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Line #	Description	Qty
1	CX50 CompactXtreme Cardiology Ultrasound	1

Interface:

15.0 inch high resolution display with wide viewing angle
Quick Keys and Active Mode
Laptop style Alphanumeric QWERTY keyboard
8 TGCs and 2 LGCs
Ergonomic carrying handle
Includes AC adapter , power cord and system battery pack
2 USB flash drives on system
80 GB hard drive
Internal DVD RW drive

Architecture:

All-digital compact broadband beamformer, Microfine 2D focusing with Dynamic Focal Tuning that includes Advanced X-Res signal processing, 170 dB full time input dynamic range 18,432 digitally-processed channels, Continuously variable steering in 2D, color and Doppler modes 2D Opt signal processing with 4X multi-line parallel processing and frequency compounding.

Intelligent Controls:

The CX50 has been designed to make portable exams easy and efficient. With a single button, iSCAN technology automatically samples data for a new level of 2D and Doppler optimization iSCAN one-touch Intelligent Optimization, iSCAN one-touch Intelligent Color Optimization, iSCAN Doppler one-touch optimization.

Transducers:

Supports Compact family of transducers featuring PureWave imaging technology in the S5-1, CX7-2t, C5-1, D5CWC. Also supports the high resolution S12-4, S8-3, C8-5 and L12-3 transducers. All transducers provide breakthrough frequency bandwidths and array configurations. These transducers also have ergonomically designed lightweight flexible cables and compact connectors.

Modes:

2D
M-mode
Anatomical M-mode
Color M-mode
Pulsed Wave Doppler
Color Power Angio (CPA)
Continuous Wave Doppler
Invert and Color Invert
Color compare mode
Dual mode
Duplex for simultaneous 2D and Doppler
2D Optimization Signal Processing
Live Compare
Tissue Harmonic Imaging (THI)

Reconstructed zoom with pan (read zoom)
 Write zoom
 Pulse Inversion Harmonic imaging
 Adaptive Doppler
 Adaptive Color Doppler
 Color Tissue Doppler imaging
 Pulsed Wave Tissue Doppler imaging
 Active Native Data - manipulation of image data
 Cineloop review
 Acquisition, storage, and display in real-time and duplex modes of up to 500 frames
 On-board workstation-class data management with thumbnail previews and storage of images, loops, and reports. Retrospective and prospective clip capture to internal drive or removable media
 Integrated DVD/CD burning capability for storage of images or export in DICOM, JPEG and .avi for PC compatibility. Philips DICOM viewer option to imbed in media transfer for easy viewing of study on most PCs.
 Maintenance and Serviceability
 Remote Access for Expedient Clinical and Technical Support
 Flexible Service Agreements
 Clinical Application and Educational Support
 Scheduled Preventative Maintenance and System Optimization

Adult Echo Clinical Option

Tissue Specific Imaging software for adult cardiac ultrasound applications. Display optimization software with Tissue Specific presets for adult cardiac imaging and Doppler applications. Analysis software package includes cardiac imaging protocol measurements and configurable reports and finding codes. Active native data for post-process optimization and advanced XRES adaptive image processing for improved tissue conspicuity. iSCAN intelligent one-button optimization for adaptive gain compensation in 2D, Doppler, Tissue Doppler Imaging and LVO contrast functions. Includes Live compare mode, cardiac High-Q Automatic Doppler Analysis and respiration waveform from chest impedance. Allows operation of S5-1, CX X7-2t and D2cwc transducers.

2 **DICOM Package** **1**

NetLink/DICOM 3.0

Provides DICOM 3.0 network print and store, commit, modality worklist. Includes print and store capabilities to network devices and CD/DVD and USB, Storage Commit, Modality Worklist. Also includes wireless DICOM hardware.

Dicom Structured Reporting

Provides Cardiac structured reporting feature to transfer measurements off the system via DICOM

3 **Travel Case** **1**

Padded wheeled travel case with front zipper pockets & telescoping handle. Includes a retractable stacking extension for transporting additional supplies and a customized transducer & gel carrying bag for up to 4 transducers. Dimensions:
 Accommodates CX50 imaging system, AC adapter, separate transducer carry bag for up to 4 transducers and gel,

4 **Cart with Multi-port Adapter** **1**

Highly mobile cart that features hardware module to support transducer switching among up to three imaging transducers at the touch of a button. Includes: 4 swivel wheels with 2 locking casters, rear handle, micro-positioning grips, quick-connect tray, storage shelf, footrest, internal isolation transformer, B&W printer brackets, integrated transducer connector holder, gel holders and cable management. Includes USB hub for additional connectivity.

