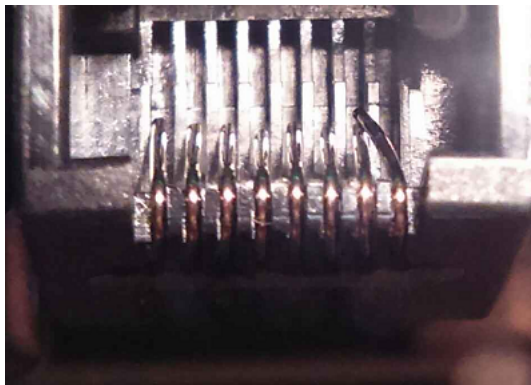# MGEN – a first aid box

Your Lacerta MGEN is a very reliable device, which usually works for many years without hustles. However, should you encounter a problem, we are providing you here with a collection of troubleshooting Tipps. Mostly, only  some maintainence is needed that you can do yourself easily.

**- the camera is not responsive, error messages like  "wrong camera mode" "camera init. failed" or "camera off" are displayed.**
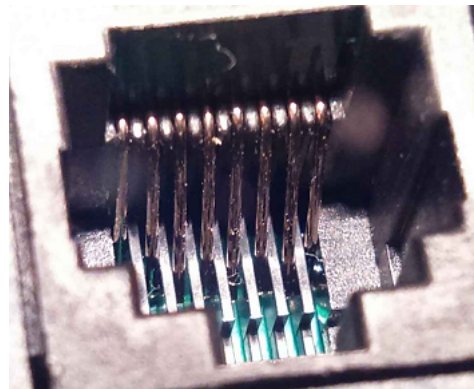Try another power source. Reload firmware.

**- at updating with MGEN App fails, there are error messages like "firmware file may be corrupt" "cannot get camera boot version"**
There is no contact to the camera. Try applying 12V when updating, maybe your USB source is not powerful enough. Next, check the PIN contacts in the jacks at camera and handbox, they man be bent or corroded. Use a good light and magnifying glass to check.



PIN is bent to a wrong row                    PINs uneven, some bent to the back

A strong piece of wire gives a good hook if you file a sharp dent into it, next to ist end. Try to get hold of the bent PIN and bring it back into the correct position, so all are on the same level nicely in a row. From moisture and extended use the PINs can get corroded and need to be cleaned.

As MGENs handbox houses two jacks of different size near each other (ST4 and camera), it may happen accidentally that you push your ST4 cable into the camera jack, and PINs get bent. Always connect the cam cable first!
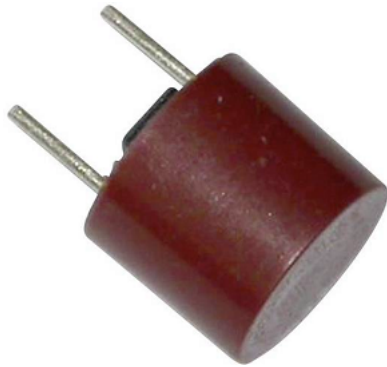
Also check the cable itself, sometimes a contact may get loose. Try a replacement cable, it is a simple network cable (not crossed).

If the problem persists, there may be a contact problem between the cameras double platine: Unscrew the front plate of the camera (a T2 extension may help to get a better grip, screw it in and tilt it while unscrewing).  Touch your water pipe to unload any possible static electricity. Unscrew the 3 screws and carefully take out the platine stack. The rear platine should sit firmly into ist PIN socket, gently press it back if it gots loose.

If that still not helps to get the camera working, there must be some hardware failure. Call your dealer for the details to get your MGEN repaired.

