

Quick Reader®

Holter Scanner ECG



1st software able to manage long term Holter recordings

HOLTER SUPPLIES® design Quick Reader®, a Windows™ (XP® or Vista®) based software able to manage efficiently Holter recording over periods of 1 to 30 days.

FAST:

ECG data recorded with the AFT1000 (or 250) are downloaded with a USB2 high speed connection: around 4s for 24h with 2 channels at 250Hz.

ECG analysis using optimized multi-frequency breakdown: around 8s to analyze 24h (QRS detection, classification, rhythm analysis and samples selection for report).

ERGONOMICS:

Main screen with simple access to the functions and the samples:

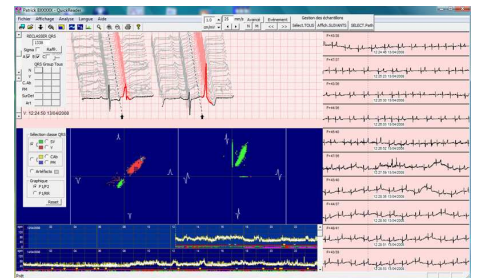
- ECG 1, 2 or 3 channels window, in standard formats: 25mm/s, miniature, superimposed or in "3D".
- Trends window to display until *30 x 24h trends*: Heart rate, ST segment elevation, other data, rhythm events represented by icons with specific shapes and colors,
- Samples window to control immediately 10 ECG examples having particular characteristics.

INTERACTIVITY:

Switch between trends and zoom, histograms, or graphics of the distribution of QRS displayed as clouds of points. Left click, right click and drag of region to reclass rapidly the QRS with more efficiency than usual methods, under permanent control of tenths of complexes.

Trends: each event if immediately displayed with a click on the corresponding icon, on "Next" or on one ECG sample.

ECG samples: display all or selected events with various parameters, giving access to the more significant ones. The not selected icons are grayed.



ADAPTABILITY:

The parameters of analysis and rhythm are adjustable.

You can select the level of automaticity of the analysis.

FULL REPORT:

Printing of a report including -as you select - general results, patient diary, QRS templates, h/h summary, histograms, trends, ECG samples and full disclosure. For each class of event, a graphic gives the distribution of their characteristics (for example, maximum heart rate and duration for the tachycardia).

AND MORE:

The patients list is associated with a simple but efficient database, with capability to research patient with particular pathologies and/or sort by name, date, status and referred physician.

A global hypertext help and a local help facilitate initiation to the program.

Specifications

ECG:

- Transfer from AFT recorder 1 to 3 channels, 1 to 30 days.
- Files size 21,6Mbytes/channel/day in 250Hz (x4 in 1000Hz)
- Export & Import ECG ISHNE format or by Internet in proprietary format.
- Display: 1,2 or 3 channel at 3,2, 6,25, 12,5, 25, 50 & 100mm/s
- Superimposed QRS or moving event/event, minute/minute....

Signal analysis:

- Recognition of QRS waves with permanent measurement of HF & BF noises.
- Detection of pace-maker pulses on 1, 2 or 3 channels.
- The analysis uses the values of the impedances of the electrodes to erase periods having a too high impedance, suppressing relative artifacts.
- Bi-dimensional projection of monophasic or biphasic QRS parameters for reclassification under visual control using 3D display.

Rhythm analysis:

- Measurement of heart rate: mean value of day, night, max and min,
- Recognized pathologies: Pause, Missed beat, SVPB/1, 2 & +, VPB/1, 2 & +, Bradycardia, SV.tachycardia et V.tachycardia, V&SV bigeminy, V&SV Trigeminy, irregular RR.
- Adjustment of the parameters of detection for each pathology saved with patient files.
- Display of the trends with icons representing the events and zoom of 6h, 4h, 2h or 1h

ST segment elevation analysis:

- Adjustment of the position of the iso-electric point and the position of the sampling point.
- Detection of crisis by overpass of amplitude and duration thresholds.

Management of patient data:

- The patient's files are in a selectable directory, sorted by date, by name, by status, by referent.
- Data base management for multi-selection pathologies.
- Archiving functions: copy or transfer of patient files.

Interactive display:

- RR Histograms in 4 colors normal, ventricular, aberrant and paced QRS. Interactivity with projection 3D of QRS of similar category and reclassification facilities.
- Bi-dimensional projection formation of clouds of points corresponding to the characteristics of the QRS (relative to frequencies content) and allowing a fast classification of QRS.
- ECG: Relabeling of individual QRS or by series, erasing and insertion of QRS, calipers to measure intervals and amplitudes.

Printed report:

- Selection of elements of the report: Main report, diary, summary, QRS templates, trends of rhythm, pace-maker and ST elevation, histograms, ECG sample, full disclosure ECG.
- ECG samples automatically and/or manually selected.
- Conclusions with free and/or programmed text.

Internet transfer:

- Creates a unique compacted file -without any loss of information- containing all the patient files for immediate transfer by internet, as attached file for example.
- Reading and decompacting of a file received from Internet.

Quick Reader is easy to install on a Windows based PC when the AFT recorder is connected by USB (Setup file in QuickReader directory). It runs in "basic" mode (download of data from the recorder->PC, ECG viewer, Internet and ISHNE transfer) if no any USB Quick Reader key is connected to the PC.

The USB QuickReader key authorizes several functionalities of the program: Printing (ref.:KLQ01-1)/ Standard Holter with ST elevation analysis (ref.: KLQ07-A)/ option pace-maker (ref.:KLQ08-A)

Depending of software versions, several functions can be modified. CE marked.