

#124 AVM Audio XPT Upgrade



[01/31/01]

Tech Note

Instructions for upgrading an AVM8L8L-8RGBHV to an AVM16L8L-8RGBHV

Parts list:

- 1 - 16x8-R Crosspoint Board (“fully populated”; to replace 8x8 “half-populated” board)
- 1 - 220-AB-0010 Input Ribbon Cable
- 1 - 800-Input Master Board
- 4 - Screws (for mounting 800-Input Master Board)
- 1 - 220-EB-0003 Power Cable (for 800-Input Master Board)
- 8 - Phoenix Connectors



220-AB-0010
Audio Input Cable



220-EB-0003
Input Board Power Cable

Backup File:

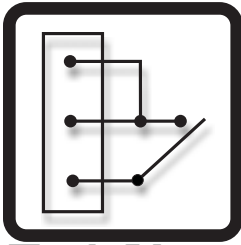
After changing the size of the matrix, the current AVM program file will not be valid. Use the AVM Designer Software to create a backup file. Follow these steps for creating the backup file:

1. Connect the PC to the AVM matrix.
2. Open the AVM Designer Software.
3. Go to “Communication --> Upload/Download” and select “Read Data from AVM Device”.
4. Save file to PC.

Hardware Installation Instructions:

1. Place the matrix on a work bench with the back of the matrix closest to you. Unscrew all 10 screws from top of matrix chassis and remove the top.

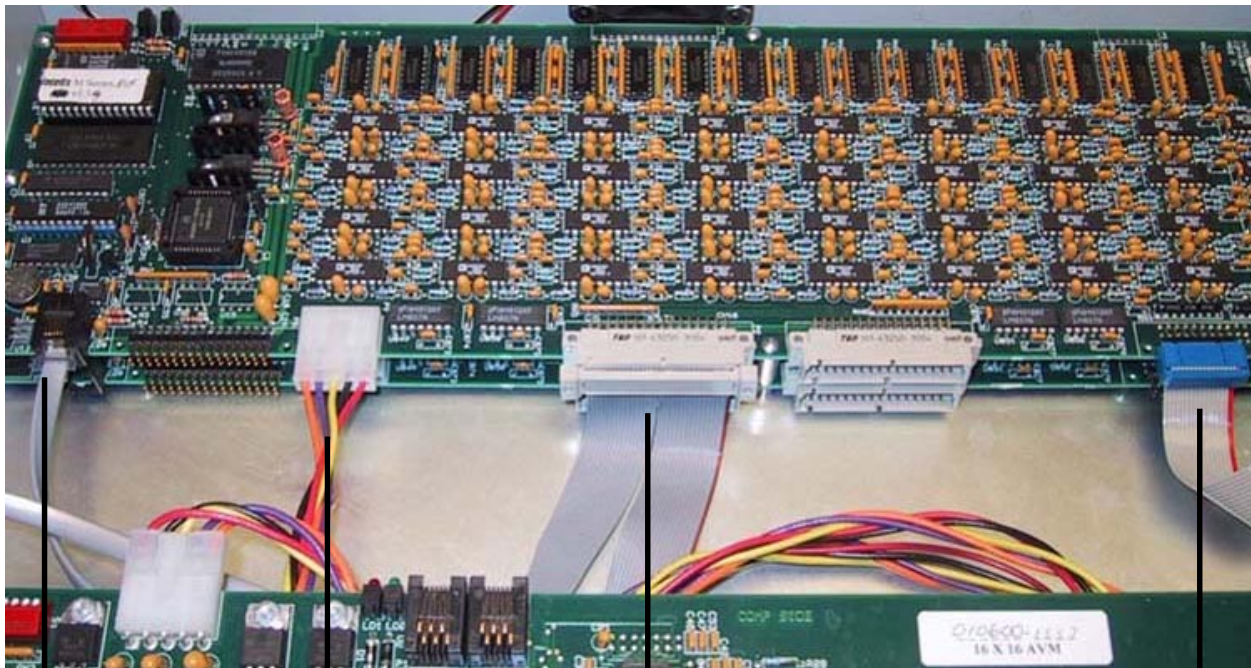
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Hardware Installation Instructions, cont.:

2. Disconnect all 4 cables from the 8x8 crosspoint board. All cables are located across the rear edge of the crosspoint board. Cables requiring disconnection are as follows:



a. IPB Cable

b. Power Cable

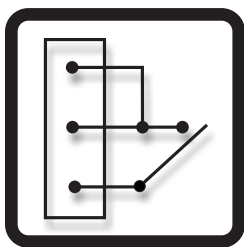
c. Audio Input Cable

d. Audio Output Cable

a. The IPB Cable. This is a flat grey cable plugged into the black IPB connector located at the far left side of the crosspoint board. This cable has an RJ12 connector. Push the RJ Connector's tab (on the under side of the cable) and pull the RJ connector out of the IPB connector.

b. The Power Cable. This is a 5-conductor (multicolored) power cable plugged into a flat white connector a few inches to the right of the black IPB connector. To remove this cable, push down on the connector's lever (on top of the of the connector) and pull the cable away from the board.

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Hardware Installation Instructions, cont.:

c. The Audio Input Cable. This is a 32-conductor grey input ribbon cable plugged into a wide grey connector located near the middle of the crosspoint board. This cable is separated into two equal halves and one half is cut off at the connector and the other half continues to the mic/line input board. To remove this ribbon cable, simultaneously pull on the “ears” of the cable’s connector. The cable’s connector will separate from the board’s connector until it is free from the board. Follow this ribbon cable to the Mic/Line Input Card and separate that end from the Mic/Line Input Card. With both ends of this input ribbon cable disconnected, pull this cable from the matrix and set it aside.

d. The Audio Output Cable. This is a 16-conductor grey output ribbon cable plugged into a black connector located to the far right side of the crosspoint board. This grey ribbon cable has a blue clamp-down connector at its end. To remove this ribbon cable, firmly grip the blue connector and pull it (and the cable) away from the board.

3. Unscrew the six (6) mounting screws holding the 8x8 Crosspoint Board in place. These 6 screws are located at the left and right edges of the crosspoint board. There is one screw in each corner and one screw in the middle of each side. With all 6 screws removed, lift the 8x8 crosspoint board out of the matrix and set aside.

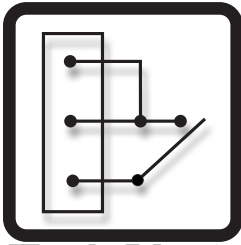
4. Take the new 16x8 Crosspoint Board and place it in the matrix. Align the board’s 6 mounting holes over the board mounts. Take the 6 screws that held the old board in place and screw them into the 16x8 board to mount the new board in place of the old board.

5. Reconnect the following cables:

a. The IPB Cable. Plug the RJ connector into the new board’s black IPB connector located at the left of the board. The RJ connector will click into place.

b. The Power Cable. Plug the 5-conductor (multicolored) power cable into the new board’s flat white power connector located a few inches from the black IPB connector. The white power connector will also click into place.

(Hardware Installation Instructions continued on next page)



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Hardware Installation Instructions, cont.:

c. The Audio Output Cable. Plug the 16-conductor grey output ribbon cable with the blue clamp-down connector into the new board's black output connector located at the right side of the board. Make sure that this cable is connected to the new Crosspoint Board in the same orientation it was connected to the old crosspoint Board. The correct orientation is with the RED line/edge of the ribbon cable closest to the right side of the matrix chassis (when looking at the chassis from the rear, as you have been all throughout the install). Align the holes of the blue connector with all the pins of the board's black connector and push the blue connector toward the board until the blue cable connector and the black board connector meet.

