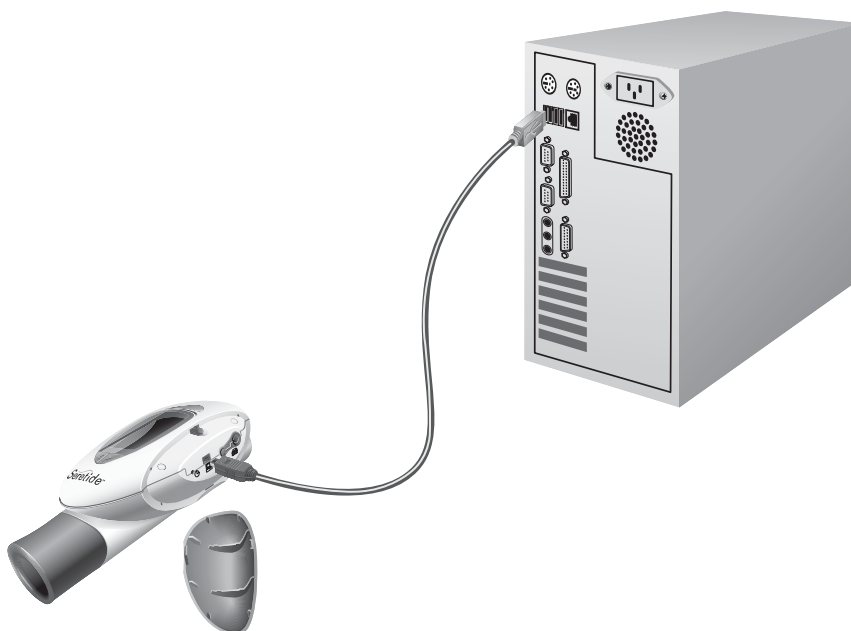




Connecting the Asthma Monitor to a Computer

Refer to the following illustration and instructions to connect the Asthma Monitor to a computer for transfer and analysis of data:



1. Attach the small USB connector on the Asthma Monitor cable to the jack on the Asthma Monitor.
2. Attach the large USB connector on the Asthma Monitor cable to the USB port on your computer.



About the Main Program Window

The following screen displays the Asthma Analyser (AA) Patient View:

Patient Information **Patient View Button** **Data View Button**

Patient List **Search field** **Program buttons** **Main buttons**

Patient Information	
Family Name	SAMPLE
Given Name(s)	Patient
ID	632003-452
Address	MAIN STREET, 404 CAPITOLCITY
Phone / E-Mail	010 538 38 58, p.sample@NET.COM
Date of birth	Day 10 Month 3 Year 1941
Last data transfer	08.11.2001 Sex Male Age 62
Patient Notes	HEAVY SMOKER

Program buttons: new patient, delete, send ID, data transfer


Main buttons: save, print, settings, help, quit

Patient Information: This pane displays the patient's information.

Patient List: This list displays a list of patients whose data has been entered. A sample patient profile is available for your reference.

Search Field: This field enables you to search for a patient by name or by ID.










Active Buttons: These are program buttons that enable you to create or delete patient profiles, send patient IDs to the Asthma Monitor, or transfer patient data from the Asthma Monitor to your computer.

Main Buttons: These enable you to set program settings, save or print patient profiles, and exit the program. Click  to open this help file.



Getting Started

Follow these steps to quickly get started with the Asthma Analyser program.

- Press  to create a new [patient profile](#) and fill out the details. A sample patient profile exists for your reference.
- Press  to [send the patient ID](#) to the Asthma Monitor. Next time the Asthma Monitor is connected to the computer, the patient profile opens automatically.
- Press  to [transfer data](#) saved on the Asthma Monitor. The saved measurements are transferred to the computer and displayed in the [graph view](#) on the data page.
- The patient's data can be analyzed on the [Data page](#), using the [Personal Best Value](#), [Ranking List](#)  and [Traffic Light Display](#)  functions. The data can be displayed in [PEF](#)  or [FEV1](#)  modes.
- [Comments](#)  can be set by dragging and dropping to a date in the graph.
- Select a patient's name in the [patient list](#) to view the profile for that patient.
- [Search](#) for a patient by typing the patient's family name or ID in the search field.
- The [time and date](#) for the Asthma Monitor can be set automatically from the computer in the [Settings](#)  screen. They can also be set directly on the Asthma Monitor.



Note: Click the orange hyperlinks for more information on the underlined items.



Main Buttons

The following buttons are available at all times while using the program. Click the orange hyperlinks for more information on the button's function.



Patient - Click this button to view the patient profile.



Data - click this button to view the patient's data.



Save – Click this button to save the patient profile.



[Print](#) - Click to print the patient profile, the data graph, comments or the ranking list.



[Settings](#) – Click to set preferences for time and date formats, to set the Asthma Monitor clock from the computer, to export/import patient profiles to and from the program database, to set the search criteria, and to change the [Print settings](#).



Help – Click this button to access the Asthma Analyser program's online help.



Quit – Click to quit the Asthma Analyser program.



Active Buttons

The following describes active buttons, which are specific to the [Patient View](#) or the [Data View](#) in the program.



Note: When buttons are not available for use, they are grayed out. For example, when the Asthma Monitor is not connected to a PC, the transfer button appears as shown to the right.



Patient View

Patient View is where you create or delete patient profiles, send patient ID numbers to the Asthma Monitor, or transfer patient data from the Asthma Monitor to the Asthma Analyser.



[New Patient](#) – Click to create a new patient profile.



[Delete Patient](#) – Click to delete the selected patient profile. When the patient profile library is empty or no patient profile is selected, this command is unavailable.



[Send ID](#) – Click to send a patient's identification number to the Asthma Monitor. The connected Asthma Monitor is synchronized with the open patient profile. The Send ID button is invalid until a new patient profile is selected.



