CARD GUARD
Scientific Survival LTD.

CG-6108 Continuous ECG Monitor and Arrhythmia Detector 510(k) Summary of Safety and Effectiveness

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Device		
Trade Name:	CG-6108 Continuous ECG Monitor and Arrhythmia Detector	
Classification:	detector and alarm, arrhythmia	
Product Code:	DSI	
Regulation No:	870.1025	
Class:	II	

DEC 18 2007

1. Definition

The CG-6108 Continuous ECG Monitor and Arrhythmia Detector system is designed for self-testing by patients at home and for analysis by medical professionals at a remote Monitoring Center. It comprises a chest-worn ECG sensor and a handheld device with a proprietary application, configured to process and transmit the ECG recordings.

The chest-worn unit includes 3 electrodes on a harness and it houses a battery, an ASIC and a Bluetooth transceiver for the acquisition, recording, and transmission of the ECG signal.

The ECG signals are transmitted via Bluetooth to the handheld device. When an event is detected it is wirelessly transmitted to the CG Monitoring Center for professional analysis. The handheld device is equipped with shared memory used to record the signal received from the sensor and to allow pre- and post processing options through the use of this memory in a dual memory loop configuration, both running in parallel. One loop is auto-triggered, with programmable thresholds that starts recording based on specific rhythms detected or manually activated by the patient. The second, and longer, recording loop is controlled remotely to provide the physician with more information, when requested by the CG Monitoring Center.

The handheld device automatically transmits the recorded ECG, via cellular link, to the Monitoring Center. When cellular service is unavailable the patient can transmit via landline telephone.

2. Medical Application

The Application is designed for wireless mobile platforms, e.g. PDA, SmartPhone and for static platforms, i.e., PC. It is used to receive from the CG-6108, the test results and other medical data, to process and save these test results, and synchronize data and test results with the Medical Center. The Application is a part of a personal medical system solution. The Medical Application performs the following activities:

1. Receives medical test inputs from the external accessories
2. Collects medical test data and other related information as defined for each test
3. Accesses historical test and related data stored on the device
4. Transmits medical test data and additional information to Center for professional evaluation/backup
5. Receives data from Center
6. Enables configuring GPRS data connection (based on mobile phone GPRS/CDMA capabilities), changing user name and password.

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3. Referenced Standards

No performance standards have been developed under Section 514 of the Federal Food, Drug and Cosmetic Art for wireless ECG event recording devices. Following are reference standards:

(1) Arrhythmia Detector and Alarm Guidance for Industry and FDA Staff Class II Special Controls Guidance Document: October 28, 2003
(2) ANSI/AAMI-EC 57:1998, Testing and Reporting Performance Results of Cardiac Rhythm and ST Segment Measurement Algorithms
(3) ANSI/AAMI EC38:1998 Ambulatory Electrocardiograph
(4) IEC 60601-2-27 2005 Medical electrical equipment - Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment
(5) EN 475: Medical devices - Electrically-generated alarm signals ; April 1995
(6) EN 980: Graphical symbols for use in the labeling of medical devices; August 2003
(7) EN 1041: Terminology, Symbols and Information provided with Medical Devices; Information supplied by the manufacturer with medical devices; April 1998
(8) EN ISO 9001: Quality management systems - Requirements; December 2000
(9) EN ISO 13485: Quality systems – Medical devices; August 2000
(10) EN ISO 14971: Medical devices – application of risk management to medical devices; March 2001
(11) EN ISO 10993 Biological evaluation of medical devices Part 1: Evaluation and testing; Dec. 1997
(12) EN 60601-1: Medical electrical equipment; Part 1: General requirements for safety; Sept. 2002
(13) EN 60601-1-2: Medical electrical equipment; Part 1: 2. Collateral Std: EMC; requirements and tests; 2001
(14) EN 60601-1-4: Medical electrical equipment; Part 1: 4. Collateral Std: Programmable electric medical systems; 2001

4. Indications For Use

The CG-6108 Continuous ECG Monitor and Arrhythmia Detector is intended for use by patients who experience transient symptoms that may suggest cardiac arrhythmia. The device continuously monitors a one lead ECG, automatically generates an alarm triggered by an arrhythmia detection algorithm or generates an alarm manually triggered by the patient, and transmits the recorded data transtelephonically to a monitoring center. The monitoring center provides the ECG data to the medical practitioner for evaluation.

5. Principles of operation

The CG-6108 system comprises a chest-worn ECG sensor with 3 electrodes and a handheld device with a Medical Application, used to process and transmit the ECG recordings. The battery powered chest-worn unit has an ASIC and a transceiver for acquisition, recording, and transmission of the ECG signal. The ECG signals are transmitted via Bluetooth to the handheld device equipped with the Medical Application, which incorporates an algorithm for AF detection. A detected event triggers transmission of the signal to the CG Monitoring Center for analysis.

6. Substantial Equivalence

The clearance for the CG-6108 is sought on the grounds of its claimed substantial equivalence (SE) to the following predicate devices:

1. Card Guard's CG-6108 Arrhythmia ECG Event Recorder K060911 for the complete physical identity and the identity of the intended use and technical specifications. The CG-6108 Continuous ECG Monitor and Arrhythmia Detector is physically identical to the CG-6108 ECG Event Recorder K060911.
2. Cardiac Telecom Corp's Heartlink, Model II K982803 for Product Code DSI (Reg. Number 870.1025).

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7. Conclusions

The CG-6108 device constitutes a safe and reliable means for self-testing by patients who experience transient symptoms that may suggest cardiac arrhythmia. The device is at least as safe, effective, and reliable as the cleared predicate devices.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

DEC 18 2007

Card Guard Scientific Survival, Inc.
c/o Mr. Gregory Levine
Arnold & Porter, LLP
555 12 St NW
Washington DC 20004

Re: K071995
Trade/Device Name: Card Guard CG-6108 Continuous ECG Monitor and Arrhythmia Detector
Regulation Number: 21 CFR 870.1025
Regulation Name: Arrhythmia detector and alarm (including ST-segment measurement and alarm)
Regulatory Class: II (special controls)
Product Code: DSI, DXH
Dated: October 26, 2007
Received: October 26, 2007

Dear Mr. Levine:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.
This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometric's (OSB's) Division of Postmarket Surveillance at 240-276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at 240-276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address http://www.fda.gov/cdrh/industry/support/index.html.

Sincerely yours,

Bram D. Zuckerman, M.D.
Director
Division of Cardiovascular Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

Indications for Use

510(k) Number (if known): K071995

Device Name: **CG-6108 Continuous ECG Monitor and Arrhythmia Detector**

Indications for Use:

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Prescription Use [X] _____ AND/OR Over-The-Counter Use _____
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Cardiovascular Devices
510(k) Number K071995

(Posted November 13, 2003)