

# PANTHER™ AND SIGMA ALARM SOUND LEVEL ADJUSTMENT FIXTURE KIT

P/N 997024

## Operation Instructions

### I. INTRODUCTION


This document provides instructions for the operation of the adjustment fixture to test and adjust the Panther and SIGMA SCBA alarm sound level. **You must be a SURVIVAIR-certified technician, read and understand these instructions, and be properly trained before using this fixture or adjusting alarms.**

#### NOTE

All SURVIVAIR-certified technicians are required to remain current on new procedures and parts through SURVIVAIR's published Technical Bulletins, technical manual revisions, and certification seminars.

### II. SAFETY PRECAUTIONS

The Warnings, Cautions, and Notes contained in this manual have the following significance:

 <b>WARNING</b>
Maintenance or operating procedures and techniques that may result in serious personal injury, serious illness, or death if not carefully followed.
<b>CAUTION</b>
Maintenance or operating procedures and techniques that may result in damage to equipment and/or minor to moderate personal injury if not carefully followed.

#### NOTE

Maintenance or operating procedures and techniques or information considered important enough to emphasize.

### III. DESCRIPTION

By use of the Alarm Sound Level Adjustment Fixture, SURVIVAIR-certified technicians can test the Panther and SIGMA alarm loudness and adjust it as required. The fixture consists of a sound level meter that measures sound levels from 50 to 126 ±2 dBA and a bracket with an attachment position designed to mount the alarm the proper distance from the meter.

### IV. PARTS LIST

Qty.	Part No.	Description
1	961616	Battery, Alkaline, 9 Volt, NEDA 1604A
1	997001	Bracket
1	997017	Sound Level Meter
1	997023	Operation Instructions

### V. USE INSTRUCTIONS

#### A. Alarm Sound Level Adjustment

#### NOTE

- For alarm activation adjustment, refer to the Panther and SIGMA Service Manual, latest edition.
- See the Panther and SIGMA Service Manual, latest edition, for additional instructions.
- Prior to testing, refer to Sound Level Measurement, paragraph B.

1. To test the battery, set the RANGE selector to BATT. If the meter shows a reading in the red BATT TEST region, the battery is still good.
2. Remove the noted hold-down screw and attach the first stage regulator to the Sound Level Measurement Fixture, P/N 997020, as shown in the figure below.

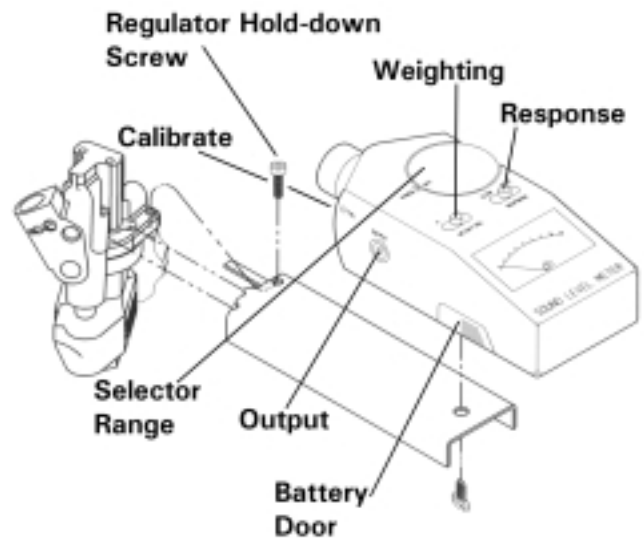


Figure 1. Sound Level Adjustment Fixture

3. Open the cylinder valve to pressurize the alarm to 1000 psig for L.P. SCBAs and 2000 psig for H.P. SCBAs. (Alarm can be pressurized to full cylinder pressure.)

#### NOTE

If the alarm does not stop sounding before reaching 2000 psig, consult the Troubleshooting Guide in the Panther and SIGMA Service Manual, latest edition.

4. Close the cylinder valve.
5. Slightly open and close the bypass valve of the second stage regulator to decrease the pressure. The alarm should begin sounding at 600 psig for L.P. (2216 psig) SCBAs, 800 psig for 3000 psig

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SCBAs, and 1175 psig for H.P. (4500 psig) SCBAs.

