Priorclave Tactrol© USB Interface Socket

Operation and Set-up Instructions

The Tactrol© USB interface socket is intended to allow the user to easily download a copy of the configuration backup file (.BAK) and also a copy of the Data log file (.LOG).

These files can then be used by Priorclave Technical Support for fault evaluation and also for your in house logging procedures after the creation the text file (.TXT) of the Data log file.

The Tactrol© USB interface socket can be also used to upload a new or replacement Configuration file (.PTC) to a Priorclave.

Logging can be carried out "on the fly" to the USB Memory Stick or downloaded from the autoclave memory*

*If Tactrol Board Specification allows.

The USB Interface Socket can be used in different ways to download and upload information from the autoclave's control system as listed below:
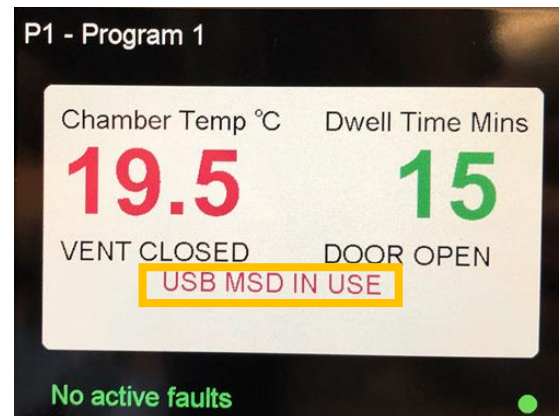
Contents

Quick "On the Fly" operations

"On the Fly" operation is useful to quickly download a settings file for diagnostic or backup purposes and to record a log file live during the autoclave cycle. It requires the use of a USB memory stick with an empty root directory. Subfolders and previous Priorclave settings and log files are permitted but these will be over written by the process.

Backing up the autoclave settings directly to the USB memory stick

1. Turn off the power to the autoclave and insert the USB memory stick into the autoclave's USB interface socket.

2. Turn the power on to the autoclave. The message 'USB MSD IN USE' will be displayed, this message displays for 20 seconds after insertion or when the machine is powered up with the stick inserted. Please wait till after this message has disappeared to remove the USB memory stick.

3. If the download is successful, **Sxxxx.BAK** (where xxxx is the autoclave serial number) will have been be created on the USB memory stick. This is a backup of the autoclave's current configuration and can be saved to a computer and or emailed to Priorclave for diagnostic purposes.

Note: *The date and time for the file will be downloaded from the on-board real time clock and therefore the time and date can be checked by looking at the file time/date.*

Recording the autoclave log file directly to the USB memory stick

For Priorclave autoclaves fitted with the Mini-Tactrol control board this is the only method of extracting log information for the autoclave cycles as the control board has no on-board logging memory.

On other models a copy of the text log file is downloaded to the stick live and the encrypted file is saved in the Tactrol control board memory. The entire log and encrypted log can be downloaded using the method described later in this instruction sheet.

1. Ensuring that the autoclave is powered up and not in a process cycle, insert the USB memory stick into the autoclave's USB interface socket. After inserting the USB memory stick the USB in use message (see above) will be displayed while a settings backup file **Sxxxx.BAK** (where xxxx is the autoclave serial number) is saved on the USB memory stick) This will happen each time a USB memory stick is inserted into the autoclave's USB interface socket.

2. From the beginning of the next cycle a text file named Sxxxx.TXT (where xxxx is the serial number of the autoclave) will be saved to the memory stick. There is no indication of data transfer on the autoclave control panel but the USB memory stick will indicate activity if it is able to do so.

3. On subsequent cycles the existing Sxxxx.TXT text log file will be updated with the subsequent cycle logs. The log files should be regularly copied or moved from the USB memory stock to a computer for recording and archive purposes along with the **Sxxxx.BAK file.**

Note: *The date and time for the file will be downloaded from the on-board real time clock and therefore the time and date can be checked by looking at the file time/date.*

Note: *Do **NOT** remove the USB memory stick from the autoclave while a cycle is running.*
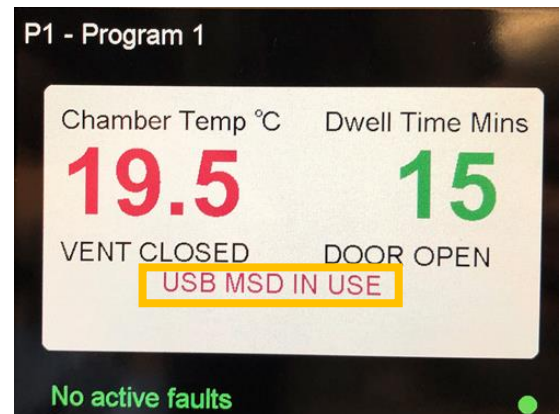
Note: *On models where the Tactrol Control Board includes on-board memory it is good practise for audit records to periodically download the full encrypted log file using the procedures on the following pages.*

Full Operations

Backing up the autoclave settings

Warning! - Any Backup file saved in the root of the USB memory stick will be overwritten.

