Welch Allyn Connex® Devices
Quick Reference Card

English
80019393A

Welch Allyn Connex® Devices
Quick Reference Card
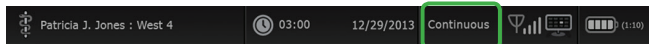
Power on/Display power-saving mode

- Located on the device housing
- Powers up the monitor
- Brief press – Sets monitor to Display power-saving mode
  (does not power down monitor)

Power down

1. Touch the battery status icon.
2. Touch **Power down**.

Change profile

Patricia J. Jones : West 4 | 03:00 | 12/29/2013 | Continuous | (1:10)

1. Touch the selected profile indicator in the Device Status area.
2. Select the desired profile.
3. Confirm your selection.

Central station connectivity indicators

Connected to
the central station

Disconnected from
the central station
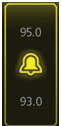
Start/Stop blood pressure

Start intervals

1. On the Home tab, touch .
2. Select **Automatic** or **Program**, and enter or select desired settings.
3. Touch **Start intervals.**

Stop intervals

1. On the Home tab, touch .
2. Touch **Stop intervals.**

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Alarm indicators and controls

Icon	Description
⌀	Alarm off No visual or audio notifications are enabled.
🔔	Alarm on Visual and audio notifications are enabled.
🔕	Alarm audio off Only visual notifications are enabled.
🔔	Alarm audio paused Countdown timer is active.
⚠	Alarm active Touch to pause or silence.
⚠	Multiple alarms active Touch to pause or silence.
95.0 🔔 93.0	Medium priority alarm Touch to adjust alarm limits or turn off alarm.
100 🔔 98	High priority alarm Touch to adjust alarm limits or turn off alarm.

Change view of vital signs measurements

Parameter frames that support multiple views of patient data (such as numeric and waveform, numeric and trend, SYS/DIA and MAP) include a view indicator next to the name of the parameter frame.

Touch the left side of the parameter frame to toggle between views.

Enter manual parameters
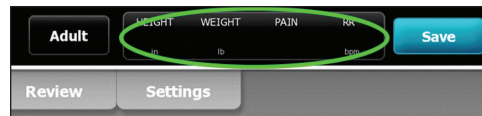
1. Touch the Manual parameters frame.
2. Touch the keypad in selected fields to adjust the parameter measurements.
3. Touch **OK**.

   Note   Entries will not be saved unless you touch **OK**.

Navigating the Review tab (Continuous Monitoring profile)

In the Continuous Monitoring profile, the Review tab enables access to a trend table of all readings for the currently monitored patient.

1. Touch the **Review** tab.

   Note Measurements that triggered a physiological alarm are highlighted on this tab.

2. Touch the **View** list box to modify the trend interval.
   The default trend interval is 1 minute.

3. Use the scroll bar on the right as well as the page forward and page backward controls in the table header to view additional measurements for your patient. The most recent measurements appear on the right side of the table, with older measurements to the left.

   Note Episodic measurements that occur between trend interval measurements are displayed in separate columns under their own time stamp.

4. To print the patient record, modify the View selection as desired and touch **Print**.

5. In the Print options dialog, select the desired Timespan and touch **Print**.

Manage patient records (Intervals Monitoring, Spot Check, and Triage profiles)

Patient records can be sent to the network, printed, or deleted.

1. Touch the **Review** tab.

2. Select records by touching the check box.

3. Touch **Send** to transmit the records to the network, **Print** to print the records, or **Delete** to permanently remove the records.

   Note The ✉ icon indicates the records have been sent to and received by the network.

   Note Measurements that triggered a physiological alarm are highlighted on this tab.

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Add a patient to the patient list (not connected to central station)

1. Touch the **Patients** tab.
2. Touch **Add**.
3. Touch and then enter patient information.
4. Touch **Next** to cycle through the patient data fields.

   Note You can use a barcode scanner to enter a patient ID in the Patient ID

   field. Touch in the Patient ID field, scan the barcode, and touch **OK**.

