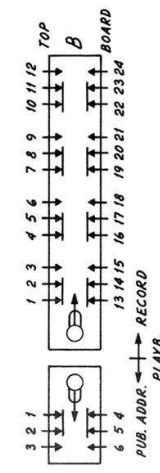
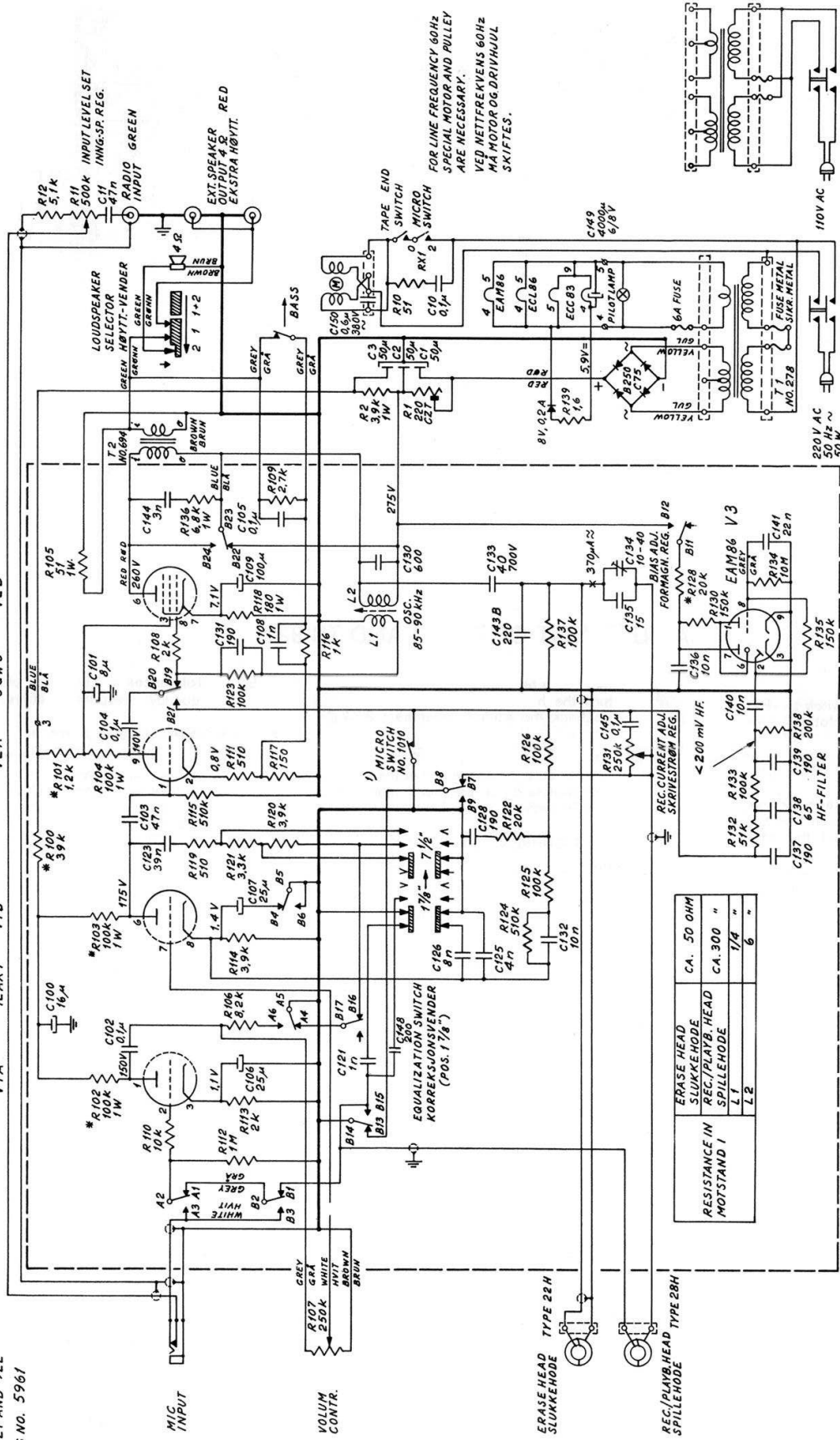


TANDBERG TAPE RECORDER
MODEL 921 AND 922
DRAWING NO. 5961

ECC 83 12AX7 V1B
ECL 86 6GW8 V2B
V1A V2A



MODE SWITCH IN POS. "PLAYB."
FUNKSJONSVENDER I STILLING "PLAYB."

