PHILIPS

PageWriter TC10

A portable workflow solution

with DXL clincal decision support.

The Philips PageWriter TC10 cardiograph is portable, affordable and easy to operate. It supports advanced PageWriter cardiograph features, scalable network connectivity, and the world-class Philips DXL ECG algorithm.

Quickly download worklists and patient demographics with wireless LAN via standard XML, HL7 and DICOM communications. Easily retrieve ECG orders from your current DICOM MWL provider and store resulting DICOM-format ECGs to your existing PACS.

The intuitive 1-2-3 touchscreen lets physicians, technicians, nurses, and assistants efficiently acquire, analyze, store, print, and access ECGs. With its compact size and lightweight design, the PageWriter TC10 is a portable workflow solution that supports patient needs in a wide range of care settings.

Key advantages

- Portable size, lightweight design, and a convenient handle for easy use in nearly any care setting
- Easy 1-2-3 touch operation with the Philips DXL ECG algorithm
- Automated workflow with one-button push via XML, HL7, and DICOM

DXL

Technical specifications

PageWriter TC10 Cardiograph (860392)

ECG functions

Simultaneous lead acquisition	12 leads
ECG report via TC10 printer	• 3 x 4, 3 x 4 3R, 3 x 4 1R, 3 X 4 IR plus ST Maps, 6 x 2 • Standard and Cabrera format, plus Pan 12 Cabrera
Standard measurements	• Ten interval, duration, and axis measurements • Configurable QT correction method
Rhythm strips	Up to 6 configurable leads
Disclosure (D05)	• Five-minute history of all 12 leads • Complete ECG report of any selected 10 seconds
Event marking (D05)	• Six independent events can be marked for later review and analysis • Event markers appear on ECG reports
Timed ECG	Support for pharma stress protocols
Report storage and transfer	Full fidelity at 500Hz of 10 seconds for all 12 leads
Data format	PDF and XML

DXL ECG Algorithm (D03)

Interpretive statements	• >600 interpretive statements • Integrated pediatric analysis
Borderline statement suppression	Three configurable settings
Extended measurements	• 46 measurements of morphology analysis in each of the 12 leads • 21 parameters of rhythm analysis
Reasons	Selectable explanations of all interpretive statements
Nomenclature	Aligned with 2007 AHA/ACCF/HRS Recommendations, Part II[1]

STEMI diagnostic aids

Graphical ST presentation	• Two ECG reports with polar ST Maps • Frontal and transverse planes
Age and gender criteria (D03)	Based upon 2009 AHA/ACCF/HRS Recommendations, Part VI: Acute Ischemia/Infarction[2]
STEMI-CA (Culprit Artery) (D03)	• Criteria that suggest any of four probable sites of the occluded coronary artery • Based upon 2009 AHA/ACCF/HRS Recommendations, Part VI[2]
Critical values (D03)	Highlights four conditions requiring immediate clinical attention

[1] AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram, Part II: Electrocardiography Diagnostic Statement List. J Am Coll Cardiology, 2007; 49:1128-135.

[2] AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram, Part VI: Acute Ischemia/Infarction. Circulation, 2009; 119:e262-e270.

Advanced bi-directional network communications*

Central time management (D01)	Time can be manually or automatically synchronized to a Network Time Server via IntelliSpace ECG or IntelliBridge Enterprise**
Orders worklist (D01)	• Download of orders worklist from networked server via IBE • User-configurable drop down lists (e.g. by location, user, or shift) • Ad-hoc query for specific orders based upon multiple user-entered or scanned search criteria (e.g. Patient ID, Last/First Name) • Supported by Open Worklist with IntelliSpace ECG and select departmental systems • Supported by standard HL7 and DICOM interface via IntelliBridge Enterprise for departmental and hospital systems
ADT (D02)	• Query and retrieval of patient demographic information • Based upon user-entered or scanned search criteria (e.g. Patient ID, Last/First Name) • Supported by standard HL7 interface via IntelliBridge Enterprise for hospital systems
Last ECG (D06)	• Automatic retrieval of previous ECG or list of available ECGs for current patient • Supported by IntelliSpace ECG
Interactive query (D06)	• Retrieval of selected ECGs based upon user-entered search criteria • Supported by IntelliSpace ECG
Manual orders (D07)	Create patient worklists with complete demographic information for later retrieval

