

A major upgrade of the “classic” Detective-EX/DX and Micro-Detective software, available as a “self-install.”¹

- Instantly Upgrade the performance of your Detective-EX/DX or Micro-Detective instrument in the field; no need to return it to the factory.
- Add the latest Library List.
- New flexibility in operational mode options adapt more easily to YOUR CONOPS.
- ANSI N42.42 data format capability.
- Algorithm improvements reduce even further the level of false identifications.

Since the announcement of the ORTEC Detective-EX/DX and Micro-Detective products, many hundreds of instruments have been set to work across the world and continue to help in the battle to prevent illicit trafficking of nuclear materials. We have received many favorable comments about the usability of the “classic” instrument as well as suggestions for improvement. We constantly strive to improve analysis software performance. The latest version (1.13) now includes many of these improvements with no loss of familiarity to those who use the instruments often.

New Features in Version 1.13

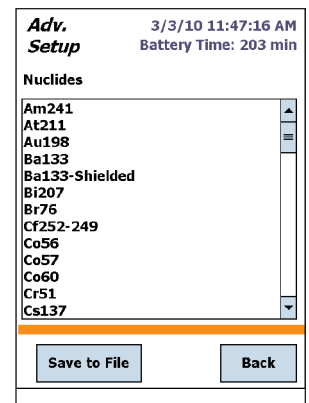
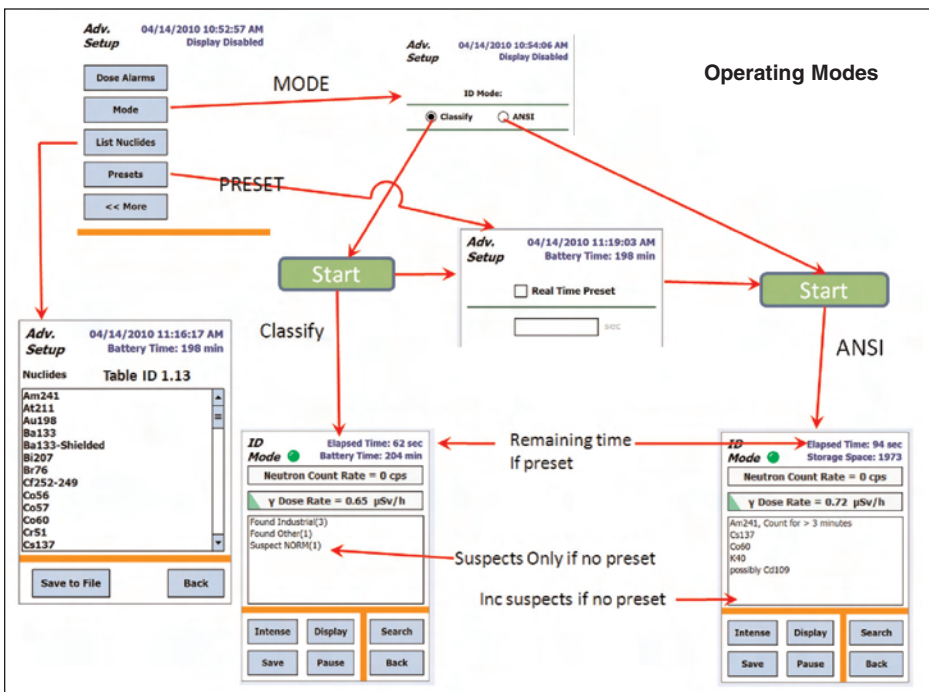
1. List Library Nuclides

It is now possible to check the list of nuclides in the internal library. Some users have commented that, just because the instrument does not ID a nuclide, it would be helpful to be positive that the nuclide in question was present in the nuclide library, to increase confidence in negative results.

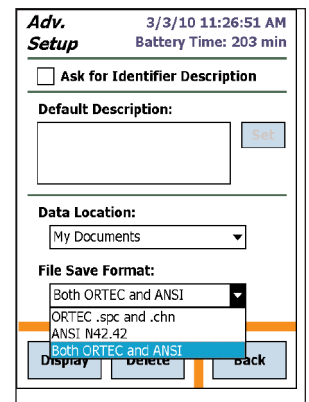
2. ANSI N42.42 File Structure

The spectrum can now be saved in the N42.42 file structure. This file type is commonly used by reach-back organisations. These can now be written directly to the internal or removable storage according to USER choice.

3. Significant Changes in Operating Modes (see figure)



List Library Nuclides



ANSI N42.42 File Structure

¹Note: in order to install Version 1.13 software, version 7 Micro-Detective or Version 3.04 Detective-EX/DX firmware must be installed. The V1.13 update comes with an InstallShield set-up program which guides you step-by-step through the upgrade of both firmware and software.

