



Users Manual

Note to all Studio Hawk Users: This manual has been developed to allow you to find information quickly and easily to make The Studio Hawk a valuable tool to "beginners" and "professionals". Due to the detailed nature of the information, the manual has been through many revisions, and we feel that it is still a "work in progress". Therefore, if you find any mistakes (spelling or otherwise), please send your comments to Support@IntrinsicNet.com. For your significant contribution toward the improvement of this manual, we will send you a **Free Plus Size T-shirt (while supplies last!)**.

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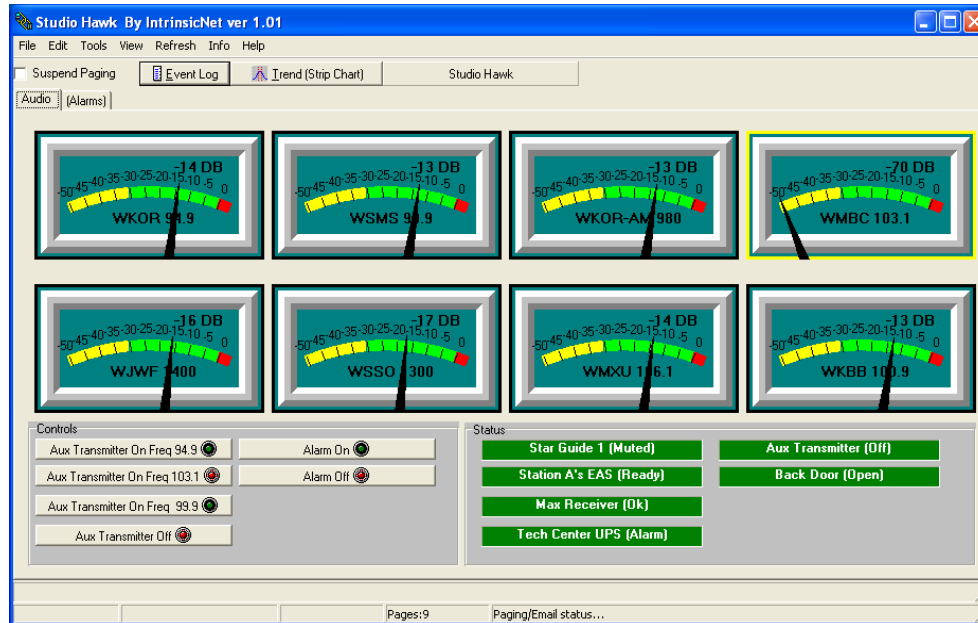
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Chapter 1

The Studio Hawk Overview



The Studio Hawk.8 was developed to provide a low-cost solution to monitoring audio and EAS receivers at a studio, and for efficient communication of problems via email, text messaging, and signaling devices. The base system includes Studio Hawk software and hardware to monitor 8 status channels, 8 analog channels, and 8 relays. The Studio Hawk.8 records EAS data (transmitted and received), and can be expanded to monitor up to a total of 6 EAS receivers.

Includes Studio Hawk.8 Software and Hardware

- Monitors 8 status channels, 8 analog channels and 8 relays
- Emails or text messages of alarms
- Multiple contacts for each alarm with delays between text messages
- Dead air report via email
- EAS receiver monitoring

Records EAS data (transmitted and received)

Filters EAS alerts that can be emailed or sent via text message

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Chapter 2

Database Navigation

Button Purpose



First Sets the current record to the first record in the data set, disables the First and Prior buttons, and enables the Next and Last buttons if they are disabled.



Prior Sets the current record to the previous record and enables the Last and Next buttons if they are disabled.



Next Sets the current record to the next record and enables the First and Prior buttons if they are disabled.



Last Sets the current record to the last record in the data set, disables the Last and Next buttons, and enables the First and Prior buttons if they are disabled.



Insert Inserts a new record before the current record, and sets the data set into Insert and Edit modes.



Delete Deletes the current record and makes the next record the current record.



Edit Puts the data set into Edit mode so that the current record can be modified.



Post Writes changes in the current record to the database.



Cancel Cancels edits to the current record, restores the record display to its condition prior to editing, and turns off Insert and Edit modes if they are active.



Refresh Refreshes the buffered data in the associated data set.



Chapter 3

Installing the USB-1208LS

What comes with your USB-1208LS shipment?

As you unpack your USB-1208LS, verify that the following components are included.

Hardware

-  USB-1208LS
-  USB cable (2 meter length)




Additional documentation

In addition to this hardware user's guide, you should also receive the Quick Start Guide (available in PDF at www.mccdaq.com/PDFmanuals/DAQ-Software-Quick-Start.pdf). This booklet supplies a brief description of the software you received with your USB-1208LS and information regarding installation of that software. Please read this booklet completely before installing any software or hardware.

Unpacking the USB-1208LS

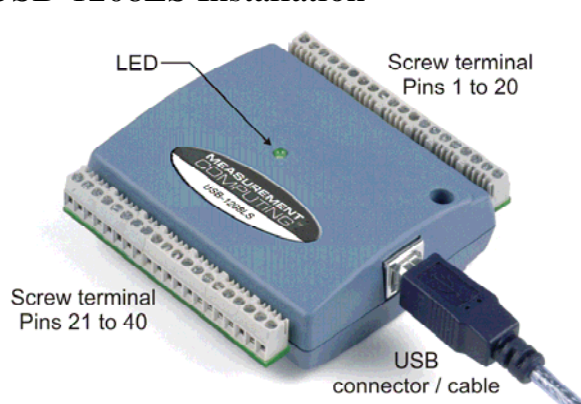
As with any electronic device, you should take care while handling to avoid damage from static electricity. Before removing the USB-1208LS from its packaging, ground yourself using a wrist strap or by simply touching the computer chassis or other grounded object to eliminate any stored static charge.

If any components are missing or damaged, notify Measurement Computing Corporation immediately by phone, fax, or e-mail:

-  Phone: 508-946-5100 and follow the instructions for reaching Tech Support.
-  Fax: 508-946-9500 to the attention of Tech Support
-  Email: techsupport@mccdaq.com

2-1 USB-1208LS User's Guide Installing the USB-1208LS

USB-1208LS Installation



Installing the software

Refer to the Quick Start Guide for instructions on installing the software on the Measurement Computing Data Acquisition Software CD. This booklet is available in PDF at www.mccdaq.com/PDFmanuals/DAQ-Software-Quick-Start.pdf.

Installing the hardware

Be sure you are using the latest system software

Before you connect the USB-1208LS, make sure that you are using the latest versions of the USB drivers.

Before installing the USB-1208LS, download and install the latest Microsoft Windows updates. In particular, when using Windows XP, make sure you have XP Hotfix KB822603 installed. This update is intended to address a serious error in Usbport.sys when you operate a USB device. You can run Windows Update or download the update from www.microsoft.com/downloads/details.aspx?familyid=733dd867-56a0-4956-b7fe-e85b688b7f86&displaylang=en. For more information, refer to the Microsoft Knowledge Base article "Availability of the Windows XP SP1 USB 1.1 and 2.0 update." This article is available at support.microsoft.com/?kbid=822603.

To connect the USB-1208LS to your system, turn your computer on, and connect the USB cable to a USB port on your computer or to an external USB hub that is connected to your computer. The USB cable provides power and communication to the USB-1208LS.

When you connect the USB-1208LS for the first time, a **Found New Hardware** popup balloon (Windows XP) or dialog (other Windows versions) opens as the USB-1208LS is detected by your computer.

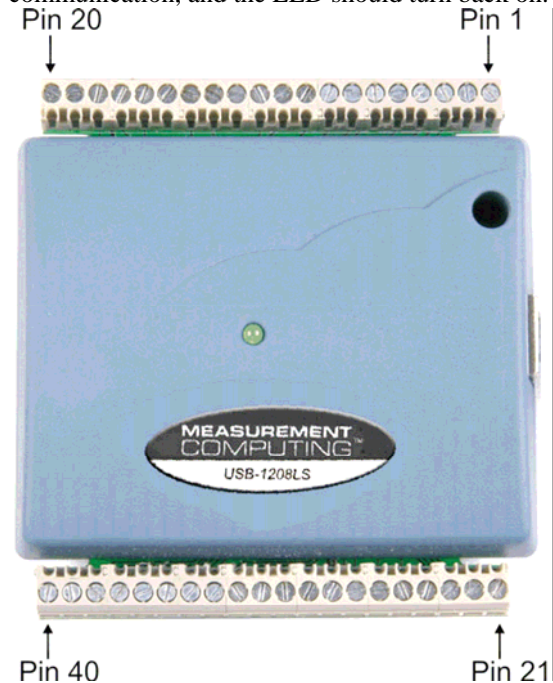
Another **Found New Hardware** balloon or dialog opens after the first closes that identifies the USB-1208LS as a USB Human Interface Device.

When this balloon or dialog closes, the installation is complete. The LED on the USB-1208LS should flash and then remain lit. This indicates that communication is established between the USB-1208LS and your computer.

Caution! Do not disconnect **any** device from the USB bus while the computer is communicating with the USB-1208LS, or you may lose data and/or your ability to communicate with the USB-1208LS.

If the LED turns off

If the LED is illuminated but then turns off, the computer has lost communication with the USB-1208LS. To restore communication, disconnect the USB cable from the computer, and then reconnect it. This should restore communication, and the LED should turn back on.



