DIGIMAT Wireless Nurse Call system

User Guide

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1. GENERAL OVERVIEW AND FUNCTIONS

Digimat Wireless 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. 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. All made calls are displayed as room numbers on the LED Display (dashboard). The created calls are listed in order with the last call shown in large size on the home screen and the other calls shown in small size on the side screen. In case of another emergency call comes, this call will be displayed on the main screen and the old last call goes to the side screen at the top of the other calls.

When the nurse call button is pressed, the door mounted lamp lights up red and the assigned room number lights up on the display, moreover an audio warning is produced. The nurse sees either the red light on the warning lamp or the number of the room that made the call and goes to handle the situation.

When she enters the room she should press the green tick symbol on the bedhead call unit, this way the red light of the door lamp and the related display leds turns to green indicating that there is a nurse in the room. After the nurse finishes with the patient she should press the green tick once more. By doing that the call will be cleared from the display and the warning lamp shut off.

If the nurse finds the situation needs an emergency help she could first press the green tick icon then the nurse call button on the bedhead unit. This case, the assigned room number on the display room will appear with the word "EMERGENCY" and the display's LED will light with blue, while the warning lamp will flash with blue color. And as always by pressing the green tick icon after the intervention has been made, the call will be cleared from the display and the lamp turns off.

In case of an emergency call the panel produces a short discontinuous sound whereas in case of a normal nurse call produces long discontinuous sound.

The panel produces a specific warning as an indication of low battery.

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.

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. It performs the call initiation and termination.

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.

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

It 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

Door Mounted Corridor Lamp

It is a warning lamp which can light 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.

Nurse call Panel

It's the place on which the rooms that made the call, the nurse room information, the date and time and the emergency consultation information is stored and displayed.

Features:

- It is an intelligent unit with microcontroller inside.
- It works on its own and can be connected to the computer via the converter device. It contains a Wireless Mode setting.
- By defining the floor address it can respond to the information coming from the call units and display them on the screen.
- There are 6 Dot Matrix displays with 5 lines in this panel.
- The system communicates with the address modules via wireless Rf -433 Mhz.
- Other settings can be made with the keys found on the panel so there is no need for a computer.

RF Transmitter Device

It is used to strengthen the call signal in cases that call signals could not reach the panel due to physical reasons.

Features:

- It broadcasts 433 Mhz in accordance with KET regulations.

3. SYSTEM INSTALLATION AND SETUP

3.1. Bedhead Call Unit

Bedhead call unit is wireless and works with battery. 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. After the calls is started from this device it starts showing on the nurse call panel.

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. After the completing the intervention she ends the call by pressing the green button on the relevant bedhead call unit.

Figure 1: Bed head unit.

3.2. Handset Unit

In order to use this device the bedhead unit should be placed and the cable connection is established. In order 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. The room number that sent the call will appear on the main screen of the Nurse Call Panel. 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 and after the completing her 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

This device is wireless and works with battery. Calls that comes from the WC/ Bathroom device always have a priority over the other calls. In order to start a call, the cord handle must be pulled as shown in figure 3. The room number from which the call came and the "EMERGENCY" word alternately displayed on the Nurse Call Panel. When the call is initiated, the red led on the front of the WC/ Bathroom device starts flashing.

Figure 3: WC/Bathroom Call Unit

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 and cancels the call by pulling the cord handle in the WC / Bathroom call unit. When the call is terminated, the warning light on the door turns off.

3.4.   Door Mounted Warning Lamp

This lamp shown in figure 4 is manufactured for making the nurse finds and reaches the call initiating room easily. In the case of a call situation it will generate a constant Red light. But, it will lights with a constant Green light to indicate that there is an Intervention in progress (there is a nurse in the room). And finally when there is no call it will turn off.

Figure 4: Door Mounted Warning Lamp.

3.5. Nurse Call Panel

The nurse call panel shown in figure 5 works with plug-in. The settings of the system must be done as described in the following sections.

ATTENTION! In order to be able to receive a call in the wireless system, you need first to register the call buttons and introduce them to the system. The system will not respond if a non-identified call unit made a call.