1. Ensuring that the autoclave is powered up and not in a process cycle, insert the USB memory stick into the autoclave's USB interface socket.

2. The message '**USB MSD IN USE**' will be displayed, this message displays for 20 seconds after insertion or when the machine is powered up with the stick inserted. Please wait till after this message has disappeared to remove the USB memory stick.

3. If the download is successful, **Sxxxx.BAK** (where xxxx is the autoclave serial number) will have been be created on the USB memory stick. This is a backup of the autoclave's current configuration and can be saved to a computer and or emailed to Priorclave for diagnostic purposes.

Note: *The date and time for the file will be downloaded from the on-board real time clock and therefore the time and date can be checked by looking at the file time/date.*

Downloading an encrypted log file

The ROOT directory of the USB memory stick must contain the files Sxxxx.DWN and Sxxxx.TXT. (where xxxx is the serial number of the autoclave) to enable downloading a log file.

The USB memory stick supplied with the autoclave should have already been set up with these files ready to use but if you need to re format the stick or use another one, please refer to Formatting the USB drive instructions *(Page 7)* for instructions on how to do this.
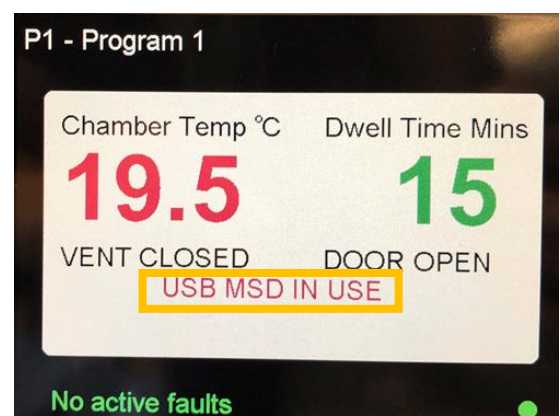
A backup file will be created when downloading the log.

Warning! - Any similar files saved in the root of the USB memory stick will be overwritten.

1. Ensuring that the autoclave is powered up and not in a process cycle, insert the USB memory stick into the autoclave's USB interface socket.

2. The message '**USB MSD IN USE**' will be displayed, this message displays for 20 seconds after insertion or when the machine is powered up with the stick inserted. Please wait till after this message has disappeared to remove the USB memory stick.

Warning! This can take a long time depending on the size of the log file

3. After a successful download the following files will be created on the USB memory stick:

- **Sxxxx.BAK** (backup of the current autoclave set-up)

- **Sxxxx.LOG** (encoded log file that can be read by the Tactrol© Log reader program or Tactrol© tools log reading mechanism)

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Note: *The date and time for the file will be downloaded from the on-board real time clock and therefore the time and date can be checked by looking at the file time/date.*
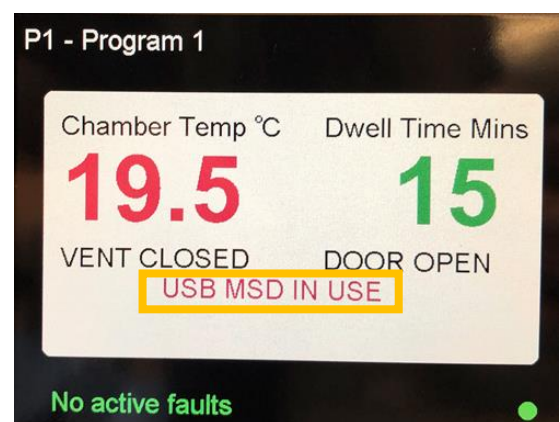
Uploading a new settings file

Warning! The current settings are first downloaded as an Sxxxx.BAK file. Any Sxxxx.BAK file already in existence on the USB memory stick will be overwritten.

*(If you wish to keep a previous .BAK file, save it on another drive or create a sub directory on the USB memory stick and move the file there **BEFORE** inserting the USB memory stick into the USB socket.)*

To update the autoclave's settings, you will have been sent a **.PTC file**. This must be copied to the ROOT directory of a USB memory stick if a USB memory stick with the file on has not been provided.

1. Ensuring that the autoclave is powered up and not in a process cycle, insert the USB memory stick into the autoclave's USB interface socket.

2. The message '**USB MSD IN USE**' will be displayed, this message displays for 20 seconds after insertion or when the machine is powered up with the stick inserted. Please wait till after this message has disappeared to remove the USB memory stick.

