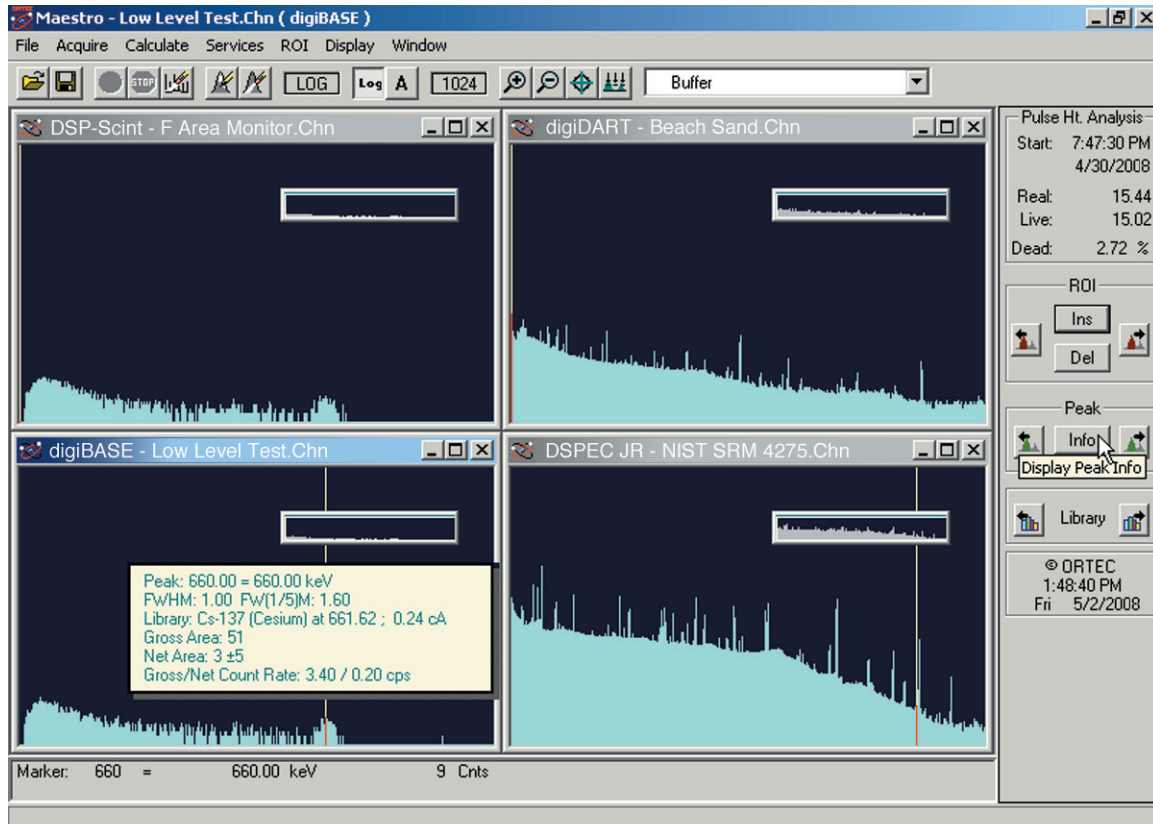


Advanced Software for Multichannel Analyzer (MCA) Applications



- Integrated control of a wide range of spectroscopy hardware
- Instant live display of acquiring data on up to eight inputs
- Built in network support for control of up to 256 MCAs
- Advanced “smart” peak analysis features
- Support for Microsoft Windows XP and Vista
- Advanced control of ORTEC DSP spectrometer features
- Automated acquisition control via "Job Streaming"
- Data Security Protection by personal password
- Windows® 2000/XP/VISTA compatible

MAESTRO-32 is a multichannel analyzer “emulation” software package. When used in conjunction with a personal computer, and appropriate MCA¹ hardware, MAESTRO-32 constitutes an advanced “smart” analysis environment for use in a wide variety of scientific applications in industry, teaching, research, including nuclear counting laboratories.

The MAESTRO-32 user interface provides live spectral display, control of hardware and provides a number of “smart” analysis tools. The spectrum display and manipulation has a common “look and feel” with other ORTEC Spectroscopy products, such as GammaVision-32.

