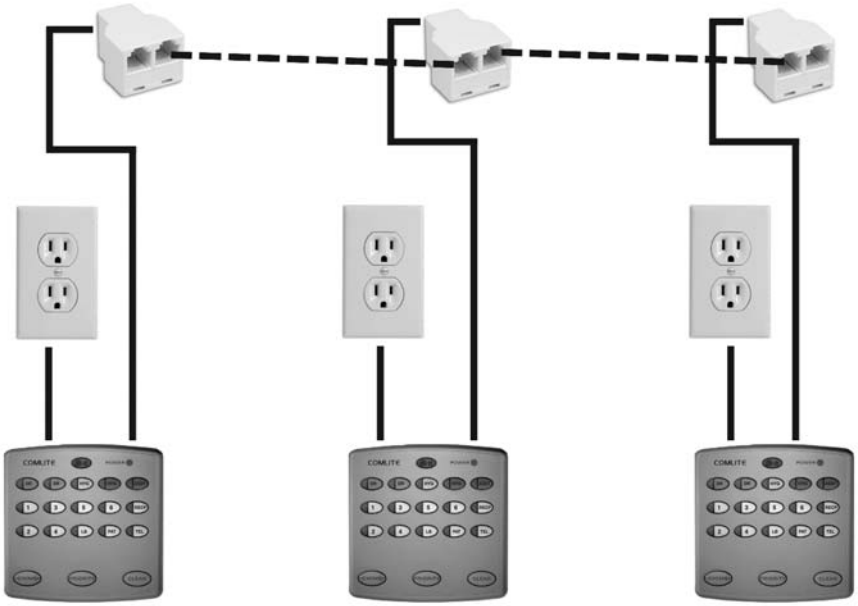
COMLITE
SYSTEMS

LCS4000/LAS4000
Installation & Operation Guide

LCS4000/LAS4000 HARDWIRE INSTRUCTIONS

Hardwiring is accomplished by connecting the center pair of pins on type RJ-11 telephone jacks in series, as shown below. Connect all #3 pins together, and all #4 pins together. Use short telephone wire jumpers to connect the wall jacks or three-way in-line couplers to the units. It is best to use commercially manufactured telephone wire.



Congratulations on choosing the Comlite LCS4000/LAS4000 for your office communication needs. The LCS4000/LAS4000 is a state-of-the-art, light-coded message system specifically designed for the professional office environment. Easy to learn, and simple to use, the LCS4000/LAS4000 increases office efficiency by streamlining communications.

The LCS4000/LAS4000 system provides a quiet, efficient alternative to the confusion and distractions common in busy professional offices. Your new "silent partner" gives you discreet access to what's going on in the office while freeing you to tend to patients or clients.

We hope you will be pleased with your LCS4000/LAS4000 system. If you have any questions, or need assistance, call our Customer Service Department at:

1-800-899-4741

©2006 Comlite Systems. All rights reserved.

No part of this publication can be reproduced, transmitted, transcribed, stored in a retrieval system or translated in any form by any means without the prior written consent of Comlite Systems.

INTRODUCTION

The LCS4000/LAS4000 is a microprocessor-based, light-coded information system that communicates using your existing AC electrical wiring. Because it uses lighted buttons to transfer information, it provides a quiet alternative to paging or intercom systems. And because all Comlite units in any system are linked through a common channel, all information appears simultaneously on every unit throughout the office. (The LCS4000/LAS4000 can also be hardwired outside the AC electrical system. Contact Customer Service for details.)

To use the LCS4000/LAS4000, you assign your own customized message codes to the 15 light buttons, then send information by pressing these light buttons individually or in different combinations.

