GE Measurement & Control

## Validation

# Kaye LabWatch® LT

## User's Manual





imagination at work

M4580 Rev. B January 2013

GE Measurement & Control

# Kaye LabWatch® LT

## **Monitoring System**

User's Manual

M4580 Rev. B January 2013



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## Chapter 1. The GE Kaye LabWatch LT Monitoring System

The GE Kaye LabWatch LT monitoring software system integrates RF ValProbe sensors, measurement hardware and networked PCs into a comprehensive solution for laboratory, warehouse and stability monitoring. Customers can incorporate wireless sensors for differential pressure, relative humidity, temperature, contact closure, CO<sub>2</sub>, and any wireless device that outputs an analog or digital signal. They can also add, replace or delete sensors as a facility expands or changes.

LabWatch LT software combines three functions. The system monitoring software allows users to perform real-time monitoring of groups of sensors, with color coding to indicate alarm levels. Users can click on individual sensors for more detailed information on trending, tabular data and alarm configuration, or to change the sensor tag description. The Alarms screen provides lists of recent alarms, and the Audit screen allows users to record and check the audit trail. For system administration, the Configuration screen enables system administrators to manage alarm contacts (e-mail and telephone) and acknowledgements, user accounts, calibration records, tag and group configurations, and basic system display parameters. All comments are held in a secure database that becomes part of the permanent record, archived to a secure audit trail in compliance with 21 CFR Part 11.

To signal personnel immediately when alarm events occur, LabWatch LT provides alarm notification via telephone and e-mail contacts:

- A flashing area on main screen shows the alarm location and details the alarm condition
- Automatic dialing/emailing from a priority list that calls personnel via telephone or e-mail
- User dial-in from a remote site to inquire about system status.

Automatic dialing for remote personnel allows LabWatch LT to deliver a message using text to speech messaging to notify the recipient of the alarm description and condition. An administrator can arrange the calling list in a cascading fashion to ensure the most efficient response to alarm situations.

Report creation allows you to create reports from a secure database. Users can generate six types of reports: Real-time, History, Single Tag Alarm, Mean Kinetic Temperature (MKT), Audit Trail and Calibration reports. A query function provides access to any type of Audit Trail reporting, from complete reports over any time period to specific reports focused on a particular system point or event.

To control user access, a system administrator grants access privileges and maintains the operator list. Each user receives an individual user ID and password combination that allows entry at the appropriate security level.

## Chapter 2. Installing Kaye LabWatch LT

Installing and setting up LabWatch LT is fairly straightforward. However, you must first be sure that your PC meets the necessary requirements.

## 2.1 System Requirements

- OS compatibility (MS Windows 7 32 bit and 64 bit, MS Windows XP SP3 32 bit, MS Windows Server 2008R2-Standard). English, German, French, Italian, Spanish, Portuguese and Chinese language version of above mentioned operating systems are supported.
- Minimum P4 or equivalent PC/Server design capable of running the required MS Operating System (OS).
- Memory Minimum 4 GB of RAM
- Hard Drive Minimum 40 GB free space
- CD or DVD Writable Drive
- Internet access
- IP address (assigned by customer's IT department) for each Base Station used
- One direct-connect USB (hubs or expansion cards do not work)
- One PCIe (1x or greater) slot for telephony media board
- 101-key standard Keyboard and mouse (can be used with KVM switching)
- Graphics 1024x768, 256 color resolution
- SVGA flat screen or LCD monitor (17-inch recommended, can be used with KVM switching)
- 10/100/1000 Network Interface

#### 2.1.1 Peripherals

- Networked black and white or color laser printer for all reports and printouts. (Optional, recommended)
- Local color ink jet/laser printer for all reports and printouts. (Optional)

#### 2.1.2 Computer Software

- OS compatibility (MS Windows 7 32 bit and 64 bit, MS Windows XP SP3 32 bit, MS Windows Server 2008R2-Standard)
   English, German, French, Italian, Spanish, Portuguese and Chinese language versions of above mentioned operating systems are supported.
   Hot Fixes is optional but strongly recommended.
- **Note:** LabWatch LT software package will be installed based on language OS (Windows 7 German, Windows 7 English, etc.) instead of regional and language option selection in operating system. For any language OS which is not supported, the English version will be installed by default.
- Anti-Virus and anti-Spyware/Spam software (Optional, highly recommended)
- Word processing, spreadsheet software and Adobe Reader (Optional; export of reports to Word, Excel and PDF format not possible in absence of MS Office, no other impact on the system)

#### 2.1.3 Application Software

- LabWatch LT 1.0 software package
- IMPORTANT: RF ValProbe, LabWatch Pro and LabWatch LT cannot run on the same machine. GE recommends using the LabWatch LT machine only for LabWatch LT.
   GE cannot test with all applications that could possibly be installed and cannot guarantee how the system will react with other software on the same machine.

### 2.2 Setting up RF ValProbe Hardware

Before you install LabWatch LT, be sure your RF ValProbe Base Station (s) and Loggers are transmitting and receiving in a network linked to the PC in which you have installed LabWatch LT.

Setting up an RF ValProbe hardware system for operation involves three steps:.

- **1.** Setting up the Base Station.
- 2. Connecting any External Sensors or Auxiliary Inputs.
- **3.** Setting up and positioning the Loggers.

#### 2.2.1 Setting Up the Base Station

Starting the Base Station requires plugging in the power supply and the USB or Ethernet connections. The rear of the Base Station appears similar to Figure 1 below.



**Figure 1: Base Station Connections** 

- To power the Base Station, insert the round barrel connector into the power input jack of the Base Station (the input at the left shown in Figure 1 on the previous page). Attach the power supply to the power cord. Then insert the power cord into a standard 100-240 VAC outlet. A green light next to the power outlet on the Base Station indicates that the station is powered up.
- For USB use, a separate USB-adapter-cable plugs into a USB socket on the user's PC. The other end of the USB-adapter-cable fits into the 10bT Ethernet socket on the Base Station. Use only ONE USB-adapter-cable on a PC.

# **IMPORTANT:** The external power supply included with your RF ValProbe is fitted with an AC power cord suitable for the country of destination.

#### 2.2.1 Setting Up the Base Station (cont.)

A new Base Station needs configuring before it is added to the LabWatch LT system. By default, Base Stations are in USB mode but must be switched to Ethernet. Configuration involves four steps:

- 1. Switch the Base Station from USB to Ethernet mode.
- 2. Put the Base Station on the Ethernet and make sure it is online and that the LabWatch LT PC is able to ping it.
- **3.** Assign an RF network ID to Base Station, All Loggers intended for the Base Station should also be set with same Network ID manually; all loggers will communicate with the Base Station on that Network ID. However, be sure no two Base Stations have same network ID.
- **4.** Perform the Base Station's Time Synchronization against the PC Time on which Lab watch Lite Software is running.
- **Note:** While performing this step, make sure the "Windows Time" service is running on the PC.

Be sure you have installed LabWatch LT and entered users (see page 17). To begin configuration, proceed to the second tab (page 20) and click on **Configure New Base Station**.

#### 2.2.1a Configuring a New Base Station

#### Setting up a New Base Station for the Configuration on PC

- **a.** Use CTA5 Crossover cable to connect the USB-Adapter and Base Station. Put one end of the crossover cable into the Base Station's Ethernet port and the other end into the USB-Adapter's Ethernet port.
- **b.** Plug-in the USB-Adapter into the PC's USB Port.
- **c.** The USB Adapter will be detected and Network properties will show a new connection as shown in Figure 2 below.

Shetwork Connections				_ 🗆 🗙
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorit	es <u>T</u> ools Adva <u>n</u> ced <u>H</u> el	p		<b>.</b>
🛛 🕜 Back - 🌍 - 🗗	🔊 🔎 Search 🄀 Folde	rs 🕼 🎯 🗙 🍤	Folder Sync	
Address 🔕 Network Connec	tions			🚽 ラ Go
Name	Туре	Status	Device Name	
LAN or High-Speed Intern	net			
Local Area Connection 26	LAN or High-Speed Internet LAN or High-Speed Internet	Connected Limited or no connectivity	Intel(R) 82566DM-2 Gigabit Network HighSpeed USB-Ethernet Adapter #	Connection
Wizard	Wizard			
< ]				>
HighSpeed USB-Ethernet Adapte	er #3			

Figure 2: Network Properties with New Base Station

A new Base Station needs configuring before it is added to the LabWatch LT system. By default, Base Stations are in USB mode but must be switched to Ethernet. Configuration involves four steps:

- 1. Switch the Base Station from USB to Ethernet mode.
- 2. Put the Base Station on the Ethernet and make sure it is online and that the LabWatch LT PC is able to ping it.

- **3.** Assign an RF network ID to Base Station. All Loggers intended for the Base Station should also be set with same Network ID manually; all loggers will communicate with the Base Station on that Network ID. However, be sure no two Base Stations have the same network ID.
- **4.** Perform the Base Station's Time Synchronization against the PC Time on which Lab watch Lite Software is running.
- **Note:** While performing this step, make sure the "Windows Time" service is running on the PC.
- **1.** Use the link **Click Here to find Base Station on USB** to detect the Base Station on the USB-Ethernet Adapter.

wtich Base Station from USB to Ethernet	Set Base Station Network ID	Time Sync Base station with PC	
A new Base Station by default will be in US	B, need to switch it to ethernet w	hen being added to the system.	
To Add a new Base Station to the System			
1. Make Sure the Base Station is connect	ed to PC through USB cable. Click	Here, To find Base Station on USB	
Ba	se Station Detected at		
2. Enter New Static IP for Base Station an	d Click "Configure to Ethernet".		
	Base Station Static IP	• •	
	Configure to	Ethernet	

Figure 3: Switch Base Station Tab

wtich Base Station from USB to Ethernet	Set Base Station Network ID	Time Sync Base station with PC	
A new Base Station by default will be in US To Add a new Base Station to the System. 1. Make Sure the Base Station is connect Ba 2. Enter New Static IP for Base Station or	B, need to switch it to ethernet w ed to PC through USB cable. Clicl se Station Detected at^ nd Click "Configure to Ethernet". Base Station Static IP Configure to	hen being added to the system. Here, To find Base Station on USB Scans USB ports to detect Comparison of the system Ethernet	Base Station

Figure 4: Scanning USB Ports

If a Base Station is connected through the USB port, then the Base Station IP address will appear in the "Detected at" text box after "**Click Here to find Base Station on USB**" is clicked.

wtich Base Station from USB to Ethernet	Set Base Station Network ID	Time Sync Base station with PC	
A new Base Station by default will be in US	B, need to switch it to ethernet w	hen being added to the system.	
To Add a new Base Station to the System. 1. Make Sure the Base Station is connec Ba	ted to PC through USB cable. Click	K Here, To find Base Station on USB	
2. Enter New Static IP for Base Station a	nd Click "Configure to Ethernet". Base Station Static IP 251	251 · 251 · 0	
	Configure to	Ethernet	
		Click to put Base Station on Ethernet mode w	ith above static IP.

Figure 5: Detected Base Station

 Enter the new "Base Station Static IP" which has to be assigned to the Base Station Your business IT department may need to assign this unique Static/Fixed-address/ Reservation IP address using their network configuration tools. Click Configure to Ethernet. Once successful, the "IP Address Switched Successfully" message will appear.

vitch Base Station from USB to Ethernet	Set Base Station Network ID	Time Sync Base station with PC
new Base Station by default will be in US	B, need to switch it to ethernet w	hen being added to the system.
To Add a new Base Station to the System.		
1. Make Sure the Base Station is connect	ed to PC through USB cable. Click	(Here, To find Base Station on USB
Bo	ase Station Detected at 192	168 · 99 · 100
2. Enter Static IP for Base Station and Cli	ck "Configure to Ethernet".	
	Base Station Static IP	
	Configure to	5 Ethernet
	L	Antonio anto anto

Figure 6: Configure to Internet

3. Click Next to configure the Base Station's RF Network ID.



Figure 7: Network ID Configuration

4. Enter the Base Station's Static IP. Enter the new RF Network ID, and click Change Network ID. Current Network ID of the Base station is detected and a confirmation message is prompted. For easy identification and future use, please affix a tag to the Base Station noting the selected Base Station IP address and the RF Network ID.

which Base Station from USB to Ethernet	Set Base Station Network ID	Time Sync Base station with PC	
ake Sure the ethernet cable is plugged into Change Network ID".	Base Station and Base Station is	online, Enter Base Station IP and Slect New Netw	ork ID and Click
Base Stati	on Static IP 3	· 100 · 100 · 100	
Select Bas	e Station Network ID A		
rrent network ID is 9, Do you want to chang	e it to 10 Proceed	ick to Change Network ID	
nected to 3.185.91.159 icribtion done to 3.185.91.159 ing for Sensor Network Inventory			
ing for derider recorder inventory in			

Figure 8: Confirmation Message

- **5.** Click **Proceed** to confirm you want to change the ID. Once done, the "Network ID Changed Successfully" message appears.
- **6.** Click **Next** to proceed to Time Synchronization of the Base Station with the LabWatch LT PC.



Figure 9: Time Synchronization

Now you must synchronize the Base Station's time with that of the PC on which LabWatch LT is running. The IP address of the PC is displayed; a user needs to enter the Base Station IP address.

Make sure the "Windows Time" is running on the PC and then click **Apply Time Synchronization**. Once done, the message "Base Station Time Synchronization is Successful" appears.

Loggers on the Base Station also need their times synchronized with that of the Base Station; do this manually by power resetting all the loggers. Please follow the steps below to sync the logger time with Base Station Time:

- **1.** Power OFF the logger, and change the Base Station ID, to anything other than the original ID.
- **2.** Power ON the Logger.
- 3. Power OFF the logger, and change the Base Station ID back to the original.
- **4.** Power ON the Logger.

Once you have added the Base Station to the network and synchronized the time, continue with setting up the LabWatch LT system as shown on page 20.

#### 2.2.2 Connecting an External Sensor and Auxiliary Inputs

If any of your Loggers are designed for use with an external sensor, that sensor will have been shipped in the same package as your Logger.

- To connect the sensor to the Logger, simply slide the connection end of the sensor into the hole on the right side of the Logger.
- To disconnect the sensor from the Logger, pull back the connection sleeve (the grooved part visible outside the connection) and you can pull out the sensor.

# <u>CAUTION!</u> When handling external sensors, avoid bending the sensor near either the tip or connector ends. Repeated bending will damage the sensor.

You connect auxiliary inputs (4-20 mA, 0-10V or contact closure) via the terminal at the top of the Logger shown in Figure 10 below. Figure 11 below illustrates wiring connections for the auxiliary inputs.



Figure 10: Auxiliary Input Terminal



Figure 11: Interface Connector Wiring Diagram

#### 2.2.2 Connecting an External Sensor and Auxiliary Inputs (cont.)

**Note:** For a 2 or 5-channel Logger, the sensors are prewired to terminal blocks inside the Logger. To replace or reattach a sensor, you must remove the cover and retaining bar, remove the terminal block for the existing sensor, attach the terminal block of the new sensor, and replace the retaining bar and cover.

#### 2.2.3 Setting up the Loggers

When you are setting up the Loggers, you must first be sure that they are switched on, and that they have the same network ID (from 0 to 9 or A to F) as the Base Station. (For instance, all Loggers must have the network ID "5" if the Base Station has the ID "5".)

**IMPORTANT:** If you have more than one Base Station, each one <u>must</u> be configured with a unique network ID.

To switch on the Logger, see the back of the Logger above the battery panel, as shown in Figure 12. Slide the switch below the network ID wheel to the right to turn on the logger.



Figure 12: Logger Battery Compartment, Power Switch and Network ID Wheel

#### 2.2.3 Setting Up the Loggers (cont.)

Be sure the network ID for both Base Station and Loggers is set up as shown on page 15.

If you need to adjust the Logger's network ID, use a small screwdriver to turn the arrow in the middle of the network ID wheel in Figure 12 on page 14. Be sure the arrow points to the appropriate ID number. (You can choose from numbers 0 through 9, and letters A through F.)

**Note:** You must change the Logger network ID before you switch on the Logger. If you have already switched the Logger on, switch it off and then turn it back on so the Logger can read the correct ID.

#### 2.2.4 Logger Installation Guidelines

You can now position the Loggers. Each Logger must be no more than 300 ft. distant from the Base Station and the other Loggers. GE offers several recommendations for logger placement:

- Install the Loggers at least one to two feet above the ground or floor. For better RF transmission, place them as high as possible. If possible, raise or lower the Base Station and Loggers above or below walls or any obstruction.
- Point the Logger antenna upwards for best results.
- Do not position the Loggers directly above or below each other. Stagger their positions for better transmission.
- If Loggers are placed at different heights, make sure that they are within antenna range (within 300 ft. from the Base Station or another logger). The RF signal is transmitted in an arc, with maximum signal strength occurring in the area 45° above and below the tip of the antenna.
- Be aware that metal surroundings can interfere with RF transmission; the Logger may transmit, but the signal will be weaker. Shorten the transmission distance accordingly.
- Do not install Loggers next to a cordless phone base or other 2.4 GHz transmission device.
- Do not install Loggers on a vibrating surface.
- Do not place Loggers where the temperature is outside their rated operating range.

**IMPORTANT:** If you are using Loggers with internal sensors, be sure the vents on the side remain uncovered. If the vents are covered, the sensors cannot provide correct readings.

### 2.3 Installing Kaye LabWatch LT Software

To begin installation, insert the LabWatch LT CD into the CD drive. Follow the steps in the *LabWatch LT Startup Guide* to install the software.

Once you have installed LabWatch LT, click on **Start >Programs>LabWatch LT** to open the program. The Login window opens.

6 LOGIN
PASSWORD
OK CANCEL

Figure 13: Login Window

## 2.3 Installing Kaye LabWatch LT (cont.)

The Configuration Wizard will open before you launch LabWatch LT if the following conditions are met:

- 1. No users have been created
- 2. No tags have been defined

Through the Configuration Wizard you can create user accounts, discover Base Stations/ Loggers, associate a sensor with a tag, set tag properties, create tag groups, associate users with tag groups, and associate schedules with users.

The following sections describe configuration steps.

#### 2.3.1 User Registration

In a newly installed system, no user accounts exist for LabWatch LT. So when you start LabWatch LT for the first time, a Registration window appears in which you can create new users. For each user, enter the relevant data in the fields.

REGISTRATION		C ASSEGN TAGS	CONFIGURE TAGS	GROUPS	O USERS	O SCHEDULE	O NOTIFICATIONS	
GISTRATION								
P 1: Users of Lab	ATCH LT avatch LT applicatio	n can be Created,M	adified and Deleter	d. :				
LIST OF USERS	\$400 USER	USER ID			USER NAME	- i		
		COMMENTS			_			
					F RESET PASSWORD			
					T DISABLE USER			
		USER TYPE		3	CHANGE PHOTO			
		System Admi	istrator +			al over the		
		EMAIL ID			TELEPHONY NO			
			0					
		ACCESS CODE			ACK CODE			
			eroue.			_		
		USER PERMES	stons					

Figure 14: User Creation Screen

Users can be one of three types, each with specific permissions:

**System Administrator** - Creates and maintains user accounts, locks and unlocks the system, sets site options and system preferences, backs up and restores user information, and views, prints, and maintains the audit trail. The System Administrator also performs Logger calibration.

**Operator** - Can view screens and create reports, Operators can also have particular permissions if the System Administrator has set them up with specific permissions in this window.

Guest - Can view screens, but cannot change any parameters.

