

## MADI Diagnostics

Firmware Version 2.1.4

With MADI firmware v2.1.4, the card will log certain errors it detects when receiving a MADI audio stream, and log this information in flash memory. This information will be available even if the card is reset or power is removed.

The diagnostic information can be viewed in AZedit, as follows:

- Go on-line
- For a multi-frame system, ensure that AZedit is connected to the controller in the same frame as the I/O card (e.g. to inspect the diagnostic information for the MADI card in frame 2 slot 4, ensure AZedit is connected to frame 2). Select Options | Connect to Frame to select the correct frame.
- Hit Shift-Ctrl-M to go to the Memory View
- In the Type field, select I/O Cards
- In the Instance field, select the card number. For instance, frame 2 slot 4 would be I/O card number 21, assuming frame 1 is an ADAM frame. If frame 1 is an ADAM-M frame, then frame 2 slot 4 would be I/O card number 12. (If you go to Status | I/O Cards and highlight an I/O card, the Status bar at the bottom of the screen will show the card type and the I/O card number.)
- In the Address field, enter the appropriate address.

Diagnostic information is stored starting at address 270.0000. (Addresses do not have dots in them; they are included in this document to make it easier to read the addresses and to verify the number of trailing 0's.)

If no diagnostic information is stored, the data will be all FF. (If the data is all 00, then probably the correct data is not being read: The wrong address was entered, the wrong instance number was selected, or AZedit is not connected to the correct frame.) If there is diagnostic information stored, the first 4 bytes of data will be 2A 44 4D 50, and you will see “\*DMP” at the top-left corner of the right-hand pane (which shows the ASCII equivalent of the data).

The page-down and page-up keys can be used to navigate through the following and preceding pages of memory. The actual addresses being displayed (the left-most column) will be updated as you press page-up and page-down.

The card can store up to 128 diagnostic snapshots. Once 128 diagnostic snapshots have been stored, the card will erase all of the diagnostic information, and then start again at the beginning.

The Memory View screen shows 256 bytes of memory (although the last 16 locations are suppressed, and display as "--"). Each diagnostic snapshot is allocated 1024 bytes (4 screens); however, only 672 bytes (2½ screens) are used for each. Thus, the last half or so of the 3<sup>rd</sup> screen will be filled with FF's, and the 4<sup>th</sup> screen will be all FF's. If there is data on the 5<sup>th</sup> screen, this would be the start of the next snapshot.

There may be many stored snapshots. Memory addresses 270.0000 through 271.FFFF are reserved for storing snapshots. Each snapshot will start at an address that ends with "000", "400", "800", or "C00". For example, the starting addresses of the first 5 snapshots will be 270.0000, 270.0400, 270.0800, 270.0C00, 270.1000.

### When a Problem Occurs

1. Find the last stored snapshot

Go to address 270.0000, and see if there is a snapshot. If so, hit page-down 4 times (to address 270.0400) to see if there is a second snapshot. Repeat, until you find the last snapshot.

If there are a lot of snapshots, it will be more expedient to type in different addresses to rapidly skip through memory. For instance, snapshot #5 will start at address 270.1000, snapshot #17 will start at address 270.4000, snapshot #33 will start at address 270.8000, and snapshot #65 will start at address 271.0000.

2. Take screen shots of the last 4 snapshots, and save them (e.g. paste them into a Word document).

If there are 4 or fewer snapshots, go to the first (address 270.0000). Otherwise, go to the start of the 4<sup>th</sup>-last snapshot.

Take a screen shot (Alt-PrtSc), and save it. Repeat for the next 2 pages. Skip the 4<sup>th</sup> page (all FF's). Repeat for the remaining snapshots.