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DATE: 06/10/2010

MODIFICATION: RM09002

CONCERNING: Modification MX1400 / MX1800 / MX2200 / MX3000, inside

REASON: - Unexpected reset of the mixing panel during use. Visualized by interruption of the output signal for a few seconds, illuminating the FX-1 LED's and illuminating the Alarm/Music-mute LED.

ATTENTION: This modification contains actually 3 actions, which must all be fulfilled to obtain a positive and reliable result.

- Action 1: Modification of main power supply cable
- Action 2: Modification of master PCB
- Action 3: Modification of switching power supply PCB

We also appreciate, the serial numbers of modified units are send to pv@rodec.be to update our records.
The modifications should be done by a schooled technician.

MODIFICATION: from serial number 225667 on to serial number 228129.
Later units are factory modified.

PREPARATION: - Be sure the mains power supply cable is disconnected!
- To open the mixing panel, first pull off all fader knobs and crossfader knob. Slide all faders half way up. Unscrew 4 (for MX1400) or 6 (for MX1800, MX2200 or MX3000) metal screws on the top aluminum panel. (pic. 1)



Pic. 1.

Remove the aluminum panel. Unscrew 2 (for MX1400) or 3 (for MX1800, MX2200 or MX3000) black screws below the faders. (pic. 2)

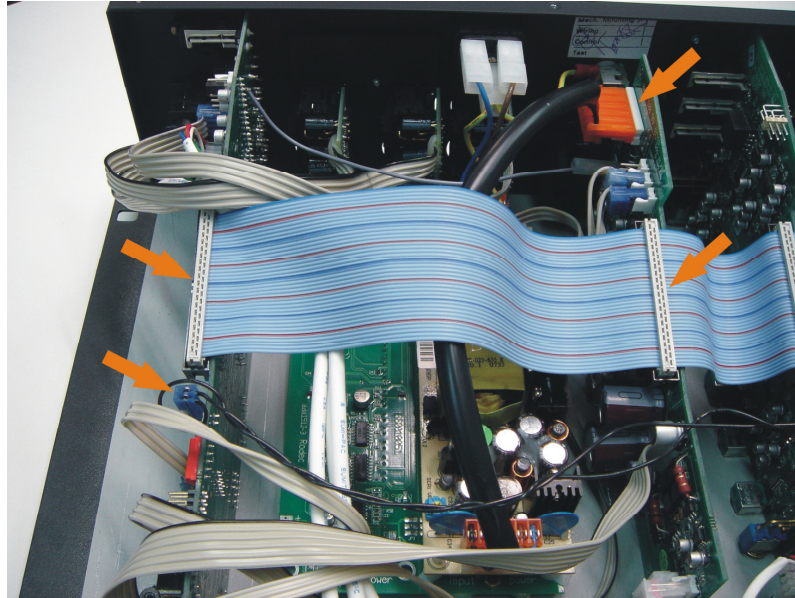


Pic. 2.

Unscrew the black screw at the left and right side of the mixing panel. Unscrew the 2 (for MX1400) or 3 (for MX1800, MX2200 or MX3000) black screws at the bottom of the mixing panel. Take of the bottombox.

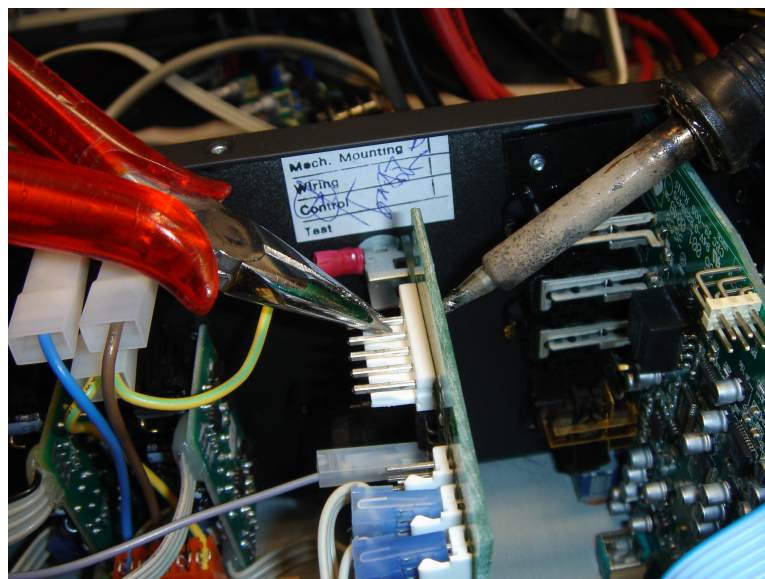
ACTION 1: MODIFICATION OF MAIN POWER SUPPLY CABLE