5 **USA Power Cord** 1

6 **Cardiac Motion/Mechanics Quantification Plug-in** 1

Uses next-generation 2D speckle tracking technology to provide a robust and objective assessment of Left Ventricular global function and regional wall motion, deformation and timing. Provides ability to extract a wide range of motion parameters from stored datasets at any time after the actual scan, facilitating quality assurance, collaborative clinical decision making and case reviews without the need for rescanning the patient.

CMQ includes a suite of methods either based on 2D speckle tracking (CMQ, free Strain and TMAD methods) or border detection technologies (Simple/CK, Complex/CK, Other). Each method includes a "step by step" user interface and report capabilities for ease of use and fast clinical adoption. Computes regional and global strain rates among other parameters such as rotation and transmural torsion. 2D speckle tracking is based on dense tracking field technology and images acquired from transducers featuring PureWave technology ensures superb tracking performance for enhanced clinical utility. A new image quality confidence index with a user-defined threshold removes untracked segments and further ensures that diagnoses are based on the best possible information. CMQ adopts the LV 17-segment model and produces comprehensive regional and global strain using easy to read bulls eye plots.

The free Strain method offers a simple and intuitive way to assess local tissue motion and deformation. AQ/CK and Tissue Motion Annular Displacement (TMAD) methods facilitate Global Left Ventricle function, volume, and EF assessment.

7 **S5-1 Broadband Phased Array** 1

PureWave crystal Sector array transducer with 5 to 1 MHz extended operating frequency range for adult cardiology, abdominal, vascular, TCD and Acute Care.

8 **D2cwc Static Transducer** 1

Non-imaging 2 MHz PW/CW Doppler transducer for cardiac applications

9 **English Manual** 1

Operation Manual

10 **English Manual** 1

Operation Manual

11 **QLAB 9.0 NA GI/ Shs Bun** 1

This QLAB package is only provided if purchased in conjunction with an ultrasound system that includes a QLAB Plug-In. This encompasses QLAB Core Module, Intima Media Thickness (IMT) Quantification Plug-in, Region of Interest (ROI) Quantification Plug-in, Cardiac Parametric (PQ) Quantification Plug-in, Strain (SQ) Quantification Plug-in, Cardiac 2D Quantification (2DQ) Plug-in, Cardiac 3D Quantification (3DQ), Cardiac 3DQ Advanced Plug-in, Mitral Valve Quantification (MVQ) Plug-in, GI 3D Quantification (GI 3DQ) Plug-in Elastography Analysis (EA) plug-in and CMQ (Cardiac Motion /Mechanics Quantification Plug-in).

Includes QLAB Core Module, Intima Media Thickness (IMT) Quantification Plug-in, Region of Interest (ROI) Quantification Plug-in, Cardiac Parametric (PQ) Quantification Plug-in, Strain (SQ) Quantification Plug-in, Cardiac 2D Quantification (2DQ) Plug-in, Cardiac 3D Quantification (3DQ), Cardiac 3DQ Advanced Plug-in, Mitral Valve Quantification (MVQ) Plug-in, GI 3D Quantification (GI 3DQ) Plug-in, MicroVascular Imaging (MVI) plug-in, Elastography Quantification (EQ) plug-in and CMQ (Cardiac Motion /Mechanics Quantification Plug-in).

QLAB Core Module

QLAB is designed for ultrasound clinicians who require sophisticated analysis of image data acquired on Philips ultrasound systems.

A large number of Plug-ins is available, offering a variety of powerful 2D/3D advanced quantitative capabilities.

All Plug-ins require the QLAB Core Module.

QLAB core module provides 2D viewer by default.

The 3D Viewer comes with the 3D plug-ins when ordered.

QLAB Core Module functions include review, deletion and quantification of Philips iE33, iU22, CX50, HD15, HD11, HD7, SONOS, HDI and EnVisor C.0 image files;

PC Graphic image/movie files creation in BMP, TIFF, JPEG and AVI;

Ability to remove patient information from QLAB all screens and prior exporting new PC files;

Export of quantification data into Excel-compatible spreadsheet formats;

Built-in on-line help in multiple languages.

Ultrasound data can be sent to QLAB via DICOM network connection, MOD/CD/DVD media or USB Flash Drive/Self-powered MiniDisk devices.

