



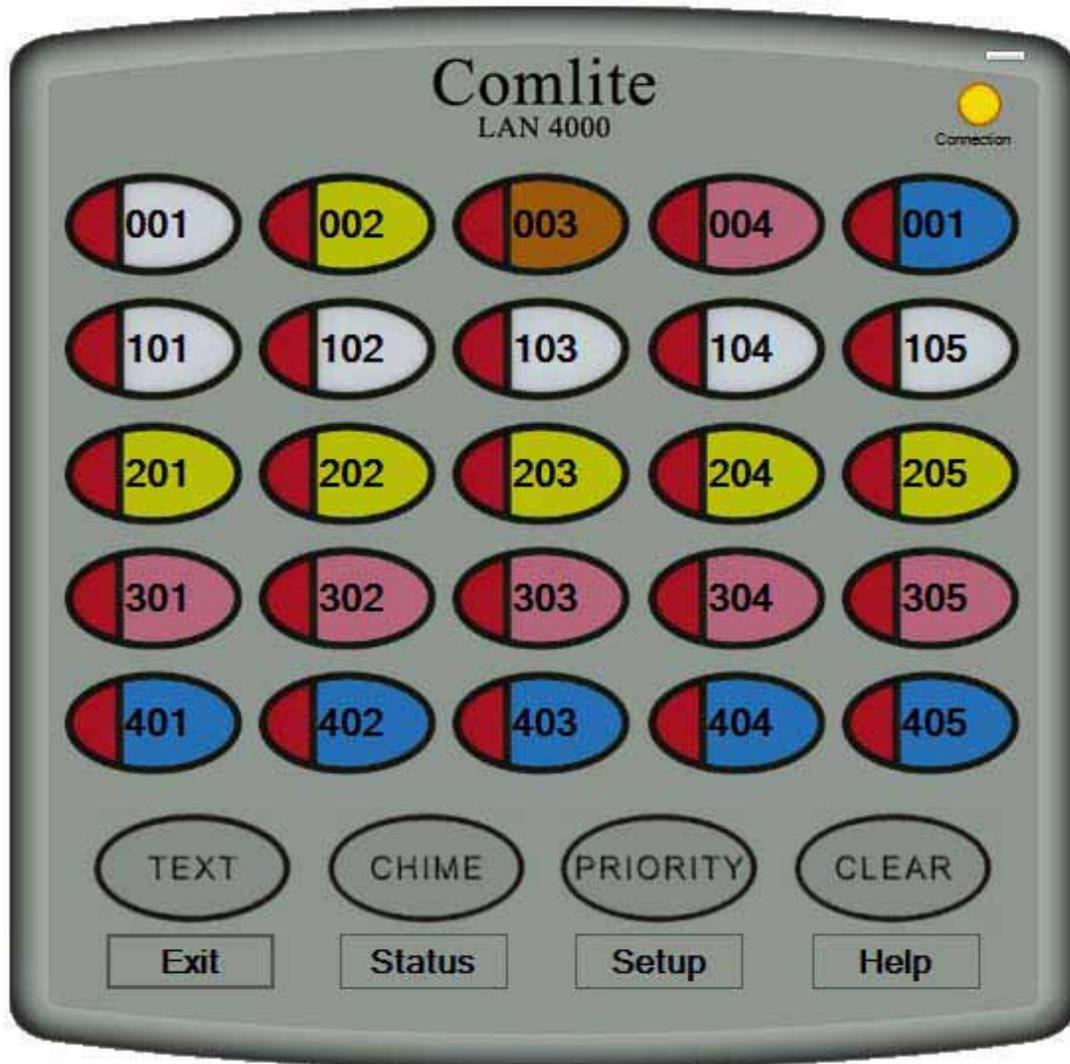
# LAN4000 User Guide

## Table of Contents

<b>The Comlite LAN4000</b>	<b>2</b>
<b>Buttons</b>	<b>5</b>
<b>Controls</b>	<b>8</b>
<b>Setup</b>	<b>10</b>
<b>Client Station Setup</b>	<b>13</b>
<b>Administrative Station Setup</b>	<b>16</b>
<b>Example Setups</b>	<b>25</b>
<b>Dental Office</b>	<b>25</b>
<b>Medical Office</b>	<b>28</b>
<b>Optometry/Ophthalmology Office</b>	<b>32</b>
<b>Troubleshooting</b>	<b>36</b>
<b>Networking</b>	<b>37</b>

## LAN4000 System Overview

The LAN4000 is designed to allow custom configuration of button functions and appearance to reflect your office layout and staff makeup. This is accomplished via the user-defined standalone and sequence buttons that comprise the LAN4000 system.

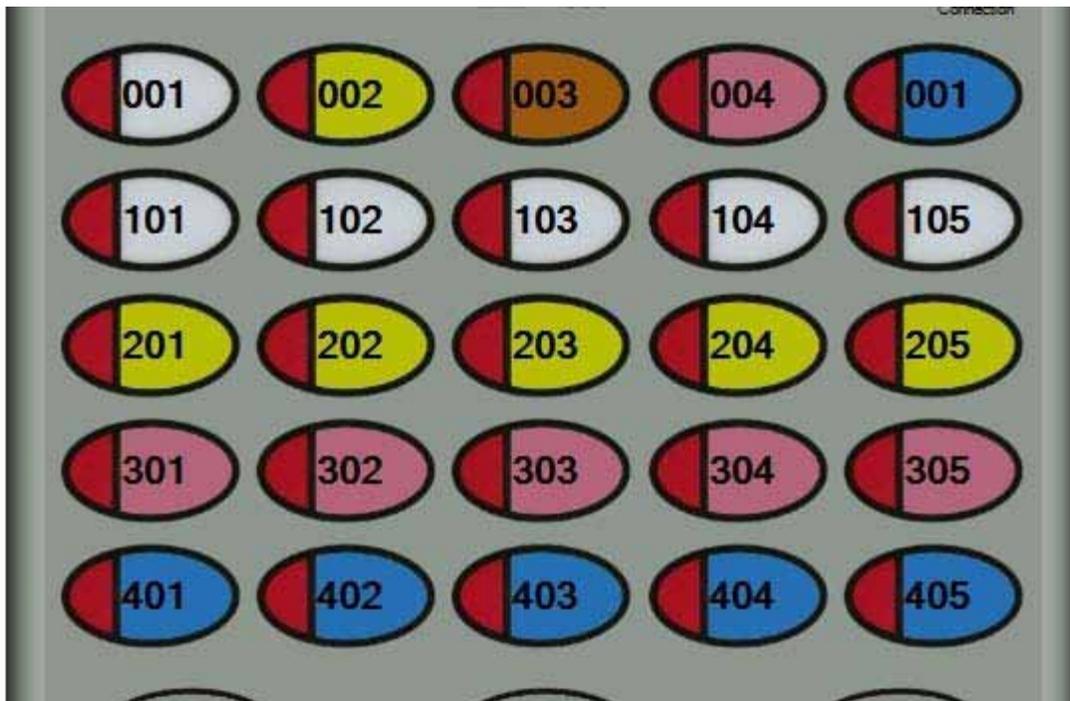


## Screen Layout

The LAN4000 screen consists of three main areas: **Primary** Buttons, **Control** Buttons, and **Application** Buttons

### Primary Buttons

The primary buttons are the oval buttons with red indicators. The red indicators can be off, on, or flashing. There are two types of primary buttons: standalone and sequence.



### Standalone buttons

A standalone button is a button that is not part of a sequence. When pressed once, a standalone button lights and stays lit. When pressed a second time, the button flashes. When pressed a third time, the button turns itself off.

### Sequence buttons

The LAN4000 can have up to five sequences. These sequences are defined on the Server station. (Refer to the **Setup** section for instructions for defining sequences.) The first button press in a sequence causes the button to flash. Subsequent button presses on the rest of the buttons in the sequence light the particular buttons. Press the flashing sequence button to turn it off and the next button in the sequence will begin flashing.

**NOTE:** Right-click on any button in a sequence to move that button to "next in line" in the sequence. A chime will play when this occurs. When the current flashing button is pressed, this button will flash next.

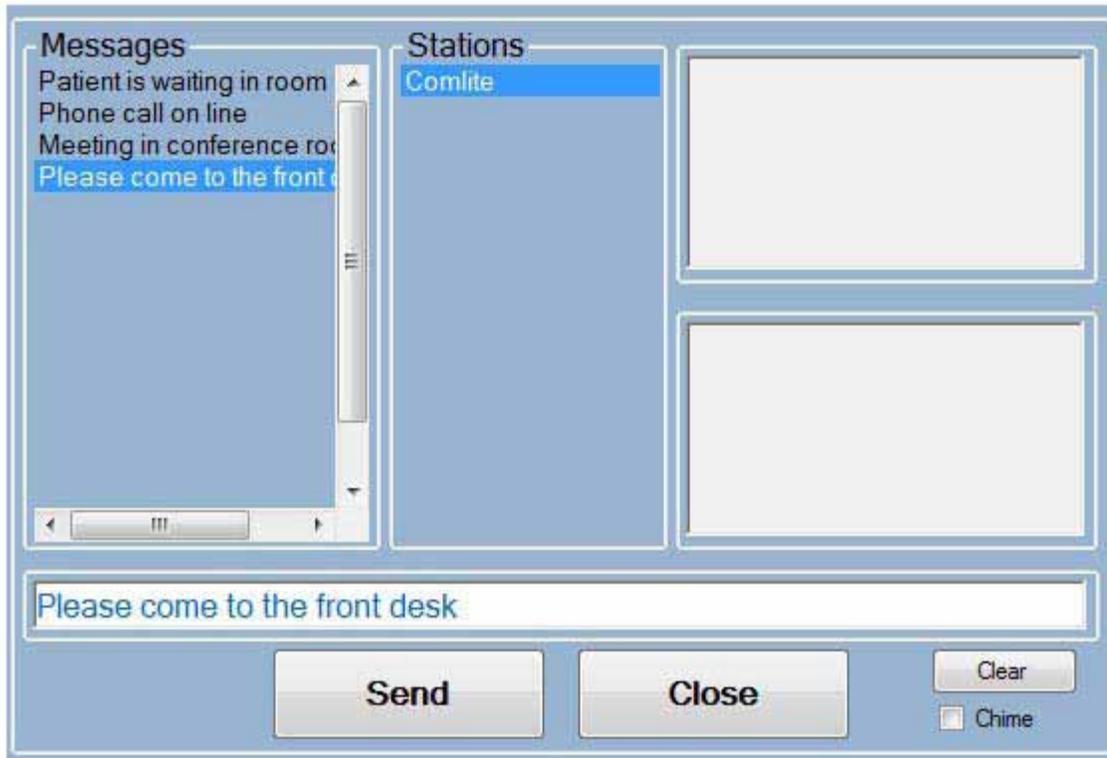
### Control Buttons

The Control buttons are **Text**, **Chime**, **Priority**, and **Clear**.



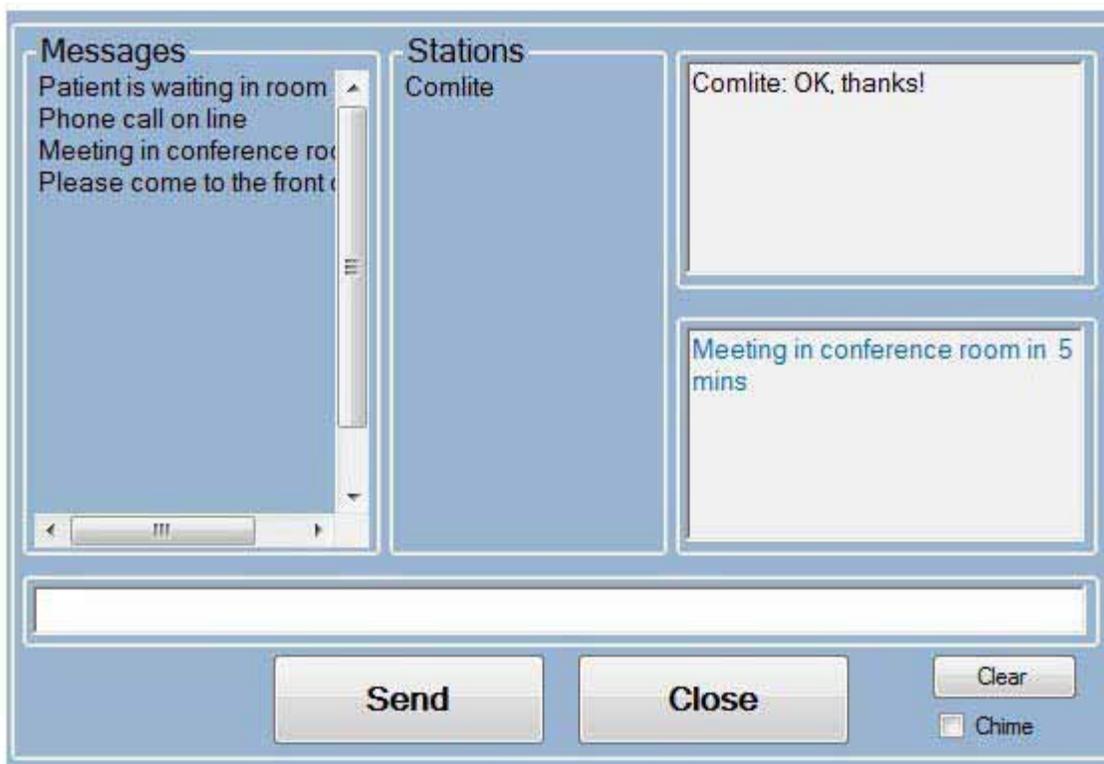
### Text

Press **Text** to send a text message to any or all other stations connected to the station.



The text messaging screen contains a predefined Message field; a Stations field, plus fields for sent and received data. The bottom field is for entering text. Selected predefined messages are also placed in the field.

To send a message, select a predefined message (or type in your own - or both). Then select a Station or multiple stations to send to. To select multiple stations, select a station and drag your mouse or click on the individual stations. Press **Send**. The sent text will appear in the bottom field on the right. When a message is received by a station, this screen will pop up with the received text in the top field.



## Chime

Press the **Chime** button followed by any primary button. This will cause the chime (if one has been assigned) for that button to sound one time on all stations. This does not affect the status of the button. For example, if it is blinking, it will remain blinking.

## Priority

A single primary button can be defined as the **Priority** button. The Priority button is typically used to identify the local station and will alert the other stations of an emergency at the local station. (For example; If button 101 is the button that identifies the local station you would select Priority and then select button 101. Each station's Priority button is defined in **Setup**)

Pressing the **Priority** button places all stations into "priority mode"; clears the display; and then flashes the defined primary button. The flash rate is twice the normal rate and all other stations continuously play the chime defined for that button. Each station can define its own distinct priority button. Unless defined otherwise, the default chime for the priority button is Chime 1.

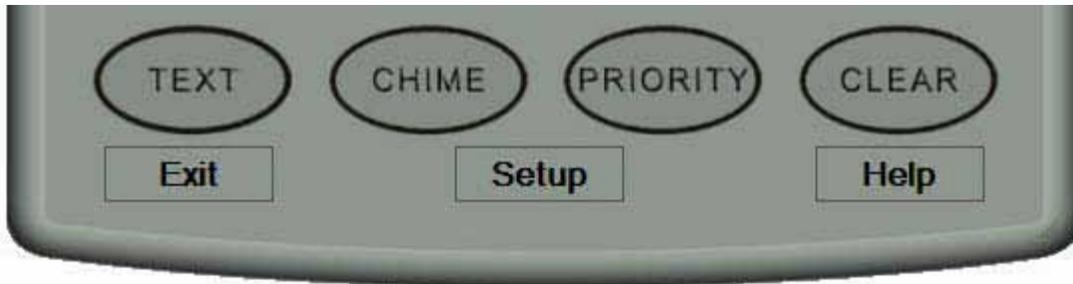
## Clear

The **Clear** button has two uses in the LAN4000. If the system is in "priority mode", it reverses the action of the **Priority** button. It turns off the defined priority button and redisplay the button sequence that was active before the **Priority** button was pressed. If the system is not in "priority mode", pressing the button will clear all standalone buttons.

**NOTE:** On the LAN4000 Administrative Station only, pressing the **Control Key + Clear** will clear ALL lit or blinking buttons.

## Application Buttons

The LAN4000 Client has three rectangular buttons underneath the Control Buttons. The LAN4000 Administrative Station has four.



## **Exit**

The **Exit** button ends the LAN4000 program. Exiting a client disconnects that Client Station from the Administrative Station. Exiting the Administrative Station disconnects all clients.

## **Status**

LAN4000 Administrative Station only. This button displays the Status screen. Refer to the Status screen page for more information.

## **Setup**

The **Setup** button displays the Setup Screen which allows you to configure your LAN4000 network and individual client stations. Refer to the Setup screen page for more information.

## **Help**

Displays this help.

Other controls on the main page are:



## **Connection**

On the LAN4000 Administrative Station, the yellow indicator is on when there is a network connection. On the Client Station, it is on when there is a server present somewhere on the network. The indicator is also a connection button. If the indicator is off, press it to try to reconnect to the server.

## **Minimize**

Press the bar in the upper right corner to minimize the LAN4000 to the task bar.

## **Screen Size**

Select the lower right corner and drag the screen to change the size of the Comlite display. The cursor will change to an arrow when over the selection area.

## About Box

Displays LAN4000 version and licensing information; configures the updater; creates and submits problem reports, and accesses log files.

To launch the About Box, click on "Comlite":



The About Box display is as follows:

The image is a screenshot of the Comlite LAN4000 About Box dialog box. The title bar reads "Comlite LAN4000 Version 1.3". The dialog box is divided into several sections. The top section displays the license information: "License: ABCDEF-GHIJ-KLM", "Registration Date: 4/12/2012", and "Maintenance Plan Ends: 03/13/2013". Below this, there are two sections of buttons. The "Support:" section contains "Report Problem" and "Select Log File" buttons. The "Updates:" section contains "Check for Update" and "Configure Updater" buttons. At the bottom center, there is an "OK" button.

The **Version** is the version installed on your PC. The **License** field displays your license number If you have licensed your LAN4000. The **Registration Date** is the date you licensed this copy of the LAN4000 software. The **Maintenance Plan Ends** field is the date your maintenance plan expires.

**Note:** During the evaluation period, the **License** field is replaced with a button to enter a license and the **Maintenance Plan Ends** field is replaced with **Evaluation Ends**.

## Support

Licensed software that is within the maintenance plan period has the capability to report a problem directly to Comlite Systems. Press Report Problem to display the screen below:

**License:** ABCDEF-GHIJ-KLM

**Name:**

**Phone:**

**Email:**

**Brief Description of Problem:**

Note: Have you checked your firewall rules? Almost every button delay or drop problem is the result of a firewall. To access our online support page, click [here](#)

OK Cancel

Enter your name, phone number, and email address along with a brief description of the problem you are having. Press OK to send the report to Comlite Systems. You will receive an email confirmation once the report is received by Comlite Systems.

