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|  | <b>SONARtrac<sup>®</sup> Rework Instruction</b>  |         |        |
|   | <b>Subject: Procedure for<br/>Replacement of USB Port Cable<br/>Assembly PN 20631-01</b> | R100009 | Rev: 1 |
| Page 1 of 8   |  |         |        |


The following procedures provide the list of tools, materials, and procedures for replacing the P/N 20631-01 USB port cable assembly.

Carefully read the entire document prior to starting replacement.

If there are any questions or comments please contact CiDRA Customer Support.

### Document Change History

| Date    | Revision | Changed By | ECO #    | Description of Change |
|---------|----------|------------|----------|-----------------------|
| 25Sep08 | 1        | Griffin    | E08-0099 | Initial Release       |
|         |          |            |          |                       |
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| CiDRA Corporate Services | 50 Barnes Park North | Wallingford, CT 06492                            |
| Tel. 203-265-0035        | Fax. 203-294-4211    | <a href="http://www.cidra.com">www.cidra.com</a> |



# SONARtrac™ Rework Instruction

**Subject: Procedure for Replacement of USB Port Cable  
Assembly PN 20631-01**

RI00009

Rev: 1

Page 3 of 8

## Tools Required:

| Qty | Part No. | Recommended Tools              | Qty |  |  |
|-----|----------|--------------------------------|-----|--|--|
| 1   |          | Phillips Head Screw Driver, #2 | 1   |  |  |
| 1   |          | Needle nose pliers             | 1   |  |  |
| 1   |          | ESD Wrist Strap                | 1   |  |  |

## Materials:

| Item No. | Quantity | Part No. | Description              |
|----------|----------|----------|--------------------------|
| 1        | 1        |          | Loctite 242              |
| 2        | 1        | 20631-01 | USB Cable Assembly       |
| 3        | 2        | 52124-08 | Cable guides (as needed) |

**Procedure:**

1. Remove power from transmitter in accordance with site specific lockout / tagout procedures.
2. Open transmitter door.
3. Either:
  - 3.1 Remove power cables and all input / output and ground cables from Connector Terminal Board Assembly (CTBA).
  - 3.2 Move transmitter to work shop.
  - 3.3 Install personnel ESD Wrist Strap.
  - 3.4 Remove 4ea chassis screws. **Note:** screws are captive.
  - 3.5 Remove ground wire from CTBA.
  - 3.6 Remove transmitter chassis from transmitter enclosure.

**OR,**

- 3.7 Remove power cables from terminal board.
- 3.8 Remove input / output cable connector removable terminal blocks from CTBA connectors.
- 3.9 Remove ground wire from removable terminal block.
- 3.10 Install personnel ESD Wrist Strap.
- 3.11 Remove 4ea chassis screws. **Note:** screws are captive.
- 3.12 Remove transmitter chassis from transmitter enclosure.
- 3.13 Place chassis in ESD safe bag.
- 3.14 Move chassis to work shop.