4-Channel Balanced Audio (Status & Relays)

Pin	Signal Name	Pin	Signal Name
1	Ch 1 +	21	Relay 0 Out Bit 0

2	Ch 1 -	22	Relay 1 Out Bit 1
3	Ch 1 GND	23	Relay 2 Out Bit 2
4	Ch 2 +	24	Relay 3 Out Bit 3
5	Ch 2 -	25	Relay 4 Out Bit 4
6	Ch 2 GND	26	Relay 5 Out Bit 5
7	Ch 3 +	27	Relay 6 Out Bit 6
8	Ch 3 -	28	Relay 7 Out Bit 7
9	Ch 3 GND	29	GND
10	Ch 4 +	30	PC+5V
11	Ch 4 -	31	GND
12	Ch 4 GND	32	Status 1 input
13	Not Used	33	Status 2 input
14	Not Used	34	Status 3 input
15	GND Not Used	35	Status 4 input
16	CAL	36	Status 5 input
17	GND	37	Status 6 input
18	Not Used	38	Status 7 input
19	GND	39	Status 8 input
20	Not Used	40	GND

8-Channel Unbalanced Audio (Status & Relays)

Pin	Signal Name	Pin	Signal Name
1	Ch 1 +	21	Relay 0 Out Bit 0
2	Ch 2 +	22	Relay 1 Out Bit 1
3	Ch 1,2 GND	23	Relay 2 Out Bit 2
4	Ch 3 +	24	Relay 3 Out Bit 3
5	Ch 4 +	25	Relay 4 Out Bit 4
6	Ch 3,4 GND	26	Relay 5 Out Bit 5
7	Ch 5 +	27	Relay 6 Out Bit 6
8	Ch 6 +	28	Relay 7 Out Bit 7
9	Ch 5,6 GND	29	GND
10	Ch 7 +	30	PC+5V
11	Ch 8 +	31	GND
12	Ch 7,8 GND	32	Status 1 input
13	Not Used	33	Status 2 input
14	Not Used	34	Status 3 input
15	GND Not Used	35	Status 4 input
16	CAL	36	Status 5 input
17	GND	37	Status 6 input
18	Not Used	38	Status 7 input
19	GND	39	Status 8 input
20	Not Used	40	GND

Notes.

1. DO NOT CONNECT ANY RELAY DIRECTLY TO THE RELAY OUTPUT OF THE 1208LS PINS 21-28 THAT DRAW OVER 2.5 ma. You must use buffers to drive relays.

2. Audio inputs need to be terminated. If you are bridging another device that has termination then you are ok. If not you need to place a termination resistor across the input. Most broadcast audio equipment has an output impedance is 600 ohm. Most consumer audio equipment has an output impedance is 10k. Connect resistors as listed below.

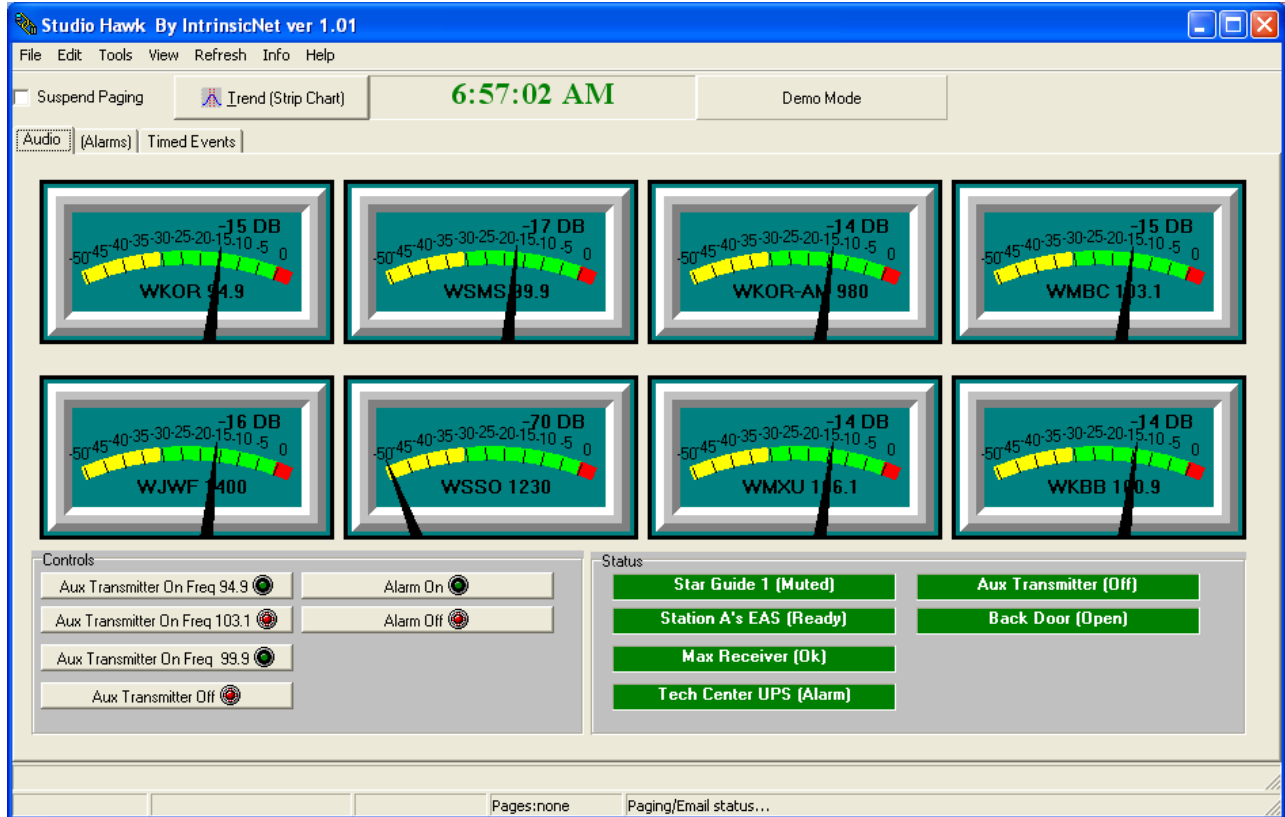
3. The audio connected to the 1208SL is sampled and then converted to an approximate DC value. The meters displayed on the main page of The Studio Hawk are an approximation of the audio input. It is used to determine if the station's audio source is present or not. The values displayed are not an accurate representation of the audio's DB level.

Connect a resistor between the pins listed below. Most common values are 600 ohms for broadcast equipment and 10k ohms for unbalanced consumer grade equipment. Only install resistors if the equipment is not terminated by another piece of equipment.

4 Channel Mode	Pins
1	Pin 1 to Pin 2
2	Pin 4 to Pin 5
3	Pin 7 to Pin 8
4	Pin 10 to Pin 11
8 Channel Mode	
1	Pin 1 to Pin 3
2	Pin 2 to Pin 3
3	Pin 4 to Pin 6
4	Pin 5 to Pin 6
5	Pin 7 to Pin 9
6	Pin 8 to Pin 9
7	Pin 10 to Pin 12
8	Pin 11 to Pin 12

Chapter 4

The Studio Hawk Main Screen



Suspend Paging

By checking this box, The Studio Hawk will suspend text messaging and emailing.

When not checked, The Studio Hawk will start messaging and emailing.

Trend (Strip) Chart Button

A trend (strip) chart is a data acquisition tool used to generate a plot, graph or other visualization of data versus time. A trend chart is used to monitor either analog or status channels in real time. As many as 8 channels can be recorded at one time. The charts can show the time relationship between the channels.

Alarm Tab

Active	Date	Time In Alarm	Time Alarm Cleared	Label
False	11/4/2008	5:26:53 AM	5:27:36 AM	Station B Has No Audio ! for a period of 43 Sec(s)
False	11/4/2008	5:27:36 AM	5:28:00 AM	Station C Has No Audio ! for a period of 24 Sec(s)
False	11/4/2008	5:28:00 AM	5:28:10 AM	Station D Has No Audio ! for a period of 9 Sec(s)
False	11/4/2008	5:28:10 AM	5:28:53 AM	Station F Has No Audio ! for a period of 43 Sec(s)
False	11/4/2008	5:28:54 AM	5:29:26 AM	Station G Has No Audio ! for a period of 31 Sec(s)
False	11/4/2008	5:30:11 AM	5:30:26 AM	Station B Has No Audio ! for a period of 15 Sec(s)
False	11/4/2008	5:30:26 AM	5:31:10 AM	Station C Has No Audio ! for a period of 43 Sec(s)
False	11/4/2008	5:31:09 AM	5:31:34 AM	Station D Has No Audio ! for a period of 24 Sec(s)
False	11/4/2008	5:31:34 AM	5:31:39 AM	Station F Has No Audio ! for a period of 5 Sec(s)
False	11/4/2008	5:31:41 AM	5:31:50 AM	Station G Has No Audio ! for a period of 9 Sec(s)
False	11/4/2008	5:33:12 AM	5:34:14 AM	Station B Has No Audio ! for a period of 1 Min(s) 1 Sec(s).
False	11/4/2008	5:34:13 AM	5:35:30 AM	Station C Has No Audio ! for a period of 1 Min(s) 16 Sec(s).
False	11/4/2008	5:35:30 AM	5:36:31 AM	Station D Has No Audio ! for a period of 1 Min(s) 1 Sec(s).
False	11/4/2008	5:36:31 AM	5:36:37 AM	Station F Has No Audio ! for a period of 5 Sec(s)
False	11/4/2008	5:36:38 AM	5:37:03 AM	Station G Has No Audio ! for a period of 24 Sec(s)
False	11/4/2008	5:38:20 AM	5:39:37 AM	Station B Has No Audio ! for a period of 1 Min(s) 16 Sec(s).
False	11/4/2008	5:39:37 AM	5:40:53 AM	Station C Has No Audio ! for a period of 1 Min(s) 16 Sec(s).
False	11/4/2008	5:40:53 AM	5:41:55 AM	Station D Has No Audio ! for a period of 1 Min(s) 1 Sec(s).
False	11/4/2008	5:41:54 AM	5:42:04 AM	Station F Has No Audio ! for a period of 9 Sec(s)
False	11/4/2008	5:42:28 AM	5:42:30 AM	Station G Has No Audio ! for a period of 1 Sec(s)

Create New Alarm Table

Used to close the current alarm table and create a new one. Used if an alarm table is corrupted or is out of date.

Alarm Date

The date that the alarm occurred.

Time Alarm Cleared

The time the alarm was cleared, or the time the alarm was truncated on startup.

