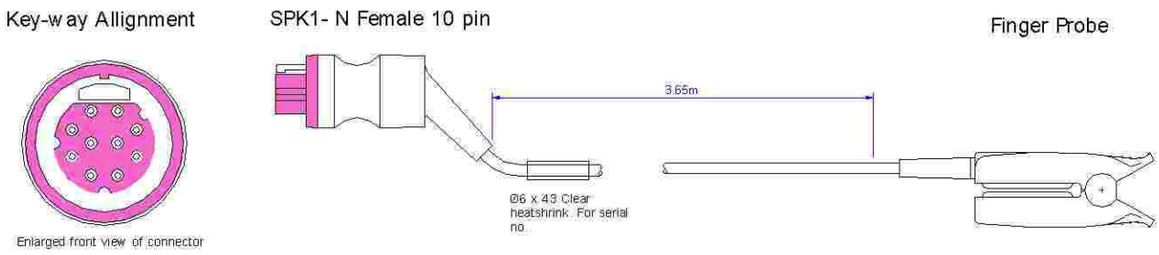
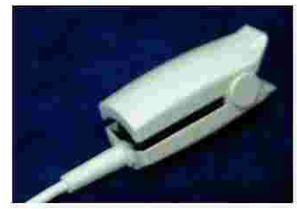
COMPANY OPERATING PROCEDURES

0018960 S&W P896RA

VM3/COP/32.34

Date: 18-Dec-01 **Revision date: 17-May-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)

SPK1-N male 12-pin Side			Finger Probe Side		
Qty	Description	Part No.	Qty	Description	Part No.
1	SPK1-N female 10-pin kit	001070	1	Top Shell (x25)	0010110
(1)	Rubber housing	kit	2	Pad Support (white) (x50)	0010160
(1)	Cable grip	kit	1	Top Pad (black)(x25)	0010132
(1)	Collar	kit	1	Bottom Pad (black)(x25)	0010133
(10)	Pins	kit	1	Bottom Shell (x25)	0010111
(1)	Upper casing	kit	1	Spring (x25)	0010140
(1)	Cable clamp	kit	2	Button (White) (x50)	0010180
(1)	(pink) Pin housing	kit	1	Detector	0030902
(2)	Screws	kit	1	LED/ I.R.	0030955
(1)	Lower casing	kit	1	Strain Relief	0010150
(1)	Pink Coller	kit			

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1	R1 7.5 kΩ Resistor	0032080			
1	∅6 x 43mm Clear heat shrink	0032331			
1	∅1.6 x 20mm heat shrink	0032310			
2	∅6 x 25mm heat shrink	0032321			

ASSEMBLY OPERATIONS

1. Pre Heat soldering iron temperature to 240°c.
2. Collect all required parts and equipment listed above.
3. Cut a 3.75 metre length of standard 6-core cable. (Details shown below).

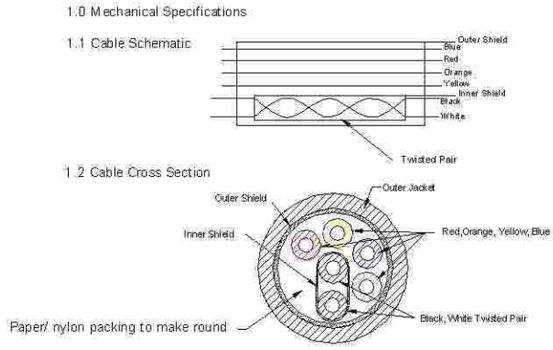


Fig 1.

SPK1-A male 12-pin Side :