## - at switching on MGEN, the display stays dark
Plug in your 12V power cable, and observe if the 4 directon buttons LED's light up shortly. If they do not blink up, go to your PC and connect USB. Do they light up shortly now? If they do, it suggests that MGENs internal fuse has shut off. It easy to change it. Open the handbox, the fuse is located directly next to the 12V jack and can be pulled out of ist socket. It is a slow fuse 200mA and 250V (yes, thats correct!) to be obtained at an electronics dealer:

for example at Conrad:
https://www.conrad.at/de/kleinstsicherung-radial-bedrahtet-rund-200-ma-250-v-traege-t-eska-887110-1-st-537736.html

## - at switching on MGEN, the display stays dark
Plug in your 12V power cable, and observe if the 4 directon buttons LED's light up shortly. If they do blink up, open the handbox and check if the display unit has slipped out of ist PIN socket and got loose. Press it softly back into the sockets being careful not to bend one of the contacts. Switch on again.

## - the buttons do not work anymore
Open the handbox, the front panel with buttons is connected to the mainboard via a flat cable that may have slipped out of its socket. Here is a video how to fix it again:
https://www.youtube.com/watch?v=f7Xmj8eClhs

## - MGEN gets not recognized when connected to PC
Check if the driver is installed, you find it here:
https://www.ftdichip.com/Drivers/CDM/CDM21228_Setup.zip

You also find an installation guide at the drivers website:
https://www.ftdichip.com/Support/Documents/InstallGuides.htm

## - at starting the MGEN App an error message pops up that a FTD2XX.dll is missing
install the driver again by right clicking on the setup.exe and choosing "as administrator". Your Windows denies writing to the C directory without telling you.

## - at starting the MGEN App an error message pops up that a MSVCR110.dll is missing
this is a Microsoft Visual C++  file which actually is not needed by the MGEN App. But to make Windows work, load it down from the net and copy it into the same folder where the MGEN App resides, or to C:\Windows\System32 (as administrator).

**- at requesting camera liveview an error message pops up "version mismatch"**
You camera has a differnet firmware loaded than the handbox. Please always connect the camera too, if you upload a new firmware. Reload with camera connected.

**- MGEN has a wobble contact at the power socket, and frequently shuts down**
The socket has the 5,5/2,1mm dimension. There are cables with similar jacks measuring 5,5/2,5mm out there, please check for the correct dimension.

**- MGEN is suddenly not guiding properly, it looks as if it just omits a direction**
Check the ST4 connection to your mount: Go to calibration screen and choose "manual". Now you can outout ST4 signals by pressing the direction buttons. Set your mount to tracking mode, and with your ear the the mount head check if the motors change sound when pressing a button. If all 4 directions are ok, maybe a DEC direction is disabled at DEC parameters. If not sure, go to misc / modes and choose factory reset.

**- MGEN is suddenly not guiding properly, and there is a little cross at the guide star**
This happens at emulation mode, for training purposes MGEN can simulate a guidestar. Go to misc / modes and deactivate emulation mode.

**- the guidestar is visible at the display, but MGEN says "star lost"**
You have a very big guidestar and use the "NEW" algorithm which is good especially for the small stars of a finder scope. Switch to "OLD" and it will work also with big stars.

**- there are two guidestars in the guide window, and MGEN oscillates between them**
You are using algorithm "OLD", in this case please change the sub parameter from "window" to "partial" and choose one of the two stars. With algorithmus "NEW", this is automated.

**- I am still not so familiar with MGEN, and it does not behave as expected**
Especially important if you have bought an used MGEN. In course of many years development many features have been implemented, and maybe something is turned on or off that you are not aware. Go to misc / modes and use firmware reset which loads the recommended parameters. They are chosen that way your MGEN should work out of the box in almost any circumstance.

**- here is a checing procedure to test the basic functions at daytime**
https://teleskop-austria.at/information/pdf/MGEN_checking.pdf

**- here is a "bad weather mount guiding test program", it projects a wandering star on your PC screen (german only)**
https://www.watchgear.de/SWMT/SWMT.html

**- here is Version 2.0 of SWMT.exe**
https://teleskop-austria.at/information/pdf/MGEN_sternbewegung_Testprogramm_SWMT2.exe

We hope this little first aid box helps you out of the most problem situations. Do not hesitate to contact your dealer or our team if you have furthr questions!

**Your Lacerta Team**