Intima Media Thickness (IMT) Quantification Plug-In

Provides automated measurements of intima media thickness in carotids and other superficial vessels;

Eliminates the laborious process of manually positioning cursors, minimizing the time needed to complete an IMT study.

Compatible with Philips iE33, iU22, HD15, HD11, HD7, EnVisor C.0, SONOS and HDI systems.

Region of Interest (ROI) Quantification Plug-in

On compatible files calculates Color Mean and Standard Deviation, Echo mean and Standard Deviation, VI, FI, VFI. Enables user to apply motion compensation algorithm. Provides basic trending capabilities (off cart only).

Compatible with Philips iE33, iU22, CX50, HD15, HD11, HD7, EnVisor C.0, SONOS and HDI systems.

Cardiac Parametric Quantification (PQ) Plug-In

Allows advanced review and analysis of contrast intensities within the heart;

Provides color-coded representation of contrast intensity and replenishment rate based on either Log or linear scaling.

Compatible with iE33, SONOS and HDI systems.

Strain Quantification (SQ) Plug-in

Used in the evaluation of regional myocardial function; assessment of synchronicity and guidance during bi-ventricular pacing procedure;

Measures the myocardial velocity TDI data set and derives the displacement, strain and strain rate along user-defined M-Lines.

Compatible with iE33, iU22, CX50, HD15, HD11, SONOS and HDI systems.

2D Quantification (2DQ) Plug-in

Display of 2D ultrasound images;

Semi-automated border detection for cardiac chambers and vessel cavities;

Computes Areas, Volumes and advanced parameters for LV systolic and diastolic function including, LV Ejection Fraction (EF) and Fractional Area Change (FAC);

The Peak Ejection Rate (PER), Peak Rapid Filling Rate (PRFR) and Atrial Filling Fraction (AFF) are also reported;

Color Kinesis (CK) tool for provides color-coded visualization of global and regional wall motion;

TMAD allows visualization and quantification of Atrio-Ventricular Annulus planes Motion in order to assess cardiac global function in fast and reproducible way to facilitate trending report.

Compatible with Philips iE33, iU22, CX50, HD15 and HD11 systems.

Cardiac 3D Quantification (3DQ) Plug-in

Provides easy access to Live 3D, 3D Zoom, Full Volume and 3D Color data sets from the iE33, iU22 and SONOS 7500 Live 3D systems;

Offers viewing, cropping, slicing and quantification including distance measurements, area, Bi-plane LV Volume, Ejection Fraction (EF) and LV Mass calculations;

3DQ also provides Multiplanar Reconstruction (MPR) views for unlimited anatomical planes from 3D volume and new 3D iSlice generation.

Compatible with Philips iE33, iU22 and SONOS7500 systems.

Advanced 3D Quantification (3DQA) Plug-in

Extends the diagnostic power of Live 3D Echo by providing the first semi-automated, on-cart and off-cart analysis of true LV volumes—using all the voxels to generate a full 3D endocardial border; Cardiac 3D Quantification Advanced (3DQ Advanced) revolutionizes echo quantification and extends the diagnostic power of Live 3D echo by providing the first semi-automated, on-cart and off-cart analysis of true LV volumes—using all the voxels to generate a full 3D endocardial border. This is a true 3D border with higher accuracy and less dependency on LV shape assumptions than conventional methods, which rely on sparse view analysis.

3DQ Advanced waveform display provides accurate data for assessing global function based on LV volume, ejection fraction and stroke volume. Additionally, 3DQ Advanced allows simultaneous display of 17 regional waveforms, enabling temporal comparisons between segments.

MultiPlanar Reconstruction (MPR) views provides unlimited anatomical planes from 3D volume;

New iSlice generation run in the 3D viewer and is compatible with all Philips Live 3D dataset including color data, provides highly flexible short and long

axis slicing tool and display up to 4x4 equally spaced MPR views to facilitate LV function visualization assessment;

Measurements of LV endocardial Volumes, Stroke Volume (SV) and true 3D ejection fraction (EF) using a semi-automated border detection in 3D space;

Computes global and regional LV volumes based on ACC 17 segments model;

Displays global LV volume waveform and provides selective display of 17 regional volume waveforms;

Offers timing assessment for each 17 minimal regional volumes and determine a synchronicity index for all volume segments or a user-selectable group of volume segments;

Provides comprehensive report with summary of synchronicity indexes and displays regional Timing and Radial Excursion Parametric Images in Bull's eye representation.

iCrop capabilities with the 3D volumes.