[Data Transfer](#) – Click to transfer saved measurements from the Asthma Monitor to the program. This function is invalid when the Asthma Monitor is not connected or there is no data to be transferred.



Data View

Data view enables you to look at a graphical representation of patient data, view statistics related to the data, and attach comments to the patient data.



[PEF](#) – Click this button to view the patient's data in PEF mode.



[FEV1](#) – Click this button to view the patient's data in FEV1 mode.



[Ranking](#) – Click this button to view the ranking list or set the ranking parameters.



[Traffic Light](#) – Click to display the graphical data with a traffic light colored display or set the traffic light parameters.



[Data Transfer](#) – Click to transfer saved measurements from the Asthma Monitor to the program. This is invalid when the Asthma Monitor is not connected or there is no data to be transferred.




Managing Patient Profiles



Full Screen

About Patient Profiles

This section describes the process of creating and filling out a patient profile. Click  to view the Patient Profile screen.

Asthma Analyzer

microlife

patient

SAMPLE, Patient

smith, john

Family Name: smith

Given Name(s): john

ID: 1234-5

Address: home ave

Phone / E-Mail: 335578

Date of birth: Day 18, Month 6, Year 1980


Last data transfer: none

Sex: Male, Age: 23




Patient Notes

new patient, delete, send ID, data transfer, save, print, settings, help, quit

Creating a New Profile


1. Press  to create a new Patient Profile.
2. Enter the patient's identification information:
 - Family Name (required)
 - Given Name(s) (required)
 - ID (required) is provided by the physician and cannot be changed by the patient. Each patient must have a unique ID. If the ID you typed in is already in use, the program prompts you for a different ID.



3. Enter the patient's contact information and birth data (optional).
 - Address/Phone/E-mail address
 - Date of Birth – Press  to select the patient's birth day, month, and year from the drop-down menu.
4. Enter the patient's personal data (optional).
 - [Last Data Transfer](#) – This displays the date of the last or most recent data transfer and is updated automatically.
 - Sex – Click  to select the patient's gender from the drop-down menu.
 - Age – Type in the patient's age.
5. Type in information pertaining to the patient's health and risk factors under Patient Notes. Provide data about smoking habits, family history, medications and other miscellaneous information related to the patient in this field (optional).
6. Click [Save](#)  to save the patient's profile.

When the required patient information is filled out and saved, the patient name gets displayed in the list on the left side. Patient profiles can be found by entering a Name or ID in the [Search](#) field. Patient profiles can also be [Exported](#) or [Imported](#) from the [Settings](#) menu.

Deleting a Patient Profile

Select a profile from the Patient Profile list and click  to delete the patients records from the Asthma Analyser program.



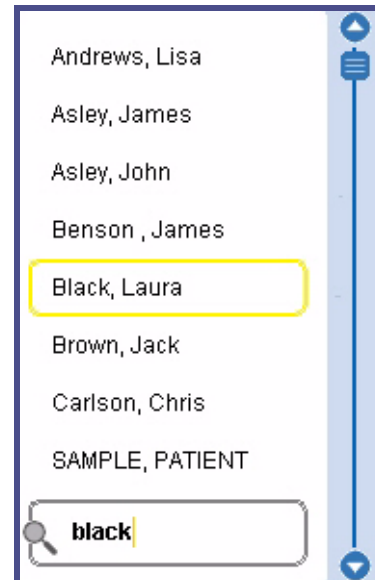
Managing Patient Profiles




Full Screen

Searching for a Patient

Patient profiles can be found by entering the patient's name or ID in the Search field. Type the patient's name or ID in the Search field. The program lists all patients with names that have the same first letter or number. The Search criteria can be set to search by name or ID, by changing the program [Settings](#).

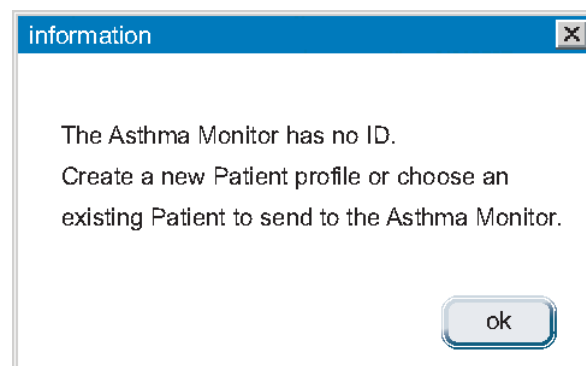



Sending ID

If the Asthma Monitor is connected to a computer, the Send ID  button becomes available allowing Patient IDs to be transferred to the Asthma Monitor. A [New Patient ID](#) can be sent to the Asthma Monitor if it does not have one stored, or its previous ID can be [Changed](#) for a different patient.

Sending a New Patient ID

1. If there is no ID saved on the Monitor, the program asks you to create a [New Patient Profile](#) or select an existing one.

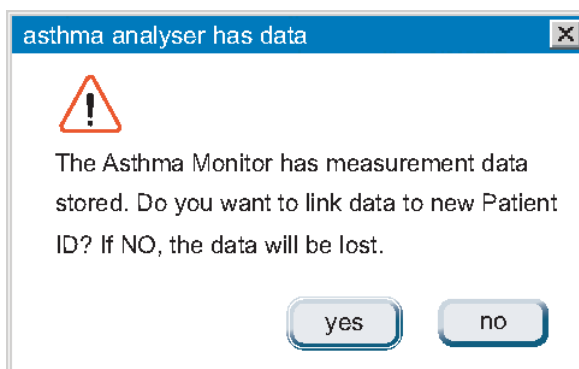


2. Press  to send the patient's ID number to the Asthma Monitor. The Patient is now linked to the



Monitor, and his profile will open automatically every time the Monitor is connected.

3. If the Asthma Monitor has previous measurement data stored on it, you are prompted to save the data to a new patient profile or erase the data.




