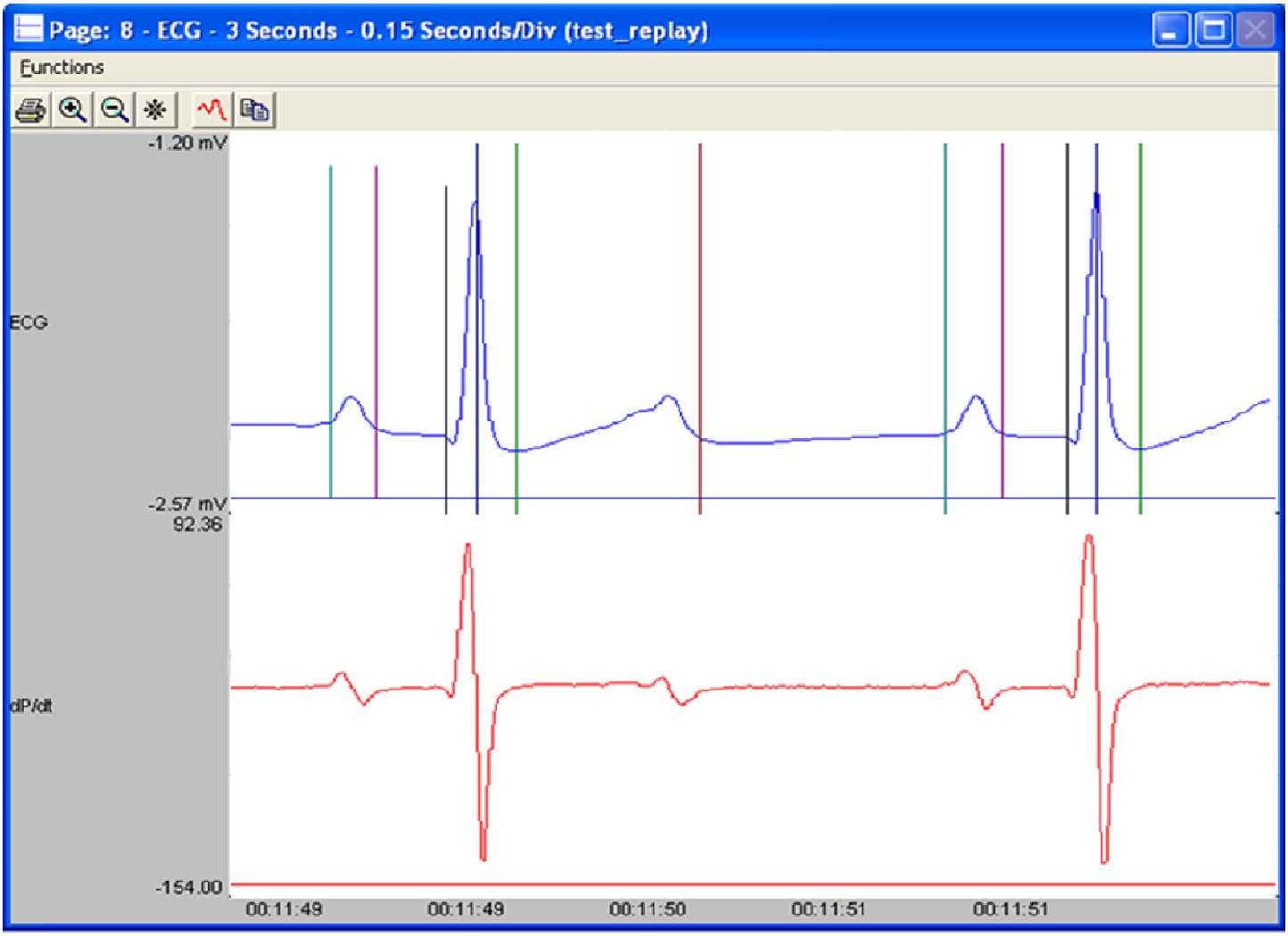
Electrocardiogram

The Electrocardiogram Analysis Module (ECG) computes physiologically meaningful parameters on a beat-to-beat basis, from digitized multiple lead ECG data. The Multiple Lead Electrocardiogram parameters provide additional information related to QT Interval Prolongation and dispersion. The analysis functions by applying a series of logical tests to the digitized ECG signal(s), utilizing criteria selected by the user. The ECG signal can have positive, negative, or bi-phasic T waves, P waves, and QRS complexes. The graph below represents a typical canine ECG recording and its first derivative as they would appear on the monitor. Automated validation marks for Q, R, S, End of T and Beginning of P are shown (other validation marks are also available). The validation marks provide visual, on-line verification of the accuracy of the system. The following list describes the parameters calculated by the analysis module either in real-time or during subsequent analysis.



Technical Data Sheet

Model PNM-ECG100W

Electrocardiogram Analysis Module

Name	Definition
Num	The number of the cardiac cycle.
HR	The heart rate is computed in beats-per-minute.
R-H , P-H, T-H	Height of the waves from the Iso-electric level, in millivolts.
T-HN	Lowest point between the end of the S wave and the end of the T.
ST-I	Time interval in milliseconds from the S wave to end of the following T wave.
ST-E	The ST elevation, measured in “ST Measure” milliseconds after the S wave, from the Iso-electric level.
QRS	Time interval of the QRS complex.
PR-I , QT-I, RR-I	Common Interval measurements.
QAT	Q Alpha T is the time interval from the Q wave to the peak of the following T wave.
QTcb , QTcf, QTcv, and QTcm	Multiple corrected QT intervals (Bazett, Fridericia, Van de Water and Matsunaga).
EQTS, EQTSc, EQTM, EQTMcs, EQTMce, QTMc	Various cross channel calculations.
QTD	QT Dispersion.
QR-I, QRSA	QR interval, QR amplitude.
MxdV	Maximum derivative of the R wave.
T-A	Area of the T wave from the Iso-electric level.
PCt , TCt,	The number of valid waves encountered in the logging period.
QTCt	QT count.
BAD	The number of arrhythmic beats detected during a specified logging period.
GW, TW	The Good Wave counts and number (Total Wave) of good and bad complexes.
QATN	Time, in milliseconds, between the Q wave and the lowest point between the end of S and the end of T wave.
PWdth (Pwidth)	Reports the time, in milliseconds, between the start and end of the P wave.
Tpe-I	The time in milliseconds between the peak of the T wave and the end of the T wave.
T-P	The signal value at the peak of the T wave relative to the Iso-electric level.
Match, Pmatch, Qmatch, Smatch, Tmatch	Used specifically with Template Analysis.
Noise	This parameter reports an approximation of the noise level in the ECG cycle.

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