

TRANSARC DC 135/205

PCB Operation

Voltage Supplies:

2 x 18V ac is applied to pins 11 & 12 producing 15V regulated DC supplies.

Current Control

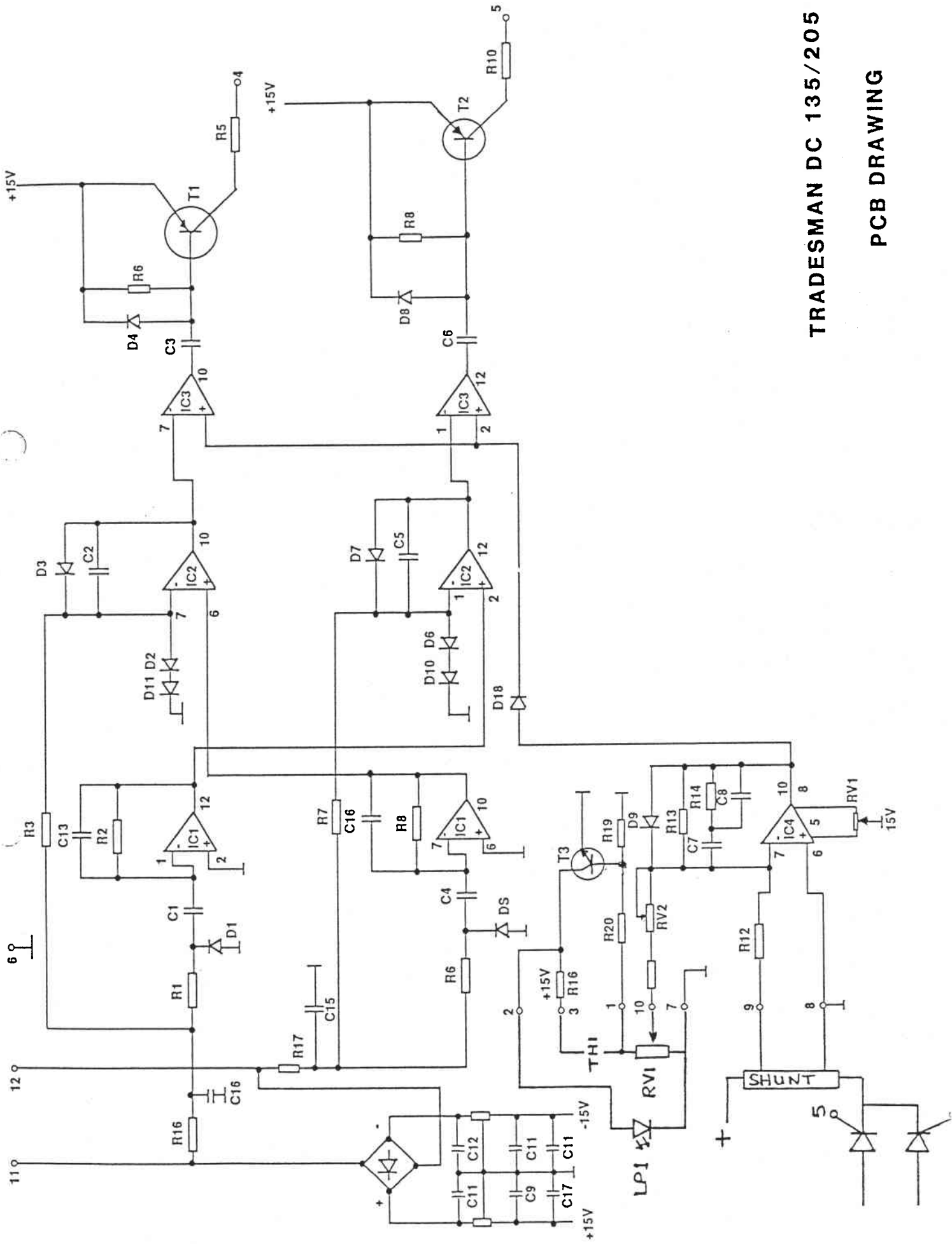
Phase shifted ac waveforms are applied to the inputs of IC1 & IC2 producing negative co-sine waveforms at IC2 outputs pins 10 & 12. These are then compared in two parts of IC3 (firing angle comparators) with the signal from the error amplifier, this signal being dependant on the setting of the current control potentiometer (RV1) and the signal from the shunt, this signal is also being negative.