**IMPORTANT:** Whenever new users are created, they are assigned default passwords that are the same as their User IDs. A user must change the default password at first log in.

After creating the required number of user accounts, click **Next** to configure the base station and loggers, as explained on the following pages.

#### 2.3.2 Discovering Base Stations and Loggers

In the next window, click on **Discover Base Stations** to determine what Base Stations are on your network, and click on **Get Loggers** to find the Loggers for each of the selected Base Stations. You can also **Enter an IP Address** to locate a particular Base Station.

	TION ASSISTATIONS	O ASSIGN TAGS	O TAGS	O GROUPS	O USERS	O SCHEDULE	O NOTIFICATIONS	O REVIEW
CONF	IGURE BASE STATIONS							
Step 2:	Base Stations can be confi	gured, discovered a	nd included in the	monitoring system.				
	1 rom	R IP ADDRESS						
NACORE	NEW BASE STATIONS		OK DIS	COVER BASE STATION	GET LOGGERS			
su	CT IP ADDRESS	NAME		PORT	TOTAL LO	GGURS	RECEIVED LOGGED	85
K P.	3.185.91.159	BASESTATIO	00.	4445	1		1	

Figure 15: Configure Base Station Window



Figure 16: Discovering Base Stations

2.3.2 Discovering Base Stations and Loggers (cont.)



Figure 17: Getting Loggers

When a user clicks on **GET LOGGERS**, it toggles to a **STOP GET LOGGERS** button. Clicking on **STOP GET LOGGERS** will stop LabWatch LT from searching for Loggers from selected Base Stations.

After the Loggers have been received and displayed, a user can select/unselect Base Stations and Loggers by clicking the corresponding check boxes. Click **Next** when you have finished.

Kaye L	abWatch LT	6		-		-		Configurati	on Wizard Step 2 Of 9
el GESTIKA	110N 28	ESTATEORS	O ASSIGN TAOS	O TAUS	O GROUPS	O ASSESS	O DEFINE SORDULE	O DEFINE ALARM NOTIFICATIONS	O ALVILW
CONF	IGURE BASE Stations	TATIONS	oured discovered a	nd included in the	monitorina system				
auch 23	base stations i	an de com	gurea,ascoverea a	nu nouveu in the	monitoring system	-			
NADURE	NEW BALL STATE		ER IP ADDRESS	OK DE	COVER BASE STATIO	IS GET LOSSE	-		
				trainin Trainin	property in				
9111	CT TP ADDRES	s	NAME.		PORT	101.	ALLOGGERS	RECEIVED LOCAL	85
	1.163.91.13		BADESTIATIO	n.,	110	1+			_
		ELFCT LOS	XGER SN (MAC ADOR)	855	SENSORI	ENSORE SENSOR	SENSORA SENSORS	SENSORS	
		D 903	592 00-00-00-0	0-00-01-92-FE	8L.	TA TB	TC TD	TE	
							-		
							and the second se		and the second se

Figure 18: Screen Populated with Base Stations

2.3.2 Discovering Base Stations and Loggers (cont.)

REGISTRATIO		ASSERTANCE	CONFECURE TAGS	O GROUPS	O USERS	OUP O SCHEDUL	O DEFINE ALARM	O REVIEW
CONFIG Step 2: 8a	URE BASE STATIONS ise Stations can be configu	rred,discovered a	nd included in the	monitoring system.				
CONFIGURE NEW		IP ADDRESS	OK 00	COVER BASE STATION	S GET LOGG	05		
डामटा	IP ADDRESS	NAME		PORT	101	AL LOGGERS	RECEIVED LOGGE	15
a P	3.185.91.159	BASESTATIO	01	4945	1.		1	
	SILLOT LOGO	ER SN. MAC ADOR	55	SINSORI S	DISOR2 SDISOR	a sonsore sonsore	SUNSORS	
	IF 60359	2 00-00-00-0	0-00-01-92-FE	BL T	а тв	TC TD	TE	

Figure 19: Populated Screen with Selected Loggers

**Note:** You can configure four (4) Base Stations. Two Base Stations can have 40 loggers per Base Station; overall, you can configure no more than 100 loggers.

#### 2.3.3 Associate Sensors with Tags

**IMPORTANT:** Tags cannot be generated without license info, so to generate the license key, click on the **License Key** button and enter a valid license key as shown below. Once a valid key is entered, tags can be generated, otherwise a message will pop up if it exceeds the limit. Even if the number of tags exceeds the limit, a user can still generate the tags but can only generate up to the license key provided.

Once the license key is entered, clicking on the **Evaluate** key will connect to the product key evaluation server to generate the license information. On receiving the license info, the license to number of tags will be listed and a user can proceed further for tag generation; otherwise appropriate messages will be displayed on unsuccessful product key entry.

D/ee89D-2a5a-40eb-9Ce	D-13122Dee80C3
	EVALUATE REF CANCEL

Figure 20: License Key Evaluation

When you have populated the list, click on the **Next** button to proceed to the Assign Tags tab (Figure 21 on the next page). In the Enabled column, clear the checkbox for any tag you do not want to enable. In the Tag and Tag Description columns, you can enter your own tag IDs and descriptions. To create automatic tags, click the **Generate Tag** button. If you need to reassign a tag, click the **REASSIGN Tag** button. By default, "Group By" will list all the base stations. Selecting a particular base station will list sensors related to that selected base station.

2.3.3 Associate Sensors with Tags (cont.)

6) ×	aye LabWatch L				_			Configuration	Mepsory (
0 ***		AF MANE	ASSESSMENTER	O CONFID		O biers	O SCHEDULE	O NOTIFICATIONS	O SCYTCH
	ASSIGN TAGS								
	top 3: Tags can be get	erated For deter	ted sensors.						
1	GENERATE TAG	LICENSE	427 R.	BAT HOLES	PREFIX I	START WITH PROFE	INCREMENT BY	UPDATE TAG	AND DO
12									
NAR	LED BASE STATION	SENSOR SP	SENSOR TYPE	TAG TA	G DESCRIPTION				
	BASESTATIONS	BESSERI, PL	Battery.						
7	INVESTATION3	helsez.TA	Temperature						
7	BALETATIONS	h031962.718	Temperature						
87	INVESTATIONS	bising.tc	Temperature						
2	BASESTATIONS	hessez.to	Temperature						
7	BASESTATIONS	URADING TE	Tempsisture						
_									-
aped	In User: w			ENAB	ITAL .	DISABLE ALL	0.07	INEVEND	NOT
				-			-		-

Figure 21: Assign Tags Tab

By default, tags are generated with prefix "T", but you can change the tag prefix by selecting the required letter from the Prefix drop-down box. Then click on **Update Tag Prefix** to update the tag prefix for all tags. Remember that the option to change tag prefixes is a one-time activity, and that clicking **Next** will save tags into the database. Once a tag is saved into the database, the option to change tag prefix becomes invisible, so users will not be able to change the tag prefix anymore.

Clicking **ENABLE ALL** will enable all sensors.

Clicking **DISABLE ALL** will disable all sensors.

Step 3: Tage can be gen GENERATE TAG Group By all	wrated for detect	ted sensors. KTY REAGES	SELECTED TAG	aga - 100	DICHEMENT BY	UPDATE TAG PRETEC
HED BASE STATION BASESTATIONS BASESTATIONS BASESTATIONS BASESTATIONS	ESTINGOR CN 6035972.81. 6035962.73A 6035962.710 6035962.700	SERVICIO TYPE TA Dattery . Temperature Temperature Temperature	TAG NAME	CANCE		
BASESTATION	barring, TE	Temperature			J	

Figure 22: Reassigning Tags

#### 2.3.3 Associate Sensors with Tags (cont.)

When you have completed sensor and tag association, click Next to configure tags.

#### 2.3.4 Configure Tags

REGISTRATION O BASESTATIONS	CON ASSESSMENTARIAS		O USERS	O SCHEDULE	O REVIEW
CONFIGURATION TAGS					
Step 4: Tags can be configured for ALL TAGS	parameters like Scaling and	Alarm Settings.			
Group By Al	CONFIGURATION	ALARM			
Tag Tag Tag Tag Tag T T00008 Minterpretaine T00007 Temperature T00008 Temperature T00005 Temperature T00005 Temperature	TAS DESCRIPTION SPORTS DESCRIPTION UNIT (%)	)			
MULTI TAG SETTINGS					

Figure 23: Configure Tags Tab

Click on any single tag, and the window for that tag opens at the **Configuration** tab. It includes text boxes for the **Tag Description**, **Spoken Description** (for telephone contacts) and **Measurement Unit** (C or F for temperature, % for relative humidity)

Click the **Alarm** tab, and you can enter alarm limits and delay times. Click the **Enable** box to apply the values you have entered for alarm limits.

#### 2.3.4 Configure Tags (cont.)

Kaye LabWatch LT			-		Configuratio	Ship 4 Of 9
		CONNECTORIE	O USERS	O SCHEDULE	O DEFENE ALARM NOTIFICATIONS	O REVIEW
CONFIGURATION TAGS Step 4: Tags can be configured for ALL TAGS	parameters like Scali	ng and Alarm Settings.				
Group By All	CONFIGURATI	ON ALARM				
Top	р <sup>а</sup> темала на на на на на на на на на на на на на на н	CQL <sup>12</sup> (M.mm) 0:00 0:00 0:00 0:00				
	1.00			-	_	-
gged In User: w				EXET	HRV2005	NOT

Figure 24: Alarm Tab

The tag window differs slightly for analog and digital auxiliary inputs. For analog inputs, a third tab, **Scaling,** appears.

REGISTRATION	CONFIGURE RASESTATIONS	O ASSIGN TAGS	CONFIGURE TAGS	O GROUPS	O ASSIGN GROUP	O SCHEDULE	O NOTIFICATIONS	O REVIEW
CONFIGUR Step 4: Tags ALL TAGS	CATION TAGS	parameters like Scali	ing and Alarm S	Settings.				
Tag T00001 BM T00002 Tef T00002 Tef T00002 Tef T00005 Tef T00005 Tef T00005 Am T00001 Cef T00001 Cef T00010 Tef T00010 Tef T00015 Tef T00015 Tef T00015 Tef	The Tipes International Intern	Tad Desiciention provide desicientia unit reactions	s	〕				

Figure 25: Configure Tags Tab (for Analog Inputs)

#### 2.3.4 Configure Tags (cont.)

		OREATE TAG	O ASSIGN GROUP	O SCHEDULE	O DEFINE ALAUM	O REVEN
CONFIGURATION TAGS Step 4: Tags can be configured for ALL TAGS	parameters like Scaling a	nd Alarm Settings.				
Tag         Tag Tag           100001         United           100001         Temperature           100011         Capitalityoit           100014         Temperature           100015         Temperature           100016         Temperature           100017         Temperature	UNIT ИNIT R R	58,51 (M. Hel) 6390 6390 6390 6390				
MULTI TAG SETTINGS				_		

Figure 26: Configure Tags (Analog Inputs)—Alarm Tab

REGISTRATION	O BASESTATIONS	ASSESS TAG	TAGS	O GROUPS	O USERS	O SCHEDULE	O NOTIFICATIONS	O REVIEW
CONFIGUR	TATION TAGS							
Step 4: Tags	can be configured for	r parameters like	Scaling and Ala	irm Settings.				
ALL TAGS								
Group By	Al	CONFIGU	RATION	ALARM	SCALING			
The Troot Bar T00001 Bar T00002 Ter T00002 Ter T00005 Ter T00005 Ter T00005 Ter T00005 Ter T00012 Bar T00012 Ter T00013 Ter T00015 Ter T000105 Ter T000105 Ter T000105 Ter T000105 Ter T000105 Ter T000105 Ter T00005 Ter T00055 Ter T0055 Ter T00555 Ter T00555 Ter	Trg Trps: tary more thank or more thank more thank more thank thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of the thank of thank of the thank of the thank of thank	RANKE RANKOW RANKOW SCALE HODH SCALE HODH	0.00					
MULTI TA	IG SETTENGS					DIT	1911/1745	NOT

Figure 27: Configure Tags —Scaling Tab

On the Scaling tab, click **Enable** to enable scaling. Two windows display the current raw low and raw high values. Enter the **Scale Low** and **Scale High** values in the text boxes.

The tag window for a digital input has two tabs, but the inputs differ.

#### 2.3.4 Configure Tags (cont.)

						201013
REGISTRATION O CONFIGURE	ASSIGN TAGS	O CREATE TAG	O ASSIGN GROUP	O SCHIDULE	O DEFINE ALARM NOTIFICATIONS	O REVIEW
CONFIGURATION TAGS		the second states of second				
ALL TAGS	r parameters like sca	ing and Alarm Settings.				
Group By Al	CONFIGURAT	ION ALARM				
Tooling         Justice           Tooling         Temperature           Tooling         Temperature	TAS DEBOSPTION SPORTN DESCRIPTION UNIT NODE	CC 0/1 OPEN / CLOSE 0 / 1 ON / OFF				
MULTI TAG SETTINGS						

Figure 28: Configure Tags—Digital Inputs

REGISTRATION O BASESTAT	TONS O ASSERN TAGS	COME LOURE	O GROUPS	O ASSIGN GROUP	O SCHEDULE	O NOTIFICATIONS	O REVIEW
CONFIGURATION TAGS Step 4: Tags can be configu ALL TAGS	red for parameters like Se	aling and Alarm S	Settings.				
Top         Top Tray           T00041         Entranslave           T00042         Entranslave           T00042         Entranslave           T00042         Entranslave           T00044         Entranslave           T00044         Entranslave           T00044         Entranslave           T00044         Entranslave           T00045         Entranslave           T00047         Entranslave           T00047         Entranslave           T00047         Entranslave           T00047         Entranslave           T00047         Entranslave	тка сессиотар рокен сесоат чист носе	CC OPEN / CL	OSE -	00			

Figure 29: Mode Selection

On the Configuration tab, three modes are available in the drop-down list: **Open/Close, I**/ **O** and **On/Off.** Click on the desired mode. On the Alarm tab, besides enabling alarms and setting a delay time, you can select an Alarm Mode of **Open** or **Close** from the drop-down list.
## 2.3.4 Configure Tags (cont.)

Kaye LabWatch LT		Configuration Wizar Step 4 Of	rd 9
REGISTRATION 2 CONFIGURE BASESTATIONS	3 ASSIGN TAGS 4 CONFIGURE 3 CREATE TAG 6 ASSI	GN GROUP O SCHEDULE O DEFINE ALARM O REVI	EW
CONFIGURATION TAGS Step 4: Tags can be configured fo ALL TAGS	r parameters like Scaling and Alarm Settings.		
Group By All         -           Tag         Tag Type           Togota         Extray           T00001         Extray           T00002         Temperature           T00004         Temperature           T00005         Temperature           T00006         Temperature           T00007         Extray           T00008         Relative Humidit           T00009         Remerature           T00009         Remerature	CONFIGURATION ALARM		
T00010     Auxiliary Input       T00011     DigitalInput       T00012     Battery       T00013     Temperature       T00014     Temperature       T00015     Temperature	CLOSE		

Figure 30: Alarm Mode Selection

If you select one/more tag (of type Temperature, Humidity, Auxiliary), the **Multi Tag Settings** button is enabled. Click this button, and you can apply common Lo, LoLo, Hi, and HiHi alarm limits and delays to the selected tags.

**IMPORTANT:** For **Multi Tag Settings** to work, a user should uncheck any DI tag within the list.

Kaye LabWatch LT					Contiguratio	Step 4 Of 9
REGISTRATION 2 CONFIGURE BASESTATIONS	3 ASSIGN TAGS	GROUPS	G ASSIGN GROUP USERS	O DEFINE SCHEDULE	DEFINE ALARM NOTIFICATIONS	<b>O</b> REVIEW
CONFIGURATION TAGS Step 4: Tags can be configured for ALL TAGS Group By All Tags Tags Typs T00001 Buffer T00002 Temperature T00004 Temperature T00004 Temperature T00007 Baffery T00005 Restrict T00001 Auxiliary Input T00001 Buffery	CONFIGURATION	d Alarm Settinos.	5 DELAY 0:00 0:00 0:00 0:00			

Figure 31: Multi Tag Settings Window

### 2.3.4 Configure Tags (cont.)

Click **Enable** to enable these limits, and then click **OK** to apply the limits and delays to the selected alarms.

### 2.3.5 Create Tag Groups

Clicking **Next** opens the **Create Tag Groups** tab in which a user can create/modify tag groups; by default, the battery group opens, as shown below.

REGISTRATION	CONFIGURE BASESTATIONS	3 ASSIGN TAGS	CONFIGURE TAGS	GROUPS	G ASSIGN GROUP	O DEFINE SCHEDULE	DEFINE ALARM     NOTIFICATIONS	
CREATE TAG GR	OUPS							
tep 5: Tag Group	s Can be Created,Mo	dified and Deleted.1	ags can be assigned	to Groups.				
List Of Tag Group	5							
🔂 Add								
	Battery							
TAG GROUP NAME		A	VAILABLE TAGS		SELECTED TAGS			
			00002-Temperature 00003-Temperature	î		1		
TAG GROUP DESCRI	PTION		00004-Temperature 00005-Temperature 00006-Temperature					
		TC	00008-Relative Humidit 00009-Temperature					
			00010-Auxiliary Input 00011-DigitalInput 00013-Temperature			•		
			00014-Temperature 00015-Temperature					
		T	00016-Temperature					

Figure 32: Create Tag Groups

The left pane of this tab lists the currently available groups. Click on the arrow button beside any group, and a list of associated sensors appears below the group name. (The same list appears in the "Selected" pane at the right.) When you select a group, the Available Tags list and Selected Tags list are updated to show the specific group. You can move tags between the Available and Selected lists.

To create a new group, click the **Add Group** folder icon in the upper list of tag groups. You can then create the group by entering the group name and description, and selecting tags. Then click **Save** to save group information. Clicking on the arrow (up/down) buttons allows you to set the order of tags.

## 2.3.5 Create Tag Groups (cont.)

CONFIGURE	Margaret and the second	CONFICURE	CREATE TAG	ASSIGN GROUD	DEETNE	DEETNE ALARM	-
REGISTRATION 2 BASESTATIONS	ASSIGN TAGS	O TAGS	5 GROUPS	O USERS	SCHEDULE	NOTIFICATIONS	2 REVIEW
CREATE TAG GROUPS							
tep 5: Tag Groups Can be Created,Modifie	d and Deleted.Ta	igs can be assigned	to Groups.				
List Of Tag Groups							
	8						
◆ Add	List of available	tag groups					
Battery Group	1	tag groups.					
TAG GROUP NAME	AV	AILABLE TAGS		SELECTED TAGS			
Broup1	TOC	0004-Temperature		T00002-Temperature			
	TOC	0005-Temperature 0006-Temperature		100003-Temperature	23		
irst group		0009-Temperature 0010-Auxiliary Input					
	TO	0011-DigitalInput 0013-Temperature					
	T00	0014-Temperature 0015-Temperature			1.3		
		0016-Temperature 0017-Temperature					
SAVE	2						

Figure 33: Adding a Group

To delete a group, select the group and click on the cross icon appearing on top right corner of the group folder icon.

Click Next to proceed to the Assign Users tab, where you can associate users with groups.