5. Touch **OK** to return to the Home tab.

Configure parameter options

1. Touch the **Settings** tab.
2. Touch the **Setup** tab.
3. Touch the parameter(s) in the vertical tab you want to modify.
   (Touch the ▼ to scroll through the list as needed.)
4. Modify settings for each parameter as desired.
   The new settings take effect immediately.

Clean the monitor or stand

1. Power down the monitor.
2. Wipe the equipment with one of the following:
   • cloth dampened with 70 percent isopropyl alcohol
   • cloth dampened with 10 percent chlorine bleach solution
     (rinse off bleach with a damp cloth)

   ⚠ **Caution** When cleaning the device, avoid using cloths or solutions
   that include quaternary ammonium compounds (ammonium chlorides)
   or glutaraldehyde-based disinfectants.
3. Allow the equipment to dry for 10 minutes before use.

Communication with the Connex central station (CS)

The Connex central station provides centralized monitoring of connected devices. The monitor must be configured to connect to a central station in Advanced settings.

Monitors communicate with the central station through hardwired Ethernet and wireless networks. Communication between the monitor and the central station is bi-directional but varies based on the active profile and selected advanced settings. In the Continuous Monitoring profile, patient vital-signs data streams to the central station.

Connex CS supports communication of the following:

- continuously monitored and intermittently acquired (episodic) vital-signs data
- patient vital-signs alarms
- technical equipment alerts

The central station also supports the review and printing of stored data.

Connex CS indicators

Connected to the central station

Disconnected from the central station

Monitor tab
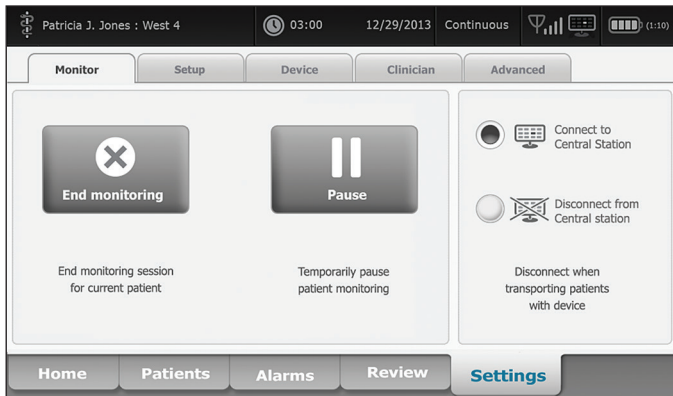
The Monitor tab provides the following controls related to continuous patient monitoring at the device and the streaming of patient vital-signs data to a central station:

- End monitoring – Stop continuous monitoring on the current patient and clear patient data on the device.
- Pause – Pause continuous monitoring as well as alarms for a specified period and retain patient data on the device.
- Connect to central station – Manually connect to a central station and start or resume the streaming of patient vital-signs data when the device does not connect automatically.
- Disconnect from central station – Manually disconnect the device from a central station yet continue monitoring the patient and retain patient vital-signs data on the device. This control is only available after connecting to a central station.

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Connect to the central station

1. Touch the **Settings** tab. The Monitor tab appears.
2. Select ⌨ **Connect to central station**.

As the device attempts to connect to the central station, a 🔆 appears in the Device Status area. When the device connects to the central station, the ▦ indicator appears.

Note The device must be in the Continuous Monitoring profile to set up a continuous connection to the central station. When the device is in the Continuous Monitoring profile, the device automatically connects to the central station when you navigate to the Patient tab or apply continuous sensors to the patient.

Disconnect from the central station

1. Touch the **Settings** tab. The Monitor tab appears.
2. Select 📵 **Disconnect from central station**.
   If reasons for disconnecting from the central station have been configured in Connex CS, a "Disconnect" dialog appears with a list box of reasons.
3. Select a reason for disconnecting, if applicable, then touch **OK**.
   The Home tab appears.