Label

The common name or text information about an alarm. (i.e. what channel, what date and time, above or below what limit, and for how long)

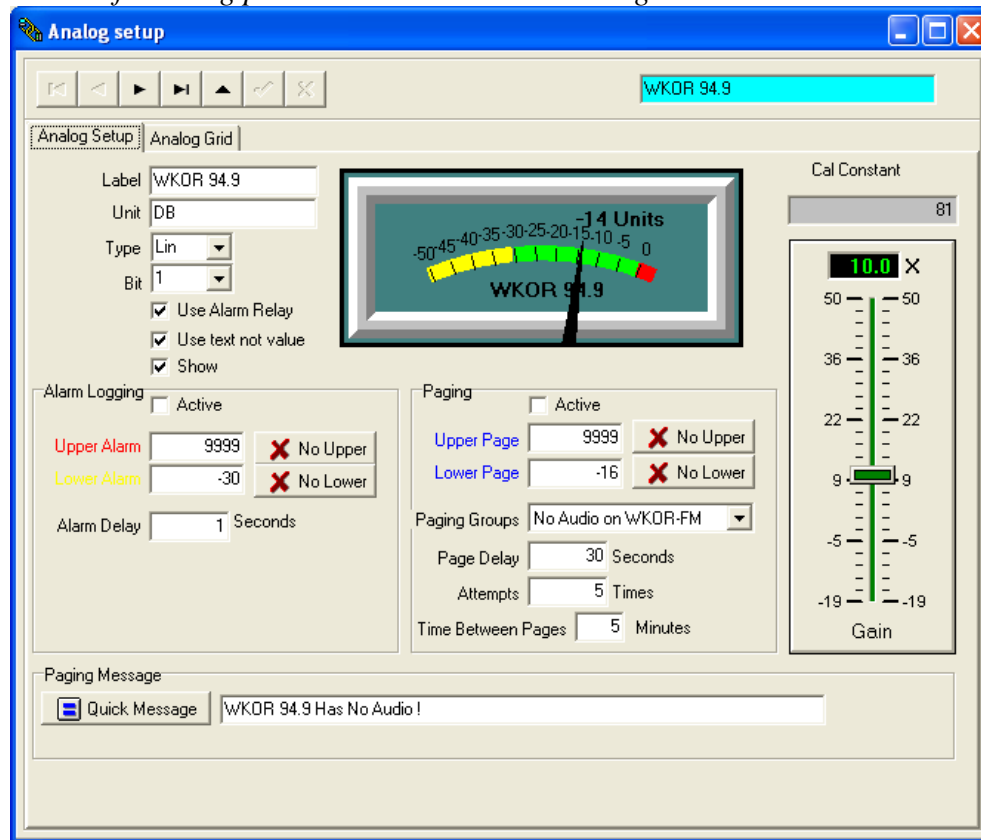
Current Database

The name of the current database in which the alarms are being stored. When the alarm database gets too large to handle, The Studio Hawk will automatically close the database and create a new one. The alarm database files will be deleted based on the dates stated in the system setup.

Chapter 5

Analog Channel Setup

Use the following pull down menu: *Edit > Analog*



Analog Label

The Analog Label is the text that will be displayed on the meter and used as related to other functions. It is the title of the analog channel.

Analog Unit

The Analog Unit is the unit of measurement for a channel

Use Alarm Relay

If this box is selected and a signaling device is attached to The Studio Hawk, then this channel will activate an audible or visible alarm. For more information on signaling, see Setting up Signaling Devices Alarm Relay

Use Text Message

If this box is selected, the message sent will be the text entered in the "Paging Message" edit box.

If this box is not selected, the **alarm will show the level at the time of the alarm (i.e. Audio was logged at –70 db below limit of –30 db)**

Show

If this box is selected, this **meter will be displayed on The Studio Hawk main page.**

Note: regardless if the meter is shown or not, the alarm and meter will be active unless both are unchecked.

Paging Message

The message that will be sent (text or email), if this channel goes in alarm.

Use Alarm Relay

If this box is checked and a signaling device is attached to The Studio Hawk, then this channel will activate an audible or visible alarm.

Alarm Logging

Active

When checked the logging function is enabled.

Upper Limit

If the Analog Channel exceeds the selected value for the selected time set in the Log Delay, a log entry will be made in the Alarm List.

Lower Limit

If the Analog Channel drops below the selected value for the selected time set in the Log Delay, a log entry will be made in the Alarm List.

No Upper Limit

Select the No Upper Limit button, and there will be no upper limit for the log. When you enter a value in the Upper Limit box, logging will be restarted.

No Lower Limit

Select the No Lower Limit button, and there will be no lower limit for the log. When you enter a value in the Lower Limit box, logging will be restarted.

Alarm Log Delay

The amount of time in seconds you want Studio Hawk to wait before making an alarm log entry.

Paging

Active

When selected the Paging function is enabled.

Upper Page

If the Analog Channel exceeds the set value for the amount of time set in the Paging Delay, a page will be sent.

Lower Page

If the Analog Channel drops below the set value for the amount of time set in the Paging Delay, a page will be sent.

No Upper Limit

Select the No Upper Limit button, and there will be no upper limit for the paging. When you enter a value in the Upper Limit box the paging will be restarted.

No Lower Limit

Select the No Lower Limit button, and there will be no lower limit for the paging. When you enter a value in the Upper Limit box the paging will be restarted.

Paging Group

A list of pagers, cell phones or email accounts to notify if an alarm or event occurs.

Page Delay

The amount of time in seconds you want The Studio Hawk to wait before paging.

Attempts

The number of times you want The Studio Hawk to send pages on this alarm. The paging will stop when one of the following is achieved:

1. The alarm is cleared.
2. The suspend paging box is checked.
3. All of the pages have been sent.

Time Between Pages

The amount of time The Studio Hawk will wait in minutes between pages. This will allow someone enough time to correct the problem before the next page is sent.

Others

Normal Value

The normal input value of a channel. Used to calculate quick limits and to get into the simulate mode. If the audio level is normally -5 db, then you input a value of -5. This is used to set the value in the simulate mode.

Calibration Constant

This is the value created when the gain slider is adjusted. It is used to convert the input voltage to a usable value to be displayed by the metering system.

Analog Grid

A spreadsheet view of the analog records . You can click on the row and edit the data or use this page to select the record you would like to edit. Once the record is selected, click the Analog setup tab to edit the data.

Status Channel Setup

Use the following pull down menu: *Edit > Status*

The screenshot shows a software window titled "Status edit" with a blue title bar and standard window controls. The window contains a navigation bar with "Status Setup" and "Status Grid" tabs. Below the tabs are several configuration sections:

- Label:** "Star Guide 1" (text field)
- On Label:** "ok" (text field)
- Off Label:** "Muted" (text field)
- Is This a EAS device:** (checkbox)
- Bit:** "0" (dropdown menu)
- Use Alarm Relay:** (checkbox)
- Show:** (checkbox)
- Alarm Log:**
 - Active:** (checkbox)
 - Alarm State:** "On" (dropdown menu)
 - Log Delay:** "10 Second(s)" (text field)
- Paging Information:**
 - Active:** (checkbox)
 - Time between Attempts:** "10 (Min.)" (text field)
 - Paging Groups:** "reports" (dropdown menu)
 - Number of Attempts:** "1" (text field)
 - Page Delay:** "10 Second(s)" (text field)
- Message:**
 - Quick Message:** (checkbox)
 - Message text:** "Star Guide 1 Is Muted" (text field)

Status Grid

A grid or spreadsheet view of the status records. You can click on a row and edit the data, or you can use this page to select the record you would like to edit then click the Status Setup tab to edit the data.

Status Label

This label is the text that will be displayed on the Status Indicators and used as related to other functions.

On State

The label that will be displayed when the Status Input is low.

Off State

The label that will be displayed when the Status Input is high.

Device Bit

This is the input of a device. (0 –7)

Paging Message

The message that will be sent (text or email) if this channel goes in alarm.

Is this an EAS receiver?

If checked, The Studio Hawk will look for an incoming EAS and report it as an alarm. The EAS receiver monitored is determined by the bit.

Bit 1= EAS receiver 1

Bit 2= EAS receiver 2, and so on.

Logging

Active

When this is selected, the logging function will be enabled.

Alarm State

The state of a status channel that will cause an alarm to be logged or a page to be sent.

Log Delay

The amount of time in seconds Studio Hawk will wait before it will make a log entry in the Alarm List.

Paging

Active

When this is selected the paging function will be enabled.

Paging Group

A list of pagers, cell phones or email accounts to notify if an alarm or event occurs. See Edit/setup Paging Sequence for more details.

Log Delay

The amount of time in seconds The Studio Hawk will wait before sending a page.

Attempts

The number of times The Studio Hawk will page on this alarm. The paging will stop when one of the following is achieved:

1. The alarm is cleared.
2. The suspend paging box is checked.
3. All of the pages have been sent.

Time Between Pages

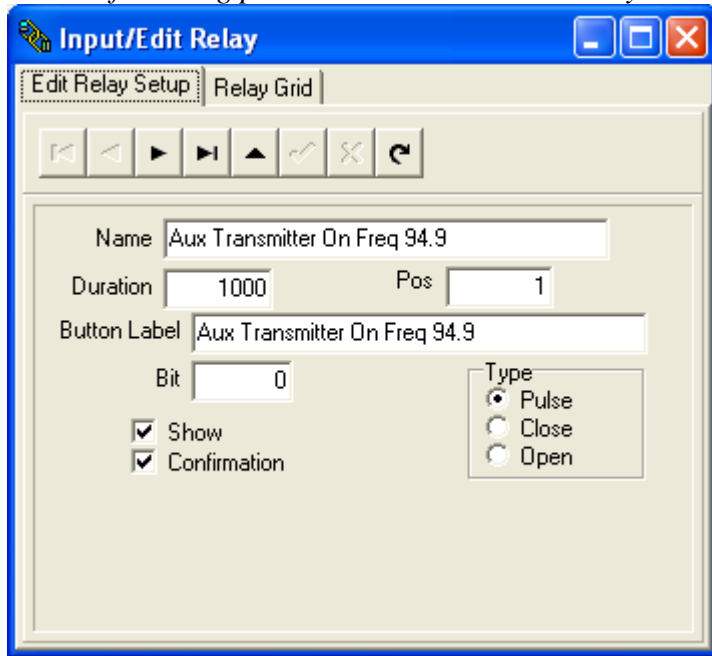
The amount of time in minutes The Studio Hawk will wait between pages. This will allow someone enough time to correct the problem before another page is sent.

