Wheatstone

Technical Document

Interfacing with DAD and the Bridge Router

Overview

This technical document is intended to give you general information about integrating ENCO Systems DAD (Digital Audio Delivery) with the Wheatstone Bridge Networked Audio System. This control is network based using TCP/IP. The Interface does require the purchase of the Router Control option on the DAD software key. Contact your ENCO Sales Representative for more information.

What do I need to get started?

- Purchase Router Control Application from ENCO Systems and Enable Serial I\O on the ENCO Security dongle.
- Latest version of the Router Control Application from ENCO Systems
- Document IP addresses for the Wheatstone Bridge Router and DAD PC for reference during setup. Also make note any Wheatstone Bridge router source or destination signals that will be controlled by the ENCO Router application. These signal IDs can be obtained from the Xpoint GUI.

NOTE: More advanced user may wish to skip to the Sample file section of this document.

Setup

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There is no additional setup for your Wheatstone Bridge Router. The necessary interface is enabled at the factory and is ready for uses. If desired, the UDP port used may be changed on the Bridge router to fit the needs of the facility.

Configuring DAD and the Router Control Application

Make sure you have the latest version of the Router Control application from ENCO systems. You may download the latest version from the ENCO FTP site.

It is recommended that you run the ENCO Router Control Application on the PC that has Wheatstone Xpoint GUI Installed. Start by creating a Router directory in C:\Program Files\Wheatstone\ and place the Router Control application files in this directory.

There are several INI files used by the ENCO Router Control application that allow the user to customize the level of control for their needs.

Below are the Samples of the default files you will receive from ENCO Systems. These files are described in more detail later in this document.

Configuring the DAD CFI File

DAD will communicate with the interface via the Send Text function. In the DAD CFI file set a Send Text port to the port used in the Interface and the local IP address.

NOTE: *Check DAD key for Serial I/O support. Serial I/O is required for Send Text.*

[SEND TEXT]

A_IO=UDP 4444 192.168.1.XXX (replace IP address with network scheme)

NOTE: *There are no spaces around the equals sign in the CFI file*

Now create Command Cuts using the Send Text DCL that will control the Bridge Router. Xpoint signals can be connected, disconnected, locked, and unlocked. Salvos can also be run from the Enco Router Control Application. For more information on Salvos refer to your Wheatstone Bridge Router manual.

The DCL's will contain a comment that is used by the application's DADText.INI file

For example:

SEND TEXT A 'DAD TO AIR'

The console interface contains a DADText file which contains:

"DAD TO AIR" "CONNECT 12 28"

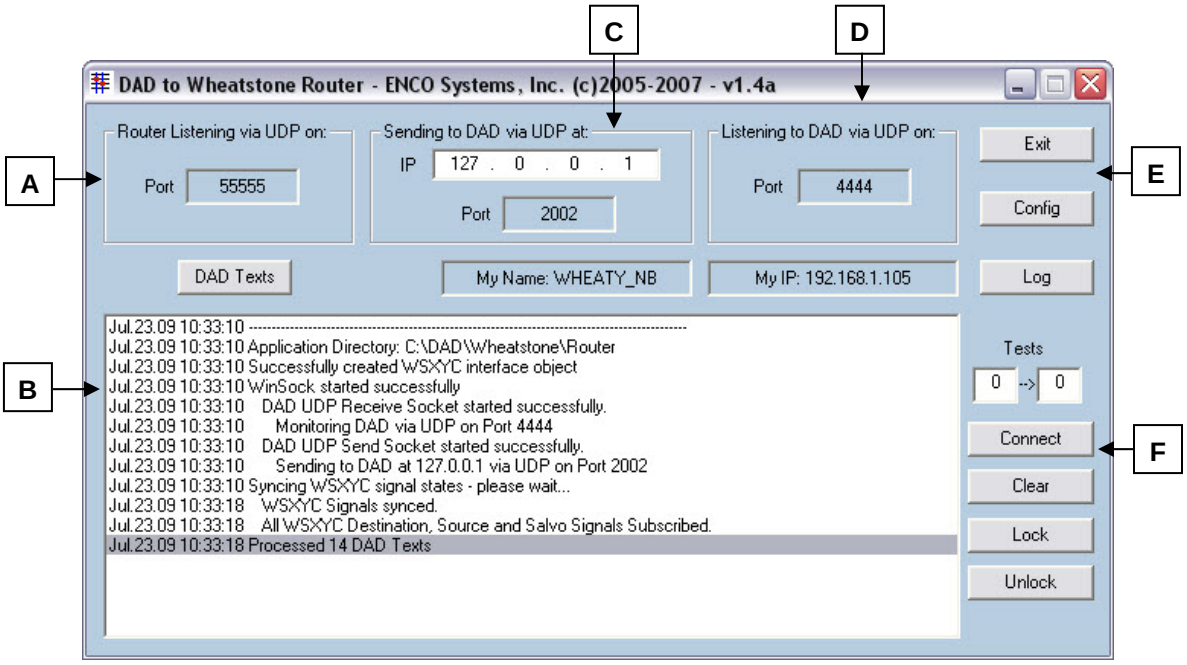
NOTE: *More details on the interfaces DADText.INI file is below.*