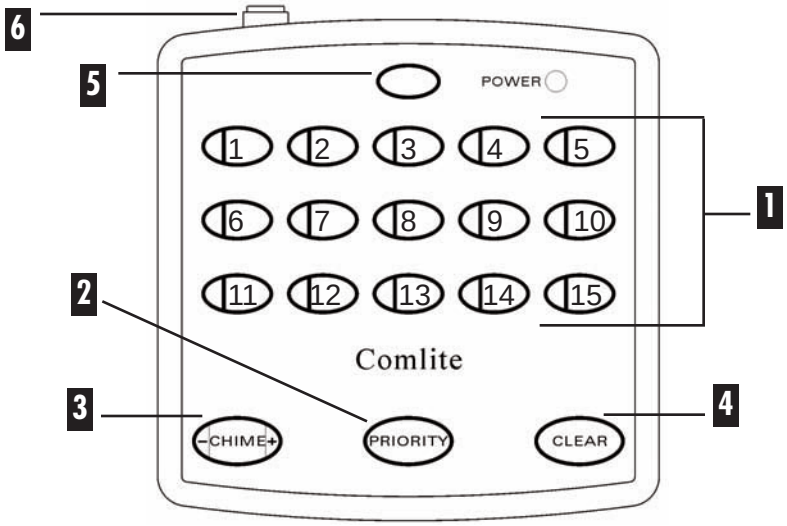
On the following pages, you will find instructions for installing and customizing the units as well as examples of ways to set up your light button message codes.

The first step is to become familiar with the LCS4000/LAS4000 unit.

Each LCS4000/LAS4000 unit has 9 basic components:

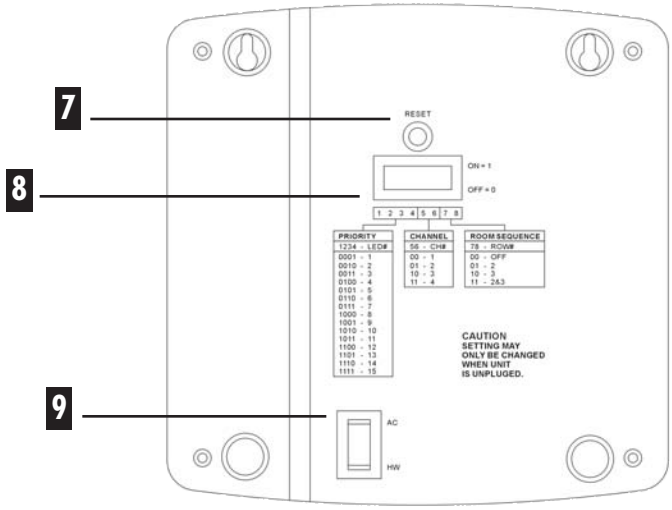
	Component	Usage
1	Fifteen Light Buttons	send and receive messages
2	Priority Button	send an emergency signal/talk (LAS4000 only)
3	a) Chime Button	produce manual chime signal
	b) Chime - Button	decrease chime volume
	c) Chime + Button	increase chime volume
4	Clear button	clear all lit message buttons
5	Infrared Sensor	remote control operation/listen light (LAS4000 only)
6	RJ11/Phone Jack	hardwire communication
7	Reset button	resetting the unit
8	DIP Switches	customizing the unit
9	AC/Hardwire Switch	selecting communication method

Take a moment to review the diagrams below for the location of each of the components listed in the table on the previous page.



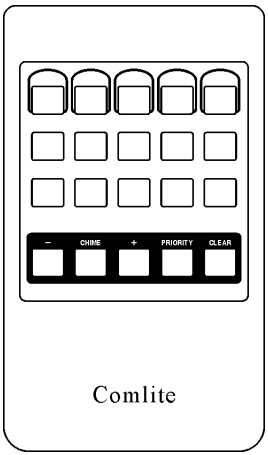
Front of LCS4000/LAS4000 unit

Back of LCS4000/LAS4000 unit



OPTIONAL REMOTE CONTROL UNIT

Customers have the option of purchasing remote control units (see illustration) for use with their LCS4000/LAS4000 main units. The remotes allow operation of all the functions from anywhere within line-of-sight of a main unit, and the remote's buttons function exactly the same as the main unit. The remote only works with LCS4000/LAS4000 series models, and not with earlier Comlite systems, and is an optional item.



SET UP

There are two steps in the system set up:

• Installation • Customizing the Units

Installation

Before you begin, check to make sure you have received an Installation Kit including screws, anchors, labels, rubber feet, and a template.

1. Plug the unit into any standard outlet.

DO NOT USE A POWER STRIP THAT HAS SURGE PROTECTION.

2. Test each light button.

Press Once . . . . . steady light
Press Twice . . . . . flashing light

Press 3 times . . . . . light extinguishes
To Clear All . . . . . press Clear Button

3. Test the Chime by pressing it once and causing it to sound. Adjust the volume of the chime to your preference. (Note: After the unit is unplugged, the volume resets to the middle range.)

