

LifeVet 10C Portable Multi-Parameter Veterinary Monitor

Quick Reference Guide

Symbol	Function	Symbol	Function
 Main Menu	Enters the main menu.	 More	Shows more quick keys.
 Alarm Setup	Enters the Alarm menu.	 Alarm Reset	Acknowledges ongoing alarms and reset the alarm system.
 Audio Pause	Pauses alarm tone.	 Alarm Pause	Pauses the current alarms.
 Review	Enters the Review menu.	 Standby	Enters the Standby mode.
 Patient Management	Enters the Patient Management menu.	 Screen Setup	Enters the Screen Setup menu.
 NIBP Start/Stop	Starts an NIBP measurement or stops the current NIBP measurement.	 NIBP Stop All	Stops all NIBP measurements.
 NIBP STAT	Starts a five-minutes continuous NIBP measurement.	 NIBP Measure	Enters the NIBP Measure menu.
 Zero IBP	Starts IBP zero calibration.	 C.O. Measure	Opens the C.O. Measure window.
 PAWP	Enters the PAWP screen.	 Night Mode	Enters the night mode.
 Venipuncture	Opens the Venipuncture window.	/	/

Symbol	Function	Symbol	Function
 Parameters Setup	Enters the Parameters Setup menu.	 Remote View	Opens the Remote View window.
 Manual Event	Manually triggers and saves an event.	 Minitrends	Enters the Minitrends screen.
 Call Help	Calls for help.	 Intubation Mode	Enters the intubation mode.
 Volume	Enters the Volume menu.	 Freeze	Freezes waveforms.
 Calculations	Enters the Calculations menu.	 Load Config	Enters the Load Config menu.
 Print	Starts printing a real-time report.	 Record	Starts/Stops a recording.
 Discharged Patients	Enters the Discharged Patients dialog box.	 ECG Lead/Gain	Enters the ECG Lead/Gain menu.
 Discharge Patient	Enters the Discharge Patient dialog box.	 End Case Report	Prints the selected end case reports.
 Targeted Goal	Opens the Targeted Goal screen.	 CPB Mode	Enters the CPB mode.

Turning on the Monitor

Press the power switch to turn on the monitor.

Quick Operation with Gestures

Using the following gestures can take a quick operation.

- Tapping the screen
 - ◆ To select an item from menus or lists, or select a quick key, tap on it with your finger.

- ◆ To enter a parameter menu, tap corresponding numeric area or waveform area.
- Swiping across the screen with a single finger
 - ◆ To scroll through a list and a menu, swipe up and down.
 - ◆ To show or expand the Minitrends screen, swipe right across the corresponding screen.
 - ◆ To contract or hide the Minitrends screen, swipe left across the corresponding screen.
- Swiping across the screen with two fingers
 - ◆ To switch screens among the normal screen, the big numeric screen, and the minitrends screen, swipe left or right across the screen.
 - ◆ To discharge a patient, swipe from top to bottom.

Display

Locking the Touchscreen

To lock the touchscreen, hold and press the **Main Menu** quick key and slide as directed by the arrow. A padlock symbol  displays at the top of the main menu quick key if the touchscreen is disabled.

Unlocking the Touchscreen

The touchscreen is enabled in the following situations:

- The preset time is reached.
- Hold and press the **Main Menu** quick key and slide as directed by the arrow.

Choosing a Screen

1. Access **Choose Screen** by either of the following ways:
 - ◆ Select the **Screen Setup** quick key.
 - ◆ Select the **Main Menu** quick key → from the **Display** column select **Choose Screen**.
2. Select a desired screen.

Displaying Parameter Numerics and Waveforms

1. Access **Tile Layout** by either of the following ways:
 - ◆ Select the **Screen Setup** quick key → select the **Tile Layout** tab.
 - ◆ Select the **Main Menu** quick key → from the **Display** column select **Tile Layout**.
2. Select a parameter numeric area or waveform area, and then from the popup list select an element you want to display in this area. The parameters and waveforms you do not select will not be displayed.

Setting the Quick Key

1. Set the quick key by either of the following ways:
 - ◆ Select the **Screen Setup** quick key → select the **Select Quick Keys** tab.
 - ◆ Select the **Main Menu** quick key → from the **Display** column select **Quick Keys**.
2. Select the **Current** tab to configure the quick keys you want to display on the screen: From the top of this page, select a block where you want to show a certain quick key, and then select the quick key from the quick key list.
3. Select the **More** tab to configure the quick keys you want to display when the **More** quick key is selected.