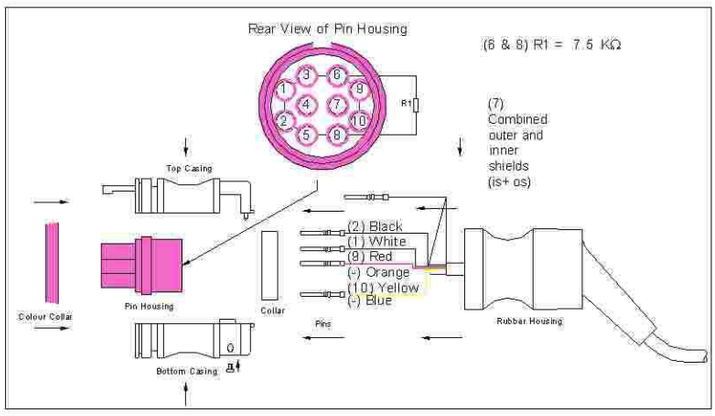


Fig 2.2

1. Feed ∅6 x 43mm (clear) heat shrink, rubber housing, collar, ∅6 x 25mm (black) heat shrink and cable grip over the end of the cable.
2. Strip 25mm off outer jacket of wire to reveal coloured wires, outer shield, and nylon/paper wire packing.

3. Cut all packing and blue wire to the base. Trim resistor legs to 4mm and 15mm.
4. Strip 25mm off inner jacket to reveal black and white wires and the inner shield.
5. Twist inner and outer shields together, and heat ∅6 x 25mm heat shrink over excess naked wire.
6. Trim ends of wires to the same length.
7. Strip jacket of every wire 2mm to reveal copper core, and solder resistor legs, shields and wires to the rear of individual pins.
8. Clamp the cable grip approximately 10mm from the cable outer casing, and heat ∅6 x 25mm heat shrink over the cable grip and up to the end of the wires.
9. Insert all pins into correct locations.
10. Insert pin housing into the bottom casing, and screw cable clamp over cable.
11. Push top casing onto bottom casing, and push the collar over mating cases.
12. Push rubber housing over cases, and then the pink collar over the front of the casing.

Finger Probe side:

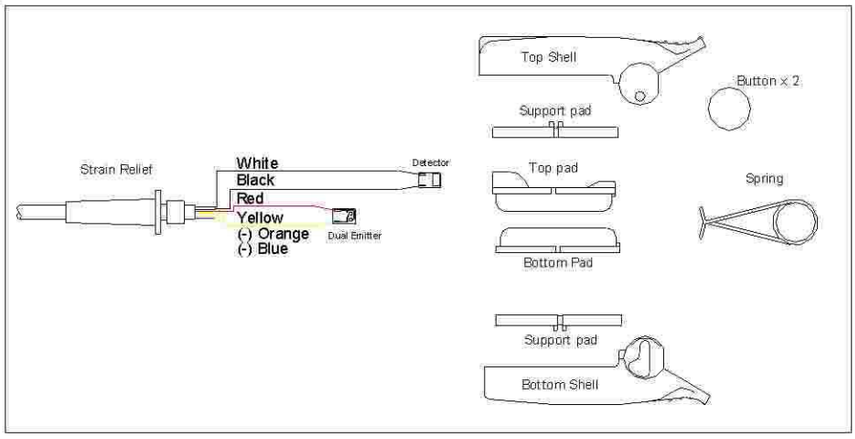


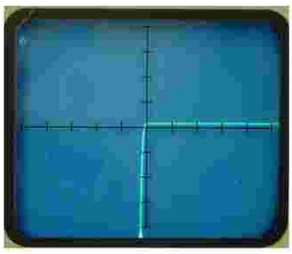
Fig 2.3

1. Apply loctite primer to the cable surface, and slide on the strain relief.
2. Apply a small amount of superglue on to the surface of the cable and push the strain relief over the glue to secure in place leaving approximately 80 mm of cable.
3. Strip outer jacket up to the strain relief and cut packing, outer shield, orange and blue wires.
4. Cut red and yellow wires to 15 mm, strip jackets off 2mm and apply a small amount of solder to the ends.
5. Strip 10 mm off inner jacket and cut off inner shield.
6. Strip jackets 2mm and apply small amount of solder.
7. Solder wires to the detector, LED/I.R as shown in fig 2.3
8. Place the assembly on the drying rack, and apply a small amount of clear silicon to the front of the detector and LED/I.R and mount into the pads (Led/IR in the top pad and Detector in the bottom pad) allowing the sensors to be seen and central, and scrape excess silicon. Then place the drying rack in the drying cabinet and leave to dry overnight.