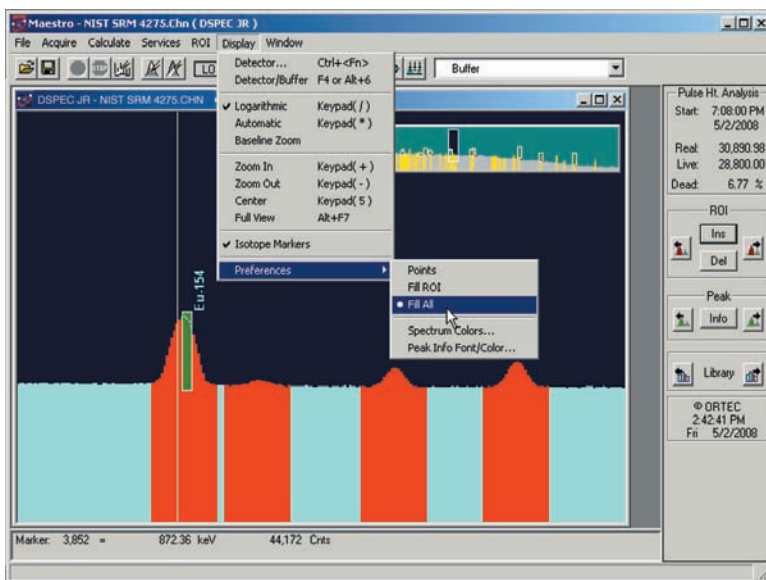
Full control of acquisition and all MCB hardware features is provided. The software auto-detects the attached hardware, presenting the user with only those features specifically available for that hardware. For example, members of the ORTEC DSPEC Series of Digital HPGe gamma spectrometer systems provide full control of the digital filter, auto-PZ and Insight[®] oscilloscope mode. These features are displayed by the MAESTRO-32 software when the DSPEC hardware is connected to the system.

As a member of the ORTEC CONNECTIONS-32 suite of software products, MAESTRO-32 has the capability to fully support up to 250 detector systems across a local area network; a remote detector appearing to a local operator is no different to one physically attached to the local PC workstation.

MAESTRO-32, in its current release, is the latest stage of an ORTEC evolutionary development over many years. The vast majority of ORTEC MCB hardware is still supported by MAESTRO-32, making an upgrade to the latest version a potentially inexpensive yet rewarding experience.

Display and User-Interface Features

- Compliant Microsoft Windows GUI for control and spectrum manipulation using the mouse or the keyboard, including the use of accelerator hot keys
- True live display on any mix of supported MCB hardware; view up to 16k channels, zoom to 32 channels full scale
- Control of advanced functions of all ORTEC MCAs
- Logarithmic and auto-scaling linear vertical display
- Multiple Regions of Interest: ROI data and settings can be saved to a file
- Spectrum Smooth
- Spectrum Compare
- Spectrum Strip (normalized to acquisition time)
- Spectrum Sum



¹In ORTEC parlance, the hardware, a multi-channel buffer or “MCB”, when used in conjunction with the MAESTRO-32 or similar MCA emulation software, constitutes the multi-channel analyzer or MCA.

MAESTRO[®]-32 v6.08

MCA Emulation Software

- Multidetector display and control

Up to eight live spectra and eight static (buffer) spectra may be simultaneously displayed at a single PC workstation from up to 256 total system inputs

Identical operation for local and remote networked MCBs/MCAs

Simultaneous display of any spectrum on multiple workstations

“Detector Locking” Password protection

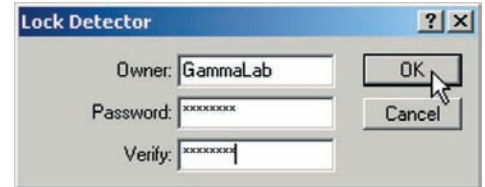
- Single key or mouse button for:

Setting/deleting of ROIs

Indexing to next ROI

Indexing to next peak

Indexing to next library energy

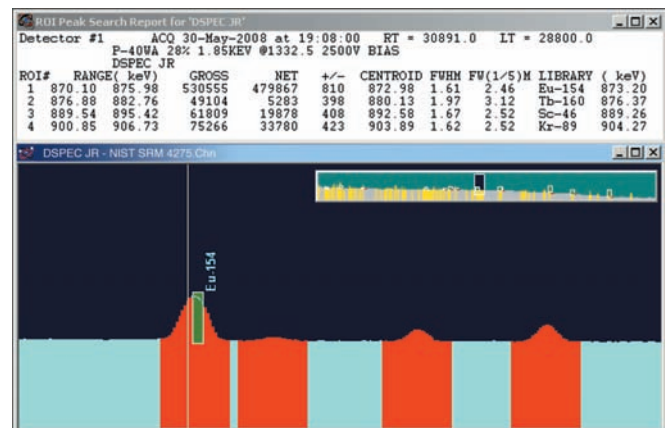
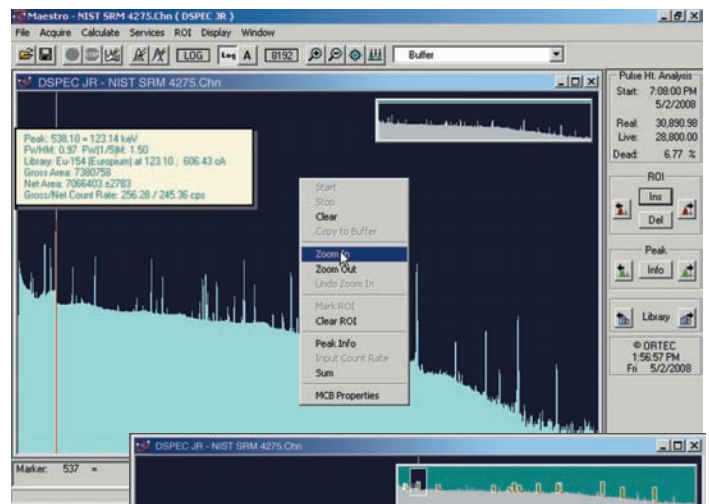


The MAESTRO-32 display and detector control are integrated, providing an easy-to-use human interface. The most commonly used functions have been implemented as "hot keys" or buttons. This allows the commonly used functions to be accessed directly without going through the menus and taking up display space. These "hot keys" are the same as in previous versions of MAESTRO-32 — making the upgrade learning process an easy one.

Within the spectrum display window, both the full spectrum and the expanded (zoomed) spectrum windows are shown at the same time. The expanded window region is highlighted in the full window and the expanded region can be selected by clicking on that part of the full window. The ROIs are shown in both views. The full display window can be sized independently of the expanded window. Comprehensive display manipulation is provided in the expanded spectrum window.

Features such as the ability to compare an acquiring spectrum with a reference from disk or the instant live “peak info” and peak ID functions provide the user immediate reassurance that all is well during acquisition of a long count, without having to interrupt the count itself. Jump to next spectrum peak, library peak, or region of interest peak, while acquiring live data, add to the user convenience of this MCA emulator.

Setting of ROIs is easily done by pressing the mouse button and moving the cursor over the region to be marked. Any number of ROIs may be entered. The ROI definition may be saved to disk and recalled to another spectrum.

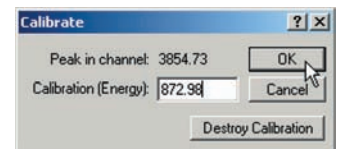
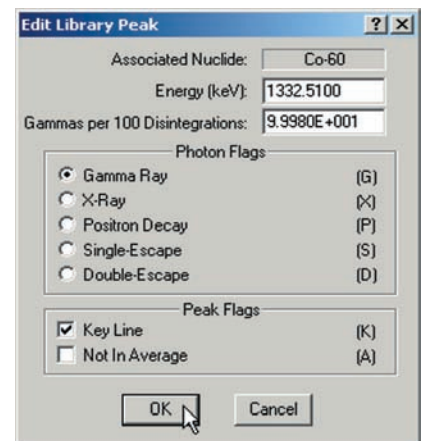


Display colors can be changed, and the spectrum can be displayed as dots or bars. The optimum display may be chosen, color or monochrome, indoors or out.