- Disconnect the 40-pole flat-cable at the master PCB (68 00x 0050) and at the microphone channel PCB (68 001 0049). Also disconnect the 2-pole cable at the master PCB. Disconnect the 6-pole orange connector at the microphone PCB (pic. 3)

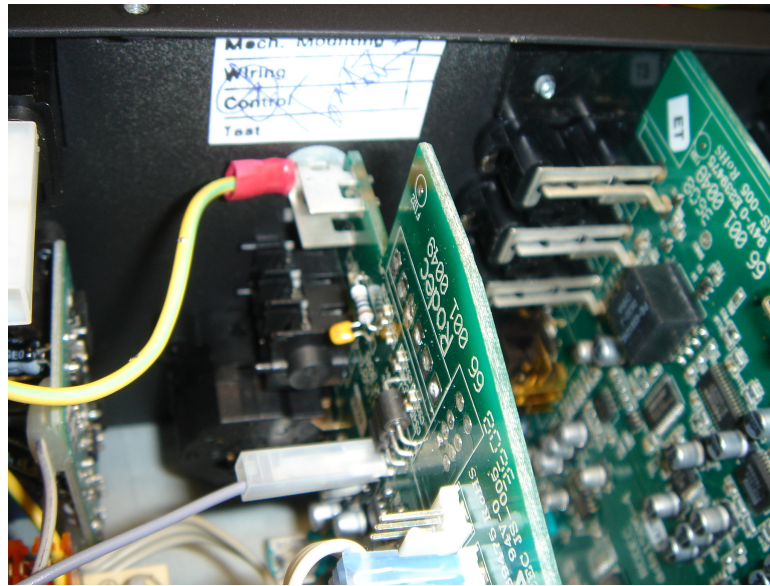


Pic. 3.

- Desolder and remove the 6-pole male connector at microphone channel PCB (68 001 0049). The easiest way is to heat each contact with a solder-iron and pull out the contact at the other side with some pliers. (pic. 4 + pic. 5)



Pic. 4.



Pic. 5.

NOW THERE ARE 2 POSSIBILITIES:

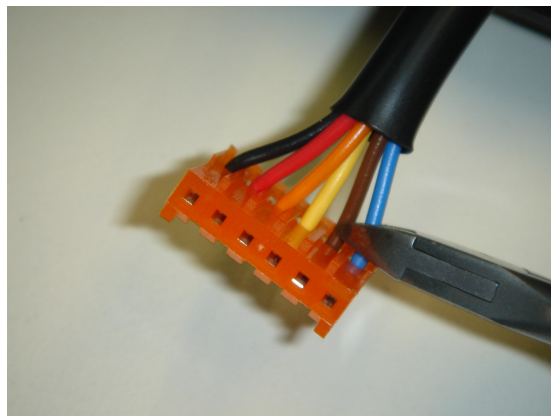
The mixing panel you have to modify contains a 6-pole cable with:

- 1) Colored wires (blue, brown, yellow, orange, red and black).
- 2) All black wires.

In case 1 colored wires, follow steps POSSIBILITY 1, in case 2 all black wires, follow steps POSSIBILITY 2

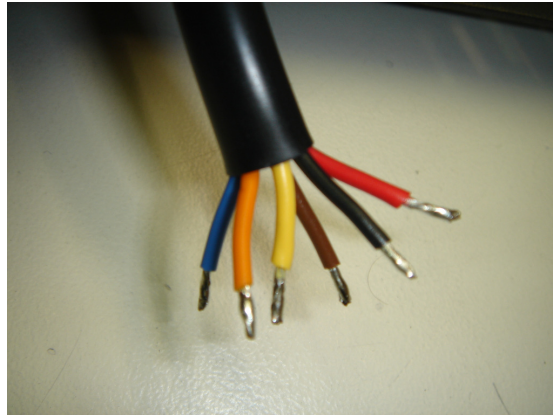
POSSIBILITY 1: COLORED WIRES

- Cut of the orange 6 pole female connector, as close as possible near the connector. (pic. 6)