Mitral Valve Quantification (MVQ) Plug-in

The Mitral Valve Quantification plug-in (MVQ) adds precise 2D and 3D quantification of the mitral valve anatomy and associated structures based on data acquired with Philips Live 3D Echo and

the X7-2t transesophageal transducer;

Based on the precise Live 3D TEE information, the MVQ plug-in provides a clinical decision support tool to improve diagnostic confidence, surgical planning, communication between clinicians and for the patient, and follow-up care.

Compatible with the Philips iE33 system and Live3D TEE Transducer.

GI 3DQ Plug-In

Review and display 3D data sets from the Philips iU22, iE33 and HD11 systems;

Includes MPR (Multiplanar Reconstruction) capability;

Can display as 1-up (full volume), 4-up (volume/MPR), or Direct iSlice display);

Also provides MPR rotation, basic crosshair control, rotation and movement; crosshair and MPR border graphics controls, pan and zoom controls, and export of BMP, JPEG, TIFF and AVI files;

Rotation speed control, Elevation resize for freehand volumes, Linear Measurements, Ellipse

Measurements, Stacked Contour Measurements, Region of Interest (ROI) Analysis;

Works with Matrix and Mechanical Volume Transducers.

MicroVascular Imaging (MVI) Plug-in

MVI uses specially designed post-processing software to map contrast agent progression. This software plug-in measures changes in the image from frame to frame, suppressing background tissue signals and capturing additional contrast data. The additional data obtained using MVI dramatically enhances vessel conspicuity.

Elastography Quantification (EQ) Plug-in

Perform parametric imaging and strain ratio analysis. Parametric imaging calculates relative strain with respect to a user defined reference region. Strain ratio allows calculation of relative strain of two regions of interest over time.

Cardiac Motion/Mechanics Quantification Plug-in

Based on 2D speckle tracking technology, CMQ provides a method for assessing global and regional cardiac function. It offers a suite of measurements and parametric displays to analyze trans-myocardial mechanics without Tissue Doppler imaging angle dependency limitations. Using the 17-segment ASE left ventricular model, CMQ provides additional information for many clinical applications such as ventricular wall motion and mechanical synchrony assessments.

Compatible with the Philips iE33, iU22, CX50, HD15 systems files.

PC requirements for all QLAB plug-ins:

- Processor: Intel Core 2/Xeon, AMD Athlon 64/Opteron or greater
 - Operating System:
 - Windows XP Pro Service Pack 3, 32-bit
 - Windows 2003 Server, 32-bit
 - Windows 2008 Server R2, 32-bit
 - Windows Vista, 32-bit
 - Windows 7, 32-bit or 64-bit
 - Memory: 2 GB RAM
 - Graphics Card: 32 64 MB or greater with H/W accelerated OpenGL support and Pixel Shader 3.0 (Intel video cards may work but are not supported)
 - Hard Drive: 80 GB HD with 7200 RPM
 - Monitor: Minimum 1024 x 768 resolution (SVGA) and capable of 24-bit or 32-bit color display
 - Media:
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- CD-ROM/DVD Drive for transferring files from iE33, iU22, HD11 XE, HD11, HD15, HD9, CX50 and EnVisor ultrasound systems
- 640 MB 3.5-in magneto-optical drive for transferring files from HDI ultrasound systems
- 1.2 to 2.3 GB 5.25-in magneto-optical drive for transferring files from SONOS ultrasound systems
- USB port for transferring files from iE33, iU22, HD9, HD15, and CX50 ultrasound systems
- Mouse with a scroll wheel and a standard Microsoft keyboard

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1 Day PAS Onsite

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1 Day PAS Onsite - Ultrasound system or upgrade onsite training provided by a PAS (Product Applications Specialist) for specific system applications or upgrades; not per modality. *Education is provided Monday - Friday during normal business hours.* Note: Philips Healthcare personnel are not responsible for actual patient contact or operation of equipment during education sessions except to demonstrate proper equipment operation. The training sessions should be attended by the appropriate healthcare professional as identified by the department director. *Repeat training for staff non-attendance will not be accepted.* Site must be patient-ready to meet training expectations. All onsite training day expires within 90 days from system or upgrade installation date. Exceptions are for 3D Stress onsite training (which expires 9 months from system or upgrade installation date) and Fusion & Needle Navigation onsite training (which expires 180 days from system or upgrade installation date).