Up to eight detectors may be selected for live display on a single workstation from a system maximum of 256. Selection is made from a detector “pick list.” Multiple workstations may simultaneously display the same live detector(s) or two adjacent workstations may display different selections through unique pick lists. Each detector may be “locked” to prevent unauthorized access. In addition to viewing live spectra in the acquisition hardware, static spectra can be displayed in PC memory, either by recall from disk or by taking a “snapshot” of an acquiring spectrum, allowing spectrum viewing and analysis to be done without disrupting data collection. In this way a maximum of 16 spectra may be displayed simultaneously on a single PC screen, eight live and eight static.

Advanced Features

- Mariscotti fast peak search, with nuclide identification by library lookup and ROI Marking of found peaks.
- Multipoint energy and peak shape calibration.
- Activity, net and gross areas (with uncertainty), centroid and shape (“FW 1/Xm”) for peaks.
- Instant isotope markers can mark all gamma rays of a single nuclide (from the library) when any one of the gamma ray peaks from that nuclide is selected in the spectrum. Instant visual confirmation that all peaks are present, with peak amplitude estimator.
- Built-in semi-quantitative analysis, reports of peak area, centroid energy, peak count rate, and nuclide activity are easily produced.

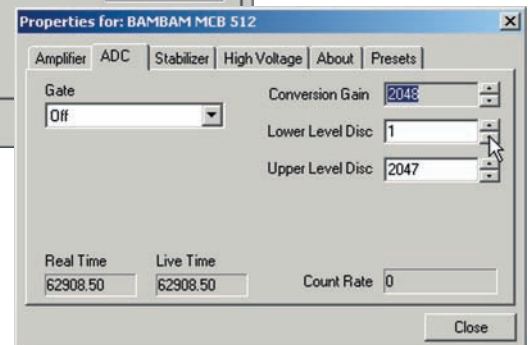
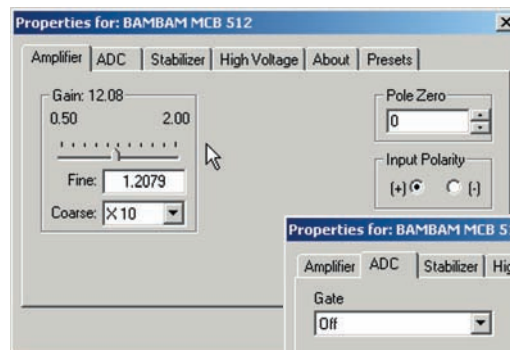


Hardware Control

Where available in the specific installed MCB hardware, all advanced features are supported:

In particular support is provided for:

- Multiple simultaneous acquisition presets
 - Real Time
 - Live Time
 - ROI peak
 - ROI Integral
 - Count to uncertainty
 - MDA
- Gain Stabilizer support
- SMART-1 Detector functions
- ZTD loss-free counting correction
- Control of analog and digital amplifier filters
- Detector HV bias control
- Sample changer control

