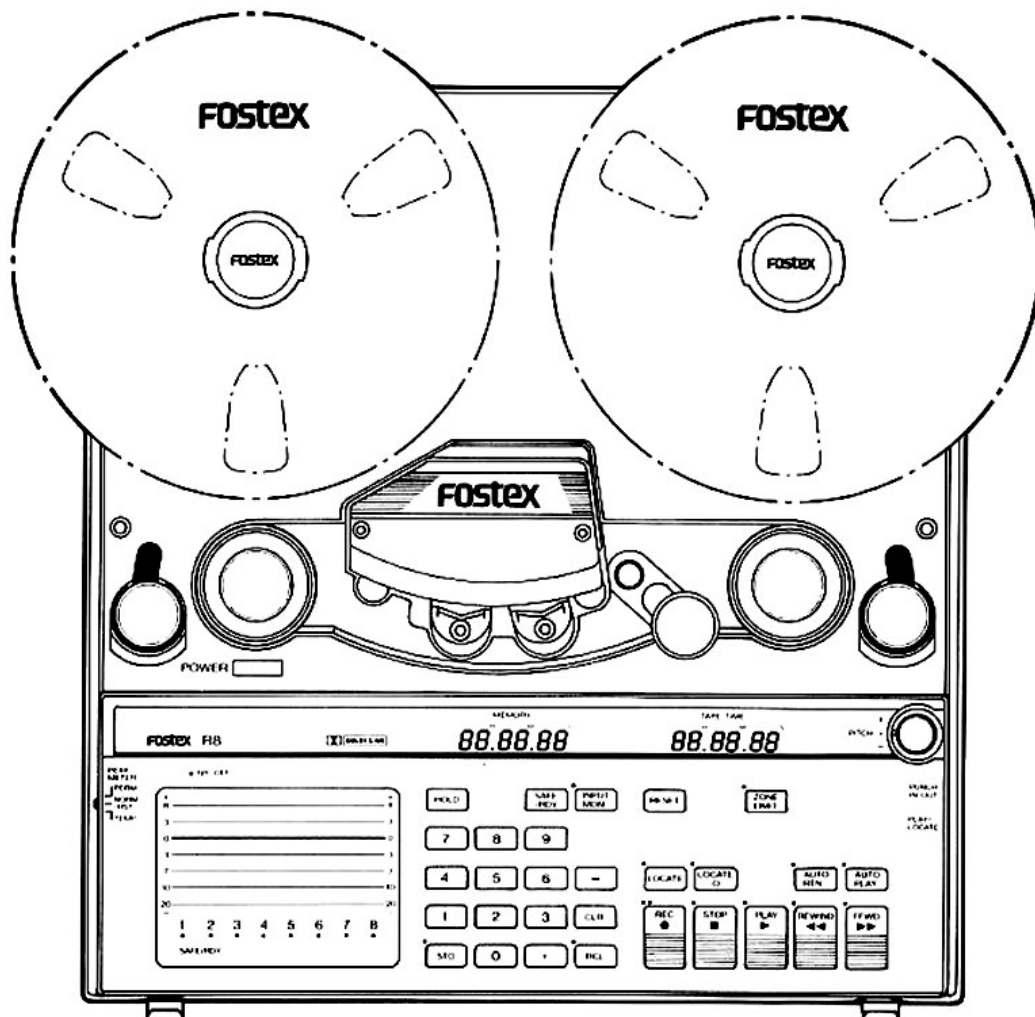


