Checking modulation of piezo etalon in a Matisse laser head.

Symptomatics

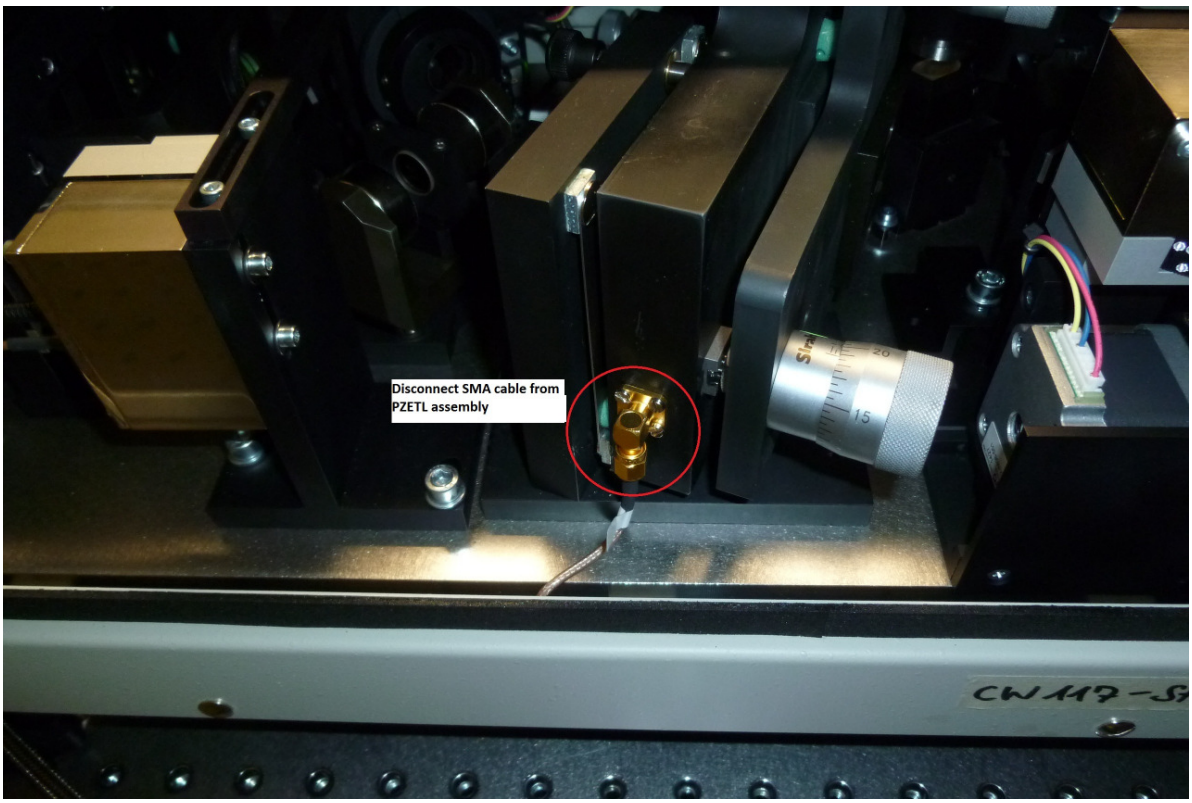
The Piezo Etalon is allways dithering as long the electronic box is switched on, even when no pump radiation is applied to the Matisse. In case that the Matisse cannot run single mode and all other checks have been done to recover to single mode operation without success, with the following procedure one can check the modulation frequency of the Piezo Etalon.

Equipment

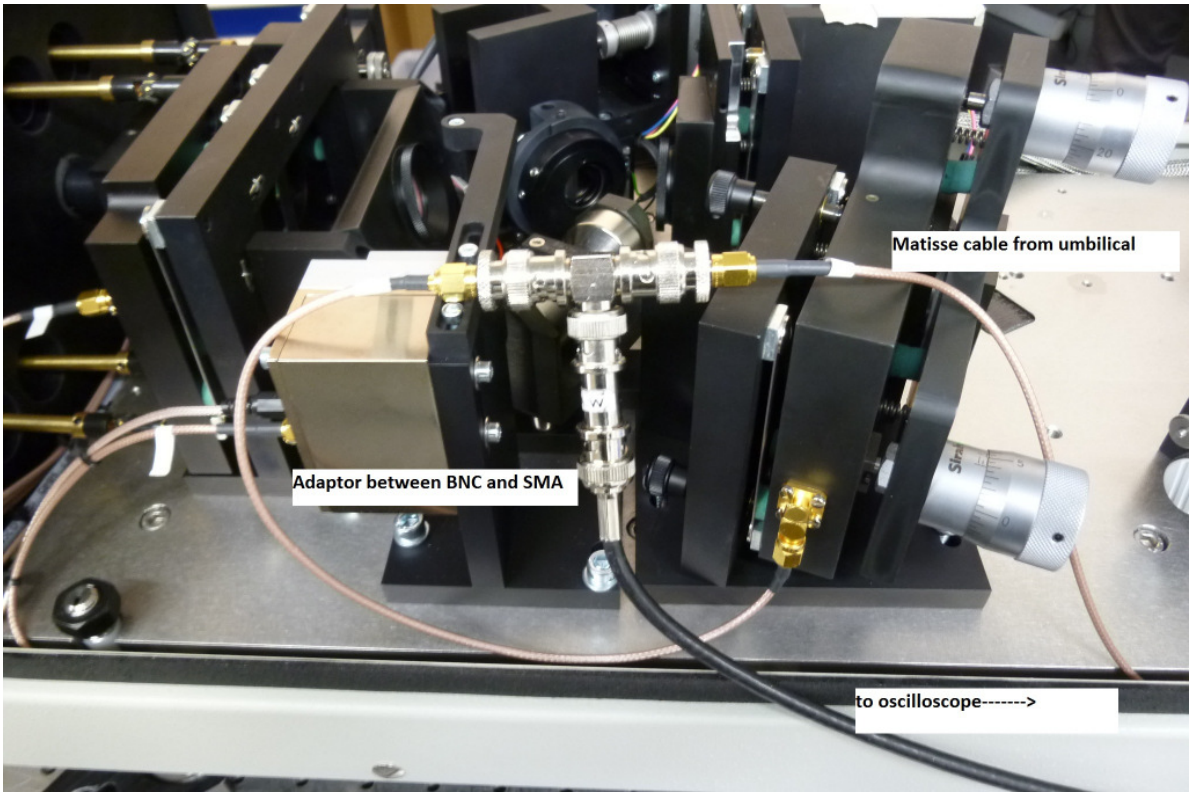
- Oscilloscope
- 2 SMA<->BNC(female) adaptors
- T-Connector BNC
- BNC cable approx. 2m