Use Alarm Relay

If this box is selected and a signaling device is attached to The Studio Hawk, then this channel will activate an audible or visible alarm. For more information on signaling, see Setting up Signaling Devices Alarm Relay.

Relays Setup

Use the following pull down menus: *Edit > Relay*



Relay Name

Enter the name of the relay that will be displayed on the buttons.

Relay Duration

Enter the amount of time in milliseconds that the relay will be engaged.

Button Label

Enter the name that will be placed on the button on the Button Box page or any Tab

Relay Type:

Pulse :Sets the output high for the amount of time defined in Duration.

Close :Sets the output high and is held there until a Open or Pulse is sent.

Open :Sets the output low and is held they're until a Close or Pulse is sent.

Show

If selected, this relay will be shown on The Studio Hawk main page.

Confirmation

If this box is checked a confirmation box will appear when the user presses a button related to this relay. This is used to prevent accidental activation of a critical relay

Chapter 6

Contacts

How To Create A Contact

Path: *Edit > Messaging and Paging > Contact Info.*

The screenshot shows a 'Contact Info' window with the following fields and data:

- Name: PD of WKOR-FM
- Mail Type: Text Messaging, Email
- Address Info:
 - Address: 2225551212@usamobility.net
 - cc: olenbooth@fixmystation.com

Pos	Name	TYPE	Text_Email_address	Show_tag	CC
1	PD of WKOR-FM	SMTP	2225551212@usamobility.net	True	olenbooth@
2	PD of WSMS	SMTP	2225551213@usamobility.net		olenbooth@
3	PD of WMBC	SMTP	2225551221@usamobility.net		
4	PD of WJWF	SMTP	2225551277@usamobility.net		
5	PD of WSSO	SMTP	2225551111@usamobility.net		
6	PD of WKBB	SMTP	2225551212@usamobility.net		
7	PD of WMXU	SMTP	2225551212@usamobility.net		
8	PD of WKOR-AM	SMTP	2225551212@usamobility.net	True	
9	General Manager	SMTP	2225551212@usamobility.net		
10	CE	SMTP	2225551212@usamobility.net		

Name

The name of the person receiving the email or text message.

Address

The address of the Text or Email (i.e. 6625551212@Cell phone.com)

CC

(Carbon Copy) A second copy of this message/email will be sent to the address entered

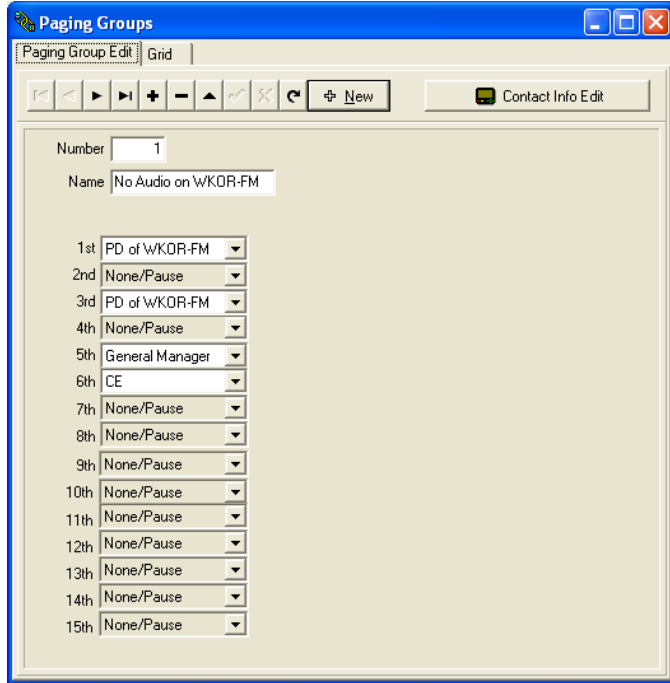
Email or Text Message

If set to Text Messaging, then a short message is sent and the alarm is placed in the subject line.

Edit Paging Groups Button

Once you have created an email account, you must place the contact in a paging group to be used.

Email Lists



Note: a page refers to a pager, text message, or email.

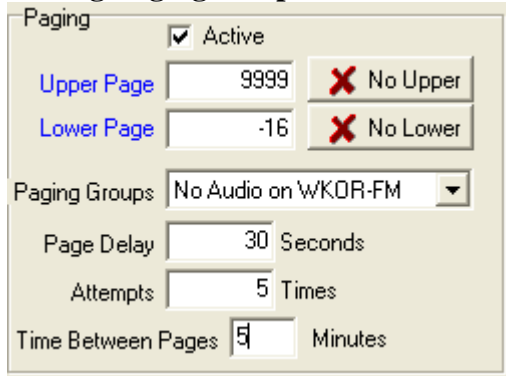
Group Name

A common name for the paging group (i.e. Off-The-Air, Program Directors, etc.)

This is an example of the paging group set up to receive notification when the analog channel is in alarm:

This is the paging group for this example.

Analog Paging Setup for Channel #1 (WKOR-FM)



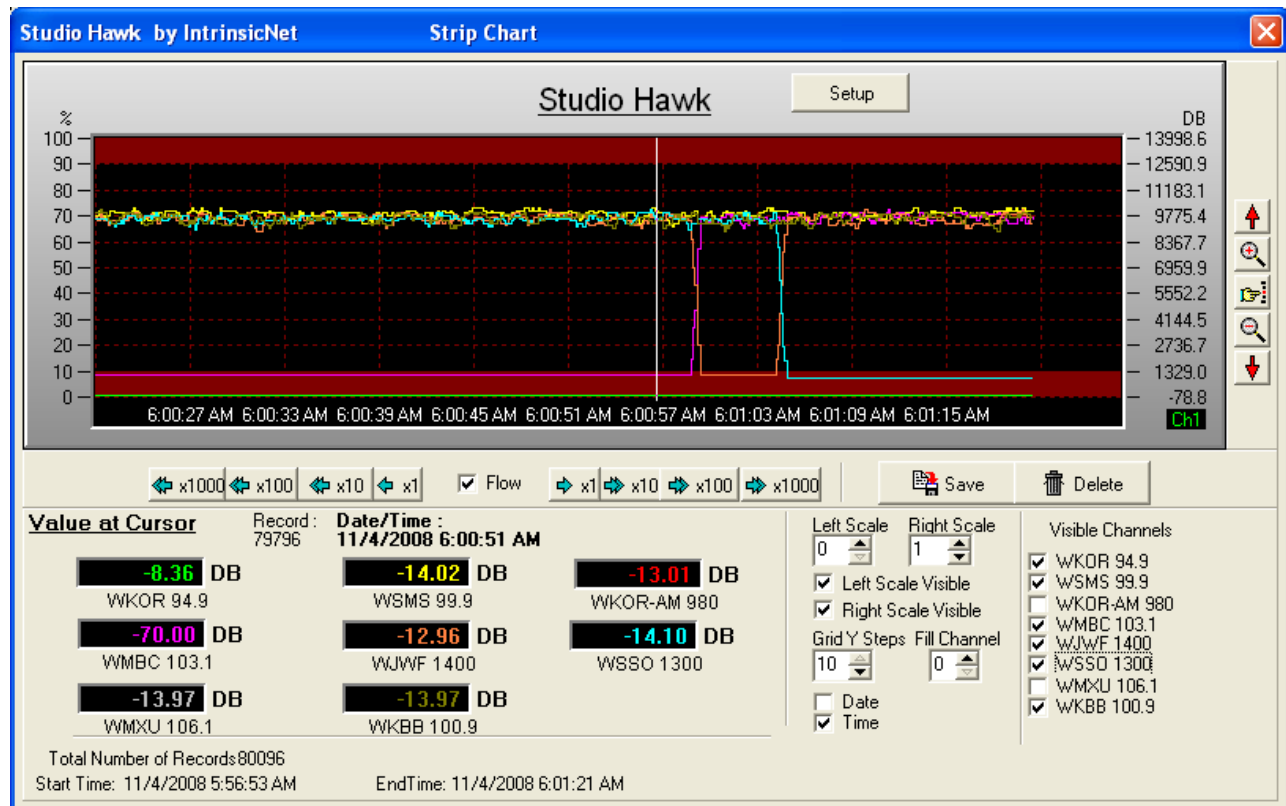
At 09:00:00 a.m. the WKOR audio dropped below -16 DB for 30 seconds

1. At 09:00:30 a.m. the **PD for WKOR-FM** (1st) is sent a page, text message or email. (page 1)
2. When The Studio Hawk finds a None (2nd), a pause is inserted.
3. At 09:05:30, if the WKOR-FM audio is still out of limits, the **PD for WKOR-FM** (3rd) will be sent a page, text message or email (attempts are made every 5 minutes as set up in Page Delay).
4. Another None (4th) is found, and again The Studio Hawk will wait.
5. At 09:10:30 if the analog channel is still out of limits, the **General Manager** (5th) and **CE** (6th) will be sent a page, text message or email.
6. Another None (9) is found, and again The Studio Hawk will wait.
7. At this point only 4 of 5 pages, emails, or text messages have been sent, and only 4 contacts are setup in the page group, so The Studio Hawk will start back at the top of the list.
8. At 09:15:30 a.m. the **PD for WKOR-FM** will be sent a page, text message or email again.

Paging can be halted by checking the Suspend Paging button box or if the alarm is cleared.

Chapter 7

Trend Charts



A trend (strip) chart is a data acquisition tool used to generate a plot, graph or other visualization of data versus time. A trend chart is used to monitor either analog or status channels in real time. As many as 8 channels can be recorded at one time. The charts can show the time relationship between the channels. Even though the strip chart can only record 8 channels at a time, The Studio Hawk keeps a continuous log of all analog and status channels.

You can select and change the channels that you want to visualize on the chart at any time.

