Unique Selling features

Startup mode selection

This defines if AMEDTEC ECGpro starts in the Data Management Module or in any of the test procedures, such as Resting ECG, Rhythm ECG, Stress test, Holter ECG or Blood Pressure Monitoring. After an ECG or any other test has been stored the system always returns to the selected mode.

Why is this useful?

An AMEDTEC ECGpro system in the examination room shall be set to the test procedure which is mostly done so that the operator doesn't need to start the procedure each time.
After saving a recording the system automatically returns to the hook-up screen and is ready for the next ECG.

If a system is used only for review, it should be set to the Data Management because the doctor opens a stored recordings from the Data Management recording list, makes his comments and closes the ECG. Now the AMEDTEC ECGpro automatically goes to the next ECG to be reviewed.

Bluetooth ECG transmission

The CardioPart 12 Blue is a high performed ECG device that transmits the ECG to the PC via Bluetooth. This wireless solution allows the patient a maximum of mobility. This is of a great advantage for treadmill stress test and other sport medicine.

The Power Button can be used to remotely start an emergency- resting-, rhythm- or stress-ECG test.

Device Selection

Several CardioPart devices, treadmill and cycle ergometer devices, NIBP devices as well as SpO2 devices can be connected to a PC at the same time, e.g. a number of CardioPart 12 USB and some CardioPart 12 Blue. Before you start the ECG recording the device to be used can be selected from a list. To make selection easier each ECG device can be labeled with a name that is displayed in the selection list.

Example:

The first CardioPart has not been labeled. In this case the serial number is displayed.
The second CardioPart has been labeled with EXAMINATION ROOM 1
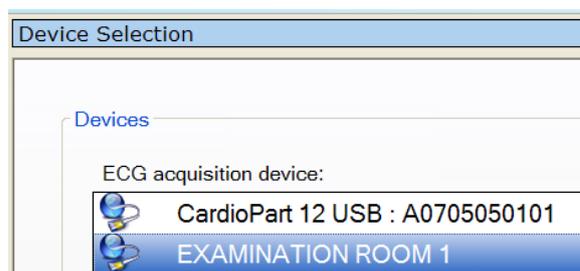
8000 Hz Sampling Rate

AMEDTEC ECGpro is the PC ECG with the highest sampling rate per ECG channel. Amongst others the 8000 Hz allow a proper digital pacemaker detection.

One Button Operation

The operator has only to push the orange button or the F2 key to record an ECG. After the button was pushed it gets labeled with the next step the operator has to do next.

For a stress test the button will change as follows:
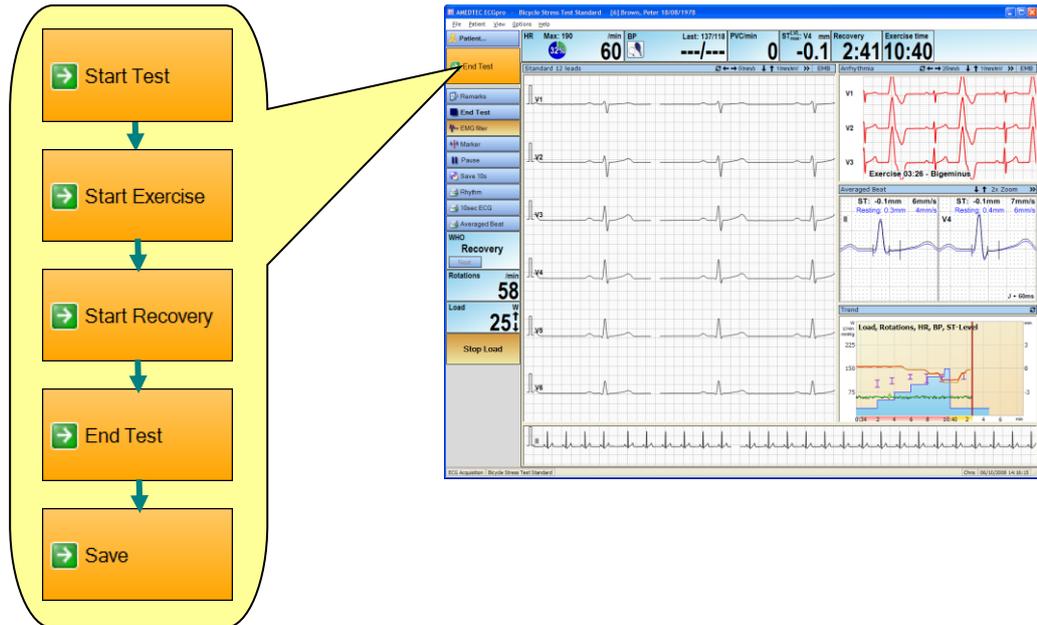
Hook-up scheme and quality

There are three options to check the electrodes:

The electrode labels blink if the electrodes are not attached.

The graph beneath the hook-up scheme indicates the noise level. It shows which electrode must be improved.