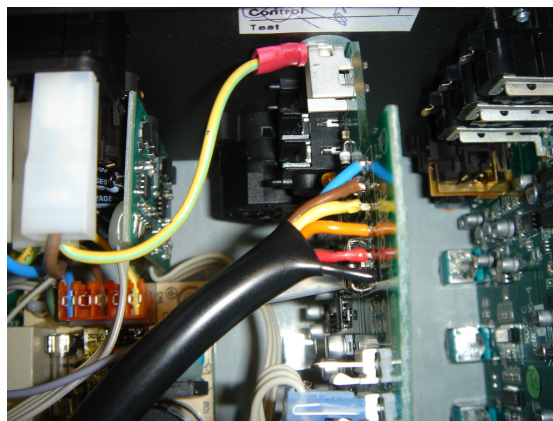
Pic. 6.

- Strip the 6 wires for about 5mm and tin them. (pic. 7)



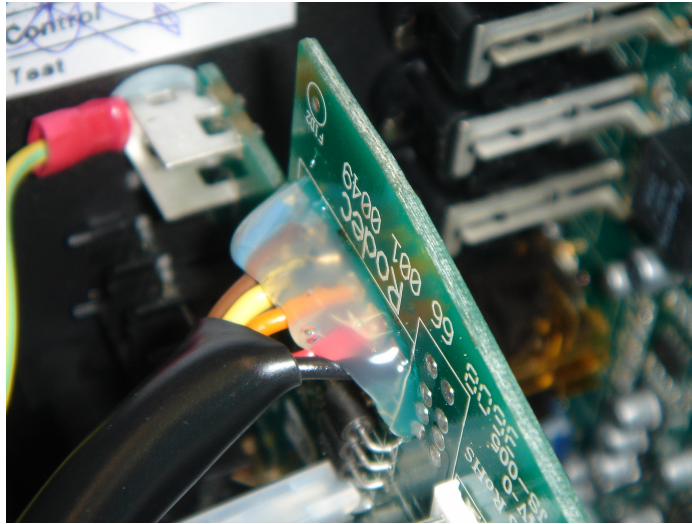
Pic. 7.

- Cut approximately 1cm of the black insulation tube to avoid mechanical stress on the wires.
- Solder the wires in the holes, where the 6-pole connector was placed, on the microphone PCB (68 001 0049).
Attention: keep the correct follow order (Starting from the backpanel of the mixer: Blue, brown, yellow, orange, red and black)(pic. 8)



Pic.8.

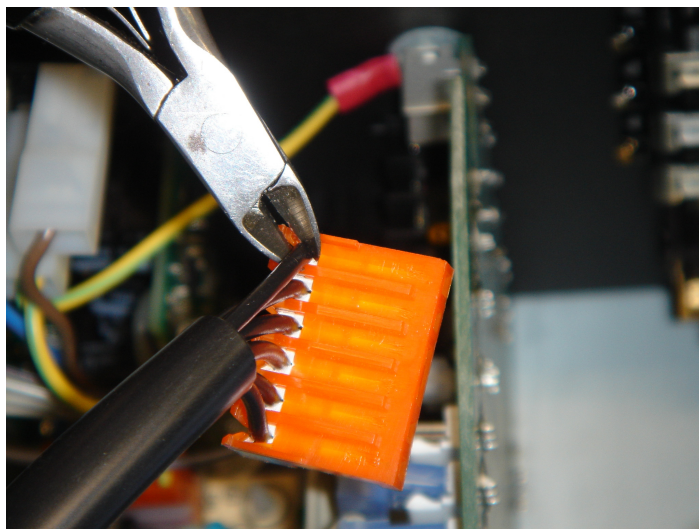
- Place some hot melt glue on the wires near the PCB, to increase the mechanical strength. (pic. 9)



Pic. 9.

