# VIAMED

## COMPANY OPERATING PROCEDURES
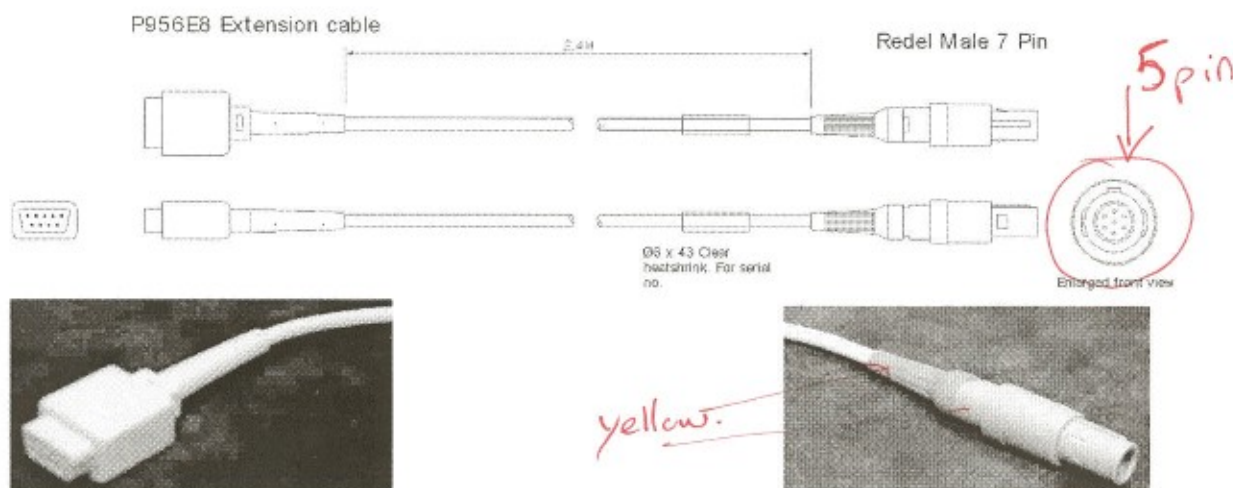
### 0019618    BCI    P961E8

VM3/COP/33.09

| Date: | 17-Dec-01 | **Revision date: 22-Jul-04** | 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. (Continued over page)

| D-Type female 9-pin Side | | | Redel male 7-pin Side | | |
|---|---|---|---|---|---|
| Qty | Description | Part No. | Qty | Description | Part No. |
| 1 | D-type extension cable (Female side) | 0019568 | 1 | Redel male 7-pin kit | 0030795 0030785 Kit |
| | | | (1) | Sleeve | Kit |
| | | | (1) | Collett | Kit |
| | | | (1) | Connector Pin | Kit |
| | | | (1) | Outer Sleeve | Kit |
| | | | (1) | Strain Relief (orange) | 0030794 0030786 |
| | | | 1 | Ø6 x 43mm Clear heat shrink | 0032331 (roll) |
| | | | 1 | Ø6 x 10mm heat shrink | 0032321 (roll) |
| | | | 1 | Ø1.6 x 17mm heat shrink | 0032310 (roll) |

*Dwg from CST*

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*0019998*
*P999E8*

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### ASSEMBLY OPERATIONS

1. Pre Heat soldering iron temperature to 240°c.
2. Collect all required parts and equipment listed above.
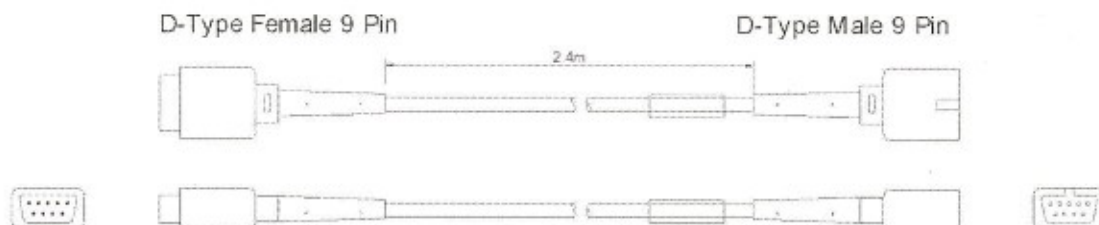
D-type female 9-pin side:



Fig 2.1.  0019568 Extension Cable.

1. The 0019568 cable is already assembled. The female side does not need to be modified, but the male side needs to be cut off ready for the Redel male 7-pin connector to be fitted.
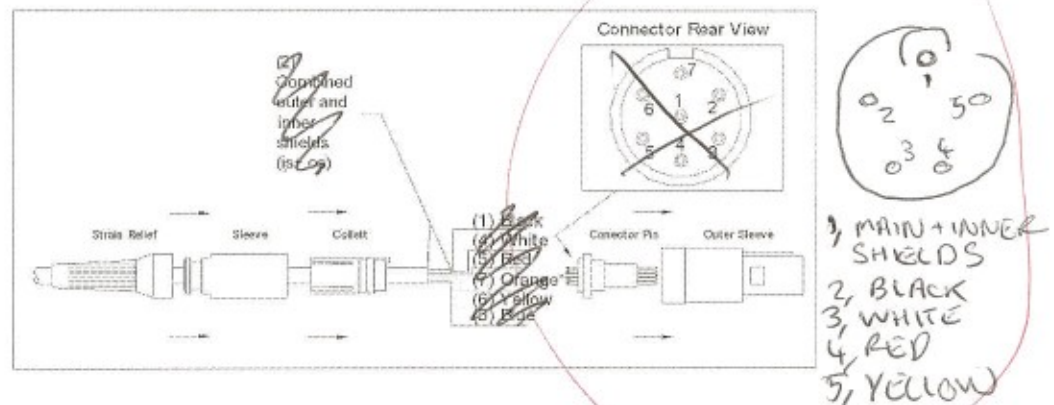
Redel male 7 pin side:



Fig 2.2

*1, MAIN + INNER SHIELDS*
*2, BLACK*
*3, WHITE*
*4, RED*
*5, YELLOW*

1. Feed ∅6 x 43mm (clear) heat shrink, strain relief, sleeve, collett, ∅6 x 10mm (black) heat shrink over end of cable. *no need.*
2. Strip 10mm off outer jacket of wire to reveal coloured wires, outer shield, and nylon/paper wire packing.
3. Cut all packing to the base.
4. Strip 10mm off inner jacket of wire- to reveal black and white wires and the inner shield.
5. Twist outer and inner shields together.
6. Trim (tidy) ends of all wires and shields to the same length.

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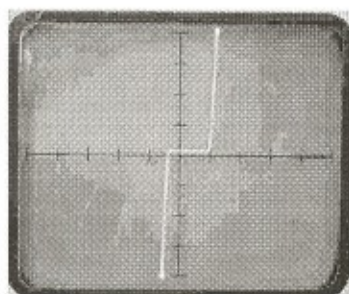### 0019618    BCI    P961E8

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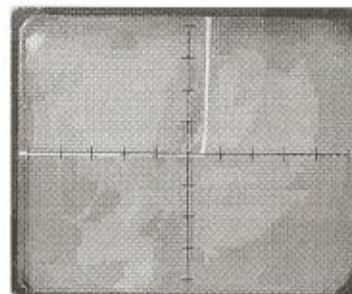| Date: | 17-Dec-01 | **Revision date: 22-Jul-04** | Issue: 3 |
|---|---|---|---|

7.  Strip jacket of every wire 2mm to reveal copper core.
8.  Apply small amount of solder to ends of each wire and shields.
9.  Heat ∅1.6 x 7mm heat shrink over twisted shield pair to insulate.
10. Solder wires and paired shields to the rear of the connector pins as shown in fig 2.2.
11. Push collett up to the connector pin, and screw the sleeve into the outer sleeve.

## TESTING

1.  Attach the Redel side to a test lead and then the test box connector marked 'A'.
2.  Attach D-type side to a BCI finger probe.
3.  Check display is showing correct characteristics as shown below. (At correct switch positions)

NB: Gap to be at bottom of display
Position 2. IR, LED.                        Position 4. Detector

4.  If the gap is at the top of the screen then the LED is wired incorrectly.
5.  'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
6.  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.
7.  Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
8.  Connect Redel 7-Pin side to a BCI 71000A2 portable monitor and attach probe on finger to check SpO$_2$ level. (Ideal reading 95-100.)

## Labelling

5 pin

1.  Labels: to be attached facing upwards as looking at the top of the probe.
    - 1 x CE Label
    - 1 x serial no. Label
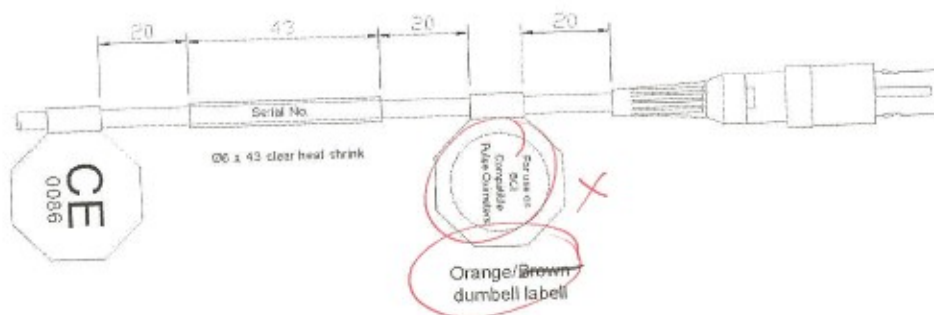    - 1x Orange / Brown BCI Label

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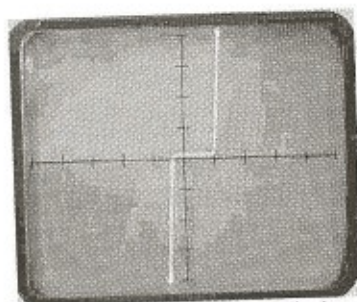Date:     17-Dec-01     **Revision date: 22-Jul-04**     Issue: 3
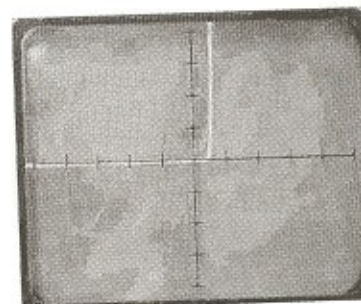


### Quality Assurance (QA)

1.  Attach the Redel side to a test lead and then the test box connector marked 'A'.
2.  Attach D-type side to a BCI finger probe.
3.  Check display is showing correct characteristics as shown below. (At correct switch positions)



NB: Gap to be at bottom of display
Position 2. IR, LED.

Position 4. Detector

4.  If the gap is at the top of the screen then the LED is wired incorrectly.
5.  'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
6.  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.
7.  Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
8.  Connect Redel 7-Pin side to a BCI 71000A2 portable monitor and attach probe on finger to check SpO₂ level. (Ideal reading 95-100.)
9.  Fill and sign attached paperwork.
10. Test 10 % of batch on DL3000 simulator.
11. Log all results on compatibility sheet.

*5pin*

### Packaging

1.  Visually check all labels are attached properly

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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

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### 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.