NOTE: *The Source signal is always listed first followed by the destination signal.*

When the DCL containing DAD TO AIR is sent from DAD to the control interface, the interface will in turn send the string: CONNECT 12 28 to the Bridge Router, making the desired connection. Connecting Source 12 to Destination 28.

The following is an overview of the interface.

Buttons and Functions



ITEM	FUNCTION	DESCRIPTION
A	Router Send/Receive	
	Router IP / Port Address	The IP Address and default port used by the Bridge Router. The port is defined in the Config.INI file and should match the port used by the Router.
	DAD TEXTS Button	Opens the DADtext.INI file. This file is the “Look-up” table for DAD. DAD will send a declaration to this interface. In turn, this application will send the corresponding string to the router.
B	Process information screen	Here basic startup and connectivity messages are displayed. Any messages to / from the console can be displayed.
C	Sending to DAD via UDP at	
	IP Address / Port Address	The IP Address and default port used by the DAD application. The port is defined in the Config.INI file. This could be 127.0.0.1for the local host adaptor.
D	Listening to DAD via UDP on	
	Port	The port used by DAD to send declarations.
E	EXIT Button	Exits and closes the program

	CONFIG Button	**Opens the Config.INI. Here one can define the Console IP and Port, the DAD IP and Port plus the Heartbeat interval.**
	LOG Button	**This button opens the log files for the application. The application will create a log in the \Logs directory where the application is run from. The file will be in MMDDYY.txt.**
F	**Tests**	**These buttons allow users to make connections, disconnects, lock, and unlock signals**

Overview of INI files

As mentioned previously in this document, there are several INI files used by the interface application that allow the user to customize the level of control for their needs. A brief description of each of these files is below.

Config.INI

The Config.INI file allows the user to define the Port used by the Router along with the IP Address and Ports used to communicate with DAD.

[General]

ROUTER PORT =55555

TO DAD IP =127.0.0.1

TO DAD PORT =2002

FROM DAD PORT =4445

NOTE*: The Port number used in the line: FROM DAD PORT should be set the same as the [SEND_TEXT]*

x_IO line in the DAD CFI.

DADText.INI

The DAD Texts file can be thought of as a ‘look-up’ table. When a user creates a Send Text Command Cut, they will reference the phrase in the DADText.INI. The interface will in turn send the appropriate string to the Router.

Examples of the DADText.INI entries are shown below.