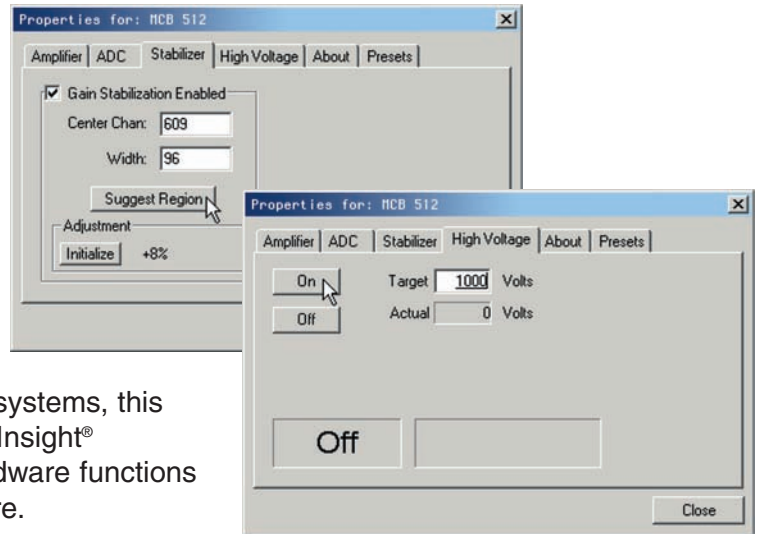


MAESTRO[®]-32 v6.08

MCA Emulation Software

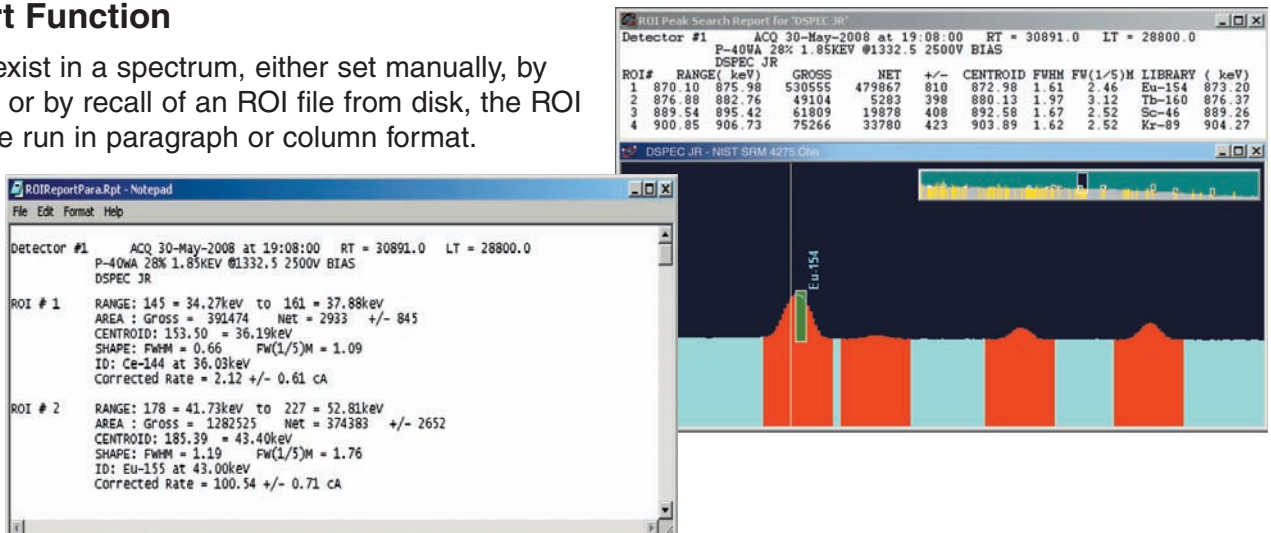
- Automatic and manual detector optimization
- Insight[®] Oscilloscope mode
- Conversion gain
- Portable instrument Battery Voltage monitoring.

Full control of acquisition and all hardware features is provided. The software auto-detects the attached hardware, presenting the user with only those features actually available in the specific hardware. In the case of the ORTEC DSPEC Series Digital HPGe gamma spectrometer systems, this includes full control of the digital filter, auto-PZ and Insight[®] oscilloscope mode. Further details of advanced hardware functions are provided in the relevant specific product literature.



ROI Report Function

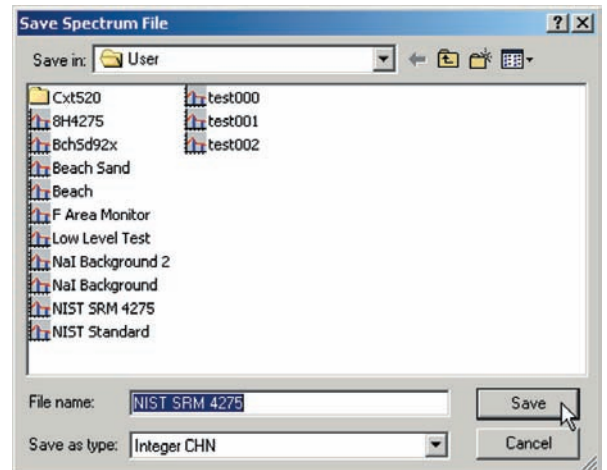
When ROIs exist in a spectrum, either set manually, by peak search, or by recall of an ROI file from disk, the ROI report may be run in paragraph or column format.



