

### COMPANY OPERATING PROCEDURES

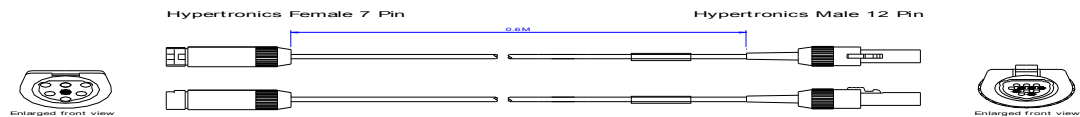
0019252 SPACELABS P925E2

VM3/COP/33.01

Date: 11-Dec-01













Revision date: 7-Apr-11

Issue: 3



Equipment required: Soldering iron (0060120), solder (0050012), Wire stripper (0060030), Flush Cutter (0060010), Snipe nose pliers (0060021), 'helping hand' (0060145), Heat gun (0060100).

Parts list: Kit and parts required.

| Hypertronics Female<br>7-pin Side |   |                   | Hypertronics male<br>12-pin Side |   |          |
|-----------------------------------|---|-------------------|----------------------------------|---|----------|
| Qty                               | Description   | Part No.          | Qty                              | Description   | Part No. |
| 1                                 | Hypertronics Female<br>7-pin Kit  | 0010606           | 1                                | Hypertronics male<br>12-pin Kit   | 0010602  |
| (1)                               |  Pin Housing   | kit               | (1)                              |  Pin Housing   | kit      |
| (9)                               |  Pins          | kit               | (12)                             |  Pins          | kit      |
| (1)                               |  Cable grip    | kit               | (1)                              |  Cable grip    | kit      |
| (1)                               |  Strain relief | kit               | (1)                              |  Strain relief | kit      |
| (1)                               |  Colett        | kit               | (1)                              |  Colett        | kit      |
| (1)                               |  Barrell       | kit               | (1)                              |  Barrell       | kit      |
| 1                                 | 0.7m of standard 6-core<br>cable  | 0030513<br>(roll) | 1                                | 47.5 kΩ Resistor  | 0032110  |
| 1                                 | Ø1.6 x 17mm heat shrink   | 0032310           | 1                                | Ø6 x 43mm Clear heat shrink   | 0032331  |

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|   |                       |                   |   |                       |                   |
|---|-----------------------|-------------------|---|-----------------------|-------------------|
|   |                       | (roll)            |   |                       | (roll)            |
| 1 | Ø6 x 10mm heat shrink | 0032321<br>(roll) | 1 | Ø6 x 10mm heat shrink | 0032321<br>(roll) |
|   |                       |                   |   |                       |                   |

### ASSEMBLY OPERATIONS

1. Pre Heat soldering iron temperature to 240°C.
2. Collect all required parts and equipment listed above.
3. Cut a 0.7 metre length of standard 6-core cable. (Details shown below).

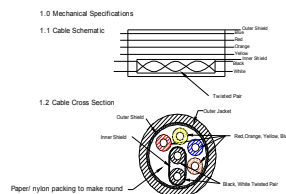


Fig 1.

Hypertronics female 7 pin side:

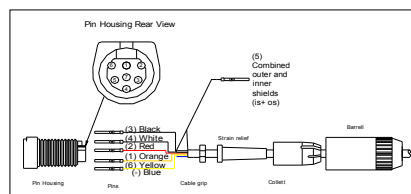


Fig 2.1

1. Feed barrel, collett, strain relief, cable grip and Ø6 x 10mm heat shrink onto the cable.
2. Strip 20mm off outer jacket of wire to reveal 4 coloured wires, outer shield, and nylon/paper wire packing.
3. Cut all packing, and blue wire to the base.

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4. Strip 20mm off inner jacket of wire to reveal black and white wires and the inner shield.
5. Twist outer and inner shields together.
6. Trim ends of wires and shields to the same length.
7. Strip jacket of every wire 2mm to reveal copper core.
8. Apply small amount of solder to ends of each wire and shields, then solder each of the 5 wires to the rear separate pins.
9. Place Ø1.6 x 17mm heat shrink over twisted inner and outer shields to cover naked wire, and solder to the rear of a pin.
10. Clamp cable grip approximately 2mm from end of outer jacket.
11. Place Ø6 x 10mm heat shrink over cable grip and beginning of wires and heat to shrink firmly over.
12. Insert pins into correct locations (as shown in fig 2.1) and push firmly into place.
13. Push strain relief up to cable grip, collett over strain relief up to the pin housing (locate in keyway), hold the pin housing fixed and screw the barrel to the pin housing.