## 2.3.6 Associating Users with Tag Groups

REGISTRATION	2 CONFIGURE BASESTATIONS	3 ASSIGN TAGS	O CONFIGURE TAGS	G CREATE TAG GROUPS	6 ASSIGN GROUP	DEFINE SCHEDULE	DEFINE ALARM NOTIFICATIONS	
ASSIGN USERS tep 6: Users who	TO TAG GROUPS are responsible for T	agGroups can be as	signed or removed					
List Of Tag Group	5							
3	2							
Battery	Group1							
AVAILABLE USER	S @ADD USER	ASSIGN	D USERS	1				
a w wajid								
		•						

Figure 34: Assign Users Tab

Upon selecting a group, the Assigned User list is updated appropriately. You can also move users between the **Available** and **Assigned Users** lists. Clicking on the arrow (up/ down) buttons allows you to set priority of users in a group.

To create a user, click on the **Add User** icon located on top right corner of the Available Users listbox. Clicking **Next** will display the **Define Schedule** tab, where you can associate schedules with a specific user of a group.

### 2.3.7 Defining and Modifying User Schedules

Kaye LabWatch LT						Configuration	Step 7 Of 9
REGISTRATION 2 CON	FIGURE ASSIGN TAGS		G CREATE TAG GROUPS	ASSIGN GROUP USERS	C DEFINE SCHEDULE	DEFINE ALARM     NOTIFICATIONS	
FINE SCHEDULE 0 7: Schedules for the Us	ers of Labwatch LT application	can be Created,Mo	odified and Deleted				
HEDULE NAME	1 START TIME	1 END	TIME	1 MONDAY T	JESDAY WEDNESD	AY THURSDAY FRIDAY S	SATURDAY SUNDA
	09:00:00	18:0	0:00	×	x x	x x	1 1
				_			
		NEW	- 10				

Figure 35: Define Schedules Tab

The Define Schedule tab displays all the available schedules. You can also create a new schedule or modify existing schedules here:

1. To create a schedule, click on the **NEW** button.

RECIETRATION	CONFIGURE	ASSIGN TAGS	CONFIGURE	CREATE TAG	ASSIGN GROUP	DEFINE	DEFINE ALARM	
REGISTION	BASESTATIONS		TAGS	GROUPS	USERS	SCHEDULE	W NOTIFICATIONS	O REVIEW
FINE SCHEDU	ILE							
p 7: Schedules f	or the Users of Labw	S NEW SC	HEDULE		_	00	1	
HEDULE NAME	1.	5					Y THURSDAY FRIDAY S	ATURDAY SUN
		0	ENTER SC	HEDULE			XX	1 1
			START	TTIME 00:00:00	<b>H</b>			
			ENDT	TIME 00:00:00				
				SCHEDULE REPE	AT	and the second se		
			TUESDAY TWEDN	ESDAY				
					EEKENDS			
				CA	ICEL			
							^	
			NEW	100				

Figure 36: New Schedules Window

#### 2.3.8 Defining and Modifying User Schedules (cont.)

2. To edit a schedule, select the required schedule and click on the EDIT button.

REGISTRATION	CONFIGURE RASESTATIONS	ASSIGN TAGS	CONFIGURE	GROUPS	G ASSIGN GROU	IP DEFINE SCHEDULE	DEFINE ALARM     NOTIFICATIONS	REVIEW
			C. Mas	-				
tep 7: Schedules f	for the Users of Laby	at an			8	_		
		(%) EDIT SC	HEDULE			? 😫		
CHEDULE NAME								ATURDAY SUNL
		-	SELECT SCHE	EDULE S1	•			
			START TI	ME 09:00:00	8			
			ENDTIM	E 18:00:00	m			
					(man)	-		
			S	CHEDULE REPE	AT			
			TUESDAY WEDNESD	DAY THURSDAY	FRIDAY V SAT	JRDAY V SUNDAY		
				EKDAYS 🖌 W	EEKENDS			
				CAN	ICEL			
							/	
			NEW	EDIT DELE	TE			

Figure 37: Edit Schedules Window

3. To delete a schedule, select the required schedule and click on the **DELETE** button.

Kaye LabWatch L1					Configura	ation Wizard Step 7 Of 9
REGISTRATION 2 COM	NFIGURE SESTATIONS 3 ASSIGN TAGS	CONFIGURE      GREATE TAG     GROUPS	G ASSIGN GROUP	DEFINE	DEFINE ALARM     NOTIFICATION	
EFINE SCHEDULE ep 7: Schedules for the U:	sers of Labwatch LT application	n can be Created,Modified and Deleted				
CHEDULE NAME	1 START TIME	1 ENDTIME	1 MONDAY TUESD	AY WEDNESDAY	THURSDAY FRIDA	Y SATURDAY SUNDA
L	09:00:00	18:00:00	X X	×	× ×	* *
		Yes	No			
		NEW EDIT DELE	TE			

Figure 38: Delete Schedules Window

Clicking on the **Yes** button deletes the selected schedule.

## 2.3.9 Defining Alarm Notifications

-	2 CONFIGURE BASESTATIONS	3 ASSIGN TAGS	O CONFIGURE TAGS	GROUPS	ASSIGN GROUP     USERS	O DEFINE SCHEDULE	8 DEFINE ALARM NOTIFICATIONS	
DEFINE ALARM	NOTIFICATIONS							
Step 8: Define Ala	rm Notifications for th	ne schedules.						
List Of Tag Group	5							
3	3							
Battery	Group1							
SELECTED USERS	-	SCHEDU	LE DETAILS					
		SEL	ECT NAME	5	ART TIME	ENDTIME		
		*						

**Figure 39: Defining Alarm Notifications** 

To associate a schedule with a user of a particular group:

- 1. Select a group.
- 2. Select a user from the selected users list.
- **3.** Select a schedule. You can also create a new schedule by clicking on the Add icon located at the top left corner of the Schedule Details grid.
- 4. Select the notification type as needed.

You can also change the priority of users by clicking on the arrow (up/down) buttons. These up/down buttons allow you to set the priority of users in a group.

#### 2.3.9 Defining and Modifying User Schedules (cont.)

Click **Next** to display the **Review** tab, where you can see a detailed report of activities performed in the last seven tabs.

Kaye I	LabWate	dh LT							Step 9 Of 9	
B REGISTR		CONFIGURE BASESTATION	s 3 ASSIGN		ONFIGURE AGS	CREATE TAG GROUPS	G ASSIGN GROUP USERS	O DEFINE SCHEDULE	DEFINE ALARM NOTIFICATIONS 2 REVIEW	w
⊲ ⊲ 1	of 2	) ⇒    4 4	8 🕲   🖨 🛙		100%	•	Find   Next			
			CURRE	ENT CO	NFIGL	<b>JRATION</b>				
						P	rinted By w On 07/N	ov/2012 12:00		
				Base	Station					
IP ADD	RESS	NAM	E	PORT	TOTA	L LOGGERS	RECEIVED LOG	GERS		
3.185.9	91.159	BASESTA	TION1	4445		1	1			
3.185.	91.28	BASESTA	TION2	4445		2 2				
				Assign B	ase Statio	n				
Enabled	ed Base Station		Sensor SN	Senso	r Type	Tag	Tag Descript	ion		
True	BASE	STATION1	b03592.BL	Bat	tery	T00001				
True	BASE	STATION1	603592.TA	Tempe	erature	T00002				
True	BASE	STATION1	b03592.TB	Tempe	erature	T00003				
True	BASE	STATION1	603592.TC	Tempe	erature	T00004				
True	BASE	STATION1	603592.TD	Tempe	erature	T00005				
True	BASE	STATION1	603592.TE	Temp	erature	T00006				

Figure 40: Review Tab

Click Finish to exit the Configuration Wizard and launch LabWatch LT.

[no content intended for this page - proceed to next page]

# Chapter 3. Monitoring Sensors with Kaye LabWatch LT

Once you have installed and set up LabWatch LT, you can begin to monitor your sensors. If this is your first use of LabWatch LT, the Log In screen will ask you for your User ID and password. (For the first use *only*, enter the User ID in both columns.) The system will then ask you to enter and confirm a new password. Enter a new password with a minimum of six characters.

Once you have entered your new password, LabWatch LT opens at the System Monitoring screen. Click on a button for one of the groups you have created in Chapter 2, and the screen will appear similar to Figure 41 below.

🛞 Kaye L	abwatch	LT				-	-	-	-	-		TOTAL ALARM CO	UNT: 7	? ଃ
MONITOR	1	(	GRAPHING	1	ALAR	NS	1	AUDIT		RE	PORTS	CONFIGURATIC	N	COMMENTS
												DISPLAY	VIEW	n e s
VIEW BY List	View 🗸	6												
Battery- Batter	v Group	-												
SENSOR NAME	TAG NAME	STA	TUS T	LOLO LIMIT	LO LIMIT	HI LIMIT	HIHI LIMIT	VALUE	IS ALAR	M ENABLE	DESCRIPTION	۲	_	
A1980.TA	T0001	1	LOLO	10.00	20.00	50.05	80.33	12 °C			Freezer 1			
A1980.RH	T0002	1	LOLO	10.00	20.00	50.00	80.00	11 mA			Freezer 2			
A1980.AUX	T0003		LOLO	10.00	20.00	50.00	80.00	11.30 V	2		Freezer 3			
A1981.TA	T0006		HI	10.00	20.00	50.00	80.00	98 °C			Freezer 6			
A1981.RH	T0007		HI	10.00	20.00	50.00	80.00	91 mA			Freezer 7			
A1981.AUX	T0008		HI	10.00	20.00	50.00	80.00	97 V			Freezer 8			
Battery	Group A													
GE LabWatch LT,	All Copyrigh	its Re	served.					_		Logged	In User: admin	Thursday, Novembe	r 08, 2012	3:35:42 PM

Figure 41: Monitoring Tab

# 3.1 The Monitoring Screen

The Monitoring screen, the first screen to appear once you have logged onto LabWatch LT, provides a concise overview of the various groups of sensors that make up a LabWatch LT system. As with the other major screens, the header lists the number of current unacknowledged alarms.

At the bottom of the screen, the Area series of buttons offers a scrolling list of the userassigned alarm areas (groups). Any group with at least one unacknowledged alarm will flash red, while the others will remain blue. Users can create any number of individual alarm areas with any number of tags. (GE recommends defining areas with up to 30 tags for better and clearer depiction on a full screen view.)

When you click on any of these buttons, you can survey the status of the alarms assigned to this group in the center of the screen. Users can display all areas, or up to four groups on the screen at any one time, in three different views — **List** (tabular data, as shown in Figure 41 on the previous page), **Graph** (a color-coded graph of the individual tags), and **Floor** (displaying tag icons superimposed over a map of the facility floor plan). To determine the number of areas displayed on the monitor at any one time (from one to four), click on the appropriate button in the Display View option.

For example, if you click on the two-pane button, a two-area screen appears, with the right screen empty. Click on the second group, and, with the mouse held down, pull the second group onto the window. The screen now appears similar to Figure 42 below.



Figure 42: Two-View Monitoring Screen

# 3.1 The Monitoring Screen (cont.)

A three-area screen opens a third window. . .

🏀 Kaye I	Labwatch	n LT							TOTAL ALARM COUNT: 7	2 📀
MONITOR		GRAPHING	1	ALA	ALARMS /		AUDIT	REPORTS	CONFIGURATION	COMMENTS
									DISPLAY VIEW	
VIEW BY List	View 🔽	•					VIEW BY Graph Vie	w 🖌		
Battery- Batte	ry Group						Battery- Battery Gro	нир		
SENSOR NAME	TAG NAME	<b>STATUS T</b>	LOLO LIMI	T LO LIMI	г на шма	г нана сама	110		n n	
A1980.TA	T0001	LOLO	10.00	20.00	50.05	80.33	66	JAN JAN	M JA	
A1980.RH	T0002	LOLO	10.00	20.00	50.00	80.00	22-	and had I	and had	
A1980.AUX	T0003	LOLO	10.00	20.00	50.00	80.00	08/11/2012 0	8/11/2012 08/11/2012 08/	11/2012 08/11/2012 08/11/20	12
A1981.TA	T0006	п ніні	10.00	20.00	50.00	80.00	13:40	15:50 18:00	16:10 16:20 16:30	
A1981.RH	T0007	п ніні	10.00	20.00	50.00	80.00	🔍 🖂 🔲 тооо	3 🗹 💼 TOOOS 🗹 💼	T0002 🗹 📩 T0007 🗹	
A1981.AUX	T0008	п ніні	10.00	20.00	50.00	80.00				
	•						VIEW BY Encountry Fire View By Encountry Battery-Battery Gro			
Battery	Group /	•								
GE LabWatch LT	. All Copyrial	hts Reserved.		_				Looged In User: admin T	hursdav. November 08. 2012	1 4:28:34 PM

Figure 43: Three-View Screen

and the four-area screen supports four different groups and/or views.

(%) Kaye	Labwatch	TOTAL ALARM COUNT: 7							
MONITOR	2	GRAPHING		ALA	RMS		AUDIT	REPORTS	CONFIGURATION COMMEN
									DISPLAY VIEW
VIEW BY Lis	VIEW BY List View							iew 🔽	
Battery- Batt	Battery- Battery Group							roup	
SENSOR NAM	IE TAG NAME	STATUS T	LOLO LIP	ат со сама	т на шма	т нана на	110	And the	n n n
A1980.TA	T0001	LOLO	10.00	20.00	50.05	80.33	88 - 66 - 66		
A1980.RH	A1980.RH T0002 (1 LOLO 10.00 20.00 50.00 80.00							had had	and had had
A1980.AUX	T0003	LOLO	10.00	20.00	50.00	80.00	0 08/11	1/201 08/11/201 08/1	1/201 08/11/201 08/11/201 08/11/201
A1981.TA	T0006	ніні	10.00	20.00	50.00	80.00			
A1981.RH	T0007	🕕 ніні	10.00	20.00	50.00	80.00 *	< 🖂 💳 тоо	03 🗹 💳 T0008 🗹	I 🚃 T0002 🗹 💳 T0007 🗹 💳 T 🔰
VIEW BY C	aph View V	12 08/11/2012	08/11/201	2 08/11/20	12 08/11/2	012	VIEW BY Floor Vie Battery- Battery G	ew ▼ FLOOR PLAN roup +1 F 72°C 2 #0001	
Battery	TD011 Group A							MASSAGE	

Figure 44: Four-View Screen

# 3.1 The System Monitoring Screen (cont.)

For RF ValProbe loggers, if a sensor is OPEN CIRCUIT, OVER range or UNDER range, the value will show up as ?? on the System Monitoring screen and it will have a COMM alarm.

Users can rearrange a List by clicking on the Column Layout drop-down list. They can then click or unclick checkboxes to show or hide particular alarm columns. In addition, they can click on the Status or Description drop-down lists to select particular tags to display, or the tags that are less than, equal to, or greater than a particular value.

To alter the description or status of a given tag, click on the tag to open the Tag Maintenance screen. Here you can review trends and tabular data, and edit the alarm data.

At the top of the screen, six tabs enable navigation among the major areas of LabWatch LT (Figure 45 below).



- The **Graphing** tab allows you to select groups and tags to create graphs, as well as to determine the parameters, limits and appearance of the graph.
- The **Alarms** tab opens the Alarms window, in which you can review and acknowledge alarms. You can also view the alarm history for a particular tag since midnight of the current day (up to a maximum of 24 hours) by expanding the alarm row in the list.
- The Audit tab provides a running list of audit trail events.
- The **Reports** tab enables you to create daily, historical and Mean Kinetic Temperature (MKT) reports, along with single tag reports, audit trail reports and calibration reports, from the monitored data.
- The **Configuration** tab equips the Administrator to add and edit users and user passwords, set up telephone and e-mail contact configurations, enable and disable alarms, and access the Tag Configurator.
- From these other screens, the **Monitor** tab enables returning to the Monitoring screen.

# 3.1 The System Monitoring Screen (cont.)

At the right, the **Comments** button allows you to add comments at any time. When you click on this button, it turns yellow and the Comments window (Figure 46 below) opens.

(%) Comments	-		
USER ID			
PASSWORD			
COMMENTS			
			~
L	(		
	ł	00	CANCEL

Figure 46: Comments Window

When you have finished, click **OK** to save the comments and close the window, or **Cancel** to close the window without saving the comments.

# 3.2 Views on the Monitoring Screen

## 3.2.1 The List View

When you first open the Monitoring screen, the default view will be the List View, (Figure 41 on page 39), a list of tags and values in table format. As with other views, you can select up to four groups to display on the screen at one time — or you can display one or more groups in other views (graph or floor). In the List view, the alarm columns include **Tag, Status, Lo** and **LoLo** Limits, **Hi** and **HiHi** Limits, **Value** (the current value for the alarm), **Is Alarm Enabled** (indicating whether a given alarm is enabled) and the **Description**.

**Note:** You cannot enable an alarm in this window. To enable an alarm, go to page 51. Users can rearrange a List by clicking on the Column Layout drop-down list. They can then click or unclick checkboxes to show or hide particular alarm columns. Users can navigate to other screens and tabs by click on the List View grid header. For example, if the **Status** column header is clicked, then the user will be taken to the Alarm tab. Clicking on **Limit** columns and **Is Alarm Enabled** column will launch the Alarm Configuration tab of the Tag Management screen. Clicking on the **Tag Name** and **Value** column will launch **Trending** and **Tabular Data** in the Tag Management Screen.

Various alarm statuses are color-coded:

- red for Hi (High)
- burgundy for HiHi (High High)
- aqua for Lo (Low) sensor alarm and low battery alarm
- blue for LoLo (Low Low)
- yellow for loss of communication (COMM).
- green for the normal condition.
- **Note:** If necessary, you can change the color code for the above alarm conditions. See page 96.

For RF ValProbe loggers, if a sensor is OPEN CIRCUIT, OVER range or UNDER range, the value will show up as "??" on the Monitoring screen and it will have a COMM alarm.

## 3.2.1 The List View (cont.)

You can rearrange a List by clicking on the Column Layout drop-down list. Then you can click or unclick checkboxes to show or hide particular alarm columns. You can also rearrange the order of the columns by dragging the column headers, and sort the columns on the list in ascending or descending order by clicking on column headers. If you click on arrows alongside the **Status** or **Description** drop-down lists, you can select particular units to display, or the tags that are less than, equal to, or greater than a particular value. To add or subtract screens with other views or groups, click on the Display View button with the desired number of views. To switch to another view, go to the **View By** drop down list in the upper left corner, and click on another view option.

#### 3.2.2 The Graph View

To access a Graph view of a selected group on the Monitoring screen, go to the **View By** drop down list in the upper left corner, and click on the **Graph View** option. The screen converts to a view of the data in graphical format.



Figure 47: Graph View of Monitoring Screen

Each graphed tag is designated by a particular colored line, with the key in the upper right corner. Clicking on a given line opens a popup box with the sensor name, time/date stamp and current reading.

You can zoom into an area on the graph by selecting the area with the mouse and the scrollbars that appear. To zoom out, click on the - (minus) button on the scrollbars.

Note: The graph view displays only the readings of the past hour.

You can view up to four groups by clicking on the number of views in the Display View button in the upper right.

#### 3.2.3 The Floor View



Figure 48: Floor View, Sensors Only

To access a Floor view of a selected group on the Monitoring screen, go to the **View By** drop down list in the upper left corner, and click on the **Floor View** option. The screen (Figure 48 above) converts to a view of the sensor data for the specified group, with tag name and current reading in blinking icons. However, you can add more specific floor information by importing a floor plan onto the screen and superimposing the tag data icons. Click on the **Floor Plan Settings** button. The Floor Plan Settings window (Figure 49 below) opens.