6. For L.P. (2216 psig) SCBAs, decrease the pressure to 600 psig. Allow the alarm to sound continuously for 15 seconds, then measure the decibel (dB) level. The sound level should be at least 101 dB on the meter scale. Repeat steps, 3, 4, and 5 until the proper adjustment is achieved.

7. For H.P. (4500 psig) SCBAs, decrease the pressure to 1175 psig. Allow the alarm to sound continuously for 15 seconds, then measure the decibel (dB) level. The sound level should be at least 101 dB on the meter scale. Repeat steps, 3, 4, and 5 until the proper adjustment is achieved.

8. For 3000 psig SCBAs, decrease the pressure to 800 psig. Allow the alarm to sound continuously for 15 seconds, then measure the decibel (dB) level. The sound level should be at least 101 dB on the meter scale. Repeat steps, 3, 4, and 5 until the proper adjustment is achieved.

### B. Sound Level Measurement

1. Refer to the Owner's Manual supplied with each kit.

2. Measure the dB level by setting the RANGE selector to 110 and the RESPONSE switch to the SLOW position. Set the WEIGHTING switch position to A. Measurements will give you average value sound levels within a frequency range of 500 to 10,000 Hz if using the settings specified above.

3. During sound level measurement, the indicator needle shows the actual sound level as a displacement from the center point, within the range setting.

For example, if the RANGE selector is set to 90 and the meter scale reads -3, then the actual sound level is  $90 - 3 = 87$  dB. If the meter scale reads 0 (the same as the RANGE setting), then the actual sound level is 90 dB. Should the indicator needle move off scale on the "+" side, move the RANGE selector to the next higher range to read the sound level. Similarly, if the indicator needle moves to the "-" side of the scale, move the RANGE selector to the next lower range.

4. With the meter set at 120 dB, work downward until there is a significant deflection of the indicator needle.

5. If the sound level from the alarm does not measure at least 84 dB, refer to the latest edition of the Panther and SIGMA Service Manual for alarm and whistle shim adjustment.

### C. Maintenance

1. Open the battery compartment cover by pressing both sides at the lower striped position and lifting the bottom. Insert a 9-volt alkaline battery into the compartment as indicated by the polarity markings (+ and -) inside the compartment. To test the battery, see paragraph A.1.

2. Leave the RANGE selector in the OFF position when the meter is not in use. Remove the battery if you are not going to use the dB meter for a week or more.

3. Handle the meter carefully. The microphone and meter movement are fragile. Do not drop the meter and do not over "peg" the indicator needle.

## VI. ADDITIONAL INFORMATION

If you need additional information on any SURVIVAIR product, consult your local distributor or contact:

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## VII. WARRANTY AND LIMITATION OF LIABILITY

**LIMITED WARRANTY:** SURVIVAIR® warrants this product to be free from defects in materials and workmanship for 1 year from the date of purchase. During this period, SURVIVAIR will repair or replace defective parts, at SURVIVAIR's option. Freight charges to and from the SURVIVAIR factory shall be paid by the purchaser.

**EXCLUSIONS:** NOTWITHSTANDING ANY CONTRARY TERM IN THE PURCHASER'S PURCHASE ORDER OR OTHERWISE, THE ONLY WARRANTY EXTENDED BY SURVIVAIR IS THE EXPRESSED LIMITED WARRANTY DEFINED ABOVE. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.

**CONDITIONS:** To maintain this warranty this product must be used, maintained, and inspected as prescribed in the owner's instruction manual, including prompt replacement or repair of defective parts and such other necessary maintenance and repair as may be required. Normal wear and tear, and parts damaged by abuse, misuse, negligence, or accidents are specifically excluded from this warranty.

**LIMITATION OF LIABILITY:** No other oral warranties, representations, or guarantees of any kind have been made by SURVIVAIR, its distributors, or the agents of either of them, that in any way alter the terms of this warranty. EXCEPT AS HEREIN PROVIDED, SURVIVAIR SHALL HAVE NO LIABILITY FOR ANY LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL, TO ANY PURCHASER OR USER OF THIS PRODUCT ARISING FROM THE SALE, USE, OR OPERATION OF THIS PRODUCT.



### WARNING

The failure to use and maintain this equipment in strict conformance with the applicable instruction manual may result in serious personal injury, serious illness, or death. The equipment's use in any manner that is not expressly authorized pursuant to the applicable instruction manual may result in severe adverse impacts to human health.