Pause continuous monitoring (Pause mode)

Touch **Pause** on the Home tab.

A "Pause" dialog appears, indicating that you have paused continuous monitoring. Controls on this screen provide options to resume or end monitoring. A countdown timer displays the time remaining before continuous monitoring resumes.

Resume continuous monitoring

Pause time remaining

1. Reconnect patient sensors to the patient as needed.
2. Touch **Resume monitoring**.
   The Home tab appears and continuous monitoring resumes.

Pause time limit expired

If the Pause time limit runs out before you resume monitoring, the device exits Pause mode, and alarms might occur.

Reconnect patient sensors to the patient and/or device, and acknowledge alarm and information messages as needed. Continuous monitoring resumes.

End continuous monitoring

1. Touch the **Settings** tab. The Monitor tab appears.
2. Touch **End monitoring**.
   An "End monitoring" dialog appears with the following options:
   • New patient – Clears patient and location context and review data after you remove patient sensors
   • Power down – Clears patient and location context and review data, and powers down the device
   • Cancel – Retains patient data and returns to the Home tab
3. Select the desired option.
   a. If you select New patient, follow the onscreen prompts to remove sensors from your patient.
   b. Touch **OK**. The Home tab appears.

Connect the sampling line to the monitor

1. On the left side of the monitor, slide up the door that covers the sampling line port.
2. Connect the sampling line. Turn the connector to the right until tight. (See the animation on the display.)

> **Note** The CO2 pump starts as soon as the pump sensor recognizes the sampling line. You must connect the sampling line correctly to accurately monitor CO2.

3. Connect the sampling line to the patient as described in the directions for use supplied with the sampling line.
4. Verify that you are using the Continuous Monitoring profile.

Note If "Allow profile change" is enabled in Advanced settings, the device attempts to shift automatically to the Continuous Monitoring profile when you connect the sensor cable.

Stop and restart the CO2 pump

1. To temporarily pause or stop CO2 monitoring, touch **STOP** in the etCO2 frame.

2. To resume CO2 monitoring, touch **( ) START** .

Set up etCO2

1. Touch the **Settings** tab.
2. Touch the **Setup** tab.
3. Touch the **etCO2** vertical tab.
4. Adjust the following settings as desired:
   - Sweep speed
   - Waveform scale
   - Pump standby time
5. Touch the **Home** tab.

IPI (Integrated Pulmonary Index)

IPI integrates four parameters (etCO2, RR, SpO2, and PR) and their interactions to provide a numeric value indicating a patient's overall respiratory status.

1. On the Home tab, touch the patient type control on the right side of the Patient frame. The Patient Summary tab appears.
2. Touch the **Type** list box and select patient type.

Note IPI is available for adult patients as well as three groups of pediatric patients (1–3 years, 3–6 years, and 6–12 years), but it is not available for neonatal/infant patients. Pediatric patient subtypes appear on the Patient Summary tab and on the Home tab as a label in the IPI frame, but they do not appear in the Patient frame.

Note IPI is available only with the Continuous Monitoring profile.

Configure etCO2 and FiCO2 alarms

Note FiCO2 appears only if enabled in Advanced settings.

1. Verify that you are using the Continuous Monitoring profile.

   Note If "Allow profile change" is enabled in Advanced settings, the device attempts to shift automatically to the Continuous Monitoring profile when you connect the sensor cable.

2. Navigate to the **etCO2** vertical tab as shown.
3. Ensure that the etCO2 and FiCO2 alarm limit controls are set to ON.
4. Adjust the following settings as desired:
   • etCO2 limits (upper and lower)
   • FiCO2 limit
   • High alarm delay (specifies the minimum duration of a high alarm condition to activate an alarm signal)
5. Touch the **Home** tab.

Configure RR alarms

1. Verify that you are using the Continuous Monitoring profile.

   Note If "Allow profile change" is enabled in Advanced settings, the device attempts to shift automatically to the Continuous Monitoring profile when you connect the sensor cable.

