

i-STAT[®] SOFTWARE UPDATE INSTALLATION GUIDE



Software Update	June 2010
i-STAT 200 Analyser Version	JAMS061 / CLEW A20
i-STAT 1 Analyser Version	JAMS128 / CLEW A20
Expiration Date	15 December 2010

OVERVIEW

This guide describes the steps you need to take to update the software on your i-STAT analyser. If you are an experienced user, a “Quick Steps” guide has been provided in your update pack that gives a single page summary of the steps to take.

SOFTWARE EXPIRY

The software currently running on your analyser will expire on the 23 June 2010. The new software version on the update CD should be installed on your analyser as soon as it is received.

If you do not update your analyser and the software expires, the analyser will display the error message “12-INVALID OR EXPIRED CLEW” and cease to function. You will have to update the analyser before you can use it again.

WHY DOES SOFTWARE EXPIRE?

The i-STAT analysers are designed to eliminate operator influence on delivered results. Unlike other unit-use systems, the user is not required to enter lot-specific calibration information into the instrument. The micro fabricated sensor technology produces very repeatable material from lot-to-lot which allows the analysers to use the same set of standardisation values for extended periods of time.

Nevertheless, the continuous manufacturing improvements by Abbott Laboratories necessitate re-establishing standardisation values from time to time to maintain long term consistency. This is equivalent to adjusting calibration on a traditional analyser. This is accomplished with periodic releases of software. This new version of the software re-establishes the standardisation and incorporates refinements to the internal quality monitoring system and ensures that your analyser is able to recognise new cartridge types.

Future shipments of cartridges may require the installation of this software prior to use of the cartridges. Failure to update prior to using these cartridges will result in the quality check error “69-CARTRIDGE TYPE NOT RECOGNISED”. This new software will continue to support all existing, unexpired cartridges.

HOW TO UPDATE YOUR ANALYSER

For instructions on updating your i-STAT 200 analyser, see pages 2 to 7.

For instructions on updating your i-STAT 1 analyser, see pages 8 to 12.

UPDATING THE i-STAT 200 ANALYSER

REQUIRED EQUIPMENT

To perform this update on the i-STAT 200 Analyser, you will need the following items:

- Enclosed update CD
- i-STAT 200 Handheld Clinical Analyser
- i-STAT Analyser IR Link Assembly (see Figure 1)
 - IR Link
 - Power Adapter for IR Link
 - Modular Data Cable (Flat Grey Data Cable)
- A computer with Microsoft Windows 95 or higher

Figure 1: IR Link Assembly Components



SETTING UP THE COMPUTER LINK

1. Assemble the IR link components:

- Insert one end of the Modular Data Cable into the back of the IR Link. Look for the slot in the back of the IR Link cradle that resembles a telephone jack. Slide the cable connector into this slot until it snaps into place. Either end of the Modular Data Cable may be used. See Figure 2
- Insert the other end of the data cable into the compatible “phone jack” slot in the back of the power adapter. See Figure 2.

Figure 2



2. Attach the power adapter for IR link to your computer:

- On the back of your computer, locate the port and cable used to connect the computer keyboard to the computer. See Figure 3 for more details.
- Unplug the keyboard connector from the back to the computer.
- Plug the keyboard connector into the back of the round grey/black power adapter fitting on the Power Adapter for IR Link. See Figure 4 for more detail.

- Plug the stacked connectors into the keyboard port on the back of the PC. See Figure 5 for more detail.
- Locate the 9-pin serial port on the back of your computer. See Figure 3. If your computer or laptop does not have a 9 pin serial port, please see Appendix A: USB Adaptor Kit.
- Plug the rectangular end of the Power adapter into the 9-pin serial port on the back of the computer. Figure 5 shows the final result of this connection.