4. Verify the units are communicating properly by entering a test message. Press any combination of light buttons on one unit and make sure the same light buttons are lit on every other unit. If you discover any problems, please call Customer Service.

5. For counter or desktop installation, attach the rubber feet provided in the Installation Kit. For wall mounting, use the template, screws, and anchors provided in the Installation Kit.

Customizing the Units

You may decide to change some of the standard settings to customize your units. If you choose to do so, the options available to you are:

1. Labeling the light buttons

2. Changing the designated Priority Button (used to signal emergency alerts) for each unit.

3. Changing the channel. (Factory default is channel 1.)

4. Customizing the unit for Room Sequencing, which is used to show room status. (Factory default is Memory Sequence Off.)

5. Setting up the voice function on the LAS4000.

Accessing the Customizing Options

First, unplug the unit from the outlet. On the back of each unit you will see 8 switches. The first four switches designate the priority button of this unit, the next two switches designate the channel of this unit, and the last two switches designate either or both of the bottom two rows of message buttons for memory sequencing (see the back of your LCS4000/LAS4000 unit for details on switch settings).

Light Button Labeling

Use the adhesive labels provided to customize the system to your specific needs. Generally a button for each person and each room within the office works well. Colored buttons for people and white buttons for places is also a good idea. Using combinations of people buttons and places buttons will allow you to communicate patient/client arrivals, assistance needed, hygiene checks, nurse needed, phone calls, etc.

Priority Button Selection

During normal operation under factory default settings, you can send an emergency signal by pressing Priority and then the light button that designates where the emergency is. The user-selected light button for that unit will begin to flash at a faster rate than any other flashing light. This will happen on every unit. In addition, the chime will sound at maximum volume on every unit. Any messages currently on the system will be overridden and stored. The stored message returns when the Priority Signal is cleared.

Alternately, you may customize every unit's switch settings so that each unit's light automatically flashes when the Priority Button is pressed, chiming at maximum volume and overriding existing messages. Under this mode, when Priority is pressed to signal an emergency alert, the unit automatically sends the corresponding light determined by the customized switch setting. Refer to the table (for switches 1-4) on the back of your LCS4000/LAS4000 to set the Priority Button for each unit.

Channel Selection

Each unit comes from the factory set on the first channel. If you need to change the channel for your system, refer to the switch setting on the back of your LCS4000/LAS4000 unit. The AUDIO channel is available only on the LAS4000 model.

When changing the channel, you need to make sure **all** the LCS4000/LAS4000 units have been changed to the **same** channel.

Room Sequencing

Room Sequencing is used to:

1. Show which rooms have patients and which ones are available.
2. Show the order in which patients in these rooms should be seen.
3. Show which room the Doctor is in at any given time.

As patients are placed in exam rooms/operatories, the light buttons for these rooms are pressed and entered into memory. Room Sequencing allows the unit to record the order that these buttons are pressed. Then, by flashing these buttons in sequence, it allows the Doctor to see the order in which the patients need to be visited. The blinking button indicates where to go first. The other buttons lit indicate other rooms in which patients are waiting to be seen. When you press the blinking button, it turns off and the next button entered in the sequence begins to blink. All units in the system should have the same switch settings. (See the back of your LCS4000/LAS4000 unit for switch settings.)

You may now have row 3 in a five-button sequence, row 2 and 3 in a ten-button sequence, or rows 2 and 3 in separate five-button sequences. Following are the appropriate settings for switches 7 and 8 (0 = off; 1 = on):

Switch 7-8	Function
0-0	All sequencing off
0-1	Row 3 sequencing on only
1-0	Row 2 and Row 3 in separate 5-button sequences
1-1	Row 2 and Row 3 in same 10-button sequence

If you already have some sequencing buttons lit, but need to enter an unlit sequencing button as a higher priority, you can press the PRIORITY button and while holding it down, press the button you want to have the highest priority. This button will now flash faster to indicate its priority over the others in the sequence. To clear this button, press it once.

You can clear a selected sequence by pressing any button in the sequence while pressing and holding down the CLEAR button.

All switch settings must be done with the unit is unplugged.

LAS4000 Voice Intercom Instructions

The Comlite LAS4000 units combine the benefits of light signaling with a voice intercom for specific, detailed communications. You can talk to one room in the office, a couple of rooms, or every other room that has an LAS4000 unit. The conversation can be two-way, giving all units in the communication the option of talking. (NOTE: The remote control is disabled during audio mode.) Following are instructions for initializing and utilizing the voice function.