The Trend View tool is used to view Trend Chart data for a previous date. The Trend Chart files are closed at midnight. The files are then stored in the "C:\stations\Studio\charts\" directory. There is a data file with the extension ".TRD" and a Setup file with the extension ".INI". For example, for the date of Jan 05 2008, the files would be Jan0508.TRD and Jan0508.INI. The files are purged every night. Files will remain on the hard drive until after the date set in the system setup. The items recorded on the Trend Chart are set up by pressing the "Chart Setup" button at the top right side of the Trend Chart.

x1000

Back Move the chart back 1000 samples (if your Data write rate = 1 sample/second this will be 16 minutes and 40 seconds)

X100 Back

Moves the chart back 100 samples (if your Data write rate = 1 sample/second this will be 1 minute and 40 seconds)

X10 Back

Moves the chart back 10 samples (if your Data write rate = 1 sample/second this will be 10 seconds) X1 back Moves the chart back 1 sample (if your Data write rate = 1 sample/second this will be 1 second)

X1

Forward Moves the chart forward 1 samples (if your Data write rate = 1 sample/second this will be 1 second) X10 Forward Moves the chart forward 10 samples (if your Data write rate = 1 sample/second this will be 10 seconds)

X100 Forward

Moves the chart forward 100 samples (if your Data write rate = 1 sample/second this will be 1 minute and 40 seconds)

X1000 Forward Moves the

chart forward 1000 samples (if your Data write rate = 1 sample/second this will be 16 minutes and 40 seconds)

Flow

If Flow is checked, the graph will move forward with time. If Flow is not checked, the chart will not advance.

Notes: Use the unchecked mode if you would like to view a single point in time without the chart moving forward.

Save

Used to save the chart to a file name other than the default. This can be used to export a table to a memory stick.

Note: The Trend Chart files are automatically updated on the hard drive to insure minimum data loss in the event of a lockup or a UPS failure.

Delete

Deletes the data displayed on the current screen and purges the current trend file (current.trd) on the hard drive.

Left Scale

Used to set the left scale to the range of the channel selected.

Right Scale

Used to set the right scale to the range of the channel selected. Left Scale Visible Used to turn the left scale on and off. Right Scale Visible Used to turn on and off the right scale. Grid Y Steps Change the spacing of the Y grid (located on the left and right side of the graph).

Fill Channel

If selected (zero means fill no channel). The selected channel will be filled under the curve.

Value at Cursor

The value of every channel logged by the Trend Chart will be shown at the point you select on the graph (noted by the white horizontal line).

Visible Channels

This allows you to select the channels to be displayed. The channels that are not selected will still be recorded but not displayed. This allows you to minimize the clutter on the screen Up Button Moves the center point up. Down Button Moves the center point down.

Zoom In

Expands the vertical gain.

Zoom Out

Contracts the vertical gain.

Reset Button

Resets the zoom and the center point to the original defaults.

Setup Button

Jumps to the Trend Chart Setup Screen.

Date

Displays the current date in the lower part of the graph.

Time

Displays the time in the lower part of the graph.

Total Number of Records

The total number of records recorded in the current.trd file. (information only)

Start Time

Shows the start time of the current trend file (current.trd).

Stop Time

Shows the stop time of the current trend file (current.trd).

Trend Setup

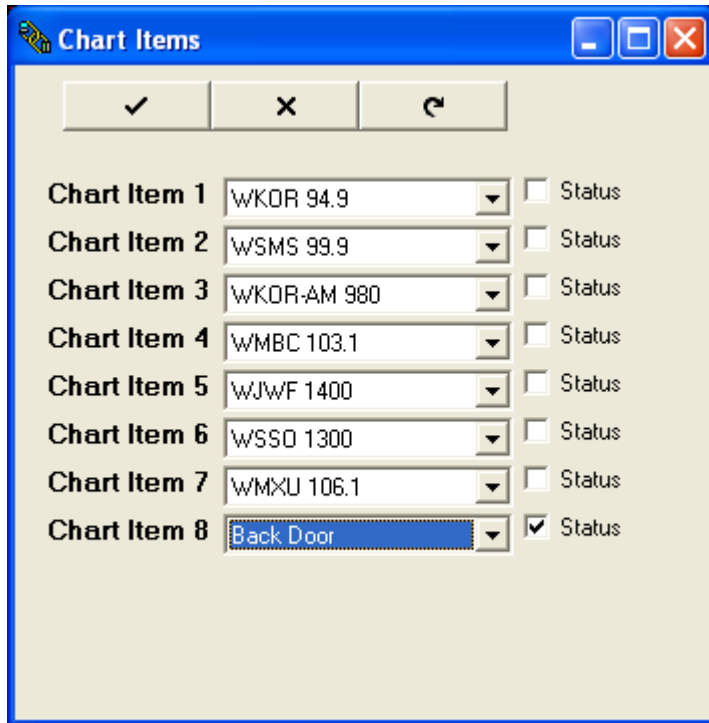


Chart Item

Select the items to record and view on the Trend Chart. Status Use the Status check box if you want to display a status (on/off) item instead of an analog item.

Chapter 8

Report Generator

Add Alarms

If checked, the alarm list will be included when printing or emailing logs.

Report Name

The name for the report. Used to identify the report when setting up a timed event to email or print a log.

Header 1-3

Three lines that will be printed on the top of a report.(i.e station, call letters, city, state , and report type).

Intervals

The amount of time in seconds between readings that will be recorded on reports. The old FCC logs were recorded at 30 minute intervals. This number cannot be smaller than 1 second.

Time Frame

Today

Today's log (from midnight last night until the current time) Yesterday From midnight (00:00:00) two nights ago until midnight(00:00:00) last night. Last Week From Sunday morning at midnight (00:00:00) to the following Sunday morning at midnight (00:00:00).

Custom (date)

User defined start and ending date.

Custom (time)

User defined start and ending time.

Report List

A list of reports you have created. Click on the report name, and that report will be displayed for editing or reviewing.
Report Items

Type

Select the items to be reported (status or analog). Analog or Status Report The type of items to display for selection. Use the Status check box if you want to report a status (on/off) item instead of an analog item.

Alarm Report

Used to view or print an report of alarms. An Alarm Report is a report generated from the alarm list. This report shows which channel was in alarm and the duration of the alarm. Save Report Used to save the current report to disk. Reports are stored at

'C:\stations\studio\logs\report'.

Custom Time

Allows you to select the start and stop time for a report.

Custom Date

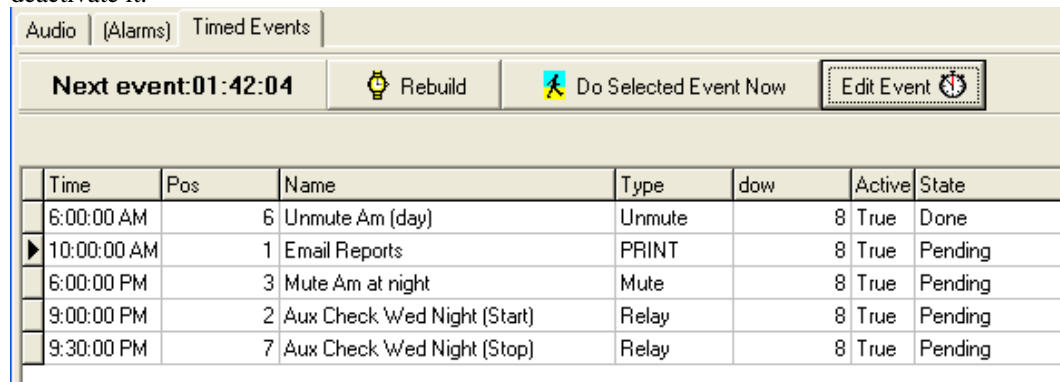
Allows you to pick a custom start and stop date for a report.

Chapter 9

Timed Events

Timed Event Tab

An event that is executed based on time. There are several different events that can be used. The events can be run once an hour, day or week. An event can be stopped by deactivating the event. It is not necessary to delete the event, just deactivate it.



Time	Pos	Name	Type	dow	Active	State
6:00:00 AM	6	Unmute Am (day)	Unmute	8	True	Done
10:00:00 AM	1	Email Reports	PRINT	8	True	Pending
6:00:00 PM	3	Mute Am at night	Mute	8	True	Pending
9:00:00 PM	2	Aux Check Wed Night (Start)	Relay	8	True	Pending
9:30:00 PM	7	Aux Check Wed Night (Stop)	Relay	8	True	Pending

Timed event tab is used to show the current events that are running and the time the next event will run.

Next Event 00:00:00

Shows the amount of time remaining before the next event is executed.

Rebuild

Used to force a rebuild of the time sequence database. Use this after edit, deleting, or adding an event.

Do Selected Event Now

By highlighting an event and pressing this button, you can force an event to occur without waiting for its predefined time.

Edit timed event

You can use this button to jump to the Edit Event Page without having to go through the menu, [Edit > Timed](#) ->

Common to All Timed Events

Name

Common name to be used for the timed event.

Time

Specified time the event will be executed.

Active

Check to allow this timed event to be executed.

Time Type

Everyday

This event will be executed once a day.

Specific Day of Week

Any day can be selected to run the event.

Weekdays

This event will only execute on weekdays, Monday through Friday.

Weekends

This event will only execute on weekends, Saturday and Sunday.

Types of Timed Events

[Relay](#)

[Mute Limits and Paging](#)

[Un Mute Limits And Paging](#)

[Print or Email Report\(s\)](#)

[Checking In](#)

Relay Timed Event

Pos: 7 Name: Aux Trx. Check (On)
Time: 9:00:00 PM

Active:
 Yes
 No

Event Type:
 Relay
 Mute Limits and Paging
 Unmute Limits And Paging
 Print or Email Report(s)
 Checking In

Time Type:
 Sunday
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Everyday
 Weekdays
 Weekends

Relay to Activate:
Aux Transmitter On Freq 94

Use this event to activate a relay on a timed event. For example, you can activate a Aux transmitter once a week by setting up the following two events:

1st event:

Event Type: Relay

Active: Yes

Timed type: Sunday

Time: 09:00:00 PM

Relay: Aux Transmitter On Freq 94.9.

