





Micropaq Outline Train the Trainer



A. Micropaq



1. Lightweight (approx. 18 oz.)
2. Uses rechargeable (lithium ion) battery
3. Compatible with 5 lead ECG cables
4. Store battery in charger when not in use
5. Water resistant; *not* waterproof - do not submerge in water
6. Clean Micropaq with warm water, liquid soap, or your hospital's cleaner to comply with the list of approved cleaners in the *Directions For Use* manual.
7. Clean the ECG lead wires with a mild detergent. Do not clean ECG leads with alcohol.
8. Batteries and ECG cables are interchangeable. They can be used between the old and new versions of Micropaqs.

B. Micropaq Buttons

1.  is the Select or Alarm Suspend button
2.  and  are the Scroll up and Scroll down buttons which allow you to navigate
3. within the menus
4. Depending on your system configuration, pressing the Nurse Call  button can do one of the following:
 - a. Generate a Nurse Call message to the Acuity workstation (if configured)
 - b. Print a snapshot of current patient waveform at the central printer
 - c. Perform both a and b
 - d. Perform neither a nor b

Note:

In order to restrict access to the Main Menu, a Menu Lock option can be configured for the Micropaq at the Acuity Workstation. When the Menu Lock is enabled, the operator must press and hold down the Select button  and the Scroll Down button  for two seconds to gain access to the Main Menu. The Menu Lock is disabled if the Micropaq loses communication with Acuity.

3. On Micropaq models 406 and 408, the Snapshot  button replaces the Nurse Call  button on the front of the unit. When the monitor is connected to an Acuity Central Monitoring System, the Snapshot function will initiate a printout of the patient's waveform and numeric data at the Acuity Central Station printer. Depending on how Acuity is configured, this will cause Acuity to print a 21-second snapshot (14 seconds of history before and 7 seconds of data after the button is pressed).

Select:  Scroll Up:  Scroll Down:  Nurses Cap:  Snapshot 

Note:

Snapshot is the default selection of the monitor. However, the connected monitor will inherit the configuration previously defined by Acuity. For example, if Acuity has defined the Snapshot key to respond with a Nurse Call function and a new monitor is introduced to the system, the Snapshot key definition will remain as Nurse Call.

C. Micropaq/Acuity Setup Procedure

1. Insert a battery into the Micropaq monitor to turn it on. After a few seconds an initial monitoring screen replaces the monitor Power up Screen. Note the patient mode (Adult or Pediatric) that is programmed on the Micropaq
2. Verify communication between the Micropaq and Acuity by seeing the telemetry symbol (Ψ) and green light on the Micropaq
3. After the network connection is established, you must identify your patient. If there is more than one Acuity on the network, the monitor may prompt you to select an Acuity Unit first. Press the Scroll Down (⏴) Scroll Up (⏵) to highlight the desired Acuity unit, and then press Select (⏴). Depending on whether or not the patient was pre-admitted perform the following steps:
 - a. If the patient was pre-admitted:
The Micropaq displays a list of possible patients. Scroll through the patient list to look for your patient's name. Highlight the name and then press Select (⏴).
 - b. If your patient was not pre-admitted, highlight Select Patient at Central and press Select (⏴). The patient name will need to be entered at the Acuity workstation. At Acuity, click on the Micropaq icon (the icon has a 4-digit number that matches the last 4 digits of the serial number on the back of the Micropaq). Click on Setup, then click Patient ID. Enter patient ID #, room #, and name. Click Confirm, and then click Close

Notes:

- If the Micropaq is not connected to the patient, the Map Location Icon and Waveform Window will be blue until properly connected
- If the Micropaq is connected to the patient, the patient Map Location Icon and Waveform Window will be green after the patient is identified at the Acuity workstation
- Depending on configuration, the patient's Map Location Icon will either remain in the Map area or the icon will move to patient's assigned room
- If you enter the same room number for more than one patient, Acuity will alert you

D. SpO2 Monitoring (if applicable)

On Micropaq models 406 and 408, the SpO2 connection at the top of the device has a standard, rectangular 9-pin connector. If using other Welch Allyn devices - Propaq CS, Propaq LT, Spot, and/or VSM, you will be able to use the same SpO2 cable.