"DAD TO AIR" "CONNECT 141 256"

"DAD TO STREAM" "CONNECT 141 2"

"CLEAR AIR" "DISCONNECT 256"

"CLEAR STREAM" "DISCONNECT 2"

"ENCO" "SALVO 1"

"LOCK AIR" "LOCK 256"

"UNLOCK AIR" "UNLOCK 256"

The format for the DADText.INI should be as follows:

“Name of String” “<Function><Source><Destination>”

Or

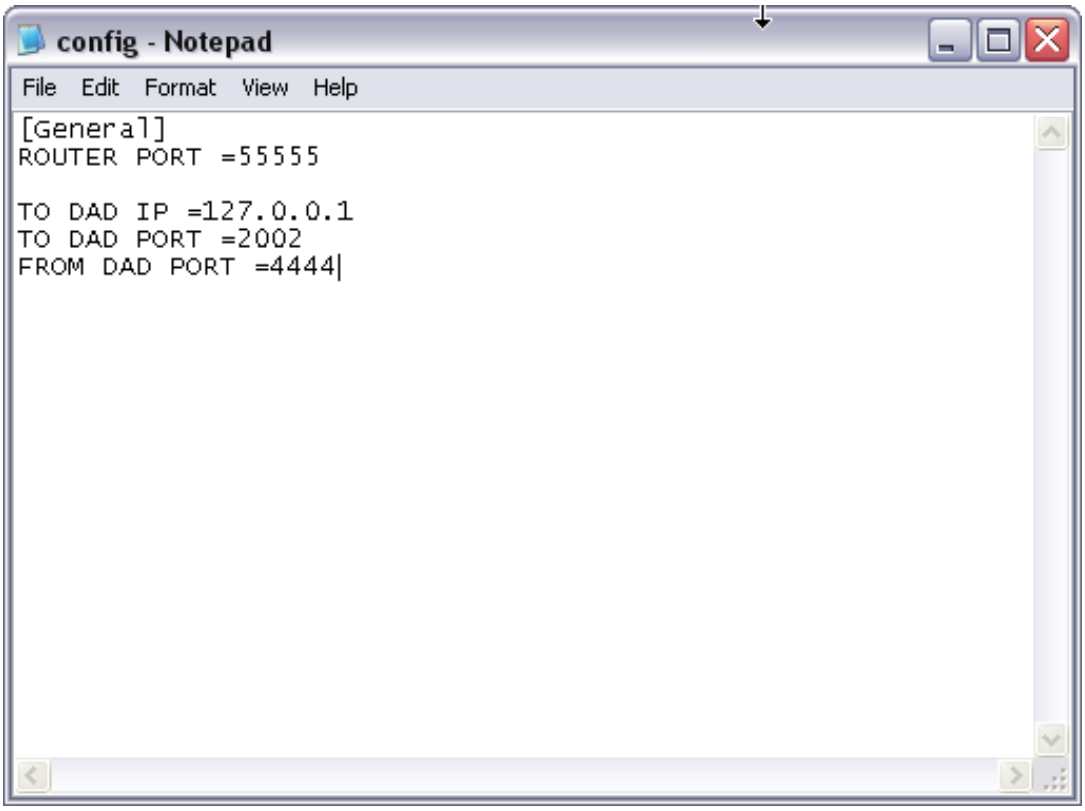
“Name of String’ “<Function><Destination>”

Valid functions that can be made to the Router are:

FUNCTION	DESCRIPTION	EXAMPLE
CONNECT	**Connects the Source to the Destination**	**CONNECT 10 44**
DISCONNECT	**Removes Source from the given Destination.**	**DISCONNECT 44**
LOCK	**Locks the given Destination preventing any other Source from being routed to that Destination.**	**LOCK 44**
UNLOCK	**Unlocks the given Destination**	**UNLOCK 44**
SALVO	**Issues a SALVO request to the Router. The number is the Salvo Index, not the name of that salvo**	**SALVO 4**

Below are the Samples of the default files you will receive from ENCO Systems. These files are described in more detail later in this document.

Config.INI *– The Config.ini*



DA

Dtext.INI*- the DADtext.ini file is the lookup table that matches DAD commands with the Wheatstone Router commands.*