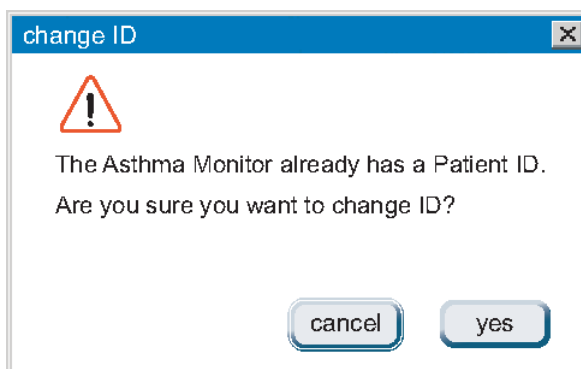
Click  to save the data.



Note: The [Data Transfer](#) from the Asthma Monitor to the computer is not automatic. Click the Data Transfer button to transfer data.

Changing a Patient ID

1. If the Asthma Monitor has a previously stored ID, it can be changed by sending a different ID (Patient Profile) to the Monitor. The ID can be obtained by creating a [New Patient Profile](#) or selecting an existing Patient Profile.
2. Press  to send the patient's ID number to the Asthma Monitor. The program asks before overwriting the existing ID on the Asthma Monitor.





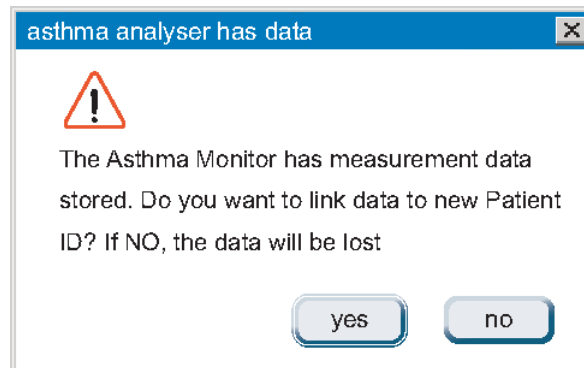
Managing Patient Profiles



Full Screen

3. Click to link to the new patient ID.



4. If there is data already stored on the device, the program prompts you to confirm before overwriting the existing data on the Asthma Monitor.



5. Click . The ID is changed and data remains on the Asthma Monitor. Click to change the ID and delete the data on the monitor.

Once the ID is sent to the Asthma Monitor, that patient's profile automatically opens every time you connect to the Asthma Monitor until you change the ID.

Transfer- ring Patient Data

If the Asthma Monitor is connected to a computer and the ID stored in the Asthma Monitor exists in the Patient List, the Data Transfer  button becomes activated allowing patient profile data to be transferred. The Patient Information screen in the program switches to the same ID as well. If the ID stored in the Asthma Monitor doesn't exist in the Patient List, then the button is disabled .


1. Connect the Asthma Monitor to the computer.

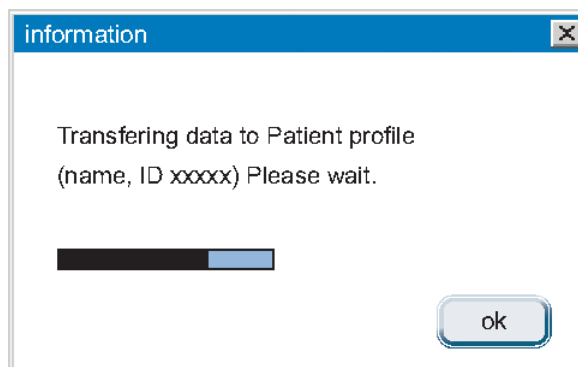


Managing Patient Profiles



Full Screen

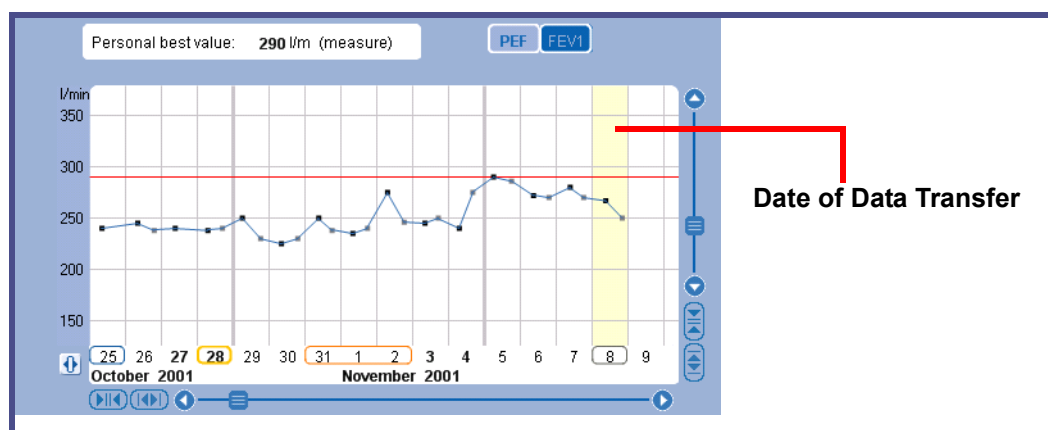
2. Click  to send the patient's profile information. A screen appears showing that the patient's profile is being transferred.



3. After data transfer, the data gets erased from the Asthma Monitor, and saved to the program. The [Data View](#) page opens to display a graphical view of the data. The date of data transfer is saved as the [Last Data Transfer](#) in the Patient Profile.

Date of Data Transfer

This is the date of data transfer from the Asthma Monitor to the Asthma Analyser program. This is displayed on the graph as a yellow band. The last or most recent date is also recorded in the [Patient Profile](#) page, as a reminder.