If using Micropaq models 402 or 404, ensure you line up the arrow on the side of the SpO2 cable with the arrow on the side of the Micropaq for proper cable insertion.



Note:

Do not force or jam any cable into the Micropaq. Doing so could damage the prongs inside the cable. Always make sure to line up cables appropriately to the device.

E. Tips for successful ECG monitoring

1. Using pre-gelled silver/silver chloride electrodes is recommended. Electrodes with dissimilar metals can prevent obtaining an ECG tracing and can compromise recovery time after defibrillation.
2. Prepare electrode sites (skin preparation)
 - a. Remove hair from electrode sites. Shave or clip hair according to hospital policy
 - b. Thoroughly clean skin where electrodes will be attached and lightly rub dry
 - c. Use soap and water, isopropyl alcohol, or special skin preparation pads to cleanse the skin
 - d. To avoid allergic reactions to electrodes, refer to the electrode manufacturers guidelines
3. Proper electrode placement
 - a. Increased artifact due to patient movement greatly affects telemetry monitoring
 - b. Place electrodes in flat, non-bony areas and avoid large muscle areas
4. Suggested lead placement
 - a. RA (white)-place near right mid-clavicular line directly below the clavicle
 - b. LL (red)-place near 7th intercostal space in line with or lateral to the midpoint of the left clavicle
 - c. LA (black)-Place near left mid-clavicular line directly below the clavicle
 - d. RL (green)-place near 7th intercostal space in line with or lateral to the midpoint of the right clavicle
 - e. C (brown)-place in the intercostal space equivalent to the V1, V2, V3, V4, V5, or V6 position you want to monitor.
5. Always attach lead wires to electrodes before applying to patient. Then insert ECG cable into the Micropaq. Use stress loops to decrease artifact.

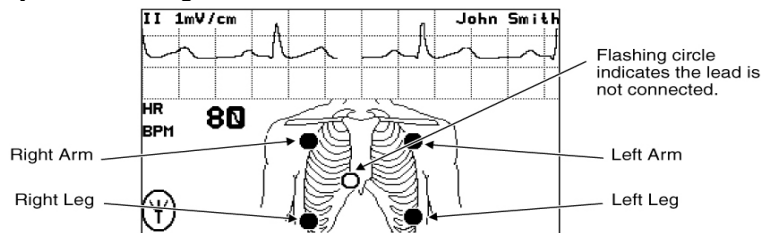
Model 408



Model 404





Confirm that the Micropaq displays the ECG waveform, heart rate, and other patient data. If the Micropaq detects that some lead wires are not properly connected, the Micropaq displays a chest diagram, as shown, and indicates which leads are disconnected.



6. Electrodes should be replaced when loose and daily after bathing (according to your policy).
7. Contributors to a poor ECG tracing:
 - a. Dried electrodes
 - b. Placing an electrode on sites affected by motion
 - c. Not properly supporting a patient's monitor
 - d. Hair at electrode sites
 - e. Using electrodes with dissimilar metals
8. Place the carrying pouch on the patient and insert the Micropaq, or place in the Micropaq bedrail holder (if applicable). Use of the pouch will help reduce stress on the cables and contamination of the device.









F. Micropaq Menu Options

When you first press the Scroll Down  button, the Main Menu appears which include the following options: Exit, Acuity, ECG Lead, and ECG Scale. Notice the downward arrow in the last box; this tells you that there are more options to the Main Menu. They are as follows: Waveforms, Limits, System Information, and the Service Menu.

1. **EXIT** – Pressing the Select  key when Exit is highlighted will cause the Main Menu to disappear
2. **ACUITY** – This will access the Acuity Menu with any configurable network options. This is only accessible while connected to Acuity. Below are the options within this menu:
 - a. EXIT – Exit all menus and return to the monitoring screen
 - b. END TELE – Discontinue monitoring a patient
 - c. NEW ROOM – Reassigns a patient to a new room in the same unit
 - d. TRANSFER – Transfers a patient to a new room in a new unit
 - e. NEW PATIENT – Assigns the monitor to a new patient
 - f. PATIENT INFO – Displays patient information such as ID, name, unit, and

Select:  Scroll Up:  Scroll Down:  Nurses Cap:  Snapshot 

room.