3. After updating the autoclave's setting, the (.BAK) file on the USB memory stick, will be of the previous settings.

4. It is good practise to save this (.BAK) file in another place and then download another (.BAK) file for the current settings after performing the update, using the Backing up the autoclave settings procedure (page 3)

Clearing the autoclave log

On default logging settings the autoclave log file has space for about a year of cycle records. Once the file is full the log will over-write itself from the oldest record first.

Over time the log file can get quite large and log downloads can take some time to download. If you routinely download log files to save time and repeated data you can regularly clear the log file – having saved the previous data of course.

To carry out this procedure a USB memory stick with a **.ers** file loaded is required.

Usually this will need to be set up first and instructions for this are in the **Formatting the USB drive** section. *(Page 8)*
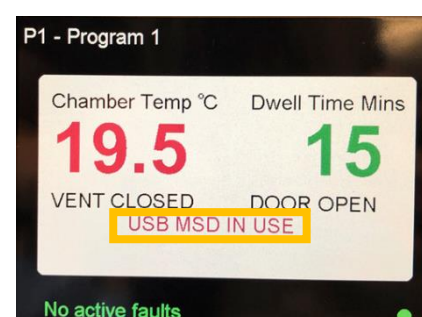
To preserve data use a dedicated USB memory stick for this function only.

Once you have a USB memory stick with an **.ers** file loaded onto it then carry out the following steps to erase the log file from the autoclave.

1. Check that the current log file has been downloaded and saved. If not then download and save the log file from the autoclave using the procedure on page 3.

   Warning! Once erased by this procedure the log file cannot be retrieved.

2. Ensuring that the autoclave is powered up and not in a process cycle, insert the USB memory stick into the autoclave's USB interface socket.

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Data Transfer and connection will be indicated to the user The message 'USB MSD IN USE' will be displayed, this message displays for 20 seconds after insertion or when the machine is powered up with the stick inserted. Please wait till after this message has disappeared to remove the USB memory stick.

On successful erasing of the internal log, the string – **LOG ERASED** will be appended to the .ers file on the stick.

Once this string is appended it will not erase any further logs until the – **LOG ERASED** text is removed from the file.

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Types of files used and their extensions:

File Extension	File Type	Purpose
(.BAK)	Backup file	Backup file of the current Autoclave's configuration.
(.TXT)	Text file	Used to create (.DWN) file and afterwards to be over-written to create a text version of the log file.
(.DWN)	Download file	Used to download the log file and populate the text version of the log file, (TXT)
(.PTC)	Configuration file	The Autoclave's configuration file
(.LOG)	Data log file	Encoded Log file. *(Save this encrypted file as part of your laboratory quality system as it gives an un-editable record.)*
(.ERS)	Erase file	Erases the current log file.

Notes:

- The files that are pre-installed on the supplied Priorclave USB memory stick must **NOT** be deleted.

- Each file name includes/must include the serial number of the autoclave in the following format, "Sxxxx". Example S1234.TXT

- The files used can only reside in the ROOT directory of the USB memory stick.

- The Tactrol© USB interface socket will not search subdirectories contained within the USB memory stick.

- Other files can exist in their own folders on the USB memory stick without causing any problems to the upload/download procedure. Ensure that no other files are present in the root directory that do not relate to the files listed above.

- Whilst the upload or download procedures are in operation it is imperative that the USB memory stick is not removed. Removal of the USB memory stick may leave the autoclave partially updated and may also corrupt the FAT table on the USB memory stick leaving it unreadable.

- If a Log File has been downloaded before erasing the log, (the .TXT, .LOG and .DWN files are present in the ROOT directory of the USB memory stick), a copy of the log file will be made before the erasure is completed.

- If a Log File has been downloaded before erasing the log, and you do not require a copy of the log file, then you can delete the .TXT, .LOG and .DWN files that are present in the ROOT directory of the USB memory stick before erasing the log - This however is **NOT** recommended!