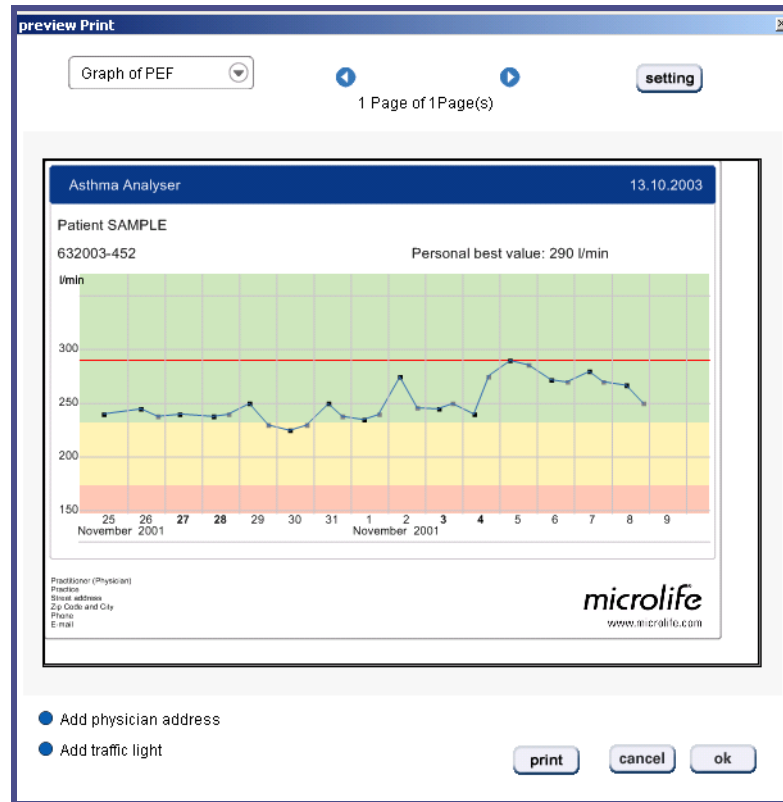


Managing Patient Profiles

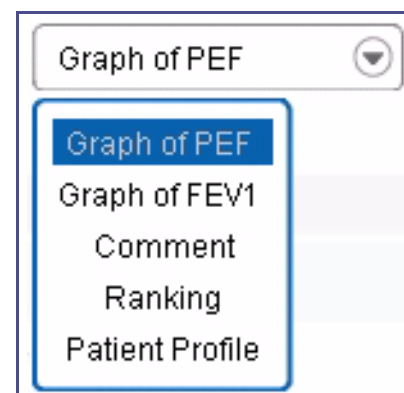


Full Screen

Printing Click the  button to print data.



A print preview is shown. Select from the pull-down menu to print either the Patient Profile, Graph of PEF or FEV1, Ranking List, or Comment. Click to add the [Traffic Light](#) display and the Physician's address which can be set in the [print settings](#).



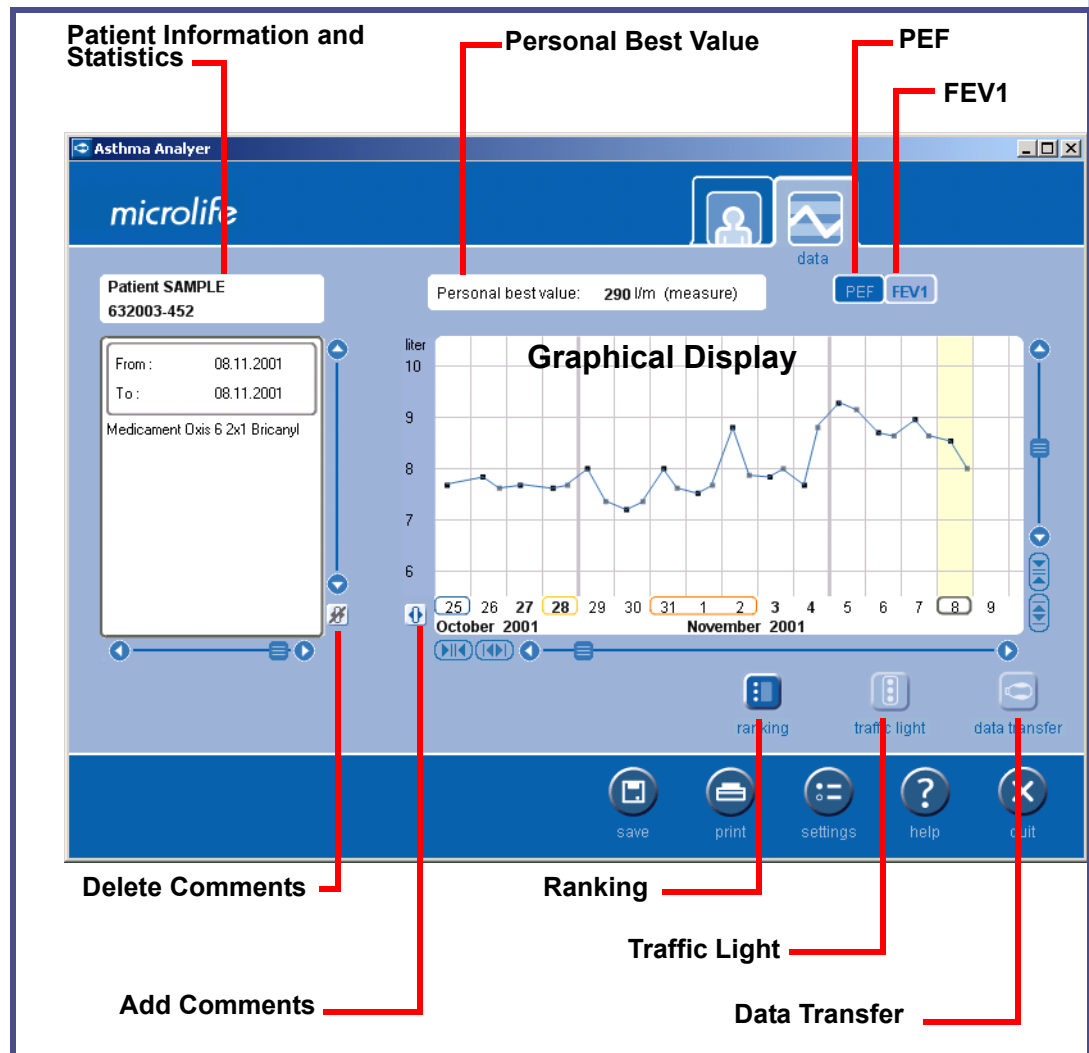


Analyzing Data

This section describes the process of analyzing patient data

graphically, and explains how to read the statistics window. Click 

to view the patient's data in a graphical view.