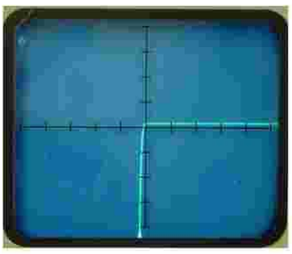
9. Superglue loose cable to the pads and fill the rears with white silicon.
10. Glue pads onto the pad supports (prime first).
11. Place spring around pads and into place.
12. Clip upper and lower shells (apply a little super glue) into place and glue caps onto the sides.

TESTING

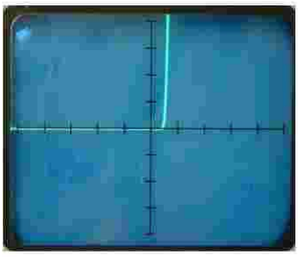
1. Attach SPK1-N side to the S&W/Vickers box then to the test box connector marked 'A'.
2. Check display is showing correct characteristics as shown below. (At correct switch positions)



Pos 2. LED



Pos 3. IR



Pos 4. Detector

3. 'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
4. If there is any movement of signal, the cable must be taken apart and all connections checked and re-soldered. Then tested again until results are satisfactory.
5. Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
6. Attach SPK1-N side to a S&W/Vickers box, then a Nellcor monitor and the probe on to the finger simulator to check SpO_2 level. (Ideal reading 95-100.)

Labelling

1. Labels: to be attached facing upwards as looking at the top of the probe.
   - 1 x CE Label
   - 1 x Viamed shell label on probe lower shell.
   - 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).

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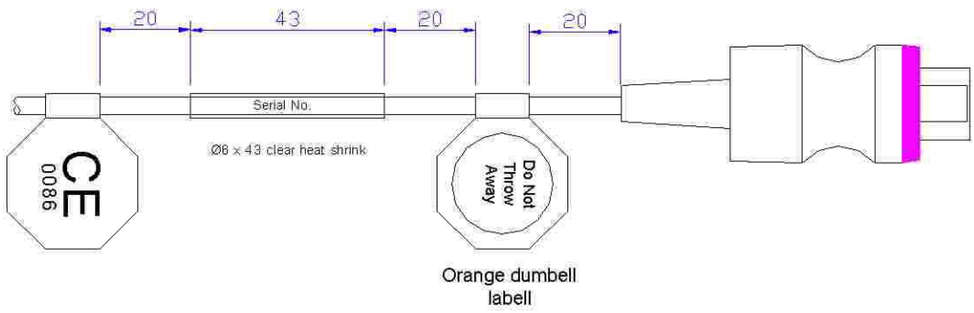
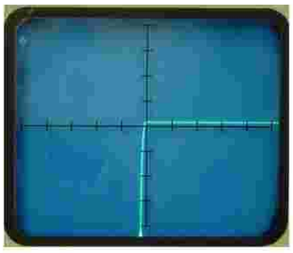
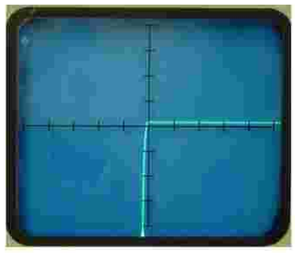


Quality Assurance (QA)

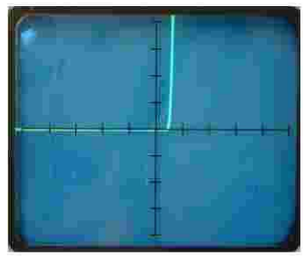
1. Attach SPK1-N side to the S&W/Vickers box then to the test box connector marked 'A'.
2. Check display is showing correct characteristics as shown below. (At correct switch positions)



Pos 2. LED



Pos 3. IR



Pos 4. Detector

3. 'Play' with wire at connections to see if any change in the display (i.e. flickering etc).
4. If there is any movement of signal, the cable must be taken apart and all connections checked and re-soldered. Then tested again until results are satisfactory.
5. Check the cable is of correct quality standard. (See VM/COP/30.11 for details).
6. Attach SPK1-N side to a S&W/Vickers box, then a Nellcor monitor and the probe on to the finger simulator to check SpO_2 level. (Ideal reading 95-100.)
7. Fill and sign attached paperwork.
8. Log all results on compatibility sheet.

Packaging

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.