**Note:** This feature requires an Internet connection.

The **Updates** section is for checking for updates and configuring the frequency of the update check.

## LAN4000 Button Overview

There are two types of buttons:

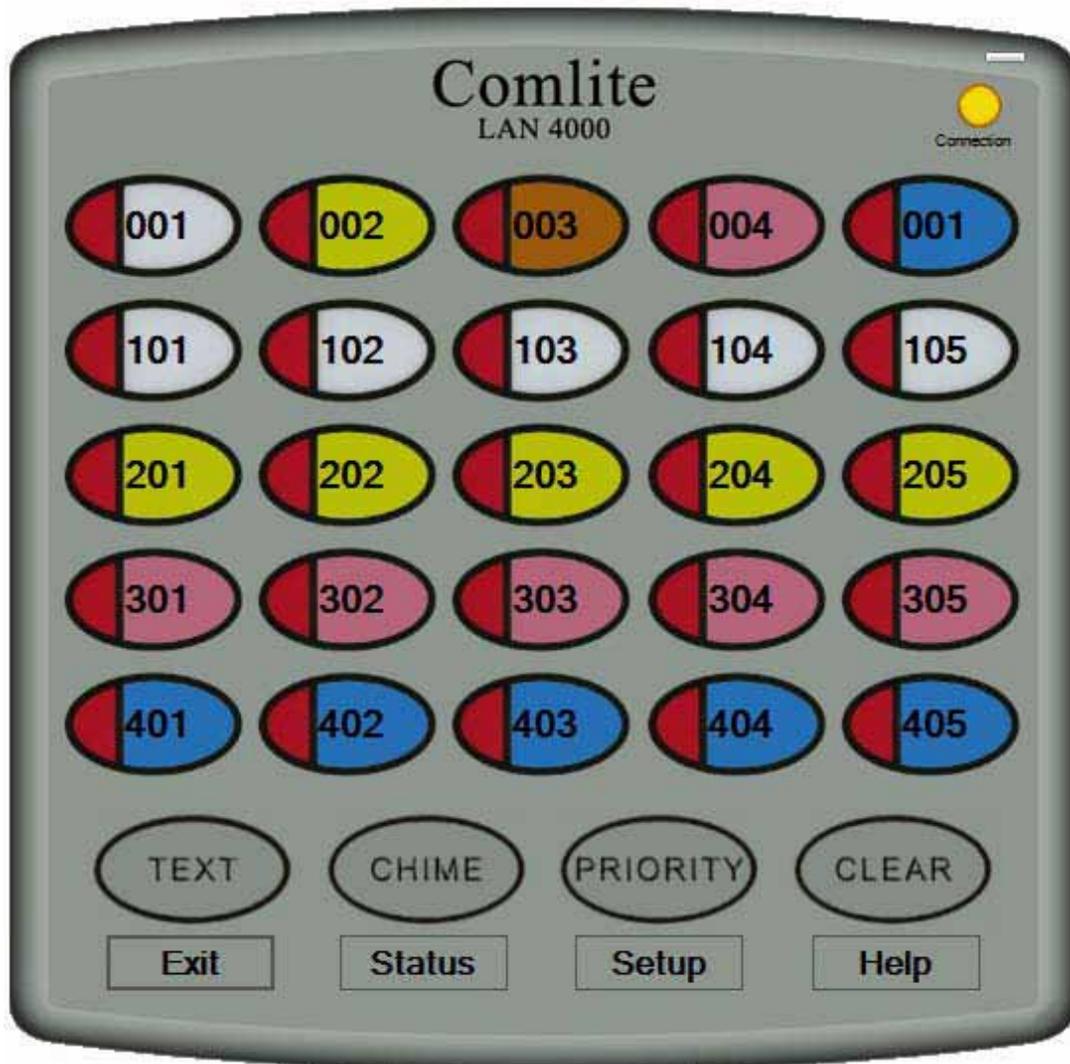
### Standalone buttons

A standalone button is a button that is not part of a sequence. When pressed once, a standalone button lights and stays lit. When pressed a second time, the button flashes. When pressed a third time, the button turns itself off. These are useful for paging and for indicating patient, waiting room, exam room or other status, phone calls, messages, etc.

### Sequence buttons

Sequence buttons flash in the order in which the sequence was created. They are useful for "where to go next" scenarios.

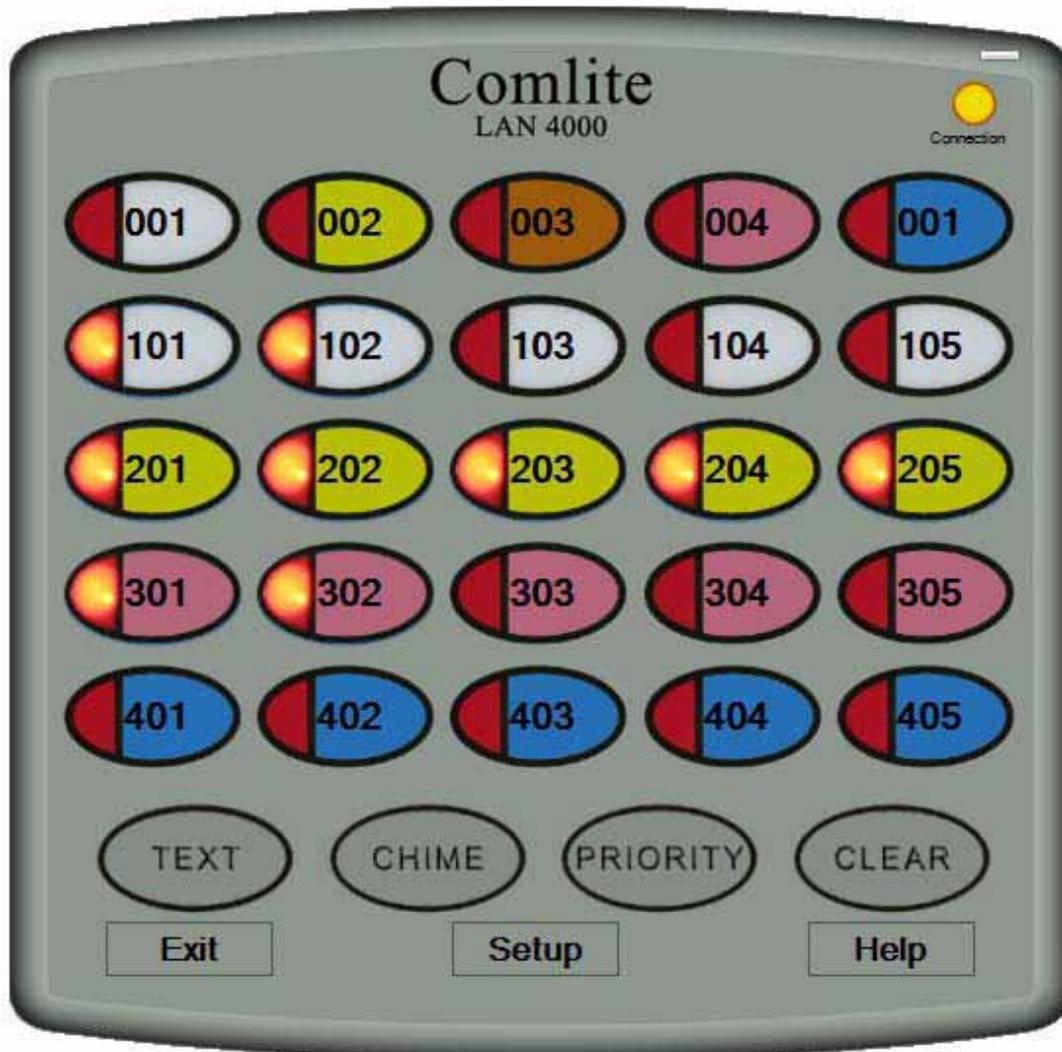
For this example, assume sequence 1 is defined as the entire 2nd row; sequence 2 is defined as the entire third row; and sequence three is defined to be the entire fourth row.



Pressing 101 causes it to flash. Pressing 201 causes it to flash. Pressing 301 also causes it to flash. Three sequences have been started. (The LAN4000 can have up to five sequences. Refer to the Setup section for instructions for defining sequences.) Pressing 102 causes it to light (but not flash).

Pressing 201, 202, 203, 204, 205, and 302 also cause them to light (but not flash).

The first button press in a sequence flashes. Subsequent button presses on the rest of the buttons in the sequence only lights the buttons, but does not flash them.

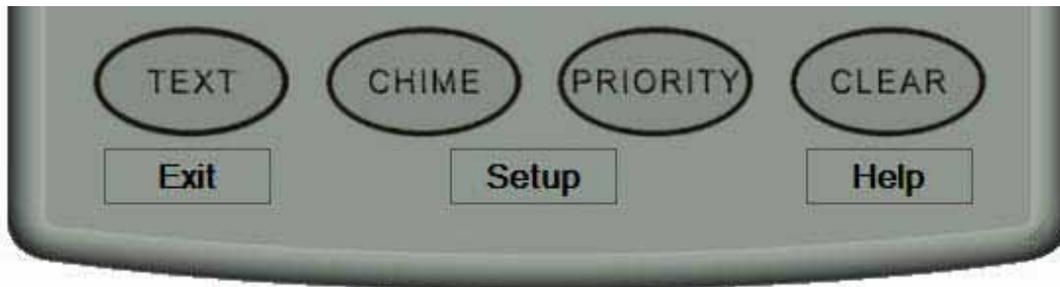


Press the flashing sequence button to turn it off and the next button in the sequence will begin flashing. Pressing 101 will cause 102 to start flashing. Pressing 201 will cause 202 to start flashing. Pressing 301 will cause 302 to start flashing.

### Sequence 'bumping'

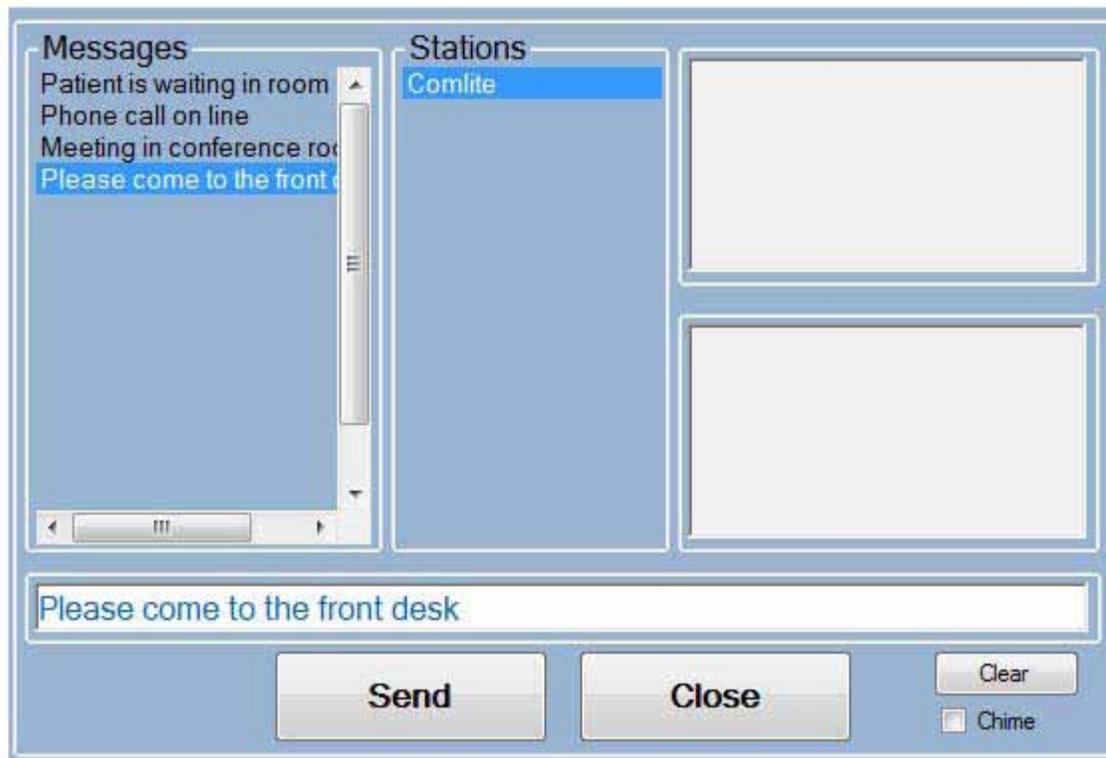
Right-click on any sequenced (lit, non-flashing) button in a sequence to move that button to "next in line" in the sequence. A chime will play when this occurs. When the current flashing button is pressed, this button will flash next.

## Main Screen Controls



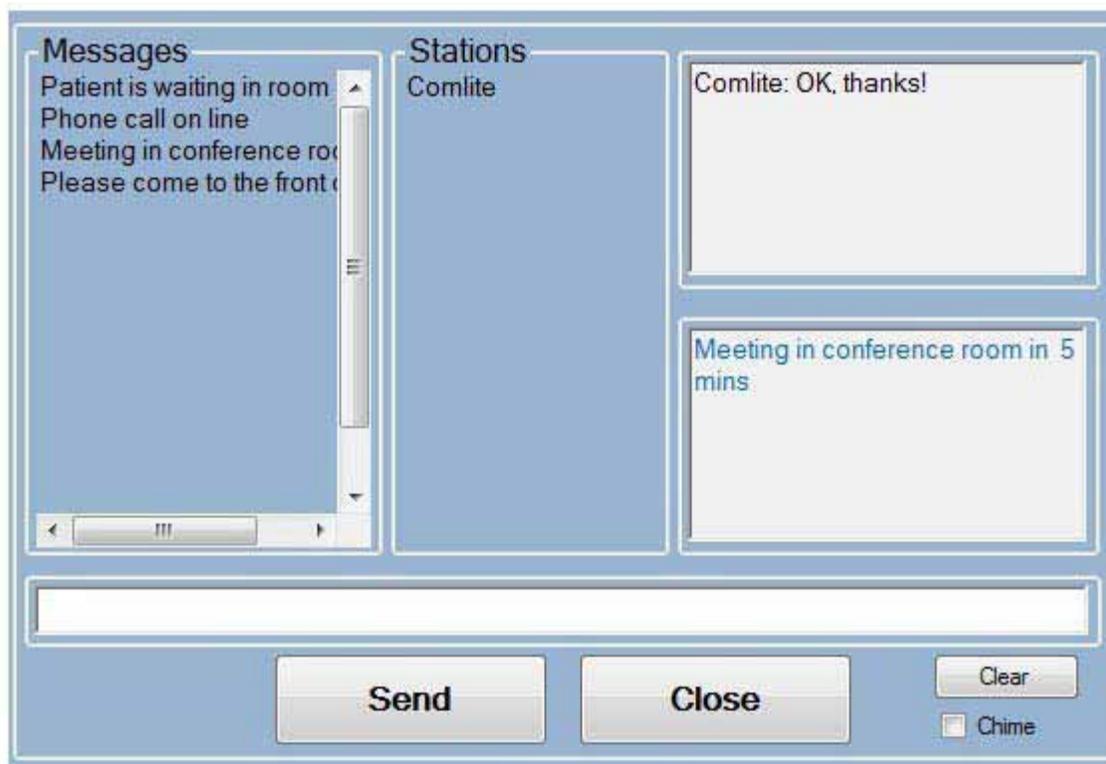
### Text

Press **Text** to send a text message to any or all other stations connected to the station.



The text messaging screen contains a predefined Message field; a Stations field, plus fields for sent and received data. The bottom field is for entering text. Selected predefined messages are also placed in the field.

To send a message, select a predefined message (or type in your own - or both). Then select a Station or multiple stations to send to. To select multiple stations, select a station and drag your mouse or click on the individual stations. Press **Send**. The sent text will appear in the bottom field on the right. When a message is received by a station, this screen will pop up with the received text in the top field.



## Chime

The **Chime** button is for repeating a chime on a particular button. Press the **Chime** key and then press one of the LAN4000 buttons. If a chime has been defined for that button, it will chime on all stations. This will not affect the status of the button. For example, if it is blinking, it will remain blinking.

## Priority

Press the **Priority** button to turn off the current button display and switch to the 'priority mode' display for this unit. Each unit may have a unique priority defined. An error message is displayed if no priority button has been selected.

## Clear

If Comlite is in 'priority mode', press the **Clear** button to switch back to the normal button display. If Comlite is in normal mode, all lit or blinking non-sequenced buttons are cleared.

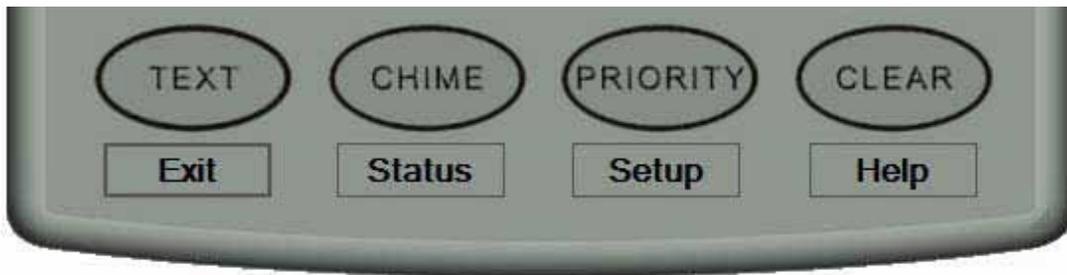
**NOTE:** Press **Ctl-Clear** (on the LAN4000 Server only) to clear all of the buttons on all of the connected LAN4000 units.

