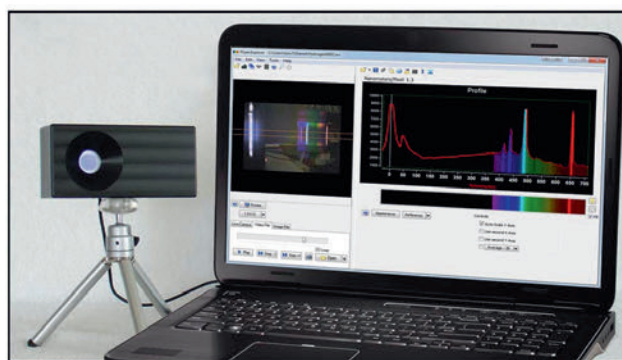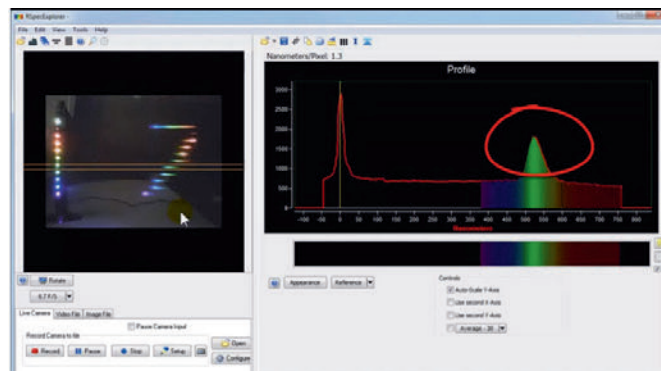**NADA SCIENTIFIC**

RSpec EXPLORER DIGITAL SPECTROMETER

N601-RSPECEX

Consists of three components:

Camera
Single-board, auto-focus, USB camera with 640x480 resolution, interpolated to 1.3 megapixels. Focal length is 2.3 mm. Focus distance is from about 5" (130 mm) to infinity. The field of view is 68°. Frame rate is 30 fps. Cable length is 4'.

Spectrometer
The spectroscope is a slit-less objective grating device with a dispersion of 1.30 Nanometers/pixel. Spectral range is from approximately 380 nm to 700 nm, with maximum sensitivity mid-range. The spectroscope and camera are integrated into a sealed 3 x 1.5 x 1" plastic enclosure. There are no mechanical adjustments or tuning necessary or available for this device. Also included in the package is an aluminum tripod with a standard male camera thread, 4" legs (extendable to 6") with a universal swivel head. An external, adjustable slit is also provided for use on extended objects.

Software
The software is a standard Windows program requiring no additional auxiliary software (eg .NET, SQL Server, etc.). It conforms to Microsoft Windows security standards meaning that after installation by an administrative use (e.g. teacher or network administrator), it can be run by a user (e.g. student) without administrative privileges. It runs on Windows XP or later, 32-bit or 64-bit. The software comes pre-calibrated for the spectroscope's dispersion, but allows the user to customize the calibration using a polynomial fit. The software system's default mode is for the camera to be run in automatic mode where it handles all configurations. Users have found this mode gives optimal spectroscopic results. However, the user can optionally manually adjust the camera properties like brightness, contrast, gamma. At the time of installation, the software also installs a series of graduated instructional videos lasting a total of 30 minutes. These on-screen videos (accessible by a single click from inside the software) walk a new user through the operation of the software. Any software updates are free for one year from date of purchase. Updates are provided via the web. Along with the hardware, the original shipment contains a URL for download of the software. No media (CD, DVD) is available. Licensing is on a per user or workstation basis. The first copy of the software can be installed by the instructor on as many machines has he or she needs for his or her own use. Additional licenses are required for additional users.

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