RADOS RAD-60 PERSONAL ALARM DOSIMETER

THE ESSENTIAL TOOL FOR PERSONAL RADIATION PROTECTION

The RADOS RAD-60 Personal Alarm Dosimeter is a precise and reliable instrument for ensuring the personal safety of the user. Ideally, the RAD-60 is used in everyday radiation monitoring, in stand-alone conditions. If your needs grow for a more sophisticated system, the versatile RAD-60 can also be integrated into an Access Control System. The RAD-60 can be switched into System Mode, for the purpose of tracking Personnel Dose records and generating compliance reports.

The design includes state-of-the-art technology with built in memory for retrieving dose, even during power-down. It eliminates outside interference from shock and RF. The RAD-60 is easily programmed by the user, has a digital display and operates with a single AAA alkaline battery. See reverse side for technical specifications for the RAD-60.

COULD IT GET ANY EASIER THAN THIS?

SO SIMPLE TO USE…WITH THE PUSH OF A BUTTON, YOU CAN:

- ⇒ TURN THE UNIT ON/OFF
- ⇒ CHANGE THE DIGITAL DISPLAY TO READ DOSE OR DOSE RATE
- ⇒ SELECT FROM SEVERAL DOSE AND DOSE RATE ALARM LEVELS
- ⇒ TURN THE CHIRP FUNCTION ON/OFF
- ⇒ RESET INTEGRATED DOSE
- ⇒ PERFORM A BATTERY TEST

THE LARGE DIGITAL DISPLAY GIVES INSTANT DOSE OR DOSE RATE READINGS AND THE AUDIBLE ALARM IS LOUD – BETTER THAN 85 DBA!

Specially Designed for:

Military
Customs
Nuclear Medicine
Nuclear Facilities
Emergency Response
Industrial Radiography
Most any situation where radiation exposure can occur

Reader and Software available for Dosimeter Configuration-Calibration-or Access Control

LAURUS SYSTEMS

LAURUS Systems Inc – 8779 Autumn Hill Drive – Ellicott City, MD 21043
Tel. 410.465.5558 – Fax 410.465.5257
www.LaurusSystems.com

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SPECIFICATIONS

Radiation detected:	Gamma and X-Ray
Detector type:	Energy compensated Si-Diode
Measurement range:	Dose: 1 uSv – 9.99 Sv or 0.1 mrem - 999 rem Dose Rate: 5 uSv/h – 3 Sv/h or 0.5 mrem/h – 300 rem/h
Calibration:	Better than + or – 5% (Cs-137, 662 keV at 2 mSv/h), Hp(10)
Energy response:	Hp(10), 60 keV – 3 MeV, better than + or – 25%, up to 6 MeV, better than + or – 35%
Dose rate linearity:	Better than + or – 15% up to 3 Sv/h (300 rem/h)
Audible alarms:	Seven separate alarms, sound level typically better than 85 dBA at 30 cm * integrated dose * dose rate * dose overflow * dose rate overflow at 3 Sv/h or 300 rem/h * low battery 1 and 2 * defect
Alarm thresholds:	Six preset values each for integrated dose and dose rate-push button selection
Power supply:	One triple A alkaline cell, typical life is 1800 hours in background (dose mode)
Reader :	Infrared communication via bottom of the dosimeter
Button functions:	Front panel push button has the following selectable functions: * change display priority (dose/dose rate) * switch ON/OFF * chirp ON/OFF * reset integrated dose * change alarm thresholds * activate battery test
Temperature range:	-20 – + 50ºC operational, humidity up to 90% RH, non-condensed -20 – + 70ºC storing
Dimensions:	78 x 67 x 22 mm
Weight:	80 g –including battery

RAD-60 Accessories

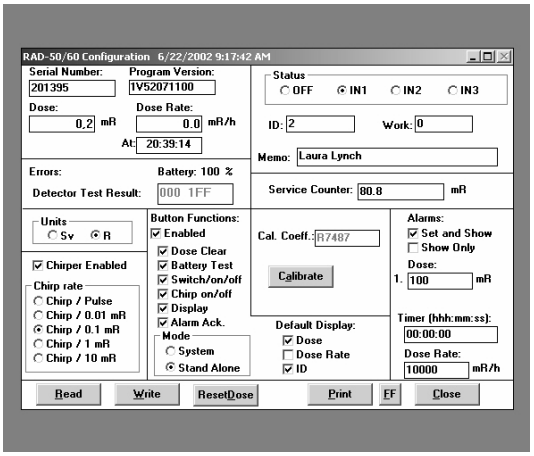
ADR-1 CONFIGURATION KIT

With the ADR-1 Configuration Kit, a user can:

- ⇒ **Change Dosimeter Settings**
- ⇒ **Perform Calibration (with applicable source)**
- ⇒ **Assign a User ID and Name**

Configuration Window

The configuration window is presented in the figure. The window displays the configuration information of the dosimeter. You can change the configuration to meet the users requirements by choosing the options you want to include in the dosimeter.