Hypertronics male 12 pin side:

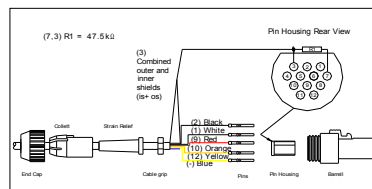


Fig 2.2

1. Feed Ø6 x 43mm (clear) heat shrink, end cap, collett, strain relief, Ø6 x 10mm (black) heat shrink and cable grip onto the cable.
2. Strip 20mm off outer jacket of wire- to reveal 4 coloured wires, outer shield, and nylon/paper wire packing.
3. Cut all packing, and blue wire to the base.
4. Strip 20mm off inner jacket of wire- to reveal black and white wires and the inner shield.
5. Twist outer and inner shields together and trim to approximately 8mm long.
6. Strip jacket of every wire 2mm to reveal copper core.
7. Apply small amount of solder to ends of each wire and shields.
8. Trim one of the legs of the resistor to 4mm and the other to 15mm .

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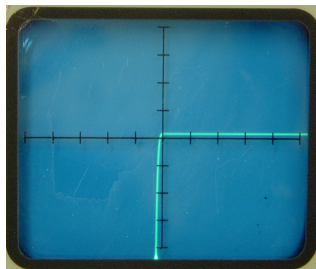
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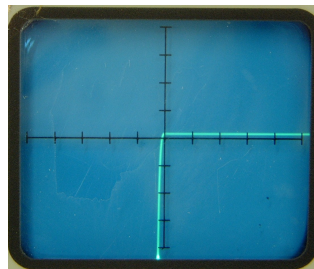
9. Solder each leg of the resistor into the rear of 2 separate pins and push pins firmly into correct locations as shown in fig 2.2.
10. Solder all 5 wires to the rear of 5 pins and push/pull firmly into correct locations shown in fig 2.2.
11. Solder shields to the leg of the resistor on the pin location 3 side.
12. Clamp cable grip approximately 2mm from outer jacket end.
13. Place Ø6 x 10mm heat shrink over cable grip and beginning of wires and heat to shrink firmly around.
14. Push the strain relief up to the cable grip, collett over the strain relief up to the pin housing, and into the barrel and finally screw end cap onto the barrel.

### TESTING

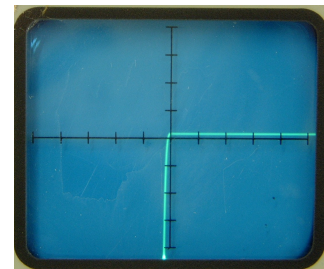
1. Attach male Hypertronics 12-pin side to an 877 Spacelabs adapter cable and then to the test box connector labelled (B).
2. Attach female Hypertronics 7-pin side to a Novametrics finger probe.
3. Check display is showing correct characteristic as shown below. (At correct switch positions)



Pos 2. LED



Pos 3. IR



Pos 4. Detector

4. 'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
5. If there is any movement of signal, the extension wire must be taken apart and all connections checked and re-soldered. Then tested again, until results are satisfactory.
6. Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
7. Connect male 12-pin side to a test cable then to the Novamatrix monitor, and attach probe to the finger. Check SpO<sub>2</sub> level is around 95-100.

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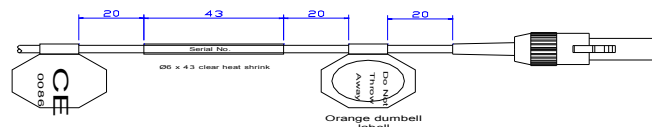
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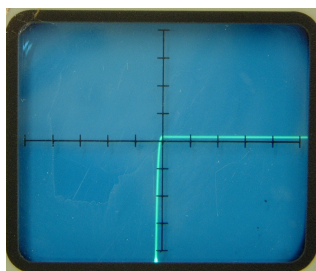
#### Labelling

1. Labels: to be attached facing upwards as looking at the top of the probe.
  - 1 x CE Label
  - 1 x serial no. Label
  - 1x Orange 'Do Not Throw Away' Label (correct one of two is dependant of country unit is being sold to).

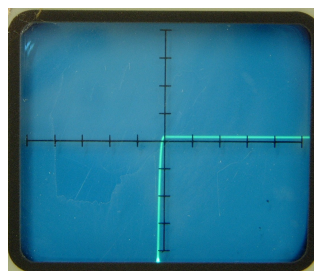


#### Quality Assurance (QA)

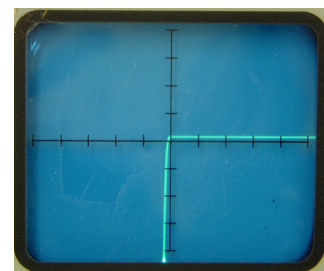
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8. Fill and sign attached paperwork.

#### Packaging

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1. Visually check all labels are attached properly
2. Using a twist tie (bunny clip) wrap the cable and place in a small blue Viamed plastic box, ensuring the cable is inserted in a neat and tidy presentable manor.
3. Place a serial number sticker (supplied with the batch) on the front face of the box.
4. Place a packed and tested sticker (also containing initials of the individual who is packing) on the right hand side top left corner of the box. Do not close box.

#### Final QA

1. Final inspection. Visually ensure cable sit neatly within the box and is in a presentable state.
2. Boxes are ready to stock in stores.