DIGIMAT IP Nurse Call system

User Guide

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1. GENERAL OVERVIEW AND FUNCTIONS

Digimat IP Nurse Call Systems, has been designed and manufactured for the purpose of informing the personals working in hospitals, health care institutions and home cares of an a emergency situations immediately, shortening patient 's waiting for intervention period and responding to patient requests quickly.

The products is suitable for use in the hospital environment. The units should be installed in each patient room when an emergency situation occurs a patient uses on of the units to make an emergency call which will be shown on the computer's screen at the nurse office and at the same time, the corridor lamp above the patient's room's door lits in different colors according to the situation inside.

In the bedhead call units and handset buttons, calls can be made by pressing the section with the nurse's picture. WC/ Bathroom buttons are conveniently manufactured for wet walls. In order to use the WC/ bathroom buttons the patient shall only have to pull the cord handle. The calls made from the bedhead call units and the handset buttons will be displayed on the nurse's screen differently.

When a nurse responds to the call and enter the room she must pass her smart card on the Room Control Panel that comes with IP Nurse Call System in order to turn off the call warning and informing the system that the call has been answered. When the card is read by the panel, the red light of the door lamp turns to green indicating that there is a nurse in the room. After the nurse finishes handling the emergency situation she should press the (green tick icon) on the bedhead call unit in order to inform the system that the situation has been handled. When the tick icon is pressed the corridor lamp goes off and Room Control Panel returns to the standby screen.

Using this System

- Confusion in emergency calls is avoided in hospitals.

- It provides the immediate notification in case of emergency situations that require an urgent intervention.

- It ensures the rapid responding to the patient's requests

- Because the system communicates over the IP network, it is possible to check the status of the parts forming the system instantly.

2. SYSTEM CONTENTS

Bedhead Call Unit

It is the unit that gives a light and audio warning that allows the nurse to be called from the patient's room.

Features :

- This product is also where to the handset call unit is connected.
- It has an ergonomic structure so that it can be attached to the built-in junction boxes.
- The RJ45 socket allows easy installation.
- ABS raw material used.
- Emergency call and reset buttons are constantly illuminated to be easy viewed at all times.

Handset Call Unit

In cases where the patient is not able to use the bed head call unit, he can use this handset device without having to get up of his bed.

Features :

- It has a continuously illuminated nurse call button, and a button to control the room lighting and book reading lamp.
- It has a cable to connect it to the bedhead call unit.

WC / Bathroom Call Unit

Is a corded device that is used to initiate an emergency call from WC/ bathroom in patients' rooms.

Features

- It has a fabric cord that ends with a plastic handle which makes it easy to pull and a make an emergency call
- Its box designed to be easy fixed on wet walls

Over-door Corridor Lamp

It is a warning lamp which can be lit with different colors according to the call situation made from the patient's room.

Features

- It can light up with three colors, red, green and blue.
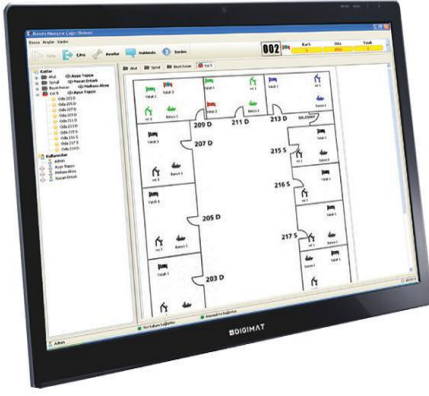- Can easily be mounted over the room's door.

Room Control Panel

It is the unit that feeds and controls the Bed head call unit, WC/ Bathroom call unit and the over-door warning lamp in the patient's room.

It ensures that by reading the staff cards, routine control, blue-pink-white code, consultation call initiation and termination are performed visually and audibly.

Features

- The room control unit is suitable for built-in or surface mounting.
- Has a 3.5 touch screen.
- Supports 2 bed, 1 WC call unit as standard.
- It is able to define up to 99 addresses in total, for that it is suitable hardware.
- Patient information in HBYS software can be monitored from the device screen when an authorized employee pressed the bedhead call buttons on the screen.

Nurse Call Panel

Is the unit in the nurse's office that responsible for displaying call situations at the nurses' rooms and the notification of the

Features

- It has a new generation of call panel touch screen and a hardware that can work together.
- It can control the IP addresses and the room control unit that connected to it.
- can display the faults and information messages
- Emergency, WC/ Bathroom and normal room calls can be followed from this panel.
- Any transaction that passes through the system is recorded. Received records can be reported in detail.
- There are adjustable number of room follow-up icons on the panel's interface. With these icons, call status can be monitored instantaneously.

