validity of the earthing arrangement. If at all possible, the pc board published should be used, as departures from this design could seriously affect amplifier performance.

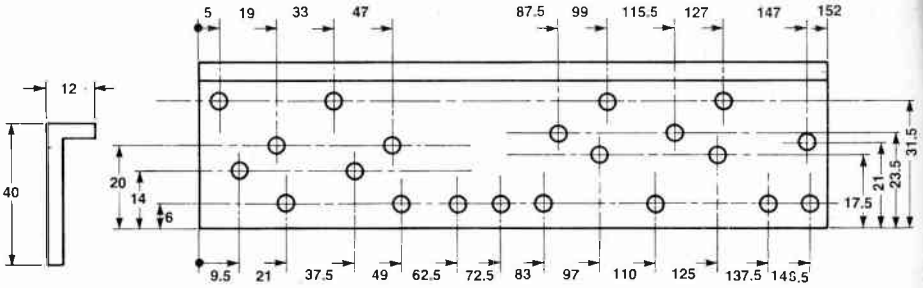
Commence construction by soldering all the resistors onto the circuit board with the exception of the four 0R22 output resistors. These effectively connect all the sources of the MOSFETs together and make it difficult to locate faults in the mounting of the MOSFETs. Solder the 1 W resistors slightly above the circuit board since these can become hot under certain conditions. The components marked with an asterisk on the circuit diagram are mounted on the rear of the pc board. They should be mounted close to the MOSFETs. Do not solder the resistors to the rear of the circuit board at this stage. These are best left until after the MOSFETs have been mounted.

Solder the capacitors onto the circuit board with the exception of those on the rear of the board and the two large electrolytics. The 100u capacitor C3 is the only other electrolytic, so be careful with the orientation of this component. The capacitor is marked to indicate which of its leads are to be connected to a positive or negative voltage. Check the correct orientation on the overlay diagram. This also applies to the diodes and zener diodes used in the circuit, which can be mounted next.

Both the driver and power transistors are mounted on a length of aluminium angle extrusion, which is bolted to the pc board by bolts through the transistor mounting holes. This is shown in the accompanying diagrams. The extrusion is used to conduct the heat generated by the output and driver transistors to the heatsink, which will also be bolted to the extrusion. If you purchase the mod-

ALL 4 mm DIA.
MATERIAL 40 x 12 x 3 ALUMINIUM ANGLE EXTRUSION
Drilling details for the heatsink bracket assembly. All dimensions are in millimetres.
Suitable aluminium angle stock is available from Alcan Handyman stores.

BRACKET DRILLING DETAILS



PARTS LIST — ETI-499

Resistors ..... **all ½ W,5% unless stated**
R1,R2 ..... 100k
R3,R11 ..... 1k
R4,R5,R18-R21 ..... 220R
R6,R7 ..... 3k9
R8 ..... 22k
R9 ..... 680R
R10 ..... 10k
R12,R15,R16,R17 ..... 100R
R13 ..... 33k
R14 ..... 10k 1 W
R22-R25 ..... 0R22 W
R26 ..... 4R7 1 W
R27 ..... 1R 1 W
RV1 ..... 100R preset
RV2 ..... 250R preset

Capacitors
C1,C9 ..... 220n greencap
C2 ..... 2n2 greencap
C3 ..... 100u/25 V electrolytic
C4 ..... 33p ceramic
C5 ..... 6n8 greencap
C6,C8 ..... 330p ceramic
C7 ..... 47n greencap
C10,C11 ..... 100n greencap
C12,C13 ..... 8000u/75 V electrolytic

Semiconductors
Q1,Q2,Q3 ..... BC546
Q4,Q5 ..... BF470
Q6,Q7 ..... BF469
Q8,Q9 ..... 2SK134 Hitachi MOSFET
Q10,Q11 ..... 2SJ49 Hitachi MOSFET
D1-D4 ..... 1N914
D5-D8 ..... 1N5404
ZD1,ZD2 ..... 12 V 400 mW zener

Miscellaneous
ETI-499 pc board; plastic bobbin (from P26/16 potcore or similar); 5 A fuse (speaker fuse, not mounted on pc board); fuse holder; 1 m of 0.8 mm enamel-covered copper wire; 155 mm length of aluminium extrusion, 40 mm x 12 mm, for use as the heatsink bracket; assorted nuts and bolts, hookup wire, etc; two solder lugs.

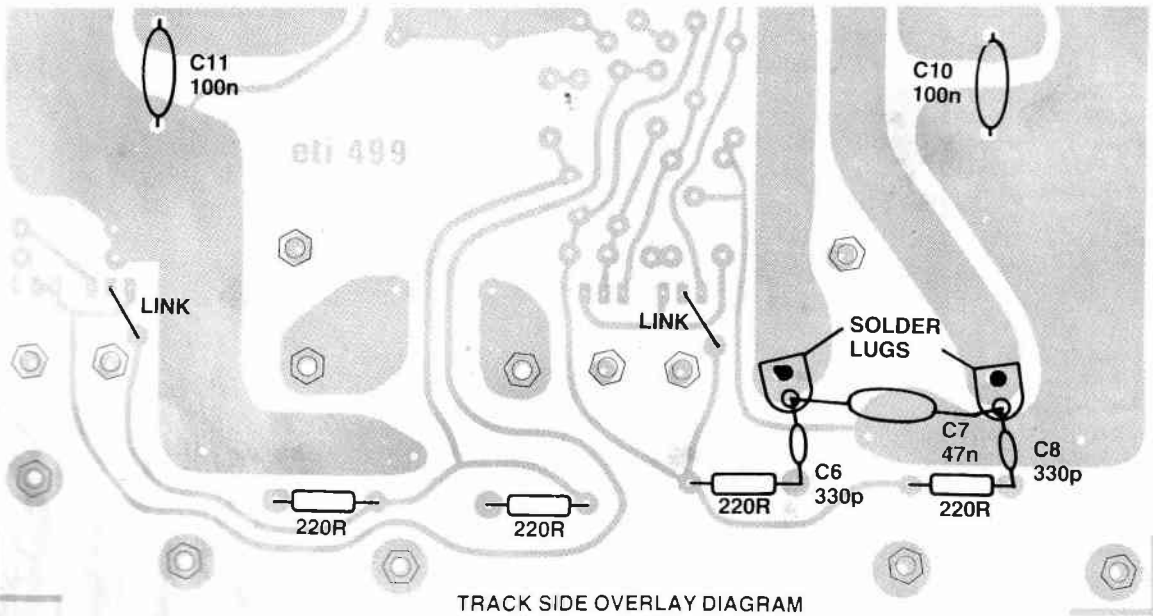
Price estimate

We estimate the cost of purchasing all the components for this project will be in the range:

$75-$85

(heatsink & transformer extra)

Note that this is an **estimate** only and **not** a recommended price. A variety of factors may affect the price of a project, such as — quality of components purchased, type of pc board (fibreglass or phenolic base), type of front panel supplied (if used), etc — whether bought as separate components or made up as a kit.



TRACK SIDE OVERLAY DIAGRAM