Figure 3

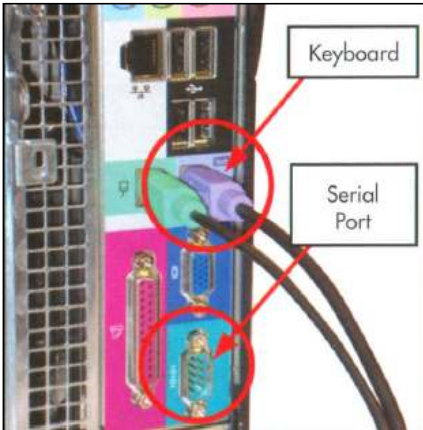
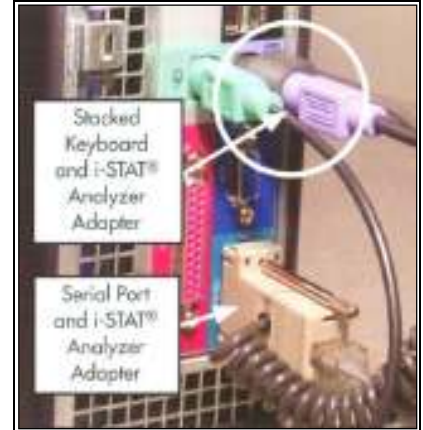


Figure 4



Figure 5



PREPARING YOUR ANALYSER

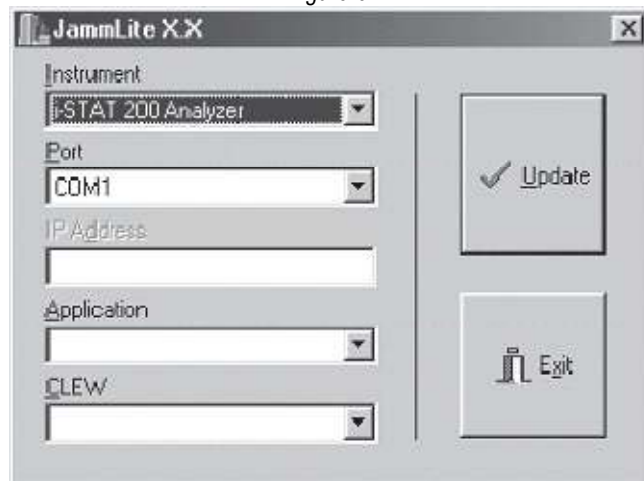
1. Print out any results from your i-STAT Analyser that you would like to save. Data stored in the i-STAT Analyser will be lost after a software update. To print out results, performed the following steps:
 - Press [DIS] on the analyser keyboard to activate the display.
 - The word [MENU] is displayed at the bottom of the screen. Press the arrowhead [▲] on the keypad that is directly below [MENU].
 - The analyser menu options are displayed (1 STATUS, 2 STORED RESULTS). Press [2] to access the stored results.
 - The stored results menu is displayed. Press [2] to activate the data printout function.
 - Patient files are displayed in groups of five, with the most recent patients listed first. To select one or more of the displayed files for printing, press the key that corresponds to the file number of that patient (i.e. press [2] to select file #2). To scroll to additional patient files, press the Up or Down arrowheads on the keypad.
 - Continue to scroll through the patient files, selecting patients to be printed. Multiple patients on different pages may be printer out simultaneously.
 - To deselect a patient file, press the numbered key again. (The number for a selected file will be in reverse video-a dark box with light number.)
 - Orient the analyser and the printer as usual then press the [PRT] key on the analyser keypad. Printing of all selected patients begins automatically.
 - Press [*] to exit the printing function.
2. Check the voltage of the batteries in your analyser as follows:
 - If the screen has gone blank, press DIS on the analyser keypad to activate the display.
 - The word MENU is displayed at the bottom of the screen. Press the arrowhead on the keyboard that is directly below MENU.
 - The analyser menu options are displayed (1 STATUS, 2 STORED RESULTS). Press [1] to access the analyser status page.

- The battery voltage is displayed adjacent to the word BATTERY. If the voltage is below 8V, new batteries should be installed in the analyser before performing the update.
- Press [*] to exit the STATUS page.

INSTALLING THE NEW SOFTWARE

1. **IMPORTANT:** Exit all programs currently running on your computer.
2. Insert the update disc into the appropriate drive of your computer.
3. Double click the “My Computer” icon on your computer desktop. The “My Computer” window appears.
4. Double click the icon for the drive containing the new software. The window for that drive appears.
5. Double click the “Transfer.bat” icon (may also read simply “Transfer” or “Transfer_xp.bar”). A black window will quickly appear and disappear. The transfer is now complete.
6. At the end of the download process, the drive window is displayed again. Close this window by clicking on the small X in the upper right corner. This window may also close automatically after the data is transferred.
7. Double click on the My Computer icon on your desktop again. The “My Computer” window appears.
8. Double click the C: icon (may also say Local Disk C:).
9. Double click the folder entitled “bins”.
10. Double click the icon entitled “JAMMLITE.” The software will open as seen in figure 6.

