

BARC – Presentation – Wed 10th April 2024

Presentation covers:

- **Shack Construction & Set Up**
- **Running power to the Shack with a focus on Electrical Safety**
- **Re-using Equipment Chassis & Cabinets**
- **Introduction to VHF & HF Web SDR's**

Please feel free to ask any relevant questions during the Presentation, although there will be time at the end to ask questions.

Gareth M7GRB & Martin 2E0XBZ



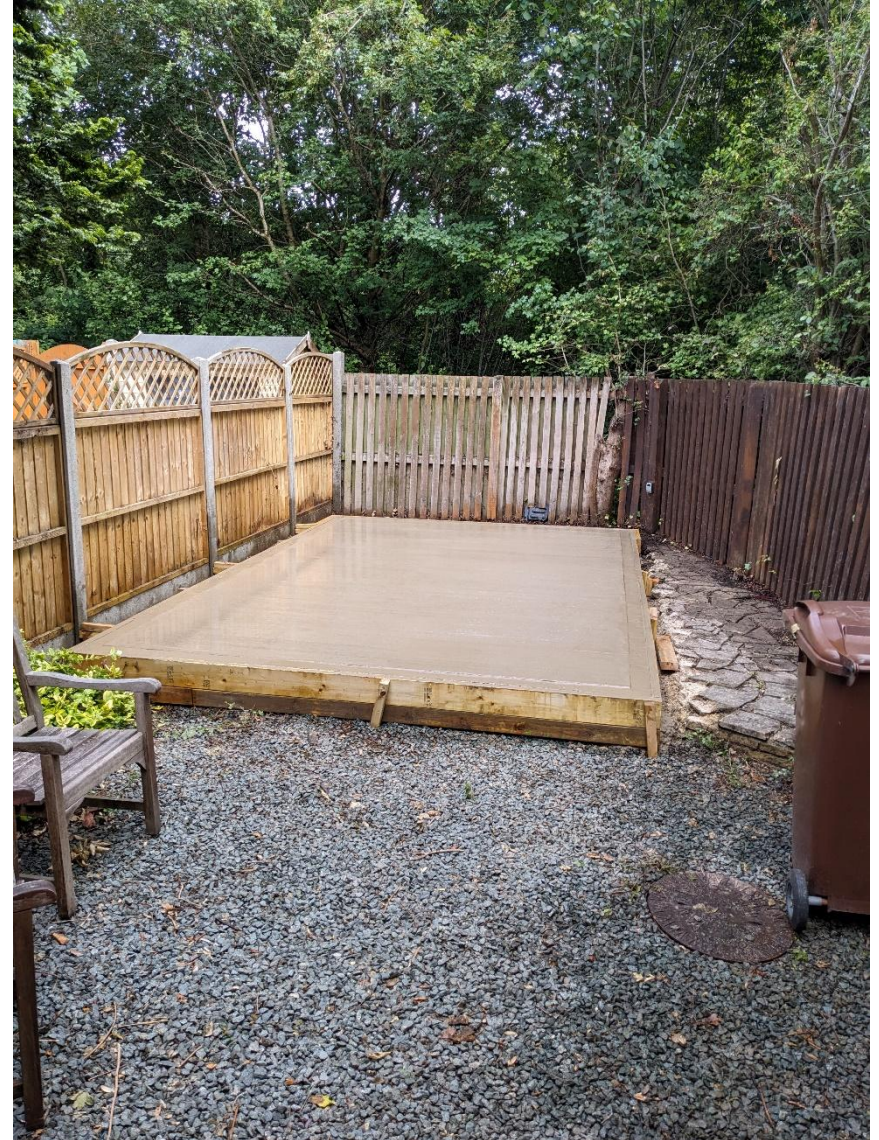
2E0XBZ Shack



M7GRB Shack

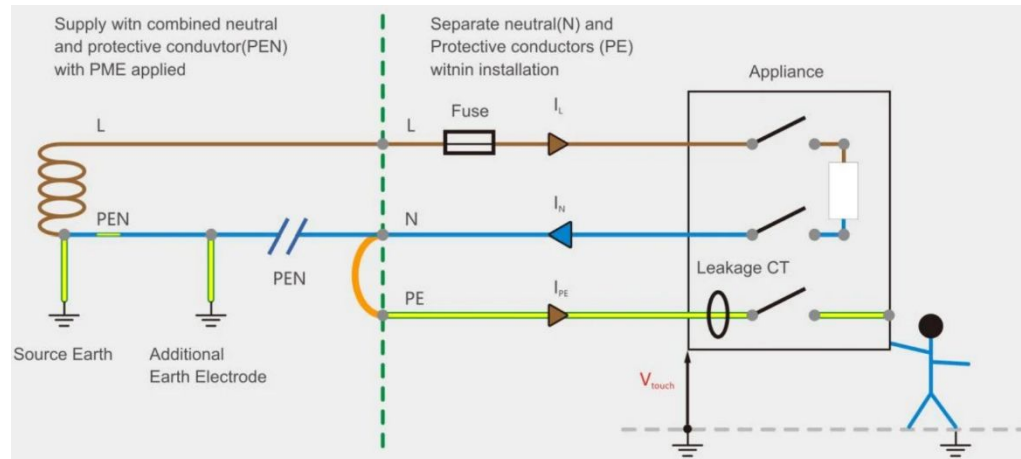


M7GRB Base



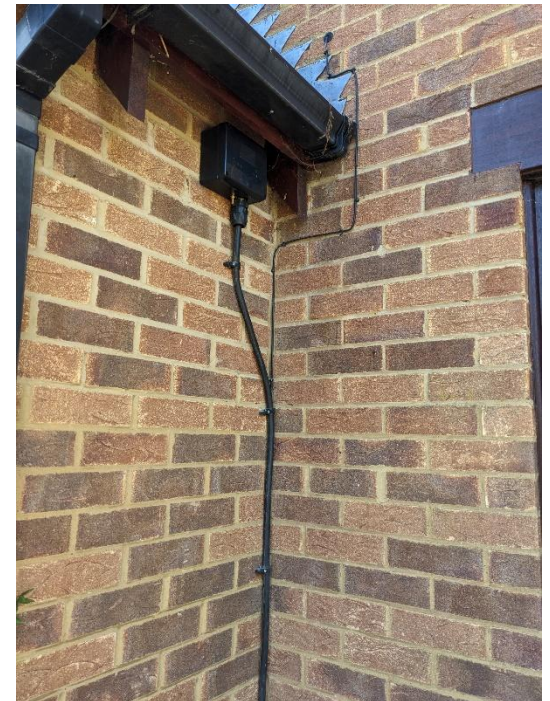
The Problem With PME (TN-C-S) Mains Supplies

- Ground is connected to the neutral as it comes into the house.
- If there is a break in the neutral wire in the street then earth is effectively connected to live via every switched on appliance in the area.
- An RCD won't detect the fault.
- Not quite as bad as it may initially appear as the regulations also require earth to be bonded to water and gas pipes. Still a neutral polarity of around 100V is common in fault conditions.
- If water and gas pipes are plastic then they are not going to be effectively grounded.
- At least you are not going to be electrocuted as badly as if you were touching something earthed at the same time!



Shack Power

- Martin suggested that the earthing arrangements were sorted while the foundations were being done but this would have been too difficult to arrange as the ground was also to be the mains ground.
- I had the circuit breaker installed in the consumer unit and wired up and the mains cabling run in trunking using 10mm² SWA cable. This is good for 60+ Amps but protected by a 40A dual pole circuit breaker. Power cut #3.
- Later I had an EV battery charger installed, an isolator switch installed by the electricity company and a battery storage system installed. Power cuts #4, #5 and #6. I was getting tired of power cuts by this point.



Shack Photos



Construction - Internal Panelling