2. Navigate to the **RR** vertical tab as shown.
3. Ensure that the RR alarm limit control is set to ON.
4. Adjust the following settings as desired:
   • RR limits (upper and lower)
   • High alarm delay (specifies the minimum duration of a high alarm condition to activate an alarm signal)
   • No breath detected alarm delay (specifies the minimum duration of a no breath condition to activate an alarm signal)
5. Touch the **Home** tab.

Welch Allyn Connex® with EarlySense Monitoring Quick Reference Card

Connect the patient movement cable

1. Align the EarlySense cable connector with one of the EarlySense ports on the right side of the monitor.
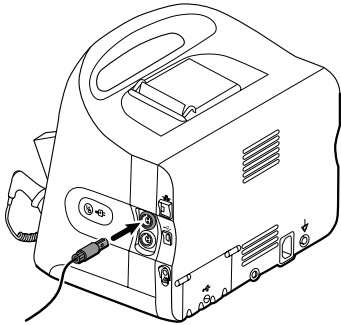
2. Insert the cable connector until it clicks into place. Also check the stress relief connector on the cable to ensure that both parts of the cable are tightly connected.

3. When you are ready to monitor a patient, position the bed sensor (sensing unit) as follows:
   - horizontally under the patient's mattress
   - the top surface of the sensing unit facing the mattress
   - the sensing unit under the patient's chest area
   - the sensing unit cable extending toward the head of the bed
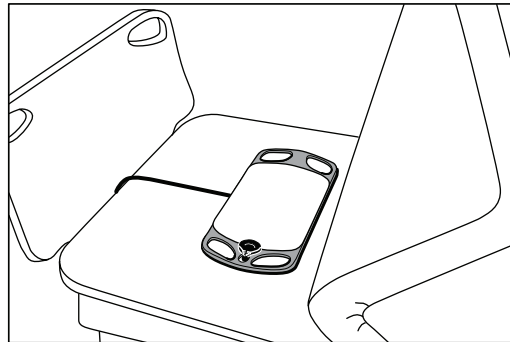
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Configure movement alarms and patient turn reminder

Follow these steps to set alarm limits for patient movement.

1. Verify that you are using the Continuous Monitoring profile.

   Note If "Allow profile change" is enabled in Advanced settings, the device attempts to shift automatically to the Continuous Monitoring profile when you connect the sensor cable.

2. Touch the **Alarms** tab.
3. Touch the **Movement** vertical tab.
4. Ensure that the Exit alarm and Motion alarm controls are set to ON.

   Note If any parameter's alarm limit control is set to OFF, you cannot adjust alarm limits on the Alarm tab, and no visual or audio signals occur for that specific parameter.

5. Adjust the following settings as desired:

   • **Exit sensitivity.** Use the up/down arrow keys or the keypad to choose a sensitivity level ranging from 1 to 6. Setting 1 is the least sensitive, and setting 6 is the most sensitive.

      Note Levels 5 and 6 are highly sensitive and might trigger an alarm as a result of minimal movement while the patient is in bed. Correct patient assessment is the key to minimize false alerts.

   • **Turn reminder.** Select the desired turn schedule from the list box.

6. Touch the **Home** tab.
   The new alarm settings take effect immediately.

The EarlySense monitoring screen
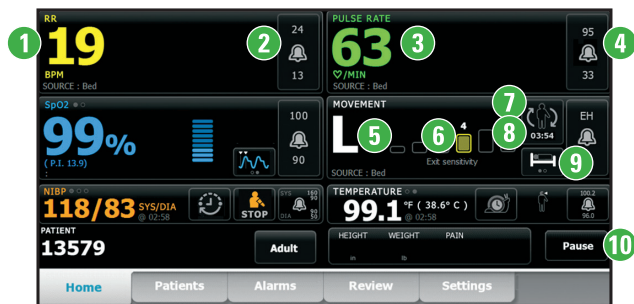
1. Respiration rate
2. Respiration rate alarm limit control
3. Pulse rate
4. Pulse rate alarm limit control
5. Patient movement level (0, L, M, H, EH)
6. Exit alarm sensitivity indicator (1–6)
7. Patient turn indicator
8. Patient turn indicator timer
9. Bed mode indicator
10. Pause monitoring button

