AutoRAE 2 Cradle QuickStart

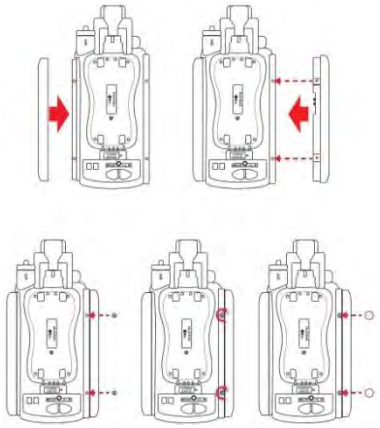
Setup

Before using the AutoRAE 2 Cradle to bump test or calibrate, make sure the AutoRAE 2 Cradle and (if one is used) the AutoRAE 2 Controller is running the latest firmware. Also, follow the instructions in the AutoRAE 2 User's Guide for programming the gas configurations.

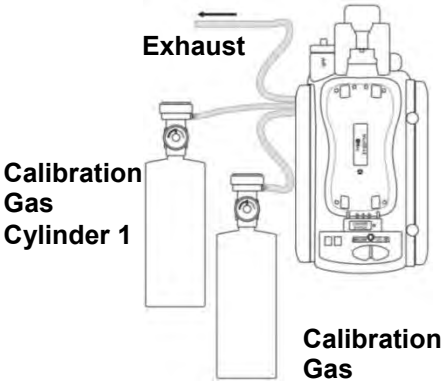
Important! Each calibration gas cylinder must have a demand-flow regulator.

Connections

Install left and right end caps



Connect gas cylinders with gas inlets

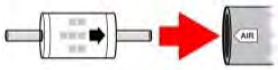


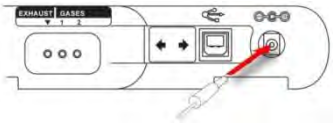


Press filter onto receptacle at end of Cradle

UltraRAE 3000 or ppbRAE 3000 only:

Use an Active Carbon Filter for VOC filtering





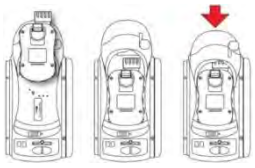
Plug barrel from AC adapter into jack, then AC Adapter to AC power source

Important! Always check that the gas configuration and the type/concentration of the calibration gases connected to the AutoRAE 2 Cradle match before you begin any bump test or calibration. Make sure there is enough gas in the cylinder(s). Set the RTC (real-time clock) date and time on the Cradle via ProRAE Studio II before first use.

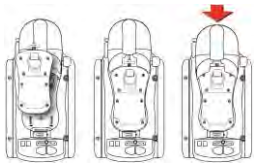
Placing An Instrument In The Cradle

Important! If the Cradle is for a ToxiRAE Pro-family instrument, make sure the correct calibration adapter is in place.

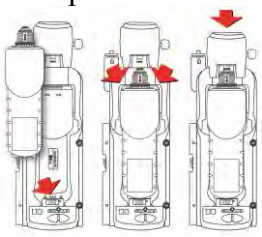
1. Make sure the filter on the instrument is not dirty or clogged (MiniRAE 3000, ppbRAE 3000, UltraRAE 3000, and MiniRAE Lite must be equipped with Quick Connectors and have their inlet probes removed).
2. Make sure the instrument is turned off or in AutoRAE 2 Mode.
3. Place the instrument into the cradle face-down, making check that it is aligned correctly with the contacts on the AutoRAE 2 Cradle's charging port.
4. Press in on the capture mechanism to lock the instrument in place.



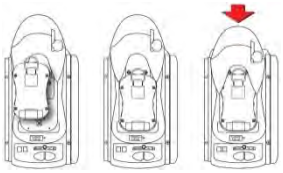
ToxiRAE Pro



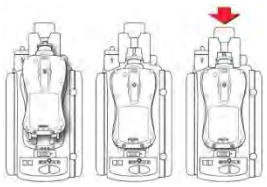
QRAE 3



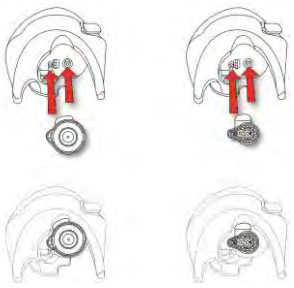
Handheld PID



MicroRAE



MultiRAE



The ToxiRAE Pro Cradle requires an adapter to be inserted in the capture mechanism. ToxiRAE Pro and ToxiRAE Pro LEL (L) and ToxiRAE Pro PID (R).

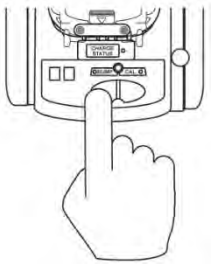
Automatic Warm-Up Before Bump Testing Or Calibrating

When you place an instrument in the cradle and lock the capture mechanism, the instrument begins charging and is automatically warmed up. Warm-up time depends on the sensors installed in the instrument and their individual warm-up requirements.

Performing A Bump Test

1. Insert an instrument in the AutoRAE 2 Cradle.
2. Press "Bump." If the instrument is warmed up (both LEDs are glowing green), the bump test begins.

Consult the Bump & Cal Error & Status chart for an explanation of the LED indications that tell you which operations are underway and which LED indications tell you of errors during calibration**.**

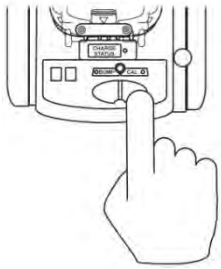


Note: If the instrument does not successfully pass a bump test, the AutoRAE 2 Cradle automatically begins a full calibration.