Configuring the Monitor

Adjusting the Volume

Select the **Volume** quick key to set **Alarm Volume**, **QRS Volume**, and **Key Volume**.

Adjusting the Screen Brightness

1. Access **Display** by either of the following ways:
 - ◆ Select the **Screen Setup** quick key → select the **Display** tab.
 - ◆ Select the **Main Menu** quick key → from the **Display** column select **Display**.
2. Set **Brightness** for the display. If **Brightness** is set to **Auto**, screen brightness automatically changes with ambient light level.

Patient Management

Admitting a Patient

The monitor admits a new patient in the following situations:

- After a patient is manually discharged, the monitor automatically admit a new patient.
- After being switched off for the selected time period, the monitor automatically discharge the previous patient and admit a new patient at startup.
- If the monitor has not detected certain patient vital signs (ECG, SpO₂, PR, RR, NIBP) for 30 minutes, you will be prompted whether to start monitoring a new patient if any of the above vital signs are detected again.

Editing Patient Information

1. Select the **Patient Management** quick key.
2. In the **Patient Management** menu, edit patient information as required.

If you connect a barcode reader with your monitor, you can scan the patient's barcode to enter the patient's medical number.

Discharging a Patient

Manually discharge a patient by any of the following ways:

- Swipe down the touchscreen with two fingers.
- Select the **Discharge Patient** quick key.
- Select the patient information area at the top left corner of the screen → **Discharge Patient**.
- Select the **Patient Management** quick key → select **Discharge Patient**.
- Select the **Main Menu** quick key → from the **Patient Management** column select **Discharge**.

Alarms

Alarm Status Symbols

Symbol	Description	Symbol	Description
	All the alarms are paused.		Audible alarm tones are paused.
	Audible alarm tones are turned off.		Alarms are acknowledged and the alarm system is reset.
	Individual physiological alarms are turned off or the system is in the alarm off status.		

Setting Parameter Alarm Properties

1. Access the **Limits** page by either of the following ways:
 - ◆ Select the **Alarm Setup** quick key.
 - ◆ Select the **Main Menu** quick key → from the **Alarm** column select **Limits**.
2. Select a parameter tab and set alarm switch, limits, priority, etc.

Initiating Auto Alarm Limits

1. Access the **Limits** page by either of the following ways:
 - ◆ Select the **Alarm Setup** quick key → select the **Limits** tab.
 - ◆ Select the **Main Menu** quick key → from the **Alarm** column select **Limits**.
2. From the **Limits** page, select **Auto Limits** at the left bottom.

Setting the Auto Limits for New Patient Switch

1. Access the **Setup** page in either of the following ways:
 - ◆ Select the **Alarm Setup** quick key → select the **Setup** tab.

- ◆ Select the **Main Menu** quick key → from the **Alarm** column select **Setup**.
- 2. Set the **Auto Limits for New Patient** switch.

Pausing Alarms/Pausing Alarm Tones

1. Select the **Main Menu** quick key → turn to the third page → from the **System** column select **Maintenance** → input the required password → select **Ok**.
2. Select the **Alarm** tab → select the **Pause/Reset** tab.
3. Set **Pause** to **Alarm Pause** or **Audio Pause**.

Resetting Alarms

Pressing the **Alarm Reset** quick key to acknowledge the ongoing alarms and reset the alarm system.

Accessing Help When Technical Alarms Occur

In the technical alarm list, alarm messages followed by **Detail** includes help information.

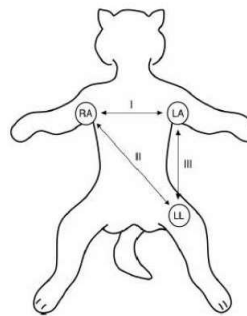
1. Select the technical alarm information area to enter the **Alarms** window.
2. Select the **Technical Alarms** tab.
3. Select the desired alarm.

Monitoring ECG

ECG Electrode Placement

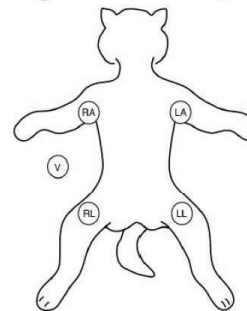
The following is an electrode configuration when a 3-leadwire cable is used:

- RA placement: on the right foreleg.
- LA placement: on the left foreleg.
- LL placement: on the left hind leg.



