP Address, see "Reset the Current IP Address to the Default RVON-I/O IP Address" on page 9.

To reset the IP Address to default on the RVON-I/O, do the following:

1. On the front of the RVON-I/O unit, push and hold buttons 1 and 2, then push the **RESET** button. Hold the buttons in for 15 seconds or until all the LED lights blink rapidly. When all the LED lights blink rapidly, the RVON-I/O IP Address has been reset to the default.

NOTE: If buttons 1 and 2 are pressed during power ON, the unit will reset the IP Address.



-- “SPY” COMMANDS:

This will maintain a stable screen to view keyboard entries as long as you do not exit the edit session.

If continual scrolling appears on the screen while using Telnet commands, it can be stopped by using the Spy command below. This **must be done for each** four character acronym displayed, one at a time, until all are stopped from being displayed in scroll.

MXP>**spy <xxxx> 5**

The switch “5” means do not show me anything in scroll.

RETURN

MXP>

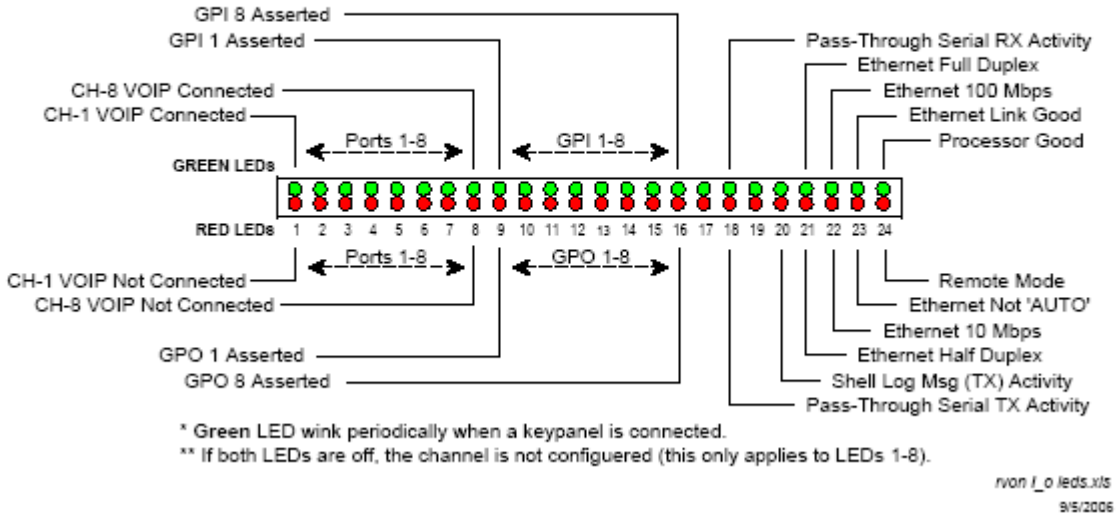
The "**arp**" related messages can't be stopped using the SPY command. However, these messages do not occur in the latest RVON firmware releases (which use the VxWorks network stack instead of the Telogy network stack).

The latest versions are:
RVON-8 : V1.3.0
RVON-1: V1.2.0
RVON-IO: V1.1.0
RVON-C: V1.0.0

The "**RVON: port #**, requesting call permission" messages can by stopped using “spy rvon 5”.

DIAGNOSTICS:

RVON I/O LED Status Display

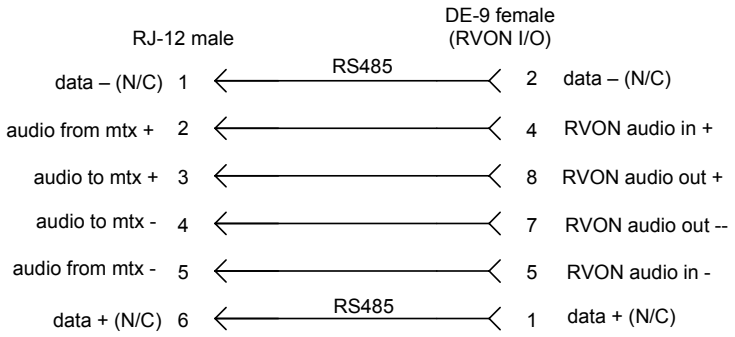


* Green LED wink periodically when a keypanel is connected.
** If both LEDs are off, the channel is not configuered (this only applies to LEDs 1-8).

rvon I_o leds.xls
9/5/2006

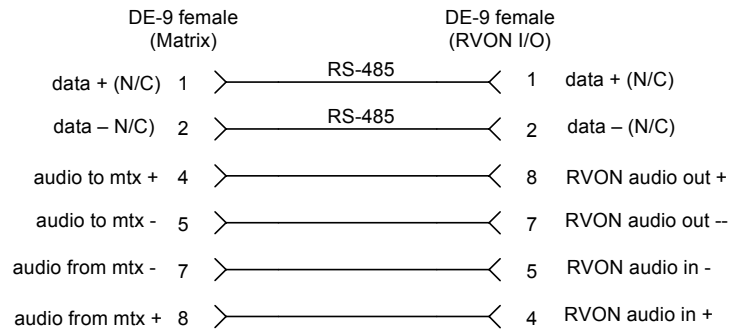
RVON I/O Audio Crossover Cables

DO NOT use data connections when going from RVON to Matrix analog ports
(Local Mode)



RJ-12 to DE-9 Audio Crossover Cable

EIA 568A – EIA-568B



ADAM & Zeus Audio Crossover Cable

EIA 568A – EIA-568B

NOTE: Mark all crossover cables clearly, not to be mixed up with standard EIA 568A or B color codes.

CODEC Codes

VAD: **V**oice **A**ctivity **D**etection, when enabled and only when audio is above a certain threshold, will send packets. Otherwise, a silence packet is sent once, and not again until audio is above the threshold. Enabling this will result in a more efficient network, but care must be taken to because of the mother's day phenomenon. If there is ever a need to have all audio paths open and active, a network designer must account for this scenario.

NOTE: VAD **only** supported in G.711u , codes 1,2,3.

Supplemental Coding Table

Coding	Codec	Codec Rate	Size (ms)	VAD	Bandwidth kbps	Comments
1	G.711u	64k	10	Y	160-224	More robust. Decoding more accurate
2	G.711u	64k	20	Y		
3	G.711u	64k	30	Y		More efficient but can have re-assembly problems at other end. Less robust.
4	G.711u	64k	10	N		
5	G.711u	64k	20	N		
6	G.711u	64k	30	N		
7 *	G.711A	64k	10	Y		Euro Standard (codes 7-12) * See user manual
13 *	G.729AB	8k	10	Y	32-112	Lower Fidelity (codes 13-20) * See user manual
21	G.723	5.3k	30	Y	29-45	Economy but avoid using for IFB or music
22	G.723	5.3k	60	Y		
23	G.723	5.3k	30	N		
24	G.723	5.3k	60	N		
25	G.723	6.3k	30	Y		
26	G.723	6.3k	60	Y		
27	G.723	6.3k	30	N		
28	G.723	6.3k	60	N		

See user manual for greater detail

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