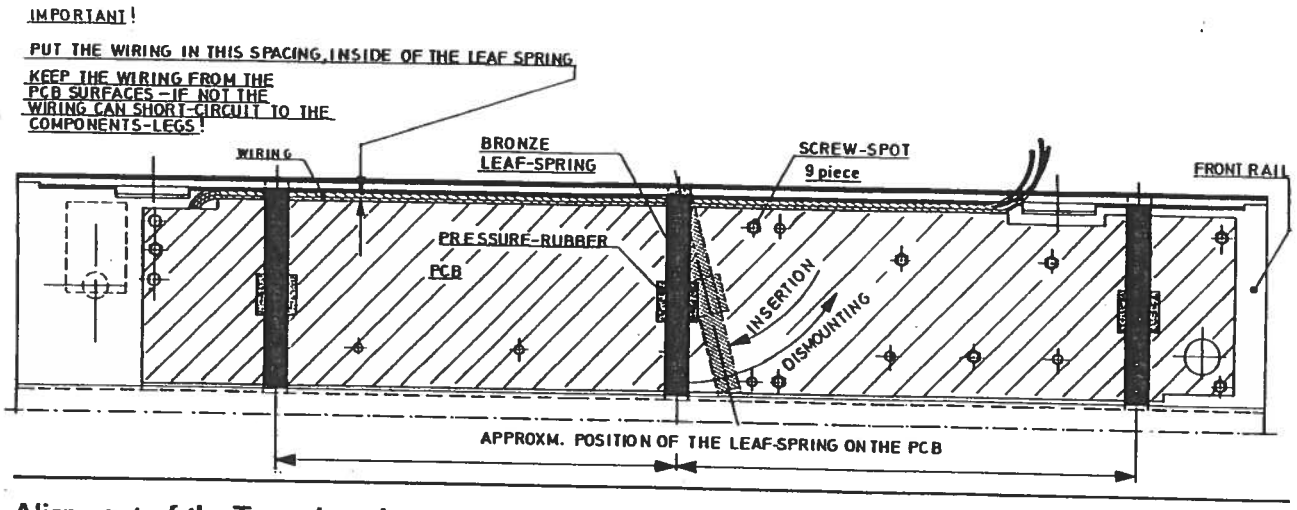
Dismantling/Mounting the Display board



Alignment of the Tuner board

1. DC voltage control
   - DC voltage across C726 shall be 30V ± 1V
   - DC voltage across C708 shall be 15V ± 1V
   - DC voltage across C757 shall be 5.6V ±0.3V

2. For alignment the display board has to be connected. Connect the FM-generator to the antenna connector (75 ohm) and use the following set up.
   - Frequency to 98 MHz.
   - Modulation, FM 100% = ± 75 kHz
     Audio 1 kHz, 91%, and pilot 19 kHz, 9%.
   - RF level, 65 dBf (approx. 0.5 mV).
   - Mode, mono.
   - Adjust the FM tuner to 98 MHz on the display.

3. Adjust the frequency at J707, TP101, to 108.7 MHz exactly with C774 using a frequency counter. The accuracy in this adjustment is very important for the following adjustments.

4. Connect a distortion analyzer and a level meter to the audio output terminal, L or R channel, and connect a DC mV meter across pin 7 and 10 on U707.
   - Adjust L713 until the DC meter indicates 0V ± 20 mV.
   - Adjust L714 for minimum distortion.
   - The adjustments have to be repeated several times to attain minimum DC level and minimum distortion, d ⩽ 0.2%.

5. Adjust the FM generator for modulation on the L channel only.
   - Measure the audio output level, L channel.
   - Change to the R channel and adjust R709, channel separation, for minimum deflection on the level meter. The output level shall be ⩽ 45 dB relative to the level measured in the L channel.
   - Change modulation to R channel only and repeat the measurements but this time on L channel.

   NOTE! Minimum deflection on the level

6. Adjust the RF level from the FM generator to 20 dBf (approx. 3μV).
   - Adjust R708, center LED, so that it just goes on (lights up).

7. Adjust the RF level from the FM generator to 30 dBf (approx. 10μV).
   - Adjust R710, signal strength LED, so that it just goes on (lights up).