Figure 49: Floor Plan Settings Window

#### 3.2.3 The Floor View (cont.)

To import the floor plan, click on the **Browse** button and locate the desired plan (in bmp or jpeg format). When you have added the plan, click **OK**. The screen now appears similar to Figure 50 below.



Figure 50: Floor Plan with Sensors

Click and drag the tag icons to the desired locations. When you have finished, click **Save Floor Plan**. Now you can view the tag data in its approximate location on the floor.

As with the List and Graph Views, you can view up to four groups by clicking on the number of views in the Display View button in the upper right.

# 3.3 Viewing Tag Data in Detail — The Tag Maintenance Screen

When you click on the tag line of a particular tag in the System Monitoring window, the Tag Maintenance screen opens. This screen offers three tabs for viewing the most current alarm data:

## 3.3.1 The Trending Tab



Figure 51: Trending Tab

The tab that initially appears, **Trending**, opens a live trend of the selected point. It appears blank when first opened, but then updates at 10-minute intervals. At the top of the screen, it displays the tag name, description and current value. If the tab remains open, it continues to collect and display data, allowing scrolling in the predetermined minutes. If you move the cursor to a particular point on the graph, a popup displays the date, time and value for a specific point.

Note: Trending data only covers readings for the past hour.

## 3.3.2 Tabular Data for a Tag

VALUE           0012-08-17 14:35         53.8           0012-08-17 14:30         55.5           0012-08-17 14:29         56.4           0012-08-17 14:29         56.4           0012-08-17 14:24         57.4           0012-08-17 14:21         50.8           0012-08-17 14:17         56.7           0012-08-17 14:14         12.4           0012-08-17 14:13         12.1           0012-08-17 14:12         12.6	TRENDING	TABULAR DATA	ALARM CONFIGURATION		
2012-08-17 14:35         53.8         Image: Constant of the second of th	TIME IN	VALUE		_	•
2012-08-17 14:30         55.5           2012-08-17 14:29         56.4           2012-08-17 14:24         57.4           2012-08-17 14:21         50.8           2012-08-17 14:17         56.7           2012-08-17 14:14         12.4           2012-08-17 14:13         12.1           2012-08-17 14:12         12.6	2012-08-17 14:35	53.8			]=[
2012-08-17 14:29         56.4            2012-08-17 14:24         57.4            2012-08-17 14:21         50.8            2012-08-17 14:17         56.7            2012-08-17 14:14         12.4            2012-08-17 14:13         12.1            2012-08-17 14:12         12.6	2012-08-17 14:30	55.5			H
2012-08-17 14:24         57.4           2012-08-17 14:21         50.8           2012-08-17 14:17         56.7           2012-08-17 14:14         12.4           2012-08-17 14:13         12.1           2012-08-17 14:12         12.6	2012-08-17 14:29	56.4			
2012-08-17 14:21         50.8           2012-08-17 14:17         56.7           2012-08-17 14:14         12.4           2012-08-17 14:13         12.1           2012-08-17 14:12         12.6	2012-08-17 14:24	57.4			
2012-08-17 14:17         56.7           2012-08-17 14:14         12.4           2012-08-17 14:13         12.1           2012-08-17 14:12         12.6	2012-08-17 14:21	50.8			
2012-08-17 14:14     12.4       2012-08-17 14:13     12.1       2012-08-17 14:12     12.6	2012-08-17 14:17	56.7			
2012-08-17 14:13 12.1 2012-08-17 14:12 12.6	2012-08-17 14:14	12.4			
2012-08-17 14:12 12.6	2012-08-17 14:13	12.1			
	2012-08-17 14:12	12.6			-

Figure 52: The Tabular Data Tag

The second tab, **Tabular Data**, presents the real-time data for the tag in a Date/Time and Value table for the tag data. A drop-down list at the bottom of the tab enables you to display data over the following past durations in 1-minute increments (only):

- 5, 10 and 30 minutes
- 1, 2 and 12 hours
- 1 day, 2 days
- 1 week
- 1 month

## 3.3.3 The Alarm Configuration Tab

TRENE	DING	TABULAR DATA	ALARM CONFIGURATION	
		-	ALARM SETPOINTS	
NABLE	~			
ROUP	Battery			
	ALARM I	IMIT	ALARM DELAY (hh:mm)	
OLO	10.00		00:00	
0	15.00		00:00	
I	90.00		00:00	
I IHI SAVE (	90.00 100.00 CHANGES		00:00 00:00 : T0007-Freezer 7	
I IHI SAVE (	90.00 100.00 CHANGES		00:00 00:00 : T0007-Freezer 7 ALARM CONFIGURATION	
I IHI SAVE ( TA TREN	90.00 100.00 CHANGES	INISTRATION : TABULAR DATA	00:00 00:00 : TOO07-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE ( ) TA TREN ENABLE	90.00 100.00 CHANGES	INISTRATION : TABULAR DATA	00:00 00:00 : TOOO7-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE C TREN TREN ENABLE GROUP	90.00 100.00 CHANGES NDING	INISTRATION : TABULAR DATA	00:00 00:00 : T0007-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE ( SAVE ( TREN ENABLE GROUP DELAY	90.00 100.00 CHANGES	INISTRATION : TABULAR DATA Battery 0:00:00	00:00 00:00 : TOOO7-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE C TREN TREN ENABLE GROUP DELAY ALARM	90.00 100.00 CHANGES IG ADMI NDING	INISTRATION : TABULAR DATA Battery 0:00:00	00:00 00:00 : TOOO7-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE ( SAVE ( TREN ENABLE GROUP DELAY ALARM	90.00 100.00 CHANGES NDING	INISTRATION : TABULAR DATA Battery 0:00:00	00:00 00:00 : TOOO7-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	
I IHI SAVE ( SAVE ( TREN ENABLE GROUP DELAY ALARM	90.00 100.00 CHANGES NDING MODE CHANGE	INISTRATION : TABULAR DATA Battery 0:00:00	00:00 00:00 : TO007-Freezer 7 ALARM CONFIGURATION ALARM SETPOINTS	

Figure 53: The Alarm Configuration Tab

## 3.3 The Alarm Configuration Tab (cont.)

The third tab in the Tag Maintenance screen, **Alarm Configuration**, equips you to enable, or specify alarms for a specified tag. Click (or clear) the **Enable** check box at the top to enable (or disable) alarms for a specific tag.

The **Group** line below identifies the group to which the tag belongs.

Eight text boxes below allow you (if you have appropriate permissions) to enter the **Alarm Limits** and **Alarm Delays** (in minutes) for the LOLO, LO, HI and HIHI alarms. However, if the tag type is a digital input, then you will be able to enter only the delay and alarm mode fields. When you have completed entering changes, click the **Save Changes** button.

# Chapter 4. Graphing Tag Data

When you click on the Graphing tab from the Main Menu, you can set up a graph with specified groups and tags, and then establish the duration, appearance and limits of the graph. You can display one or two graphs at any one time, as shown in Figure 54 below and Figure 55 on the next page.



Figure 54: Single Graph View

A Graph Tooltip (shown above) allows users to review sensor readings that appear at a given point in time on the graph. To display the Tooltip, click on the graph at a particular point on the X-axis. A red vertical line will appear next to the Tooltip, which lists the tags and their readings for that particular time.



Figure 55: Dual Graph View

# 4.1 Configuring the Graph — the Chart Configuration Screen

On the Chart Configuration screen, you can enter the criteria and options (tags and groups, multiple Y axes, and limit lines) required for generating a single or double graph.

#### 4.1.1 Entering Content

The first tab, **Tags**, displays the Groups and their tags you can select to generate a single graph or double graph. Click the checkbox for the groups and/or tags you need on the graph, and then select a template from the drop-down list.



Figure 56: Groups and Tags

Click on the expansion box (+) to open the list of tags associated with each group. Click on the checkboxes for each group or tag you want to plot. Follow the same procedure to select each group and/or tag for comparison. When you have finished, click **OK**.

**Note:** Only 20 tags can be selected for each type of graph, i.e., Single Graph, Graph1 and Graph2.

#### 4.1.2 Determining the Graph Appearance – Chart Configuration



Figure 57: The Chart Configuration Tab

On the Chart Configuration tab, you can specify the basic parameters of one or two charts that will appear on the Graphing screen.

- 1. First, select the **Data Retrieval** mode: click on either the Real-time or Historical option button.
- 2. Next, click on the **Calendar** button to open a calendar and select the **Start Date/Time** for either or both charts. You can click on the date on the calendar or enter the date/ time in the text box.
- 3. In the same manner, select the End Date/Time for either or both charts.
- 4. Click on the **Sampling Mode** drop-down list to enter one of four sampling modes: **Sample/Lab, High Value, Low Value** or **Average.** 
  - **d.** Sample/Lab: The graph will plot the sample value every minute for the selected duration. You can select chart duration for this mode to define the number of hours the chart will cover on the x-axis.
  - e. High Value: The graph will display the maximum sample values. The maximum value to be plotted depends on the duration selected. For example, if the duration (determined by Start Date and End Date) is 3 days, then the maximum value out of every 3 samples for 3 days is considered and plotted on the graph. Similarly, if the duration is 7 days, then the maximum value out of every 7 samples for 7 days is considered and plotted on the graph.

#### 4.1.2 Determining the Graph Appearance — Chart Configuration (cont.)

- f. Low Value: The graph will display the minimum sample values.
- g. Average: The graph will display the average sample values.
- **5.** Finally, pull down the **Chart Duration** drop-down list and click on the number of hours the chart (s) will cover.
- 4.1.3 The Y Axis Tab

	Y1		Y2		Y3
AXIS NAM	E SENSOR TYPE	AXIS NAME	ENABLE SENSOR TYPE	AXIS NAME	SENSOR TY
MIN	MAX	MIN	MAX	MIN	MAX
0.00	100.0	0.00	100.0	0.00	100.0

Figure 58: The Y Axis Tab

Click on the **Y-Axis** tab to set up the parameters for each of three Y axes.

- 1. For each axis, click the checkbox **Enable** if you want to apply that particular axis.
- 2. In the Axis Name text box, enter the name that will appear on the chart.
- **3.** Click on the **Sensor Type** drop-down list to click on the type of sensor that will be displayed (temperature, humidity or auxiliary).
- 4. In the Min and Max text boxes, type in the lower and upper limits for the y axis.

#### 4.1.4 Marker Properties

TAG	CHART CONFIGURATION	Y AXIS	MARKER PROPERTIES	LIMIT LINE
	Ma	arker Propert	ies	
	SHAPE	Circle	•	
	SIZE	2	•	-
	COLOR	<u>A</u> -		-
	BORDER COLOR	<u>A</u> •		-
	BORDER WIDTH	1	-	

Use the Marker Properties tab to select the appearance of data markers on the chart.

Figure 59: The Marker Properties Tab

- 5. Pull down the **Shape** drop-down list to select the shape of the marker (circle, square or triangle).
- 6. Pull down the Size drop-down list to click on the size of the marker (from 1 to 10).
- 7. Open the **Color** drop-down list and select the marker color.
- 8. Open the Border Color drop-down list and select the border color.
- **9.** Pull down the **Border Width** drop-down list to click on the size of the border (from 1 to 10).

#### 4.1.5 Limit Lines

TAG CHA	ART CONFIGURATION	Y AXIS MARKER PR	ROPERTIES LIMIT LINES		
	¥1		¥2		<b>Y</b> 3
	ENABLE	E	ENABLE	LIMITE	ENABLE
Hi-Hi	Lo-Lo	Hi-Hi	Lo-Lo	Hi-Hi	Lo-Lo
ні-ні 30.00	LO-LO 10.00	HI-HI 30.00	LO-LO 10.00	HI-HI 30.00	LO-LO 10.00
TYPE Dash *	TYPE Dash *	TYPE Dash	• TYPE Dash •	TYPE Dash	TYPE Dash
WIDTH 1 -	WIDTH 1 -	WIDTH 1	• WIDTH 1 •	WIDTH 1	WIDTH 1
	COLOF A +	COLOF A -	COLOF A +	COLOI A .	COLOF A -
н	Lo	Hi	Lo	Hi	Lo
HI 20.00	LO 0.00	HI 20.00	LO 0.00	HI 20.00	LO 0.00
TYPE Dash *	TYPE Dash •	TYPE Dash	• TYPE Dash •	TYPE Dash	TYPE Dash
WIDTH 1 +	WIDTH 1 -	WIDTH 1	• WIDTH 1 •	WIDTH 1	WIDTH 1
	COLOF A -	COLOF A -	COLOF A -	COLOF A -	COLOF A -

Figure 60: The Limit Lines Tab

The **Limit Lines** tab allows you to set the values and appearance of the alarm limits on the chart. For each of up to three axes, enter the following parameters:

- 1. Click the checkbox Enable to enable any of the Y axis limit lines.
- 2. For each of the alarm limits (HI-HI, HI, LO-LO and LO), type in the desired value.
- 3. From the Type drop-down list, click on the line type required (solid, dash, etc.)
- 4. From the Width drop-down list, click on the desired width (from 1 to 10).
- 5. From the **Color** drop-down list, click on the desired color.

When you have completed entering parameters on the four tabs, click OK.

#### 4.1.6 Graph Template

The chart configuration details can be saved and deleted. However, there is no provision for modifying a template.

To create a new template:

- **1.** Fill all configuration details.
- 2. Click ON.
- 3. Click Save.

After successful saving, LabWatch LT displays a success message and the Chart Configuration window closes. The graph is drawn using these configurations.

To delete a template:

- 1. Select a template from the **Template** dropdown menu.
- 2. Click **Delete** from the dropdown menu.

#### 4.1.7 Plotting a Graph for Multiple Y-Axis

In case of multiple Y axes, each axis gets a color based on the sensor type selected on the axis. The trend line has shades of color based on the type of sensor. In this way users can determine which trend line belongs to which axis.

Tag Type	Color Shade
Temperature	Blue
Humidity	Green
Auxiliary	Red
Digital Input	Yellow
Battery	Brown

# 4.2 Basic Chart Controls



Figure 61: Graph Controls

Below each chart, a series of buttons allows you to further customize the chart appearance.

- The **Zoom** buttons real allow you to zoom in and out of particular locations on the chart.
- The **Refresh** button 2 allows you to update the chart with the most recent data.
- The **Save** button allows you to save the graph as a jpeg or bmp image file.
- The **Print** button allows you to print out the graph on your default printer.

# 4.2 Basic Chart Controls (cont.)

• The **Color** button allows you to apply one of a number of basic colors as a gradient background to the chart. For example, if you want a green background, click on the button, and a pull-down palette opens. Click on a shade of green, and the background changes color, as shown below.



Figure 62: Graphing Screen with Changed Gradient

- The Annotation buttons ANNOTATIONS enable you to add or remove annotations (titles and comments) to the chart or to individual data points. The first annotation is normally the title, and subsequent annotations are comments.
- Click on the Show Marker checkbox Show MARKER to enable the chart to display the marker. A graph without markers appears similar to Figure 63 on the next page.

## 4.2 Basic Chart Controls (cont.)



Figure 63: Graph without Markers

When you click **Show Markers**, the markers pinpoint the data readings (Figure 64 below).



Figure 64: Graph with Markers)

Click on the **Limits** button to display the LOLO, LO, HI and HIHI limits as lines on the graph for a single tag.

**Note:** The Limits button remains disabled if you select two or more tags in the Legends and Statistics list. It is enabled only if a single tag is selected.

# 4.2 Basic Chart Controls (cont.)

At the bottom of the screen, click on the **Legends and Statistics** arrow to open a list of tags, along with their time stamps, associated colors, descriptions and most recent readings.

Segends and Readings									Show Min. Show Max. Show Avg.						
		Tag	Description	Time Stamp	Reading	Min	1			Tag	Description	Time Stamp	Reading	Min	1
5	<u>A</u> •	T029	Freezer 29	3/15/2012 7:37:49 PM	57.2	0		V	<u>A</u> -	T031	Freezer 31	3/15/2012 7:37:49 PM	56.7	0	
5	<u>A</u> -	т030	Freezer 30	3/15/2012 7:37:49 PM	59.1	0	I	5	Α.	T032	Freezer 32	3/15/2012 7:37:49 PM	54.1	0 =	4
5	A	T031	Freezer 31	3/15/2012 7:37:49 PM	56.7	0	1	5	Α -	T033	Freezer 33	3/15/2012 7:37:49 PM	54.3	0	II.
5	A -	T032	Freezer 32	3/15/2012 7:37:49 PM	54.1	0		•	Α -	T034	Freezer 34	3/15/2012 7:37:49 PM	58.5	0	1
┥	A		II	I	l	l		1	Δ		<sup>*</sup>		1	<u> </u>	-

Figure 65: Legends and Statistics

Click on another tab at the top of the screen to exit the Graphing screen.

# Chapter 5. Monitoring Active Alarms

Accessible when you click on the **Alarms** tab, the Alarms screen provides a list view of all currently unacknowledged alarms triggered by the sensors monitored by LabWatch LT.

Æ	) Kaye Labwa	tch LT								TOTAL AL	ARM COUNT: 12	? 😣
	MONITOR	GRAPHIN	G		ALARMS		AUDIT		REPORTS	CONF	IGURATION	COMMENTS
											Second	JMN LAYOUT
	TIME IN	TAG NAME	STA	πυς τ	LOLO LIMIT		HI LIMIT		VALUE	GROUP T	DESCRIPTION	τ
Ŧ	25/09/2012 20:45:39	T0001	1	LOLO	10	15	90	99	11 °C	Battery	Freezer 1	
Ŧ	25/09/2012 20:45:39	T0002	1	LOLO	10	15	90	100	11 mA	Battery	Freezer 2	
Ŧ	25/09/2012 20:45:39	T0003	1	LOLO	-5	20	70	80	13.80 CC	Battery	Freezer 3	
Ŧ	25/09/2012 20:45:40	T0006		HI	10	15	90	100	96 °C	Battery	Freezer 6	
Ŧ	25/09/2012 20:45:40	T0007		HI	10	15	90	100	99 mA	Battery	Freezer 7	
Ŧ	25/09/2012 20:45:40	T0008		HI	10	15	90	100	91 V	Battery	Freezer 8	
Đ	25/09/2012 20:45:40	T0011	!	СОММ	10	15	90	100	?? °C	Battery	Freezer 11	
Ŧ	25/09/2012 20:45:40	T0012		СОММ	10	15	90	100	?? mA	Battery	Freezer 12	
Ð	25/09/2012 20:45:40	T0013	!	COMM	10	15	90	100	?? V	Battery	Freezer 13	
Ŧ	25/09/2012 20:45:40	T0016		HI	10	15	90	100	93 °C	Battery	Freezer 16	
Œ	25/09/2012 20:45:40	T0017		HI	10	15	90	100	96 mA	Battery	Freezer 17	
Ŧ	25/09/2012 20:45:40	T0018		HI	10	15	90	100	92 V	Battery	Freezer 18	
er i	-buckling all co-	unich te Daramad							onned In Licer	admin Tuesday	ACKN	IOWLEDGE

Figure 66: The Alarms Tab

For each alarm, the list covers **Time In, Tag Name, Status, Lo** and **LoLo Limits, Hi** and **HiHi Limits, Current value, Description** and the associated **Group**.
If you click on the arrows alongside **Status, Description** or **Group**, a window opens in which you can click on the particular tag (status, or description) to display; you can also select particular specifications for values displayed, as shown in Figure 67 below.