1) TO PREVENT DC PULSES TO PASS THROUGH THE REC./PLAYB. HEAD, THIS MICRO SWITCH MUST SHORTCIRCUIT BEFORE ANY OTHER CONTACTS ARE MADE WHEN THE B SWITCH MOVES FROM "RECORD" TO "PLAYBACK". FOR A HINDRE AT LIKESTRØMSPULSER PÅSERER GJENNOM SPILLEHODET, SKAL MICRO-BRYTEREN KORTSLUTTE FØR NOEN ANNE KONTAKTDANNELSE INNTREFFER NÅR VENDER B BEVEGER SEG FRA "RECORD" TIL "PLAYBACK".

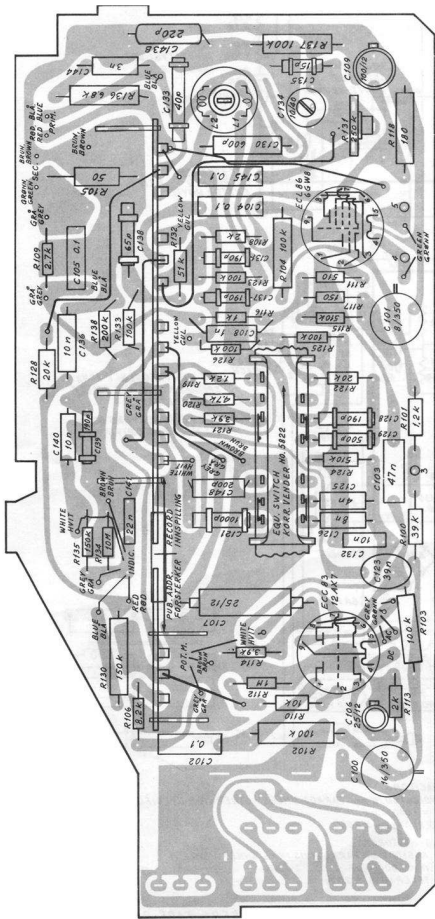
RESISTORS INDICATED IN OHMS.
K = 1,000 OHMS
M = 500,000 OHMS
* = DEPOSITED CARBON RESISTORS.
TOLERANCES ± 10% UNLESS OTHERWISE SPECIFIED.
MOTANDER ANGIT I OHM
K = 1,000 OHM
M = 500,000 OHM
* = KULLSKIKTMOTSTANDER
TOLERANSE ± 10% HVIS IKKE ANNET ANGIT

CAPACITORS INDICATED IN μF FARADS UNLESS OTHERWISE SPECIFIED.
n = 1,000 μF.
TOLERANCES ± 20%.
KONDENSATORER ANGIT I μF FARAD HVIS IKKE ANNET ANGIT.
n = 1,000 μF
TOLERANSE ± 20%

FOR LINE FREQUENCY 60Hz
SPECIAL MOTOR AND PULLEY
ARE NECESSARY.
VED NETTFREKVENNS 60Hz
MÅ MOTOR OG DRIVHJUL
SKIFTES.

NAB - EQUALIZATION

ADJUSTMENT OF TB 921 AND TB 922.