Emergency Service Consultation Doctor Call Panel

Because of the need for the consultation under the emergency department this unit provides the ability to call the doctor of the related branch and record the service period of the doctors.

Features

- It has a 21 inch easy to use touchscreen.
- It contains an integrated card reader.
- Any transaction that passes through the system is recorded. Received records can be reported in detail.

3. SYSTEM INSTALLATION AND SETUP

3.1. Bedhead Call Unit

In order to be able of using the bedhead unit correctly cable connections must be made, the device has a backlight to enable the selection of the device with the cable connection attachment. In order to start the call process the red icon shown in figure 1 must be pressed. When the call is started, it gives audio and light warning. In order to make the nurse finds and reaches the room that started the call easily the over door (door-mounted) warning lamp lights with red light. The nurse arrives to the room, reads the card in the room control panel, and after the completing the intervention she ends the call by pressing the green button on the relevant bedhead call unit. Even if the nurse didn't press the call cancel button, the system will automatically turn off after 2 minutes.

Figure 1 : Bed head unit.

(**Nevertheless if the nurse didn't pass her smart card to the reader of the room control panel there is no way the call could be terminated**).

(If the handset unit is not attached to the bed head call unit, the letter "E" flashes next to the related bed head call unit in the room control module display. If the handset is attached again, the letter "E" disappears).

3.2. Handset Unit

In order to use this device the bedhead unit should be placed and the cable connection is established. The device has a backlight to enable the selection of the device with the cable connection attachment. In order to be able to send a call the button with the red nurse icon shown in figure 2 must be pressed, as the call starts it generates audio and light warning. In order to make the nurse finds and reaches the room that started the call easily the over door (door-mounted) warning lamp lights with red light, the nurse arrives to the room, reads the card in the room control panel, and after the completing the intervention she ends the call by pressing the green button on the relevant bedhead call unit.

Figure 2: Handset Call Unit

There is no cancel (green tick) button in the handset call device, the buttons under the nurse call initiation button are used for optional lighting, and it is designed to control the room lighting and book reading lamp.

3.3. WC/ Bathroom Call Unit

Cable connections must be established in order to use the Wc/ Bathroom Call Unit. In order to start a call, the cord handle must be pulled as shown in figure 3. When the call is initiated, the red led on the front face begins to flash. In order to make the nurse finds and reaches the room that started the call easily the over door (door-mounted) warning lamp lights with red light.

The nurse arrives at the room, reads her card into the room control panel, and cancels the call by pulling the cord handle in the WC / Bathroom call unit. Furthermore, after 2 minutes of the nurse's reading her card to the room control unit the system will automatically cancel the call.

Figure 3 : WC/Bathroom Call Unit

3.4. Door Mounted Warning Lamp

This lamp shown in figure 4 is manufactured for making the nurse finds and reaches to the call initiating room easily.

In the case of a call situation it will generate a constant Red light. In addition, it will lights with a constant Green light to indicate that there is an Intervention in progress.

And if an emergency consultation starts at the Room Control Panel it will lights with discrete Red - Green light.

Finally when White, Blue, or Pink code is started the lamp will generate a Blue light.

Figure 4 : Door Mounted Warning Lamp.

3.5. Room Control Panel

The using of the Room Control Panel requires the completion of the device installation and the setup of its cable connections. When the device starts to operate, the standby screen will appear as shown in Figure 5. On this standby screen, MENU and EMERGENCY keys will show up.

Figure 5: Room Control Panel.

The identification of the device and server IP addresses to the room control module:

The previously set device IP address is entered to the server computer. This IP address is the same for all room control modules.

Setting the Date and Time:

This section can be used in case of there is no connection with the server and you want to set the time and date manually.

Giving MAC address, GATEWAY (gateway), MASK (mask) addresses:

MAC address is given during production. It can be changed if desired.

The address of GATEWAY is the gate to communicate with the external network. It can be changed if desired.

The MASK address is used for restriction or expansion of the IP. It can be changed if desired.

Adding the buttons:

Bed Head, WC/ Bathroom units' buttons can be programed from this section.

The bedhead units are given an ID number from 1 to 8.

The WC/ Bathroom units are given an ID number from 9 16.

Adding buttons section:

Button identification is done according to the IDs given above. In order to be able to assign a button's ID, first we must select a number to be assigned from the room control module. Then the call is made from the corresponding button. If no problem occurred, you will hear a confirmation tone three times. This way, the buttons is being identified.

Removing saved buttons:

This section is used when the numbers of the buttons connected to the Room Control module are wished to be deleted. However if the registered buttons are deleted, no call could be received from them unless IDs will be given to the buttons again. The red lamp in the background of the buttons whose IDs have been deleted will flash.

