

# Tipperary Amateur Radio Group, Experiments in the Galtees

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Over the weekend of the second and third of April, Tipperary Amateur Radio Group, with assistance from others provided radio communications for almost all of the walks of the Galtee Walking Festival (<http://www.aherlow.com/html/walking.html>). Radio Personnel, were on all but the 'C' walk on Sunday, these included:

Saturday:

- A Walk - EI7IG
- B Walk - EI3FFB, EI3IQ, EI9HR
- C Walk - EI5HE, EI3ENB
- Base - EI2HI
- Relay - EI3FU, EI8JA, EI5JF, EI2JB

Sunday:

- A Walk - EI2IT
- B Walk - EI3FFB
- C Walk - (none)
- Nature Trail - EI2JB
- Base - EI7IG

Over 250 walkers participated over the course of the two days, many thanks to EI3FU, EI3IQ, EI9HR and EI8JA for assisting us over the weekend your help was very much appreciated.

## 1 Voice Communications

On Saturday, EI2HI used his Handheld radio at the Foot Bar (Base), while using his Mobile Radio as a temporary relay station, this allowed for great flexibility for Base Operations and rapid deployment. In my personal opinion, Jackie, EI3FU played a critical part in the early part of the A walk (the ascent of Temple Hill) as he was the only station that could hear me, and he relayed several messages between myself and EI2HI at Base, in a clear and concise manner. This initial stage has proven to be the most critical in the past, with walkers finding that they are unable to continue for whatever reason.

On Sunday morning we set up the antennas for Voice (Diamond X300) and Data (Slim Jim) at the Foot Bar (pictures attached), I used a FT-1500M for APRS receive (we didn't transmit as we would most likely have desensed the Icom 910 which was used for Voice communications) and a G3LIV soundmodem interface (<http://www.melvin2.freemove.co.uk/>). The computer was a Dell Latitude PII 366 with 128MB of Ram, Debian Linux installed, and I compiled Xastir ([www.xastir.org](http://www.xastir.org)), the APRS application, and all the components it needed from their source-code packages on Friday (1st) evening. I used the linux 'soundmodem' package to do the decoding of the AX25 Frames. All this constituted our base station. I was surprised over the course of the day that there was no de-sense of the FT-1500M, listening on 144.800MHz from the Icom 910 transmitting on 145.450MHz

## 2 Digital Communications

EI8JA, and I (and others) have been experimenting with Automatic Packet/Position Reporting System (APRS), a definition of which is "APRS is a real-time tactical digital communications protocol for exchanging information between a large number of stations covering a large (local) area." (from <http://web.usna.navy.mil/bruninga/APRS-docs/APRS.TXT>). For the Galtee walk, we decided to test out how well it would work.

The unit tested was a PocketTracker from byonics (<http://www.byonics.com/pockettracker/>) they give about 235 milli-watts out, so they are most definitely QRP. Last July, I got a few of the TARG club members and some others interested so I ordered 10 kits (I still have 3 if anyone is interested). Their construction isn't for the faint of heart, and the club has several in various stages of construction.

Sunday morning, after setting up the antennae, we put a mobile digipeater on a site 7km due north of GalteBeg at about 600m ASL, this had line of sight to most of the northern face of the Galtees. Tommy, EI2IT had his pocket tracker in his bag with an extendable whip antenna protruding from a hole he cut in the bag. This allowed the antenna some clearance of the bag. A Garmin Foretrex 101 was connected to the tracker and was strapped to the outside of the bag. At approximately 9:05 UTC the first position report was received from his Tracker. The organisers were quite impressed that we could follow his, and thus the groups progress up the mountain. After watching his progress for a while I noticed that Tommys track was veering south of what I thought was the intended route. This was communicated to the leaders who after some discussion changed direction in order to approach the lake from the northern side.

### 3 Lessons Learned

From a personal point of view, I feel there were several valuable lessons that could be taken from the exercise:

**Antennae:** Get them up as high and as clear from surrounding objects as possible.

**Batteries:** Always use fresh Alkalines. If using rechargeables, know what the 'full' voltage of the pack/cell should be and check that it is correct, that way you won't get any nasty surprises

**Relay Stations:** In hilly terrain like the Galtees its worth investigating, in advance, for communications black spots. Relay stations are extremely important (thanks again to Jackie, EI3FU) in this case.

**APRS:** It has to be recognised that low powered handhelds and pockettrackers cannot hope to work satisfactorily without help in rough terrain such as the Galtees. The use of, and positioning of digipeaters must be considered. APRS works surprisingly well, and provides an excellent way of visualising a scene or event.

### 4 Conclusion

Events like the Glen of Aherlow Walking festival show that "Amateur radio"<sup>1</sup> has a place at public service events. Through having a moderate level of fitness, willing operators and relay stations, everyone benefits from it. The Organisers have a better communications system which helps to make the event safer. Us Experimenters become better and more proficient operators, and, due to the efforts of the Experimenters at the event, "Amateur" Radio gets some very good PR. This can only be of benefit in this current climate of reduced numbers entering into the Hobby. In summary, I think it shows that "Amateur" radio experimenters have quite a lot to offer at public service events such as this.

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<sup>1</sup>I put the work Amateur in quotation marks because at these events we are never referred to as amateurs, but as professionals, as we provide a professional level of service to the organisers and they are very grateful for it.