The output waveforms from the firing angle comparators are 15V squarewaves, the negative half-cycles being used to energise transistors T1 & T2 which subsequently switch on the main thyristors.

Overload Protection/Indication

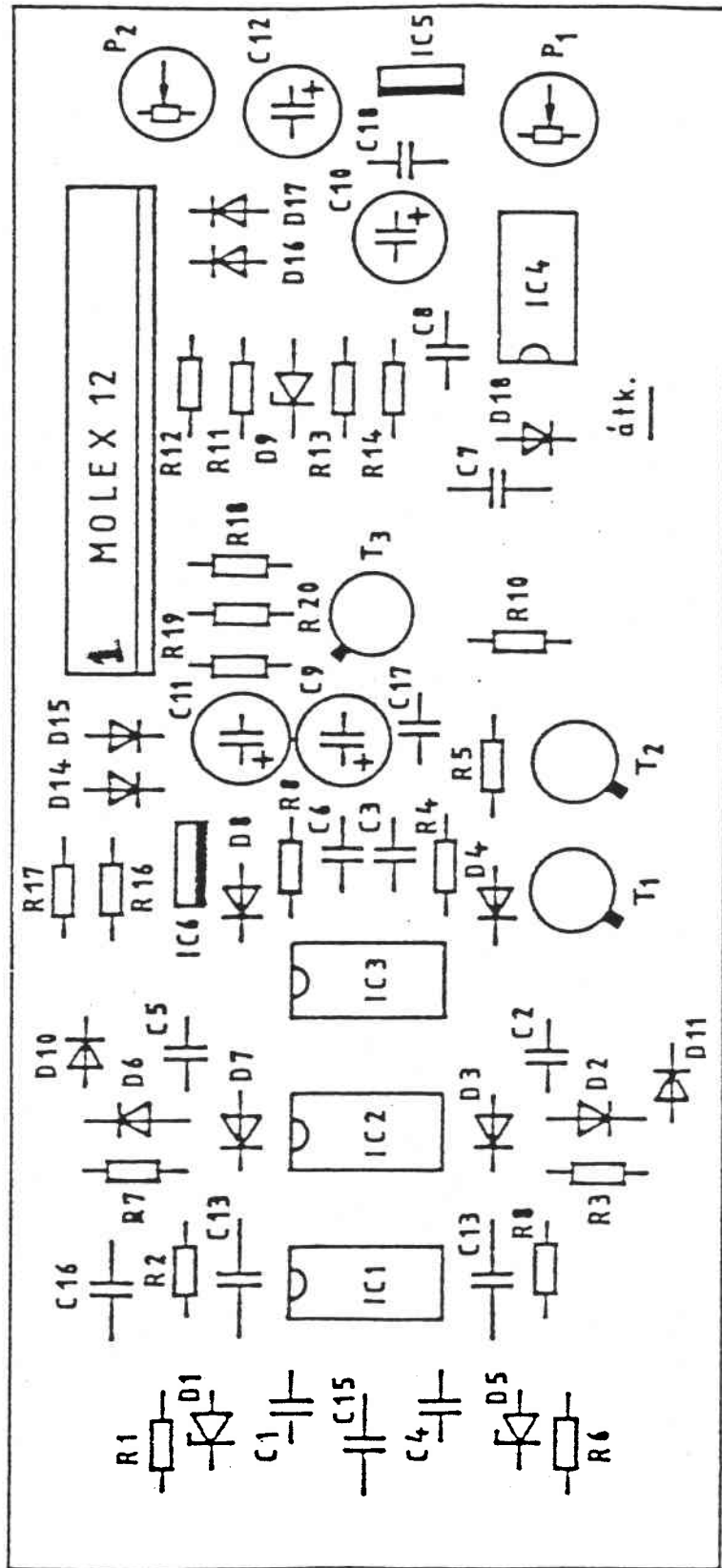
Under normal conditions +15V from pin 3 is applied through the thermostat to pin 1 and hence to the top of RV1. This positive voltage is also applied to the base of T3 with energises grounding pin 2, no voltage is present at this time to illuminate the overload indicator lamp LP1.

At overload condition the thermostat (TH1) will open removing the voltage from pin 1, T3 will now switch off allowing +15V to be applied to the indicator lamp which will now illuminate. Also no voltage will now be present at RV1 and the thyristors will not be fired.



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PCB DRAWING



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PCB LAYOUT