DETEX1.13UG

Detective-EX/DX and Micro-Detective Version 1.13 Firmware and Software Upgrade

Preset Count Time

In some CONOPS (concept of operations), users have commented that the Detective “suspected nuclide” feature is not helpful, “because it does not tell the user what to do next.” The question is “if the ‘suspected’ message is displayed, what should the operator do and for how long should he/she continue to count?” In many CONOPS, the procedure is to “count for XX seconds and note what the instrument displays.

A count time preset may now be set as an advanced setting, between 1 and 9999 seconds. If a non-zero preset is enabled, no suspect nuclides are reported, and the “live” IDs are reported, as now, with the acquisition terminating when the preset count time is reached.

“Classify” and “ANSI” Modes

The present mode of operation in which “Found Medical (2)” signifies the detection of two medical nuclides, with the IDs being revealed one “level” down was in response to the requirements of a particular CONOPS. We are retaining that mode and now referring to it as “Classify” mode. (Note, the previous comment relating to presets and “suspected” nuclide reporting.)

In the new “ANSI” mode (enabled as an advanced setting) the nuclide names are shown immediately without requiring an extra display screen “tap.” (Note, the previous comment relating to presets and “suspected” nuclide reporting.)

Analysis Algorithm Improvements

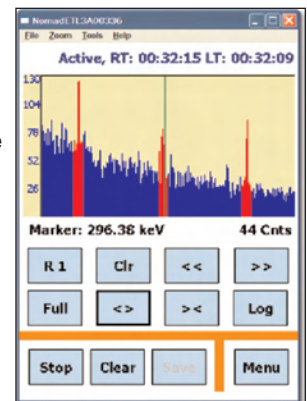
Although the Detective Series instruments have proven highly resistant to false positive and false negative results, it has been noticed that in some severe cases, (for example very complex spectra or heavy shielding), less than 100% correct results can occur. While no instrument can ever be considered perfect, certain (proprietary) modifications to the algorithms have been made to improve resistance to these incorrect results.

Dual Mode Operation for Micro-Detective

Many users have asked if it would be possible to operate the Detective-EX/DX or Micro-Detective as a trans-SPEC model. (Trans-SPEC is a general purpose gamma ray spectrometer, which shares most of the hardware of the Detective. See for example <http://www.ortec-online.com/solutions/gamma-spectroscopy.aspx?tab=5>.)

In Detective mode operation, the instrument is factory pre-calibrated, requiring only periodic minor calibration updates in the field with a check source. In trans-SPEC mode, much wider adjustment of instrument parameters is possible. In dual mode operation, if the trans-SPEC software is installed, swapping back and forth can be achieved and the Detective mode “remembers” its last set of settings on restart. The trans-SPEC software is not part of this upgrade and is available as an extra cost option.

Note: The feature applies to Micro-Detective only. For classic Detective-EX/DX operation in dual mode, contact the factory with your serial number for advice. Certain hardware limitations may apply. In the first instance please contact our service department through our web site: <http://www.ortec-online.com/Service/index.aspx>



Dual Mode Operation

Silent Mode Running

This small change allows a “mute all audio” choice to be made in one location as an advanced setting.

Frequently Asked Questions FAQ's

Q: Why should I purchase this upgrade?

A: The ORTEC Detective family of instruments has been in evolutionary development since the introduction of the first instrument in January 2004, more than 6 years ago. There are many hundreds of units across the world daily engaged in the vital work of protecting against nuclear terrorism and helping in other nuclear related activities such as lost source recovery.

Over that period, ORTEC has actively engaged in numerous test programs and has tried to remain in close contact with users and their experiences with these instruments.

DETEX1.13UG

Detective-EX/DX and Micro-Detective Version 1.13 Firmware and Software Upgrade

In general the instruments have proven reliable in use, the vast majority of all instruments shipped since 2004 remaining in daily operation. We try to protect your initial investment by making available to existing users the latest improvements and developments which we make based upon that wide experience.

By adding this latest upgrade, your Micro-Detective or Detective EX/DX instrument will benefit from these improvements at moderate cost.

Q: I have one of the "old style" Detective instruments with the monochrome display and push buttons. Can I benefit from this upgrade?

A: Yes, most certainly and we would recommend it. It will also require that the hardware be upgraded. In the first instance please contact our service department through our web site: <http://www.ortec-online.com/Service/index.aspx>

Ordering Information

Model	Description
DETEX1.13UG	Version 1.13 firmware and software upgrade for Detective-EX/DX and Micro-Detective.

DETEX1.13UG

Detective-EX/DX and Micro-Detective
Version 1.13 Firmware and Software Upgrade

Specifications subject to change
051210

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