Redline Instruments

Monitor OPeration Manual

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Rev. 2.2 (RL_PWR31)
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1. Normal Operation

Pressing the RESET button on the faceplate when in any other mode, the system will return
to the NOrmal Operating Mode. If the system is left in any other mode, the system wiil
return to the Normal mode 2 minutes after a button was pressed.

In Normal Operating Mode, all relays are active. The green LEDs will scan across the
channels that are turned on. To stop the scan and watch a channel, press the HOLD button
on the faceplate to select a channel to examine. The selected channel will be displayed
for one minute or until the RESET button is pressed.

If a channel is OFF, the scan will skip the channel, but if the HOLD button is pressed to
advance to an OFF channel, the system will display "OFF" when you try to examine the
channel. If all 8 channels are off, the system will scan and display "OFF".

If alarms B or D or activated by a high level, pressing RESET will cause the B and D relays
to be released (sometimes referred to as High Alarm Disable). When B and D are activated
by a high gas level and the alarms have been disabled, pressing RESET again will enable the
alarms.

2. Set ALarm Set Points

To enter this mode, the system must be in Normal Mode. Press the Mode button at the top
and back of the display circuit board. The green LED will indicate which channel is
selected and the first digit in the display will indicate which alarm is selected (A, b, C,
d). To change the channel, press the HOLD button; to change the alarm, press the Test
button at the bottom and rear of the Display circuit board. To change the set point, use
the UP (2nd from the top)and DN (3rd from the top) buttons.

3. Turn Channels ON/OFF
To enter this mode, press the Mode button when in 'Set Alarm' mode. HOLD selects the
channel, UP will turn the channel on; DN will turn the channel off. For 4-20mA inputs, a
third selection is possible (4-20). Press UP until the display shows "4-20". The monitor
will ignore radio communications for this channel and use the 4-20mA input.

4. Assign Radio (Head) to Channel

To enter this mode, press the Mode button when in 'TurnChannels ON/' mode. HOLD selects
the channel. Use UP and down to change the Head (radio#) assigned to the channel. The
letter 'r' in the first digit indicates this mode. The range is 0-255. When going up, the
number will go from 255 back around to 0 and when going down, the number will go from 0
back around to 255 (the Head units cannot be set to ZERO, so do not use it).

Pressing MODE in this mode returns the system to Normal Operating mode. Also, by pressing
the RESET button at any time, the system will return to Normal Operating mode.

To get into the second set of modes, press the TEST button while in Normal mode.

5. Relay / Wiring Test

The first digit in the display (as well as the green LEDs 1-4) will show which relay is
being affected. The display shows if the relay is on("on" & Red LED) or off("OFF" & Yellow
LED). The UP button turns the relay on; the DN button turns the relay off. If you set a
relay on (or off), pressing the TEST button will set the next relay on (or off), or each
relay can be set on or off individually. This mode can be used to verify the wiring of the
alarms or autodialers or dry contacts, AC contacts or DC contacts. There is a fuse
associated with each relay. This fuse is also a jumper to configure the relay to be DRY,
AC or DC. For DC alarms, the return must be brought back to the DC return terminals. For
AC alarms, the return MUST be brought back to the AC Return (AC neutral) terminals. When
using the Dry contact configuration, the relay is isolated from the on-board power
supplies.

6. Check the Radio Power Level

Pressing the MODE button while in Relay Test will display the radio signal level. The Head
unit must have had the signal strength test performed previously or this value will not be
valid. Use the HOLD button to scan the channels. UP and DN buttons have no function. The
first digit in the display will be "L".

7. Check Time since last Radio Message

Pressing the MODE button while in Check Radio Level will display the time, in seconds,
since the last good radio message. Use the HOLD button to scan the channels. UP and DN
buttons have no function. The first digit in the display will look almost like a "t"

8. Check Gas Type

Pressing the MODE button while in Check Time will display the type of gas (only H2S so far,
but CO coming soon). Use the HOLD button to scan the channels. UP and DN buttons have no
function. If there are "_" in the display, the Monitor has not received a message from a
Head unit.

9. Check Mode of Head Unit

Pressing the MODE button while in Check Gas Type will display the mode of the Head unit.
Use the HOLD button to scan the channels. UP and DN buttons have no function. The first
digit will show "-". Refer to the Redline operation manual (also coming soon) for a
description of the modes.

10. Check Battery Voltage in Head Unit

Pressing the MODE button while in Check Mode will display the mode of the Head unit. Use

the HOLD button to scan the channels. UP and DN buttons have no function. The first digit will show "b". The display will show the battery voltage in the Head unit.

11.   Select Destination Address for Remote Shutin. If the Monitor Destination Address ("DE??") is set to 60, the Monitor will not send a message to the Remote Shutin unit. The Remote Address must be between 50 and 59. This address must be set to the same value on the Remote Shutin's address setting.

12.   Select Source Address for Remote Shutin. The Remote Shutin may receive a shutin message from four different monitors. Each monitor must have a different Source Address. The source address choices are 41-48. The Shutin Unit must have a Source Address set to this source address.

13. See Time (HR:MIN)

Pressing the MODE button while in Set Source Address display the HR:MIN from the system clock. This is not usefull except to show that the system memory is intact.

14. See Time (MN:SEC)

Pressing the MODE button while in See Time will display the MIN:SEC from the system clock.

Pressing the MODE button returns to the Normal OPerating MODE. Also, by pressing the RESET button at any time, the system will return to Normal Operating mode.

15.   Test Remote Shutin Relays. This display looks like the Local Relay Test (#5 above), but the relays of the Remote Shutin unit will be enegized (Destination and Source Addresses must agree) instead of the local relays. When Alarm A is activated, it appear on the Remote Shutin unit on channel A. When Alarm B is on, it will appear on Channel 2. Alarm C will appear on channel 3 and Alarm D will appear on channel 4.