Select All	×	2
🔲 СОММ		0
🔲 HIHI		7
🗖 LOLO		5
Show rows with value that		1
Is equal to	D	20
Is equal to	<u>م</u>	۱Ľ
Is not equal to		7
Starts with		9
Ends with		6
Contains	=	F
Does not contain		3
Is contained in		
Is not contained in		
Is less than	Ē	18
Is less than or equal to		3
Is greater than	•	70

Figure 67: Filter Window

To remove or rearrange columns, click on the **Column Layout** arrow. The Column Layout window opens.



Figure 68: Column Layout Window

Clear the checkbox for any column you do not wish to view. To move a column further to the left or right, highlight the parameter in the list, and then click the **Move Up** or **Move Down** buttons to reposition the column. When you are satisfied, click **OK**. The Alarms screen reopens, with the highest column in the list at the far left, and other columns in descending order from left to right.

To acknowledge the current alarms, click the **Acknowledge** button at the bottom of the screen. Then follow the instructions below.

#### 5.1 Acknowledging Alarms

When you click on the **Acknowledge** button from the Alarms window, the Acknowledge Alarms window opens.

	E ALARM'S	2 😒
ACTIVE ALARM'S	group2     Group3     Group1	
RESET	SELECT ALL DESELECT ALL ACKNOWLEDGE ALARMS CANCE	

Figure 69: The Acknowledge Alarms Screen

# 5.1 Acknowledging Alarms (cont.)

Click on the checkbox for the group and/or tags you need to acknowledge. (You can also click on the **Select All** or **Deselect All** buttons.) To reset the alarms, click **Reset**. To acknowledge the alarms, click **Acknowledge Alarms**. A second window opens alongside the first.

(acknowledge alarm's 🕐 🙁	
ACKNOWLEDGE ALARM'S	

Figure 70: Acknowledge Alarms Windows

- **1.** First, click the check box for the "Please confirm that you want to acknowledge the alarms for the below tag."
- 2. Next, enter your User ID and Password.
- 3. Finally, enter your Comments, either from the drop-down list or in the text box below.
- 4. Click the **OK** button to acknowledge the alarm.
- **Note:** If you do not have authorization to acknowledge this alarm, a popup window informs you that the entered user does not have authorization to acknowledge the alarm. Click **OK** to close the window, and **Cancel** to close the Acknowledge Alarms window.

# 5.2 Viewing the Alarm History

To view the alarm history of a particular tag, click the + button for that tag in the far left column, as shown in Figure 71 below.

+	2012-08-17 12:50:54	T0011	() CO	мм	10	15	90	100	73.1 C	Group3	Freezer 11
Ε	2012-08-17 12:50:54	T0012	<b>!</b> co	мм	10	15	90	100	62.7 RH	Group3	Freezer 12
	TAG NAME	TIME IN	_	ALARM TYP	PE	T VALUE	_	c	OMMENTS		STATUS T
	> T0012	2012-08-17 12:	42:55	HI		59.4				1	Not Acknowledged.
	T0012	2012-08-17 12:	43:54	HI		57.7				1	Not Acknowledged.
	T0012	2012-08-17 12:	44:54	HI		??				1	Not Acknowledged.
	T0012	2012-08-17 12:	45:54	HI		??				1	Not Acknowledged.
	T0012	2012-08-17 12	46:54	HI		61.4					Not Acknowledged.
±	2012-08-17 12:50:54	T0013	. co	мм	10	15	90	100	73.2 V	Group3	Freezer 13
±	2012-08-17 12:50:54	T0015	() co	мм	10	15	90	100	72.8 %	Group3	Freezer 15
1											
											CACKNOWLEDGE
GE	LabWatch Lite, All Copyri	ghts Reserved.	-			_	_	_	Logged 1	In User: kri	ish Friday, 17 August 2012   12:52:24

Figure 71: Alarm History

**Note:** The screen displays the alarm history for a particular tag since midnight of the current day (for a maximum of up to 24 hours).

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# Chapter 6. Viewing the Audit Trail

MONITOR	GRAPHI	ING AL	ARMS AUDIT	REPORTS CONFIGURATIO	IN COM
		3. 			COLUMN LA
	н		н		
JSER ID	USER NAME	τ date τ	AUDIT EVENT T	DESCRIPTION	COMMENTS
admin	administrator	09/20/2012 19:32:45	LOGINOK	SUCCESSFULLY LOGGED IN	
admin	administrator	09/20/2012 19:32:45	UISTARTUP	UI STARTUP AT Thursday, September 20, 2012	
admin	administrator	09/20/2012 19:19:43	UISHUTDOWN	UI SHUTDOWN AT Thursday, September 20, 2012	
admin	administrator	09/20/2012 19:19:27	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO USER ACCOUNT SETTINGS	
ədmin	administrator	09/20/2012 19:19:20	LOGINOK	SUCCESSFULLY LOGGED IN	
ıdmin	administrator	09/20/2012 19:19:19	UISTARTUP	UI STARTUP AT Thursday, September 20, 2012	
admin	administrator	09/20/2012 18:23:05	UISHUTDOWN	UI SHUTDOWN AT Thursday, September 20, 2012	
admin	administrator	09/20/2012 18:21:08	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO SCHEDULE DETAILS	
admin	administrator	09/20/2012 18:19:23	LOGINOK	SUCCESSFULLY LOGGED IN	
admin	administrator	09/20/2012 18:19:22	UISTARTUP	UI STARTUP AT Thursday, September 20, 2012	
admin	administrator	09/20/2012 18:04:17	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO USER VACATIONS	
admin	administrator	09/20/2012 18:03:51	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO SCHEDULE DETAILS	
admin	administrator	09/20/2012 18:03:18	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO SCHEDULE DETAILS	
system	systemuser	09/20/2012 18:00:19	Created Deafult User Account Settings	SCHEDULES ALLOWED PER USER is Assigned with 2	USRACTSET
system	systemuser	09/20/2012 18:00:19	Created Deafult User Account Settings	PASSWORD RESET AFTER DAYS is Assigned with 300	USRACTSET
ystem	systemuser	09/20/2012 18:00:19	Created Deafult User Account Settings	DISABLE ACCOUNT AFTER FAILED ATTEMPTS is Assigned with 3	USRACTSET
system	systemuser	09/20/2012 18:00:19	Created Deafult User Account Settings	REQUIRE STRONG PASSWORD is Assigned with False	USRACTSET
system	systemuser	09/20/2012 18:00:19	Created Deafult User Account Settings	MINIMUM PASSWORD LENGTH is Assigned with 6	USRACTSET
admin	administrator	09/20/2012 18:00:09	SUCCESSFULLY LOGGED INTO	SUCCESSFULLY LOGGED INTO USER ACCOUNT SETTINGS	
idmin	administrator	09/20/2012 17:59:59	LOGINOK	SUCCESSFULLY LOGGED IN	
admin	administrator	09/20/2012 17:59:59	UISTARTUP	UI STARTUP AT Thursday, September 20, 2012	
idmin	administrator	09/20/2012 17:53:42	UISHUTDOWN	UI SHUTDOWN AT Thursday, September 20, 2012	

Figure 72: The Audit Screen

The Audit screen provides a list view of all audit events entered into the LabWatch LT audit trail. For each event, the list covers User ID, Date, Audit Event, Description, Comments and Tag Name. If you click on the arrows alongside some of the columns, a Filter window opens in which you can click on the particular item(s) you wish to display.

🛞 Kaye Labwatch	Lite Lite		_	-	TOTAL	ALARM COUNT: 16	2 🔀
MONITOR	GRAPHING	ALARMS	AUDIT	REPORTS	CONFIGUR	ATION	COMMENTS
						😔 COLUI	IN LAYOUT
USER ID	DATE	AUDIT EVENT	DESCRIPTION	C	DMMENTS	TAG NAME	
krish	2012-08-17 13:02:33	LOGINOK	SUCCESSFULLY LOGG	ED IN			
krish	2012-08-17 13:02:33	UISTARTUP	UI STARTUP AT Friday	r, 17 Augus			
krish	2012-08-17 12:45:42	MODIFIEDALARMCOLORCOL	UPDATED OK ALARM	COLOR COE			
krish	2012-08-17 12:45:42	MODIFIEDALARMCOLORCOI	UPDATED COMM ALAF	RM COLOR			
krish	2012-08-17 12:45:41	MODIFIEDALARMCOLORCOL	UPDATED HIHI ALARM	I COLOR CO			
krish	2012-08-17 12:45:41	MODIFIEDALARMCOLORCOL	UPDATED HI ALARM C	COLOR COD			
krish	2012-08-17 12:45:41	MODIFIEDALARMCOLORCOI	UPDATED LOLO ALARI	M COLOR C			
krish	2012-08-17 12:45:41	MODIFIEDALARMCOLORCOL	UPDATED LO ALARM	COLOR COE			
krish	2012-08-17 12:45:40	Modified Alarm COLORS	Reseted Alarm Colors.				
krish	2012-08-17 12:43:10	LOGINOK	SUCCESSFULLY LOGG	ED IN			
krish	2012-08-17 12:43:10	UISTARTUP	UI STARTUP AT Friday	r, 17 Augus			
u1	2012-08-17 12:42:59	LOGINFAILURE	INCORRECT LOGIN CF	REDENTIAL			
krish	2012-08-16 22:13:08	UISHUTDOWN	UI SHUTDOWN AT Th	ursday, 16			
ul	2012-08-16 22:13:00	LOGINFAILURE	INCORRECT LOGIN CF	REDENTIAL			
krish	2012-08-16 22:08:10	MODIFIEDUSER	MODIFIED USER ACCO	OUNT OF kr			
krish	2012-08-16 22:08:10	MODIFIEDUSER	MODIFIED USER ACCO	OUNT OF kr			
krish	2012-08-16 22:07:30	LOGINOK	SUCCESSFULLY LOGG	ED IN			

Figure 73: Filtered Events

You can also select particular limits for values displayed, as shown in Figure 74 below.

🗆 Select All
LOGINOK
MODIFIEDTAGALARM
UISTARTUP
Show rows with value that
Is equal to 🔹
A
And
Is equal to
aA
Filter Clear Filter

Figure 74: Audit Trail Events

To remove or rearrange columns, click on the **Column Layout** arrow. The Column Layout window opens.



Figure 75: Column Layout Window on Audit Screen

Clear the checkbox for any column you do not wish to view. When you are satisfied, click **OK**. The Audit screen reopens, with the highest column in the list at the far left, and other columns in descending order from left to right.

**Note:** The screen displays audit events since midnight of the current day, for a maximum of up to 24 hours. To create a detailed Audit Trail report, go to "Creating an Audit Trail Report" on page 83.

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# Chapter 7. Creating Reports



Figure 76: The Reports Tab

The LabWatch<sup>™</sup> Lite Reporting System, available from the Reports tab of LabWatch LT, is a reporting and analysis tool that allows you to create reports from a secure database.

Note: Entering the reporting system requires re-entry of a User ID and password.

# 7.1 Report Types

LabWatch LT also lets you create the following reports from secure historical data:

**Daily Report** — LabWatch LT can be configured to automatically generate a Daily Report covering 24 hours of the day. The Daily Report contains each tag name, description and its hourly minimum, maximum, and average values over a specific 24-hour period.

**Historical Data** — The software creates an Historical Data Report using information from a secure database. Four types of Historical Data Reports are available: Values, Period Summary, Min/Max/Avg and Alarm. You can request a Values report that includes all values for selected tags at specified intervals over a defined period of time. You can also filter tag values by defining upper and lower limits. Values that exceed the specified upper limit and those values that fall below the specified lower limit are included in the report and marked with High or Low.

With a Min/Max/Avg report, you obtain the minimum, maximum, and average values for selected tags at specified intervals over a defined period of time. These can be used to produce daily or weekly reports.

The Alarm report displays the Alarm and Audit history for the selected tag(s).

**Mean Kinetic Temperature** (**MKT**)\* — MKT is the isothermal temperature that corresponds to the kinetic effects of a time temperature distribution. The MKT calculation produces a single value that characterizes the effect of fluctuating temperatures on long-term product storage by weighing higher temperatures more heavily than lower ones. This is appropriate because product degradation occurs at an accelerated rate at higher temperatures.

LabWatch LT extracts data from the historical data files, performs an MKT calculation on the selected inputs, and reports the result in an MKT Report.

**Single Tag Alarm Report**— LabWatch LT can also create an alarm report for a single tag for a specified single day. It contains Alarm and Audit history for a selected tag for the selected day.

**Audit Trail Report** —You can create an Audit Trail report for specified groups or tags, including all audit trail events or those you specify.

# 7.1 Report Types (cont.)

**Calibration Report** — LabWatch LT also enables creation of current or historical calibration reports for specified groups or tags.

# 7.2 Reporting Operation and Benefits

LabWatch LT provides the following benefits:

- Secure encrypted audit trails, which meet FDA guidelines for electronic records and data (FDA Regulation 21 CFR part 11)
- An alarm log that chronologically records every event and operator action
- Ability to quickly sort or query the alarm data by tags and tag descriptors over a defined time period
- User name and password controlled access
- User can select only 100 tags for a report
- If the criteria for generating report results in a large set of records, the system prompts the user to tweak the criteria (e.g., a large date range).

# 7.3 Creating a Daily Report

To create a Daily Report, first click on the LabWatch LT Reports tab at the top of the screen, and then on the **Daily Report** button. The **Generate Daily Report** window opens (Figure 77 below).

LIST OF SAVED TEMPLATES	Daily14July	· · ·	DELETE TEMPLATE	
SELECT GROUP(s) & TAG(s)	Group?	24 - 1 Mar		
	T0051	Temperature		0
	T0052	Relative Humidity		
	T0053	Auxiliary Input		
	T0054	DigitalInput		
	T0055	Battery		
	T0056	Temperature		
	T0057	Relative Humidity		
	Т0058	Auxiliary Input		*
	SELECT ALL	DESELECT ALL		
DATE	07/14/2012	<b>B</b>		
ADD GRAPH	ADD GRAPH AT TH	HE END OF REPORT		
REPORT HEADER	Report Header 1			
REPORT PAGE HEADER	Report Page Heade	r 1		

Figure 77: Generate Daily Report

- 1. Select a template from the drop-down **List of Saved Templates** (based on previous reports that have been saved as templates).
- 2. Click on the **Group(s) and Tag(s)** that you need to include. You can include individual tags within a group by clicking on the expansion box, clearing the Group checkbox, and clicking the checkboxes alongside the individual tags. To simplify selection, you can also click the **Select All** or **Deselect All** buttons.
- **3.** Click on the **Start Date** calendar and select the desired date and time. Repeat this procedure for the **End Date**.
- 4. If you want a graph at the end of the report, click the Add Graph checkbox.
- 5. In the associated text boxes, enter the text that will appear as the **Report Header**, the **Report Page Header** and the **Report Page Footer**.
- 6. Click on Generate Report to create the report, or on Reset to clear the entered data and all checkboxes. If you want to save this report as a template (adding it to the List of Saved Templates), click Save Template.

# 7.4 Creating a Historical Report

Generating historical reports is very similar to generating daily reports. Click on the LabWatch LT **Reports** tab at the top of the screen, and then on the **Historical Report** button. The Historical Report window opens.

LIST OF SAVED TEMPLATES	New Report Template49	DELET	TE TEMPLATE	
SELECT GROUP(s) & TAG(s)	Group2 Group2 Group2 Group3 Auxiliary Toos3 Auxiliary Toos5 Auxiliary Toos5 Auxiliary Toos5 Femperat Toos5 Femperat Toos5 Relative I Toos8 Auxiliary Doss6 Aux	ure Iumidity Input uut uure Iumidity Ianut LECT ALL		Î
START DATE	08/01/2012	START TIME	00:00	m
END DATE	08/09/2012	END TIME	00:00	
REPORT	Min/Max/Avg -	INTERVAL	5-Minutes	÷
JUPPER LIMIT	0.00			
LOWER LIMIT	0.00			
REPORT HEADER				
REPORT PAGE HEADER				

Figure 78: Historical Reports Window

- 1. Select a template from the drop-down **List of Saved Templates** (based on previous reports that have been saved as templates).
- 2. Click on the **Group(s)** and **Tag(s)** that you need to include. You can include individual tags within a group by clicking on the expansion box, clearing the Group checkbox, and clicking the checkboxes alongside the individual tags. To simplify selection, you can also click the **Select All** or **Deselect All** buttons.
- **3.** Click on the **Start Date** calendar and select the desired date and time. Repeat this procedure for the **End Date**.

### 7.4 Creating a Historical Report (cont.)

- 4. From the Report drop-down list, click on the desired report type: Min/Max/Avg, Period Summary, Values or Alarm.
- 5. For a Value report, if you want the report to remain within value limits, click the Upper Limit and/or Lower Limit checkboxes. Then enter the Upper and Lower Limit values in the associated text boxes. The generated Value report will show High or Low next to the value if they are not within given limits.
- 6. In the associated text boxes, enter the text that will appear as the **Report Header**, the **Report Page Header** and the **Report Page Footer**.
- 7. Click on **Generate Report** to create the report, or on **Reset** to clear the entered data and all checkboxes. If you want to save this report as a template (adding it to the List of Saved Templates), click **Save Template**.

### 7.5 Creating a MKT Report

Click on the LabWatch LT **Reports** tab at the top of the screen, and then on the **MKT Report** button. The Mean Kinetic Temperature Report window opens (Figure 79 below).

LICT OF CAUED TEND ATEC	
LIST OF SAVED TEMPLATES	DELETE TEMPLATE
SELECT GROUP(s) & TAG(s)	Group2
	T0051 Temperature
	V T0056 Temperature
	T0061 Temperature
	T0066 Temperature
	Group1
	✓ T0001 Temperature
START DATE	SELECT ALL         DESELECT ALL           11/07/2012 14:53         END DATE         11/07/2012
PERIODS	
REPORT HEADER	
REDORT DAGE HEADER	

Figure 79: Mean Kinetic Temperature Report Window

- 1. Select a template from the drop-down **List of Saved Templates** (based on previous reports that have been saved as templates).
- 2. Click on the **Group(s)** and **Tag(s)** that you need to include. You can include individual tags within a group by clicking on the expansion box, clearing the Group checkbox, and clicking the checkboxes alongside the individual tags. To simplify selection, you can also click the **Select All** or **Deselect All** buttons.
- **3.** Click on the **Start Date** calendar and select the desired date and time. Repeat this procedure for the **End Date**.
- 4. Enter the number of **Periods** you need the report to cover.
- 5. In the associated text boxes, enter the text that will appear as the **Report Header**, the **Report Page Header** and the **Report Page Footer**.
- 6. Click on Generate Report to create the report, or on Reset to clear the entered data and all checkboxes. If you want to save this report as a template (adding it to the List of Saved Templates), click Save Template.

# 7.6 Creating an Alarm Report for a Single Tag

To create a report for a Single Tag Alarm, click on the **Single Tag Alarm Report** button. The Single Tag Alarm Report window opens (Figure 80 below).

