

ARCS PROCEDURE	MWR SERIAL PORT UART SWAP AND DIGITAL BOARD REPLACEMENT	PRO(MWR)-021.000
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MWR Serial Port UART Swap and Digital Board Replacement

I. Purpose:

This procedure outlines steps for swapping the MWR serial port Universal Asynchronous Receiver-Transmitter (UART) and replacing digital board.

II. Cautions and Hazards:

None.

III. Requirements:

- Board puller (handles of a large binder clip work well)
- Chip puller (or small, flat-blade screw driver)
- Replacement digital electronics board

IV. Procedure:

A. Swapping Serial Port UART and Replacing Digital Board

1. Power down the MWR as described in *Turning Off MWR, PRO(MWR)-015*.
2. Remove the instrument cover as described in *Removing the MWR Cover, PRO(MWR)-020*.
3. Remove the digital electronics circuit board.

This board is the bottom-most of the three boards in the radiometer card cage. Because there are no “ears” on these circuit boards, it is easiest to extract the boards using the handles of a large binder clip as follows:

- a) Insert one end of each handle into the holes at the corners of the card.
 - b) Using the handles as a lever, the card cage as a fulcrum, gently unseat the board from the edge connector and slide it out.
4. Remove the two UART chips on the digital board from their sockets and swap them. **Note: Because the boards for use in the TWP have been conformally coated, it may be difficult or nearly impossible to swap the UARTs. In such a case, replace the digital board with a spare.**
 5. Re-insert the digital board into the card cage and ensure that it is properly seated.
 6. Carefully replace the cover and reattach the buckles.

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7. Reconnect the cables.

8. Test the digital board.

If this does not solve the problem: Repeat steps 1 through 8 but replace the digital board with a spare board.

If replacing the digital board does not resolve the problem: It is likely that the problem has been misdiagnosed. Contact TWPO for further assistance.

V. References:

1. MWR Restart/Shutdown, PRO(MWR)-004.
2. Turning Off MWR, PRO(MWR)-015.
3. Removing the MWR Cover, PRO(MWR)-020.

VI. Attachments:

None.