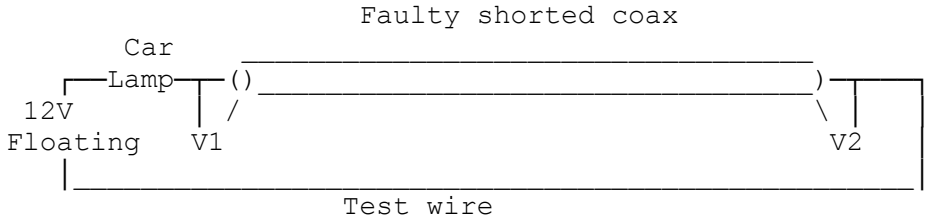
Coax faulting

By G8MNY (New Aug 10)
(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

Here is a simple practical method of finding a short on a long run of coax. It assumes a temporary test wire can be run from end to end & that the coax inner & outer are continuous, resistive damage in the outer or a corroded short (as wired below) will not affect the measurements.

CONNECTIONS

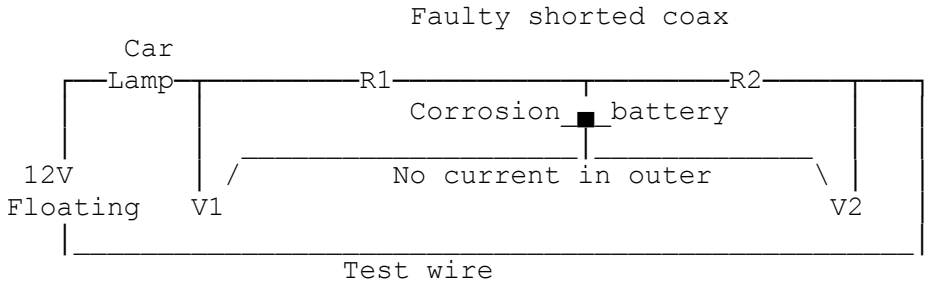


Here it is assumed the inner is OK & it has constant resistance per length. (if this is not true see "DAMAGED INNER" below)

The 12V supply must be floating so it can be reversed & have no currents to earth.

The lamp wattage sets a suitable current down the inner conductor so that at least a few 100mW will be across it. (this may need 5A for thick LDF cables etc.)

CIRCUIT



With a sensitive DMV measure V1 & V2, then reverse the 12V polarity & repeat. Average the readings at each end (ignore polarity) to cancel any corrosion voltage at the short.

Now the total inner conductor voltage drop is just V1+V2

And the fault position is $\frac{V1}{V1+V2}$ x Length, from the lamp end.

DAMAGED INNER
If the inner is damaged more than the outer (water corrosion) then make the outer the current carrier.

See TECH buls on "Coax Tester" & "Coax Feeder Tests"

Why don't U send an interesting bul?

73 de John G8MNY @ GB7CIP