Performing A Calibration

Always perform a full calibration after replacing a sensor, using a new monitor, or if the instrument has been unused for a long period of time. In addition, if the instrument has failed a bump test, perform a full calibration.

1. Make sure the span value in the monitor(s) and the AutoRAE 2 Controller match.
2. Make sure the correct Gas Configuration has been selected (use G8; G1 through G7 are not supported).
3. Insert a monitor into the AutoRAE 2 Cradle.
4. Press "Cal."



When the instrument is warmed up (both LEDs are glowing green), calibration begins.

Note: Calibration order is important. Refer to cross-interference information in section 21.2 (Connecting Calibration Gas) in the AutoRAE 2 User's Guide and RAE Systems Technical Note TN-114: Sensor Specifications And Cross-Sensitivities (available for free download from www.raesystems.com).

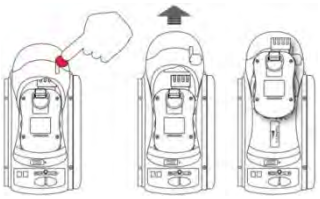
Bump And Cal Errors And Status Messages

Status	Bump LED	Cal LED	User Action
Warm-up in progress	Orange (blinking in alternation)		Do not remove the instrument from the cradle, or the warm-up process will be interrupted. Pressing keys has no effect.
Warm-up error	Red (blinking in alternation)		Remove the instrument from the cradle and take the action indicated on the instrument's display.
Warm-up completed successfully	Green	Green	Press Bump or Cal key to perform a bump test or calibration.
Bump test in progress	Green (blinking)	Off	Do not remove the instrument, or the process will be interrupted. Pressing keys has no effect.
Bump test completed successfully	Green	Off	The bump test result (pass) has been logged. You may remove the instrument from the Cradle for use or leave it on the Cradle for the next AutoRAE 2 operation or to charge its battery.
Bump test failed	Red (blinking slowly)	Off	The bump test result (fail) has been logged. The AutoRAE 2 will perform calibration on failed sensor(s) automatically.
Calibration in progress	Off	Green (blinking)	Do not remove the instrument, or the process will be interrupted. Pressing keys has no effect.
Calibration completed successfully	Off	Green	The result has been logged in the instrument. You may remove the instrument from the Cradle.
Calibration failed	Off	Red (blinking slowly)	The result has been logged in the instrument; you may remove it from the Cradle and read its display for an error code.
Sleep mode	Orange	Orange	Charging continues when in sleep mode. Press either key to wake up the instrument.
Monitor not connected / system idle	Off	Off	Check to make sure the monitor is properly installed in the cradle and the capture mechanism is fully engaged. Check to make sure the monitor is in AutoRAE 2 Communications Mode or turned off.
Cradle error	Red (blinking slowly)		Take the action indicated in the Controller's display. Otherwise, contact RAE Systems service.

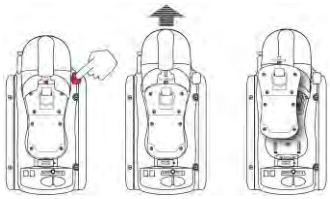
AutoRAE 2 Cradle QuickStart

Removing An instrument From The Cradle

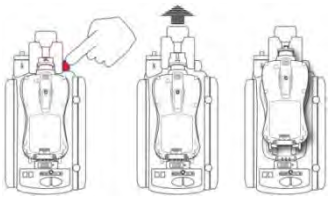
To remove an instrument from the cradle, press the button to release the capture mechanism. Then lift the instrument from its inlet end.



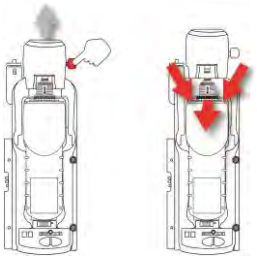
ToxiRAE Pro



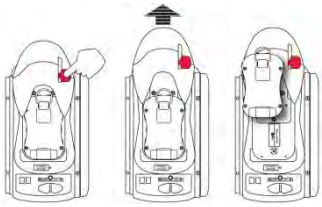
QRAE 3



MultiRAE



Handheld PID



MicroRAE

Charging An Instrument's Battery

The AutoRAE 2 Cradle automatically charges a docked instrument's battery. The Charge Status LED glows red to indicate that charging is taking place. When the instrument's battery is fully charged, the LED glows green.

Active Carbon Filter For Removing VOC

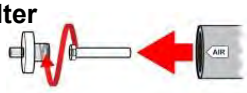
Whether zeroing a ppbRAE 3000 or UltraRAE 3000 or in an environment in which the ambient air has VOC (volatile organic compounds), it is highly recommended to use an Active Carbon Filter (P/N: 490-0006-000), which filters out VOC from the air.

Note: When an AutoRAE Controller is used with one or more Cradles, the air inlet on each attached cradle is disabled and air is taken in through the Controller's air inlet. Therefore, you only need to use one Active Carbon Filter for the Controller instead of on each cradle.

To install the Active Carbon Filter on the cradle:

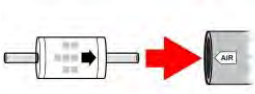
1. Remove the standard filter (if one is installed).
2. Remove the plastic filter adapter by twisting the plastic filter clockwise while gently pulling outward.
3. Press the Active Carbon Filter into the receptacle. The filter is designed for 20 uses. To help you keep track of how many calibrations are performed, there are 20 small boxes painted on the surface of the filter that you can mark with a pen after each use. **Note:** Make sure the arrow on the side of the filter points toward the cradle.

Remove standard filter



Remove plastic filter adapter

Press Active Carbon Filter into receptacle



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