## Other buttons:

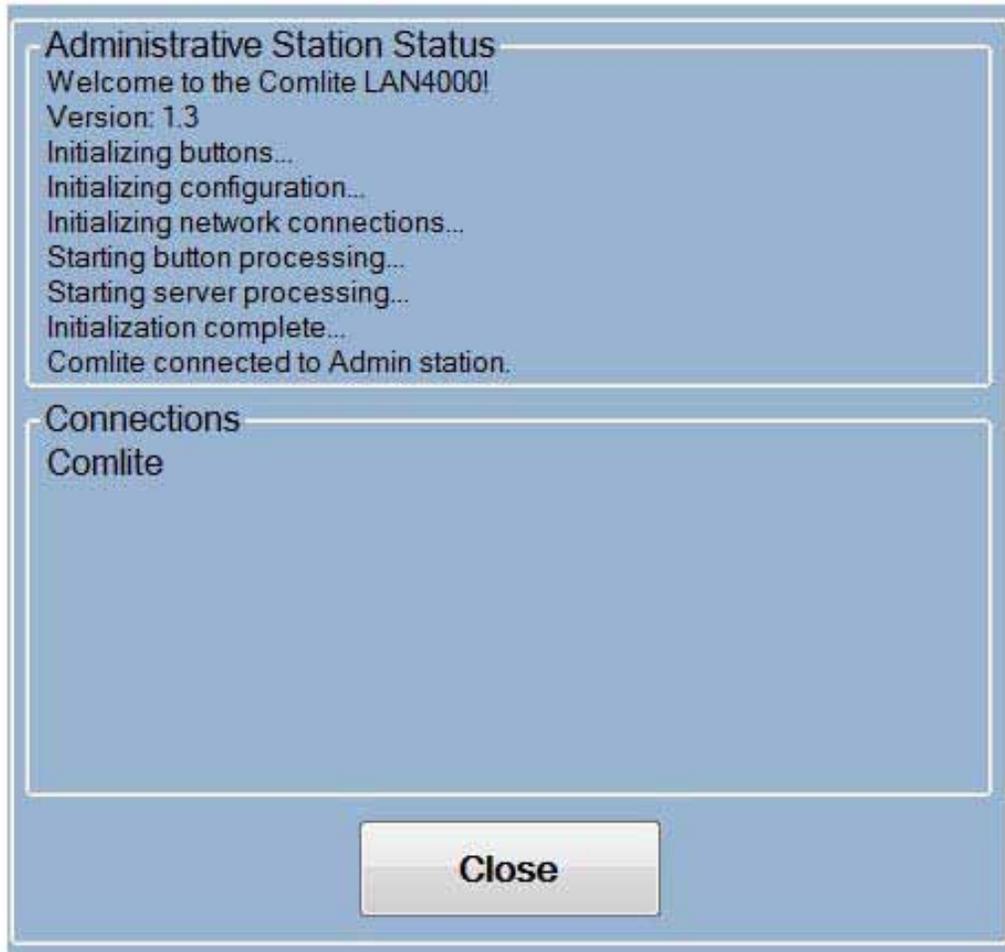
**Exit** - Ends the LAN4000 program. Exiting the server will cause all of the LAN4000 clients to disconnect.

**Setup** - Launches the Setup page

**Help** - Launches this help system



**Status** - LAN4000 Administrative station only - Displays the connection and button status for the LAN4000 system. Admin station-related information is displayed in the **Administration Station Status** area. Connection information is displayed in the **Connections** area.



**Minimize** - Press the bar on the upper right corner to minimize the screen.



### Screen Size

Select the lower right corner and drag the screen to change the size of the Comlite display. The cursor

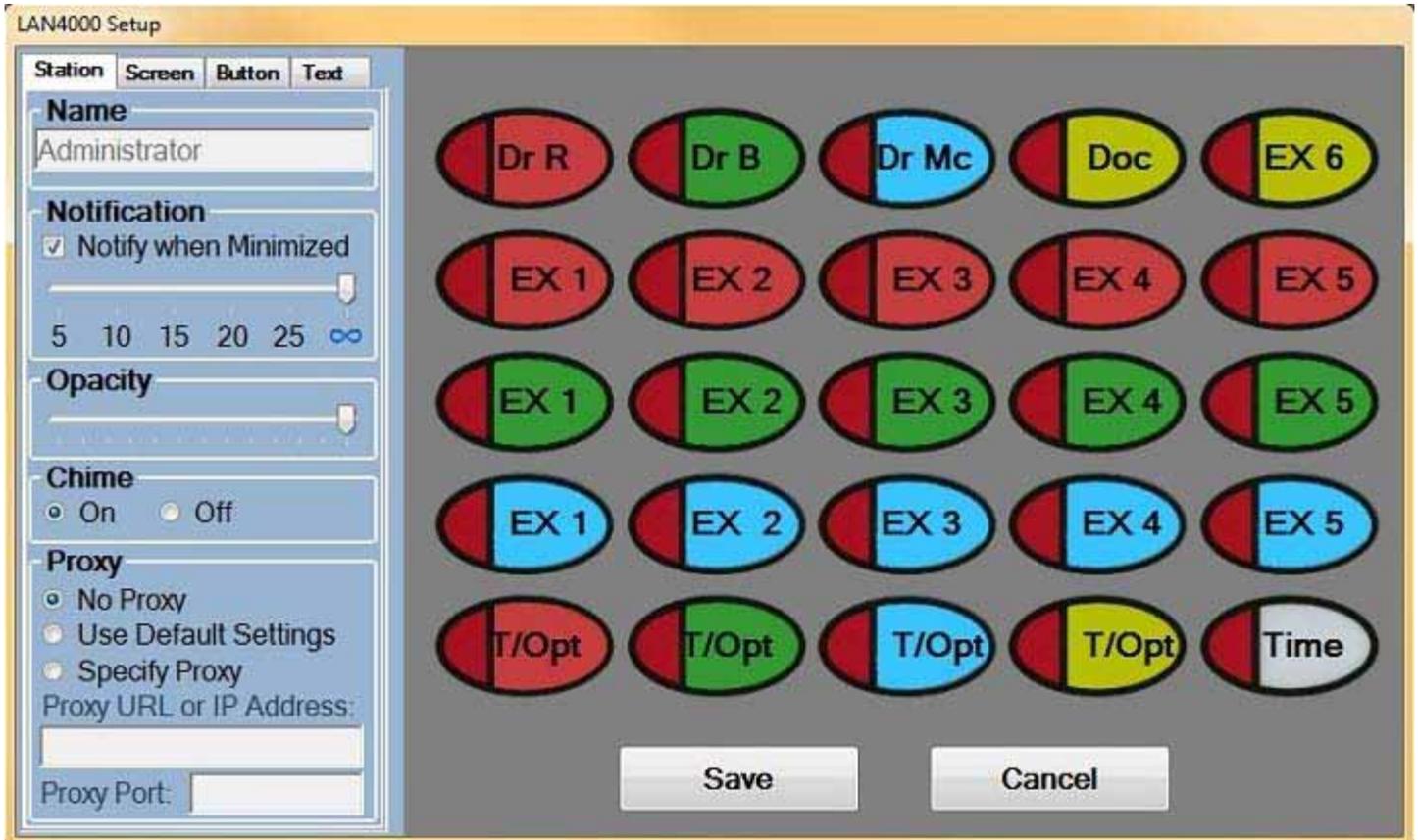
will change to an arrow when over the selection area.

## Setup Overview

### Server Setup

The Server Setup screen consists of four tabs arranged by functionality: **Station**, **Screen**, **Button**, and **Text**.

The first tab, **Station**, defines the station name, notification, opacity, local chime, and proxy settings. The **Screen** tab defines the priority status, screen layout, sequencing configuration, chime configuration and chime sounds, and timed button configuration. The third tab (**Button**) allows you to name (label), color and describe the buttons. The Text tab is for defining text messages that you can select and then send to others from the text message dialog.



## Station

### Name

Each LAN4000 station should have a unique name. The default is "Comlite" for the Client and "Administrator" for the Administrative Station. The Administrative Station name cannot be changed and "Administrator" should not be used as a Client station name.

### Notification

The LAN4000 can be minimized to the taskbar by pressing the minimize button in the upper right corner of the main screen. Once minimized, it can display temporarily if a button is pressed on another station. When **Notify when Minimized** is checked, the LAN4000 will display for the number of seconds specified by the slider - from 5 seconds up to 30 seconds.

### Opacity

Set the opacity of the LAN4000 main screen by sliding the bar to the left or right. The leftmost setting is the most translucent.

## Proxy

The LAN4000 can be configured to use a network proxy server. If your network uses a proxy server to filter Internet connections, select either **Use Default Settings** or **Specify Proxy**. Basically, select the entry that matches how your browser locates a proxy server on your network.

## Screen

### Priority

A single primary button can be defined as the **Priority** button. Pressing the **Priority** button places all stations into "priority mode" and suspends the current sequence programming, clears the display, and then flashes the defined primary button. The flash rate is twice the normal rate and all other stations continuously play the chime defined for that button. Each station can define its own distinct priority button.

**Note:** The chime for each button, including the Priority button, is defined by selecting the chime number (in the "Chimes" section of the Screen Properties) and then selecting the button.

### Layout

There are five possible layouts that are described by the number of rows and columns of buttons the LAN4000 displays.

They are: 3 x 3, 3 x 4, 4 x 4, 4 x 5, and 5 x 5.

### Sequencing

There are five possible sequences that can be assigned to a button. To define a button sequence, select the sequence number and then choose the buttons you want in that sequence.

### Chimes

There are five possible chimes that can be assigned to a button. To select a chime for a button, select the chime number and then choose the button you want to have assigned that chime.

### Timed

A timed button is a non-sequenced button that, when pressed (after saving it as a timed button in **Setup**), displays a prompt for a countdown timer. Select the time and press **OK** to start the timer on that button. When the timer reaches zero, the chime defined for that button sounds.

## Button

### Name

Each button can have a name up to 5 characters in length.

### Description/Hint/Help

Each button can have a tooltip text that appears over the button when the mouse is hovered over a

button.

## Color

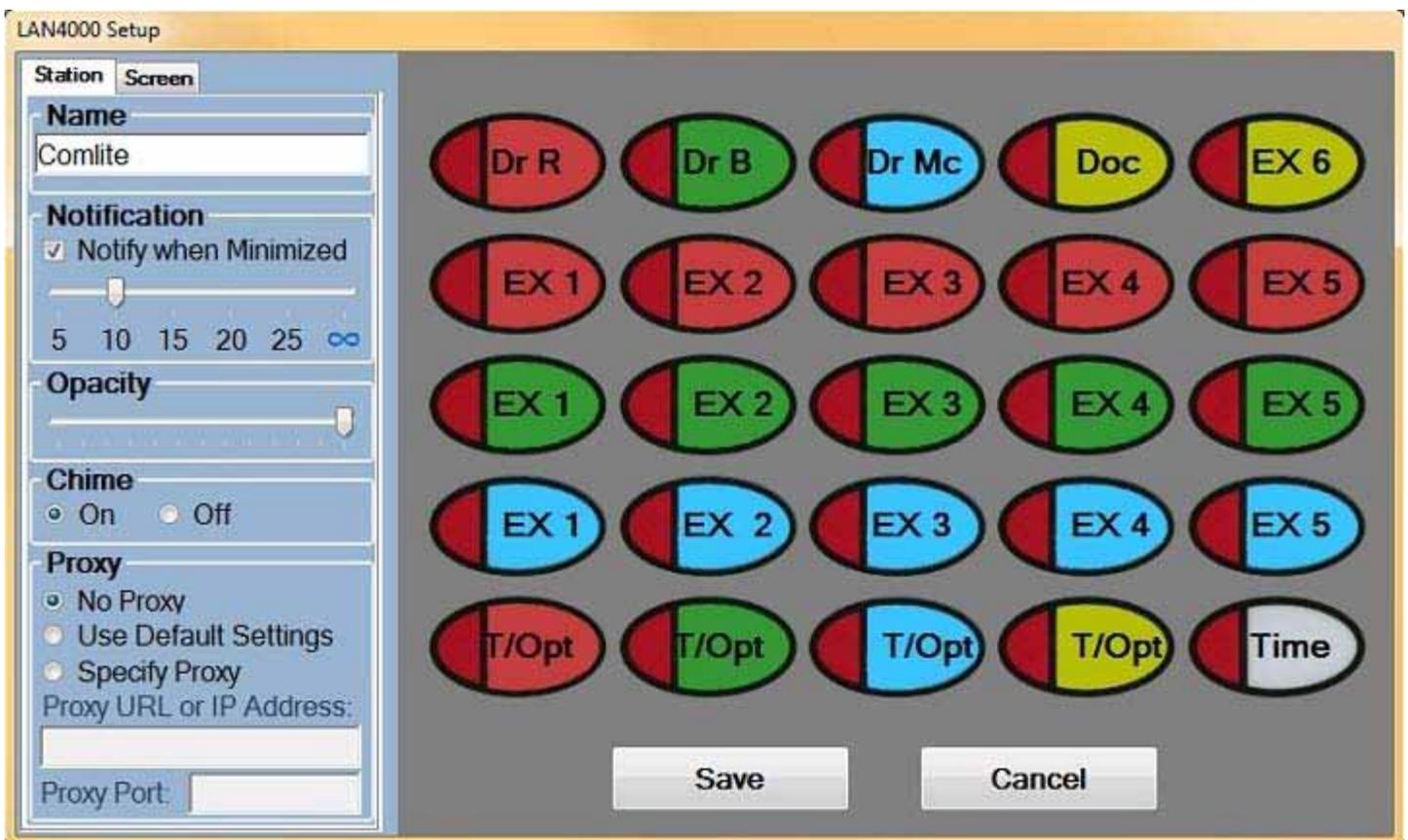
There are 9 possible button colors.

## Text

Up to 15 predefined text messages can be entered on the Text page. When sending a text message, select a message by clicking on one of them. Selecting a predefined message copies it to the text entry box at the bottom of the dialog. You can edit or add to the predefined message once it has been copied.

## Client Setup

The Client Setup screen consists of only the **Station** tab and the **Screen** tab.



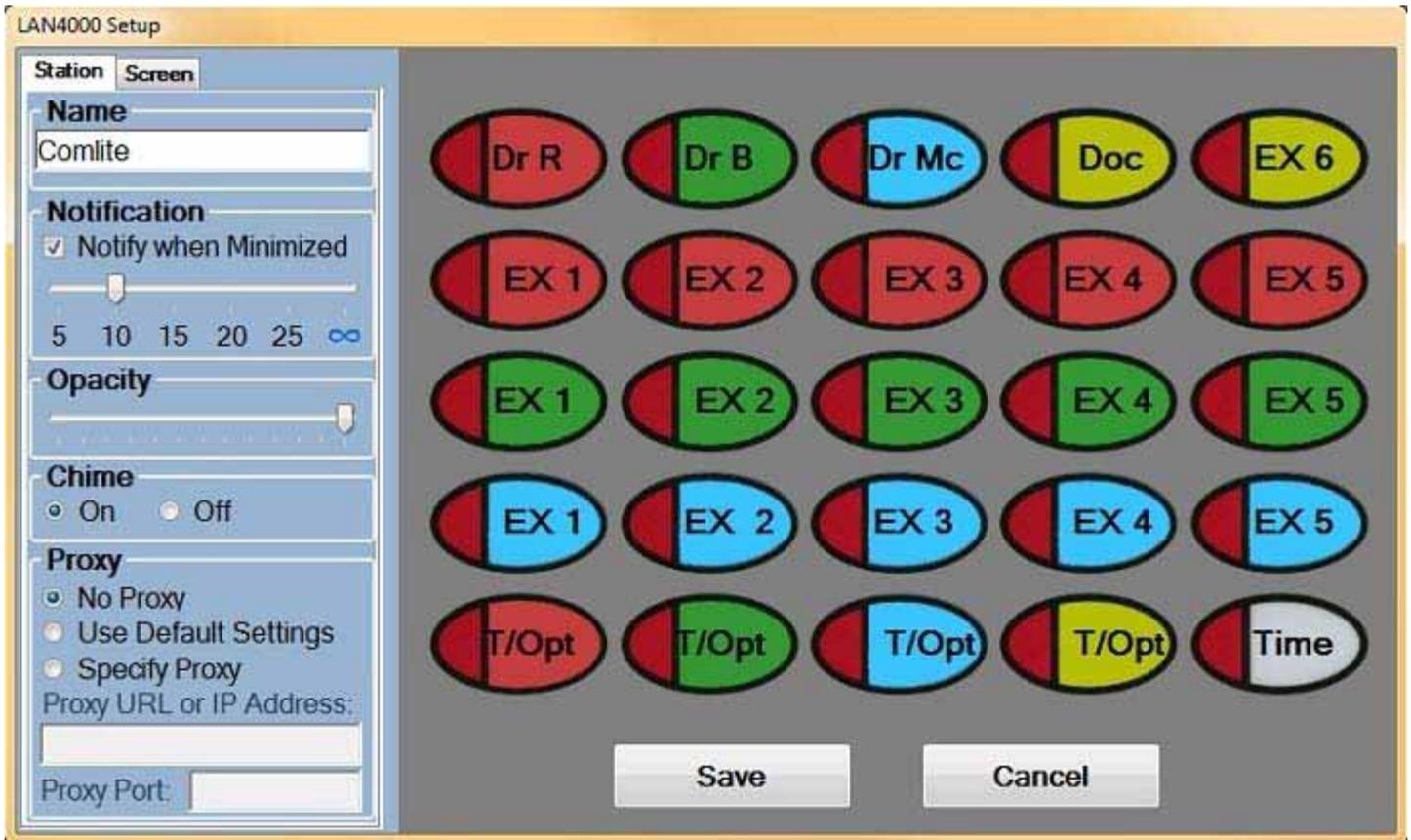
Press any button to select it as the priority button for your station. Press the button again to deselect it.

Press **Save** to save your results. Press **Cancel** to return to the main LAN4000 screen without making any changes.

## Client Station Setup

The Client Setup screen consists of two tabs: **Station** and **Screen**.

### Station



#### Name

Each LAN4000 client station has a default name of "Comlite". This name should be changed to something unique in your local area network (but not Administrator).

#### Notification

The LAN4000 can be minimized to the taskbar by pressing the minimize button in the upper right corner of the main screen. Once minimized, it can display temporarily if a button is pressed on another station. When **Notify when Minimized** is checked, the LAN4000 will display for the number of seconds specified by the slider - from 5 seconds up to 30 seconds.

#### Opacity

Set the opacity of the LAN4000 main screen by sliding the bar to the left or right. The leftmost setting is the most translucent.

Usage note: The setup screen is displayed over the main screen. Before moving the slider, move the setup screen so that the main screen is visible. You will then be able to observe the opacity change. Press **Save** to save the value.

#### Chime

Set the local chime to on or off. If on, the chime will sound when an incoming message is received. Otherwise, incoming messages are muted.