Figure 5: Nurse Display Panel.

The functions of the buttons shown in figure 6 on the device from left to right (1,2,3, ... 7) are as given below :

Figure 6: Nurse Display Panel's keys

1   **Exit:** Used for exits from the menu.

2   **Input:** Used to enter to the first menu and its setting, at the same time used as a confirmation key.

3   **Forward:** to navigate through menus.

4   **Back:** Allows navigate backwards through menus. Works in reverse with the forward button.

Setting the Date

5   This key is used to switch between the taps and at the completion of the setting used as confirmation key.

6   Is used to increase the value.

7   Is used to increase the value.

The function settings are controlled by the buttons on the back of the LED display panel. After the pre-installation is completed, the following settings must be made so that the process can be valid. When navigating through the menu the blue LED indicate which line is active, pressing it again will allow entering to the related setting. When the device is plugged in, the display will look as shown in Figure 7 with the current time and date settings.

Figure 7: device's standby case

Menu tabs are explained as follow:

TYPE: Used for operating mode selection. **RF 5** mode should be selected from the menu for the system setup. To set up the device, enter the menu tab (with the number 2 button). 3 and 4 buttons are used to toggle between the tapes and the **RF 5** portion of the type menu is for confirmation while exit is made (with button 1).

ENTR: To perform the new button identification, button change and delete operations, the ENTR tab is entered and the message Press btn is displayed. With the appearance of this message the call button on the device to be introduced to the system should be pressed. On the screen you will see the ID given by the manufacturer company, right below it you will find the tab where you can enter the room number. The letters b and t will also appear on the screen. The letter B is given to identify the bed head unit, and the letter t is for WC/ Bathroom call units. 300 buttons can be identified to the system at the same time, 5 of them are displayed in order.

If the button is already identified by the device: To identify the call button to the system, login to the **Chn** menu with the login button.

A 4 line screen will appear in front of you, if you want to define a bedhead or WC/Bathroom call unit, you should first enter its type followed by the ID you want to give it.

To delete a defined number: you should enter the ENTR menu, and next start a call from the device you want to delete then enter to the **dEL** menu. This case the device ID will be reset and it cannot send a call any more. If you want to receive calls from that button again you would need to define a number for it again.

ATTENTION! When the "del" option is selected the device's record will be permanently deleted. There is no undo key.

CLEAR: the **CLr** tab allows you to clear all calls that are on the screen and the device. When press it you will see a "yes-no" tabs on the screen. If you sure you want to clear the call history, you need to confirm with the "yes" button. The defined id will not be deleted, only the records; if you clear the record, you can continue receiving calls normally. However, if you want to go back from erasing the record you should choose the **no** tap.

RESET: For reset first you should login to **rESt** menu, then choose the **YES** tab from the "yes-no" tabs that will appear. Doing that the device will count to 100, and when the time is up it will be reset to factory setting. However if you choose **No** tab the device will not change.

ATTENTION! When the system is reset, all user settings and call button definitions stored on the panel will be deleted. This process has no go back.

ATTENTION! Do not pull the plug when the device returns to factory settings (it will count to 100 when resetting).

TRN S: in order to use the optionally added pager device you need a data transmitter. This tab is used for setting the frequency value on this data transmitter.

ID_5: this tab shows how many call buttons have been defined by the panel.

BEEP: from this tab you can choose the tone and specify its repetition. Find the "Beep" submenu by using the forward-back buttons and enter this submenu again with the enter button. Find the status you want to select with the forward / back buttons and select it with the enter button.

If you press the tab, **no** then when a call comes on the screen will not be accompanied with any sound.

If you press the tab, **YES** then when a call comes it will be shown on the screen along with a peep sound at certain intervals of seconds.

While if you choose the **1r** tab, then when a call comes on the screen it will only beep once.

And if you choose the **3r** tab, then when a call comes on the screen it will beep three times.

PAGER: it's a wireless telecommunication device that receives and display the digital messages and/ or receives the voice messages. If you want, you can add Pager to your Wireless Nurse Call System.