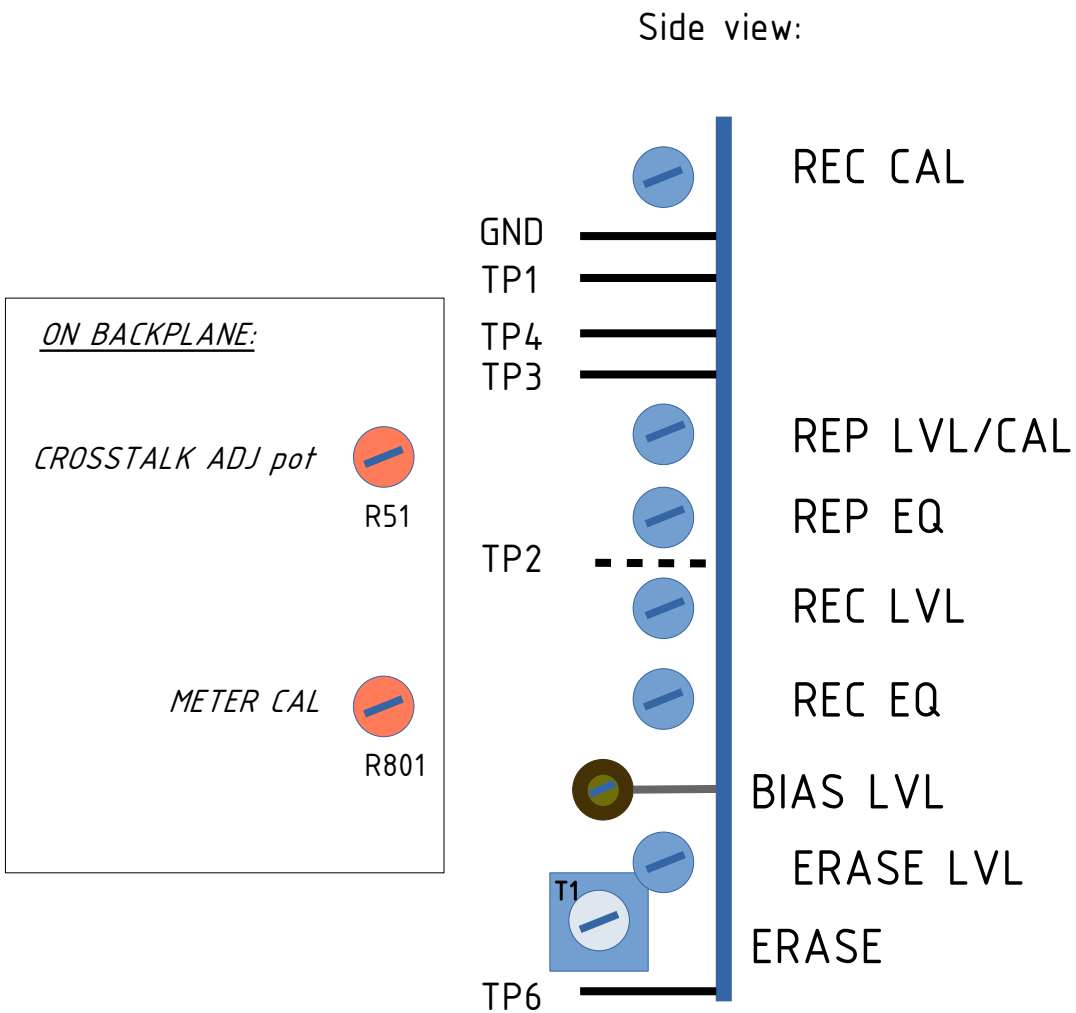
## Quick summary of Fostex R8:

Page:

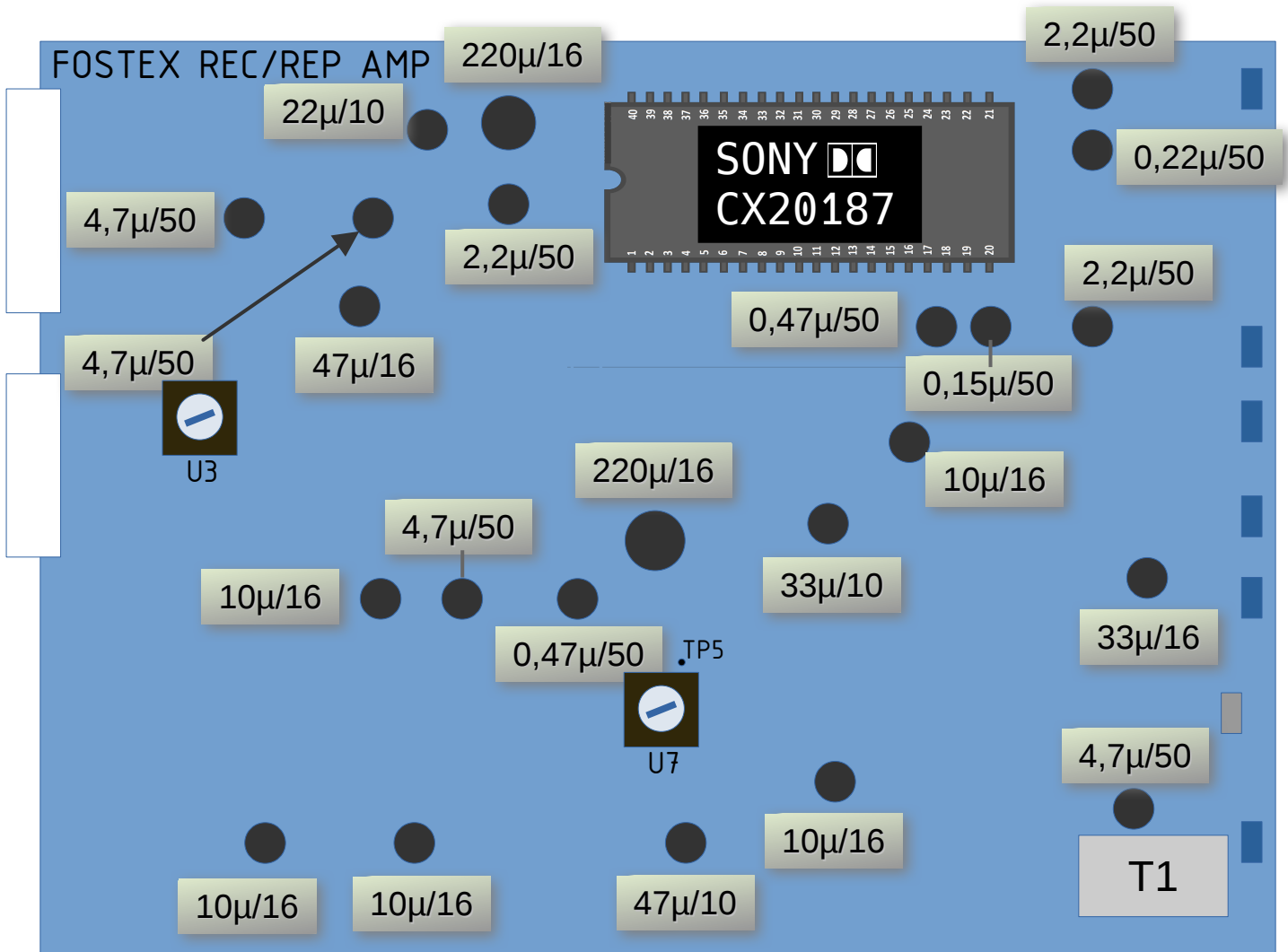
- 2 REC/REP AMP location of pots
- 3 REC/REP AMP location of el. capacitors
- 4 REC/REP AMP location of el. capacitors reverse side
- 5 Calibration instructions



