

Service Memo for Tactile M 4000:

Problem:

General care and preventative maintenance of the system.

In most cases, the M 4000 system components are mounted in a 19" rack. Here, at the beginning of the installation, it is very important to look for a perfect heat-dissipation from all rack mounted units.

As you know, the M 4000 system gets rid of the heat created by the components via passive radiation, i.e. the warm or hot air will always raise inside the 19" rack and will need a port to leave that cabinet. There is no fan inside the system. The total power consumption is 800 W, which is close to the low-level setting of an electric heater.

The best way of an installation without additional fans is to have the M490 PSU on the lowest position inside the 19" rack. Then allow a 2 U distance (possibly with an open panel for heat-dissipation) and install the M 440 central computer. With a 1U distance you may then mount the M 430 group and master rack, and again leave a distance of 2U before you install the M 420 input rack.

For maximum ease in case of service or maintenance we are suggesting to have all the units mounted on rack-rails, where they have full support for their weight, and not just hanging on 4 or 8 cage-nuts.

If your studio or room where the 19" rack is installed has a basic temperature of more than 24° Celsius, we recommend to install at least two silent fans, either running on 12 V from a separate transformer, or on normal mains voltage. These fans will apply additional airflow inside the rack, so there will be no standing heat inside the rack.

From time to time you should take a look inside this rack.

All kind of dust is getting inside via the permanent airflow, so you should have a vacuum cleaner handy and suck out all that dust.

Min. once a year you should open the top lid of the M 490 power supply and clean the inside carefully with a vacuum cleaner, you will be surprised what you will find inside!

This dust is blocking the comfortable airflow inside the units, so the components become hotter and may die because of overheating.

The M 411 motorfader controller also needs some care.

Dust, hair, tobacco etc, will disappear through the fader-slots into the fader and will get stuck under the wipers of the fader. This may result in bad contacts or open contacts, so the fader will lose track or will be intermittent. Maybe you have seen your faders "shivering" very now and then – this is a safe sign that too much dust is blocking the wipers – action has to be taken.

Switch OFF the M 411.

Take off all the fader-knobs and take a vacuum cleaner with a small pipe. Now treat every fader carefully by sucking out all the dust through the fader-slot. Be careful not to damage the faders! Once this is done, carefully move the faders by hand – one by one – and try to look inside the slot onto the wipers inside the faders. Here you may see some larger lumps of dust still sitting inside the fader.

Be sure to have switched OFF the M 411 console.

With a pair of fine, thin plyers try to get careful access to the wipers under the fader-knob and try to grab and pull out the dust.

This may not be successful in some cases, so you will either have to open and clean the fader, or to install a new one.

To open a fader you need to take out the fader panel and then remove the fader to be cleaned by unscrewing the two allen-key screws holding the fader. The fader will now fall inside the mixer. Carefully lift the fader panel and pull out the connector on the fader. If you look at the bottom of the fader you will see 8 small metal fingers squeezed open to hold the bottom of the fader. With your plyers you may now carefully close these fingers, so the bottom will come open, and then pull it from the fader body. Be very careful – as the fader will fall into pieces when open, but it is not too difficult to re-assemble the fader.

There is a drive-belt for the fader which should be neither twisted, nor pulled out of the fader shaft!! But you also will see the three wipers of the fader, covered with dust and grease. Carefully clean these wipers and possibly apply a lubricant to the fader. Bring the shaft, belt and fader-body into position and put back the bottom by carefully pressing it onto the fingers.

With a small screwdriver squeeze apart these fingers, so the bottom has a tight fit to the body. This procedure will take you about 20 minutes per fader, with some experience you will come down to 10 minutes after you have done this several times. Now reinstall the fader into its position on the fader panel, reconnect the cables and then switch ON the console to check if this fader is travelling perfectly again.

If the fader is really dead – or you broke a wiper or destroyed the belt – we can supply you with new faders in two variations:

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| 1. motorfader without sensor PCB (use your old one) | 49,50 Euro |
| 2. motorfader with sensor PCB | 58,50 Euro |
| 3. motorfader 60mm without sensor PCB | 45,20 Euro |
| 4. motorfader 60 mm with sensor PCB | 54,20 Euro |