DRAFT-1

Northern BC Amateur Radio VHF Repeater Network

Introduction

The Prince George Amateur Radio Club, working with neighboring clubs, has established a system of linked repeaters radiating out in all directions from the hub at Prince George.With repeaters linked together for hundreds of kilometers, it is necessary that a set of rules and technical requirements be established to ensure smooth operation of the network.

The network is coordinated by the Prince George Amateur Radio Club's repeater SIG (Special Interest Group). Andy, VE7EQU is the prime contact. Frequency coordination for PGARC is done by Frank, VE7AV. Andy and Frank may be reached at ve7fg@pgarc.org. Club activities, repeater maps, and technical information are available on the Prince George Amateur Radio Club web site at www.pgarc.org.

1 General

1.1 Each club should appoint a primary repeater contact person the other clubs
1.2 The repeater network is coordinated by the Prince George Amateur Radio Club
1.3 All projects linking into this system must coordinate with PGARC to avoid technical problems
1.4 Repeater controllers must enable segmenting the backbone
1.5 Repeater controllers must enable isolating drop repeaters from the network
1.6 All control codes shall be supplied to the Prince George Amateur Radio Club for emergency reasons
1.7 PGARC shall not disclose any confidential codes or other inforamtion trusted to them
1.8 Emergency traffic will take precidence over normal repeater useage
1.9 The network and any repeater on the network may be used in support of PEP tasks
1.10 The network is tested weekly by calling the BC Northern VHF Net at 09:30 Sundays
1.11 Internet connected repeaters (IRLP, echolink etc) are strongly discouraged (also a PEP rule)
1.12 Any unusual experimental activity on the network must must be brief and be pre-arranged
1.13 Co-location of an APRS node with the repeater is encouraged
1.14 Public service activities should avoid tieing up the network if possible
1.15 Local “chitchat” should use a local repeater or simplex to avoid tieing up the network
1.16 It is the responsibility of equipment owners to ensure that the equipment is being used in compliance with all regulations. This requires that the owners be able to understand the language that is being used on their equipment. Unfortunately, at the time of writing, the only language that any of the PGARC members speaks is English so we ask that only the English language be used on this network.

2 Technical

2.1 Audio coupling is done at a “flat” point (no pre-emphasis or de-emphasis)
2.2 Deviation transmitted shall be the same as deviation received (unity gain)
2.3 Courtesy beeps must not go out on the network
2.4 Repeater ID must not go out on the network
2.5 All repeaters should have backup power (usually a battery bank)
2.6 The repeater controller must be on its own fuse (not fused with a radio that it controls)

3 Best Practice

3.1 Each piece of equipment individually fused
3.2 DC circuit breakers with alarm contacts
3.3 Door alarm & breaker alarms transmitted by the controller
3.4 Double beep courtesy tone added when an alarm is active
3.5 Absorbed Glass Mat (AGM) type batteries at remote sites (sealed, maintenance-free)
3.6 True deep cycle batteries should be used (not engine starting or marine or RV types)
3.7 Remote reading of battery voltage
3.8 Remote reset (acknowledgement) of alarms that have been cleared
3.9 On site audible door alarm to warn off vandals
3.10 Audio delay modules should be used in controllers to totally eliminate squelch-tail noise