Acoustic respiration rate (RRa)

Monitors configured with Masimo rainbow Acoustic Monitoring technology continuously and noninvasively measure respiration rate based on respiratory sounds produced in the upper airway. Respiratory sounds are detected through a sensor applied to the patient's neck.

Note   RRa is available only in the Continuous Monitoring profile.

Note   Masimo SpO2 monitoring is required when monitoring RRa.

Note   RRa monitoring is only for adult patients who weigh more than 66 pounds (30 kilograms).
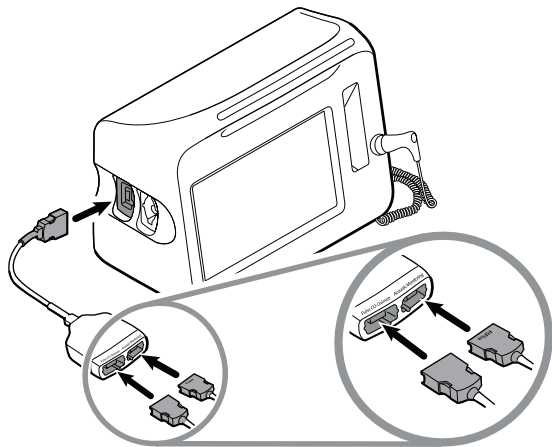
Connect the SpO2/RRa dual cable

Note   Monitors configured to measure RRa require a dual cable as shown.
The dual cable has two ports, one for the SpO2 cable and the other for the RRa cable.

1. Connect the dual cable to the device.
2. Connect the SpO2 cable to the red Pulse CO-Oximetry port.
3. Attach the RRa patient cable to the Acoustic Monitoring port.

   See the dual cable manufacturer's directions for use for more information.

   Note   Labels on the dual connector and the patient cables help ensure proper connection of the patient cables to the dual cable.
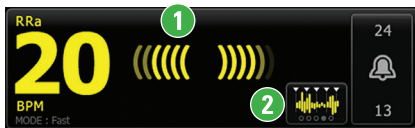
4. Attach the single-use RRa patient sensor to the RRa patient cable.

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RRa frame

The **Respiration Indicator** displays the level of sound detected by the RRa sensor. A higher level of sound causes more bars to illuminate.
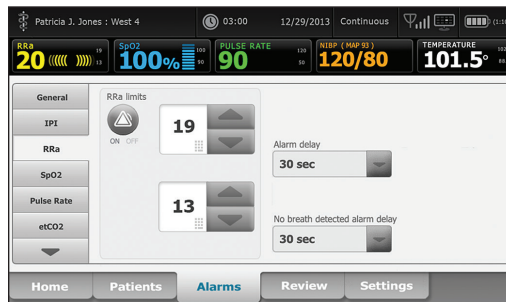

The **Averaging Selector** enables you to choose the desired visibility of subtle variations in RRa measurements. Use this control toggle to select an averaging option (off, trending, slow, medium, or fast) while acquiring readings.

Averaging periods

Option	Seconds
Trending	60
Slow	30
Medium	20
Fast	10

Configure RRa alarms

1. Verify that you are using the Continuous Monitoring profile.

   Note   If "Allow profile change" is enabled in Advanced settings, the device attempts to shift automatically to the Continuous Monitoring profile when you connect the sensor cable.

