MTWA for Quinton® Q-Stress®

The gold standard in cardiac stress testing and Microvolt T-Wave Alternans™ systems

Primary Users

Cardiology

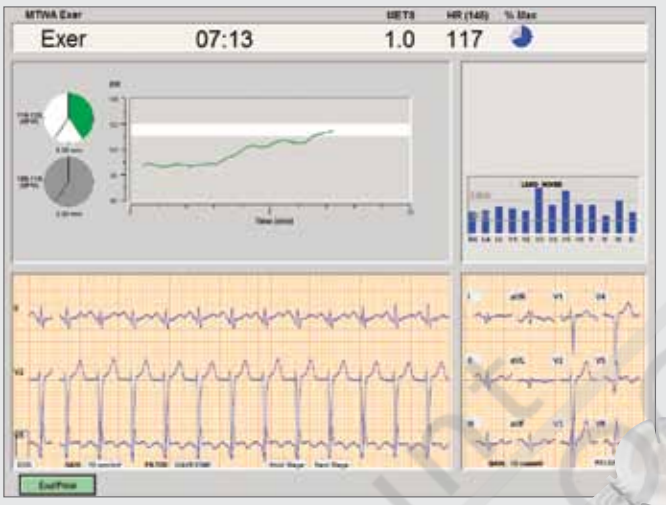
Hospitals

Primary Benefits

Quality. With the MTWA option on Q-Stress 4.5, you have the most robust cardiac risk profiling system in the industry, along with a team of MTWA testing experts whose expertise you can leverage.

Convenience. The MTWA application launches from directly within Q-Stress – you don't need to maintain two separate databases of patient information.

Connectivity. MTWA reports export to your HeartCentrix and Pyramis data management systems.



Identify sudden cardiac arrest risk

The Microvolt T-Wave Alternans™ for Q-Stress puts one of the most comprehensive cardiac risk profiling systems in the industry at your fingertips. It combines the industry-leading Q-Stress cardiac stress testing system with Cambridge Heart's® unique MTWA technology, creating a clinically proven, reimbursable diagnostic test to help identify patients at risk for sudden cardiac arrest.

+ Detects small variations in repolarization during mildly elevated target HR ranges.
+ The Analytic Spectral Method® (ASM) analyzes the ECG in the frequency domain to detect every-other-beat patterns unique to patients at increased risk.

Clinicians now have a system to manage a patient's cardiovascular risk profile:

+ Post MI patients
+ Patients with ejection fraction (EF) < 40%
+ Heart failure patients
+ Syncope patients

Efficient, reimbursable testing

+ Noninvasive – test ideal for cardiologists and hospitals
+ Convenient: test and bill the same day as a stress test
+ Q-Stress uses the only MTWA technology approved for reimbursement
+ MTWA testing is a AHA/ACC Class IIa testing guideline

CARDIAC science™

MTWA for Quinton® Q-Stress®

TECHNICAL SPECIFICATIONS

OPERATING SYSTEM	Windows XP/Vista Ultimate/Windows 7 Ultimate
POWER REQUIREMENTS	100/120 VAC 50/60 Hz 2.5 A nominal (Q-Stress host system)
MTWA PROTOCOLS	Treadmill, Paced, Pharmacological, and Custom (using the Protocol Editor)
ECG	
Gain	5 mm/mV, 10 mm/mV and 20 mm/mV +10%
Lead group	14 lead wire set (Standard 12 lead plus Frank xyz)
Display	Up to 6 simultaneous leads of 6.5 seconds each, or 12 leads of 2.1 seconds each with 9.4 second rhythm lead
Performance standard	Meets ANSI/AAMI EC11-1911 and ANSI/AAMI EC13-1992
DISPLAY AND ANALYSIS FILTERS	
Baseline filter	User-selectable time domain linear phase filter, meeting ANSI/AAMI EC 12:2000, section 4.2.9 requirements
WaveSTar® signal processing technology	Isolates the high-frequency QRS complex and independently smoothes the low-frequency ST segment and T-Wave while maintaining ECG diagnostic integrity. WaveSTar® is applied independently to the recorder output and screen.
Artifact filter	Linear phase low-pass filter at 40Hz, baseline and WaveSTar®, applied independently to the printer or display outputs.
ECG COMPUTATIONS	
Heart rate meter	Within input range of 30-300BPM, exceeds requirements of EC13:2000 section 4.2.7
ST parameters	Average level of ST-segment relative to isoelectric point, continuously updated
ST-Slope measurement	Most negative slope in any 40 msec interval between the J-point and 80 msec beyond the J-point.
Isoelectric point	Automatic, based on ASVV (Absolute Spatial Vector Velocity) of median beat. Continuously updated.
Median beat detection	Incremental update of median QRS complexes with suppression of artifact, ectopy, and aberrancy in all leads.
Beat detection	Threshold detection on bandpass-filtered ASVV. Automatic substitution of detection leads during leads-off or lead absence. Meets or exceeds EC13:2000 section 4.2.6 requirements.
T-Wave Alternans™ Measurement	Calculated in microvolts using the Analytic Spectral Method®
REPORTS	
MTWA test report includes:*	Alternans Vector Trend Summary Alternans Precordial Trend Summary Exercise Summary

TREADMILL DEVICE INTERFACES	Quinton TM55/65 Trackmaster TMX425
THERMAL PRINTER TCR1000	High-resolution with automatic feed and continuous printing capability (Q-Stress host system)
NETWORK INTERFACE	Microsoft Compatible networking for file storage, distribution and email (Q-Stress host system)
EXPORT/ COMMUNICATION PROTOCOL/FORMAT	TCP/IP, HL7, DICOM, XML (via Q-Exchange), PDF
REMOTE TECHNICAL SERVICE INTERFACE	Remote service increases system uptime availability and decreases the user's requirement to assist the troubleshooting process. Available via network or desktop connections
DISPLAY	17 in to 19 in LCD flat panel (Q-Stress host system)
LANGUAGE	English (available in US only)
ENVIRONMENTAL	
Operating temperature	50 °F - 104 °F (10 °C to 40 °C)
Operating relative humidity	25% to 80% non-condensing
Protective packaging	Keep dry; fragile
Sensors kit storage	Store in cool dry place
SAFETY STANDARDS	EN60601-1 Type CF with defibrillation protection EN 55011, Group 1, Class A EN 61000-4-2
GENERAL	
Dimensions (L x W x H)	
Patient module	5.2 in x 3.25 in x 1.2 in (13.2 cm x 8.25 cm x 3.0 cm)
Data cable	15 ft (4.58 m)
Belt and buckle (L x W)	16 in x 1.25 in (40.6 cm x 3.17 cm)
Weight	< 22 oz (9.98 kg)
WARRANTY	12 months parts and labor

*MTWA trend summaries, including interpretation, are available for printing and/or editing.

ORDERING INFORMATION

MTWA OPTION	
XKTMTWA01A	Patient module kit and software
UPGRADE KITS	
XKTMTWA02A	MTWA and Q-Stress 4.0-4.5 software upgrade
XKTMTWA03A	MTWA (T-Wave) and Q-Stress 3.x-4.5 software upgrade with installation
ACCESSORIES	
XELMTWA10A	Box of 10 MTWA (T-Wave) sensor kits
XCAMTWA01A	Replacement belt and buckle for MTWA patient module
XCLMTWA01A	Replacement MTWA (T-Wave) Patient lead cable – AHA

(Available only in the U.S.A.)

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