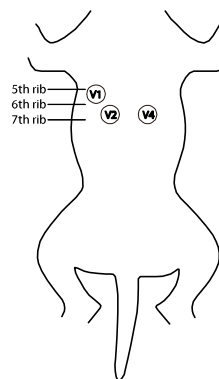
The following is an electrode configuration when 5-leadwires is used:

- RA placement: on the right foreleg.
- LA placement: on the left foreleg.
- RL placement: on the right hind leg.
- LL placement: on the left hind leg.
- V placement: exploring lead or see the following description for more information.



The chest electrodes most commonly used are V1, V2, V4 and V10:

- V1 placement: fifth intercostal space on the right side near the sternum.
- V2 placement: sixth intercostal space on the left side near the sternum.
- V4 placement: sixth intercostal space on the left side at the costochondral junction.
- V10 placement: over the dorsal spine of the seventh thoracic vertebra.



Choosing the ECG Lead Type

1. Select the ECG numeric area or waveform area to enter the **ECG** menu.
2. From the **ECG** page, select the **Setup** tab.
3. Set **Lead Set** according to the lead type you are going to use. The default lead type is **Auto**. In this case, the monitor automatically detects the used lead type.

Checking Paced Status

1. Select the ECG numeric area or waveform area to enter the **ECG** menu.
2. From the **ECG** page, select the **Pacer** tab.
3. Set **Paced** to **Yes** or **No**.

Enabling ST Monitoring

1. Select the ECG numeric area or waveform area to enter the **ECG** menu.
2. Select the **ST** tab → select the **Setup** tab.
3. Switch on **ST Analysis**.

Enabling QT/QTc Interval Monitoring

1. Select the ECG numeric area or waveform area to enter the **ECG** menu.
2. Select the **QT** tab → select the **Setup** tab.

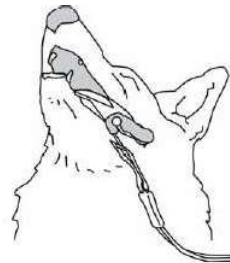
Switch on **QT Analysis**.

Monitoring SpO₂

SpO₂ Sensor Placement

The SpO₂ sensor selection and application site depend on the patient category.

When the application site is on the tongue, you should position the optical components of the sensor to the center of the tongue.



Showing/Hiding PI

1. Select the SpO₂ numeric area or waveform area to enter the **SpO2** menu.
2. Select the **Setup** tab.
3. Switch on or off **Display PI**.

Showing/Hiding PR

1. Select the SpO₂ numeric area or waveform area to enter the **SpO2** menu.
2. Select the **PR** tab.
3. Select the **Setup** tab.
4. Switch on or off **Display PR**.

Monitoring NIBP

NIBP Cuff Placement

The cuff placement depends on the patient category and weight. You should correctly set the weight range before starting NIBP measurements.

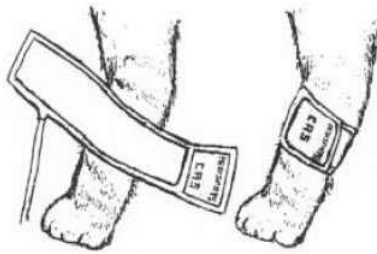
- For a canine

It is preferable to use the right lateral, sternal or dorsal recumbent position. If the canine is in a sitting position, place the front paw on your knee and then take measurements.



■ For a feline

For a conscious feline, measurements from the coccygeal artery can be taken by wrapping the cuff around the base of the tail. For a feline less than 5 lb when measurements are difficult to obtain, place the cuff around the leg above the elbow to obtain measurements from the brachial artery.