1. Each unit in the system needs to be identified by one of the light buttons (LED's) on the front of the panel. To give each unit in you system a unique setting, use the PRIORITY switches on the back of each unit (switches 1-4). Switch settings refer to LED numbers. The top row of light buttons are LED's 1-5, row two are LED's 6-10 and row three are LED's 11-15. For example, if you have labeled row two 1, 2, 3, 4, and 5 to identify rooms, the following settings would identify those units:

    a. Room 1 (LED 6) switch setting = 0110
    b. Room 2 (LED 7) switch setting = 0111
    c. Room 3 (LED 8) switch setting = 1000
    d. Room 4 (LED 9) switch setting = 1001
    e. Room 5 (LED 10) switch setting = 1010

2. To access the talk mode, press and hold the PRIORITY/TALK button and then press the CLEAR/MODE button. The mode light will flash on all stations indicating you have switched to the talk mode. Also, the light button indicating the room that is accessing the talk mode will flash. If there is a light button message on the unit at this time, it will be overridden and stored in memory.

a. To talk to every station in the office at the same time, press your unit's light button (it should be blinking). All lights on the panel will come on indicating you are talking to all stations.

b. To select specific rooms to talk to, press the light button that indicates the room. It will light steady indicating that you can talk to them. You can select as many rooms as you wish.

c. To speak, press the TALK button. Only one unit can talk at a time. All active units can also press TALK to speak.

d. When finished, the person who initiated the talk mode must press CLEAR. or press the CLEAR button and any LED button on any unit. Any messages that were in the light signaling mode, are now redisplayed on the units.

Troubleshooting

If you encounter any of the problems listed below, try the outlined steps first. If there is still a problem, a Customer Service representative will be happy to help you.

1. **The Chime Doesn't Sound**
   The Chime should sound on each unit approximately 5 seconds after the first button of a message has been pressed. If this does not happen, check the chime volume.

2. **All Units Are Not Communicating**
   Ensure all units are on the same channel. Also ensure no units are plugged into a power strip with surge protection and that the AC/HW switch is selected for the proper setting. If you are on a 2- or 3-phase electrical system, call Customer Service to inquire about an optional RF bridge to correct this problem.

3. **Interference**
   An ultrasonic instrument cleaner may cause communication signals to be blocked on some or all Comlite units. If this is happening with your system, Comlite can provide you with a filter designed to eliminate this interference.

To determine if you have this interference problem, follow these steps:

First, make sure each unit is working properly when the ultrasonic cleaner is turned off. If so then:

1. Turn the ultrasonic cleaner on.
2. Send a signal from each Comlite unit.
3. An interference problem can cause these results:

   - Messages are not transmitted.
   - The wrong lights illuminate.
   - All stations do not clear properly.

Listen LED

For LAS4000 units, note that the LISTEN LED should be on only if you are selecting AUDIO MODE or are recceiving an audio message from another unit. If a unit in audio mode has the LISTEN LED lit all the time, it indicates noise in the AC line. I can affect audio quality or prevent proper communiction.

Filter Installation

In most cases, line noise interference can be corrected by installing a Comlite Line Noise Filter on the device causing the problem. Most such problems are caused by ultrasonic cleaners, computers, copiers, printers or other major equipment. Filters can be ordered though the Comlite Customer Service Department. The filter is installed by plugging the problem device into the female ind of the filter, then plugging the filter power cord into an electrical outlet. Please call customer service if you require assistance.

Warranty and Repairs

The LCS4000/LAS4000 System carries a One-Year Limited Warranty.

There are no user-serviceable parts. Unauthorized repair or alteration shall void the Comlite Systems, Inc. warranty. Warranty covers all repairs due to normal component failure or defects in workmanship.

All repairs will be done at Comlite Systems' Customer Service facilities. The customer pays shipping or postage for returns. Comlite, Inc. will pay all freight and postage back to customer's facility.

Repairs due to adverse use, acts of God, or carelessness will be charged to the customer.

Any stations returned for repair must be accompanied with a return authorization number and brief note explaining the problem. Return authorization numbers can be obtained by calling our Customer Service Department.

COMLITE
SYSTEMS