Fostex R8 REC/REP AMP location of pots



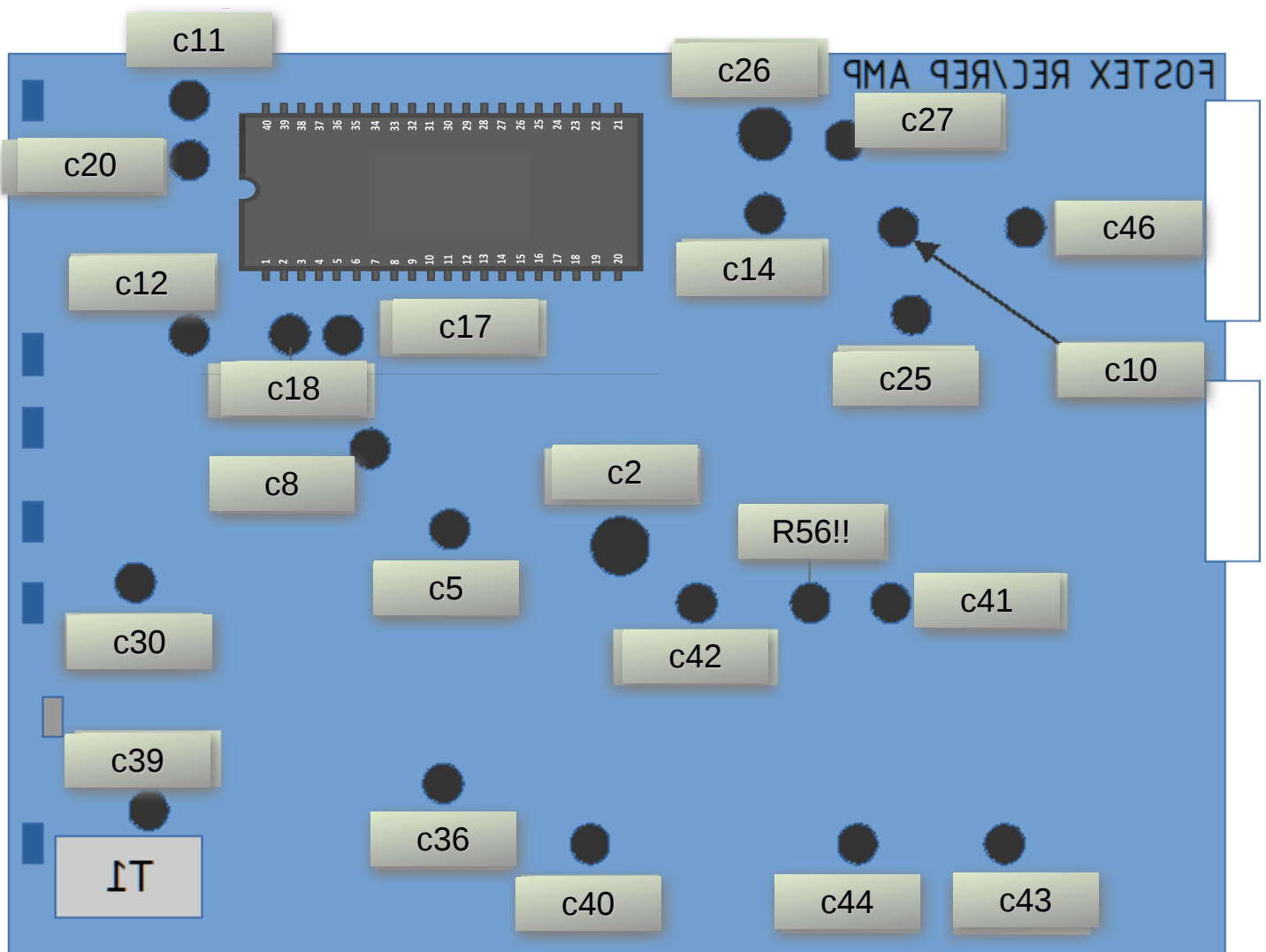
## Fostex R8 REC/REP AMP PCB location of electrolytic caps



Cap./volt	#
0,15/50	1
0,22/50	1
0,47/50	2
2,2/50	3
4,7/50	4
10/16	5
22/10	1
33/16	2
47/16	2
220/16	2
<b>Total</b>	<b>23</b>

Some voltages in this list are higher rated to reduce the number of capacitors needed. The above diagram shows original values as found.

Fostex R8 REC/REP AMP location of electrolytic caps reverse side PCB



## Fostex R8 Calibration instructions

0 dB referenced to 320 nWb/m of tape flux.

Line input: -10 dBV (316mV) impedance 30 kΩ or higher, unbalanced

Line output: -10 dBV (316mV) load impedance 10 kΩ or higher, unbalanced

Execute in given order!