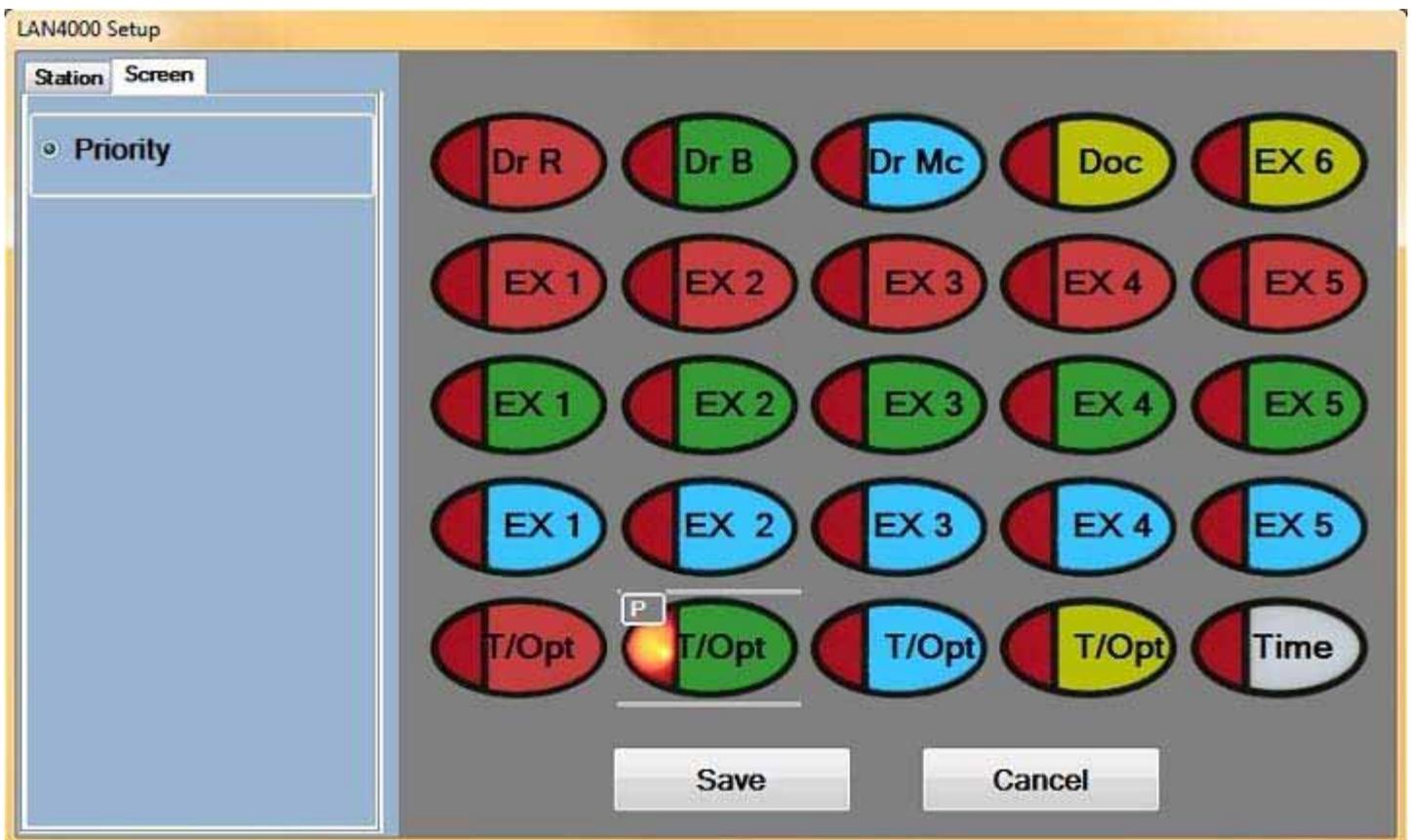
## Proxy

The LAN4000 can be configured to use a network proxy server. If your network uses a proxy server to filter Internet connections, select either **Use Default Settings** or **Specify Proxy**. Basically, select the entry that matches how your browser locates a proxy server on your network.

**Use Default Settings:** Internet Explorer has a setting named 'Automatically Detect Settings'. If your browser uses this setting (or its equivalent on other browsers), then your browser uses a mechanism called Web Proxy Automatic Discovery (WPAD) to 'discover' proxy servers on your network. The mechanism for how this works is beyond the scope of this manual, but the end result is that if your browser locates the server without specifying the IP address and port number. If your network has a proxy server and your browser connects to the Internet via this mechanism, select this entry.

**Specify Proxy:** If your browser specifies the IP address (or DNS name) and port number of your proxy server, then enter the IP address and port number here.

## Screen



## Priority

A single primary button can be defined as the **Priority** button. Select the button and the button will light and a "P" will appear alongside. The chime defined by the administrator for that button is the chime that will sound when the **Priority** button is pressed.

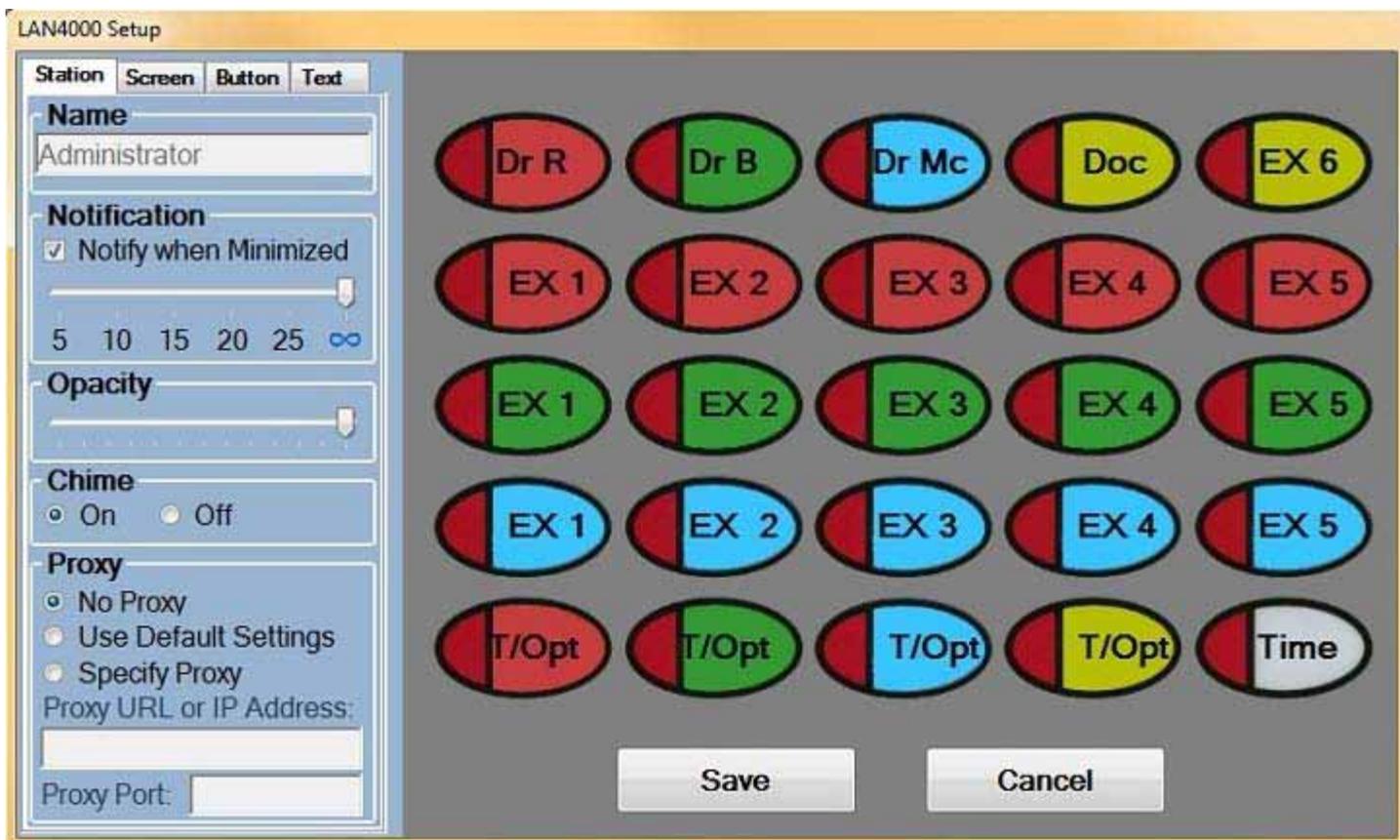
**NOTE:** There can be only one Priority button per station!

Press **Save** to save your results. Press **Cancel** to return to the main LAN4000 screen without making any changes.

## Administrative Station Setup

Most features in the LAN4000 are configured via the Administrative Station Setup screen. This screen has four tabs, arranged by functionality: **Station**, **Screen**, **Button**, and **Text**.

### Station



#### Name

Each LAN4000 station should have a unique name. The default is "Comlite" for the Client and "Administrator" for the Administrative Station. The Administrative Station name cannot be changed and "Administrator" should not be used as a Client station name.

#### Notification

The LAN4000 can be minimized to the taskbar by pressing the minimize button in the upper right corner of the main screen. Once minimized, it can display temporarily if a button is pressed on another station. When **Notify when Minimized** is checked, the LAN4000 will display for the number of seconds specified by the slider - from 5 seconds up to 25 seconds.

Select the *infinity* symbol to instruct the LAN4000 software to remain displayed until it is minimized again.

#### Opacity

Set the opacity of the LAN4000 main screen by sliding the bar to the left or right. The leftmost setting is the most translucent.

Usage note: The setup screen is displayed over the main screen. Before moving the slider, move the

setup screen so that the main screen is visible. You will then be able to observe the opacity change. Press **Save** to save the value.

## Chime

Set the local chime to on or off. If on, the chime will sound when an incoming message is received. Otherwise, incoming messages are muted.

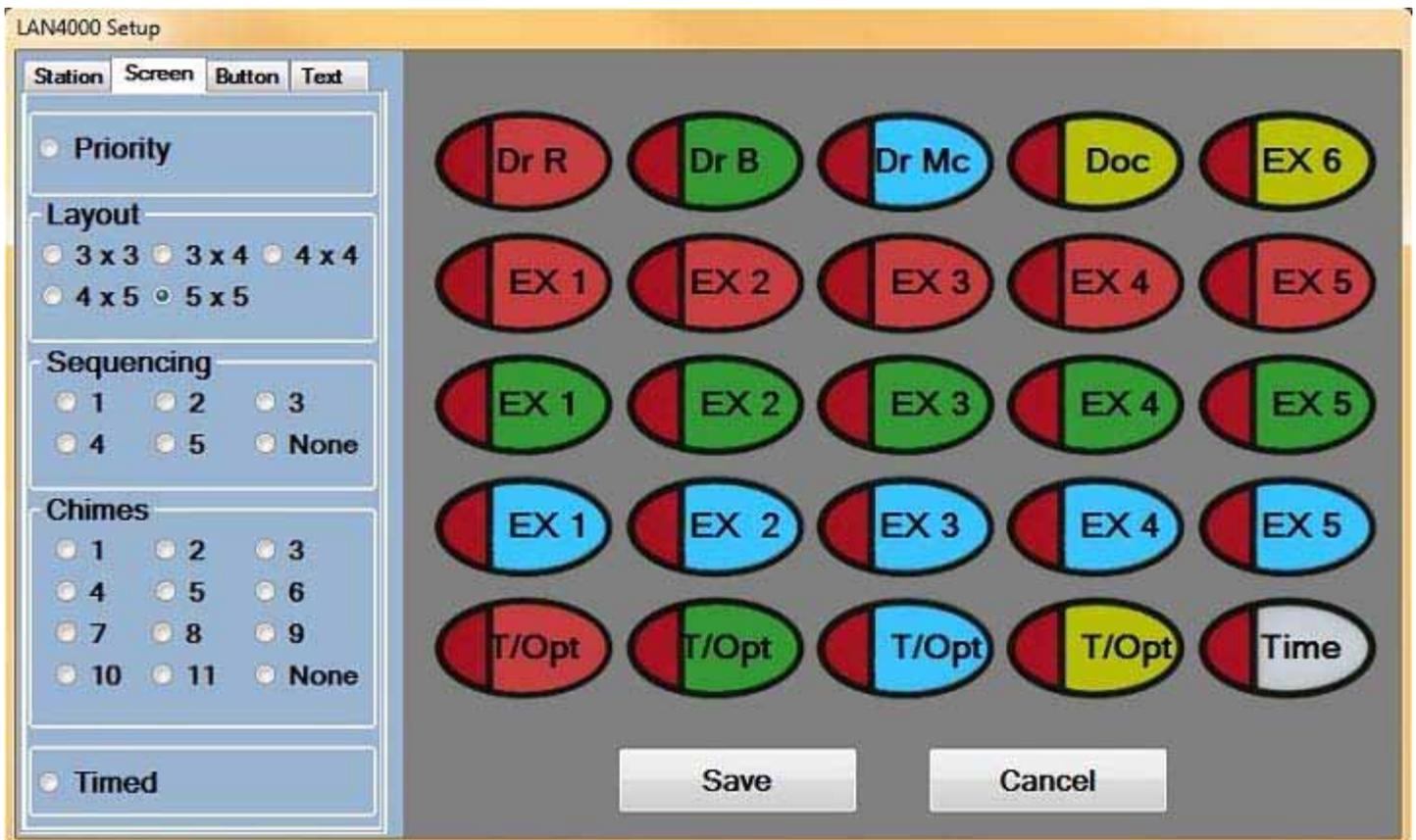
## Proxy

The LAN4000 can be configured to use a network proxy server. If your network uses a proxy server to filter Internet connections, select either **Use Default Settings** or **Specify Proxy**. Basically, select the entry that matches how your browser locates a proxy server on your network.

**Use Default Settings:** Internet Explorer has a setting named 'Automatically Detect Settings'. If your browser uses this setting (or its equivalent on other browsers), then your browser uses a mechanism called Web Proxy Automatic Discovery (WPAD) to 'discover' proxy servers on your network. The mechanism for how this works is beyond the scope of this manual, but the end result is that if your browser locates the server without specifying the IP address and port number. If your network has a proxy server and your browser connects to the Internet via this mechanism, select this entry.

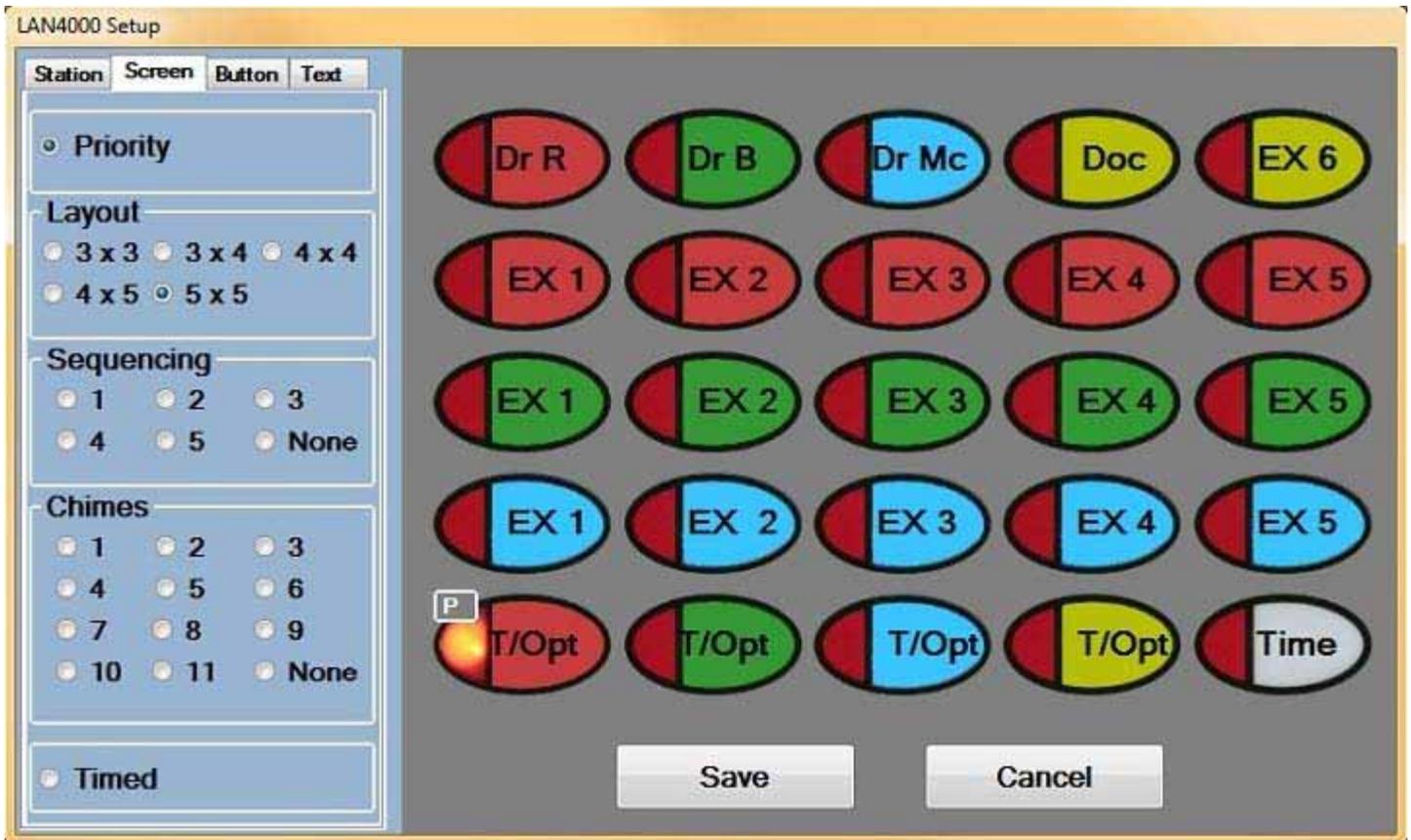
**Specify Proxy:** If your browser specifies the IP address (or DNS name) and port number of your proxy server, then enter the IP address and port number here.

## Screen



## Screen Properties

### Priority



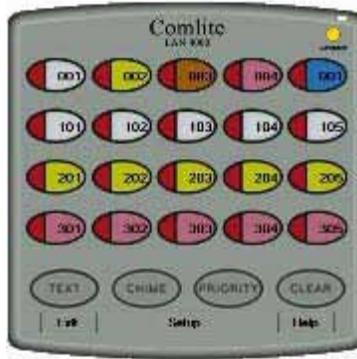
A single primary button can be defined as the **Priority** button. Select the button and the button will light and a "P" will appear alongside. Select a chime to go with the button by selecting a chime number (in the "Chimes" section of Screen Properties) and then pressing the button again. Press **Save** to save the button.