Graphical Display: This pane displays the measurement data graph.


Patient Information and Statistics: This pane displays the patient's name, ID, comments with the period associated with them, and the ranking list.

Personal Best Value: This displays the [Personal Best Value](#) as a numerical value, as well as a red line in the graphical display.

PEF: Click  to display the patient's data in [PEF](#) mode.

FEV1: Click  to display the patient's data in [FEV1](#) mode.








Ranking: Click  to display or set parameters for the [Ranking List](#).

Traffic Light: Click  to display or set the parameters for the [Traffic Light](#) range of data in the [PEF](#) graphical display as well as the Asthma Monitor (PF 200 only).

Data Transfer: Click  to [transfer data](#) from the Asthma Monitor.

Comments: Click  to [add comments](#) and  to [delete comments](#).

Navigating the Graph Window

Click  and  to scroll the graph view up and down. Click  and  to scroll the view left and right. Alternatively, you can click and drag  to change the view. Click  to condense the view. Click  to expand the view. Hover the mouse over the data points in the graph window to display the PEF value, FEV1 value, date and time of a particular measurement.



Analyzing Patient Profile Data

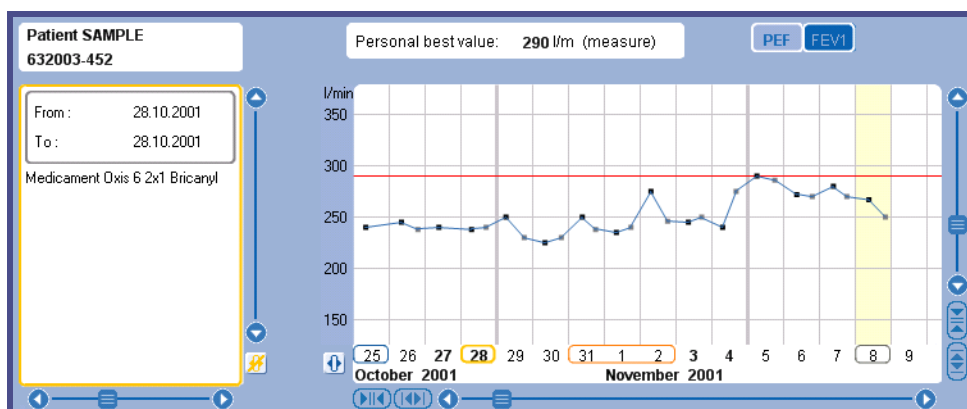


Full Screen



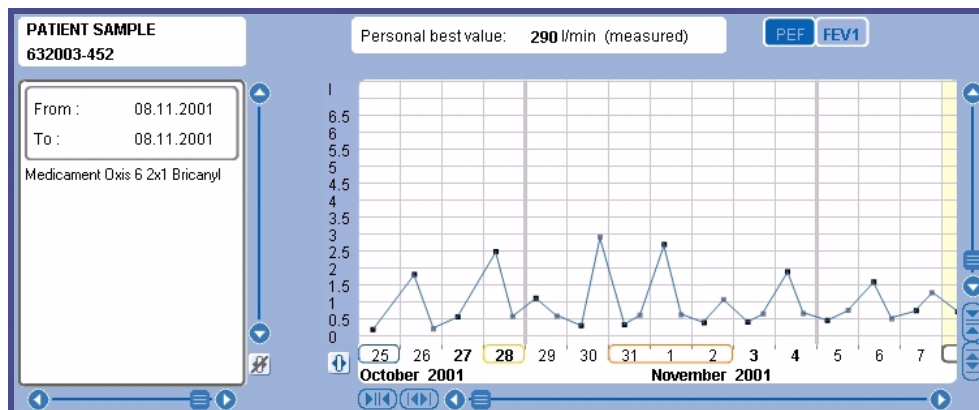
PEF

The PEF (Peak Expiration Flow) is a measurement of the rate at which the patient can exhale. The PEF mode displays the measurements taken by the Asthma Monitor in graphical form. Click the **PEF** button to enable the PEF mode of display. The unit of measurement for the PEF graph is l/min.



FEV1

The FEV1 (Forced Expiration Flow in the first second) measures the volume of air expelled in the first second of a forced expiration starting from full inspiration. The Asthma Analyser calculates the FEV1 values from the night-time maximum and day-time minimum values, and displays the FEV1 values in a graphical form. Click the **FEV1** button to enable the FEV1 mode of display. The unit of measurement for the FEV1 graph is liters.