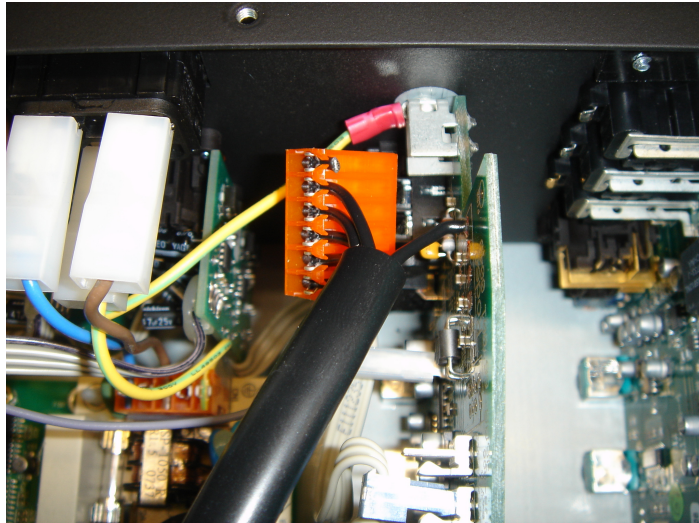
POSSIBILITY 2: ALL BLACK WIRES

- Cut approximately 1cm of the black insulation tube to avoid mechanical stress on the wires.
- Cut of the first wire, as close as possible near the orange 6 pole female connector. (pic. 10)



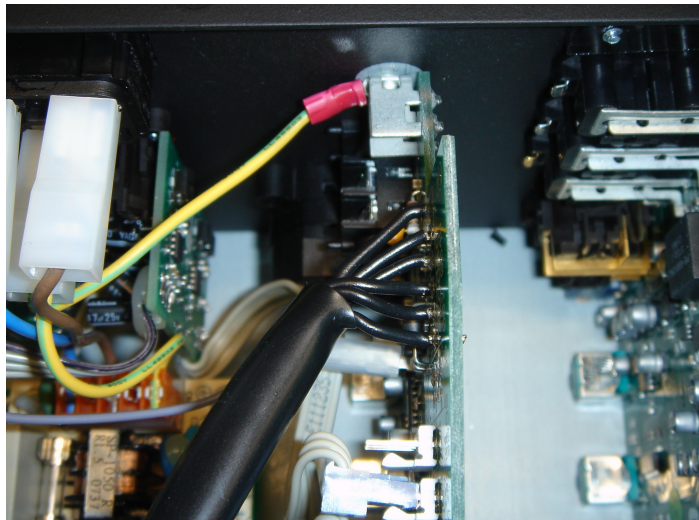
Pic. 10.

- Strip the wire for about 5mm and tin it. Solder this tinned wire in the first hole of the removed male 6-pole print-connector on the microphone PCB (68 001 0049). (pic. 11)



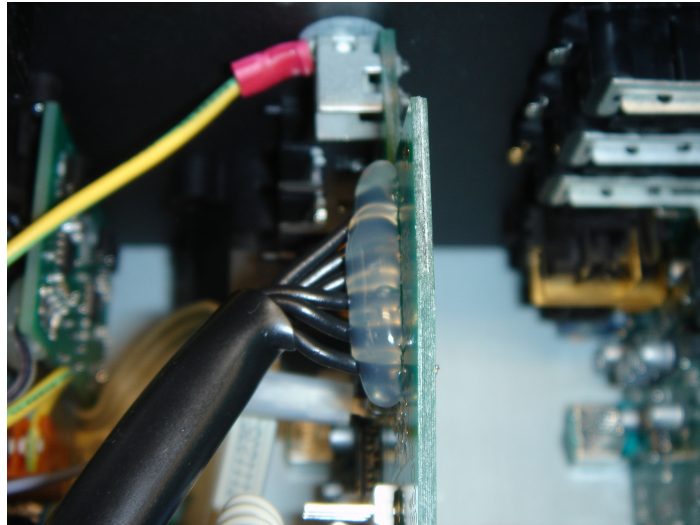
Pic. 11.

- Repeat this for the second wire, third, and so on. BE SURE TO KEEP THE FOLLOW ORDER. (pic. 12)



Pic. 12.