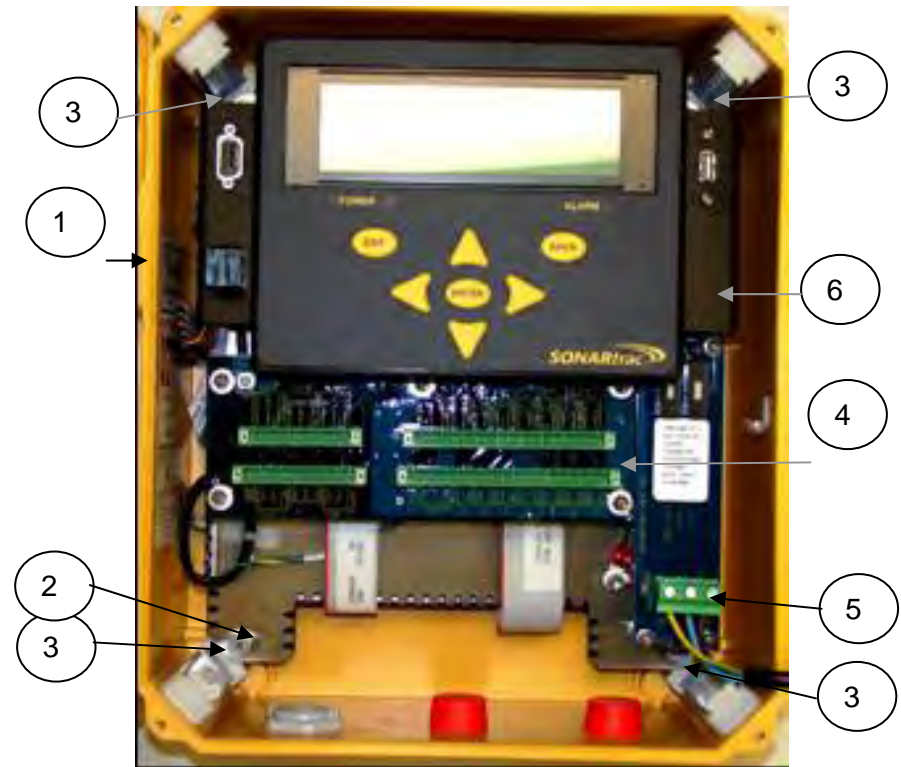


Figure 1 Transmitter

- |    |  |
|----|--|
| 1. | Transmitter enclosure  |
| 2. | Transmitter chassis  |
| 3. | Chassis screws (4 places)  |
| 4. | Connector Terminal Board Assembly (CTBA) with pluggable connectors (not shown) |
| 5. | Power input  |
| 6. | Display chassis  |