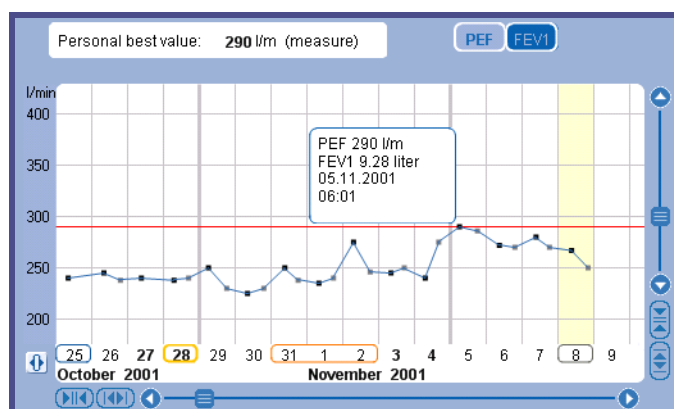
Analyzing Patient Profile Data




Full Screen

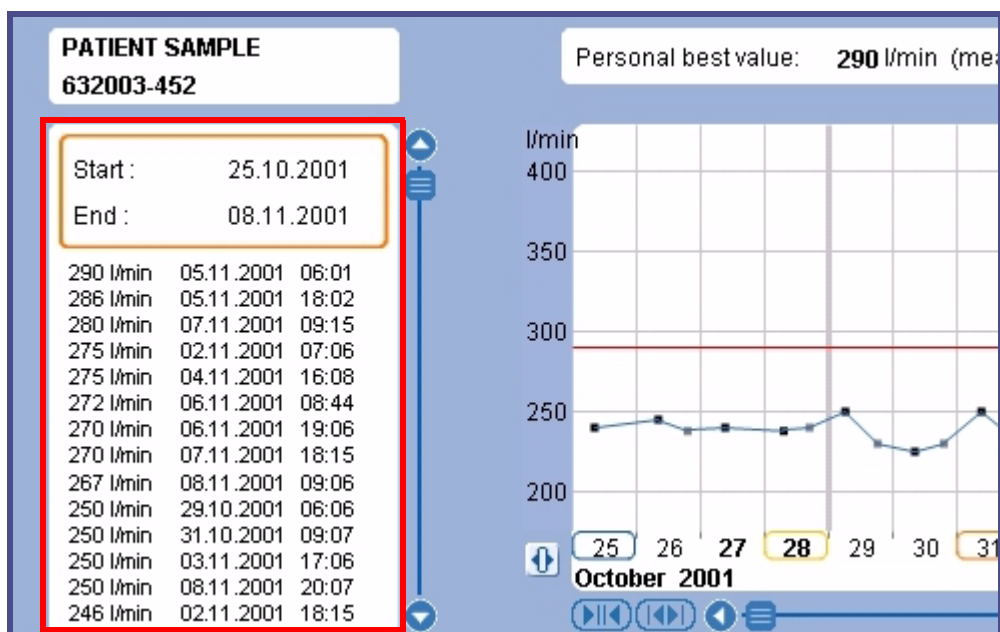
Personal Best Value

The Personal Best Value is the highest value measured by the Asthma Monitor. This value is indicated in the [PEF mode](#) by a horizontal red line, and is also displayed numerically alongside the PEF and FEV1 graphs. This value is used to calculate the [Traffic Light](#) display values.



Ranking List


Click  to show or hide the patient's Ranking List or set ranking parameters. The ranking list displays the selected data in a numerical values on the left side of the graphical display.






Show Ranking List



Click the **Show Ranking list** option on the  button, to display the Ranking List on the left side of the graphical display. The graph view remains unchanged. The Comments feature is disabled in this mode.



Hide Ranking List

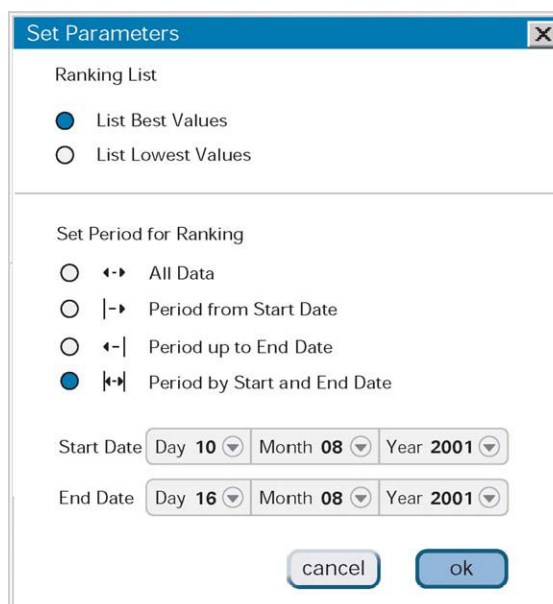


Click the **Hide Ranking list** option on the  button, to hide the Ranking List on the left side of the graphical display. The graph view remains unchanged.

Set Parameters



Click the  option on the  button to set the parameters for the Ranking List. Click to select the **List Best Values** or **List Lowest Values**, to display the list in ascending or descending order. The ranking period can be changed to show all data, data from or up to a specified date, or data within a specified time interval. Click to select the desired option and select the **Start Date** and **End Date** from the pull-down menus, as applicable.



The 'Set Parameters' dialog box contains the following elements:

- Ranking List:** Two radio buttons: 'List Best Values' (selected) and 'List Lowest Values'.
- Set Period for Ranking:** Four radio buttons: 'All Data', 'Period from Start Date', 'Period up to End Date', and 'Period by Start and End Date' (selected).
- Start Date:** Three pull-down menus for Day (10), Month (08), and Year (2001).
- End Date:** Three pull-down menus for Day (16), Month (08), and Year (2001).
- Buttons:** 'cancel' and 'ok' buttons at the bottom right.




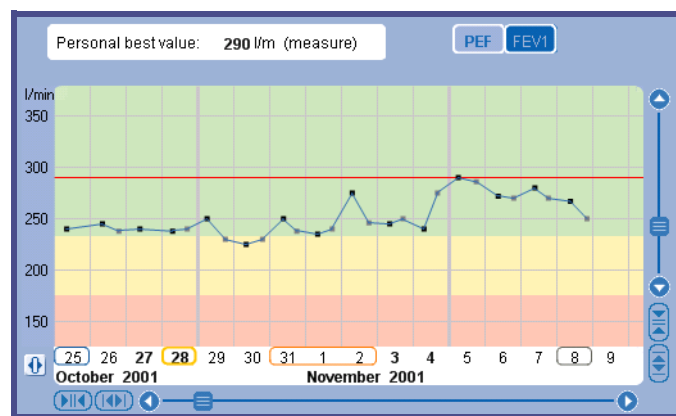
Analyzing Patient Profile Data



Full Screen



Traffic Light

Press  to use the Traffic Light function. This function divides the graph in three color ranges based on the traffic light system, indicating the patient's health status. Use this function to show or hide the traffic light display, and set the traffic light parameters on the display as well as the Asthma Monitor (PF 200 only). This function is enabled for the [PEF mode](#) of graphical display.



