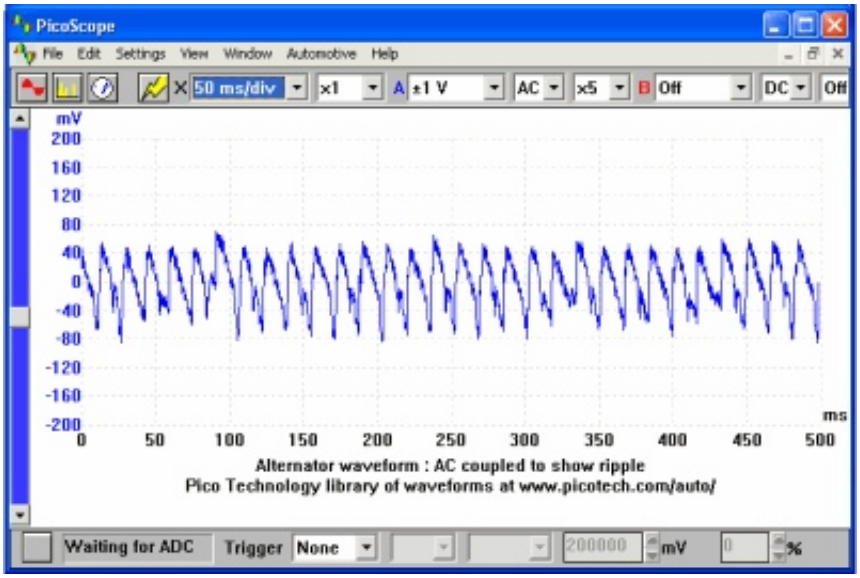
Alternator Voltage and Current (AC Coupled)



Waveform Notes

The example waveform illustrates the rectified output from the alternator.
The contents of this waveform shows:-

- The output is correct and that there is no fault within the phase windings or the diodes (rectifier pack).
- The three phases from the alternator have been rectified to Direct Current (DC) from its original Alternating Current (AC) and that the three phases that contribute towards the alternators output are all functioning.

If the alternator was suffering from a diode fault, long downward 'tails' will appear from the trace at regular intervals and 33% of the total current output will be lost. A fault within one of the three phases will show a similar picture to the one illustrated but is three or four times the height, with the base to peak voltage in excess of 1 volt.

The voltage scale at the side of the oscilloscope is not representative of the charging voltage, but is representative of the upper and lower limits of the DC ripple. The 'amplitude' of the waveform will vary under different conditions with a full charged battery showing a 'flatter' picture, while a discharged battery will show an exaggerated amplitude until the battery is charged.