2nd event:

Event Type: Relay

Active: Yes

Timed type: Sunday

Time: 9:30:00 PM

Relay: Aux Transmitter Off.

Timed Event Mute or Unmute

This is used to mute or unmute paging and alarms. (*i.e. This can be used to mute AM daytimers over night . (event 3) and mute the audio monitoring at 6pm and event 6 re-enables monitoring 6am the next day*)

Pos Name

Time

Active
 Yes
 No

Event Type
 Relay
 Mute Limits and Paging
 Unmute Limits And Paging
 Print or Email Report(s)
 Checking In

Time Type
 Sunday
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Everyday
 Weekdays
 Weekends

Channels to mute or unmute

Analog Channel	Status Channel
<input type="text" value="WSSD 1230"/>	<input type="text" value="Star Guide 1"/>
<input type="text" value="WJWF 1400"/>	<input type="text" value="Station A's EAS"/>
<input type="text" value="WKOR-AM 980"/>	<input type="text" value="Max Receiver"/>
<input type="text" value="None"/>	<input type="text" value="Tech Center UPS"/>

Timed Event Print or Email Report(s)

Pos Name

Time

Active
 Yes
 No

Event Type
 Relay
 Mute Limits and Paging
 Unmute Limits And Paging
 Print or Email Report(s)
 Checking In

Time Type
 Sunday
 Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Everyday
 Weekdays
 Weekends

Print or Email Parameters

Report

Email Group

Action
 Email
 Print

Used to print or send a report via email.

Report Name

The name of the report generated by the Report Generator.

Email Group

The Paging Group to send the report to.

Action

If print is selected, then the report will be sent to the default printer. If email is selected, the report will be emailed.

Timed Event Checking In

Pos	<input type="text" value="4"/>	Name	<input type="text" value="Check in on Weekends"/>
Time	<input type="text" value="12:00:00 PM"/>		
Active	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Event Type	<input type="radio"/> Relay <input type="radio"/> Mute Limits and Paging <input type="radio"/> Unmute Limits And Paging <input type="radio"/> Print or Email Report(s) <input checked="" type="radio"/> Checking In		
Time Type	<input type="radio"/> Sunday <input type="radio"/> Monday <input type="radio"/> Tuesday <input type="radio"/> Wednesday <input type="radio"/> Thursday <input type="radio"/> Friday <input type="radio"/> Saturday <input type="radio"/> Everyday <input type="radio"/> Weekdays <input checked="" type="radio"/> Weekends		
<div style="border: 1px solid black; background-color: #008080; color: white; padding: 5px;"> <p>Checking in Parameters</p> <p>Channel to Report</p> <p><input type="text" value="WKBB 100.9"/></p> <p>Paging Groups</p> <p><input type="text" value="CE"/></p> </div>			

A checking in page is used to report an analog channel once a day, week, or month to someone via email or pager. This can be used to report the output power of the transmitter to the engineer. A typical page would be "Site:WKBB . Forward Power is at 100.5 %. Thanks"

Channel to report

The analog channel to report when emailing or paging.

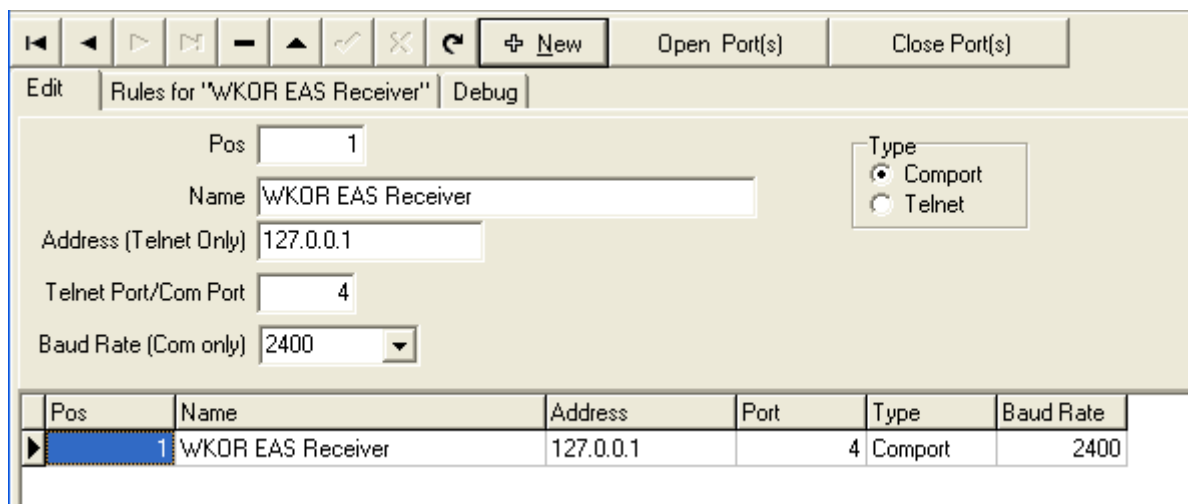
Paging Group

The Paging Group to send the page to.

Chapter 10

EAS Receivers

Setting Up EAS Ports



Pos	Name	Address	Port	Type	Baud Rate
1	WKOR EAS Receiver	127.0.0.1	4	Comport	2400

Name

The Name of the EAS receiver. This is used to identify the receiver that received the message.

Type

Telnet or COM port. A telnet converter like Site Player can be used to connect your EAS receiver to The Studio Hawk. If a COM Port is used, select COM port. A USB to serial adaptor can be used to add COM ports to your computer.

Address

If a Site Player is used, input the IP address of the Site Player. If a COM port is used, this will be ignored.

Telnet Port/COM Port

For a Site Player, input the port number (i.e. 23). If a COM port is used, input the number of the COM port assigned by Windows.

Baud Rate

The baud rate your receiver has been set to. (COM port only)

If a Site Player is used, you must set the baud rate within the Site Player.

Note:

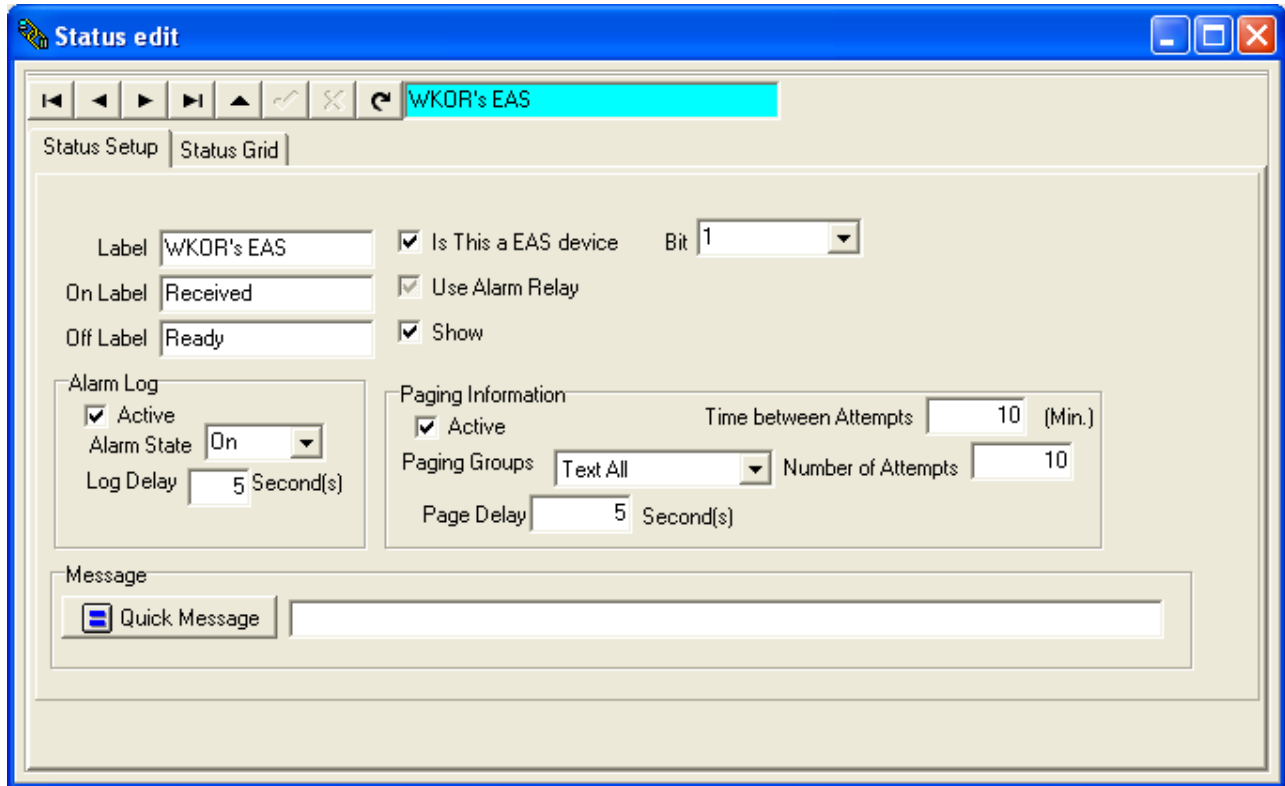
The Sage ENDEC is the only EAS receiver supported now.

Setting Up an EAS Receiver

1. You will need to define a COM port on your EAS receiver as a printer.
2. Select a baud rate on the defined COM port and make a note of it, in order to use it in setting up the EAS COM Port (#4 below).
3. Interconnect the EAS receiver to your computer with a null modem cable.
4. Setup the EAS COM port within The Studio Hawk.
5. Shut down and restart The Studio Hawk.
6. Perform a printer test or reboot your EAS receiver (Causing your EAS receiver to send a message to the printer port so that The Studio Hawk will log it)

7. Using the menu bar, select View > EAS to see the message sent by the EAS receiver.

Setting up The Studio Hawk to Send an EAS Message



1. Select Edit >Status from the menu bar.

2. Select a status channel that is not being used.

Note: a total of 8 status channels are allowed. This can be 6 I/O inputs and 2 EAS receivers or any other combination that equals 8.

