

Application and information for the Flutter and Speed Test Tape 3000-Hz

Caution: listen only to a moderately low audio level – a too high level may cause damage to your sense of hearing!!

General tips for handling of tapes:

- Careful handling prolongs life duration of the tape.
- Control first the correct function of tape drive mechanics before applying a test tape (tape tension and wind torque).
- Important: always degauss the tape heads and tape guides before using a tape!
- Store your tapes in played state ("tail out" position), don't reel them back, keep clear of magnetic fields, (transformers, loudspeakers, etc.)
- Use degaussed or unmagnetic tools for working.

How to use the Flutter and Speed Test Tape

- with a Wow and Flutter meter (WFM) and
- PC-program, for example Audiotester with spectrum-analysing

Preparations:

1. Clean the tape path of your tape recorder, clean the heads, the tape guides, the Capstan shaft and – very important – the pinchroller.
Don't use any force, danger of ruining the azimuth!
I use a Q-tip (dipped in spirit) for cleaning the tape path- (it can be bent to reach hidden parts easier)

Wipe resisting sediments using a soft cloth (lightly wetted with spirit).

2. Let the machine warm up. The settings will be more exact.
3. Wind up the tape on a large reel.
Wind up the Speed Test Tape together with an almost full reel tape when using large reels, (Ø 18 -26,5 cm).
You can check the quality of the tape drive at the end of the tape reel (full reel on the right side) as well as at the end of the tape reel (full reel on the left side).
The difference is called "schlupf."

Using a WFM:

4. Calibrate the WFM:
Connect reference-frequency-output (3000 Hz) and the measuring input of the WFM, set pointer to center position (-zero -).
5. Adjust or check the tape recorder using WFM:
Connect left or right line-out of tape recorder to measuring input of the WFM
Observe service instructions of manufacturer for adjusting the speed.

Start PLAY and adjust tape speed of machine to "zero" -reading of WFM.

Read the appropriate value of flutter value < 0.1 % at 19.05 cm /sec is acceptable.



UHER 4000 adjusted (example)

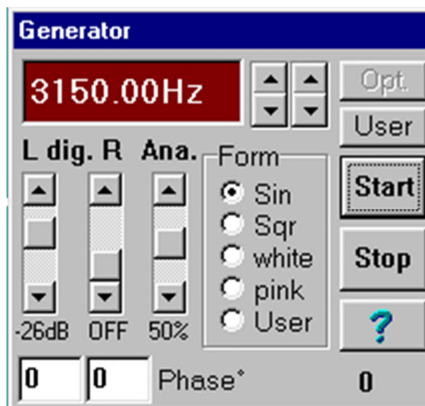
Using sound card and PC program

The tape speed can be adjusted using a PC program, for example „Audiotester with Spectrum-analyser“. Of course you can use any other program!

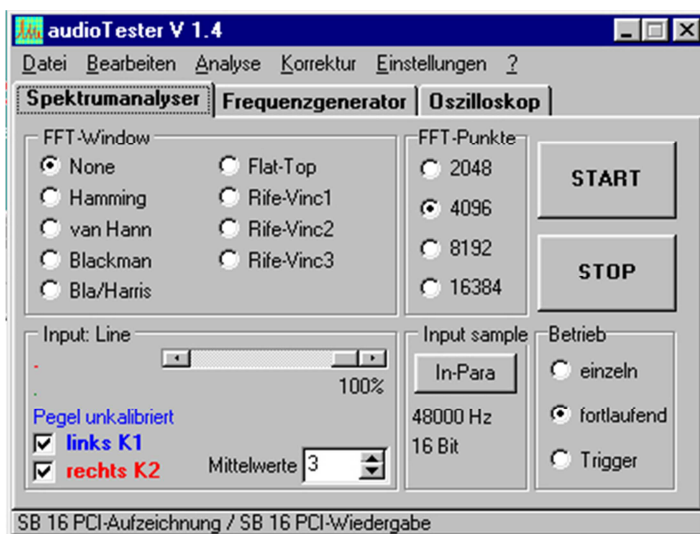
Preparations:

Connect line-out channel left to line-in channel left

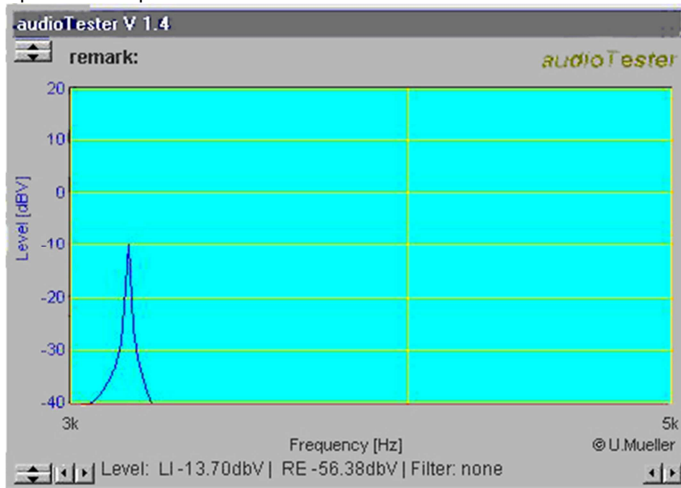
The right channel will be the measuring input. Connect here line-out of the tape recorder.



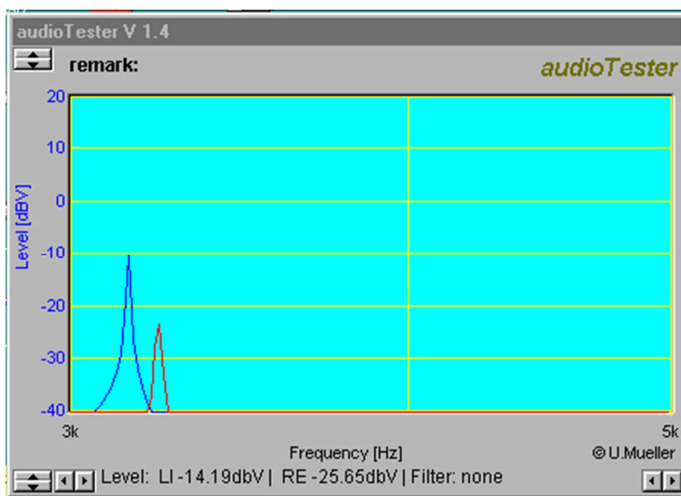
Set generator – for reference frequency
Same for 3000 Hz!



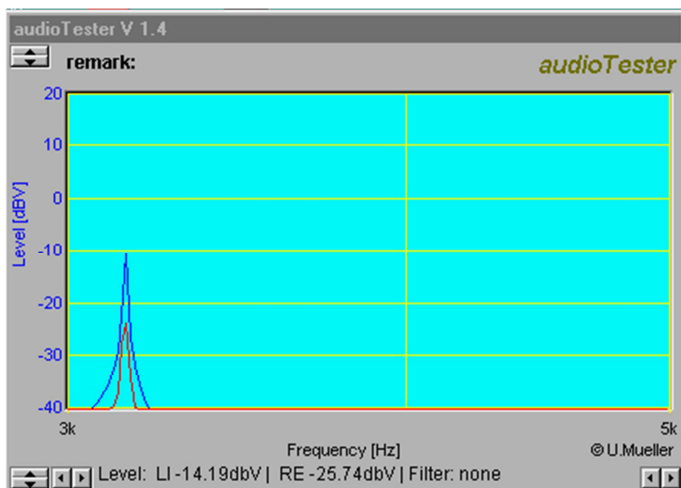
Set analyser parameters -for example
Audiotester



Display of reference-frequency.



Display of REF and playback-frequency of speed test tape



Display of adjusted tape-recorder speed - lines overlapping.

Use help of your software for further function/features e.g. measuring cursors in display screens.