Show Traffic Light





Click  on the  button to display the Traffic Light range on the graph. The graph will be marked in three colors: green, yellow, and red. The standard values for these colors are calculated, using the [Personal Best Value](#). The green range is 80-100% of the Personal Best Value, yellow is 50-80% of the Personal Best Value, and the red is 0-50% of the Personal Best Value. The three colors indicate the patient's health status as follow:

- Green: Condition is stable.
- Yellow: Alert, condition is not stable.
- Red: Emergency, condition is highly unstable.

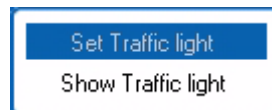




Hide Traffic Light



Click  on the  button to hide the Traffic Light system. The graphical display is restored to its normal state.

Set Traffic Light Parameters



Click  on the  button to set the traffic light parameters. The ranges for the three color values can be customized to non-standard values. Type in the desired percentage values for the three colors. Alternatively, you can type in numerical values and the percentages are calculated automatically. The [Personal Best Value](#) can also be changed. Click the **Set Standard** option to restore the default traffic light settings. This option sets the parameters on the graphical display as well as for the Asthma Monitor (PF 200 only).

Color	Percentage	Numerical Value
Green	100 %	290 l / min
Yellow	80 %	232 l / min
Red	60 %	174 l / min



Note: This option is available only when the PF 200 model is connected to the PC. If the PF 100 model is connected to the PC, or no device is connected, this option is grayed out.



Comments Comments enable you to add additional patient-specific information. Comments can be added, deleted, and viewed.

Adding Comments

Follow these instructions to add comments.

1. Click the comments button



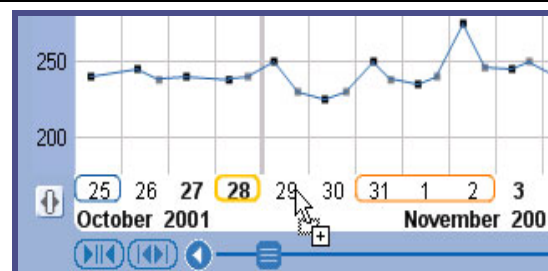
and select a color for the comments marker.



2. Click the comments button



and drag and drop it to a date on the graph view.



3. An oval appears encircling the date.



4. Click and drag either end of the oval until it encircles the days for which the comments are valid.





Analyzing Patient Profile Data



Full Screen

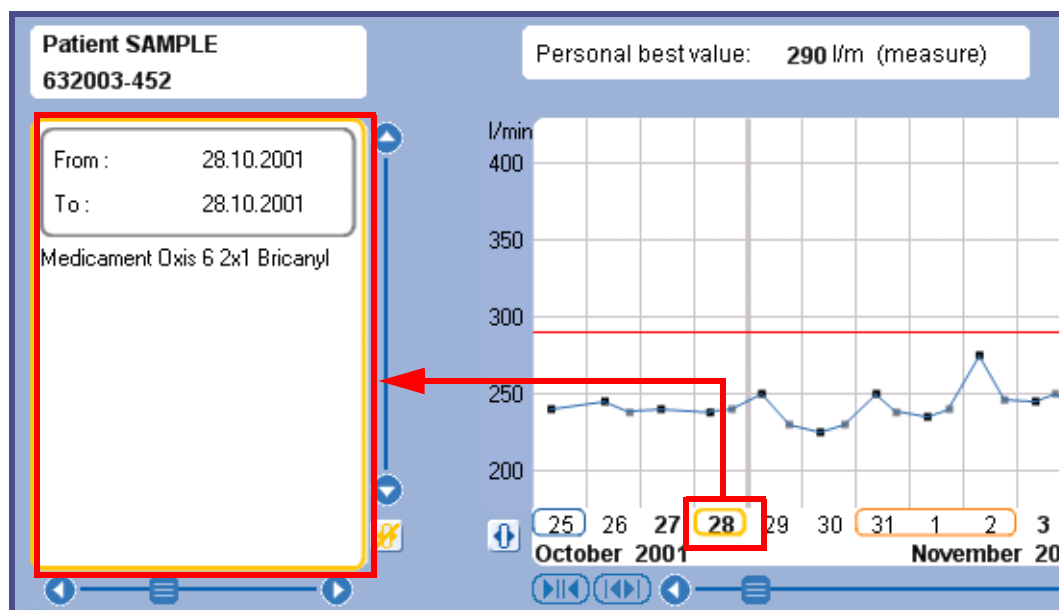
5. Type the comments in the comment box. Note that the outline of the box is the same color as the oval created in step 3.

From : 25.10.2001
To : 25.10.2001
Medicament Oxis 6 2x1 Bricanyl

Viewing a Comment

To view a comment, do one of the following:

- Click a comment on the date bar to view the comment associated with that date. Note that the boundary of the comment box is the same color as the comment.
- Use the scroll bars to display all comments sequentially.





Deleting a Comment

To delete a comment:

1. Select the comment with the cursor.




2. Click  to delete the comment.



About the Settings Screen

The settings screen enables you to set general program parameters.