MAESTRO-32 File Management

Any number of spectra may be stored on disk. Included in the spectrum file are the detector description, sample description, and the calibration. When a spectrum is recalled, the sample description is shown on the recall dialog for ease of identification.

MAESTRO-32 directly supports two file formats, *.CHN and *.SPC. The *.CHN file format offers storage and direct retrieval capability for basic MCA emulation. The ORTEC *.SPC file format is used by more advanced products such as GammaVision-32.



DataMaster File Format Conversion Tool (Optional)

DataMaster is a powerful spectrum conversion utility that is supported as an add-on tool for MAESTRO-32. This program allows enhanced flexibility in converting between a wide variety of spectrum formats. Switching between different formats becomes as simple as opening or saving a file!

Job Control

The JOB file provides a full set of commands to automate or batch the functions of MAESTRO-32. The online editor can be used to quickly create or change JOB files. A JOB file can be automatically executed whenever MAESTRO-32 is started to define or set initial conditions. The RUN command can be used to execute any program, thus allowing unlimited functions in a JOB. Separate copies of MAESTRO-32 can be started; each operating on a different set of detectors and each can run different JOB files.

MAESTRO-32 uses the full multitasking capability of the latest versions of Windows. Multiple job files can be run simultaneously. The user simply refers to the selected input by the detector name or number (set by the operator in the configuration program) without concern about detector type or physical location.

Spectrum Plotting

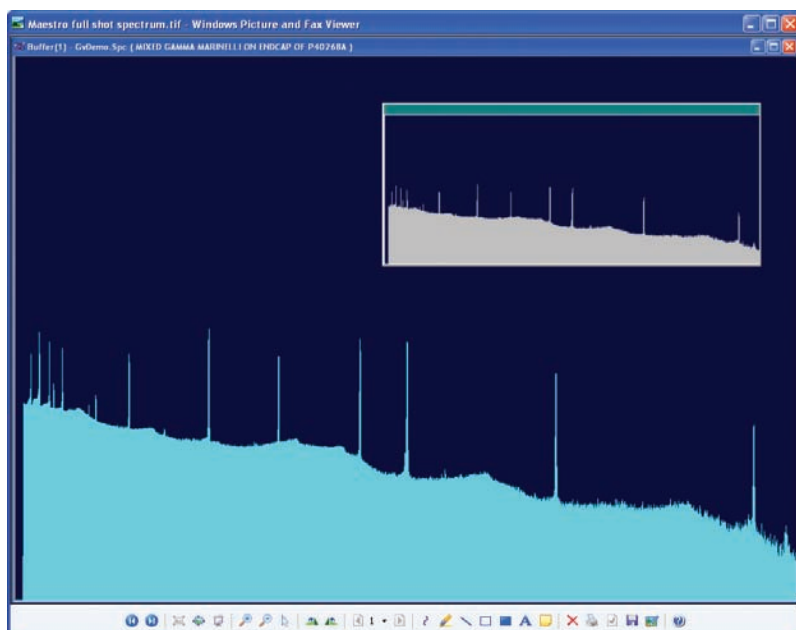
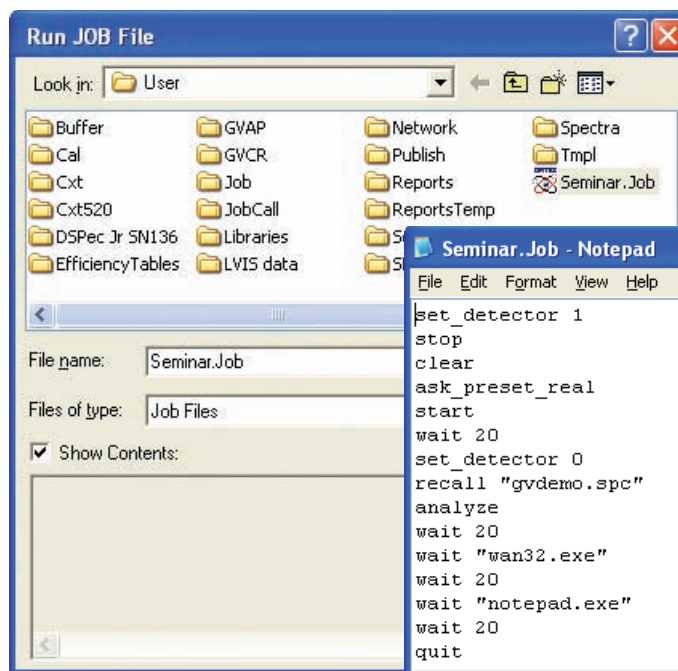
Spectrum graphical plotting or printing is provided by the FullShot™ program. This utility program will capture and save spectrum plots or send them directly to the printer. The files can be saved in any number of popular formats for inclusion in documents. FullShot can also be used to capture screens from any Windows program.