File Sizes

(.BAK) file: 220-230K

(.TXT) file: Varies according to cycle complexity and log interval but on average 3-6K per cycle on a 1 minute log interval.
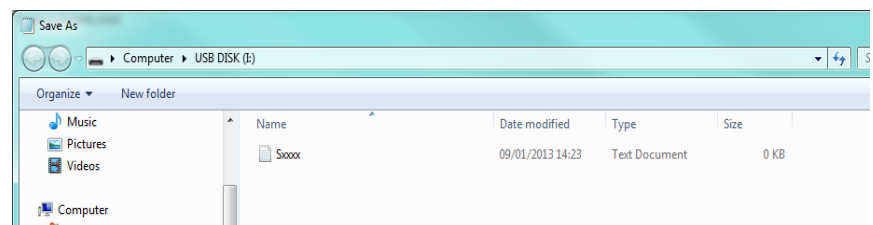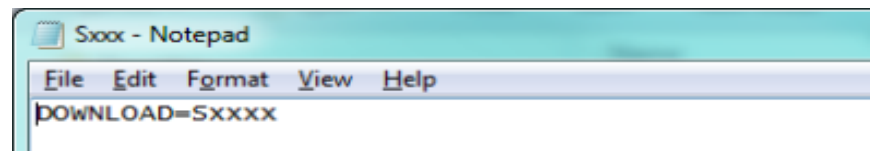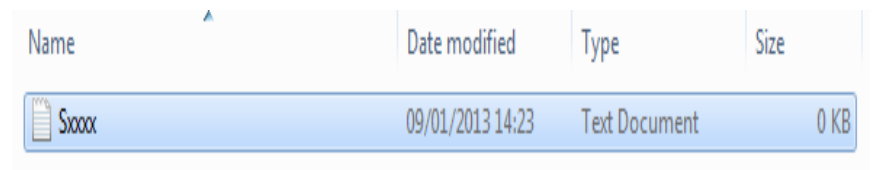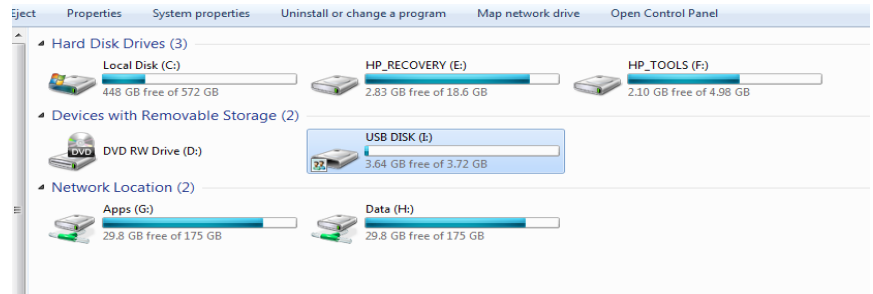
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Formatting a USB drive

Setting up a USB Memory stick for settings Backup

No set up required – ensure that any existing (.BAK) Backup files are moved if they need to be kept

Setting up a USB Memory stick for log file download

1. Insert a USB memory stick into an available Windows PC

2. On the PC, go to the *My Computer* directory

3. Double click on the appropriate USB memory stick location – for this example, Drive I

4. Open drive I

5. Right-click on the screen and select NEW / TEXT DOCUMENT

6. Name the new document 'Sxxxx' where xxxx is the Serial Number of the Autoclave and press the Return key. (This creates a Sxxxx.TXT file on the USB memory stick)

7. Open the new Text Document.

8. On the first line of the document, enter the text 'DOWNLOAD=Sxxxx' where xxxx is the Serial Number of the Autoclave

9. On the Options tab at the top of the TEXT Document window, select File / SAVE AS

10. Select the "Save as type" option and choose "All Files".

11. Name the document "Sxxxx.DWN" where xxxx is the Serial Number of the Autoclave

12. Select the Save option or press the RETURN key to save. Close the document. The ROOT directory of the USB memory stick now contains the files Sxxxx.DWN and Sxxxx.TXT.

13. Click on the "Safely remove hardware and eject media" toolbar icon on the windows task bar and select Eject the USB memory stick on which the files were created on.

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Setting up a USB Memory stick for log file erasing

1. Insert a USB memory stick into an available Windows PC

2. On the PC, go to the *My Computer* directory

3. Double click on the appropriate USB memory stick location – for this example, Drive I

4. Open drive I

5. Right-click on the screen and select NEW / TEXT DOCUMENT

6. Name the new document 'Sxxxx' where xxxx is the Serial Number of the Autoclave and press the Return key. (This creates a Sxxxx.TXT file on the USB memory stick)

7. Open the new Text Document.

8. On the first line of the document, enter the text "ERASE=Sxxxx" where xxxx is the Serial Number of the Autoclave. - **Note:** *no other text should be present within this file. If other text is present the erase will not be carried out.*

9. On the Options tab at the top of the TEXT Document window, select File / SAVE AS

10. Select the "Save as type" option and choose "All Files".

11. Name the document "Sxxxx.ERS" where xxxx is the Serial Number of the Autoclave

12. Select the Save option or press the RETURN key to save.

13. The ROOT directory now contains an Sxxxx.ERS file and an Sxxxx.txt file.

14. Click on the "Safely remove hardware and eject media" toolbar icon on the windows task bar and select Eject the USB memory stick on which the files were created on.

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