8. Adjust the FM generator to 107 MHz exactly and RF level to 65 dBf.
   - Set the tuner into autosearch mode and start searching.
   - The tuner shall stop at 107 MHZ exactly and the center LED and signal LED shall go on (light up).
   - Do the same check at 88 MHz.

9. Switch settings

	S701	S702	S704	S705 L. ch	S706 R. ch
EU	OFF	ON	OFF		
USA	ON	OFF	ON		
75μs				OFF	OFF
50μs				ON	ON
Not allowed	ON	ON			

S701 and S702 sets the frequency steps to either 50 kHz (EU) or 100 kHz (USA). S704 changes the bandwidth of the detected signal. It is from the factory set to low for all other markets except USA, which is high.

NOTE! Not allowed is S701 and S702 in on position at the same time. This will short circuit + 5.6V to ground.

10. In case of too high 19 kHz pilot leakthrough to the audio output.
    - Set the FM generator to stereo and no audio modulation.
    - Adjust L707 L ch, and L708 R ch, for minimum 19 kHz at the audio output.

Technical Data

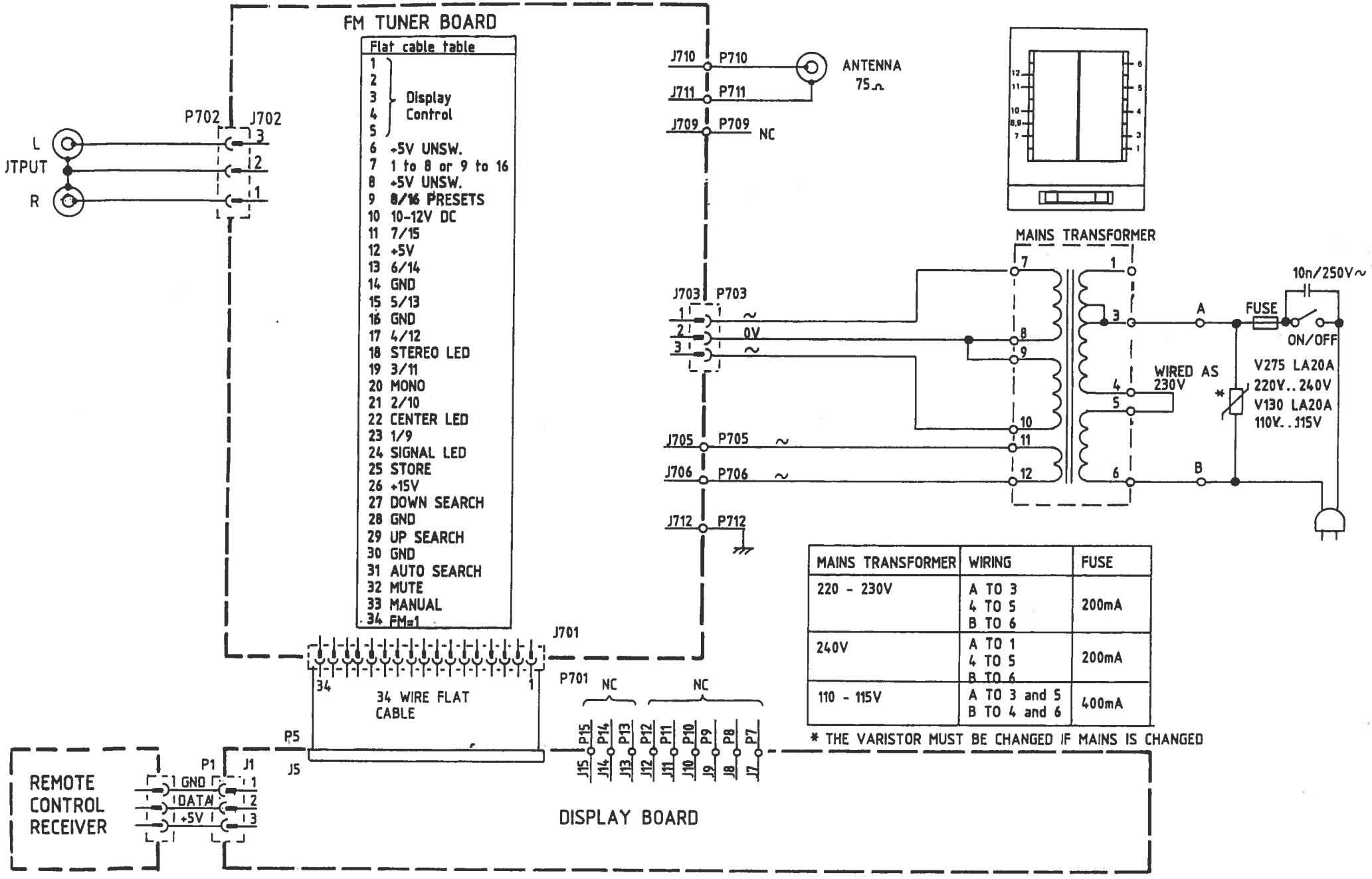
Tandberg Programable Tuner TPT 3031A

Power requirements:		110 – 115 V/220 – 230 V/240 V ± 10 %, 50/60 Hz
Power consumption:		23 W
Dimensions:	Width:	17 1/8" (43.5 cm)
	Depth:	13 3/4" (35.2 cm)
	Height:	3 1/4" (8.7 cm)
	Weight:	10.7 lbs (4.85 kg)

Technical Data according to IHF-T-200, 1975 IEEE Std. 185, 1975

Tuning range:		87.5 – 108 MHz