LIST OF SAVED TEMPLATES	DELETE TEMPLATE
	Group2
	T0051 Temperature
	T0052 Relative Humidity
	T0053 Auxiliary Input
ELECT GROUP(S) & TAG(S)	T0054 DigitalInput
	T0055 Battery
	T0056 Temperature
	T0057 Relative Humidity
	SELECT ALL DESELECT ALL
DATE	11/07/2012
	SELECT COLOR FOR HIHI ALARM $\underline{\Lambda}$ + SELECT COLOR FOR HI ALARM $\underline{\Lambda}$ +
	Select color for LoLo Alarm $\underline{A}$ . Select color for Lo Alarm $\underline{A}$ .
REPORT HEADER	
EPORT PAGE HEADER	

Figure 80: Single Tag Alarm Report

- 1. Select a template from the drop-down **List of Saved Templates** (based on previous reports that have been saved as templates).
- 2. Click on the **Group(s)** and **Tag(s)** that you need to include. You can include individual tags within a group by clicking on the expansion box, clearing the Group checkbox, and clicking the checkboxes alongside the individual tags. To simplify selection, you can also click the **Select All** or **Deselect All** buttons.
- **3.** Click on the **Start Date** calendar and select the desired date on which the report begins.
- 4. To display a graph, click on the **Display Graph** checkbox. You can then select a color for the HIHI, HI, LO and LOLO alarms by opening the drop-down list and clicking the desired color.
- 5. In the associated text boxes, enter the text that will appear as the **Report Header**, the **Report Page Header** and the **Report Page Footer**.
- 6. Click on Generate Report to create the report, or on Reset to clear the entered data and all checkboxes. If you want to save this report as a template (adding it to the List of Saved Templates), click Save Template.

# 7.7 Creating an Audit Trail Report

To create an audit trail report, click on the **Audit Trail Report** button. The Audit Trail Report window opens.

	SELECT GROUP(s) & TAG(s)
Acknowledgedalarmemail Acknowledgedalarmemail Acknowledgedalarmtelephony Acknowledgedalarmui Assigned/modified user priority Backupdb Configureditag Configuretincomingmailserver	Group2 Group2 T0051 Temperature T0052 Relative Humidity T0053 Auxiliary Input T0054 DigitalInput T0055 Battery T0056 Temperature
SELECT ALL DESELECT #	SELECT ALL DESELECT ALL
START DATE 11/07/2012	END DATE 11/07/2012

Figure 81: Audit Trail Report Window

- 1. Select the particular Audit Events that you need to include. First, click on the Audit Events option button. Then click on particular event types from the list window.
- 2. Click on the **Group**(s) and **Tag**(s) option button, and then on the groups and/or tags that you need to include. You can include individual tags within a group by clicking on the expansion box, clearing the **Group** checkbox, and clicking the checkboxes alongside the individual tags.
- **3.** Click on the **Start Date** calendar and select the desired date. Repeat this procedure for the **End Date**.
- 4. Click on Generate Report to create the report, or on Cancel to clear the entered data and all checkboxes.

# 7.8 Creating a Calibration Report

The Calibration report tells the user when the user calibration was performed on tags and the current calibration settings for the tags. On the Calibration Report screen, you can generate either current or historical calibration reports.

Temp		
500007		
S00008		
S00009		
S00011		
S00003		
RHAIDI		
S00007 PH	. 2186	Calibration Histor
SELECT ALL	DESELECT ALL	Calibration Histor
	Lange and the second se	
START DATE	01/06/2013	
THE DATE	01/06/2013	
END DATE	01/00/2015	
ENDIDATE	01/00/2015	
CUSTOMER		
CUSTOMER		
CUSTOMER ISSUED BY		
CUSTOMER ISSUED BY		
CUSTOMER ISSUED BY SPECIFICATIONS BY		
CUSTOMER ISSUED BY SPECIFICATIONS BY		
CUSTOMER LISSUED BY SPECIFICATIONS BY COMMENTS		
CUSTOMER LISSUED BY SPECIFICATIONS BY COMMENTS		
CUSTOMER ISSUED BY SPECIFICATIONS BY COMMENTS REFERENCES USED		

Figure 82: Calibration Report Window

- 1. First, click on the **Groups and Tags** that you need to include in the report. You can click on individual boxes, or use the **Select All** and **Deselect All** buttons.
- **2.** To display the current calibration of the tags, leave the **Calibration History** box unchecked.
- 3. To display the calibration history of the tags, check the Calibration History box.
- 4. Click on Generate Report to create the report, or on Cancel to leave the window without creating a report.

# 7.9 The Report Viewer Toolbar

М	4	1	of	4	M	4	×	٢			4	100%	•
												Excel	
												PDF	
									 	_		Word	

Figure 83: The Report Viewer Toolbar

LabWatch LT displays reports in the Report Viewer window, which has the toolbar shown above. The buttons may be disabled if not required (e.g., if the report is of one page, then the navigation buttons will be disabled).

The buttons are described below.

14 4	12	of 4	6	N
1. AU	-	01 1		11

The navigation buttons enable a user to navigate to a desired

page of the report.

The **Stop** button ermits a user to stop rendering the report.

The **Refresh** button 🛞 refreshes the report with the newest data.

The **Print** button is enables users to print the report.

The **Print Preview** button **[]** allows users to view the report in a print layout.

The **Page Setup** button **Q** opens the Page Setup window, where users can set the page size and page margin for the current report.

The **Zoom** drop-down menu 100% enables users to zoom the report as per the selected percentage.

# 7.9 The Report Viewer Toolbar (cont.)

The Export drop-down menu enables users to export a report to the desired format.



- 1. Audit Report This report can be exported to Word, Excel and PDF file format.
- 2. Other reports All the other reports can be exported to Excel and PDF file format.

**IMPORTANT:** MS-Office and PDF reader software should be installed, to view the exported file.

## 7.10 Deleting a Report Template

To delete a template:

- 1. Open the Report criteria screen
- 2. Select a template from the Template list.
- 3. Click the **Delete Template** button **DELETE TEMPLATE**
- 4. The appropriate success message is displayed.

**IMPORTANT:** All report criteria screens having a Report Template have the Delete feature.

# Chapter 8. Configuring Kaye LabWatch LT



Figure 84: The Configuration Tab

On the Configuration screen (available by clicking on the **Configuration** tab), you can set up and manage alarm contacts (e-mail and telephone) and acknowledgements, user accounts, calibration records, tag and group configurations, and basic system display parameters. Refer to the sections listed below for specific information on a configuration procedure.

- Email Configuration page 89
- Telephony Configuration page 92
- Schedules page 94
- Alarm Acknowledgement Comments page 95
- Alarm Color Configuration page 96
- User Creation/Modification page 98
- User Account Settings page 101
- User Vacations —page 103
- User Calibration page 104
- Tag/Group Configuration page 106
- System Configuration page 112
- Locking and Unlocking LabWatch LT page 113
- Exit/Shutdown -- Click on **Close** and then log in to exit or close your session with LabWatch LT.

# 8.1 Configuring Email Contacts

#### 8.1.1 Email Server Tab

In the Email Configuration window, the first tab, **Email Server**, equips you to set up the outgoing and incoming mail servers to transmit alarm messages.

EMAIL SERVER	AUTHENTICATION	MESSAGE FORMAT
OUTGO	NING MAIL SERVER	INCOMING MAIL SERVE
MTP SERVER NAME MTP PORT NUMBER OURCE EMAIL ADDRESS UBJECT	25 25 BY DEFAULT LabWatchLite Alarm Notificatio	IMAP SERVER NAME
* Check this Option on	v if Connection requires SSL. For Example	Use SSL*

Figure 85: Email Server Tab

For the Outgoing Mail Server:

- 1. Enter the SMTP Server Name in the associated text box.
- 2. Enter the SMTP Port Number (25 by default) in the text box.
- 3. Enter the Source Email Address and the Subject in the text boxes.
- 4. Check Use SSL option for Gmail and Yahoo mail accounts

For the Incoming Mail Server, enter the **IMAP Server Name** and the **IMAP Port Number** (143 by default).

#### 8.1.2 The Authentication Tab

The next tab, **Authentication**, sets up the Name and Password by which a user can log into LabWatch LT to acknowledge alarms.

EMAIL SERVER	AUTHENTICATION	MESSAGE FORMAT	
	EMAI	ACCOUNT	

Figure 86: The Authentication Tab

Enter the **Login Name** and **Password** that will access the account.

#### 8.1.3 The Message Format Tab

The final tab establishes the **Message Format** for alarm messages.

EMAIL SERVER	AUTHENTICATION	MESSAGE FORMAT	
LECT EMAIL BODY CON	TENTS	FORMATTING	
TagDesc TagValue EventType Priority Units		LABEL FIELDS DELIMITER FOR EMAIL BODY CONTENTS / , ;	

Figure 87: The Message Format Tab

At the left, select the **Email Body Contents** by clicking on the checkbox next to the parameter: **Tag, TagDesc, Tag Value, Event Type, Priority, Units,** and **Group**. You can also use the **Move Up** and **Move Down** buttons to arrange the order of the contents.

At the right, the **Formatting** pane enables you to **Label Fields** (by clicking the checkbox) and to select a **Delimiter for Email Body Contents** (semicolon, comma or slash) from the pull down menu.

When you have finished, click **OK** to save the entries and close the window, or on **Cancel** to close the window without entering the data.

# 8.2 Configuring Telephone Contacts

If you need to configure telephone dialing for LabWatch LT, click on **Telephony Configuration** in the Alarm Management section. The Telephone Dialer Configuration window opens.

#### 8.2.1 The Voice Tab

TELEPHON	E DIALER CONFI	GURATION	?
VOICE	CONTROL	DIALOUT CODES	
		DEVICE TYPE	
		ANALOG DIALOGIC DIVA CARD	
		ОК	CANCEL

Figure 88: Voice Tab in Telephone Dialer Configuration

#### 8.2.2 The Control Tab

VOICE		CONTROL		DIALOUT CO	DES	
			OUTBOU	ND LINE		
			LINE1 LINE2			
VOICE VOLUME DEESET	VOLUME	SETTING (-10dB	to +10dB)			
	-10	-5	0	5	10	
	-10	-5	0	5	10	

Figure 89: The Control Tab

The Control tab permits selection of the outbound line for sending phone messages, and the volume setting for these messages. In the Outbound Line box, click on the **Line 1** or **Line 2** option button to specify the telephone line. Use the sliding scale to set the appropriate **Volume Setting** (over a range from -10dB to +10dB).

#### 8.2.3 The Dialout Codes Tab

<b>VOICE</b>	CONTROL DIALOUT CODES	
	DIALOUT CODE	
	USE PREFIX CODE	
	PREFEX CODE	)]
	SUFFIX CODE	)

#### Figure 90: Dialout Codes

If you need dialout prefixes or suffixes to access outside lines, the Dialout Code tab enables you to record them. To add a Prefix Code or Suffix Code, click on the appropriate checkbox and enter the code in the text box.

When you have finished, click **OK** to save the entries and close the window, or on **Cancel** to close the window without entering the data.

## 8.3 Managing User Schedules

To set up, edit or delete a user schedule (that is, a time period during which LabWatch LT can contact specific users with messages), click on the **Schedule** option under Alarm Management. The Schedule window opens with the list of current schedules



Figure 91: The Schedule Window

• To create a new schedule, click **New.** The New Schedule window opens.

ENTER SCHEDULE	:		
START TIME	00:00:00		
ENDTIME	00:00:00	<b></b>	
SCHE	DULE REPEAT		
IONDAY 🗌 TUESDAY 📄 WEDNESDAY	THURSDAY	FRIDAY SATURDAY	SUN

Figure 92: New Schedule Window

In the text box, enter the schedule name. Then use the drop-down hourly lists to specify the **Start** and the **End Time**, and the checkboxes to enter the days. When you have completed editing the schedule, click **OK**.

- To edit an existing schedule, highlight the schedule and click Edit.
- To delete an existing schedule, highlight the schedule and click **Delete**.
- To close the window, click **Cancel.**

# 8.4 Adding Predefined Acknowledgement Comments

You can add a list of up to five predefined comments to aid in easily classifying acknowledged alarms. To define these comments, click on **Alarm Acknowledgement Comments** under Alarm Management. The Alarm Acknowledgement Comments window opens.

B ALARM ACKNOWLEDGEMENT COMMENTS	2 😒
ENTER COMMENTS	
Predefined Comment1 - updated	~
	~
1111 - Predefined Comment1 - updated         2222 - Predefined Comment2 - updated         3333 - Predefined Comment3 - updated         4444 - Predefined Comment4 - updated         5555 - Predefined Comment5 - updated	
OK CANCEL	

Figure 93: Alarm Acknowledgement Comments

Click on one of the five available comments. In the **Enter Comments** text box above, replace the "Predefined Comment" text with the desired text. When you have finished editing comments, click **OK** to save the new comments and close the window.

# 8.5 Configuring Alarm Colors

LabWatch LT has a standard set of colors to designate various types of alarms:

- red for Hi (High)
- burgundy for HiHi (High High)
- aqua for Lo (Low) sensor alarm and low battery alarm
- blue for LoLo (Low Low)
- magenta for an open circuit (disconnected sensor).
- yellow for loss of communication (COMM).
- green for the normal condition.

However, you can also substitute another color for any or all of the above. Under Alarm Management, click on **Alarm Color Configurations**. The Alarm Color Configurations window opens.

Balari	I COLOR CONFIGURATION ( 🛛 🗙
	SELECT COLOR FOR ALARM
	- LO
	+ HI
	+ HIHI
(	RESET OK CANCEL

Figure 94: Alarm Color Configuration Window

To change any alarm color, click the arrow next to the color. A palette of available colors (Figure 95 on the next page) opens.

# 8.5 Configuring Alarm Colors (cont.)



Figure 95: Palette of Alarm Colors

Click on the desired color to change the alarm color. When you have finished:

- Click **Reset** to return to the default colors.
- Click **OK** to save the changes and close the window.
- Click **Cancel** to close the window without saving any changes.

# 8.6 Adding or Editing Users

If you need to add or edit a user, click on **User Creation/Modification** under the User Account Modification heading. The User Creation/Modification window opens.

LIST OF USERS	USER ID	USER NAME		
krish		(		
krishna_balanagu@ge.com	COMPARENTS .			
	COMMENTS	1000 CO. 1000 CO. 100	227	
		RESET PASSWORD		
		DISABLE USER		
	USER TYPE	CHANGE PHOTO		
	Operator -		BROY	
	EMAIL ID	TELEPHONY NO		
	0	[		
	ACCESS CODE	ACK CODE		
	0	0		
	USER PERMISSIONS			
	PERMISSION	VIEW	MODEPY	
	EMAILCONFIG	2	V	
	TELECONFIG	8		
	SCHEDULE			
	ALARMACKNOWCOMMENTS		53	

Figure 96: User Creation Window

On this screen, you can enter or change a user ID and user name, determine the user type, and select Permissions for the particular user.

The entire list of available users appears on the left. To edit an existing user, select the user from the list on the left.

To create a user:

- Enter a User Id and User Name in the appropriate text boxes.
- You can add **comments** for the created user.
- You can **reset the password** for a particular user (in cases where a password has been forgotten).
- You can **disable** a particular user. For a disabled user, all the controls except the comments and disable user checkbox are disabled. When a user is enabled, his or her password is also reset.

# 8.6 Adding or Editing Users (cont.)

- From the drop-down list, enter the **User Type**: Operator, System Administrator or Guest.
  - System Administrator Creates and maintains user accounts, sets site options and system preferences, locks and unlocks the system, backs up and restores user information, and views, prints, and maintains the audit trail. The System Administrator also performs Logger calibration.
  - Operator Can view screens and create reports. Operators can also have particular permissions if the System Administrator has set them up with specific permissions in this window.
  - Guest Can view screens, but cannot change any parameters.

In the lower left, you have a list of particular **Permissions** for a user. If you wish to grant permissions to view or modify parameters in the Configuration option, scroll to the appropriate option and click on the checkboxes for that permission.

LIST OF USERS	USER ID	USER NAME	USER NAME	
	COMMENTS			
		RESET PASSW	RESET PASSWORD     DISABLE USER     CHANGE PHOTO	
		T DISABLE USER		
	USER TYPE	CHANGE PHOTO		
	Operator -		BROWS	
	EMAIL ID	TELEPHONY NO	TELEPHONY NO	
	0			
	•		c	
	•			
	•			
	•			
	ACCESS CODE	ACK CODE		
	USER PERMISSIONS			
	PERMISSION	VIEW	MODIFY	
	EMAILCONFIG	E	F	
	TELECONFIG	12	되	
	SCHEDULE	R	P	
	ALARMACKNOWCOMM	ENTS Int	1×	

Figure 97: Adding Contact Details

# 8.6 Adding or Editing Users (cont.)

For alarm communications, you can enter up to five email IDs and telephone numbers in the text boxes, as well as an access code and an acknowledgement code.

Clicking on the plus icon (green) enables you to enter a new email ID or telephone number, and clicking on the minus icon (red) deletes the respective email ID or telephone number.

Click **New** to create a new user, **Save** to save the changes and close the window, or close the window without saving any changes.

To delete a user, a **Close** button appears at the top right corner of the user image if you mouse over a user in the list displayed on the left. Click the **Close** button to delete the user.

If you have selected a disabled user in the Users list, then only the **Disable User** checkbox and the **Comments** textbox are editable; the other controls are disabled. To enable the controls, uncheck the **Disable User** checkbox, enter comments in the **Comments** box and click **Save**. When the user is enabled, the password of the user is also reset to the default password.

**IMPORTANT:** Whenever new users are created, they are assigned default passwords that are the same as their User IDs. A user must change the default password at first log in.

# 8.7 Establishing User Account Settings

The User Account Settings window (available under User Account Management) allows you to adjust basic account parameters applicable to all users.

() USER ACCOUNT SETTINGS	· · · · · · · · · · · · · · · · · · ·
MINIMUM PASSWORD	6 LENGTH
DISABLE ACCOUNT AFTER	4 FAILED ATTEMPTS
	REQUIRE STRONG PASSWORD
PASSWORD RESET AFTER	30 DAYS
SCHEDULE ALLOWED	2 PER USER
RESET	OK CANCEL

Figure 98: User Account Settings

- You can disable an account after it has been unused for a specified number of days. In the **Disable Account After** box, scroll to (or type in) the desired number of days, from 1 up to 366.
- You can also specify the minimum length of the password, from 6 to 16 characters. In the **Minimum Password** box, scroll to (or type in) the desired number of password characters; the default number is 6.
- You can **Disable Accounts** after a specified number of unsuccessful login attempts. (The default number is 3.) This option will disable a user account if there are three consecutive PC login failures for the same user User ID. If a user's account is disabled, the System Administrator must enable the account and assign a new temporary password. Enter the number of Failed Attempts, after which the account will be disabled.
### 8.7 Establishing User Account Settings (cont.)

• If needed, you can also require a **Strong Password** by clicking the associated checkbox.For a strong password, please enter a valid password with first letter as upper case, at least one lower case letter, one digit and one special character.

**Note:** Valid special characters for a strong password are: @#\$%^&+=

- You can require a **Password Reset** -- that is, replace the password with a different one -- after a specified number of days. Enter the desired number of days in the text box. The password will be reset to the default one and user will need to change the default password at first log in.
- Each user account can be associated with a specified number of **Schedules**. (The default is 2.) Enter the number in the text box.

When you have finished entering settings:

- Click **Reset** to return the settings to default,
- **OK** to save the changes and close the window,
- or **Cancel** to close the window without saving any changes.

### 8.8 Scheduling User Vacations

(%) USE	R VACATIONS			2 😒
	VACATION NAME			
	START DATE/TIME	08/17/2012 13:22		
R	END DATE/TIME	08/17/2012 13:22		
VIIO	COMMENTS			~
R VAC				1
ISI		ENABLE VACATION		
	N	EW DELTE	( ) ( )	CANCEL

**Figure 99: User Vacations** 

The User Vacations window enables each user to enter dates and times of user vacations into the database, so that LabWatch LT will not send messages to those particular contacts during their vacation periods.