- ⇒ **Includes an ADR-1 Reader and Configuration Software and Manual**
- ⇒ **Connects to any PC with a serial port using Windows 95™ or greater**

D-STRING DOSIMETER HOLDER

- **DESIGNED EXCLUSIVELY FOR USE WITH THE RADOS BRAND 5*x* & 6*x* SERIES ELECTRONIC DOSIMETERS & MGP SOR and DMC-2000 Models**
- **REALIZE SUBSTANTIAL SAVINGS ON CLIP REPLACEMENT AND DOSIMETER REPAIRS**
- **EXPERIENCE LESS DOSIMETER "DOWN-TIME" FOR YOUR IN-HOUSE INVENTORY**
- **UNIQUE DESIGN ALLOWS FOR SECURE USE ON A LANYARD, BELT OR OTHER DEVICE**

Provides safety and security for your investment-the D-String provides an extra layer of protection when dropped, protecting both the case and display

RAD-60 TRAINING GUIDE ON CD-ROM

New and easy to use training guide for the proper use and care of the RAD-60 Personal Alarming Dosimeter. Illustrates procedures for wearing, programming and maintenance of the dosimeter. An inexpensive method of training personnel.

ACS Express

ACS Express is a state-of-the-art Windows-based Access Control System providing logging and personnel control for restricted area entries and exits. Designed exclusively for use by Emergency Responders. Load the software on a laptop, hook up an ADR-1 Reader and your ready to implement the system in minutes. Provides dose records and ingress/egress controls to track personnel in radiation areas.

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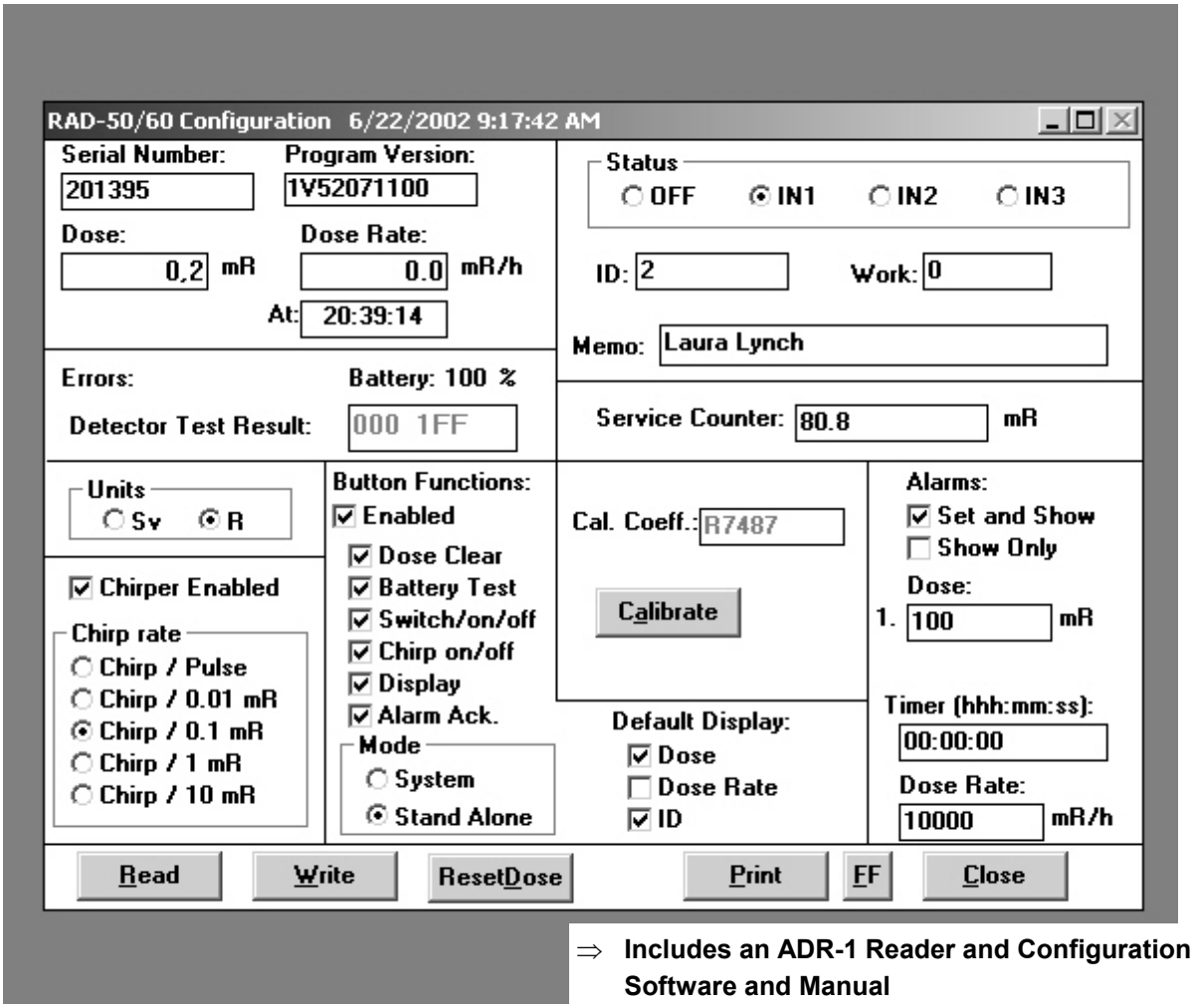