Operating System

As a CONNECTIONS-32 product, MAESTRO-32 v6.08 requires a Windows 2000/XP/VISTA platform.

Interfacing of MCB hardware to the system can be by USB, Ethernet, printer port, serial port, or ORTEC Dual-Port Memory. (Check hardware literature for details.)

Note: VISTA does not support MCBs connected directly to Ethernet utilizing IPX/SPX network protocol. Contact factory for support on this issue.



MAESTRO®-32 v6.08

MCA Emulation Software

Spectroscopy Hardware Supported

All ORTEC MCBs (past and present) and all other devices supported by ORTEC CONNECTIONS-32 are supported. Built-in support for advanced operations (where supported in hardware): amplifier gain/shaping control, Auto-PZ, DSPEC "optimize" and InSight™ mode, DART field mode, SMART-1 detector, graphical setting of MCB spectrum stabilizer and statistical uncertainty peaks. Detector Locking password protection is supported.

Supported MCBs include:

ASPEC-927	digiBASE	NOMAD	916A	921
Easy-MCA	microBASE	NOMAD Plus	917	921E
DSPEC Plus	digiDART	MicroNOMAD	918	926
DSPEC jr 2.0	DART	MiniMCA-166	918A	92X
DSPEC Pro	MatchMaker	M3CA	919	92X-II
DSPEC LF	MicroACE	OCTÊTE PC	919E	SBS65
DSPEC Jr	ACE Cards	OCTÊTE-Plus	920	
DSPEC	TRUMP Cards	CZTPack	920E	



MAESTRO®-32 v6.08

MCA Emulation Software

Ordering Information

Model	Description
A65-B32	MAESTRO-32 MCA Emulator standalone or first network copy. Includes documentation and Binary Use License.
A65-G32	Documentation for A65-B32.
A65-K32	Upgrade from A65-BI to A65-B32. Requires BUL from any version of A65-BI.
A65-K32-D	Upgrade from A64-BI or A63-BI (DOS) to A65-B32.
A65-N32	Single Use Network Copy. Includes BUL, disks, and documentation. Requires new or previous purchase (requires BUL) of A65-B32.
A65-U32	Update for A65-B32 (requires BUL from any version of A65-B32)

Options

A11-B32	CONNECTIONS-32 Programmer's Toolkit with ActiveX™ Controls
A12-B32	Analysis Results File (UFO) Toolkit
A49-B32	DataMaster
C53-B32	Nuclide Navigator® III

Update Subscription

With the purchase of a new version of MAESTRO-32, you can also purchase a subscription that will provide you with automatic updates of MAESTRO-32 as they become available.

If you own a previous version of MAESTRO-32, you can purchase a software subscription now and receive an immediate update and additional updates during the subscription period.

A MAESTRO-32 subscription may also be purchased when purchasing an ORTEC MCA Product that includes MAESTRO-32.

Model	Description
A65-232	2 year subscription (requires new purchase or BUL from any version of A65-B32)
A65-332	3 year subscription (requires new purchase or BUL from any version of A65-B32)
A65-432	4 year subscription (requires new purchase or BUL from any version of A65-B32)
A65-532	5 year subscription (requires new purchase or BUL from any version of A65-B32)

Specifications subject to change
022609

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