**NOTE:** There can be only one Priority button per station!

### Layout

There are five possible layouts that are described by the number of rows and columns of buttons Comlite displays. They are: 3 x 3, 3 x 4, 4 x 4, 4 x 5, and 5 x 5. Select a layout that best suits your needs and the setup screen will update to the selected layout. The layout shown above is the 5 x 5: Five buttons across and five buttons down. Press **Save** to change the layout on the main screen, as shown below:

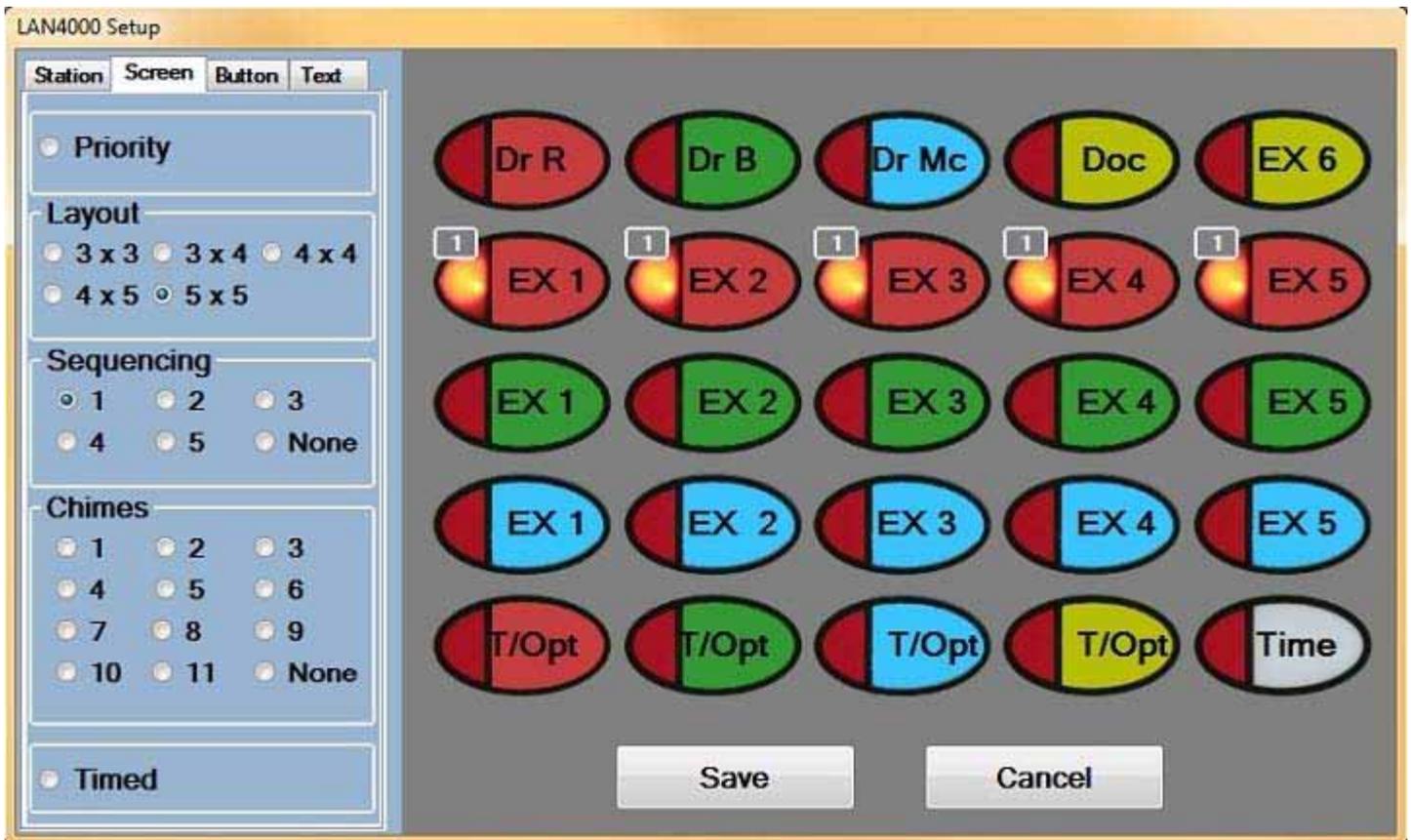




Layouts

## Sequencing

There are five possible sequences that can be assigned to a button. To define a button sequence, select the sequence number and then choose the buttons you want in that sequence.

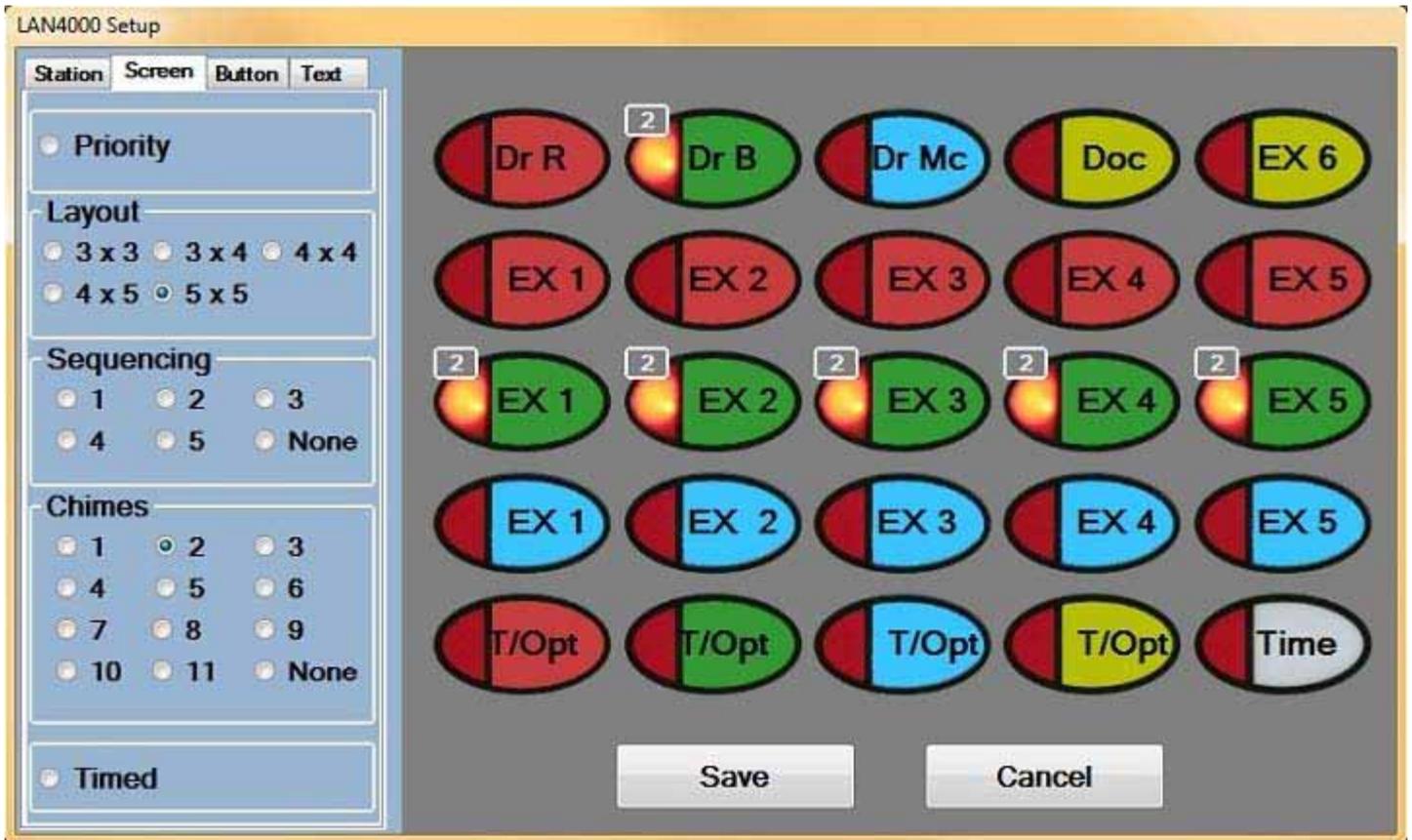


In the example above, sequence '2' is selected and the buttons that are in sequence 2 are lit. Press any button to add it to the sequence. Press the same button again to remove it from the sequence. If the button had been assigned to another sequence, it is returned to that sequence.

**NOTE:** Each button can only be assigned to a single sequence (of the five) at a time.

## Chimes

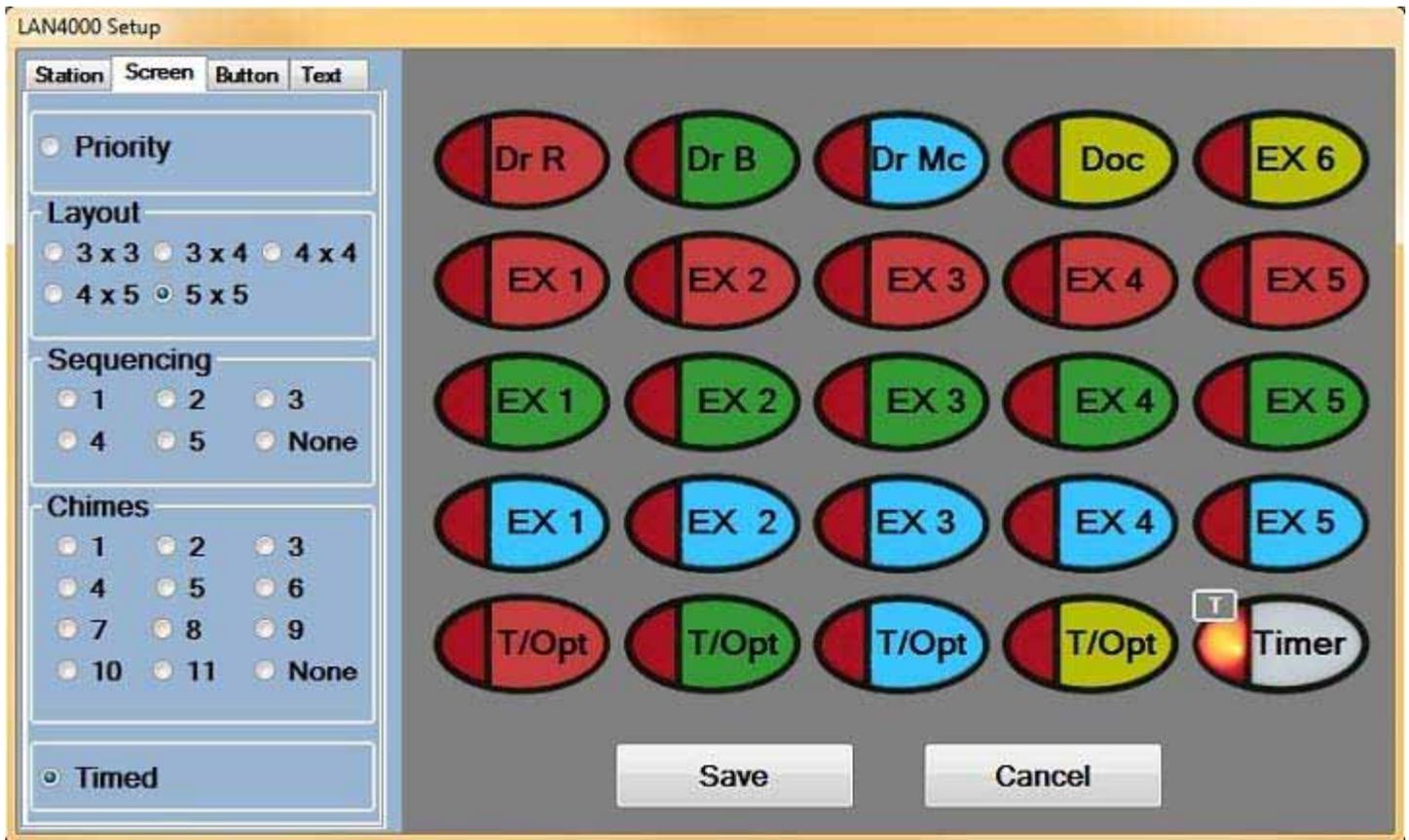
There are five possible chimes that can be assigned to a button. To select a chime for a button, select the chime number and then choose the button you want to have assigned that chime.



In the example above, chime '4' is selected and all of the buttons that are assigned chime 4 are lit. Press any button to assign it to the chime. Press the same button again to remove it from that chime assignment.

## Timed

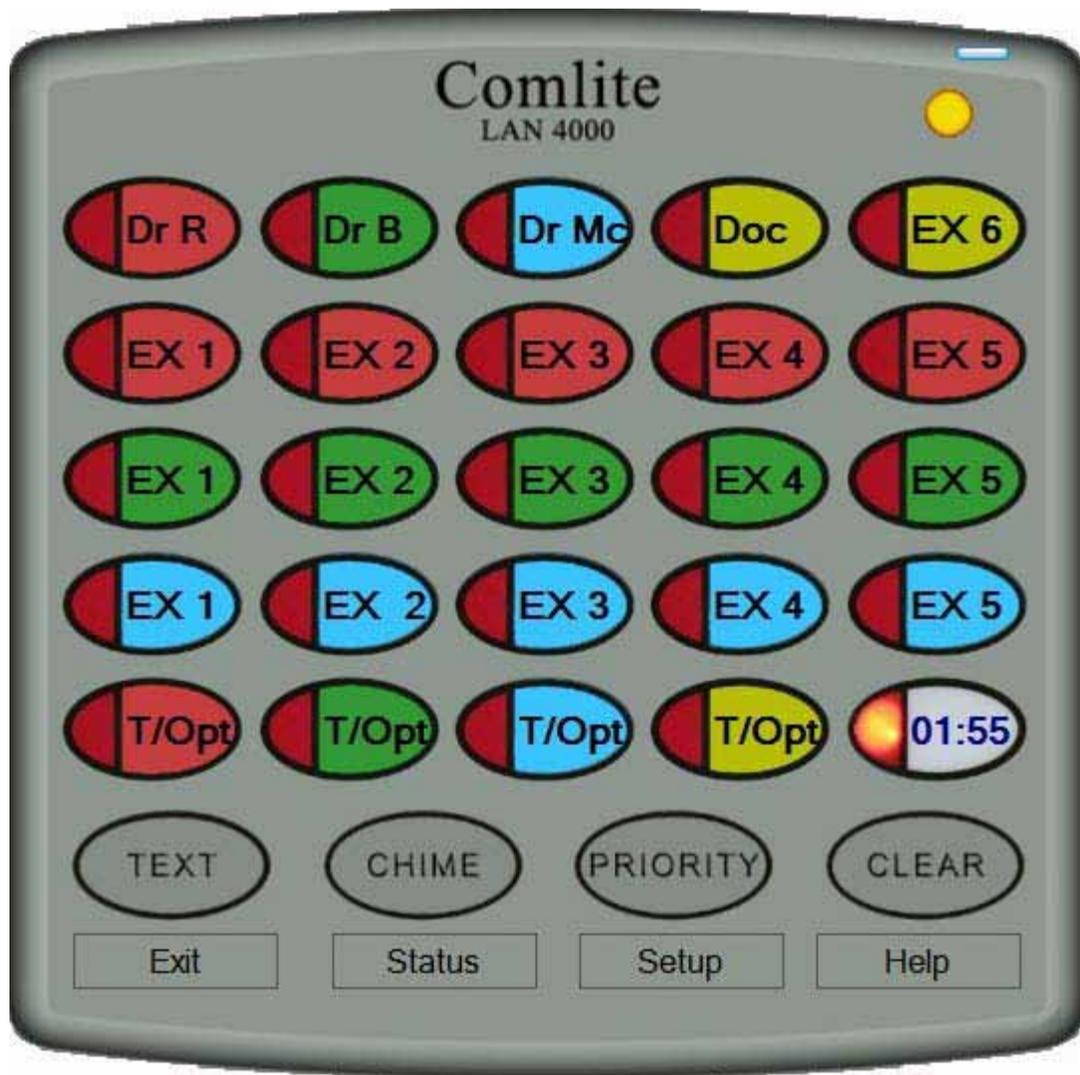
A timed button is a non-sequenced button that, when pressed (after saving it as a timed button in **Setup**), displays a prompt for a countdown timer. Select the time and press **OK** to start the timer on that button. When the timer reaches zero, the chime defined for that button sounds.



In this example, pressing the **Time** button displays the Timed Button dialog:

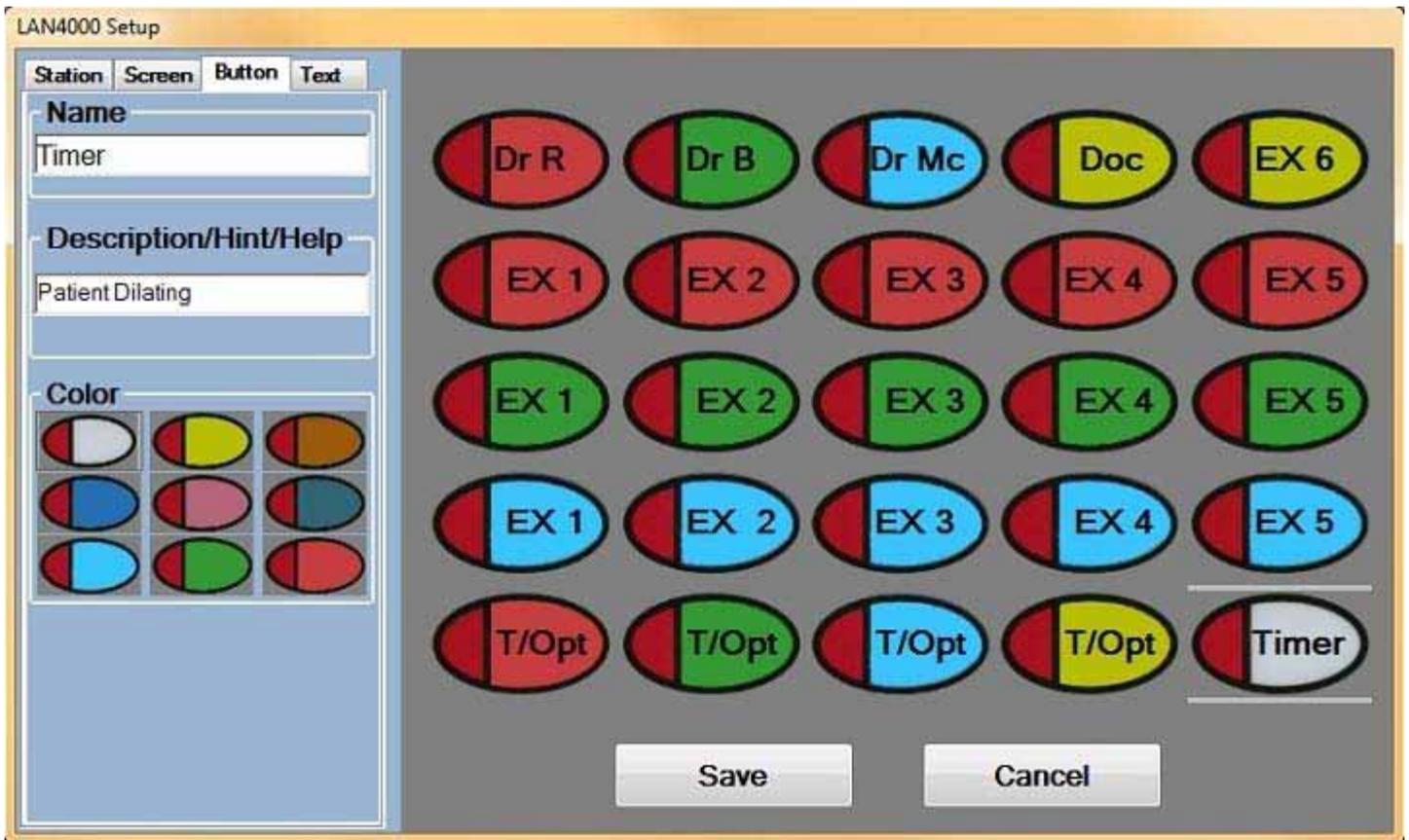


Select the length of time by sliding the bar between 1 minute and 30 minutes. Press **OK** to start the timer. Press **Cancel** to cancel timing. When timing, the current timer value displays inside the selected button and the timing can be canceled by pressing the button.