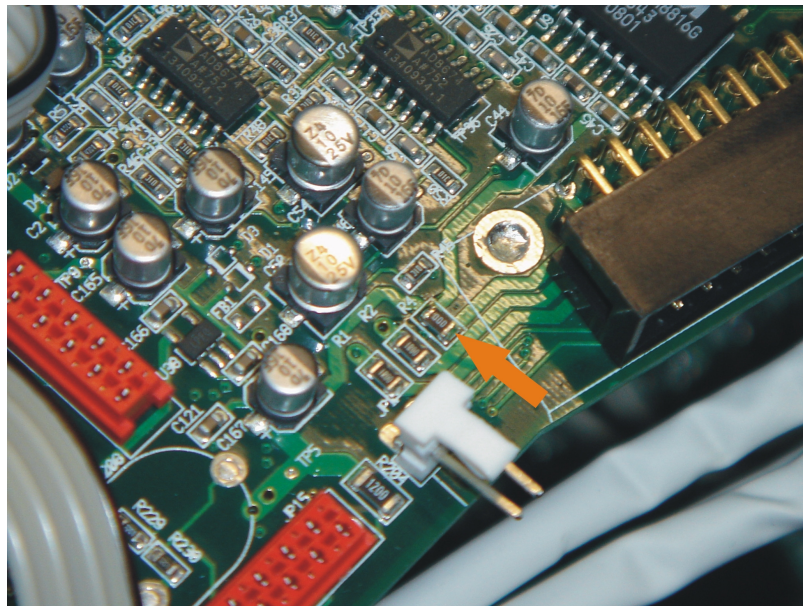
- When all 6 wires are soldered, place some hot melt glue on the wires near the PCB, to increase the mechanical strength (pic. 13)



Pic. 13.

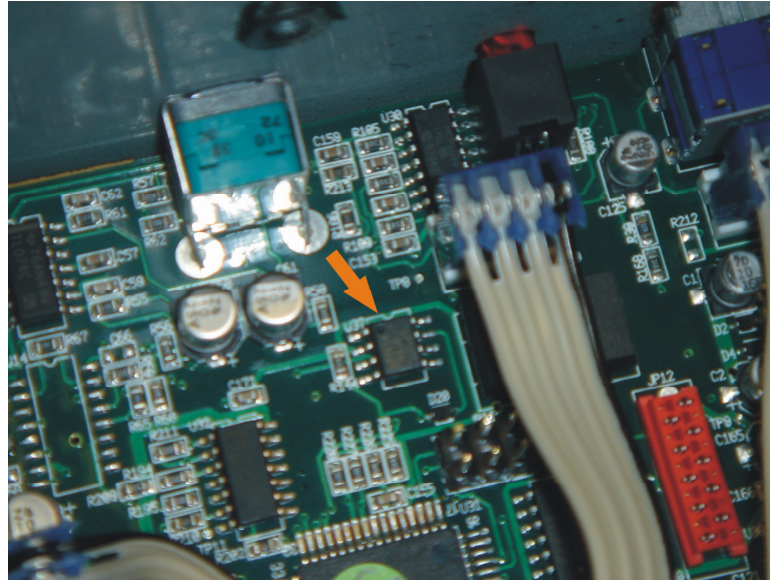
ACTION 2: MODIFICATION OF MASTER PCB (66 00x 0050)

- Solder a SMD resistor (size 0805) of 0 ohms in parallel with R4. (pic. 14)



Pic. 14.

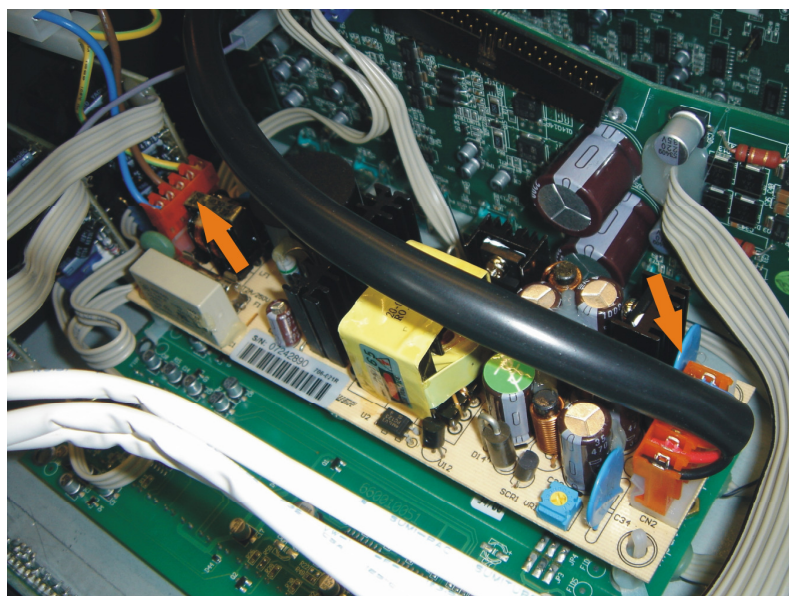
- Check the type of U37. This must be a SP707. In some cases this is a SP708. If there is placed a SP708, this must be replaced by a SP707. If you need this IC for replacement, we can send this (without charge) upon request via mail to pv@rodec.be (pic. 15)



Pic. 15.