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ACS *Express*

Software Description

ACS Express System

ACS Express is a state-of-the-art Windows-based Access Control System (ACS) providing logging and personnel control for restricted area entries and exits. The MJW ACS Express system is built on MJW's field-proven, enterprise-class Access Control System. ACS Express has been designed to be easy to use and administer, yet fully functional and robust in order to provide the highest possible level of control and data integrity.

ACS Software Overview

The MJW ACS Express system provides for log-in/log-out of personnel using an identification bar-code. RWP capabilities, personnel records, and other various administrative modules are provided to facilitate this function, as described below.

The ACS Express system is designed top down to be fully functional, comprehensive, flexible and robust. The program is written in C++ utilizing object-oriented programming technology. ACS Express is a multi-threaded application that is immediately responsive to user and hardware events. The software design and implementation provides the ability for it to be adjusted to varying hardware configurations and site-specific requirements/specifications without the need for changes to the program code.

Each workstation is easily customized. Software utilities are provided that enable the administrator to select key settings based on the policies of the customer and the hardware in use at the workstation. Data entry at the login workstation can be via numeric keypad, bar code scanner, or magnetic strip reader.

Functionality

Underlying Database

ACS Express stores/retrieves all data using relational database tables. ACS Express is provided with a Microsoft SQL Server™ database that runs within the Microsoft Data Engine (MSDE™). ACS Express is designed for single workstation use, and can be upgraded to the networked enterprise version, ACS Enterprise. Interfacing to the database is performed utilizing Open Database Connectivity (ODBC) drivers. Transaction processing protects all interactions with the database, ensuring the integrity of the data in the database.

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Log-in/Log-out

ACS provides the means to record workers entry into and exit from radiological or other controlled areas (CA). Workers are required to identify themselves, verify their identity and then select the RWP and Task specific to the entry. When logging out, the workers must again identify themselves.

Log-in:

- Verifies the person is in the database
- Verifies the person is qualified to enter a CA
- Verifies the person is permitted and qualified to perform the work
- Logs the entry event, if successful
- Logs appropriate error messages if the person cancels or is rejected for any reason.

Log-out:

- After the person is identified, the system automatically determines that the person is logging out
- Verifies the personel ID number
- Records the logout event

Administrative Modules

Dosimetry Inventory

Provides for maintenance of the inventory of dosimeters currently being utilized by ACS

Personnel

Provides for maintenance and retrieval of personnel information including name, employee ID#, and miscellaneous training and qualification information.

RWPs

Provides for the creation and maintenance of RWPs and related information including assignment of Tasks and designation of personnel authorized to login on each task.

Tasks

Provides for the creation and maintenance of Tasks and related information including training and qualification requirements.

Monitor Error Logs and System Tables

Provides notification and administrative control of system errors throughout ACS Reporting.

Reporting

Because of the design of the underlying database for the ACS, creation of queries and generation of reports is very easy and flexible. The ACS will be provided with the following set of standardized reports:

- ACS Entries by RWP/Task
- ACS Entries by Task/RWP
- Radiation Exposure
- Login/Logout History
- Login Status
- RWP Dose by Task
- RWP Dose by Group
- RWP Dose by Individual
- Group Dose by RWP
- RWP Dose Summary
- Respiration Protection Qualification Status
- Medical Qualification Status
- Training Qualification Status

ACS Hardware Requirements

The ACS is a 32-bit application and thus requires a modern PC workstation and Windows NT 4.0 or later operating system.

ACS Express Login/Logout Workstation

The ACS Express login/logout workstation should have the following minimum configuration:

- Pentium III or newer processor – 500MHz or better recommended
- 128 MB (or more) of RAM
- Microsoft Windows NT 4.0 or 2000 operating system
- Network connection and support properly configured and enabled
- 32-bit ODBC drivers to support the database being used
- Monitor (touch screen optional)
- Uninterruptable power supply (UPS)
- Barcode scanner
- Magnetic strip reader (optional and customer selected)

ACS Express Software and Services Deliverables

MJW provides the following software and services deliverables:

- The ACS Express Software, Version 1.2
- Installation Manual for the software that provides step-by-step instruction for installing and configuring the software.
- User Manual that provides step-by-step instructions for operation of all features of the ACS Express Software

NOTE: On-site installation and training services may be purchased separately

Warranty

The warranty for MJW software products is stated in the Non-Exclusive Software License Agreement.