Upon reaching zero, the button flashes and the chime defined for that button sounds. Press the button again to turn it off.

## Button



### Name

Each button can have a name up to 5 characters in length.

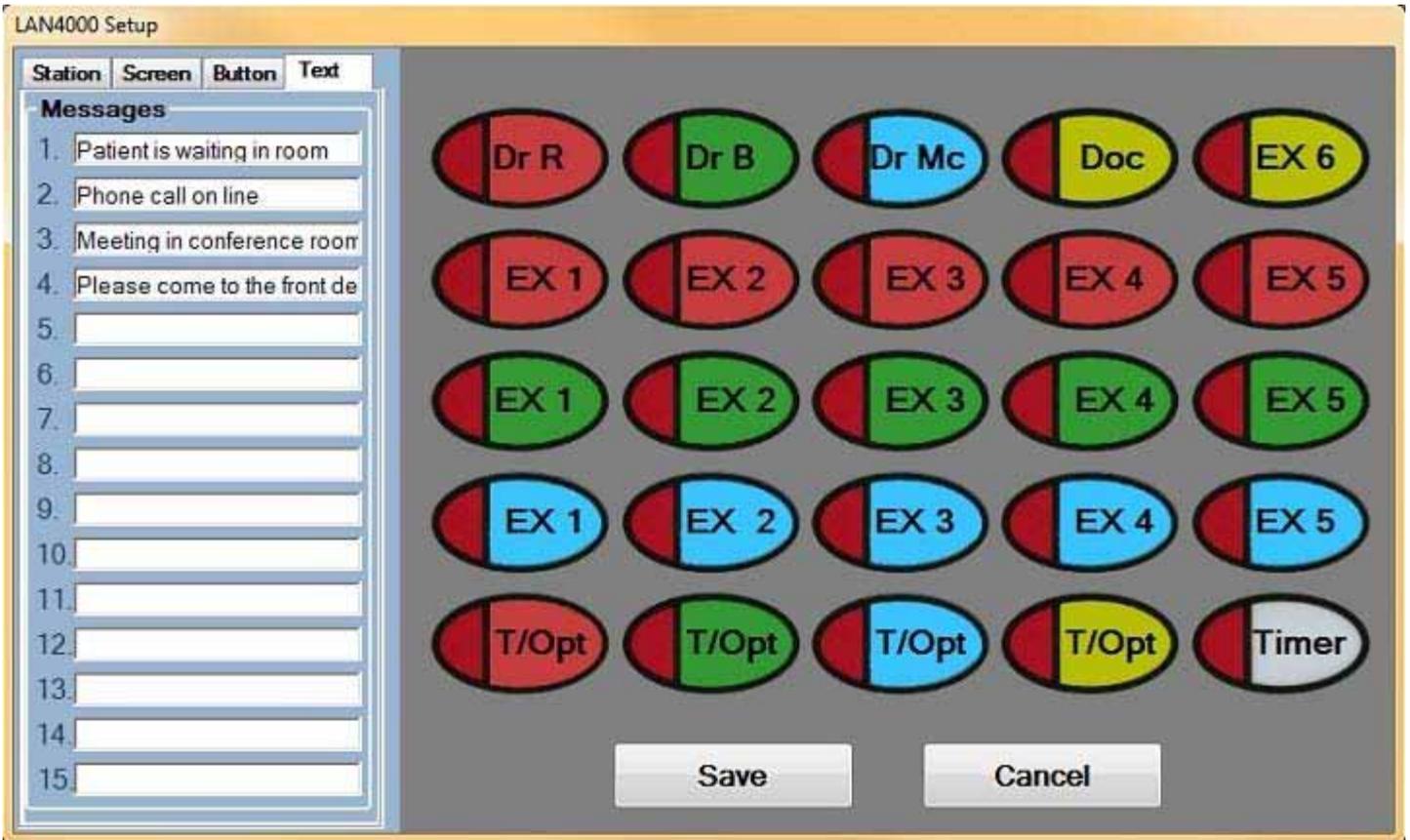
### Description/Hint/Help

Each button can have a tooltip text that appears over the button when the mouse is hovered over a button.

### Color

There are 9 possible button colors. Select the button first, and then the click on the color for that button. The button changes color to the selected color. Press **Save** to save the changes.

### Text



Up to 15 predefined text messages can be entered. When the text messaging dialog is displayed, these messages can be selected by clicking on them. This places them in the text box at the bottom of the dialog, where you can edit or add to the predefined message.

Press **Save** to save your results. Press **Cancel** to return to the main LAN4000 screen without making any changes.

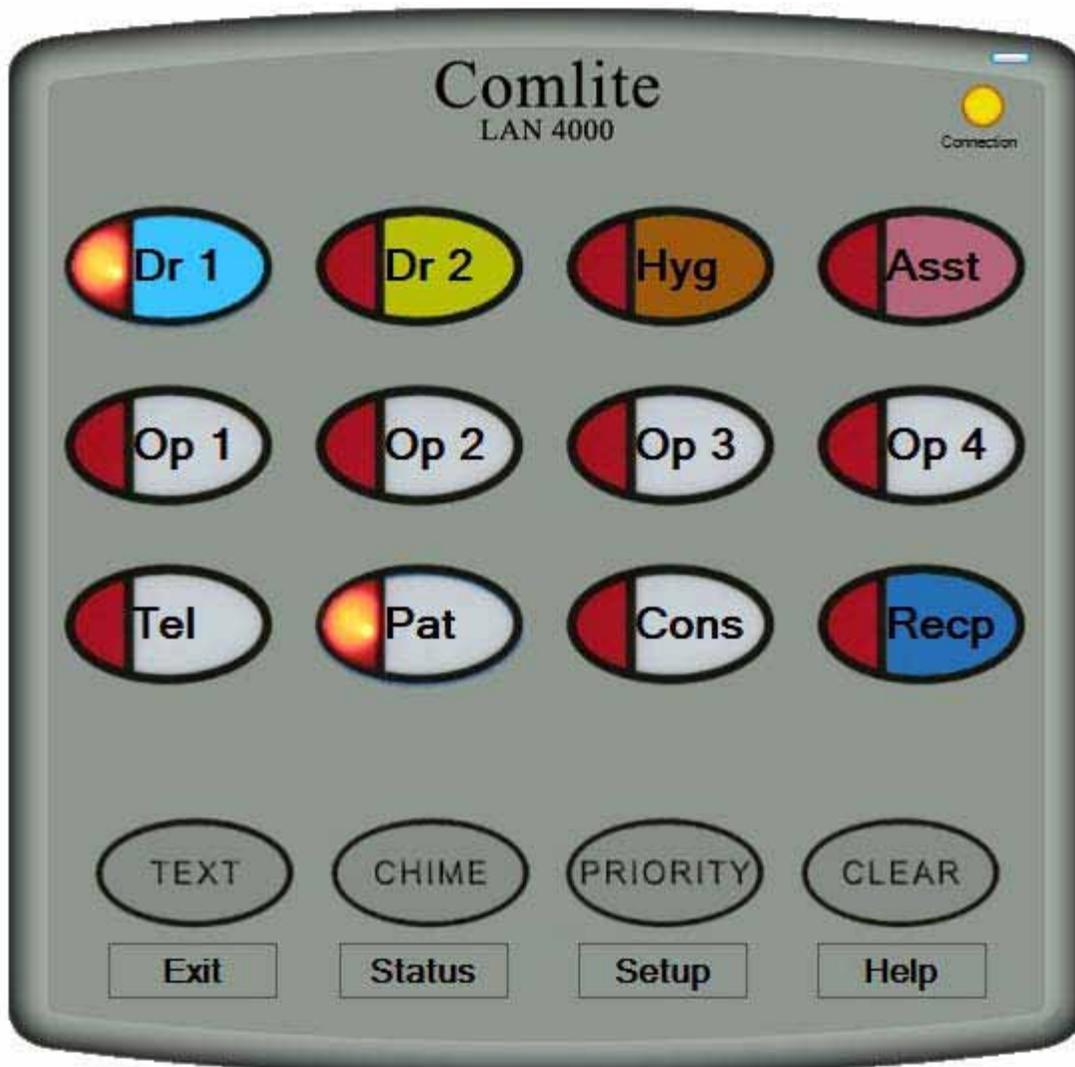
## Example Setups - Dental Office

The Comlite LAN4000 can be configured in a variety of ways. We have provided a few samples to help you get an idea of the many ways the LAN4000 can be used.

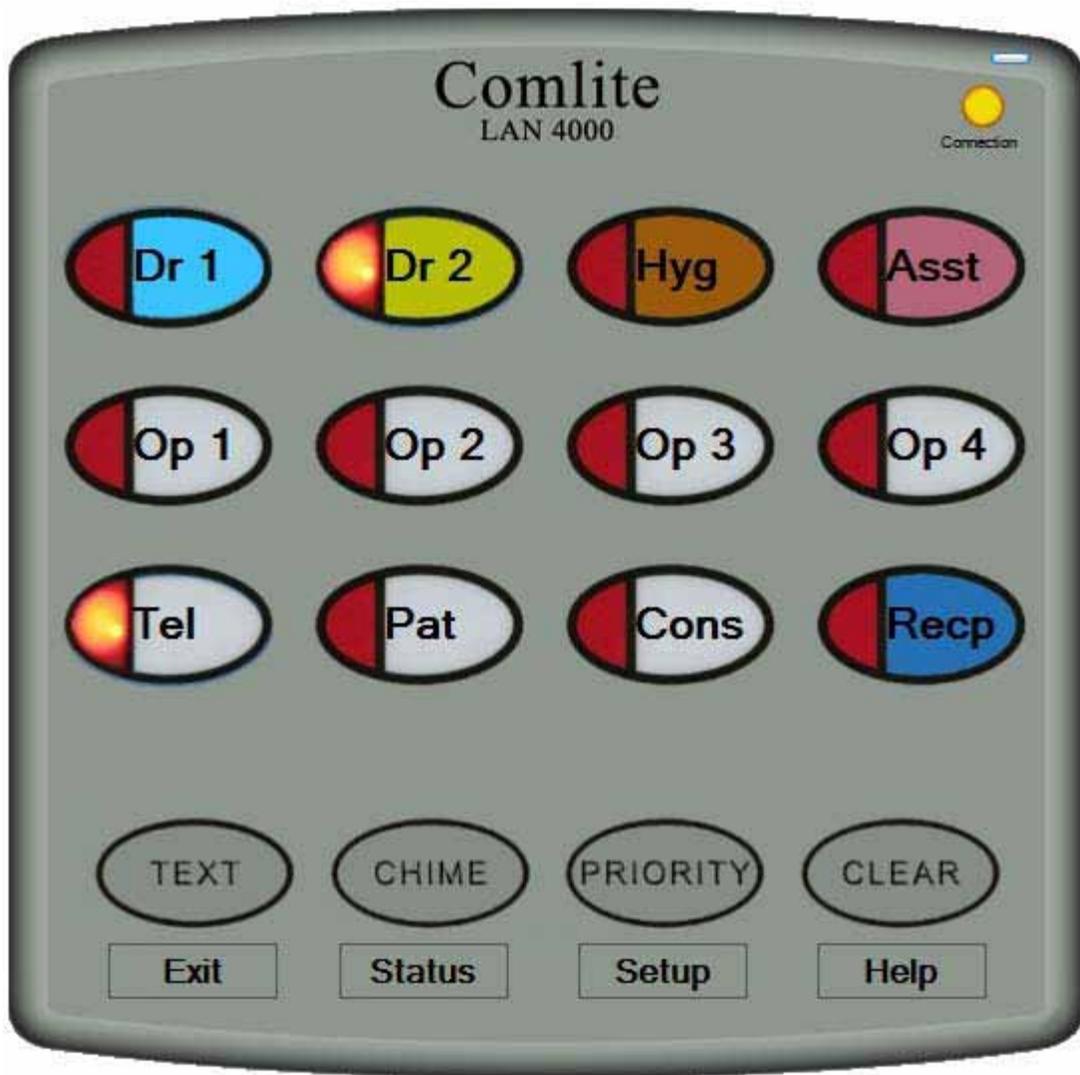
There is no right or wrong way to use our light signaling system. There are many other ways to label the lights to display messages including ways to display multiple messages at the same time. Please call to speak with one of our sales reps if you would like some suggestions as to how to customize the labeling for your office.

This is representative of a 2 doctor dental practice with 1 hygienist and 1 floating assistant. This dental office uses the LAN4000 to communicate patient arrivals for both doctors and the hygienist; paging of assistants, and hygiene checks.

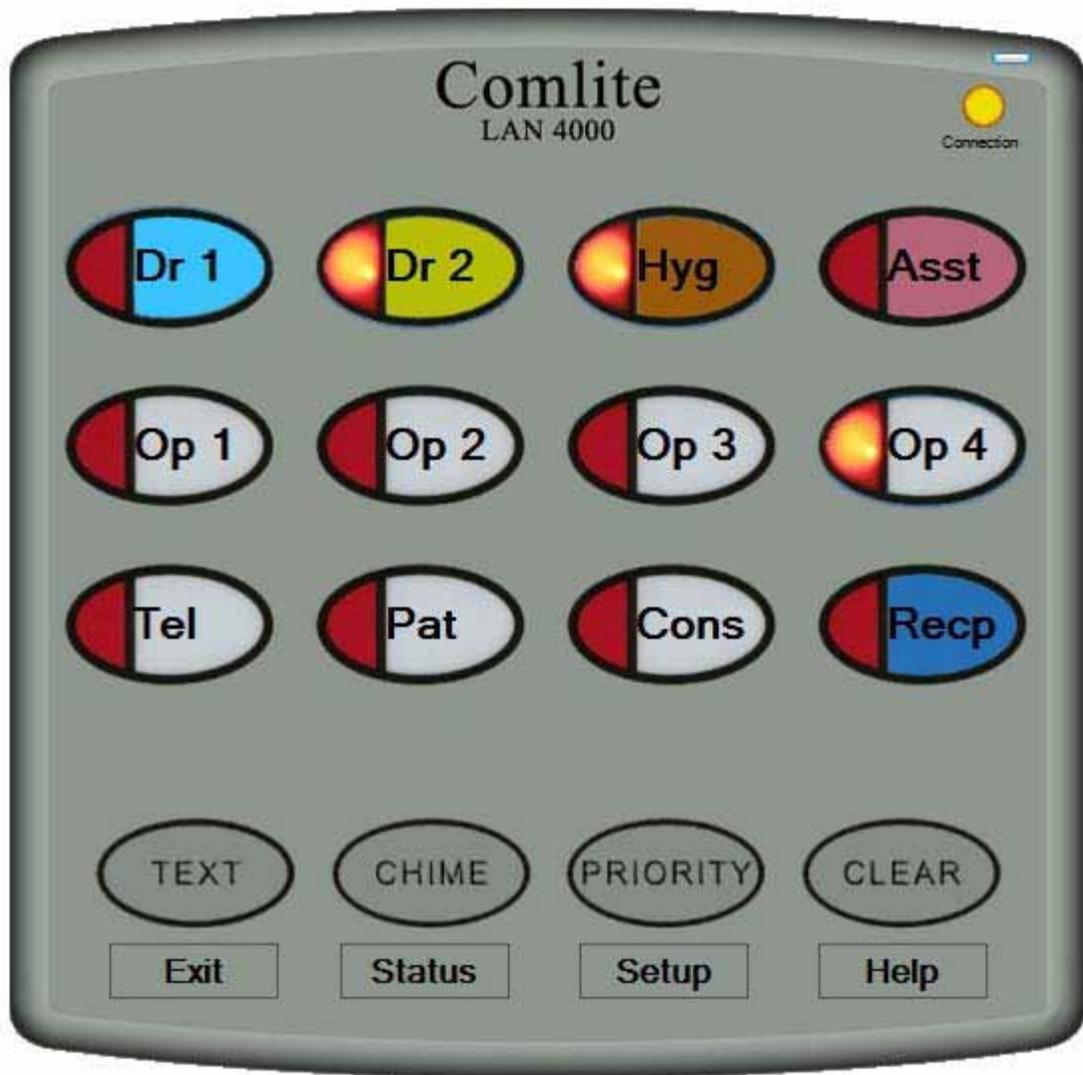
**Dental Sample 1:** Dr 1's next patient is here.



