Figure 5. The printed circuit boards for the amplifier and the protection circuitry are delivered as a single board and must be sawn apart

COMPONENTS LIST

Amplifier board

Resistors:
R1 = 1MΩ
R2 = 47kΩ
R3,R22 = 470Ω
R4,R5 = 1MΩ8
R6,R7,R11,R12 = 47Ω
R8,R9,R13,R14 = 1kΩ
R10,R15 = 330Ω
R16,R19,R30,R31 = 22kΩ
R17,R20,R28 = 270Ω
R18,R21 = 8kΩ2
R23 = 12kΩ
R24,R26 = 10kΩ
R25,R27 = 33Ω
R29 = 120Ω
R32,R33 = 220Ω
R34,R35 = 0Ω22 / 5W low-inductance, e.g., MPC 71 series
R36 = 10Ω / 1W *
R37 = 1Ω / 5W
P1 = 1kΩ preset H

Capacitors:
C1 = 2µF2 MKT (Siemens), lead pitch 5mm or 7.5mm
C2,C4,C5 = 1nF
C3 = 180nF
C6,C7 = 100µF 25V radial
C8,C9 = 220µF 25V radial
C10,C12,C14 = 100nF
C11 = 10nF *
C13,C15 = 1000µF 63V radial

Inductors:
L1 = 9 turns 1.5 mm dia. ECW around R37, inside diameter 8 mm

Semiconductors:
D1,D2 = rectangular face, red
D3,D4 = zener diode 3V9 / 0.5W
T1,T2,T6 = BC546B
T3,T4,T5 = BC556B
T7 = BC560C
T8 = MJE350
T9 = BC550C
T10 = MJE340
T11 = 2SK537 (Toshiba)
T12 = 2SK1530 (Toshiba)
T13 = 2SJ201 (Toshiba)

Miscellaneous:
5off M3 spade terminals, PCB mount
3off ceramic (or mica) isolating washer for voor T8/T10/T11
2off mica isolating washer for

inqs, we hasten to point out that we are talking about a monaural version here, so for a stereo amplifier you will have to build two of these supplies!

The 'mains switch-on delay' shown inside the dotted box in Figure 3 is not mandatory, but it is highly recommended — especially if a toroidal transformer is used. This circuit does exactly what its name suggests, and it ensures that excessive current surges do not occur when the mains voltage is switched on. Such circuits have frequently been described in Elektor Electron-

ics; the most recent one can be found in the Summer Circuits issue of 1997, and we have reproduced its