3. Label the status channel like the one in the above example, "Status edit".

4. Select "Is This a EAS device", Alarm Log Active, Paging Information Active.

5. Set Alarm State to On.

6. Select the Paging Group that you want to receive the message from the drop down menu.

7. Set the Number of Attempts to the number of contacts found in the Paging Group.

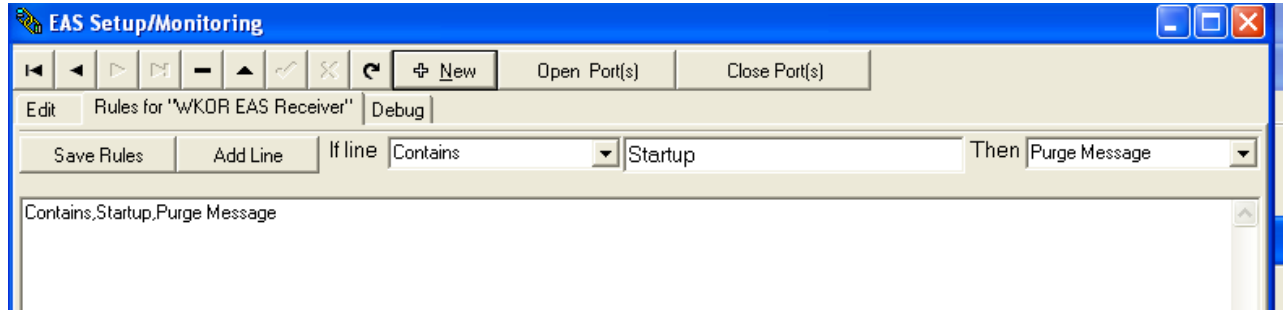
8. The information in the "Quick Message" box will be replaced by the EAS message received.

9. Close Status Edit screen.

10. Perform a printer test or reboot your EAS receiver.

11. If the rules are not set to filter out a printer test or a system startup, the message received will be sent out in the form of an email or text message. The alarm will also be logged in the alarm log.

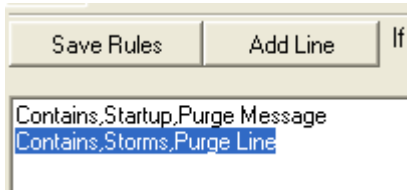
Setting up EAS Receiver Rules



Rules Overview: To prevent unwanted or unimportant messages like Startup, Printer Test, Snow Flurry Alert, etc. from being sent out, use the EAS Rules to filter these events out. All messages received will be logged, but the rules will prevent these items from being sent out as an email or text message.

1. Select "If line"
2. Type in the phrase to be filtered
3. Select "Then" statement (Purge Message or Delete Line)
4. Select "Add Line"
5. Repeat the above to add more rules
6. Select "Save Rules"

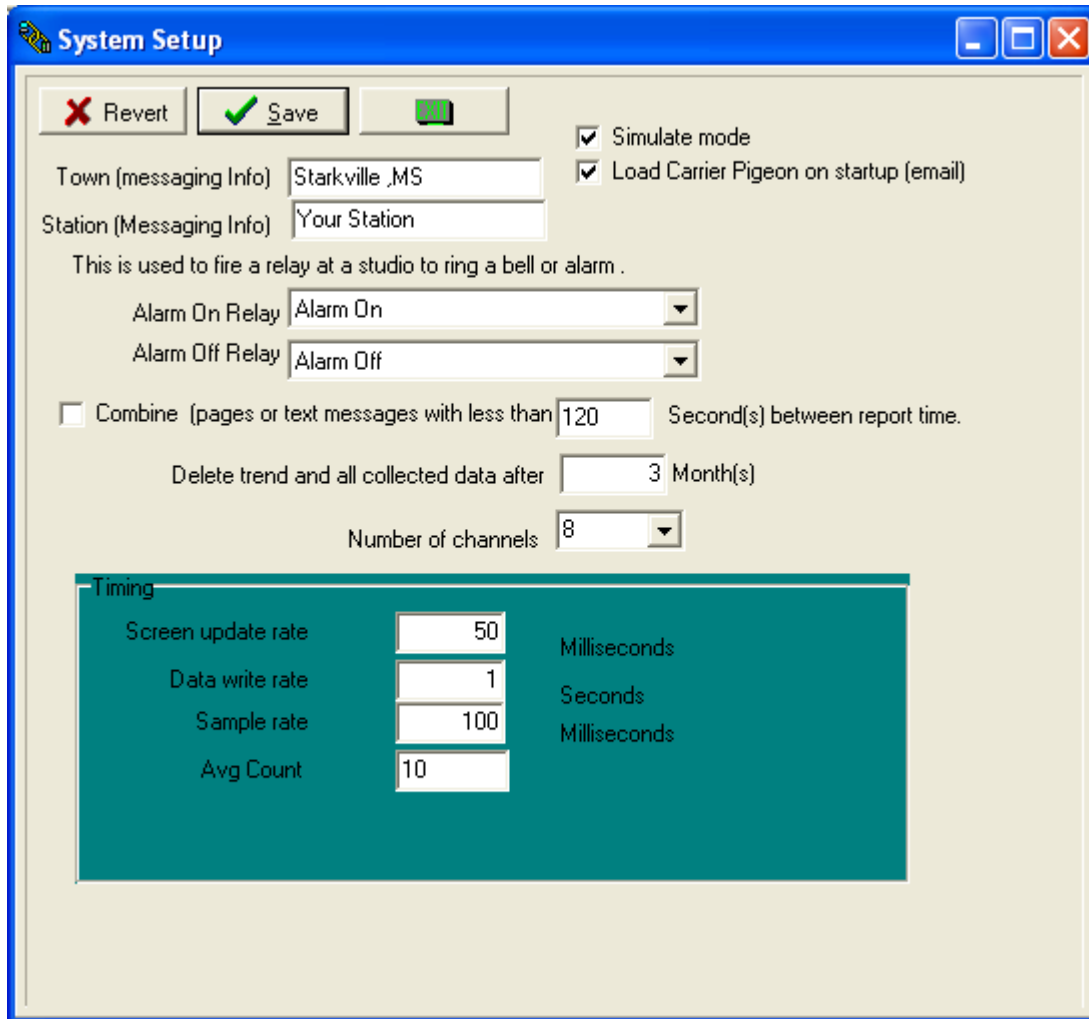
Deleting a Rule



To delete a rule, highlight it and hit the backspace key. Then select "Save Rules" to save your changes.

Chapter 11

System Setup



System Setup

Simulate mode
 Load Carrier Pigeon on startup (email)

Town (messaging Info)
Station (Messaging Info)

This is used to fire a relay at a studio to ring a bell or alarm .

Alarm On Relay
Alarm Off Relay

Combine (pages or text messages with less than Second(s) between report time.

Delete trend and all collected data after Month(s)

Number of channels

Timing

Screen update rate	<input type="text" value="50"/>	Milliseconds
Data write rate	<input type="text" value="1"/>	Seconds
Sample rate	<input type="text" value="100"/>	Milliseconds
Avg Count	<input type="text" value="10"/>	

Town

Normally used to display the city and state of the station.

Station

This is used to identify the site on pages, text messages and emails.

Simulate Mode

Places The Studio Hawk in the simulate mode for demos and to check macros and paging without hardware attached. If hardware is attached the hardware is ignored (no polling is done).

Load Carrier Pigeon on Startup (Email)

Carrier Pigeon is the program designed to run with The Studio Hawk to enable email communication.

Delete Trend and Collected Data After ___ Months

The amount of time in months that The Studio Hawk will store all collected data (i.e. trend chart data, alarm data, analog and status data). On the first day of the month, The Studio Hawk deletes files that exceed that period of time (i.e. if you set this for 6 months, The Studio Hawk deletes January's data on July 1st).

Timing Tab

Screen Update Rate

The rate (in milliseconds) that the screen is updated. Normally it is set to 500 ms. It can be set higher on slower computers.

Data Write Rate

The rate in seconds to store a sample of the incoming analog and status data to the database file.

Sample Rate

The rate the hardware is sampled in milliseconds.

Alarm relay tab

Use Alarm Relay

If this box is checked and a signaling device is attached to Plus Sine, then this channel will activate an audible or visible alarm. For more information on signaling devices see Setting up Signaling Devices.

Alarm On Relay

The relay used to activate a signaling device.

Alarm Off Relay

The relay used to deactivate a signaling device.

Avg Count

Average Count: the number of samples taken by the a/d converter. The averaging of these samples allows the audio metering to display the average value not the peak value.

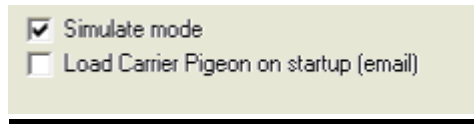
Combine Pages

If this box is checked, The Studio Hawk combines all pages or emails within the amount of time specified. This is useful during the catastrophic failures when several pages or emails cue up quickly. (i.e. If a page or email is to be sent at 8:10 and one is to be sent at 8:12 and the combined page time is set to 300 seconds (5 minutes) then the two pages will be combined.)