Procedure

1. Switch off the Matisse electronic box.
2. Open both covers of Matisse laser head.
3. Disconnect the SMA cable from the Piezo Etalon assembly
4. Connect the T-Connector between Piezo Etalon assembly and the disconnected cable using SMA<->BNC adaptors.



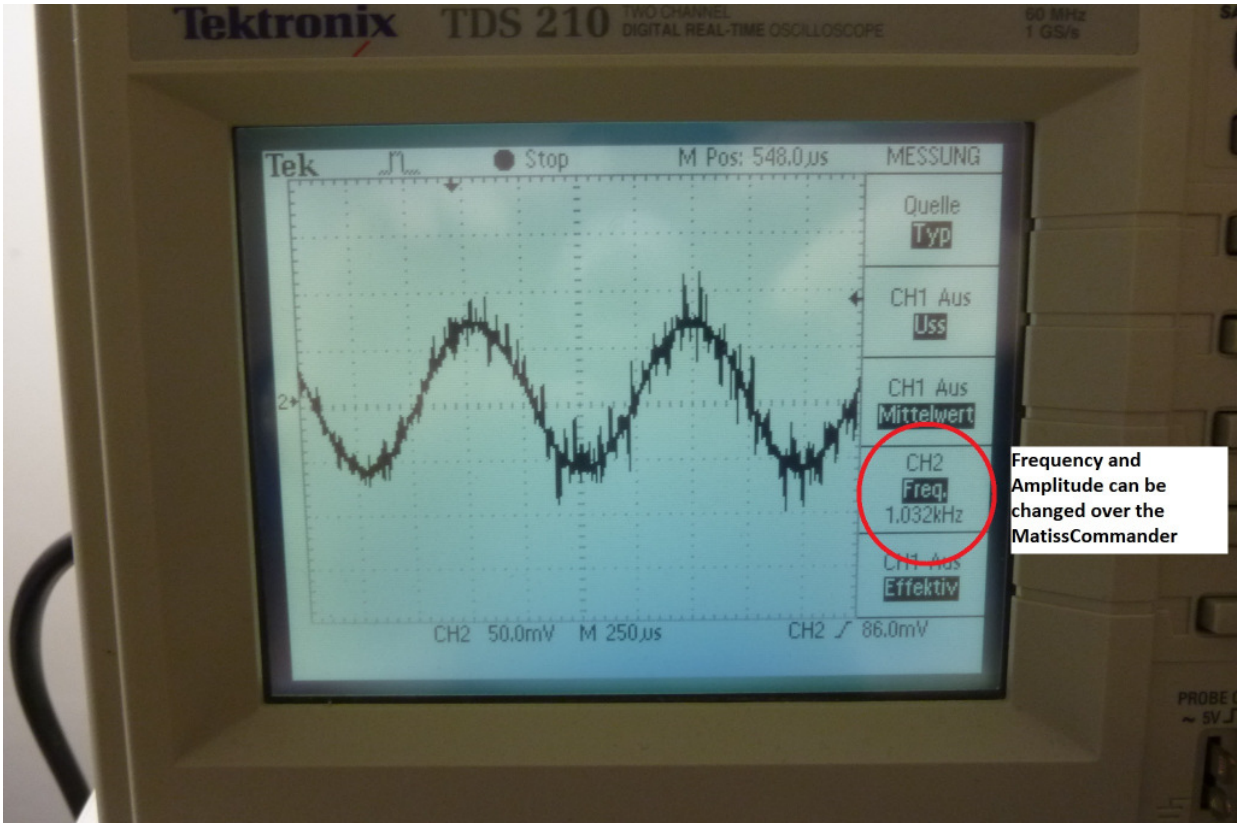
5. Connect the remaining free plug to the free SMA connector into the oscilloscope.



6. Switch on your oscilloscope and the Matisse electronic box. Put signal on an available free channel on your oscilloscope.

7. Set oscilloscope to AC coupling, Trigger to channel X (X: used channel number)

8. The signal can be now detected. If everything is OK you should see the following shape:



9. Changing values for oversampling and sample rate in Piezo Etalon Control Setup lead to changing frequency. Change values for Amplitude will change signal amplitude on the oscilloscope

Report your results to Sirah engineer.