

Application and information calibration tape for checking reproduce channel response NAB 7 ½ ips

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

This tape is a precise tool and should be treated carefully to maintain the accuracy. It was recorded on a Studer A80 recorder and tested with high precision. Simultaneously controlled quality ensures constant results.

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.

Recorded tracks:

Tape beginning: red leader tape

1. 20 sec 1 kHz -20 dB according to 0 dB NAB 257 nWb/m Revox level
2. 60 sec 10 kHz -20 dB for adjusting head azimuth
3. 10 sec 40 Hz - 20 dB
4. 10 sec 125 Hz - 20 dB
5. 10 sec 500 Hz - 20 dB
6. 10 sec 1 kHz - 20 dB
7. 10 sec 4 kHz - 20 dB
8. 10 sec 8 kHz - 20 dB
9. 10 sec 10 kHz - 20 dB
10. 10 sec 12,5 kHz-20 dB
11. 10 sec 16 kHz - 20 dB
12. 10 sec 18 kHz - 20 dB

tape ending: yellow trailer tape

Playing time of the frequency train is app. 3 minutes.

Preparations in general:

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 because of 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. NEVER USE ANY SHARP METAL PARTS TO REMOVE SEDIMENTS !
You will notice large amplitude drops and loss in treble if these coatings on the heads aren't removed!
Please pay attention to the informations in your manual referring to cleaning the pinch roller.
3. Let the machine warm up. The settings will be more exact.
4. Wind up the calibration tape together with an almost full reel tape when using large reels, (Ø 18 -26,5 cm).

User information:

The fringing effect occurs as an elevation of low frequencies when playing the calibration tape with tape widths smaller than recording width. This is because of a lateral stream in to the magnetic system of the head.

This elevation only occurs when playing the calibration tape.

If you record with the same track as playback track frequency there will be no fringing bass boost.

For 2 mm track width 7 ½ ips (19,05 cm/s):

40 Hz + 1,2 dB

125 Hz + 0,9 dB

500 Hz + 0,4 dB

1 kHz + 0,2 dB

This effect is more dominant using quarter-track machines with 1 mm track width.

40 Hz + 2,8 dB

125 Hz + 2 dB

500 Hz + 0,9 dB

1 kHz + 0,3 dB

Because this effect refers to head mechanical shape all these here mentioned levels can only be a clue for this extent.

To achieve highest precision always play this tape "head to tail".

To make the tape path from reel to reel straight without difference in height, put this tape in played position on the right hub and wind it back to the left hub. Now the tape will be in perfect position.

Tape beginning is marked by a red leader tape, tape ending is yellow.

It would be ideal to store tape in played state ("tail out" position) because it is in even spooling and only one rewind is required before application.

For adjusting the correct reference level of your recorder please study the service manual of producer. There you will also find the position of the adjustments.

For adjusting tape head azimuth very exactly and easily there is a separate tape available. On this tape special signals help to adjust head gap correctly and distinctly without setting a false maximum.

Recording heads gap is adjusted after the setting of the playback head.

>>No replacement for deleted or destroyed tapes ! <<