Click  to open the settings screen.

settings

General Preferences

Date format dd.mm.yyyy

Time format 12-hours

Search for ID / Name Name

Clock setting Asthma Monitor

PC time to Asthma Monitor

send

Back up all Patient files

export

Import Patient files

import

Export the selected patient into CSV file

CSV

Print Settings

Address

Practitioner (Physician)
Practice
Street address
Zip Code and City
Phone
E-mail

cancel ok

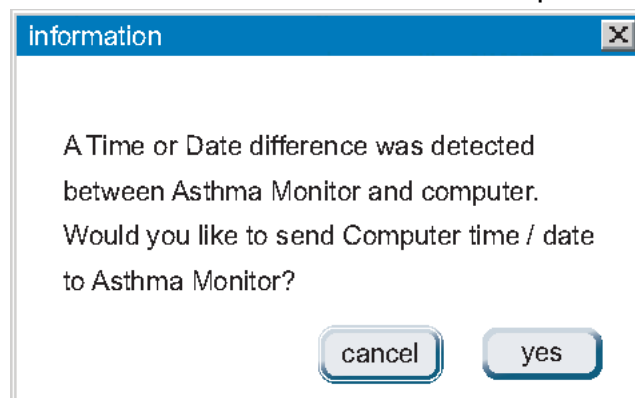


General Preferences

- **Date format** – This enables you to select the format in which the date is displayed: DD.MM.YYYY, MM.DD.YYYY, or YYYY.MM.DD.
- **Time format** – This enables you to select the format in which the time is displayed: 12-hour or 24-hour.
- **Search for ID/Name**– This sets the search preferences to enable the program to search by the patient Name or ID.

Setting the Asthma Monitor Clock

Time and date can be transferred from the computer to the Asthma Monitor. Click to set the Asthma Analyser time to that of the connected computer. The program will inform you if there's a time difference between the Asthma Monitor and the computer.

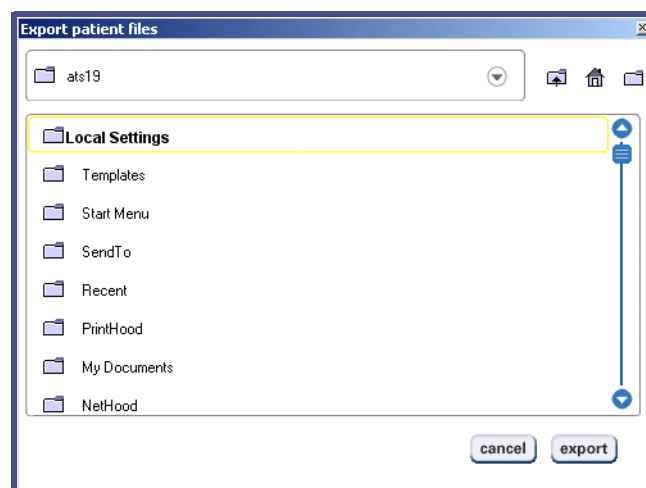




Backing Up Patient Files

This option enables you to backup (export) patient files for safekeeping.

1. Click **export** to backup all patient data to a specified location. You are prompted for the export location.
2. Browse to the directory you want to export the data files to.
3. Click **export** to export the data. The exported data files are saved as .dat files and named according to the ID numbers of the patients.

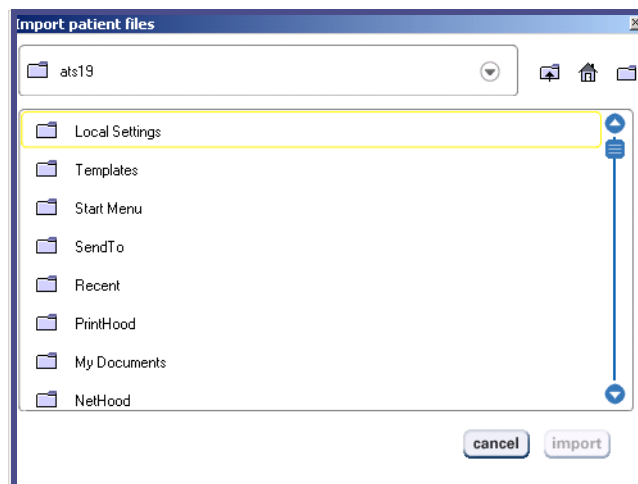




Importing Patient Files

This option enables you to import patient files to be added to the Asthma Analyser program database.

1. Click **import** to import files from a specified location. You are prompted for the file location.
2. Browse to the location of the file on your computer.
3. Select the file and click **import**. The patient's data is entered into the Asthma Analyser database, and the patient is added to the patient list.



Note: The Asthma Analyser does not check if the imported patient profile is already present. This can cause multiple entries of the same patient to be in the profile library.



Changing Program Settings



Full Screen

Exporting selected patient profile to CSV

Enables you to export the selected patient's data to a CSV (Comma Separated Values) file. CSV files can be opened and processed by all statistical programs. Use the following steps to export a patient's data to CSV format:

1. Select a patient from your patient list.
2. The **CSV** button is activated under **Settings** when you select a patient from the patient list. Click the button to start exporting.
3. You will be prompted to specify a name and location for saving your CSV file on your PC hard drive. Specify the name and location, and click OK.

The CSV file gets created and a pop-up window alerts you to this fact. You can then locate the file on your hard drive and use it for analysis.

The screenshot displays the 'microlife Blood Pressure Analyser' software interface. On the left, a patient list shows 'Sample, Patient' selected. The main area contains a form for patient details, including Family Name (Sample), Given Name(s) (Patient), ID (A123456), Address (Max Sch...), Phone / E-Mail (+41-71-7...), Date of Birth, Personal Data, Weight(kg), Risk Factor, Smoker, Cholesterol, and Patient Notes. A 'settings' window is open on the right, showing various preferences. The 'Export the selected patient into CSV file' option is highlighted with a red box, and the 'CSV' button next to it is visible. Other settings include Date format (dd mm yyyy), Time format (12-hours), Metric format (kg / cm), and options to display Pulse Pressure (PP) or MAP. The bottom of the screen features a navigation bar with 'save', 'print', and 'settings' icons.



Changing Print Set- tings

The print settings can be changed as desired to [Print](#) the physician's information if needed. Type in the name, address, phone number and E-mail of the physician as indicated in the fields.

Print Settings

Address

Practitioner (Physician)
Practice
Street address
Zip Code and City
Phone
E-mail