2. Verify that the patient type is Adult.
3. Navigate to the **RRa** vertical tab as shown.
4. Ensure that the RRa alarm limit control is set to ON.
5. Adjust the following settings as desired:
   - RRa limits (upper and lower)
   - Alarm delay (specifies the minimum duration of an alarm limit condition to activate an alarm signal)
   - No breath detected alarm delay (specifies the minimum duration of a no breath condition to activate an alarm signal)
6. Touch the **Home** tab.

Welch Allyn Connex® Office Profile
Quick Reference Card

Office profile
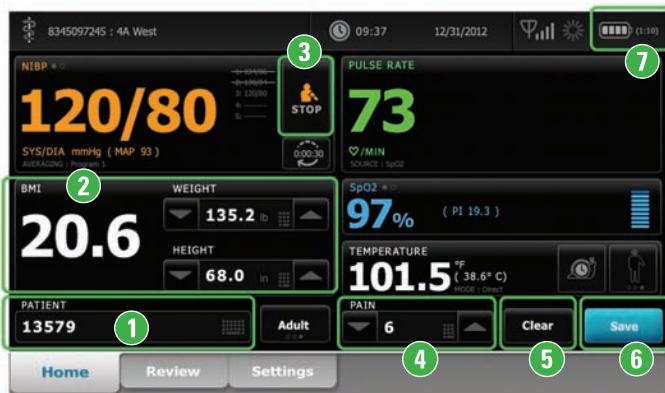
1 Manually enter patient information

1. From the Home tab, touch the keyboard icon in the Patient frame.

2. Enter patient information.

3. Touch **OK**.

4. To change the patient type, touch the patient type button (located on the right side of the Patient frame).

2 Enter weight and height

From the Home tab, touch the up/down arrow keys or the keypad to manually adjust weight and height.

Note If an approved, battery-powered weight scale is attached to the monitor, weight and height measurements from the weight scale populate fields in the BMI frame.

The BMI value changes based on weight and height input.

3 Start/Stop blood pressure

4 Enter pain level

From the Home tab, touch the up/down arrow keys or the keypad to manually adjust the pain level.

5 Clear patient data

Touch **Clear** to delete all measurements from the Home tab without saving them.

6 Save patient data

After taking patient measurements, touch **Save**.

7 Battery status

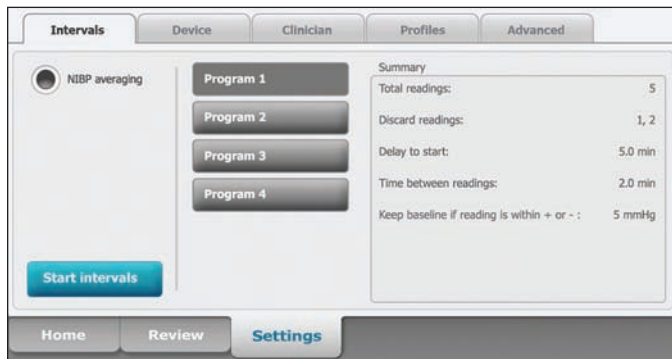|	
(100%)	Charging
(1:13)	Approximate operating time remaining
	Battery removed or not holding a charge

Power on/Standby

- Powers up the monitor
- Brief press – Sets monitor to Display power saving mode

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Start an NIBP averaging program

1. Properly size the blood pressure cuff and position it around the patient's bare upper arm.

2. On the Home tab, touch [icon]. The Intervals tab appears.

3. Confirm that **NIBP averaging** is selected.

4. Touch the desired program.

5. Read the Summary information to confirm that the specifications are appropriate for your patient.

6. Touch **Start intervals** to start the program.

Results of an NIBP averaging program

1 Displays the average of the readings.

2 Displays "NIBP AVERAGED."

3 • Displays the readings taken by the program.
   • A reading with a line through it is excluded from the average.

Note   To retain an NIBP average, touch **Save**.

Manage patient records

Patient records can be printed or deleted.

1. Touch the **Review** tab.

2. Select records by touching the check box.

3. Touch **Print** to print the records or **Delete** to permanently remove the records.

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