### 1. Input level and meter calibration: (4.3.2)

- Dolby off / Input Monitor on
- 1kHz -10dBV 316mV on input
- adjust **REC CAL** so that **TP4 = 245mV** (-12.2dBV)
- check output is 316mV (-10dBV ±1dB)
- set meter display to Fine
- adjust **METER CAL** on backplane for 0dB LED
- repeat for all tracks

### 2. Reproduce level calibration: (4.3.3)

- play calibration tape, reference level section
- adjust **REP CAL** so **TP4 245mV** (-12.2dBV)
- check output is 316mV (-10dBV ±1dB)
- check meter reading **0dB** ±1dB
- repeat for all tracks

### 3. Reproduce frequency response calibration: (4.3.4)

- playback frequency response part
- adjust **REP EQ** for frequency response **45-18kHz** ±3dB

### 4. Bias leakage check reproduce: (4.3.5)

- connect scope to **TP2**
- put track 1 on reproduce and track 2 in record mode
- check bias leakage at **TP2 < 280mV** p-p (-20dBV)
- if it is higher, then adjust **U3\*** for minimum value
- repeat for next track

\* U3 is small coil located on REC/REP PCB closest to connectors

### 5. Bias leakage check record:

- connect scope to **TP5** (in the middle of the card)
- put track 1 in record mode
- check bias leakage at **TP5 < 1.1V** p-p (-10dBV)
- if it is higher, then adjust **U7\*\*** for minimum value
- put cards in slot 8 for easy access

\*\* U7 is small coil located on REC/REP PCB, see diagram on page 3

### 6. Erase current adjustment: (4.3.6)

- put track in record mode
- connect oscilloscope to **TP6**
- set core of T1 so that voltage at TP6 reaches peak level
- then adjust **ERASE LEVEL** so **TP6 is 90mV** p-p (-30dBV)

### 7. Bias current adjustment: (4.3.7)

- put all 8 tracks in record mode
- connect oscilloscope to **TP1**
- set **BIAS LVL** ~300mV p-p over the peak point

### 8. Record level calibration: (4.3.8)

- apply 1kHz -10dBV (316mV) on input jack
- connect meter at output
- depress **RECORD TRACK1** button, then depress **RECORD** and **PLAY** buttons
- track 1 is now in record mode and meter will indicate input level regardless of position of **INPUT MON** button
- check if meter reads 0dB ±1dB
- after recording tone, rewind and check output level (input mon must be at **INDIV**)
- check output level is -10dBV ±1dB
- if not, adjust **REC LVL**
- repeat for all tracks

### 9. Overall frequency response: (4.3.9)

- apply signals 45-18kHz 316mV (-10dBV) to input jack
- record and playback the tape
- check frequency response ref. to 1kHz ±3dB
- correct by slight rotation of **REQ EQ**
- **dolby C on**
- apply signals 250-14kHz at 32mV (-30dBV)
- record and playback the tape
- check frequency response between 250-10kHz ±3dB and ±5dB @ 14kHz

### 10. Overall S/N measurement: (4.3.10)

- dolby **C on**
- apply 1kHz 316mV -10dBV on input and record tape
- keep tape running, unplug input and record to tape
- playback no-signal section against the 1kHz reference level
- calculate the difference and add 10dB
- specification: 78dB weighted, 60dB unweighted

### 11. THD measurement: (4.3.11)

- dolby **C on**
- record 1kHz 316mV (-10dBV) and playback tape
- measure output on distortion meter
- specification: THD <1%
- if not, demagnetize head, check bias trap and record level
- if not correct still, redo procedure 4.3.7, 4.3.8 and 4.3.9

### 12. Erasure measurement: (4.3.12)

- dolby **C off**
- apply 1kHz 0dBV 1V and record large section on tape
- rewind and record over small section without signal applied
- apply 1kHz bandpass filter to output and meter
- level ratio between 1kHz and no-signal section is the erase figure
- should be **>70dB**
- if not, increase erase current by 10% (4.3.6)
- monitor on scope and do not let erase current waveform deteriorate!

### 13. Sync crosstalk check and adjustment: (4.3.13)

- dolby **C off**
- apply 20-20kHz 316mV -10dBV signal to input jack2
- press **REC** and **PLAY** and select track2 so that track2 records
- monitor output1
- should be <-30dBV @ 1kHz and <-10dBV at worst point
- if not, adjust **R51 CROSSTALK ADJ** pot on connector PCB
- first adjust roughly for minimum @1kHz
- then adjust within spec @ 20-20kHz
- and so on: tr.3 to tr.2 is pot R52, tr.4 to tr.3 is pot R53, etc