OR,

3.15 Remove the 5ea #6-32x5/16" screws from the Connector Terminal Board Assembly (CTBA).



Figure 2 CTBA Mounting Screws

3.16 Fold the CTBA forward so it is supported by the cables.

3.17 Remove the ribbon cables from J12 and J13 on the underside of the CTBA.



Figure 3 Removing Jumpers J12 and J13

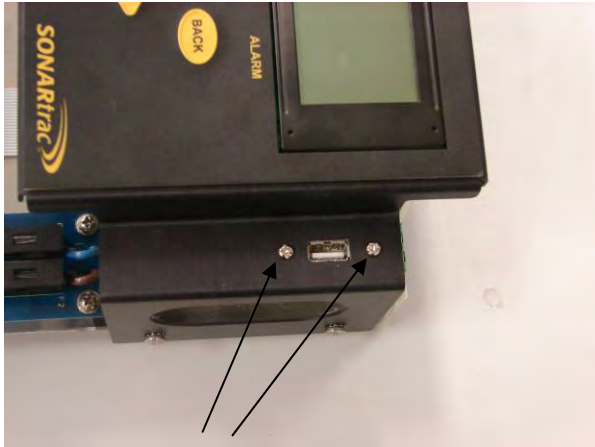
3.18 Install personnel ESD Wrist Strap

3.19 Remove 4ea chassis screws. **Note:** screws are captive

3.20 Remove transmitter chassis from transmitter enclosure.

3.21 Place chassis in ESD safe bag

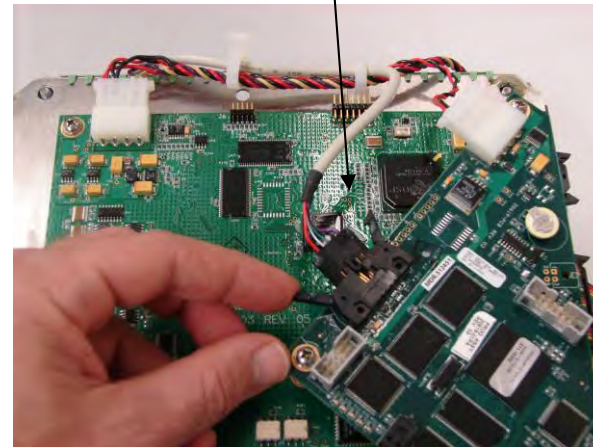
3.22 Move chassis to work shop



*Figure 4 USB Port Retaining Screws*

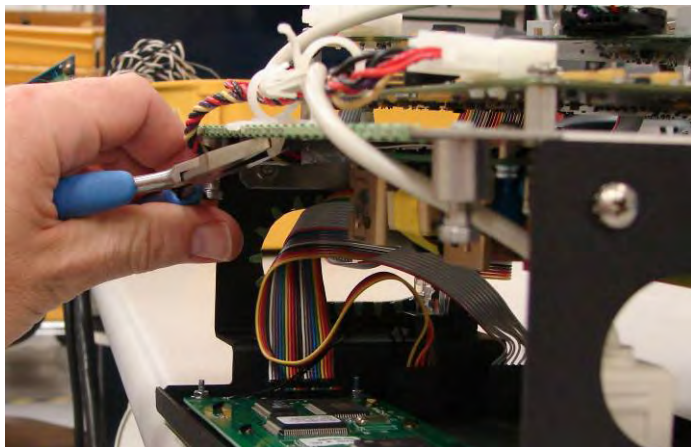
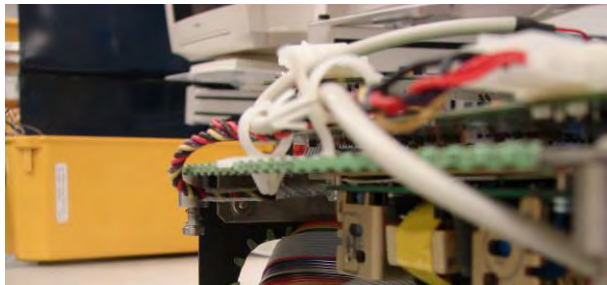
4. Remove and retain two screws securing the USB Cable to the display chassis

5. Disconnect 10 pin AMP connector from the USB interface circuit card assembly



*Figure 5 Removing 10-pin Connector*

6. Compress the tabs on the plastic cable guides to remove. (Tabs may compress using fingers or it may be necessary to squeeze them with pliers. Depending on the age and installation environment the plastic guides may have become brittle and break upon removal)



*Figure 6 Plastic Guide Removal*

7. Remove the cable from the Cable guides

### **INSTALLATION OF THE NEW USB CABLE ASSEMBLY AND RETURNING TRANSMITTER TO OPERATION:**

1. Insert the 10 pin AMP connector into mating connector on the USB interface circuit card assembly. Be sure the connector latches click into place securing the connectors.
2. Reroute the USB cable assembly and any other previously removed wiring through the two plastic cable guides. If the guides were damaged during previous removal replace.
3. Secure the USB port end of the cable to the display chassis using the previously removed two Phillips head screws. Apply Loctite 242 to the screws.
4. Reinstall transmitter chassis assembly into transmitter enclosure. Tighten 4 screws to recommended torque of 25in-lbs.



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RI00009

Rev: 1

Page 8 of 8

## 5. Reconnection of the CTBA.

- 5.1 If the wiring was removed from the CTBA reinstall all wiring making note of color and numbering codes for proper installation location.
- 5.2 If removable connector plugs were disconnected, reconnect to the CTBA at this time.
- 5.3 If the CTBA was removed in step 3.15 reconnect J12 & J13 ribbon cable connectors that were removed in step 3.17.
  - 5.3.1 Reinstall the CTBA using the previously removed 5ea #6-32x5/16" screws. Tighten the screws to 12in-lbs.

- 6. Reconnect the power lines to the power terminal board.
- 7. Close the transmitter enclosure cover.
- 8. Reapply power to the transmitter.