- 1. Enter the Vacation Name in the associated text box.
- 2. From the drop-down calendars, click on the vacation Start Time and End Time.
- 3. In the text box, enter any appropriate Comments.
- 4. Click the Enable Vacation checkbox to enter the vacation into the database.

When you have finished, click **New** to enter another vacation, **Delete** to delete an existing vacation, **Cancel** to close the window without saving data, or **OK** to save the vacation and close the window.

### 8.9 Maintaining Calibration Records

When you click on **Calibration** under the User Calibration heading on the Configuration screen, the User Calibration window is launched.

nable	Get Live	Tag	Description	Sensor Sn	Sensor Type	Standard Low	Actual Low	Loc	k Standard High	Actual High	Lock	Calibrate	Pre Calibrated	Calibrated	l Expi
/	<b>V</b>	т00002		b02747.TA	Temp	0.00	25.29		100.00	35.29		Calculate	25.30	0	01
2		T00003		b02747.TB	Temp	0.00	89.02		23.00	89.03		Calculate	89.03	23	01
/	<b>V</b>	т00004		b02747.TC	Temp	5.00	11.00		100.00	0.00		Calculate	0.00	100	En
		т00005		b02747.TD	Temp	0.00	0.00		100.00	0.00		Calculate	0.00		En
2		т00006		b02747.TE	Temp	0.00	0.00		100.00	0.00		Calculate	0.00		En
		T00008		b03184.RH	RH	0.0	100.0		100.0	100.0		Calculate	0.0		Er
		т00009		b03184.T	Temp	0.00	0.00		100.00	0.00		Calculate	0.00		E

Figure 100: User Calibration Window

This window allows users to calibrate the sensors. It also keeps record of the calibration status and data of the various tags. Columns include:

- **Calibrate** Click the checkbox to enable calibration of a tag, or clear it to disable calibration.
- **Tag** displays the tag name.
- **Description** provides the tag description.
- **Type** valid values are Temp and RH. The sensor calibration screen displays the temperature and RH sensors, but not AI/DI sensors.
- **Standard Low** value entered by user.

### 8.9 Maintaining Calibration Records (cont.)

- Actual Low latest tag value, which fluctuates according to the values being read. (This field is not editable by the user.)
- Lock Clicking this checkbox will freeze the value of "Actual Low", i.e., the value will not change.
- **Standard High** value entered by user.
- Actual High latest tag value, which fluctuates according to the values being read. (This field is not editable by the user)
- Lock Clicking this checkbox will freeze value of "Actual High" i.e. value will not change.
- **Pre Calibrate Value** the tag value before calibration.
- **Calibrated Value** tag value after calibration, displayed after both "Lock" boxes are checked by the user.
- **Expiration Date** date on which user calibration will expire. Tag rows will appear in red upon the expiry of calibration date.
- User Calibration Date date on which user calibration was performed.

When you have finished, click **Save** to save the changes, or **Cancel** to exit the window without saving the changes.

### 8.10 Configuring Tags and Groups

#### 8.10.1 Entering the Tag Configurator

When you click on the **Tag/Group Config** option under Tag Configuration, the Tag Configurator window is launched.



Figure 101: Tag Configurator Window

You have three options:

- To reconfigure Base Stations and Loggers, the communication between a Base Station and LabWatch LT will be stopped. Tag Configurator GUI will be launched. LabWatch LT will not record data until you exit the Tag Configurator.
- You can **Modify Tag Groups**. If you select this option, you will enter the Assign Tags tab of the Configurator, but will not be able to access the Configure Base Stations tab. In this option, LabWatch LT will continue to record data.
- You can exit the Configurator without making any changes.

Click on the desired option button and click **OK**.

#### 8.10.2 Locating Base Stations and Loggers

If you have clicked on the **Configure Base Stations and Loggers** option button, the **Configure Base Stations** tab (Figure 102 below) of the Configurator opens. Click on **Discover Base Stations** to determine what Base Stations are on your network, and click on **Get Loggers** to find the Loggers for each of the selected Base Stations. You can also **Enter an IP Address** to locate a particular Base Station.

EGISTRA	TION 2 CONFIGURE	O ASSIER TAGS	CONFICURE	O GROUPS	O USERS	O SCHEDULE	O NOTIFICATIONS	O MYRW
CONF Step 2:	IGURE BASE STATIONS Base Stations can be conf	Igured, discovered and in	scluded in the	monitoring system. COVER BASE STATION	S GET LOGGERS			
stu	CT IP ADDRESS	NAME		PORT :	TOTAL LO	GGERS	RECEIVED LOGGER	5
10	3.185.91.29	BASESTATION2		4445	2		2	

Figure 102: Configure Base Station Window



Figure 103: Discovering Base Stations

8.10.2 Locating Base Stations and Loggers (cont.)



Figure 104: Getting Loggers

When a user clicks on **Get Loggers**, it toggles to a **Stop Get Loggers** button. Clicking on **Stop Get Loggers** will stop LabWatch LT from searching for Loggers from selected Base Stations.

After the Loggers have been received and displayed, a user can select/unselect Base Stations and Loggers by clicking the corresponding check boxes. Click **Next** when you have finished.

	GISTRATIO		0	ASSIGN TAGS	O CONFIGURE	0	CREATE TAI	0	ARCIGN GROU		DEFINE SCHEDULL	0	OTIFICATIONS	Ø MY
	CONFIG	URE BASE STAT	IONS											
1	Step 2: Ba	se Stations can b	e configured	,discovered ar	d included in the	monito	oring syste	n.						
			- 11/168 18 4	008855	all the second se					1				
con	NOURE NEW	V BASE STATIONS			OK OS	SCOVER	BASE STATIC	NS	OFT LODGER					
_		In America										(march		
	P	3.115.91.159		BASESTATIO	NL.	4445			1			1	11120 10002	
		50.00	TLOGGERS	N MAC ADDRS	335	_	SENSORI	SENSO	2 SENSOR3	501650	N 506085	SENSOR	1	
		P	b03592	00-00-00-0	1-00-01-92-FE		Ð.	TA	тв	тс	TD	TE		
				and a second		-			z			2		
-	г	3.165.91.28		GROESTRUIG	112									
	F	3.145.41.28 <b>6.110</b>	T LOCOPA	N MAC ADDRS	55		SENSORI	senso	12 SENSORS	58450	n sensors	SENSOR	1	
	r	3.185.91.28 599.0 17	ti 10000404 b03192	N MAC ADDIS			SENSORI DL	SENSO RH	z sensora n/a	SENGO T	n seksers Al	sensor. Di	1	

Figure 105: Screen Populated with Base Stations

8.10.2 Discovering Base Stations and Loggers (cont.)



Figure 106: Populated Screen with Selected Loggers

#### 8.10.3 Modifying Tag Groups

# **Note:** If you selected **Modify Tag Groups** in the Tag Configurator, you will enter the Configurator at this point.

When you have populated the list, you will proceed to the Assign Tags tab (Figure 107 below). In the Enabled column, clear the checkbox for any tag you do not want to enable. In the Tag and Tag Description columns, you can enter your own tag IDs and descriptions. To create automatic tags, click the **Generate Tag** button. If you need to reassign a tag, click the **REASSIGN Tag** button. By default, "Group By" will list all the base stations. Selecting a particular base station will list sensors related to that selected base station.

D REG	ESTRATION O BA	NFEGURE GENTATIONS	ASSIGN TAG	0	NGS (	CREATE TAG	O ASSERT GROUP	O SCHEDULE	O DEFINE ALAIM NOTIFICATIONS	O REVIEW
	ASSIGN TAGS									
5	tep 3: Tags can be gen	erated for detec	cted sensors.	G	Baseda	n Tam				
1	GENERATE TAG	UCENSE	KEY RE	100						
	Group By All				SELECTED T	AG				
	ED BASE STATION	-	CERICOD TYPE		SENSUR					
R.	BASESTATION2	603192.AI	Auxiliary Input	10	TAG NAME					
R	BASESTATION2	603192.01	DigitalInput	TU	[	1	-			
e.	BASESTATION2	b03376.EX.	Baltrry	TD	DEATEN		CANCEL			
R	BASESTATION2	602276.TA	Temperature	TD		_	- Mercer			
F.	BASESTATION2	603376.TB	Temperature	TD						
P	BASESTATION2	603376.TC	Temperature	TRAVES	-					
y .	BASESTATION2	501376.TD	Temperature	700016						
	BASESTATIONO	601126.TF	Temperature	T00017						

Figure 107: Assign Tags Tab

- Clicking **ENABLE ALL** will enable all sensors.
- Clicking **DISABLE ALL** will disable all sensors.

8.10.3 Modifying Tag Groups (cont.)

Figure 108: Reassigning Tags

When you have completed sensor and tag association, click **Next** if you need to enter more data, or click the **Review** tab and click **Finish** to close the Tag Configurator and return to LabWatch LT.

### 8.11 Establishing Basic Display Parameters

DD/MM/YYYY	
MM/DD/YYYY	
DD-MM-YYYY	
MM-DD-YYYY	
1	
Temperature Units	
Deg C	
0	
O Deg F	
Francisco Brancisco	
remperature Precision	0.00 -
RH Precision	0.0 -
	0.0
Time Format	[and a second second
nine romat	24-hr •
	n 1 days
Calibration reminder advance notificatio	
Calibration reminder advance notificatio	
Calibration reminder advance notificatio	2 *

Figure 109: System Configuration Window

The System Configuration window allows you to set up basic display parameters: Date and Time format, temperature units, measurement precision, etc.

- From the boxed list, select the desired **Date Format**: Day-Month-Year or Month-Day-Year, separated either by hyphens or slashes.
- Click on the option button to select the **Temperature Units**: either Celsius or Fahrenheit.
- From the drop-down list, click on the desired level of **Temperature Precision**. You can choose from whole integers, one decimal place or two decimal places.
- Repeat this selection for **RH Precision**. The choice is between whole integers and one decimal place.
- Select 12 hour or 24-hour **Time Format**.

### 8.11 Establishing Basic Display Parameters (cont.)

- In the **Calibration reminder advance notification**, enter the number of days during which the system reminds you about the calibration due date for a particular tag before expiration of calibration is due date.
- **REALARM TIME** will determine the time to re-alarm if there is no change in the alarm state after acknowledgement until re-alarm time is elapsed. The Valid times for re-alarm are 1 hour, 2 hours, 4 hours, and 24 hours. The default is 2 hours.

When you have finished, click **Save** to save the entries and close the window, or **Cancel** to exit the window without saving any entries.

### 8.12 Locking and Unlocking Kaye LabWatch LT

To lock or unlock LabWatch LT, click on Lock in the System section.

#### 8.12.1 Locking the System

Only Administrator users have permission to lock the system. A locked system will not let users perform the following operations:

- They cannot launch Task Manager.
- They cannot see the Windows Start icon and task bar.
- They cannot access the system by any kind of Windows key combination (Alt + Tab, etc.)

Note: Clicking LOCK will toggle the caption to UNLOCK.

#### 8.12.2 Unlocking the System

Only Administrator users can unlock the system. Clicking **UNLOCK** toggles the caption to **LOCK**, and now users can access the system through any Windows key combination.

**IMPORTANT:** LabWatch LT cannot be shut down as long as the system is locked.

### 8.13 Sensor Calibration Reminder Screen

The Sensor Calibration Reminder screen indicates that the calibration has reached the expiration date.

Sensor Calibra	ation Reminder				
Freezer 1					1
Freezer 2					
1	[			1	
	1 Hr	<b>_</b>	Snooze	Dismiss	

Figure 110: Calibration Reminder Screen

It appears whenever the number of reminder days before the expiration date is set. On the screen you can click either **Snooze** or **Dismiss**.

- **Snooze** will pop up according to the time you set.
- **Dismiss** will dismiss the operation.

If the user clicks on **Snooze**, LabWatch LT requests login information; after the user has logged in, it will store the revised snooze information. If the user clicks on **Dismiss**, LabWatch LT requests login information and then stores the dismissal information to the database.

You can set the number of reminder days in the System Configuration option.

### 8.14 Back Up and Restore Database

		Browse
	Back Up	_
Restore Database		Browse
	Restore	

Figure 111: Backup and Restore Database

This screen allows users to back up and restore the database.

- When you click **Back Up**, the program backs up the LabWatch LT database to a specific path that has been selected through the **Browse** button.
- When you click **Restore**, the program will restore the database on the path selected through the **Browse** button.

### 8.15 Monitoring RF Signal Strength

RF strength depicts the strength of the wireless connection between a Base Station and logger and also between loggers. To view and graph the various RF strengths of signal paths, click **LabWatch LT RF Signal Strength Graph**, a separate utility available from the **Start** menu. The Logger Network Strength Graph screen opens. From the File menu, click on **Connect.** 

🔁 Labwatch Li	ite - Logger Network Strength Graph
File Background	Graph Legend
Connect	
Disconnect	
Print	
Exit	

Figure 112: Logger Network Strength Graph

The **Connect to Base Station** window opens. Click **Discover Base Stations** to find a list of Base Stations available on the network.

Connect Connect to I	Base Station —			
IP Address	Serial Number	Name	Firmware Rev.	Discover Base Station
		Connect		
<				
				Close

Figure 113: Connect to Base Station Window

When the list of Base Stations in the upper pane is populated, highlight the Base Station you need and click **Connect**.

Connect					Þ
Connect to E	Base Station				
IP Address	Serial Number	Name	Firmware Rev. 🔺		
3.185.91.28	00-17-0d-80-0e-35	GE	1.80-9		
3.185.91.31	00-17-0d-01-04-fc	SyedVenkat	1.61-21		
3.185.91.29	00-17-0d-80-0e-5b	GE	1.80-9	1	
3.185.91.25	00-17-0d-80-0f-64	GE	1.80-9	Discourse	
3.185.91.74	00-17-0d-01-04-ee	none	1.61-21	Discover Base Station	
3,185,91,12	00-17-0d-80-0f-b6	GE	1.80-9	Dase Station	
Waiting '	for Sensor Inver	itory			
<					>
				Close	1

Figure 114: Connecting a Base Station

The main Logger Network Strength Graph window reopens. After up to 15 minutes, the graph of Base Stations, Loggers and signal strength paths appears.



Figure 115: Signal Strength Graph

The **Legend** option in the Main Menu enables users to interpret the graph. It shows the color codes for signal strength, and the symbols for Base Stations and Loggers. Connection strength >-60 is considered good; -70 < and <-60 as OK; and <-70 is Bad.

Legend	Χ.
Connection Strength	
-70 < -60 < -60 < -70	
Туре	1
E Logger	
Base Station	

Figure 116: Legend Window

In the **Background** option, you can add (or clear) a background diagram or photo on which the software will superimpose the signal path graph. You can also show the signal strength as a number, and display the Logger by ID or by serial number.



Figure 117: The Background Option Menu

The **Graph** option allows you to reconfigure the colors and line appearance of the graph. You can click on a color to open palettes of color for the Background, Signal Strengths, Direction, Logger ID/SN and Strength. You can also select the signal path line format from three dashed line selections.

📮 Graph Color Se	ttings 🛛 🔀
Background	
Connection > -60 -60 > and <-70 > -70	
Connection Style	
Direction	
Logger ID/SN	
Strength	
	Ok

Figure 118: Graph Color Settings

Finally, you can return to the **File** menu to **Print** the graph on a selected printer, or to **Exit** the Logger Network Strength Graph.

## Appendix A. Configuring Telephone Notifications

This appendix defines the steps needed for installation of the LabWatch LT Telephony Notification for alarms. It focuses on:

- 1. Dialogic Diva Analog 2p Hardware installation
- 2. Configuring and testing the Diva board
- 3. Configuring and using LabWatch telephone service

### A.1 Prerequisites

- LabWatch LT, installed and configured
- Dialogic Diva Analog 2p PCIe Board
- Dialogic Diva 64 bit (for 64 bit OS), 32 bit (for 32 bit OS) drivers.
- OS: Windows XP or Windows 7 (32 bit or 64 bit)
- System with PCIe (1x or greater) slot.

### A.2 Installing Diva Analog 2p Board

This section will assist you in installing your Dialogic® Diva® Media Board and connecting it to an analog line.

You need to complete the following three procedures to use your Diva Media Board properly:

- 1. Insert your Diva Media Board into your computer as described below.
- 2. Connect your Diva Media Board.
- 3. Install your Dialogic® Diva® System Release.
- **Note:** You may need to consult your computer's manual during the installation of your Diva Media Board.

#### A.2.1 Inserting Your Diva Media Board into Your Computer

- **1.** For your safety, disconnect all technical and peripheral devices and all energy sources from the computer.
- **2.** Drain static electricity from your body by touching the metal chassis (the unpainted metal at the back of your computer).
- 3. Remove the cover of the computer as described in your computer's manual.
- 4. Locate the PCIe slot in your computer.
- 5. If there is a metal plate at the end of the slot, remove the screw or loosen the clip and remove the metal plate. Keep the screw for fastening your Diva Media Board.
- 6. If your Diva Media Board comes with a retainer, and space does not permit the use of the retainer, simply remove it before you insert the Diva Media Board. The retainer is only an installation aid, and does not add functionality to the board.

#### A.2.1 Inserting Your Diva Media Board into Your Computer (cont.)



Figure 119: Retainer on PCI Board

- 7. Before you insert your Diva Media Board, read the following safety instruction:
- <u>CAUTION!</u> To avoid damaging your hardware, insert the Diva Media Board only into a PCI or PCIe slot, according to your board type. Inserting the Diva Media Board into any other type of slot can damage your board, your computer, or both.
- **8.** Firmly insert the Diva Media Board into the selected slot. Make sure that the Diva board does not touch the CPU, memory modules, or other parts on the motherboard.



9. Firmly secure the Diva Media Board with the screw or clip.

#### A.2.1 Inserting Your Diva Media Board into Your Computer (cont.)

- <u>WARNING!</u> For your safety, make sure that the Diva Media Board's bracket is properly secured to the PC's chassis by fastening the Diva Media Board with the screw or clip. This will ensure proper grounding and avoid personal injuries and damage to your computer, your Diva board, or both.
- **10.** Replace the cover of the computer as described in your computer's manual.

#### A.2.2 Connecting Your Dialogic® Diva® Analog Media Board

Use the cables included with the Diva Analog Media Board.

#### A.2.2a Dialogic® Diva® Analog-2 Media Boards

Diva Analog-2 Media Boards have two RJ10 ports for connecting two separate analog lines. You can use any port; typically, you must specify the port number during software configuration. The port numbers are shown in Figure 121 below. The diagram is oriented with the edge connector pointing downwards.



Figure 121: RJ10 Ports

#### A.2.2 Connecting Your Dialogic® Diva® Analog Media Board (cont.)

Connect your Dialogic® Diva® Analog-2 Media Board as follows:

**1.** Take the two cables included with the Diva Media Board and plug the RJ10 connectors into the board.



Figure 122: Connecting Media Board

2. Plug the RJ11 connectors into the wall jack or PBX.

RJ10	Signals	RJ11
Pin 2	Ring	Pin 3
Pin 3	Tip	Pin 4

#### Table 1: Contact Assignments (Plugs and Jacks)

**Note:** Looking at the RJ10 and RJ11 connector with the exposed connector pins facing you, the pins are numbered from 1 to 4 and 1 to 6 from left to right as shown below.