3. ECG LEAD - Change the monitored ECG lead by pressing the Select  button to display the Main Menu. Then press the Scroll Down  to highlight ECG LEAD. Highlight ECG 1 or ECG 2 and press Select  to change the lead. Scroll to EXIT and press the Select  button
4. ECG SCALE - Change ECG Scale to change the scale of the ECG waveform. Press the Scroll down  button for the Main Menu to appear. Press Scroll Down  again to move down to ECG SCALE. Press the Select  button. Use the arrow buttons to select increase scale or decrease scale. Scroll to EXIT and then press the Select  button
5. WAVEFORM - Change the number of waveforms displayed by using arrow buttons to select one of the four options:
 - a. 1 waveform
 - b. 2 waveforms
 - c. 5 seconds
 - d. Full screen



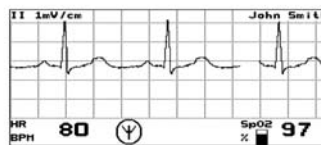
1 Waveform
The single ECG 1 (lead II) waveform is displayed.




2 Waveforms
ECG 1 (lead II) and ECG 2 (lead V) are both displayed.










5 Seconds
ECG 1 (lead II) cascades from one line to the other.



Full Screen
The single ECG 1 (lead II) waveform is allowed to occupy most of the screen.

Scroll to exit and press the Select  button. In order to visualize 2 waveforms or 5 seconds options, you must exit this menu.

6. LIMITS
 - a. Press Select  to display the Main Menu, then change alarm limits by pressing the Scroll Up  or Scroll Down  button to select HR/PR LO, HR/PR HI, and if applicable, SPO2 LO, SPO2 HI. Then press the Select  button to display the Threshold Adjustment Menu
 - b. To change the numerical value, scroll and select the + or – selections to change the limit as desired. To turn the highlighted limit on or off, scroll to ON/OFF and press Select 
 - i. HR alarm limits change in increments of 5
 - ii. SpO2 alarm limits change in increments of 1
 - c. To change other limits, scroll to PREVIOUS MENU, press Select , then select another limit to change
 - d. When you have completed all changes, scroll to PREVIOUS MENU, and press Select  three times to exit the menus and return to the normal monitoring screen
 - e. Repeat this to change any parameters.


Select:  Scroll Up:  Scroll Down:  Nurses Cap:  Snapshot 

7. **SYSTEM INFORMATION** - Displays information about the network connection and SpO2 module (if applicable)
8. **SERVICE MENU** - Enter the Service Mode for a demonstration mode or service functions for technicians. Service Mode is not available if any cables are plugged in

G. Monitoring a Patient Out of Range of Acuity



While out of range of the Acuity Workstation, the Micropaq continues to monitor the patient and provide local HR/PR and if applicable, SpO2 alarms or alerts at the Micropaq.

When the patient goes out of range of Acuity:

1. A DROPOUT equipment alert occurs at the Acuity workstation. Acknowledge the alert at Acuity
2. An equipment alert occurs at the Micropaq with an ACUITY CONNECTION LOST message
 - a. Depending on how the Micropaq is configured, this alert can also cause the Micropaq to emit audible alert tones
 - b. The appropriate person should press Select  on the Micropaq to acknowledge the alert and silence the alert tones.

When the patient returns within range of Acuity, the Micropaq automatically reconnects to Acuity. No clinician intervention is required.

H. Alerts and Alarms

1. Alarms provide a warning about a patient condition whereas an alert provides a warning about an equipment condition that needs attention. Alarms have a higher priority than alerts.
2. To help minimize false alarms, the Micropaq briefly delays triggering alarms for limit violations for HR/PR and SpO2 (if applicable). After the alarm delay begins, if the monitor detects that the patient vital sign has returned to acceptable limits, the monitor cancels the alarm delay. The next time a vital sign limit is violated, the monitor starts a new delay period. The delay for HR is 3 seconds and 10 seconds for SpO2 or PR.
3. When a patient alarm occurs, the Micropaq produces an audible tone (if enabled) and displays a message **PATIENT ALARM: Press  button to suspend**. First, check the patient and provide appropriate care. Press Select  to suspend the alarm at the Micropaq and Acuity for 90 seconds. After caring for the patient, make sure the appropriate alarm limits are set and on.