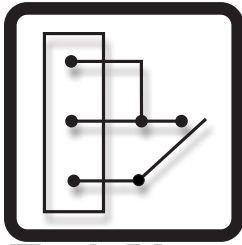
6. Locate the new **Audio Input Cable** (part #220-AB-0010). Take the wide end (with the grey connector) and connect the audio input cable to the grey audio input connector of the new Crosspoint Board. This connector is located near the middle of the new Crosspoint Board. The correct orientation of this Audio Input Cable is to have the RED line/edge of the cable to the right (when looking at the matrix from the rear as you have been throughout the installation).

7. Leave the left lead of the new Audio Input Cable free; it will be connected to the new Audio Input Board later. Take the right lead (the lead with the RED line/edge) of the Audio Input Cable and connect the blue clamp-down connector to the input connector of the Mic/Line Input Card. This connector is black and resembles the Audio Output Connector of the new Crosspoint Board. The Mic/Line Input Card also has dipswitches that need to be set. These dipswitches are located next to the input connector to which you just connected the right lead of the Audio Input Cable. Dipswitch #1 needs to be set in the "ON" position; dipswitches 2, 3, and 4 should be set in the "OFF" position.

8. At the rear of the matrix, locate the 2 covered input slots to the left of the Mic/Line Card inputs. The cover just inside of these slots needs to be removed in order to install the new 800-Input Master Board. There are 2 small screws (and the 2 small nuts inside the matrix) holding this metal cover in place. Use one hand to hold the nut on the inside of the rear panel and use a small Phillips screwdriver to unscrew this screw. Remove both screws and pull the metal cover out of the matrix.

9. Locate the new 800-Input Master Board and the 4 screws that were shipped with board. If the 800-Input Master Board came with the Phoenix connectors installed in it, please remove them before attempting to install the 800-Input Master Board. Place the board inside the matrix chassis and align the phoenix connector input edge of the board with the newly opened input slots of the rear panel. Take the 4 screws that were shipped with the new board and screw them through the four mounting holes in the rear panel, fully mounting the new 800-Input Master Board.

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Hardware Installation Instructions, cont.:

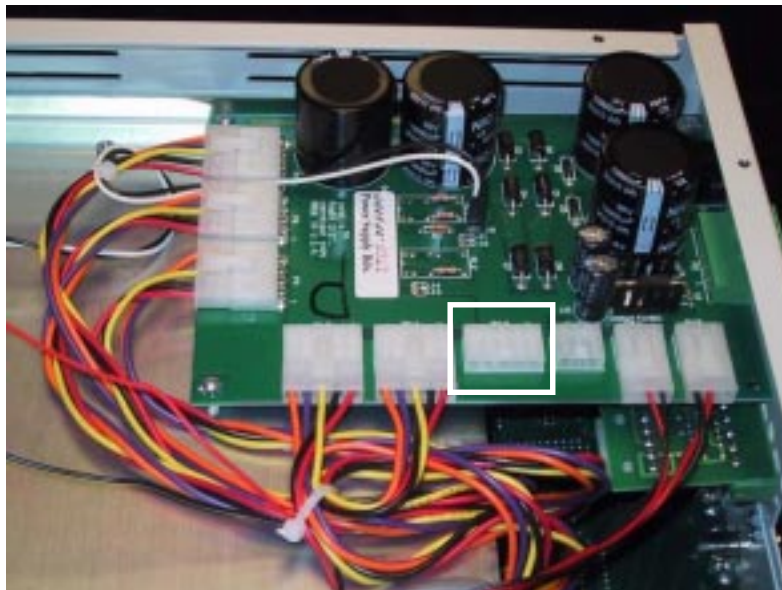
10. Take the left lead (the lead without the RED line/edge) of the new Audio Input Cable and attach the free end to the audio input connector of the newly installed 800-Input Master Board. This input connector is a black connector resembling the audio output connector of the new Crosspoint Board. Align the holes of the blue clamp-down connector with the pins of the audio input connector and push the two connectors together until the blue meets the black.

11. Locate the new 220-EB-0003 Power Cable. Attach one end of this cable to the flat white power connector of the 800-Input Master Board. Push the cable's connector into the input board's connector until it clicks, locking into place. Run the other end of the power cable under the silver metal divider of the matrix chassis. That other end will be connected to the power supply board later.