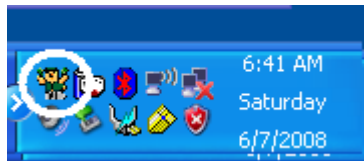
Chapter 12

Configuring and Selecting Carrier Pigeon (to enable emailing)

1. Select Edit > System and check “Load Carrier Pigeon on startup (email)”.

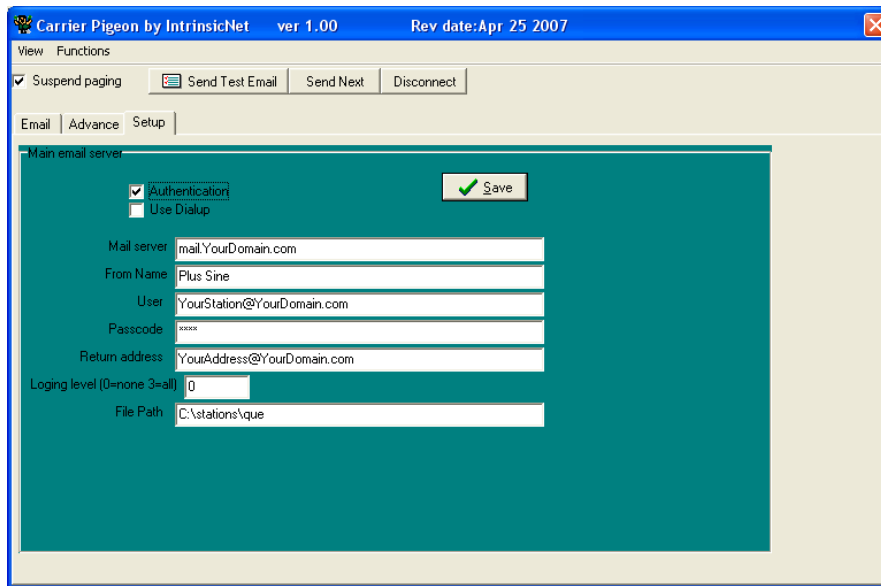


2. If Carrier Pigeon was not checked, check it, then save and exit The Studio Hawk. Restart The Studio Hawk, and you should see the Carrier Pigeon on the system tray as shown below:



3. Right click on the icon and select “Open”

4. Select “Setup” to get to the screen below:



To setup your e-mail account:

You will need the following information from your Internet service provider (ISP) or local area network (LAN) administrator. This is the same information that is used for Outlook and Outlook Express.

Authentication

Specifies that you must log on to your outgoing e-mail server

Use Dialup:

Specifies that **Carrier Pigeon** will use an RAS account to dialup via a phone line to your ISP for a connection to the Internet

Mail server

The name of the mail server given to you by your ISP, i.e. Mail.YourDomain.com

From Name

The name that will appear in the incoming email or text message, i.e. WZZZ site

User

The user name given to you by your ISP to allow access to the outgoing mail server

Password

The password given to you by your ISP to allow access to the outgoing mail server

Return address

The address that will appear on sent emails and where returned emails will be sent

Logging level (0=none 3=all)

The level of logging shown in the event log: 0 for none up to 3 for full logging of communications between the mail server and Carrier Pigeon

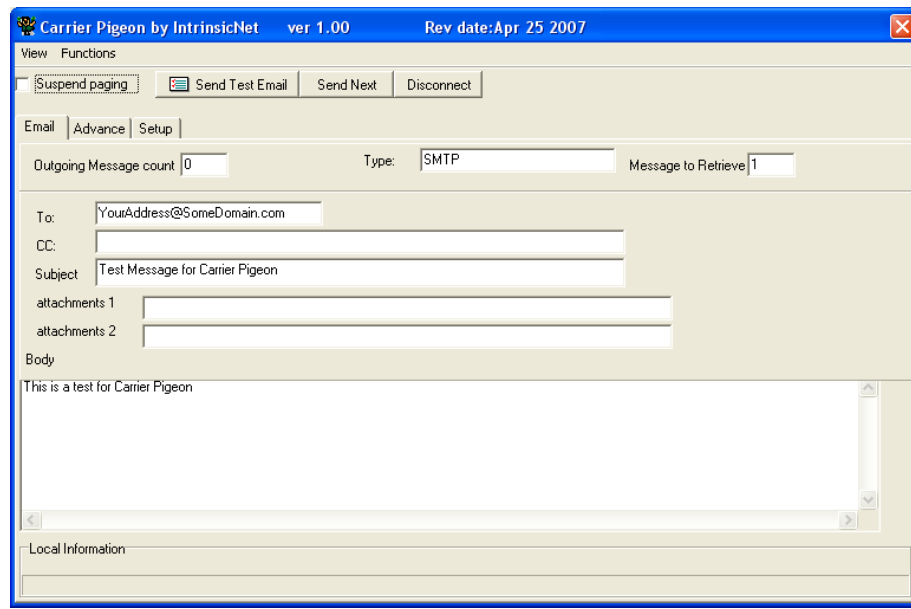
File Path

The path where outgoing emails are stored. Carrier Pigeon will monitor the folder. All files that are properly formatted will be processed.

If you do not have a high-speed connection at your site, and you are using a dialup account, you will need to setup "RAS" (Remote Access Server). To activate the RAS, check "Use Dialup" on the Setup Tab. (See Setting Up RAS below)

5. To Check Carrier Pigeon

Enter a valid email address in the "To" Field the select "Send Test Email". We also suggest you send a text message to your cell phone via email, so you can confirm you are getting the email. If the message is sent and accepted by the mail server, you will see a dialog box that states "the test email was sent". This takes 3-5 seconds in most cases. You can monitor the progress of the email by selecting View > Event log from the Menu bar of Carrier Pigeon.



Here is a sample Event Log from Carrier Pigeon

5/13/2008 7:19:10 AM To address.... YourAddress@SomeDomain.com,
5/13/2008 7:19:10 AM Subject..... Site [WCPC] Fwd Power (sine) was logged at 0 below limit of 15 Kw for a period
of 20 Min(s) and 31 Sec(s).. [3 of 3].
5/13/2008 7:19:10 AM Body.....Sent @:5/13/2008 7:18:04 AM
5/13/2008 7:19:10 AM cc.....
5/13/2008 7:19:10 AM Resolving hostname mail.fixmystation.com.
5/13/2008 7:19:10 AM Connecting to 66.128.60.12.
5/13/2008 7:19:10 AM Connected.
5/13/2008 7:19:10 AM SMTP Connected
5/13/2008 7:19:13 AM SMPT Start begin point 0
5/13/2008 7:19:13 AM Encoding text
5/13/2008 7:19:13 AM SMPT Start point 29
5/13/2008 7:19:13 AM SMPT Work ended
5/13/2008 7:19:13 AM Message Sent
5/13/2008 7:19:13 AM Disconnecting.
5/13/2008 7:19:13 AM SMTP Disconnected
5/13/2008 7:19:13 AM Disconnected.
5/13/2008 7:19:14 AM Trying to send mail.
5/13/2008 7:19:14 AM ++++++

Any Error will be recorded in the event log.

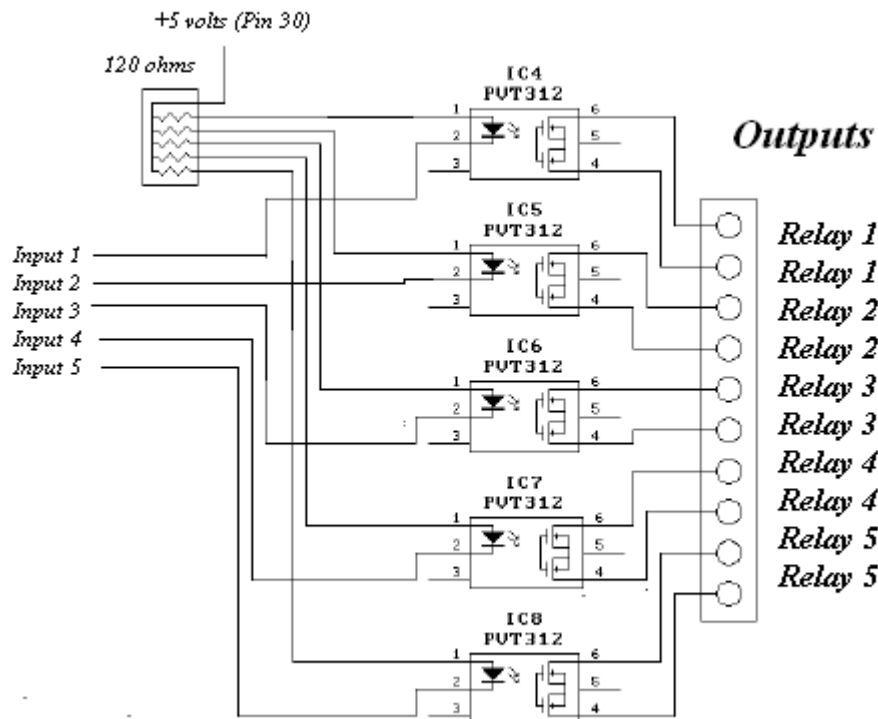
The most common errors are:

1. Host not found (your server is invalid)
2. Could not authenticate (incorrect user and/or password)
3. Relay denied (the provider of your high speed connection will not relay the message to another mail server. You will need to use the outgoing mail server of your high speed provider or have relays activated by the ISP that is providing your mail service.

Chapter 13

Relay Installation

Building a Buffer to Drive Relays



Here is a circuit to drive 5 relays. You can vary the number of components based on your application

Parts List

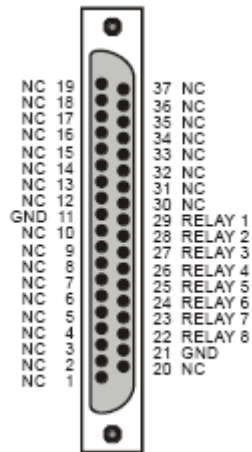
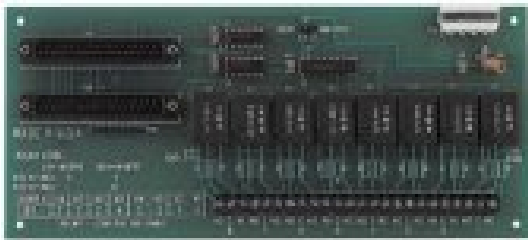
Quantity	Part Number	Description
5	PUT312	HSR312S
5	Resistor	120 ohm ¼ watt
1	Bread board	
1	Terminal Block	

Using a CIO-ERB08 to Drive Relays

[More Info CIO-ERB08](#)

This relay board is available from Measurement Computing and contains buffers to allow direct connection to the 1208SL. You will need a cable and 5 VDC power. The power for this board is supplied from your computer with the supplied cable.

<http://www.measurementcomputing.com/PDFManuals/CIO-ERB08.pdf>



1208LS

21 relay 1
 22 relay 2
 23 relay 3
 24 relay 4
 25 relay 5
 26 relay 7
 27 relay 7
 28 relay 8
 29 Ground

CIO-ERB08

Pin 29
 Pin 28
 Pin 27
 Pin 26
 Pin 25
 Pin 24
 Pin 23
 Pin 22
 Pin 21 Ground