Figure 123: RJ10 and RJ11 Connectors

### A.3 Configuring the Diva Board

To configure the Diva board (for caller ID), run Configuration Manager from: **Start->All Programs->Dialogic Diva** 

1. Select the lines.

B. Lather Confluence Research (N. Discolo (D), Confluence Research (N. Discolo))		
A Active Configuration - Dialogic(R) Diva(R) Configuration Manager		_ 0 ×
Elle Edit Insert View Iools Help		
	Property	Value
	Line Type	Pool of Analog Lines
	Country Selection	India
Services Cond	Caller ID (CLIP)	vii 👻
GAN	DTMF Collection	Off
Ŷ	Number Type	Single Phone Number
	Phone Number	
	Dial Type	Tone
Analog	Wait for Dial Tone	Yes
Boards	Connect Timeout	120
- Party Annual	Allowed Call Direction	Incoming and Outgoing Calls
Ŷ	Rejection of Incoming Calls	Ignoring
	DTMF Parsing	off
	PEX Parameters	Hide
Analog	Off-Hook Speed	Calibration on Line Up
	DTMF Clamping	Off
	Recording AGC	Off
	Dial Pulse Detection	Off
	Timeout On Silence	off
	ECT Emulation	Disabled (Handled by Net
	Limit Call Rate	Off
	Configure the line-specific pr To assign the configured ph select the bindings between	operties here. one numbers to the services, services and boards.

Figure 124: Line Selection

2. Set Caller ID option as **On**.

🏂 Artive Configuration - Dialogic (R) Diva(R) Configuration Manager		
File Edit Insert View Tools Help		
	Property	Value
	Line Type	Pool of Analog Lines
	Country Selection	India
Services USAPI	Caller ID (CLIP)	IOn 💌
GAR	DTMF Collection	Off
Ŷ	Number Type	Single Phone Number
	Phone Number	
	Dial Type	Tone
Anatog	Wait for Dial Tone	Yes
Boards	Connect Timeout	120
	Allowed Call Direction	Incoming and Outgoing Calls
l î	Rejection of Incoming Calls	Ignoring
	DTMF Parsing	Off
	PBX Parameters	Hide
Analog	Off-Hook Speed	Calibration on Line Up
	DTMF Clamping	Off
	Recording AGC	Off
	Dial Pulse Detection	Off
	Timeout On Silence	Off
	ECT Emulation	Disabled (Handled by Net
	Limit Call Rate	Off
	Configure the line-specific p To assign the configured ph select the bindings between	roperties here. one numbers to the services, services and boards.

Figure 125: Caller ID Options

### A.4 Testing Diva Board

To test the Diva board, run Line Test utility from: Start->All Programs->Dialogic Diva.

1. (Line connection check) Select the device and click on **Start** to check\test the line.



Figure 126: Line Check Tab for Diva Test

If everything is configured properly, the test result will be Line Check Passed.



Figure 127: Line Check Passed

### A.4 Testing Diva Board (cont.)

**2.** (Out Call Test) Type the number in the **Called Party Number** field (along with Prefix and Suffix code if needed).

Click on the **Call** button. It will show the call progress in the Status box. If the call is connected, it will play a default system prompt.

Dialogic(R) Diva(R) Line Test	×
Line Check/HW test Phone/Loop Call Transfer Fax The Phone/Loop test performs a simple test call to or a loop to itself. Device	Information
Call Satting Called Party Number 199995000834	Advanced
Status: Dutgoing call started Ringing outgoing call Dutgoing call is sending announcement. Phone test passed (remole phone connected)	Clear History Start Log
	<u>V</u> iew Log

Figure 128: Testing Outbound Calls

3. (Incoming Call Test) Select the **Enable incoming calls** option.

Dialogic(R) Diva(R)	Line Test				×
Line Check/HW test	Phone/Loop	Call Trans	fer Fax	Information	Н,
The Phone or a loop to Device	e/Loop test perl p itself.	iorms a simp	le test call to	o another phone	•
🖄 Dev 1: Dialog	gic Diva Analog	-2 PCI v1 #	40485 Line '	1 👻	
Call Settings Called <u>P</u> arty Nurr	iber Ca	lling Party <u>N</u>	umber	Advanced	
Enable incom	ing calls (enter i	your own nu	mber for a lo	oopback test)	
<u>Status:</u> Diva board is waitir	ig for a call.			Call	
				Clear	
				History	
				Start Log	
				⊻iew Log	
			Close	Help	

Figure 129: Enable Incoming Calls

### A.4 Testing Diva Board (cont.)

**4.** Then dial the number of the analog line which is physically connected to the board's port. It will show the following text after receiving the call and will play a default prompt.

Dialogic(R) Diva(R) Line Test	×
Line Check/HW test Phone/Loop Call Transfer	Fax   Information
The Phone/Loop test performs a simple test or a loop to itself.  Device  Manual 1. Dialogia Dive Applea 2. PCL +1. #40495 L	all to another phone
Call Settings	
Called Party Number Calling Party Number	Advanced
Enable incoming calls fenter your own number for	r a loopback test)
Diva board is waiting for a call.	<u>C</u> all
Called Party Number: Calling Party Number: Refinanced Number:	Clear
Calling Name: Incoming call is sending announcement,	<u>H</u> istory
	Start Log
	<u>V</u> iew Log
Close	e Help

Figure 130: Text After Receiving Call

### A.5 Configuring Telephone Settings

Please follow the steps below for configuring telephone settings

- 1. Open the LabWatch LT application.
- 2. Click on the Configurations tab and then on the Telephony Configuration option.



Figure 131: Telephony Configuration Option

3. On the Voice tab, the Analog Dialogic Diva Card button is selected by default.

VOICE	CONTROL	DIALOUT CODES
		DEVICE TYPE
		ANALOG DIALOGIC DIVA CARD

Figure 132: Analog Dialogic Diva Card Option Button

- 4. Click on the **Dialout Codes** tab. Set the **Prefix** and **Suffix Code**, if needed for making a call.
- **Prefix code** is the code needed to dial to access an outside line before dialing an actual number.
- **Suffix code** is the code that can be needed after keying the actual number to make a call.

### A.5 Configuring Telephone Settings (cont.)

OICE	CONTROL	DIALOUT CODES	
	DIAL	DUT CODE	
	SUFFIX CODE		

Figure 133: Prefix and Suffix Codes

### A.6 Configuring a User Account for Receiving Alarms

Follow the steps below to configure a user account to receive telephone notifications.

- **1.** Open the LabWatch LT application.
- 2. Click on the **Configurations** tab and then on the **Tag/Group Config** option. The Tag Configurator window (Figure 134 below) opens.



Figure 134: Tag Configurator Window

3. Select Modify Tag Groups and click OK.

### A.6 Configuring a User Account for Receiving Alarms (cont.)

4. The Assign Tags tab opens. Click on the Create Tag Groups tab. Then create a new group and assign the tags from the Available Tags list.

Kaye LabWatch LT	Configuration Wizard Sep 5 of 9				
REGISTRATION O CONFIGURE	ASSIGN TAGS	CATE TAG	O SCHEDULE	O NOTIFICATIONS	<b>O</b> HIVE W
REATE TAG GROUPS					
ep S: Tag Groups Can be Created, Modified	and Deleted.Tags can be assigned to Gro	ups.			
at or ray groups					
A AM					
Bettery					
AG GROUP NAME	AVAILABLE TAGS	SELECTED TAGS			
	T00002-Temperature				
AS GROUP DESCRIPTION	T00005-Temperature T00005-Temperature T00005-Temperature		10		
	100009-Keastve Humaty 100009-Temperature 100010-Auxiliary Input		-		
	T00011-Digitalinput T00013-Temperature T00014-Temperature				
544	T00015-Temperature T00016-Temperature T00017-Temperature				
			_	-	-
gged In User: w			EAL	PREVIOUS	NEXT

Figure 135: Creating a New Group with User

5. Click Next to enter the Assign Users tab. Then select the user for the group.

Kaye LabWatch LT						Configuration	Sep 6 01 9
	O A55	DEN TAGS	CONFIGURE TAGS		O SCHEDART	O MOTIFICATIONS	
ASSIGN USERS TO TAG GROUPS tep 6: Users who are responsible for '	FagGroups	can be as	usigned or removed	ı.			
List Of Tag Groups							
Bettery Group1			197 Ja 198				
AVAILABLE USERS @ADD USER		ASSERN	rd users	_			
	18	•	watro				
	1						
	1						

Figure 136: Assign Users Tab

6. Click **Next** to proceed to the **Define Schedules** tab. Create the Schedule as needed that will be assigned to the user in the next step.

### A.6 Configuring a User Account for Receiving Alarms (cont.)

REGISTRATION	CONFEGURE RASESTATIONS	ASSIGN TAGS	O TAUS	O GROUPS	C LIGERS	SCHEDULE	O NOTIFICATIONS	O REVIEW
EFINE SCHEDU	n.r					6 S		
ep 7: Schedules (	or the Users of Labw	(SE) NEW SC	HEDULE	Colorador (		2 🕄		_
YCHEDIAE NAME S1			ENTER SCHE START TI ENDTIM	IDULE 00:00:00			Y THURDAY FRIDAY S	ATURDAY SUHDA
					N / [] FREDAY [] SATURE INCEL	DAY SUNDAY		
			HEW .					

Figure 137: Define Schedules Tab

- 7. Click Next to enter the Define Alarm Notifications tab.
  - a. Select Group.
  - b. Select Group User.
  - c. Select Schedule for the User.
  - **d.** Select the notification type as needed.

A an	CONFILURE.	A contract to the	CONFIGNE	CREATE THE	ASSIGN GROUP	CEFINE	DEPENE ALAIDE	A
A RECEIVATION	BASESTATIONS	O ASSIGN TADS	O THES	S CHOOPS	QUSERS	SCHEDULE	NOTEFICATIONS	OWNER
tep 8: Define Alarm Not	IFICATIONS obfications for the	schedules,						
List Of Tag Groups								
-								
•	•							
Battery	Group1							
WLICTED USERS		SCHEDU	LE DETAILS					
SELECTED UNITES		SCHIDU SD	ALE DETAILS	51	ART TIME	ENDTIME		
SELECTED USERS		SONDA SA	ECT NAME	ទា	ART TIME	ENDTONE		
SELECTED USERS		SCHOK BR	AE DETAILS	5	ART TIME	ENOTIME		
SELECTIO LINERS			ALE DITAILS	ព	ART TIME	BATTER		
NULCTIO UNINS			ALE DETABLA	ទា	ART TIME	ENDYDAE		

Figure 138: Define Alarm Notifications

**8.** Click **Next** to enter the Review tab and click **Finish** to close the Tag Configurator and return to LabWatch LT.

### A.7 Telephone Alarm Notification Process

#### A.7.1 Steps in a Call

- 1. A user receives the call, but must enter the 4-digit access code.
- **2.** The user enters the access code; if the access code is not valid, the telephone system tries three (3) times and then disconnects.
- **3.** If the access code is valid, the message covers alarms for Tags for which the user is responsible. A user can request message replay.
- 4. The system asks for an acknowledgement code.
- 5. If the acknowledgement code is invalid, the call is disconnected. If the acknowledgement code is correct, the user acknowledges all alarms, and confirms.
- 6. The call ends.

#### A.7.2 The Telephone Notification Process

- Users assigned to a group will have priority and will be notified based on their priority.
- Users will also have schedule defined and, within that schedule, only the user will be notified.
- If user1 is unable to take the call, the system will try three times.
- If the system cannot connect after 3 retries, the call will go to next user in priority list.
- This cycle will repeat until any one of the users acknowledges the alarms.
- Each user will have only one number.
- If any user of the group acknowledges the call, the system will stop calling, and the next user in the priority list will not receive a call.

[no content intended for this page - proceed to next page]

## Appendix B. Configuring Email Notifications

This appendix defines the steps needed to configure the LabWatch Email Service. Topics covered include:

- Configuring Email Settings
- Configuring User account for receiving Alarm

### **B.1 Requirements**

- LabWatch LT is installed and configured.
- Email account with IMAP and SMTP support.
- Required IMAP and SMTP port should not be blocked.
- Required IMAP and SMTP server should not be blocked.
## **B.2 Configuring Email Settings**

To configure your email settings, follow the steps below:

1. Click the **Configuration** tab and click the **Email Configuration** option.



Figure 139: Email Configuration Option

**2.** On the Email Server tab, set Outgoing and Incoming mail server details for the Mail server.

EMAIL SERVER	AUTHENTICATION	MESSAGE FORMAT
OUTGO	DING MAIL SERVER	INCOMING MAIL SERVER
MTP SERVER NAME MTP PORT NUMBER OURCE EMAIL ADDRESS JUBJECT	25 25 BY DEFAULT LabWatchLite Alarm Notificatio	IMAP SERVER NAME IMAP PORT NUMBER 143 143 BY DEFAULT
* Check this Ontion on	v if Connection requires SSL For Example	Use SSL*

Figure 140: Email Server Tab

# B.2 Configuring Email Settings (cont.)

3. Select the Authentication tab and provide the email account credentials.

	TION		28
EMAIL SERVER	AUTHENTICATION	MESSAGE FORMAT	
	EMAIL	ACCOUNT	
	LOGIN NAME		
	ОК	CANCEL	

Figure 141: Authentication Tab

# **B.3** Configuring the User Account for Receiving Alarms

Follow the steps below to configure a user account for receiving an email notification.

- **1.** Open the LabWatch LT application.
- **2.** Click on the **Configurations** tab and then on the **Tag/Group Config** option. The Tag Configurator window (Figure 142 below) opens.



Figure 142: Tag Configurator Window

3. Select Modify Tag Groups and click OK.

# B.3 Configuring a User Account for Receiving Alarms (cont.)

4. The Assign Tags tab opens. Click on the Create Tag Groups tab. Then create a new group and assign the tags from the Available Tags list.

TAGS	REATE TAG	6 ASSIGN GROUP USERS	O DEFINE SCHEDULE	B DEFINE ALARM NOTIFICATIONS	
igs can be assigned to Gri	oups.				
AILABLE TAGS		SELECTED TAGS			
002-Temperature 003-Temperature 005-Temperature 006-Temperature 008-Relative Humidity 009-Temperature					
1003-Auxiliary Input 1001-20jgitalInput 1013-Temperature 1014-Temperature 1015-Temperature 1016-Temperature	•		D		
	gs can be assigned to Gr NLABLE TACS 002-Temperature 004-Temperature 004-Temperature 005-Temperature 005-Temperature 005-Temperature 005-Temperature 005-Temperature 015-Temperature 015-Temperature 015-Temperature	gs can be assigned to Groups.	gs can be assigned to Groups.	gs can be assigned to Groups.	ps can be assigned to Groups.

Figure 143: Creating a New Group with User

5. Click Next to enter the Assign Users tab. Then select the user for the group.

) Kaye LabWatch E	r			-		Conngurate	Shep 6 Of 9
	NFIGURE	Acceleration		O GROUPS	O SCHEDULE	O DEFINE ALARH NOTIFICATIONS	O REVIEW
SSIGN USERS TO TAG	GROUPS onsible for T	agGroups ca	an be assigned or remove	d.			
List Of Tag Groups							
Battery Gro	upl						
AVAILABLE USERS	@ADD USER		ASSEGNED USERS				
Administrator			a ingid				
		di da		2			

Figure 144: Assign Users Tab

# B.3 Configuring a User Account for Receiving Alarms (cont.)

6. Click **Next** to proceed to the **Define Schedules** tab. Create the Schedule as needed that will be assigned to the user in the next step.

EFINE SCHEDULE		A Contraction of the contraction
tp 71 Schedules for the Users	(2 Stational and a schedule	
1	а вития Конерда зтакт тике внорток Вородов	X X V V
	SCHEDULE REPEAT	
	CANCEL	J
	HEW	

Figure 145: Define Schedules Tab

- 7. Click Next to enter the Define Alarm Notifications tab.
  - a. Select Group.
  - b. Select Group User.
  - c. Select Schedule for the User.
  - **d.** Select the notification type as needed.



Figure 146: Define Alarm Notifications

**8.** Click **Next** to enter the Review tab and click **Finish** to close the Tag Configurator and return to LabWatch LT.

# Appendix C. Battery Count Reset

# C.1 Logger Battery Change and Battery Count Reset

Please follow the steps below to reset the battery count of a logger after batteries are changed:

- 1. Power off the logger and change the battery.
- 2. While holding the **Status** button, power on the logger.
- **3.** While holding the **Status** button, wait 15 seconds.
- 4. Five (5) blinks on the Power light will confirm the battery reset.
- 5. Release the **Status** button.

[no content intended for this page - proceed to next page]

# Appendix D. Glossary

Alarm Acknowledgement: If a user acknowledges an alarm, there are two possible changes in the system.

- 1. If the alarm is acknowledged, the value stabilizes to an OK state, then the alarm is cleared from the Alarm Tab. Also, the flashing of the alarm for the tag stops at the monitoring screen.
- 2. If the alarm is acknowledged, the value does not reach an OK state (still retains in an alarm condition), then the flashing of the alarm is stopped, but the alarm state is still retained. Usually the alarm state at Alarm tab and at the monitoring screen refreshes every minute.

Alarm Delay: Along with values, users can set a delay period for an alarm (in hours, minutes and seconds, up to 23 hours, 59 minutes and 59 seconds), before triggering an alarm on the screen

**Comm Alarms:** Comm alarm indicates loss of communication with a particular tag. It may be because of several reasons; for example, the RF logger is out of range and not able to communicate with the system, or there is a loose sensor in the logger.

# **IMPORTANT:** Open Circuit, Over Range and Under Range alarms are all reported under Comm alarms in LabWatch LT.

**Hi and HiHi Alarms**: Two high alarms, HI and HIHI, create an alarm on the screen that appears in the audit trail, if a value rises above the preset value. Since they are independent limits, a user has two different thresholds for alarming. (Typically, the HIHI value is set higher than the HI value to indicate that a condition has become worse.) User can apply any one condition or combination of alarm limits.

**Lo and LoLo Alarms**: Two low alarms, LO and LOLO, create an alarm on the screen that appears in the audit trail if a value drops below the preset value. Since they are independent limits, a user has two different thresholds for alarming. (Typically, the LOLO value is set lower than the LO value to indicate that a condition has become worse. For certain input types, (i.e., 4-20 mA), the limit may also indicate an open circuit alarm.

Example: If the Hi alarm limit is set at 20.1°C for a tag, the alarm triggers as soon as value of the tag crosses 20.1°C.

# **IMPORTANT:** LabWatch LT requires the tag alarm state to clear before it institutes a new alarm delay. If the alarm delay has been set, changing the delay will not go into effect until that alarm clears.

**Open Circuit:** Open Circuit means there is no sensor present or the sensor is broken.

**Open/Close, On/Off and 1/0:** For Digital tags (Contact switches), an open condition can be represented by Open, On or 1 and close condition can be represented by Close, Off or 0.

**RSSI**: RSSI is an abbreviation of Received Signal Strength Indicator. It's a measurement of the power present in a received radio signal. It tells the user how good or bad the RF signal is.

RSSI >-60 Connection Strength is considered good; -70 < and <-60 as OK; and <-70 is considered Bad

**Under Range and Over Range**: For 0-10v auxiliary input, any value less than 0 is Under Range and any value greater than 10 is Over Range. Similarly for 4-20mA auxiliary input, any value less than 4 is Under Range and any value greater than 20 is Over Range.

**IMPORTANT:** Open Circuit, Over Range and Under Range alarms are all reported under Comm alarms in LabWatch LT.

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