Reset:

This section is used to reset the settings in case of problems that may occur in the device's software. After reset, all the setting must be done all over again

Master Card:

In case there is no connection with the server, the call cancellation operation or logging into the setting section, could be made from this section by master card identification. It works locally.

About:

It is the section where the company's name and e-mail address is located. And the model of the device is written.

Restarting the device:

In case that the device is not getting the configurations or its inability to read the buttons this section could be used to restart the device.

Changing the Password:

This section used to change the password entered when logging into the system.

Once the device is set up, when a call arrives it will indicate by audio and light alert the button device that made the call. The nurse goes to the room initiated the call, reads her card to the room control panel or instead of the card she could login with a password. If the call comes from the bedhead call device, the nurse can terminate the call by pressing the call cancel key. If the call is initiated from the WC /Bathroom call device, she could pull it's cord handle and terminates the call.

If the nurse wishes to initiate an emergency consultation call, she would have to login to room control panel by reading her card or entering a password and then initiate the call

3.6.   Wireless Data Transmitter

In order to operate the Wireless Data Transmitter, it should be connected to the server computer via RS-232 cable and feed with 220 volt power. The Wireless Data Transmitter is placed at certain points of the hospital and sends the message obtained from the server computer to the pager device

3.7. Pager

It is a portable mobile message receiver that shows the incoming messages. Records the messages' receipt time. It has different melody and vibration options.

Upper-lower direction key: Used to navigate through messages and menus.

Function selection button: To enter the function menu and to make a selection.

Exit button: To exit from the function menu.

4. POSSIBLE PROBLEMS AND SOLUTIONS

Problems That May Occur	Possible Solutions
If there is no image on the room control panel	**1.** Check the system power connections. **2.** Check the whether there is energy in the cable plugged in the adapter. **3.** Try running the device with a different adapter If the problem persists, please inform our technical service.
If the image is not accurate on the Room Control Panel	**1.** Check the RS-485 cable connections. **2.** The bedhead call unit, WC/ Bathroom or the warning lamp might be defective. If the problem persists, please inform our technical service.
If "LINK" word appears on the room control panel screen	**1.** Check the data cable attached to the room control module. **2.** Check whether the switch connections have been made. **3.** Check that the switch is active. **4.** If "LINK" word appears green, the problem is solved. Otherwise please inform our technical service.

If "HTTP" word appears on the room control panel screen	**1.** Check whether the switch is active, if so then the device might not be able to connect to the server. **2.** Check that the device IP is correct. **3.** Check that the http server IP address is correct. **4.** Check whether the server computer is turned on. **5.** Check whether the server computer's firewall is open or if there is an affecting application running If the problem persists, please inform our technical service.
If "HTTP" word appears green on the room control panel screen but the configuration is not available	**1.** Check the data cable. **2.** If the device is trying constantly to get configuration, check for IP conflicts on the network. **3.** The MAC addresses of the devices may not have been entered. Check it out. If the problem persists, please inform our technical service.
in case of black light flashes on the room control panel standby screen	**1.** This might mean that the button ID is not assigned. Check it out. **2.** The buttons might not be attached to the T shaped cable. Check it out. If the problem persists, please inform our

	technical service.
If the "Database fault" message appears on the standby screen of the room control panel	Contact the technical service.
If the touch screen is not working	Contact the technical service.
If the card reader is not working	Contact the technical service.
if Bedhead and WC/ Bathroom call devices can't make a call	**1.** Check the cable connections. **2.** Check that the ID of the button is correct. **3.** Since more than one device's ID cannot be the same, one of them might not work. In this case, you must delete the buttons stored in the device memory and re-assign the ID If the problem persists, please inform our technical service.
in case of sound continues to come from the bedhead and WC/ bathroom devices after they make a call	**1.** Check the cable connections. **2.** Try with a different bedhead call unit. If the problem persists, please inform our technical service.
If there is continuous sound	**1.** There may be a communication problem

coming from the Room Control Panel	between the buttons. If the problem persists, please inform our technical service.
if when login with a smart card to start or end a call the device shows a (Invalid / unauthorized / card inquiry) failed warning	**1.** The card may be undefined at the server computer. Redefine the card. **2.** If the card is defined but not selected in the related floor plan, it may cause problems. Personnel authorization should be made on the original plan. If the problem persists, please inform our technical service.
If the device is locked while receiving the configuration	**1.** There may be a problem with the software of the device. Disconnect the power connection and restart the device. If the problem persists, please inform our technical service.
If the device says "waiting for configuration"	**1.** Select "Restart" from the device menu and restart the device. If the problem persists, please inform our technical service.