The panel sends to the pager a message that identifies the name shown on the panel along with the urgency status of the call. The ID of the pager to which the message will be sent from the panel can be set from the "PAGER" submenu.

In order to do that you should login to the menu with the enter button. Scroll to and enter the "PAGER" submenu with the forward and back keys. The 4 digits that appear identify the last 4 digits of the Pager's ID. The complete 7 digits Pager's ID is stored as standard 100xxxx, the digits indicated by X are the ones visible on the screen. Replace these numbers with forward and backward keys to create pager's ID.
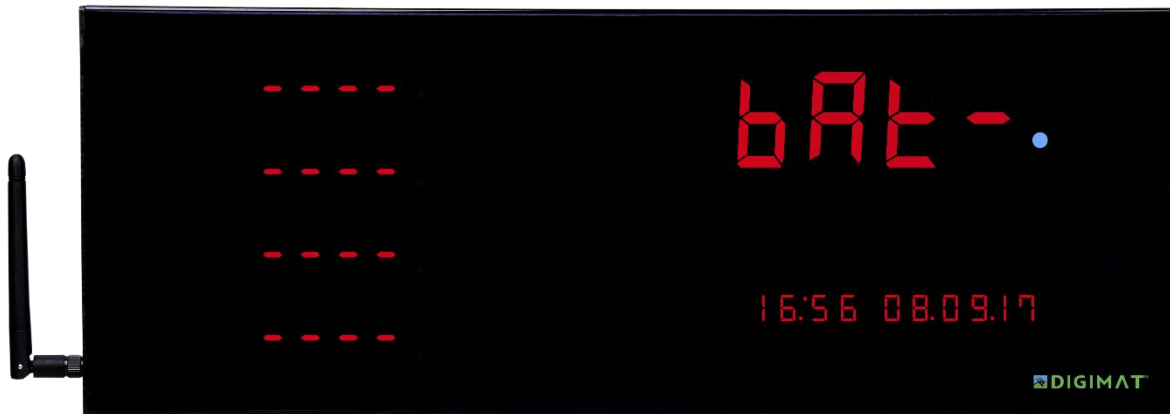
ATTENTION! Pager feature is optional.

Figure 8: the screen warning when battery is low

Device's battery model: CR-2032 coded and 3V metal cylindrical button.

4. POSSIBLE PROBLEMS AND SOLUTIONS

Problems That May Occur	Possible Solutions
There is no image comes to the 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.
The panel doesn't receive calls	**1.** Make sure that the button you are sending call from is registered in the wireless system. **2.** Check the antenna or cable connections. **3.** Make sure that the calling unit is working properly. **4.** Make sure you are not out of the wireless system's range. The transmitter module could be used in the places where the coverage area is insufficient. **5.** Make sure that the buttons are not erased and that the device is not reset. If the problem persists, please inform our technical service.

The panel displays the call information incorrectly.	1. Make sure you performed the ID definition correctly. 2. If the registration was not established correctly, ensure to define the buttons again from the entr tab. 3. If the problem is not resolved, reset the system and perform the settings again. If the problem persists, please inform our technical service.
Panel does not receive new calls while there is a call on it	1. Make sure you did not exceed the call memory capacity. The number of calls held in the panel call memory is 50, so try not to exceed that number. 2. End the displayed calls. If the problem persists, please inform our technical service.
Unidentified characters appear on the screen.	Please inform our technical service.
The function buttons do not work.	Please inform our technical service.
The buzzer is not working.	Please inform our technical service.
Though there is no new calls are starting, there still call	1. Check the call buttons, make sure that the buttons are not plugged in. Try to cut power

coming and being deleted	of the button you suspect it's causing the problem.
	2. Cut off the energy of the parasitic sources that affects the system.
	If the problem persists, please inform our technical service.
Panel is being locked.	Please inform our technical service.
The LED's are not working.	Please inform our technical service.
The button is not being registered	The system can register up to 4500 buttons, make sure you did not exceed this limit.
	If the problem persists, please inform our technical service.