**Dental Sample 2:** Phone call for Dr 2.



**Dental Sample 3:** Dr 2 is needed for a Hygiene check in Operatory 4.



**Dental Sample 4:** Assistant needed in Operatory 3

# Comlite

LAN 4000

Connection



Exit

Status

Setup

Help

## Example Setups - Medical Office

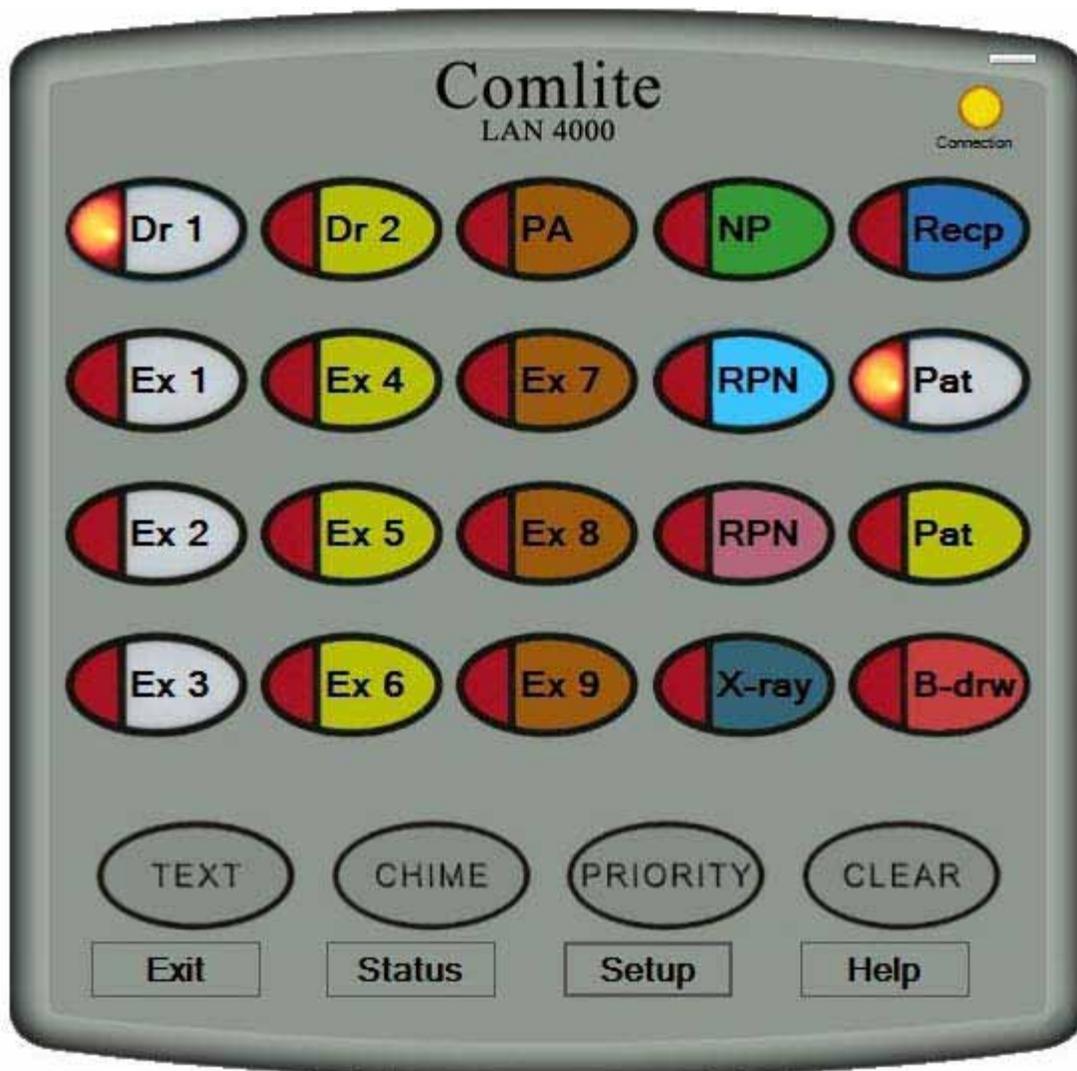
The Comlite LAN4000 can be configured in a variety of ways. We have provided a few samples to help you get an idea of the many ways the LAN4000 can be used.

There is no right or wrong way to use our light signaling system. There are many other ways to label the lights to display messages including ways to display multiple messages at the same time. Please call to speak with one of our sales reps if you would like some suggestions as to how to customize the labeling for your office.

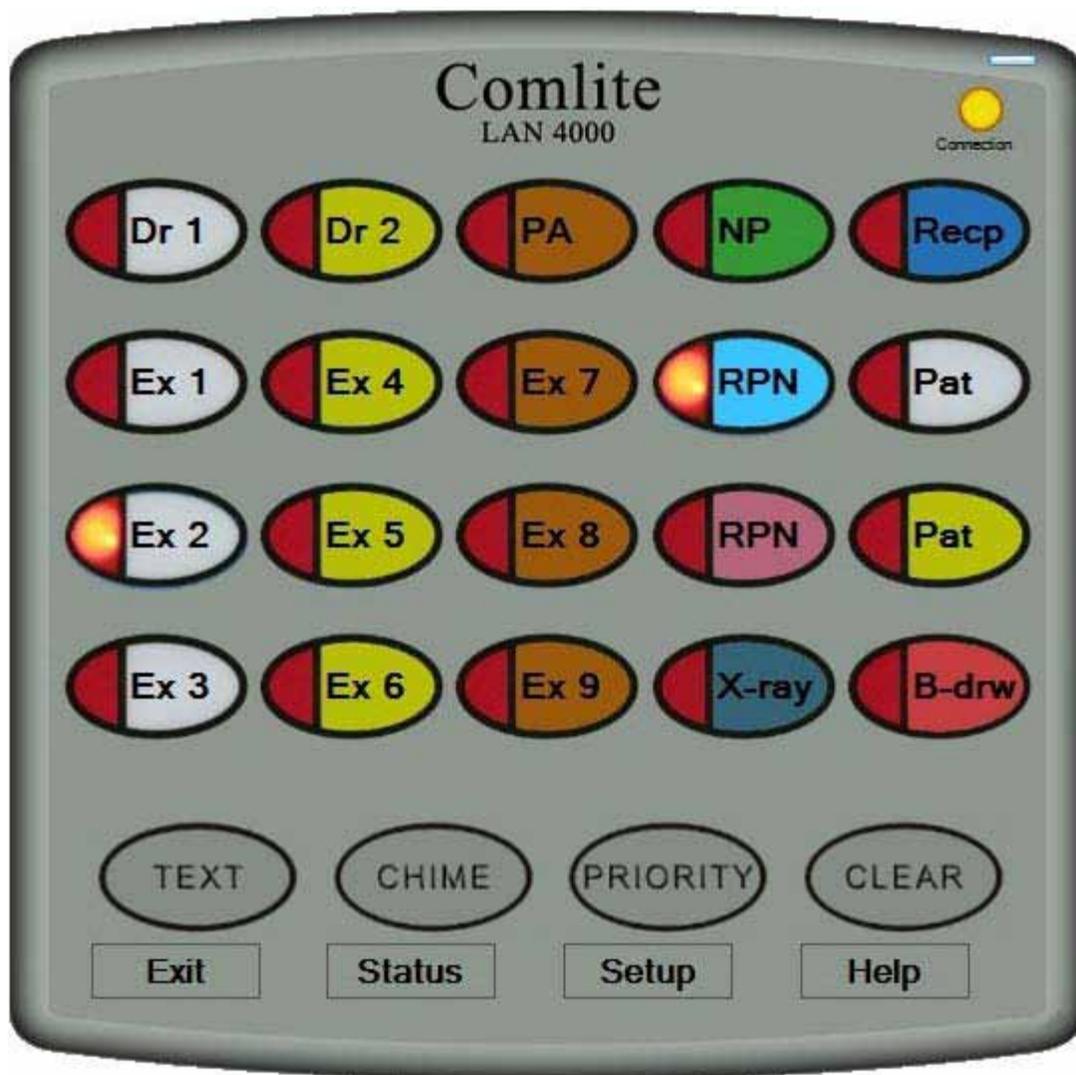
The following setup is representative of a 2 Doctor practice with each doctor working 3 exam rooms. There is a Physicians Assistant working 3 rooms, a Nurse Practitioner and 2 RPN's.

Each doctor monitors his/her patient flow on their own column. Each practitioner can page Staff members to their rooms at the same time.

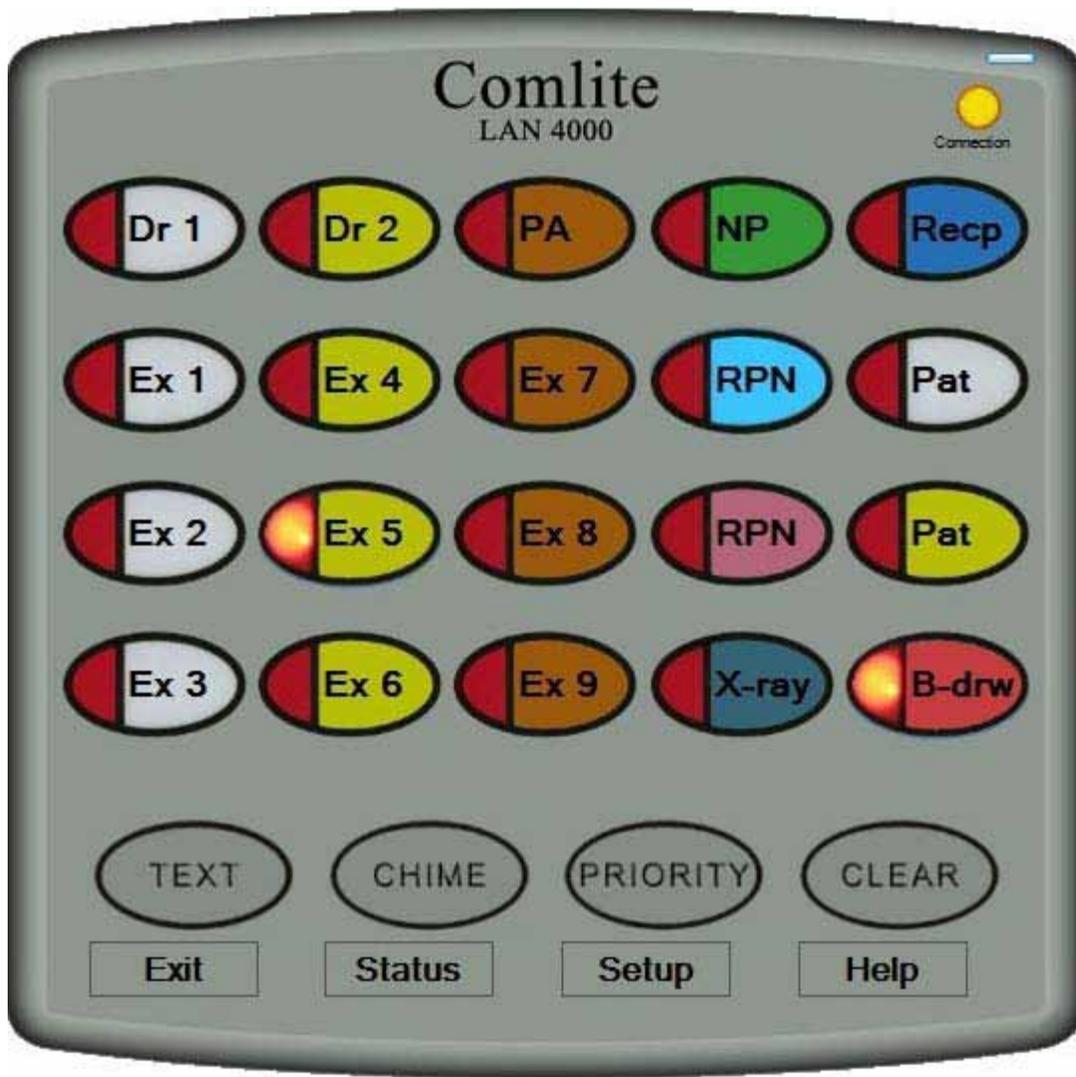
**Medical Sample 1:** Dr 1's next patient is here.



**Medical Sample 2:** Nurse needed in exam room 2



**Medical Sample 3:** Blood Draw needed for patient in exam room 5



**Medical Sample 4:** Dr 2 has patients waiting in exam rooms 4, 5 and 6

# Comlite

LAN 4000



Dr 1	Dr 2	PA	NP	Recp
Ex 1	Ex 4	Ex 7	RPN	Pat
Ex 2	Ex 5	Ex 8	RPN	Pat
Ex 3	Ex 6	Ex 9	X-ray	B-drw

TEXT	CHIME	PRIORITY	CLEAR
Exit	Status	Setup	Help

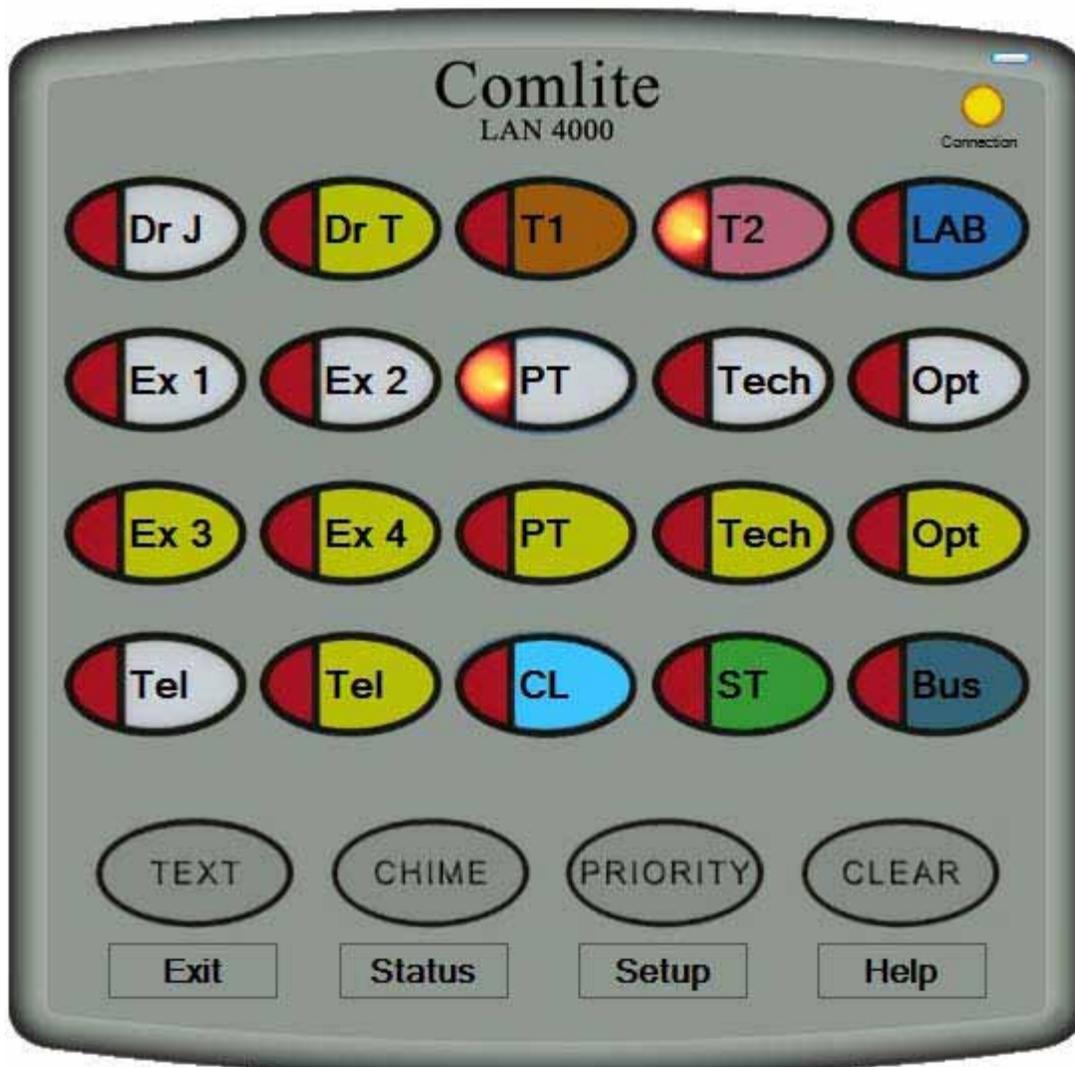
## Example Setups - Optometry Office

The Comlite LAN4000 can be configured in a variety of ways. We have provided a few samples to help you get an idea of the many ways the LAN4000 can be used.

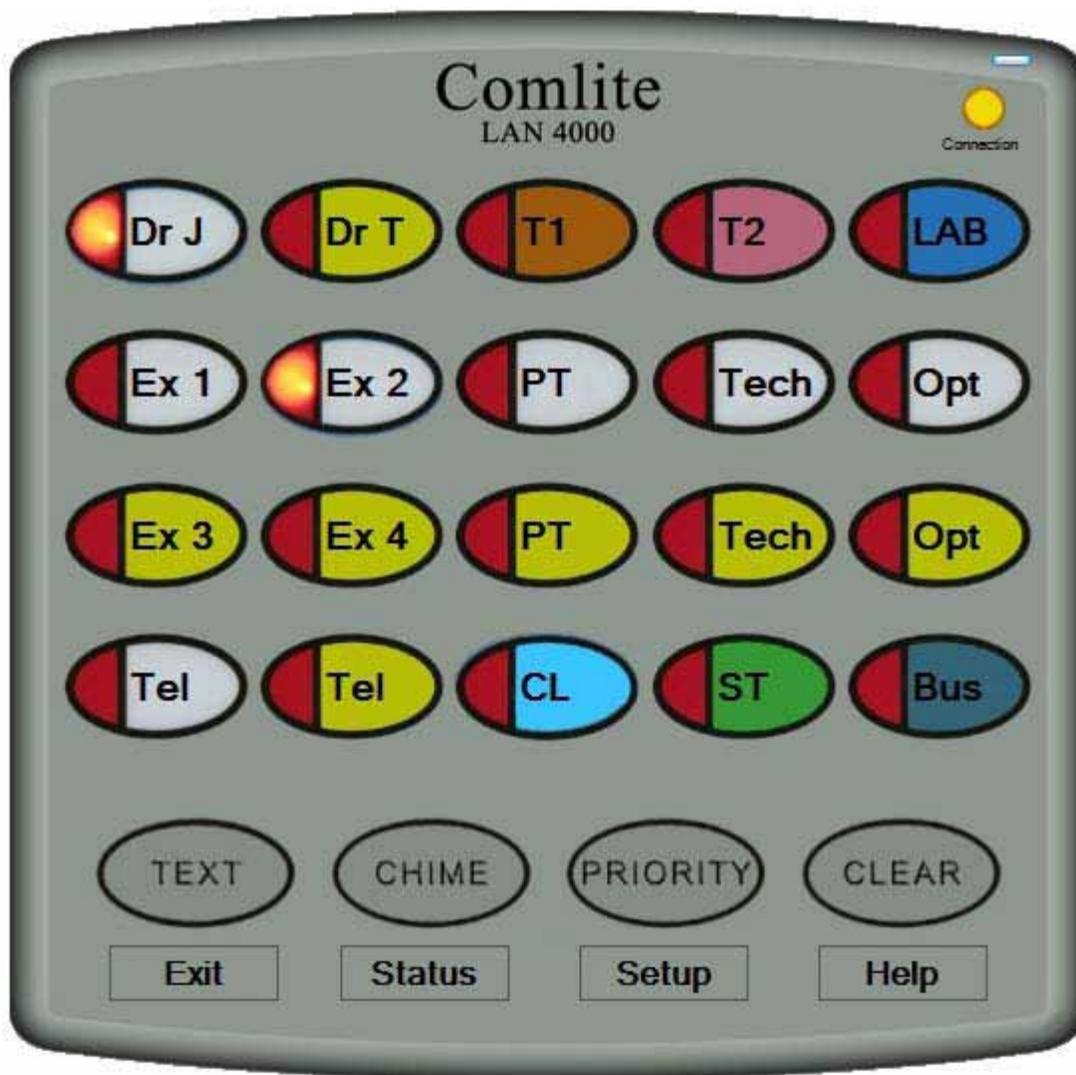
There is no right or wrong way to use our light signaling system. There are many other ways to label the lights to display messages including ways to display multiple messages at the same time. Please call to speak with one of our sales reps if you would like some suggestions as to how to customize the labeling for your office.

The following setup is representative of a 2 doctor practice with each doctor working 2 exam rooms. There are 2 techs, a lab, an optical dispensary and a pre-test room. Each doctor monitors his/her patient flow on their own row which allows both doctors to page optical or tech to their rooms at the same time.