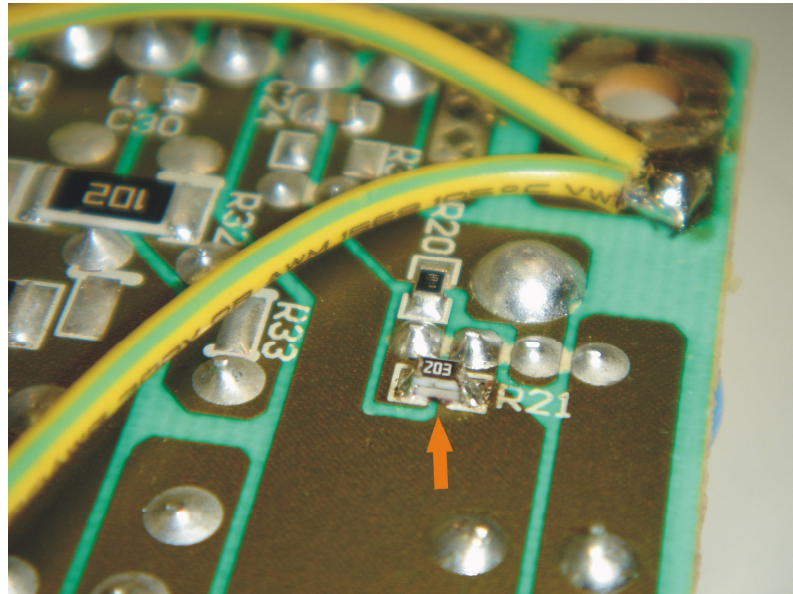
ACTION 3: MODIFICATION OF SWITCHING POWER SUPPLY PCB

- Be sure the mains power cord is disconnected!!!
- Disconnect the 2 orange connectors at the power supply PCB. (pic. 16)



Pic. 16.

- Remove the switching power supply PCB by pressing the clips of the 4 stand-offs which hold the PCB.
- Solder a SMD resistor (size 0805) of 20k ohms (tolerance 5% maximum) in parallel with R21 at the bottom of the power supply PCB. (pic. 17)



Pic. 17.

- Put the switching power supply PCB back on its place. Be sure all 4 stand-offs are well placed and locked in the holes of the PCB.
- Re-connect both orange connectors (attention the mains supply must be connected to the 3-pole male PCB connector and the 6-pole orange connector to the 6-pole male PCB connector).
- Re-connect the 40-pole flat-cable at the microphone PCB and at the master channel PCB. Also re-connect the 2-pole cable at the master PCB.
- Visually check all connections.
- Connect the mains power to the mixing panel. Attention! DO NOT TOUCH ANY OF THE INTERNAL PARTS OF THE MIXING PANEL NOW.

- Measure the voltage between pin 3 (negative) and pin 4 (positive) of the 6-pole connector at the switching power supply (these are the 2 contacts most in the middle). Regulate the voltage between these pins with trimmer VR1 on the switching power supply PCB so the measured voltage is +18,3V (minimum +18,25V and maximum +18,35V) (pic. 18)



Pic. 18.

- Disconnect the mains power cable at the back side of the mixing panel.

ACTION 4:

- Disconnect the connector shown in picture Pic 18.
- Now you see the white plastic header
- Remove the white plastic header by desoldering it at the rear side.
- Cut the wires from the connector and solder them the same way like on the microphone PCB.