■ For large animals

It is preferable for a large animal, such as a horse and a cow, to be in a stock, standing still. Measurements from the coccygeal artery on the ventral surface may be used by placing the cuff around the base of the tail

Starting or Stopping NIBP Measurement

Task	By Quick Key	From NIBP Menu
Start a manual measurement	NIBP Start/Stop quick key 	Start NIBP button
Start auto NIBP series	NIBP Start/Stop quick key 	Setup tab → set Interval → Start NIBP button
	NIBP Measure quick key  → select interval	
Start NIBP sequence measurement	NIBP Measure quick key  → Sequence menu.	Sequence tab → set NIBP sequence → select Start NIBP button
Start STAT measurement	NIBP STAT quick key 	STAT button
	NIBP Measure quick key  → STAT	
Stop the current NIBP measurements	NIBP Start/Stop quick key 	Stop NIBP button

Task	By Quick Key	From NIBP Menu
End auto NIBP series or NIBP sequence	NIBP Stop All quick key 	NIBP Stop All button
Stop STAT measurement and end series	NIBP Start/Stop quick key 	Stop NIBP or NIBP Stop All button
	NIBP Stop All quick key 	

Setting Weight Range

1. Select the NIBP numeric area to enter the **NIBP** menu.
2. Set **Weight Range**.

Setting the NIBP Interval

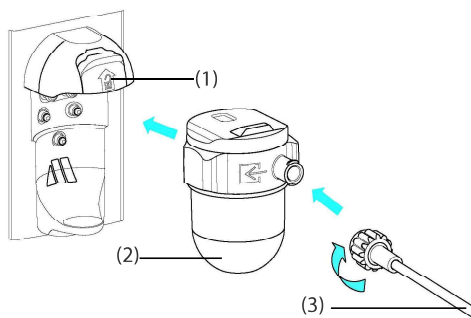
1. Select the NIBP numeric area to enter the **NIBP** menu.
2. Select the **Setup** tab.
3. Set **Interval**. Selecting **Manual** switches to manual mode.

Viewing NIBP Analysis

1. Select the NIBP numeric area to enter the **NIBP** menu.
2. Select the **Setup** tab.
3. Select **Analysis >>**.

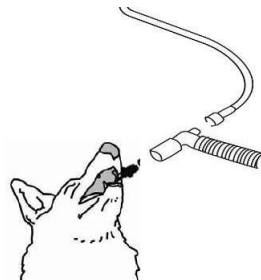
Monitoring CO₂

To prepare the CO₂ measurement, connect the watertrap and sample line as shown below.



- (1) Watertrap receptacle
- (2) Watertrap
- (3) Sample line

Sidestream CO₂ Module



Monitoring IBP

Changing the Pressure Label

The pressure label is a unique identifier for each type of pressure. Therefore, you should select a proper pressure label for the source of the pressure you want to monitor.

To select the pressure label, follow this procedure:

1. Select an IBP numeric area or waveform area to enter the corresponding pressure menu.
2. Select the **Setup** tab.
3. Select the desired Label.

Zeroing the IBP Transducer

1. Connect the IBP transducer, the IBP adapter cable and the module.
2. Turn off the three-way valve (the one close to the transducer) to the patient, in order to Vent the transducer to the atmospheric pressure.
3. Zero the transducer by any of the following ways:
 - ◆ Press the **Zero** hard key on the module.
 - ◆ Select the numeric area (such as the Art numeric area), and then select **Zero**.
 - ◆ Select the **Zero IBP** quick key.
4. After the zero calibration is completed, close the stopcock to the air and open the stopcock to the patient.

Reviewing Trends

To review trends, enter the **Review** window by any of the following ways:

- Select the **Review** quick key.
- Select the **Main Menu** quick key → from the **Review** column select one option.

Cleaning the Monitor

Clean your equipment on a regular basis. Before cleaning the equipment, consult your hospital's regulations for cleaning the equipment.

To clean the equipment, follow this procedure:

1. Dampen a soft lint-free cloth with water or ethanol (70%).
2. Wring excess liquid from the cloth.
3. Wipe the display screen of the monitor.
4. Wipe the external surface of the monitor with the damp cloth, avoiding the connectors and metal parts.
5. Wipe the external surface of the monitor with the damp cloth, avoiding the connectors and metal parts.
6. Dry the surface with a clean cloth. Allow the equipment air dry in a ventilated and cool place.