1. ADJUSTMENT OF OSCILLATOR

- 1.1. Push Record-Playback Switch to "Record" position and Tape Motion Lever to position (Normal Forward Drive). Measure voltage across erase head winding (Use a probe with input capacity less than 10 pF in order not to detune the erase head circuit). Adjust the core of the oscillator coil to max. reading on VTVM (see point 2.3.1). The frequency should then be 85-90 kHz and voltage 170-220 volts. The bias current should be about 370 mA. It can be varied by 25% by means of the variable capacitor C134 (see point 6.3).

2. ADJUSTMENT OF HEADS

- 2.1. Demagnetize the heads and adjacent parts.
- 2.2. Set Tape Motion Lever to Normal Forward Drive (→ pos.) and check that the upper mounting plates are parallel to the adjustable tape guide.
- 2.3. The playback head is adjusted by the height adjustment screws. The upper edge of the tape should run even with the upper edge of head. Be sure that the mounting plate for the head and Adjuster mounting plate are parallel. Adjust upper mounting plate by means of the output meter by playing back a standard azimuth alignment tape. Lift the pressure pad away from the tape. If the meter readings decrease more than 3-4dB, the pressure pad should be turned by turning the head mounting plate. The direction is determined by increasing the contact angle to the right or left side of the head by means of a screwdriver. (For ex. if the meter reading increases with increasing con-

tact angle on the right side of the gap. turn the head clockwise).
Recheck the azimuth alignment 2.3.2.

2.4. The Erase Head.

- 2.4.1. The face of the erase head should be visible above the tape. The gap between the head and the tape should be parallel with the upper mounting plate.

3. RECORDING CURRENT, DISTORTION

- 3.1. Recording current in the recording head should be such that during recording at max. recording level one will get 4-5% distortion on the recording level indicator light beams just touching each other. Play back and measure distortion at output terminals with a distortion meter. The recording current is adjusted by means of potentiometer R131 (increasing counterclockwise) on the amplifier board. Measurements are repeated until satisfactory results are obtained.

4. AMPLIFIER

- 4.1. Adjust the Record-Playback Switch in the upper position and set the Record-Playback Switch in Normal Forward Drive for microphone or radio input.
- 4.2. Input impedance for microphone: 1 M ohm, and for radio input: 5 M ohm. The voltage division from tape input to amplifier board should be 100% by means of a 5 M ohm potentiometer. From the factory set to about 1:50.

5. PLAY BACK

- 5.1. With Record-Playback Switch in "Play" position and Tape Motion Lever in Normal Forward Drive (→ position) the playback function can be checked, preferably with a standard frequency tape.

5.2 Tolerances ± 2.5 dB for playback frequency response curve.

6. RECORDING AND PLAYBACK

- 6.1. With Record-Playback Switch in "Record" position and Tape Motion Lever in Normal Forward Drive, recording can be made from microphone or radio input.
A 1000 Hz. input signal is connected to radio input. Speed $7\frac{1}{2}$ rpm. Volume control is set at max. The recording level indicator light beams touch each other. Reduce volume 20 dB and record the desired frequencies. By playing back the recording and measuring output voltage of the whole frequency range, the recording level indicator light beams can be checked. Same procedure for 3 1/2" and 7 1/2" speed. Tolerances at all speed ± 3 dB.
If the tape recorder's treble response is too high, the recording level control can be adjusted with the variable capacitor C134. Recheck point 3.2.

7. SPEED CHECK

- 7.1. Make sure that the flywheel and the transfer wheel move freely. Use a tape with a marked section of 450 inches (1144 cm) (start and end markers). Measure the time it takes for the tape to pass the transfer wheel. Correct time: 1 min. for $7\frac{1}{2}$ rpm, 2 min. for $3\frac{1}{2}$ " and 4 min. for $1\frac{1}{2}$ " speed. Tolerances: $\pm 2\%$ at all speeds.

8. MICROPHONE AND ERASE CHECK

- 8.1. In "Normal" position, record from microphone at max. recording level. Record the tape and listen to check recording.
- 8.2. Set volume control to zero and erase the program. Rewind the tape and play back with the volume control on max. Check that the program is erased completely.