THE NUMBER OF ONSITE TUITIONS YOU RECIEVE MAY VARY BASED ON PURCHASED OPTIONS. PLEASE CONSULT YOUR SALES REPRESENTIVE FOR FURTHER DETAILS

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1st SVC Manual for Gov

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OPTIONS

SELECTION OF ANY OPTION WILL INCREASE THE CONTRACT PRICE BY THE AMOUNT SHOWN IN THE PRICE COLUMN. OPTIONAL EQUIPMENT PRICING VALID ONLY IF PURCHASED IN CONJUNCTION WITH EQUIPMENT QUOTED.

Line #	Description	Qty	
1	Vascular Clinical Option	1	
	This clinical option includes Tissue Specific Imaging software and SonoCI for Cerebrovascular, Peripheral vascular, abdominal vascular and Transcranial applications. This clinical option also includes in depth analysis and reporting packages for vascular applications. Freehand 3D is also provide within this clinical option. Allows operation for vascular applications of the C5-1, S5-1, L12-3, L15,7io, L12-5 50 and D5cwc transducers.		
2	Cart	1	
	Highly mobile cart that includes: 4 swivel wheels with 4 locking casters, rear handle, micropositioning grips, quick-connect tray, utility drawer, storage shelf, footrest, internal isolation transformer, B&W printer brackets, integrated transducer connector holder, gel holders and cable management. Includes USB hub for additional connectivity.		

This course provides technical instruction for biomedical engineers (hospital engineers) on the CX50 Ultrasound System. Students receive instruction on system components, theory of operation, disassembly, reassembly, preventative maintenance and safety checks. Hands-on labs train the students to verify proper equipment operation and diagnostic troubleshooting techniques. Philips support philosophy is explained to facilitate working successfully with our support professionals.

Upon completion of this course, the student will be able to:

- Operate the system to determine basic functionality
- Collect and deliver system status and failure information (logs and settings) to Philips support organization
- Disassemble and reassemble the major parts of the system
- Perform Preventative Maintenance and Mechanical adjustments
- Back-up and restore user presets
- Install and upgrade system software
- Set-up the system for DICOM communication
- Configure/enable remote connections

Key topics:

- Features
- Theory of Operation
- Disassembly and Reassembly
- System Administration

Prerequisites: Basic computer knowledge, Basic Ultrasound and Transducer knowledge, Networking and DICOM familiarity, ESD training, Electrical Safety Testing.

Accreditation: None.

Location: CTC; Cleveland, OH, USA.

Class Length: 3 days (excludes Saturdays, Sundays, and Philips holidays)

Materials:

- Instructor-presented power point presentations and demonstration videos
- Field Service Manual
- Test is on Philips Learning Center

* PHILIPS PROPRIETARY MATERIALS SUCH AS DIAGNOSTIC SOFTWARE AND SERVICE DOCUMENTATION ARE NOT INCLUDED IN THE TRAINING AND WILL NOT BE AVAILABLE FOR USE OUTSIDE OF THE TRAINING ENVIRONMENT. THE TRAINEE MUST RETURN ALL

PROPRIETARY MATERIALS RECEIVED DURING THE TRAINING AT THE END OF THE TRAINING. CUSTOMER ACKNOWLEDGES AND AGREES THAT NEITHER CUSTOMER NOR TRAINEE WILL RECEIVE A LICENSE TO SUCH PROPRIETARY MATERIALS AND THAT THE TRAINEE MAY NOT BE ABLE TO FULLY UTILIZE THE TRAINING WITHOUT THE USE OF SUCH PROPRIETARY MATERIALS. (CERTAIN LICENSES MAY BE OBTAINED THROUGH PURCHASE OF A PHILIPS RIGHTFIT SERVICE AGREEMENT.) Course dates and location to be finalized by Philips. Philips shall attempt to accommodate Customer requested dates and training location. The price quoted includes course tuition. Travel and living expenses are not included, but may be purchased separately through Philips.

IMPORTANT Notes Regarding Admission to Philips Customer Engineer Training Courses:

1. Trainee must meet all prerequisites
2. Course expires one (1) year from equipment installation date (or purchase date if sold separately)
3. Customer must sign Philips Nondisclosure statement
4. Trainee must sign Philips Nondisclosure statement
5. Customer must sign Philips terms and conditions of training