Signal quality indicators

Leads-off advisory	Anatomical lead map displays the location and label of loose or disconnected leads/electrodes
Lead color	Four colors to indicate quality of individual leads
LeadCheck	Lead-placement software detects 20 different lead reversals
Heart rate	Continuous display of patient heart rate
Print preview	Full-screen preview of ECG waveforms prior to printing

User training and self help

Application help	Integrated graphical help for primary functions
Self-paced training	PC-based, interactive, dynamic animation covering all major clinical functions
Training mode	Integrated waveform simulation

* When networked with select hospital and departmental solutions; refer to supplier specifications

**IntelliSpace ECG and/or IntelliBridge Enterprise are not included with the product and must be purchased separately.

Technical specifications

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User interface

Touch screen	• 1-2-3 operation • Context-sensitive application • Five-wire, resistive touchscreen

Display

Size	7 inch touch screen
Resolution	800 x 480 pixels
Colors	64K colors

Patient connections

Patient cable	Acquire data at 8,000 samples/second on each patient connection
Long patient cable (H23)	Extended-length lead wires allow considerable distances between the patient cable and the patient connections

End connectors (adaptors)

Alligator clips (E01)	Alligator clips for tab electrodes
Wide tab (E02)	Flat adaptor for tab electrodes reduces twisting (AAMI only)
Welsh bulbs (E04)	Six Welsh bulbs and four limb clamps
Snap/Tab adaptor (E06)	Fits both snap and tab electrodes with metal on both sides

Printer

Resolution	High-resolution, digital-array printer using thermal-sensitive paper; 200dpi (voltage axis) by 500dpi (time axis) at 25mm/sec

Connectivity

Wireless LAN (D24)	802.11(a/b/g)
Internal storage (D06)	200 ECGs
External storage (D06)	200 ECGs with optional USB device

Automated data input

Barcode reader (H12)	• 1D barcode symbology: Code39 • Flexible field data entry
Barcode reader (989803189871)	• 2D barcode symbology: QR Code

Pre-processing filters

AC noise	50 or 60Hz
Signal processing	Artifact Rejection and Baseline Wander

Presentation filters – 10 sec reports

High pass	0.05, 0.15, and 0.5Hz
Low pass	40, 100, and 150Hz

Presentation filters – rhythm

High pass	0.05 and 0.15Hz
Low pass	40, 100, and 150Hz

Electrical

Battery	Lithium ion
Battery capacity	• 11.1V@4800mAH • 300 typical patient reports (3x4 3R format without measurement and interpretation), or • 120 minutes 6-lead rhythm printing (10 Hz, 1 mV signals), or • 10 hours continuous operation without printing
Battery recharge	<4 hours (standby/off mode or run mode without printing)
Main power	100-240VAC, 50/60Hz
Power consumption	60W max

Mechanical

Dimensions	65mm x 338mm x 240mm (2.6in x 13.3in x 9.4in)
Weight	2.5kg (5.5lb) includes battery

Environmental

Operating conditions	• 10°C to 40°C (50°F to 104°F) • 10% to 90% relative humidity (non-condensing) • Up to 3,048m (10,000ft) altitude
Storage conditions	• -20°C to 50°C (-4°F to 122°F) • 10% to 90% relative humidity (non-condensing) • Up to 4,572m (15,000ft) altitude

Safety and performance

International standards and regulations	• General Requirement for Safety IEC 60601-1: 1988 +A1:1991 +A2:1995 • Particular Requirement for Safety of Electrocardiographs IEC 60601-2-25: 1993 + A1:1999 • Particular Requirements for Safety IEC 60601-2-51: 2003 • US General Requirements for Safety UL 60601-1: 2003 • Diagnostic Electrocardiographic Devices AAMI EC11 : 1991(R) 2001 /(R) • CAN/CSA-C22.2 No. 601.1-M90 2007 • Electromagnetic compatibility IEC60601-1-2: 2001, +A1:2004

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