Figure 6.



UPDATING THE ANALYSER

1. In the Instrument field, verify that “i-STAT 200 Analyser is displayed (Figure 6). If it is not, click on the down arrow [▼] adjacent to the Instrument field. A drop-down list of analysers is displayed. Move the cursor to “i-STAT 200 Analyser” and click.
2. Click on the down arrow [▼] adjacent to the Port field. A list of available communication (i.e. COM) ports is displayed. If one COM port is listed, click that option. If several ports are available, move the cursor to the first COM port on the list and click.
3. In the Application field, verify that JAMS061.BIN is displayed. If it is not, click on the down arrow [▼] adjacent to the Application field. A list of software programs is displayed. Click on JAMS061.BIN.*
4. In the CLEW field, verify that A20.CLW is displayed. If it is not, click on the down arrow [▼] adjacent to the CLEW field and click on A20.CLW.*

* If the correct CLW and JAM do not appear in the JammLite window, please close JammLite and repeat the steps in the section “Installing the New Software”.

5. Click on the update button. Figure 7 is displayed. Ensure that the analyser is off then follow the instructions as shown. At Step 2, position the analyser in the IR Link as shown in Figure 8. The rubber feet on the analyser should be just outside the edge of the IR Link cradle.

Figure 7

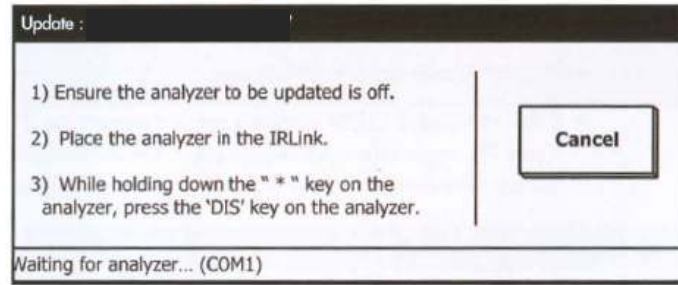
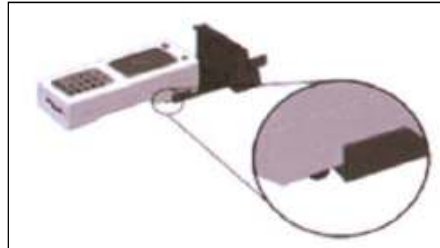


Figure 8



At Step 3, hold down the [*] asterisk key on the analyser then press and hold [DIS]. Hold both keys until the analyser begins to download the software (i.e., a vertical line moves rapidly from right to left across the screen).

Once downloading begins, release both keys. Ensure numbers next to “Programming application block” are increasing. If not, reposition the analyser. Do not move the analyser while the download is in progress.

6. During the update, the screen in Figure 9 is displayed. Do not move the analyser or the IR link until the update is complete (Figure 10).

Figure 9

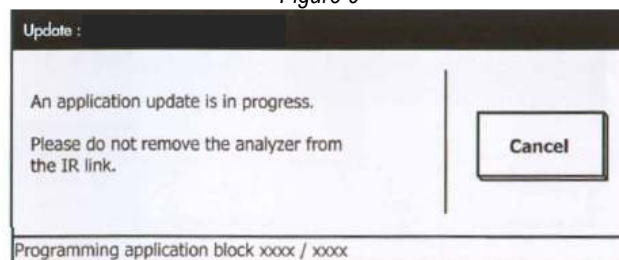
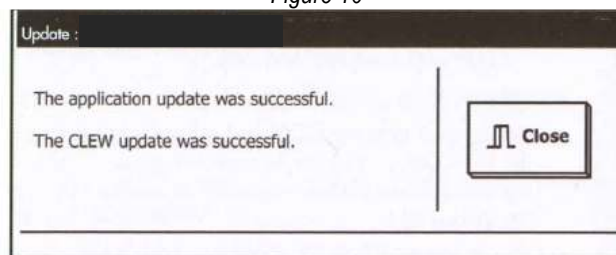