Usable sensitivity:	Mono	1 uV/75 ohm
50 dB quieting sensitivity:	Mono	2.0 uV/75 ohm
	Stereo	20.0 uV/75 ohm
Signal to noise ratio:	Mono	75 dB
	Stereo	72 dB
Muting threshold:		5 uV/75 ohm
Muting hysteresis:		6 dB
Stereo threshold:		1 uV/75 ohm
Frequency response 30 Hz to 15 kHz:	Mono	+ 0.5 dB – 1 dB
	Stereo	+ 0.5 dB – 1 dB
Distortion at 50 dB quieting:	Mono	0.1 %
	Stereo	0.2 %
Distortion at 65 dBf (0.5 mV/75 ohm at 1 kHz):	Mono	0.09 %
	Stereo	0.2 %
Distortion at 65 dBf (30 Hz to 15 kHz):	Stereo	0.3 %
Intermodulation distortion:	Mono	0.2 %
	Stereo	0.2 %
Capture ratio, selectively measured:		1 dB
Adjacent channel selectivity ± 200 kHz:		14 dB
Alternate channel selectivity ± 400 kHz:		> 100 dB
Spurious response ratio:		> 80 dB
Image response ratio, balanced:		> 90 dB
RF intermodulation:		> 70 dB
AM suppression ratio:		> 70 dB
Stereo separation: (60 Hz to 10 kHz, selectively measured):		> 45 dB
Subcarrier product ratio:		70 dB
19 kHz suppression:		70 dB
38 kHz suppression:		90 dB

Specifications are subject to change without notice.

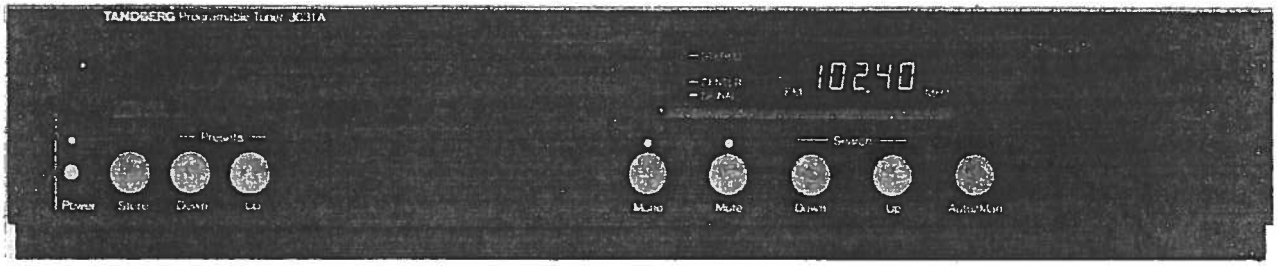


MAINS TRANSFORMER	WIRING	FUSE
220 - 230V	A TO 3 4 TO 5 B TO 6	200mA
240V	A TO 1 4 TO 5 B TO 6	200mA
110 - 115V	A TO 3 and 5 B TO 4 and 6	400mA

* THE VARISTOR MUST BE CHANGED IF MAINS IS CHANGED

TANDBERG® TPT 3031A

Circuit Diagrams and Alignment Instructions



January 1989