

27-Jun-2023 W1FY Repeater committee meeting

Attendees:

Glenn Axelrod, KC1HPZ	Richard Whalen, KC1NXT	Steve M, N1MH	Joe, N1JW
Sumner, W1VIV	Stephen, KC1LPZ	Bob Bosaz, KC1OXG	Peter Simpson, KA1AXY
John Iwuc	Peter AC1KY	Steve Hewlett	Andy Boughton
Jim WB4EJR	Victor Anderson K1VEA	Bill N1WEN	Leandra MacLennan
Steve Kondo KC1QAY	Bruce W1HNZ	Ron Rothman	Barbara KC1KGS

(from Glenn's slides)

Current Problems:

- Fragile control:
 - o A mistaken DTMF control command could shut us down
 - o MEMA location is fantastic, but hard to enter on short notice
 - o Need an alternative control channel
- Aging system needs planning for repairs/replacement
 - o Controllers are not being manufactured
 - o Limited choices for new transceivers
 - o MEMA plans major rebuild of towers; new antennas needed

Current system:

- Motorola MSF-5000 (28 years old)
- NHRC- Controller (12 year old)
- power supply, link radio w/o antenna, etc
- We benefit from exceptionally good power and lightning protection, but still it's been running 24/7 for a long time!

MTTR:

- What is tolerance for down-time?
- Today we have no plan
- MTTR (mean time to repair) could be weeks to months
- What does our community expect?

August 2023

- Add out-of-band (OOB) remote control
 - o Works with existing controller (one-way only)
 - o Cellular modem (service is available in bunker)
 - o Internet service via tello.com
 - o Small computer with audio out for DTMF
 - o Estimated cost \$200-300 + \$60-80 per year service

Soon

- Get a networked controller
- SCom 7330 is the current state of the art
- Manufacturing ended due to parts shortages
- Support continues
- 20+ are in use by MMRA
- Need prior spend approval to grab one if it appears on Ebay
- Previously seen for \$600-800. Not to exceed \$1000
- MEMA's Mike Girard recommended jumper cables upgrade
 - o Decrease signal losses from small cables
 - o Improve power output
 - o Estimate \$600 for four cables in radio room

Not scheduled yet

- During MEMA tower work
 - o Replacement VHF antenna
 - o New UHF link antenna
 - o Estimate \$3000 for parts
 - o We don't know yet how much we might be asked to spend on transmission lines or tower work
- New transceiver or parts on hand
 - o What spares are required and what skills are available?

Discussion:

Notes from chat:

Bob Bosaz volunteered a Raspberry pi 4

Peter Simpson (KA1AXY) suggests buying two SCOM/7330 to have one as a spare, or a replacement for the existing Motorola repeater. Talk to Kurt in Paxton who does commercial tower work and might be able to get good parts cheap. A standby radio & controller is a good idea to minimize down time. K1RJZ has lots of contacts.

Make one approval, or multiple approvals for multiple steps?

Digital modes? Would it add users? Keep existing users out? Which mode? Allocate time slots? Reserve some time for analog (nets). Digital modes may attract more users. The feeling of the group was that analog voice FM would always be important and the Yaesu Fusion would be the best choice if it is decided to go that way, but that was outside of the current needs for discussion. Can we support APRS? Talk to Brian W1BRI (MMRA), has experience with analog & fusion. Milford & Hopkinton 440. Talk to WO1VOS

PL Tone – a work in progress. It is part of our frequency coordination, but not currently implemented. The external controller would help with setting this up. Have measured a 100Hz tone on the output. Need to add input. The current state could be an artifact of when there was a second (UHF) repeater (link radio).

Do we have a (written) contract with MEMA? – Access? What would we be responsible for with the planned tower work? Though we are on good terms access is hard to coordinate.

Action items:

What are we going to ask for approval in September meeting:

- 1 – cables - \$600
- 2 – cellphone modem + small computer (\$200-\$300)
- 3 – controller board – (SCOM) 7330 – not to exceed \$1000
- 4 – digital mode research – subcommittee?

Proposal: Present items 1,2,3 at September meeting and if significant discussion is needed call for a special meeting.

Meeting adjourned at 20:54 local time

Notes submitted by Richard Whalen, KC1NXT, club secretary