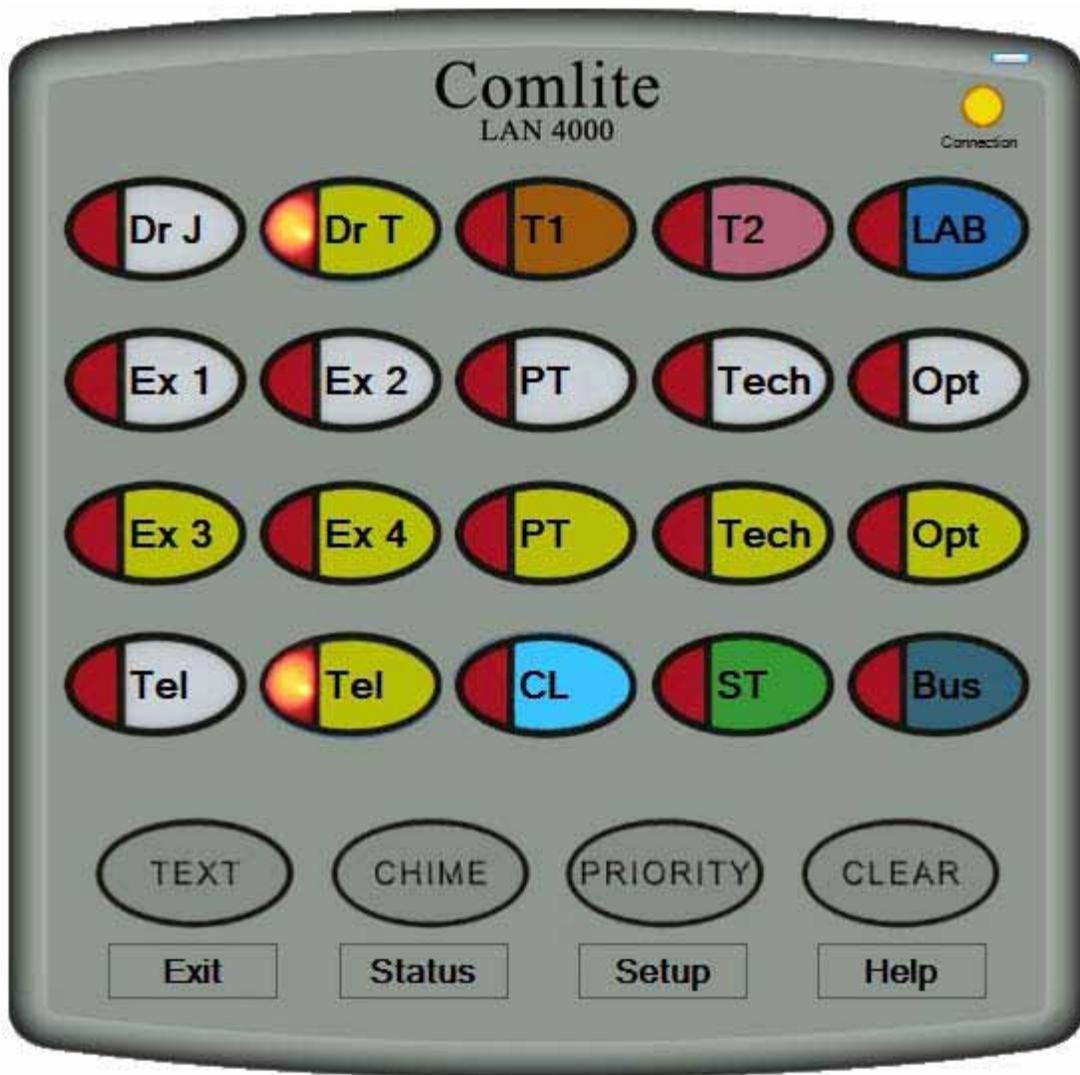
**Optometry Sample 1:** Tech 2 needed in Pre-Test.



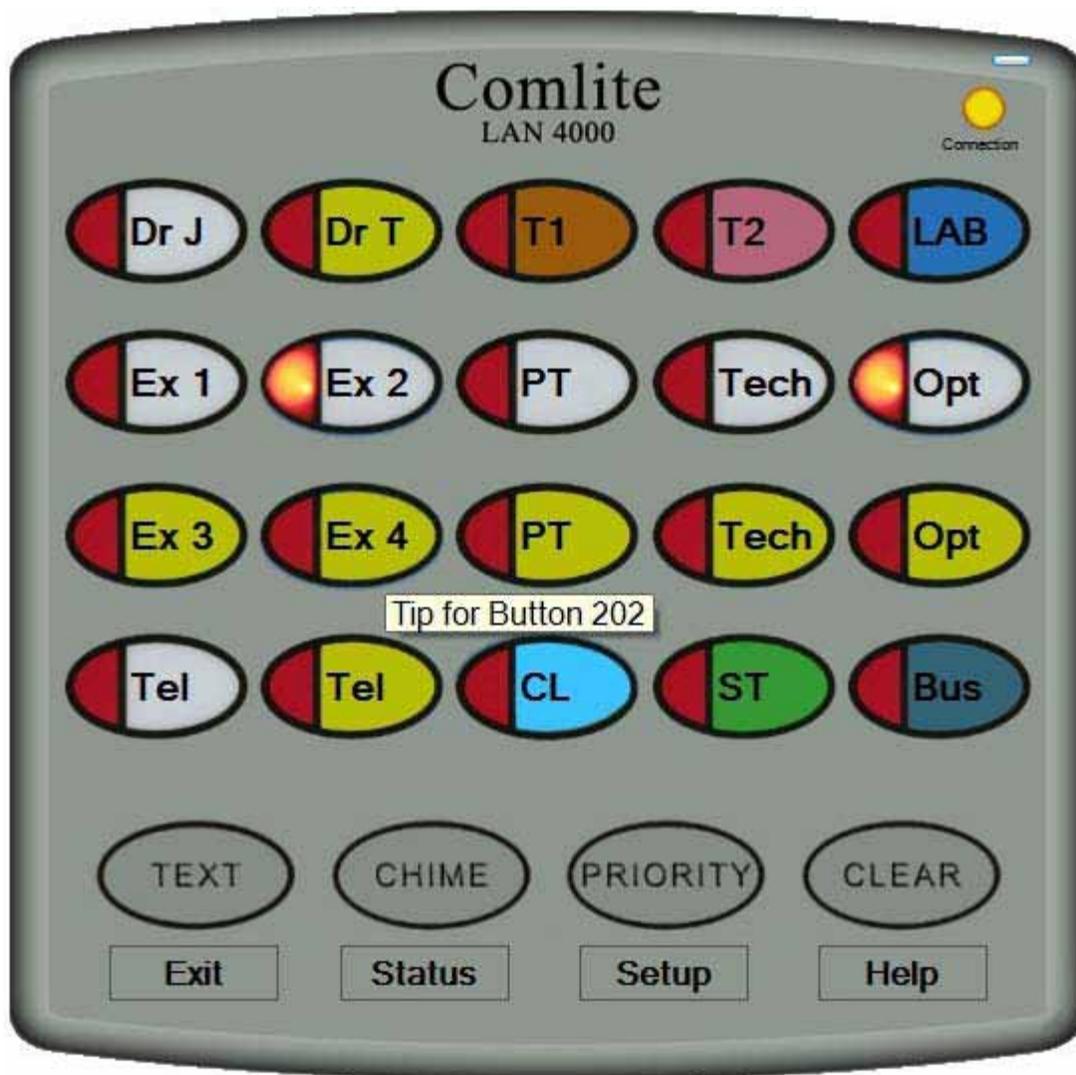
**Optometry Sample 2:** Dr J is needed in Exam room 2.



**Optometry Sample3:** Dr T has a telephone call.



**Optometry Sample 4:** Optician is needed in exam room 2.



There is no right or wrong way to use our light signaling system. There are many other ways to label the lights to display messages including ways to display multiple messages at the same time. Doctors that are working 3 or more rooms can use our patient sequencing function. Please call to speak with one of our sales reps if you would like some suggestions as to how to customize the labeling for your office.

## Troubleshooting

The Comlite LAN4000 is a product that makes extensive use of the capabilities of .Net 4 and the Windows Communication Foundation (WCF). Because of this, there may be problems getting the Administrative station to communicate with all of the Client stations. When problems occur, check your Windows Firewall configuration **first**.

### Windows Firewall

The installer software is programmed to set the Windows Firewall configuration for the LAN4000, but it must have Administrator privileges to do so. If the firewall settings are not changed, the LAN4000 station may not communicate properly with other stations.

Typical problems that occur when the firewall rules are incorrect are: intermittent light signaling, no connection light, or a connection in "one direction". This occurs when the Admin station connects to a Client station (the Client station name appears in the Admin Status) but the client does not indicate that it is connected - or the reverse where the Client is indicating a connection but the Admin station does not have it listed in the status screen.

The result is that a button press may show up at the Admin station but not at a client.

Firewalls typically block **inbound** data, so if a client presses a button and it does not show up on the Admin, then the Admin station is "blocking" the button press message. Usually this indicates a problem in the firewall settings on the Admin station.

If a button is pressed on the Admin station but it does not show up on a Client station, then the Client station's firewall is usually blocking this message.

The end result is a delay in button messages being sent over the entire network as clients are being disconnected and automatic reconnections are attempted. Check the Admin Status for error messages.

### No Connection light



The LAN4000 creates two connections. One connection is from the Admin station to the Client station and the other is from the Client station to the Admin station - much like a two-way street.

The LAN4000 Client should always launch and display the main screen with the connection light on if the Admin station has already been started. The image on the left is what is expected to be displayed.

When the program launches with the connection light off (the image on the right), there has been a problem communicating with the network.

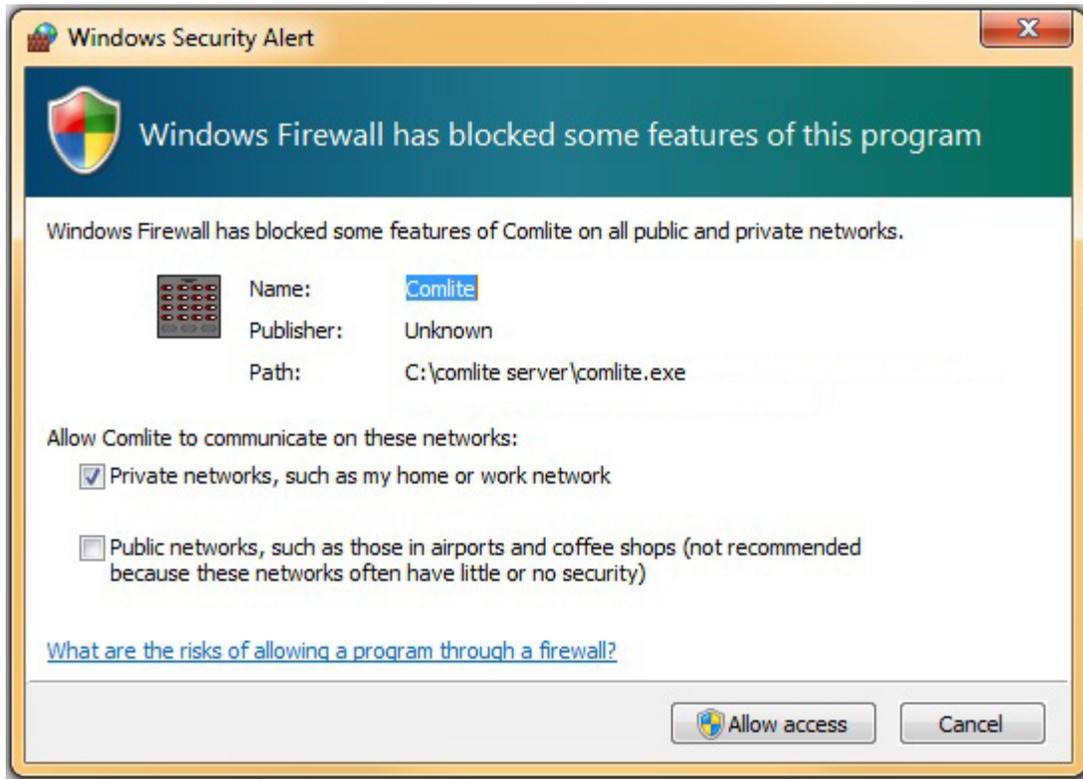
The LAN4000 Client displays its status as it launches. Check this status for error messages. The LAN4000 Administrative Station displays its status during startup and also on a separate status screen.

If the LAN4000 Administrative station starts up without turning on the connection light, press the Status button. If there was a problem connecting to .Net 4 there should be a description of the problem on the screen.

If the LAN4000 Client station starts up but does not connect - and the Admin station indicates it is connected, press the "Connection" light to force the LAN4000 to attempt to reconnect to the server. You will receive a message indicating success or failure.

If reconnecting does not work, or no problem is displayed, check your Windows Firewall settings to determine if the program is being blocked. There should be an "exception" for "LAN4000.exe". See the next section for instructions on how to create an exception manually.

Normally, the first time the LAN4000 software is launched, a screen like the one shown below is displayed:



You must press "Allow access" for the software to function properly. By allowing the LAN4000 access to your network, it can locate the other stations and communicate with them.

### **Manually setting Windows Firewall "Exceptions"**

The easiest way to create an exception for the Windows Firewall is to launch the firewall and delete the current exception (if it exists) from the list of exceptions and then relaunch the LAN4000. You should see a dialog similar to the one above. Select "Allow access". If this does not work, follow the

instructions below:

### **Windows XP**

1. Press the "Start" menu button and then select "Control Panel".
2. Select "Windows Firewall".
3. Click on the "Exceptions" tab.
4. Press the "Add Program..." button.
5. A list of installed programs is displayed. Scroll down until you reach "LAN4000 Client.exe" or "LAN4000 Admin.exe" and select it.
6. Press "OK".

### **Windows 7**

1. Press the "Start" menu button and then select "Control Panel".
2. Select "Windows Firewall".
3. Click on the "Advanced Settings" tab.
3. Select "Inbound Rules" from the left side of the dialog.
4. Select "New Rule..." from the "Inbound Rules" area on the right side of the dialog.
5. Select "Program" and then "Next"
6. Select "This program path:" and press the "Browse" button. The default location of the LAN4000 software is "[C:\Program Files\Comlite\LAN4000](#)" or "[C:\Program Files \(x86\)\Comlite\LAN4000](#)" if you are running a 64-bit version of Windows.
7. Press "Next".
8. Select the "Allow the connection" radio button and press "Next".
9. Select the appropriate checkboxes (Domain, Private, Public) for "When does this rule apply?". The default is for all of the entries to be checked.
10. Press "Next".
11. Enter a name and description for this exception, like "Comlite LAN4000".
12. Press "Finish".

Once the rule is created, it can be edited by selecting it from the list of inbound rules. Once selected, a list of options for this rule is displayed on the right side of the dialog. Select "Properties" to edit the rule.

### **Button response is delayed**

The primary reason for a significant (more than 5 seconds) delay is usually because either a firewall is "blocking" the LAN4000 from communicating or a PC has suddenly disconnected from the Admin station (by crashing or being turned off by shutting down because of a low battery). The LAN4000 Admin will detect this disconnect and drop the PC from the Connection list, but this process may take up to 20 seconds. Once the PC is removed, button response times should return to normal.

**NOTE:** If the offending PC reboots and reloads the LAN4000 software before a button is pressed, there may be two entries for the same PC in the Connection list. This is normal. One of these entries will be removed after a button is pressed (but it may take up to 20 seconds).

## Intermittent Connectivity - Admin station drops client stations

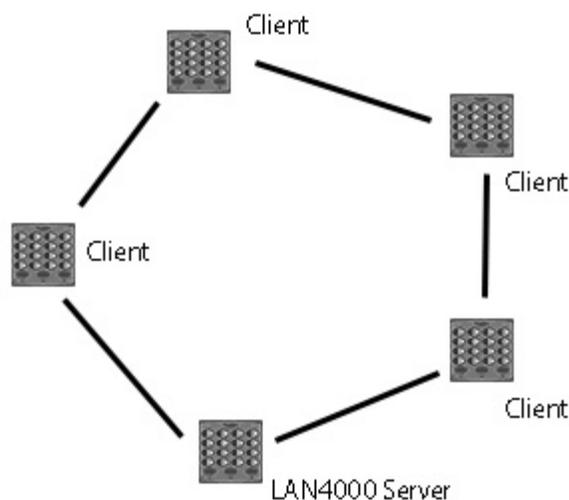
First, verify that the Administrative station can communicate with the network. The Connection light should be on and the status should indicate that the Admin station is connected to the network. Second, launch a client station and verify that the station connects to the Admin station. The Client station name should appear in the Admin station status screen. Third, press a button on the client station. If a communication error occurs, verify that an exception has been created for the client (see the section on firewall exceptions below).

If no communication error occurs, press a button on the Admin station. If a communication error occurs then the Admin station may need a firewall exception.

**NOTE:** Comlite Systems recommends that the Administrative station be installed on a Windows 7 PC. The networking is more complicated than on a Windows XP PC, but it is also much more stable - especially with .Net 4.0 installed.

## Networking

The Comlite LAN4000 is a Windows XP, Vista, and 7 application that only requires that Microsoft .Net 4 be installed to operate. Once installed, the LAN4000 Client Stations and Administrative Station will automatically locate each other through a process called "Discovery" that is built into .Net 4.



By using Discovery, the LAN4000 automatically locates every other station on your network and automatically configures itself to send and receive button press and text messages.

**NOTE:** It is very important to press "Allow access" when prompted by the **Windows Firewall** the first time the LAN4000 is launched! This allows the program to locate and communicate with the other stations on the local area network.

### Proxy Servers

Although it is not common in small offices, a proxy server may be used to filter network computer access to and from the Internet. A proxy server is a computer that has a specialized program that captures the outbound (to the Internet) traffic, compares it to a list of approved Internet locations, and if the location is approved allow the message to be sent. This message is usually a page request from a web site, but could also be FTP or email or specialized messages. Messages that are disallowed are rejected while approved messages are forwarded to the Internet site.

A proxy server also filters inbound (from the Internet) traffic to make sure unwanted messages do not enter your network. These messages could be spam, push notifications, or web pages or email with embedded virii or worms. These messages are rejected while good messages are forwarded to your PC.

For a proxy server to work, all PCs on the network must be **routed** to that server. In other words, Internet traffic must go to the proxy server and then to the Internet rather than to the Internet directly.

The LAN4000 can be configured to use a network proxy server. If your network uses a proxy server to filter Internet connections, select either **Use Default Settings** or **Specify Proxy**. Basically, select the entry that matches the method that your browser uses to locate the proxy server on your network.