Figure 10



7. Click on the Close button. Also close the initial JammLite screen by clicking on the Exit button.
8. Close any windows that remain open on your desktop.
9. Remove the analyser from the IR Link and check that it has been properly updated:
 - If the display screen is blank, press [DIS] to activate the display. If “NEW SOFTWARE INSTALLED. USE ELECTRONIC SIMULATOR. CODE 3” is displayed or “CODE 70” is displayed, ignore this message for now.
 - Press the arrowhead key [▲] under the word [MENU] at the bottom of the screen. The analyser's menu options are displayed (1 STATUS, 2 STORED RESULTS).
 - Press [1] to access the Status page.
 - Check the numbers adjacent to VER and CLEW. VER should read “JAMS061.BIN;” CLEW should read “A20.”

- Press [*] to exit the page.
 - If the JAMS and CLEW numbers are not correct, or if an error code is displayed other than Code 3 or Code 70, repeat the update process. If the JAMS and CLEW are still not correct, call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.
10. Check analyser function by running a used cartridge to activate the Internal Electronic Simulator. Ignore any error messages that are due to the used cartridge (i.e., Code 21 Cartridge Preburst). Alternatively, you may also run a patient sample to activate the Simulator.
11. If the analyser operates as expected, disconnect the update components and reattach the keyboard cable to the port on the back of the computer. Remove the update disc from the drive.

TROUBLESHOOTING

If the following messages appear during the update process, follow the indicated instructions. If the screen continues to be displayed, call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The port specified for the update can not be opened. Verify that no other program (such as the i-STAT CDS) is using the port. The update was not successful.

SOLUTION

This message indicates that another installed program is interfering with the upgrade on this COM port. Please close all running programs (especially Practice Management Software) and try the upgrade again. Should that not fix the problem, the default selection for the COM port may not be correct.

- On JammLite, click the down arrow adjacent to the Port field. A list of available COM ports is displayed.
- Move the cursor to the next available COM port in the list and click.
- Click on the Update button to try the upgrade on this port.
- If this message or the message “The IR Link could not be configured” displays, repeat these steps with the next available COM port. If the IR link successfully initialises, 3 more steps will be displayed (Figure 7) and you may continue with the upgrade.

If you have attempted the upgrade on all COM ports that are listed in JammLite, please call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The specified application could not be opened, has an error or is not a valid application file. The update was not successful.

SOLUTION

This message indicates that the wrong JAMS or CLEW was selected when you set up the program, or that another program running on your computer has interfered with the update process.

Click on the Close button to exit the program. Close all the other programs running on your computer then restart the update process, ensuring that the correct JAMS and CLEW are chosen.

MESSAGE

There was an error encountered during communication with the analyser. The update was not successful.

SOLUTION

This message indicates that a problem occurred when the computer tried to send the update information to the analyser.

Ensure that the analyser is installed properly in the IR link and that it was not removed from the link before the update was complete. Click on the Close button to exit the program Remove analyser from IR Link cradle. Take batteries out of analyser, then reinstall batteries. Replace analyser in IR Link and begin the program again.

MESSAGE

The specified CLEW file could not be opened; has an error or is not a valid CLEW file. The update was not successful.

SOLUTION

This message indicates that the correct CLEW file was not chosen during setup or that another program running on your computer interfered with the download of the CLEW files.

Click on the Close button to exit the program and close all other programs on your computer. Begin the program again, ensuring that the correct CLEW file is chosen.

MESSAGE

Nothing is selected for the update. Please select an application and/or CLEW and try again.

SOLUTION

This message indicates that the JAMS and CLEW files were not selected when setting up the program.

Click on the Close button to exit the program, then begin the program again, selecting the correct JAMS and CLEW files under “Application” and “CLEW” (see “Installing the New Software” section for details).

MESSAGE

The IRLink could not be configured to perform the application update. Verify the IRLink is plugged in and the correct port is selected. The update was not successful.

SOLUTION

This message indicates that the program could not configure the IR Link.

The IR Link may not be powered. Check the IR Link status light to ensure that it is red. If this light is not illuminated, please check all your connections as described in the section “Setting Up the Computer Link.”

