MRidium 3860+
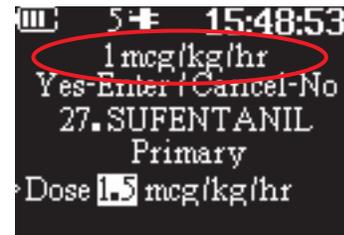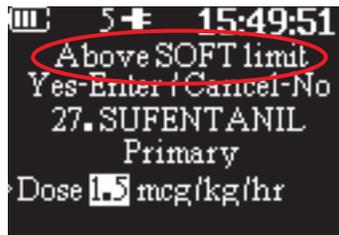## 1145 DERS Drug Library Features

IRADIMED CORPORATION

IRadimed announces the release of its expanded drug library feature which allows user programmable drug names of up to twenty characters long including both hard and soft safety limits for various parameters of the Dose Rate Calculator function. Known commonly as a Dose Error Reduction System (DERS) Drug Library, the model 1145 DERS Drug Library feature is a specially formatted 'SD' type memory card, which when inserted into the memory slot on the rear panel of the 3860+, activates the DERS capability and contains the user programmed drug library and limits.

The drug library is programmed via the service mode. Entry of drug names, initial dose value, dose units, drug concentration/units, patient weight limits, and dose time (for timeless dose units) are supported and can be entered by authorized personnel of the user facility. Users may also program hard and soft, upper and lower limits for each of the above dosing parameters.

Shown is the dose rate calculator (DRC) display of the 3860+ with selection from the Drug Library card of a user programmed drug (SUFENTANIL). As users adjust various parameters during DRC programming, values are checked against the pre-programmed limits associated with the chosen drug. Shown here is an example of the user setting the DOSE to 1.5 mcg/kg/hr. However the 'soft' limit is 1 mcg/kg/hr, this will cause a message to toggle as shown, left to right, indicating the user has chosen a DOSE **'Above SOFT limit'** and then indicating the actual soft limit value.
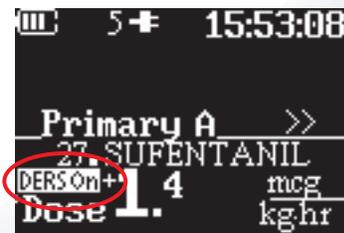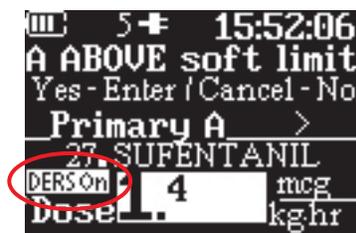

SOFT limits can be over-ridden by the user. To accept the users setting shown as **Above** or **Below** the soft limit, press the ENTER key as prompted. If the user does not wish to over-ride the soft limit, press CANCEL or simply clear the value and enter another. An indication of the most recent **SOFT** limit over-ride is indicated on the running displays once the IV drug delivery is started. See the below **DERS On +** and **DERS On -** indications.

HARD limits may also have been programmed onto the Drug Library card for each drug. Should the user enter a value exceeding a **HARD** limit, a similar message will indicate when a setting is attempted which exceeds an upper or lower **HARD** limit and the value of the hard limit, *however HARD limits cannot be over-ridden.*

Shown is the running display once a drug delivery has been started. The **DERS Off/DERS On** message located just above "DOSE", indicates whether or not, the DERS Drug Library is being used for the current drug delivery. When no DERS Library card is active, **DERS Off** indicates that the current drug has been selected from the internal factory programmed set and have no HARD or SOFT limits. **DERS On** indicates that the current drug has been selected from the user programmed DERS Drug Library card.

Above left shows the DOSE being titrated above a programmed SOFT limit, with the message prompting the user to either press ENTER, if desiring an over-ride of the SOFT limit, or CANCEL to not accept an over-ride. The display on the right shows the **DERS On +** indicating the acceptance of the upper SOFT limit over-ride. When a lower SOFT limit over-ride is accepted the message indicates **DERS On -**.

Each SOFT limit over-ride accepted is recorded into the History log. The on screen indicator only shows the most recent titration. Should the most recent setting value be within both the upper and lower SOFT limits, neither a **+** or **–** will be displayed.

MRidium 3860+
Software Version Feature Summary
2.2.919 vs 3.0.xxx

A new version of operating software for the 3860+ is now available (3.0 or higher) which facilitates the use of the P/N 1145 DERS Library Card and DERS (Dose Error Reduction System) system of customer programmed drug names, doses, units, and limits. Operation of the 3860+ without the 1145 DERS Library Card feature installed is not fundamentally changed in any way. However the basic 'running' displays will appear slightly different. The two graphics below show the differences.

An example revision 2.2.919 and earlier 'running' display is shown on the left with the associated version 3.0 or higher, shown on the right.

VERSION 2.2.919   VERSION 3.0

Version 3.0 (or higher) adds the display of three more items to the running displays and reverses the highlighting of DOSE vs RATE. The new items shown are the actual *drug name*, from the internal drug list or the user generated Library held on the DERS Library Card, the "**DERS On/DERS Off** " indication, and running **Time**.

Drug Name – Simply is the name of the drug as also seen on the DRC display. The drug names would be either the internal default drug library, or the name(s) as user programmed onto an 1145 DERS Library Card.

DERS On/DERS Off – This indicates the source of the currently displayed named drug. "DERS Off" means the drug source is the internal default drug library. "DERS On" indicates the named drug was retrieved from the user established list of drugs stored on the 1145 DERS Library Card.

Time – indicates the actual time remaining for the current dose delivery.

Version 3.0 (or higher) and above function in all other respects as the prior 3860+ software revisions, with exception of minor updates to software functions similar to changes between previous 2.2.919 revisions.

The DERS features are only active when the 1145 DERS Library Card is installed and programmed with the user facilities drug names and settings. Refer to the DERS features instructions for more complete explanation.

1145 MRidium DERS Drug Library Software Kit
Dose Error Reduction Software for MRidium 3860+ MRI Infusion Pump System Includes:

Software Card for updating Internal 3860+ to new DERS Safety Software. 1- each
SD Library Card for building and storing hospital data set on that individual 3860 pump. 1-each
Locking Mechanism for keeping SD Card from being removed from 3860 pump. 1-each
Hangtag update Card reviewing new Drug Library features. 1-each
Instruction manual. 1-each

Order Information: MRidium 1145 DERS Safety Software Kit.

IRADIMED CORPORATION

RoHS COMPLIANT   CE   0843