The ECG preview show the traces. However, if the traces are noisy it is not always clear which electrodes cause the bad quality, so that the noise level graph is very helpful.
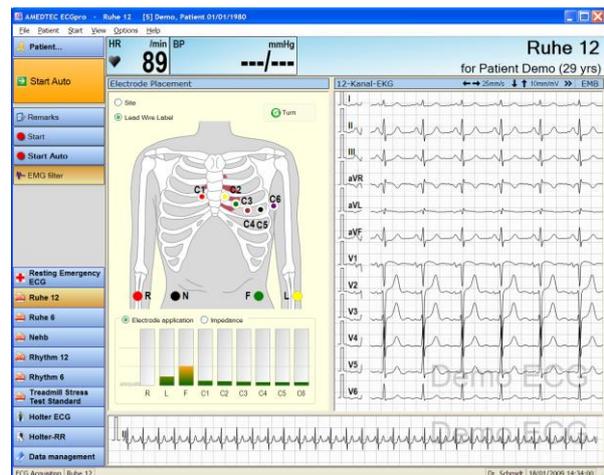
Arrhythmia detection

AMEDTEC ECGpro can come with automatic arrhythmias detection during exercise. In this case abnormal ECG events are displayed in red colored in a separate window. See the bigeminy in the upper right window on the previous page.

Emergency ECG

In case of emergency a Resting ECG can be recorded and stored without entering patient data. In a separate step the Emergency ECG can be assigned to the actual patient.

Test procedures

AMEDTEC ECGpro is extremely flexible. Based on the test procedure principle the user can modify existing test procedures and setup new ones. New test procedure will get a separate button to launch the procedure. All test procedure buttons can be labeled by the user.

Each of the test procedure can have its particular settings, such as

> Lead set
> Automatic or manual recording
> Exercise step and ramp protocol with automatic printing and blood pressure measurement
> Setting for monitoring of HR, BP and ST limits
> ST-settings
> Arrhythmia settings
> Print formats and parameter
> Screen layout settings

For example, particular tests for Sportsmen, Adults or children can be configured and the belonging start buttons labeled.
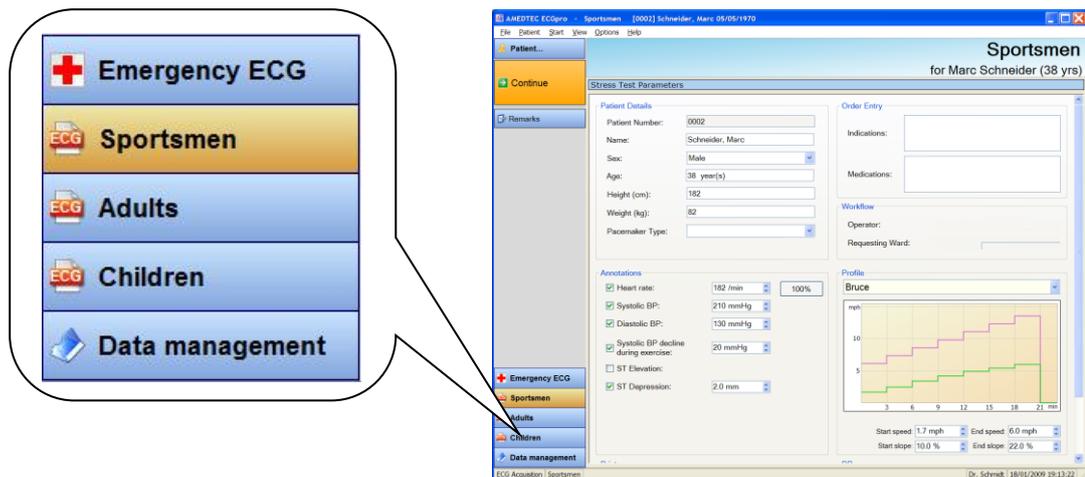
Compare recordings

AMEDTEC ECGpro allow easily to compare resting-, rhythm- and stress ECG recording

ECGpro Online

AMEDTEC ECGpro transmits the ECG from the examination room to all PCs connected to the network. While the cardiologist is sitting next door and reviewing reports for example the live ECG get displayed on his monitor. The doctor doesn't need to attend the exercise personally.
Once he identifies a critical situation with the patient he can advise the staff in the examination room by using the AMEDTEC ECGpro – Online message system.

Database replication and synchronization

All data are stored in a Microsoft SQL Server database.
If the main database is located on the server each of the clients can have their own client database.
This makes sure that no data get lost in case of a network crash or when the client is offline.
Once the network connection is rebuilt the client database and the server database will be replicated or synchronized automatically.

Database replication is very important for portable systems, e.g. notebook applications.
Typically portable systems will be wireless networked by WLAN. If the portable AMEDTEC ECGpro system comes out of the radio range the connection to the server will get interrupted. Without a local database it would be impossible to continue saving ECGs. Therefore a client database and automatic replication is essential for a high performed portable system.

Login and database selection

AMEDTEC ECGpro handles several server and local databases. Apart from the automatics the user can select a database at login.

The databases are listed on the left of the login box.

Media management

Recordings can be stored within the database as Blob. This is the highest level of data safety.
Alternatively recordings can be stored to any other directory.

Database filters

The user can define filters to sort recordings for display and further review, printing, export or anything else.

Connection to other data management systems

AMEDTEC ECGpro performs an HL7 interface to import patient data and work orders from the Hospital Information System and to return order confirmations and results.
Other systems can be interfaced via GDT.

Programming technology

AMEDTEC ECGpro has been developed with C# (C-sharp) under .NET. This latest software technology assures a maximum of system stability.