Ensure that both adapters of the Power Adapter for the IR Link (Figure 1) are connected to the PC as described in “Setting Up the Computer Link”

Should that not fix the problem, the default selection for the COM port may not be correct.

- On JammLite, click the down arrow adjacent to the Port field. A list of available COM ports is displayed.
- Move the cursor to the next available COM port in the list and click.
- Click on the Update button to try the upgrade on this port.
- If the message “The IR Link could not be configured” displays, repeat these steps with the next available COM port. If the IR Link successfully initialises, 3 more steps will be displayed (Figure 7) and you may continue with the upgrade.

If you have attempted the upgrade on all COM ports that are listed in JammLite without success, please call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The Downloader could not be configured to perform the update. Verify the Downloader is plugged in and the correct port is selected. The update was not successful.

SOLUTION

This message occurs when you are using original i-STAT 200 Analyser hardware but have configured JammLite to perform an i-STAT 1 Analyser upgrade.

Please select “i-STAT 200 Analyser” for the Instrument in JammLite and try the update again.

MESSAGE

Code 13 displayed

SOLUTION

Incorrect JAMS and CLEW combination. Reinstall the software, ensuring that the correct JAMS and CLEW are selected (see “Installing the New Software” section for details.)

MESSAGE

Code 70 displayed

SOLUTION

Code 70 can occur after a software upgrade if the unit is turned on before running a cartridge. Remove and then reseal the batteries to reset the analyser and then insert a cartridge.

UPDATING THE i-STAT 1 ANALYSER

REQUIRED EQUIPMENT

To perform this update on the i-STAT 1 Analyser, you will need the following items:

- Enclosed update CD
- i-STAT 1 Handheld Clinical Analyser
- i-STAT 1 Downloader (see Figure 11)
 - Power Adaptor
 - Power Cord
 - Downloader
 - Downloader Serial Cable (blue markings)
- A computer with Microsoft Windows 95 or higher

Figure 11:



SETTING UP THE COMPUTER LINK

1. Assemble the downloader components:

- Connect the power cord to the power adaptor.
- Plug the round plug of the power adaptor into the back of the downloader. Plug the wall plug into an electrical outlet.
- Plug either end of the serial cable into the serial port on the back of the downloader (see figure 12).

Figure 12



2. Attach the downloader to your computer:

- Locate an unused serial port on the back of your computer (figure 13).
- Plug the free end of the serial cable into a compatible 9 pin serial port on the computer. See figure 14 for a picture of the final result.


Figure 13



Figure 14



PREPARING YOUR ANALYSER

1. Check the voltage of the batteries in your analyser as follows:
 - If the screen has gone blank, press POWER [] on the analyser keypad to activate the display.
 - Press [MENU] on the analyser keypad.
 - Press [1] to select ANALYSER STATUS.
 - The battery voltage is displayed adjacent to the word BATTERY. If the voltage is below 8V, new batteries should be installed in the analyser before performing the update.
 - Press [MENU] to exit the ANALYSER STATUS page.

INSTALLING THE NEW SOFTWARE


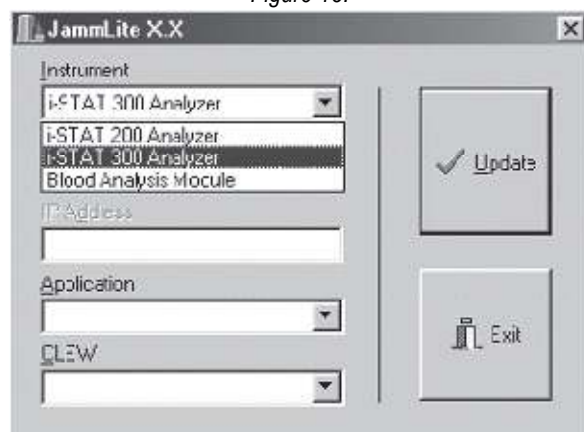
1. **IMPORTANT:** Exit all programs currently running on your computer.
2. Insert the update disc into the appropriate drive of your computer.
3. Double click the “My Computer” icon on your computer desktop. The “My Computer” window appears.
4. Double click the icon for the drive containing the new software. The window for that drive appears.
5. Double click the “Transfer.bat” icon (may also read simply “Transfer” or “Transfer_xp.bar”). A black window will quickly appear and disappear. The transfer is now complete.
6. At the end of the download process, the drive window is displayed again. Close this window by clicking on the small [] in the upper right corner. This window may also close automatically after the data is transferred.
7. Double click on the My Computer icon on your desktop again. The “My Computer” window appears.
8. Double click the C: icon (may also say Local Disk C:).
9. Double click the folder entitled “bins”.
10. Double click the icon entitled “JAMMLITE.” The software will open as seen in figure 15.