RULES OF MAINTENANCE, REPAIR AND USE

Make sure that you read the User guide carefully before you use the system

- ❖ Keep the device away from heat sources.
- ❖ Be careful not to spill any liquid on the device and avoid any liquid contact.
- ❖ Never expose the device to rain or moisture. Otherwise, danger of electric shock may occur.
- ❖ Use your device as described in the user manual.
- ❖ Please remove the power plug from the outlet when you are not using the device and its accessories.

❖ If needed, have your device serviced and repaired by an authorized service center.

HUMAN AND ENVIRONMENT RELATED WARNİNGS

❖ Keep the device away from heat sources such as radiators and ovens.

❖ Do not throw the device in the garbage box that you use at home.

❖ Due to the adverse effects of harmful components of human and environmental health, electronic devices should not be disposed in the trash can. It must be disposed in specific recycling boxes for electronic devices.

THE MAINTENANCE THAT COULD BE DONE BY THE CONSUMER AND PRODUCT CLEANING INFORMATION

There is no part of the device that can be serviced, in case of malfunction contact your authorized service center or authorized dealer.

PERIODIC MAINTENANCE

Post-warranty technical maintenance should be done only at authorized service stations.

CONNECTION AND ASSEMBLY

The connection and assembly is done by the consumer as presented in the user manual. Please contact the authorized service station for any problems that may rise in connection and assembly phase.

DEVİCE LIFETIME

In order to fulfill the functions of your device, " USE LIFE " is 7 years in terms of replacement parts.

SERVICE COVERAGE

SERVICE SCOPE: TS 13426 AUTHORIZED SERVICES-WIRELESS PERSONNEL CALL SYSTEMS' RULES.

STANDARDS SUITABLE SERVICE

TS 13426 AUTHORIZED SERVICES-WIRELESS PERSONNEL CALL SYSTEMS.

TS 13401 AUTHORIZED SERVICES-CALL DEVICES.

TS 13149 WORK PLACES-COMPUTER SERVICES-GENERAL RULES

5. WARRANTY CONDITIONS

5.1. The warranty period is 2 years starting from the delivery date of the goods.

5.2. All of our goods, including all their parts, are covered by our guarantee.

5.3. If the product malfunctions within the warranty period, the repair time will be added to the warranty period. The repair period of the goods cannot exceed 20 business days. This period start from the time that the notification to the service station (or in case of there is no service station, to the supplier, dealer, agency, representative, Importer or manufacturer) comes. Failure notification of the consumer can be done by telephone, fax, e-mail, registered mail or similar means. However, in case of disagreement, the proof responsibility is on the consumer. If the malfunction is not rectified within 10 working days, the manufacturer or importer obligated to allocate a working device similar to the malfunctioned one to be used by the consumer until the repair process completed.

5.4. Within the warranty period, in case of malfunction due to erroneous assembly all repairs and needed materials or modified parts will be carried out without any charges.

5.5. Despite the consumer's right to repair, if

→ The malfunction can cause a permanent failure to the goods, provided that the malfunction occurred at least four, or six times within the specified warranty period from the delivery date to the consumer.

→ The time required for repair is exceeded.

→ If the company service station (or in case of there is no service station, the supplier, dealer, agency, representative, Importer or manufacturer) provided a report determining that the (goods) device is beyond repair.

Then the consumer can ask to exchange, return the product with full refund.

5.6. Defects arising from using the products inconsistently with the manual's rules not covered by the warranty.

5.7. Possible warranty related problems could be presented to Customs and Trade Ministry and General Directorate of Consumer Protection and Market Surveillance.

6. POINTS TO TAKE UNDER CONSIDERATION

Damage Technical Support

If the device is serviced by technical service other than the authorized service center, or if it was opened by the consumer, the device will go out of warranty.

In the event of one or more of the following conditions, disconnect the device from the power source and connecting cables and contact your authorized service center:

→ When the power supply or connection cable is damaged.

→ If a liquid was poured on the device or an object went inside it.

→ If the device was exposed to water.

→ If an unexpected change or failure occurs despite following the operating instructions.

→ Device has been dropped or damaged.

7. SERVICE STATIONS

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