NOW THERE ARE 2 POSSIBILITIES:

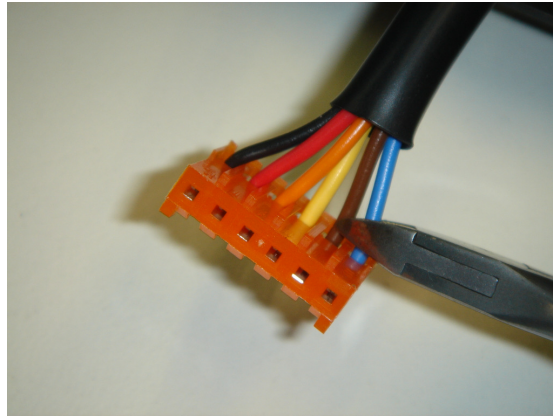
The mixing panel you have to modify contains a 6-pole cable with:

- 3) Colored wires (blue, brown, yellow, orange, red and black).
- 4) All black wires.

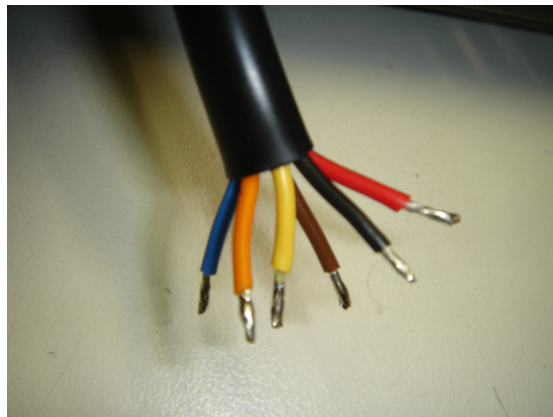
In case 1 colored wires, follow steps POSSIBILITY 1, in case 2 all black wires, follow steps POSSIBILITY 2

POSSIBILITY 1: COLORED WIRES

- Cut of the orange 6 pole female connector, as close as possible near the connector. (pic. 6)



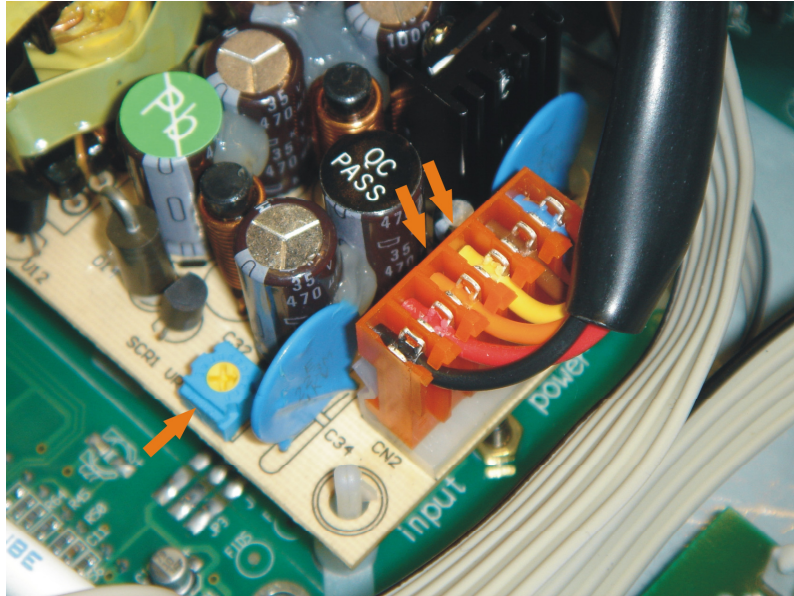
- Strip the 6 wires for about 5mm and tin them. (pic. 7)



Pic. 7.

- Cut approximately 1cm of the black insulation tube to avoid mechanical stress on the wires.
- Solder the wires in the holes, where the 6-pole connector (white plastic header) was removed, Attention: keep the correct follow order (Starting from the backpanel of the mixer: Blue, brown, yellow, orange, red and black)(pic. Below)

- Black wire on the left side pin one



- Place some hot melt glue on the wires near the PCB, to increase the mechanical strength.

- TO FINALIZE:**
- Place bottombox again on the mixingpanel. Screw the 4 (for MX1400) or 6 (for MX1800, MX2200 or MX3000) black screws on the frontpanel below the faders in again. Screw the 5 black screws in again at the bottombox.
 - Place the aluminum panel again on the panel and place the screws, also place the fader-knobs again on their positions.

- RECORDS:**
- Please send the serial number of the modified unit to pv@rodec.be to update our records.