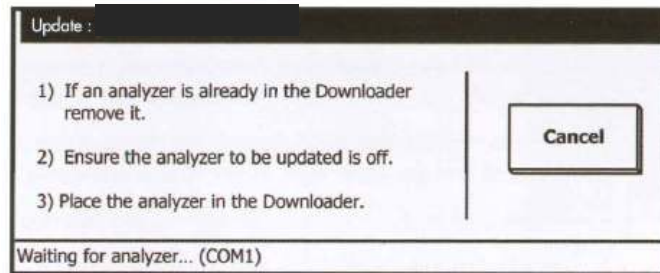
Figure 15.



UPDATING THE ANALYSER

1. Click on the down arrow [▼] adjacent to the Instrument field. A drop-down list of analysers is displayed. Move the cursor to “i-STAT 300 Analyser” (figure 15) and click.
 2. Click on the down arrow [▼] adjacent to the Port field. A list of available communication (i.e. COM) ports is displayed. If one COM port is listed, click that option. If several ports are available, move the cursor to the first COM port on the list and click.
 3. In the Application field, verify that JAMS128.BIN is displayed. If it is not, click on the down arrow adjacent to the Application field. A list of software programs is displayed. Click on JAMS128.BIN.*
 4. In the CLEW field, verify that A20.CLW is displayed. If it is not, click on the down arrow [▼] adjacent to the CLEW field and click on A20.CLW.*
- * If the correct CLEW and JAM do not appear in the JammLite window, please close JammLite and repeat the steps in the section “Installing the New Software”.
5. Click on the update button. Figure 16 is displayed.

Figure 16



6. Ensure that the analyser is not in the downloader and it is turned off. At Step 3 (seen in figure 16) simply place the analyser in the downloader. **Do not move the analyser while the download is in progress.**
7. During the update, the screen in figure 17 is displayed. **Do not move the analyser or the downloader until the update is complete (figure 18).**

Figure 17

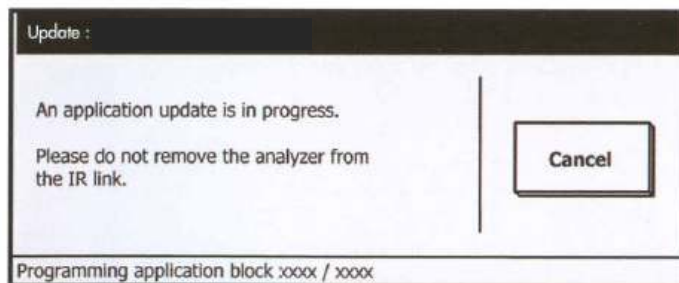
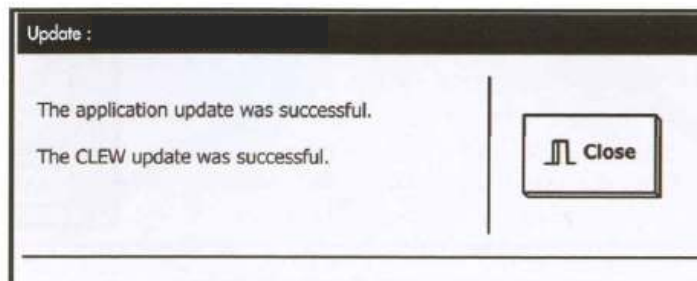


Figure 18



8. Click the “Close” button. Also close the initial JammLite screen by clicking on the exit button.
9. Close any windows that remain open on your desktop.
10. Remove the analyser from the downloader and check that it has been properly updated:
 - If the display screen is blank, press [POWER] to activate the display.
 - Press [MENU] on the analyser keypad.
 - Press [1] to select ANALYSER STATUS.