Additional Alert Messages and Display Information:









Message and Display Information	Possible Causes and Suggested Response
LOW BATTERY	The monitor will shut down within approximately 30 minutes or less due to a low battery. Replace battery

Select:  Scroll Up:  Scroll Down:  Nurses Cap:  Snapshot 








	as soon as possible
VERY LOW BATTERY	The monitor will shut down within approximately 5 minutes or less due to a low battery. Replace battery as soon as possible
BATTERY TOO LOW SHUT DOWN IN PROGRESS	The battery is so low the monitor has to shut down operation. Replace battery immediately
ACUITY CONNECTION LOST	The monitor is not connected to the network. Press Select to acknowledge and silence the tone and cancel the message. The off-network icon continues to display while disconnected from the network. The monitor will continue to attempt to reconnect until it is successful

For additional Alert messages refer to the *Micropaq Directions for Use* manual.

I. To Reassign a monitored patient to a new room within the same unit:

1. Press the Scroll Down  button to display the Main Menu
2. Press the Scroll Down  button again to highlight ACUITY and press Select  to display the Acuity Menu screen .
3. Press Scroll Down  to highlight NEW ROOM, then press Select . Within a few seconds the Micropaq displays a list of all available rooms, including the patient's current room.
 - a. If you decide not to change the patient's current room assignment, press Select 
 - b. To assign the patient to a new room, highlight the room and press Select 
 - c. If you want to cancel the patient's current room assignment, but do not want to assign a new room at this time, you can highlight Select Room at Acuity and press Select . You can then assign the room later from the Acuity workstation, or you can repeat this procedure and assign a new room from the Micropaq




J. To Transfer a patient to a new room on a different unit:

1. Press Scroll Down  to display the Main Menu
2. Press Scroll Down  again to highlight ACUITY and press Select  to display the Acuity Menu screen
3. Press Scroll Down  to highlight TRANSFER, then press Select . Within a few seconds the Micropaq displays a list of units
4. Press Scroll Down  to highlight the new unit, then press Select 

Notes:






- The patient is not monitored at Acuity during the short time required by Acuity to process the transfer to the new unit. However, the patient continues to be monitored by




- the Micropaq.
- If the selected unit is currently not available, the Micropaq displays an appropriate message; press Select  to acknowledge the message and cancel the transfer
 - You cannot choose a room number until the patient is transferred to a new unit and connected to the Acuity workstation.
5. After the patient is assigned to the new unit, the Micropaq displays a list of unassigned rooms. To assign the patient to a new room, highlight the room and press Select . If you decide not to assign the patient to a new room at this time, you can highlight Select Room at Acuity and press Select . You can then assign the room later from the Acuity workstation, or you can assign a new room from the Micropaq at a later time by following the procedure for reassigning the patient to a new room on the same unit
 6. At the Acuity workstation,
 - a. Open the Patient List Window
 - b. Click on the patient's name to be transferred
 - c. Click Transfer
 - d. Select and click on the unit to which the patient will be transferred
 - e. Click on new room number, or click on the unassigned button
 - f. Click Confirm, then click Close

K. To Discontinue Monitoring a Patient:

If you want to discontinue monitoring the patient, do the following:

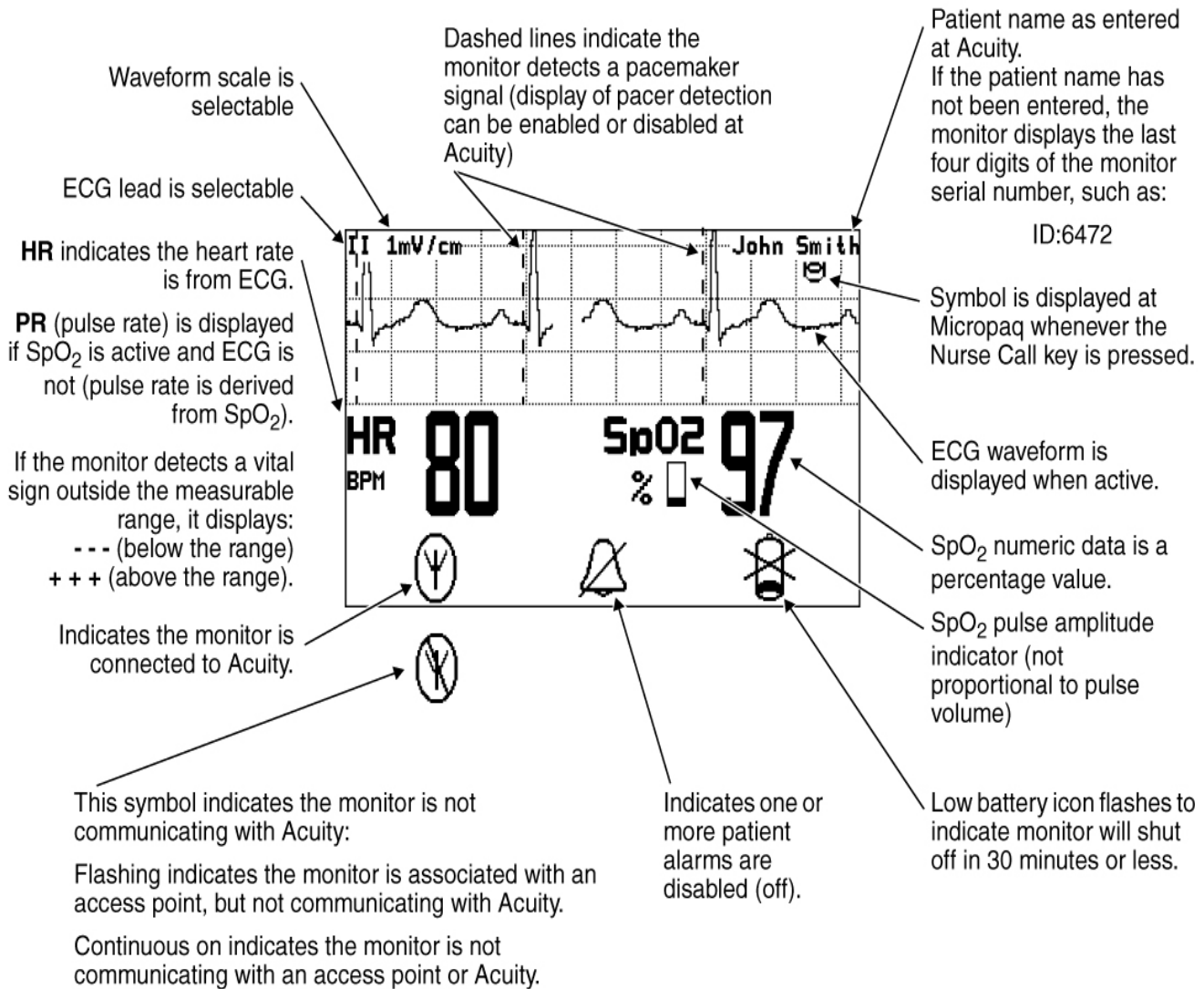
1. Press Scroll Down  to display the Main Menu
2. Press Scroll Down  to highlight ACUITY, then press Select 
3. Press Scroll Down  to highlight END TELE, then press Select 
4. When the Micropaq displays the message SAFE TO REMOVE BATTERY, remove the battery. If the battery is not removed within 30 seconds, the Micropaq will automatically try to reconnect to the network
5. Disconnect the leads and sensors from the patient
6. Store battery in charger
7. At the Acuity workstation:
 - a. Open Patient List Window
 - b. Click on patient being discharged
 - c. Click Discharge
 - d. Click Discharge again
 - e. Close Patient List Window

L. Acuity Central Station Map

1. View Micropaq Image: Button with the universal sign for telemetry  located in the left corner of screen. When pressed, icons for patients monitored on Micropaqs change their image to display the universal telemetry sign, and all other patient icons in the Map area become gray boxes.

Select:  Scroll Up:  Scroll Down:  Nurses Cap:  Snapshot 

M. Micropaq Screen



Select: Scroll Up: Scroll Down: Nurses Cap: Snapshot