12. After making sure that all of the above steps have been followed, replace the top of the matrix chassis and replace all 10 screws.

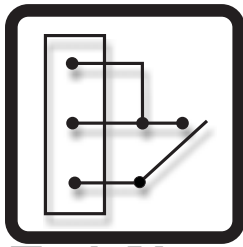
13. Flip the matrix unit over so that the bottom of the matrix chassis is facing up. Unscrew all 10 screws and remove the bottom panel. Set it aside.

14. Locate the Power Supply Board at the right rear corner of the AVM matrix. It looks like this:



(Rear
of
Matrix
this
edge)

(Hardware Installation Instructions continued on next page)



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Hardware Installation Instructions, cont.:

15. On the Power Supply Board, there will be an empty flat white power connector. Locate the loose end of the new 800-Input Master Board's power cable and plug it into this empty power supply board connector. Push the connector into the receiving connector until it clicks into its locked position.

16. Replace the bottom panel of the matrix chassis and replace all 10 mounting screws. Flip over the matrix chassis so that the top of the matrix is facing upward again.

17. Hardware installation for the upgrade from an AVM8L8L-8RGBHV to an AVM16L8L-8RGBHV is complete. Attach the Phoenix connectors to their respective input cables and insert them into the 800-Input Master Board as needed.

Reloading Program File:

After installing the new audio hardware, complete the following steps to program the new matrix configuration:

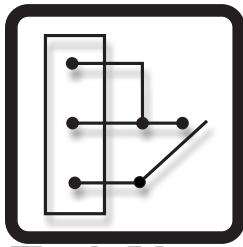
1. Do NOT connect the PC to the AVM matrix.
2. Open AVM Designer Software and open the backup file you saved from the matrix before starting the hardware upgrade.
3. Go to "Configuration --> Audio Matrix Size". Change the audio size from 8x8 to 16x8.
4. Change any other configuration items for the new application, such as video sources, audio sources, and any presets.
5. Save changes.
6. Write new file to the matrix. Go to "Communication --> Upload/Download" and select "Write File to AVM Device".

Troubleshooting Ideas:

If you experience any audio problems after completing the hardware installation and the reprogramming of the AVM matrix, please double check the following troubleshooting guides:

1. If you have NO Audio Signal whatsoever: Reverse the polarity of the blue clamp-down connector to the 800-Input Master Board. To reverse the polarity, plug the blue connector out of the 800-Input Master Board's audio input connector, flip the cable (and connector) over, and plug the blue clamp-down connector back into the audio input connector of the 800-Input Master Board.

(Troubleshooting Ideas continued on next page)



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Troubleshooting Ideas, cont.:

2. If you have NO Communication: Make sure that the IPB cable is fully attached to the new Crosspoint Board. To do this, make sure you hear the RJ connector at the end of the IPB cable click into place. It is only properly connected when it clicks into place.
3. If you have NO Power to the Crosspoint Board: No power to the Crosspoint Board is visually identified by the red LED on the front edge of the crosspoint board. If the red LED is not illuminated, you have no power to the Crosspoint Board. To correct this state, make sure that the 5-conductor (multicolored) power cable is plugged into the crosspoint board. The power cable has a flat white connector at the end of it and this connector plugs into a flat white receiving connector of the Crosspoint Board (and the Power Supply Board at the other end). Make sure that the cable's connector is fully clicked into place on both ends of the Power Cable.
4. If you have NO signal to 800-Input Master Board:
 - a. Make sure that the 5-conductor (multicolored) power cable is plugged into the 800-Input Master Board.
 - b. Make sure that the 5-conductor (multicolored) power cable is plugged into the Power Supply Board.
 - c. Make sure that the blue clamp-down connector of the left lead of the Audio Ribbon Cable is plugged into the 800-Input Master Board. If you still have no signal after completing these checks, please refer to Troubleshooting Idea #1.

If you run into any problems or have any questions during this upgrade procedure, please do not hesitate to contact Intelix.