- Check the numbers adjacent to VERSION and CLEW. VERSION should read “JAMS128”; CLEW should read A20”

TROUBLESHOOTING

If the following messages appear during the update process, follow the indicated instructions. If the screen continues to be displayed, call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The port specified for the update can not be opened. Verify that no other program (such as the i-STAT CDS) is using the port. The update was not successful.

SOLUTION

This message indicates that another installed program is interfering with the upgrade on this COM port. Please close all running programs (especially Practice Management Software) and try the upgrade again. Should that not fix the problem, the default selection for the COM port may not be correct.

- On JammLite, click the down arrow adjacent to the Port field. A list of available COM ports is displayed.
- Move the cursor to the next available COM port in the list and click.
- Click on the Update button to try the upgrade on this port.
- If this message or the message “The downloader could not be configured” displays, repeat these steps with the next available COM port. If the downloader successfully initialises, 3 more steps will be displayed (Figure 16) and you may continue with the upgrade.

If you have attempted the upgrade on all COM ports that are listed in JammLite, please call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The specified application could not be opened, has an error or is not a valid application file. The update was not successful.

SOLUTION

This message indicates that the wrong JAMS or CLEW was selected when you set up the program, or that another program running on your computer has interfered with the update process.

Click on the Close button to exit the program. Close all the other programs running on your computer then restart the update process, ensuring that the correct JAMS and CLEW are chosen.

MESSAGE

There was an error encountered during communication with the analyser. The update was not successful.

SOLUTION

This message indicates that a problem occurred when the computer tried to send the update information to the analyser.

Ensure that the analyser is installed properly in the downloader and that it was not removed from the downloader before the update was complete. Click on the Close button to close the message. Remove analyser from downloader. Take batteries out of analyser, then reinstall batteries. Begin the update again.

MESSAGE

The specified CLEW file could not be opened; has an error or is not a valid CLEW file. The update was not successful.

SOLUTION

This message indicates that the correct CLEW file was not chosen during setup or that another program running on your computer interfered with the download of the CLEW files.

Click on the Close button to exit the program and close all other programs on your computer. Begin the program again, ensuring that the correct CLEW file is chosen.

MESSAGE

Nothing is selected for the update. Please select an application and/or CLEW and try again.

SOLUTION

This message indicates that the JAMS and CLEW files were not selected when setting up the program.

Click on the Close button to exit the program, then begin the program again, selecting the correct JAMS and CLEW files under “Application” and “CLEW” (see “Installing the New Software” section for details).

MESSAGE

The downloader could not be configured to perform the application update. Verify the downloader is plugged in and the correct port is selected. The update was not successful.

SOLUTION

This message indicates that the program could not configure the downloader.

The downloader may not be powered. The green light on the downloader should be on. If this light is not illuminated, please check all your connections as described in the section “Setting Up the Computer Link.

Ensure that both adapters of the Power Adapter for the IR Link (Figure 1) are connected to the PC as described in “Setting Up the Computer Link”

Should that not fix the problem, the default selection for the COM port may not be correct.

- On JammLite, click the down arrow adjacent to the Port field. A list of available COM ports is displayed.
- Move the cursor to the next available COM part in the list and click.
- Click on the Update button to try the upgrade on this port.
- If the message “The IR Link could not be configured” displays, repeat these steps with the next available COM port. If the IR Link successfully initialises, 3 more steps will be displayed (Figure 16) and you may continue with the upgrade.

If you have attempted the upgrade on all COM ports that are listed in JammLite without success, please call Woodley Technical Support on +44 (0)1204 669033, option 1, for assistance.

MESSAGE

The IRLink could not be configured to perform the update. Verify the IRLink is plugged in and the correct port is selected. The update was not successful.

SOLUTION

This message occurs when you are using original i-STAT 1 Analyser hardware but have configured JammLite to perform an i-STAT 200 Analyser upgrade.

Please select “i-STAT 300 Analyser” for the Instrument in JammLite and try the update again.

MESSAGE

Code 13 displayed

SOLUTION

Incorrect JAMS and CLEW combination. Reinstall the software, ensuring that the correct JAMS and CLEW are selected (see “Installing the New Software” section for details.)