Disinfecting the Monitor

Disinfect the equipment as required in your hospital's servicing schedule. Cleaning the equipment before disinfecting is recommended. Always dilute and use disinfectants according to the manufacturer's instructions. The following table lists approved disinfectants:

Product Name	Product Type	Manufacturer
Alpet® D2 Surface Sanitizing Wipes	Wipes	BEST SANITIZERS INC™.
CIDEX® OPA	Liquid	Gilag GmbH International Advanced Sterilization products
Clorox Dispatch® Hospital Cleaner Disinfectant Towels with Bleach	Wipes	Clorox professional products company
Clorox Healthcare® Bleach Germicidal Wipes	Wipes	Clorox professional products company
Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant Wipes	Wipes	Clorox professional products company
Diversey Oxivir® TB Wipes	Wipes	Diversey Inc
Metrex CaviCide1™	Liquid, spray	METERX® RESEARCH
Metrex CaviWipes™	Wipes	METERX® RESEARCH

Product Name	Product Type	Manufacturer
PDI Sani-Cloth® AF3 Germicidal Disposable Wipe	Wipes	PDI Inc.
PDI Sani-Cloth® Bleach Germicidal Disposable Wipe	Wipes	PDI Inc.
PDI Sani-Cloth® HB Germicidal Disposable Wipe	Wipes	PDI Inc.
PDI Sani-Cloth® Plus Germicidal Disposable Cloth	Wipes	PDI Inc.
PDI Super Sani-Cloth® Germicidal Disposable Wipe	Wipes	PDI Inc.
VIRAGUARD® Hospital Surface Disinfectant Towelette	Wipes	VERIDIEN corporation
Virex® II 256 (1:256)	Liquid	Diversey Inc
Virex® TB	Liquid, spray	Diversey Inc
JIAN ZHI SU Disinfectant Tablets	Tablet	Beijing ChangJiangMai Medical Science Technology Co. Ltd
JIAN ZHI SU Surface Disinfectant Spray	Liquid, spray	Beijing ChangJiangMai Medical Science Technology Co. Ltd
JIAN ZHI SU Disinfectant, Double-chain Quaternary Ammonium	Liquid	Beijing ChangJiangMai Medical Science Technology Co. Ltd
DIAN'ERKANG Surface Wipes	Wipes	Shanghai Likang Disinfectant Hi-Tech Co., Ltd
DIAN'ERKANG Surface Disinfectant	Liquid	Shanghai Likang Disinfectant Hi-Tech Co., Ltd
DIAN'ERKANG Disinfectant Spray	Liquid, spray	Shanghai Likang Disinfectant Hi-Tech Co., Ltd
Clinell® Universal Wipes	Wipes	GAMA Healthcare Ltd
Clinell® Sporocidal Wipes	Wipes	GAMA Healthcare Ltd
Tristel Duo™	Liquid, foam	Tristel solutions Limited
Tristel Jet	Liquid, spray	Tristel solutions Limited
Tristel Fuse For Surfaces, 196ppm	Liquid	Tristel solutions Limited
Surfanios Premium, 0.25%	Liquid	ANIOS LABORATORIES

Product Name	Product Type	Manufacturer
Surfa 'safe	Liquid, spray	ANIOS LABORATORIES
Wip' Anios premium	Wipes	ANIOS LABORATORIES
Aniosurf ND premium, 0.25%	Liquid	ANIOS LABORATORIES
Mikrobac® Tissues	Wipes	BODE Chemie GmbH
Cleanisept® Wipes	Wipes	Dr. Schumacher GmbH
mikrozid® PAA Wipes	Wipes	Schülke & Mayr GmbH
mikrozid® Sensitive Wipes	Wipes	Schülke & Mayr GmbH
Ecolab Incidin® OxyWipe S	Wipes	Ecolab Deutschland GmbH
Glutaraldehyde, 2%	Liquid	/
*Ethanol, 70%	Liquid	/
*Isopropanol, 70%	Liquid	/
*Sodium hypochlorite bleach, 0.5%	Liquid	/
*Hydrogen peroxide, 3%	Liquid	/
*Rely+On™ Virkon® High Level surface Disinfectant, 1%	Powder	Antec International Ltd
*1-Propanol, 50%	Liquid	/
*Descosept® forte	Liquid	Dr. Schumacher GmbH
*Descosept® AF	Liquid	Dr. Schumacher GmbH
*Dismozon® plus, 0.4%	Powder	BODE Chemie GmbH
*mikrozid® AF Wipes	Wipes	Schülke & Mayr GmbH
*Terralin® Liquid	Liquid	Schülke & Mayr GmbH
*Perform® Classic Concentrate OXY, 0.5%	Powder	Schülke & Mayr GmbH