

Progress

Since the last newsletter, much progress has been made in getting the gear working but the news is not so good where the licence is concerned. The Home Office decided that no further 70cm repeater licences would be issued until six months' operational experience with GB3PY had been obtained. This time has now expired and the Home Office recently considered further applications. However, a seemingly arbitrary decision was made in that 70cm repeaters closer than 100 miles from any existing 70cm repeater would not be licensed. This, of course, rules out our application. Hopefully the Home Office can be convinced that radio propagation at 432MHz is rather different from that at 144MHz, and the RSGB is actively following this course on our behalf. If the 100 mile is rigidly applied it means that Chelmsford can never be in the service area of a repeater.

The RSGB recently held a meeting at Brunel University to discuss the future of repeaters. EK3 was represented by G3VK2 and G3VCO. Much discussion took place and there was considerable disagreement amongst those present. The most important result of the meeting was the setting-up of a working group to produce a national policy for future repeaters such that the service may be extended in a sensible way. The conclusions of the working group are expected in the near future.

The progress of the equipment is much more encouraging; the control logic is now complete and a description of its operation is included in this newsletter. Ian, G8IVC, has built this rather complicated piece of gear almost single-handed and much credit is due to him. The audio circuitry is virtually complete only needing the microphone preamplifier and local monitoring system to be built. When this is complete trials will be conducted by monitoring the input channel of another repeater to check the operation of the tone detector, audio switching, deviation monitor etc.

The antenna is nearing completion requiring only the application of some more glue for the spacers. Alan, G8JCA, has constructed the antenna and a beautiful job it is too. Unfortunately, his work will be hidden from view by a length of plastic drainpipe which protects the assembly from the weather. The antenna is a broadband device using very fat full-wave dipole elements giving a calculated gain of 3dB over a dipole.

There is some doubt about whether UK repeaters should use the 1.6 MHz spacing agreed at Warsaw or continue with the considerably earlier 2MHz of GB3PY. The problems involved in this become apparent if one remembers that commercial uhf repeaters use about 6MHz. Because of this doubt no crystals have yet been purchased and the OFK has not been aligned on 70cm.

The fm demodulator has been built and incorporated into the control unit. The companion modulator is nearing completion and will be mounted close by.

A sufficient quantity of low-loss feeder cable has been purchased and will be installed on the tower when the licence arrives.

The main area where help is still needed is concerning the duplexer. Anyone who is interested please contact G4JUE.

Meeting

An informal meeting has been arranged for Monday 24th November in the club room of 'The Cricketers' on Danbury Common NGH TL779048 at 8pm. Bring your interested friends and let's decide where we go from here.

Gear for 70cm

It would be appreciated if someone could build a simple, reproducible design for a 70cm rig using readily available components. Barry, G3WTF, has built one for 2m and many of his ideas could be adapted for 70cm. Please contact him or Ted, G4ELM.

Finance

The group's financial assets now stand at about £70, it must be remembered, however, that the OFR and the crystals have to come out of this. All donations gratefully received.

Membership

The group now has 35 members, their names and callsigns are included in this newsletter.

The committee has expanded slightly since the first meeting and now consists of the following:-

Colin McEwen	G3VKQ	Chairman
Bill Pechey	G4CJE	Secretary
John Hollison	G3WCO	Treasurer
Ian Hart	G8IVC	
Geoff Blake	G8GNZ	
Dave Elwell	G8CVI	
Dave Cawley	G8EAC	
Ted Jewell	G4ELM	

Barry Tew, G3WTF, and Norman Miller, G3MVV have given advice at several committee meetings.

Greg Trice, G8DAV, has resigned from the committee because he has left the area.

Nets

Several members are active on 433.2MHz and it is hoped that a regular net can be arranged in the Chelmsford area; perhaps we can revive the S32 net. Raise your views at the meeting.

Control Logic Description

Brief Specification:

Access tone 1750Hz, limits 20Hz, recommended duration 0.5 sec.

Input deviation to be less than 5kHz peak.

Provisional callsign GB3EK

Output tones; K 1318 Hz

 Callsign 1046 Hz

(The tones may be sent at two levels corresponding to deviations of 5kHz and 900Hz)

Basic Operation:

After an initial tone burst the repeater will relay the input signal for one minute. Immediately after the access the callsign (DE GB3EK) is sent at low level, under the relayed audio. At the end of the minute period the repeater ceases to relay the audio, sends its callsign and shuts down. A one second pause with no carrier on the input channel is required before reaccess is possible.

If the over lasts less than a minute the next user can either:

1) Transmit immediately and use the remaining part of the minute period,
or 2) wait one second (with no carrier on the input channel). The repeater will send K, after which there is a six-second window during

which a tone burst will reaccess the repeater for a further minute. If the repeater is not accessed within six seconds it sends its callsign and shuts down. (The callsign is not sent after access following the K)

Options:

The following options are available and will eventually supplement the basic facilities.

1) Over-deviation

The repeater audio circuits limit any over-deviated input signal, however, the repeater can be set to replace any over-deviated audio with a half-second burst of high-level tone.

2) Frequency check:

The frequency of the input carrier is monitored when access is in progress, and the next K will be sent as an L if the carrier is low in frequency, H if it is high and K if it is within the limits.

3) Input channel blocked:

If a carrier is left on the input channel after the repeater has timed out no access is possible until a carrier break of one second occurs. This will be indicated by the repeater sending a low level tone punctuated by the callsign (GB3EK) at sixteen second intervals until the input clears, when the tone ceases and an K is sent signifying that the repeater may now be accessed.

4) Beacon:

The repeater can go into a beacon mode after it has been unused for a minute. In beacon mode the carrier is switched on and the callsign (GB3EK) sent at one minute intervals alternately in W3 and A1. If the repeater is accessed it will immediately return to the repeater mode of operation.

ESSEX REPEATER GROUP LIST OF MEMBERS NOVEMBER 1975

Ray Stevens	G2BVN	Bill Pechey	G4CUE
Ian Hart	G8IVC	Barry Tew	G3WFF
Alf Green	G4ABB	Ted Jowell	G4ELM
Phil Bennett	G8DJB	M. Duce	G4BQF
Don Maclean	G3DNQ	S. Lydiate	-
Jeremy Royle	G8ACN	Vange AHS	-
Alan Daykin	G8JCA	Andy Botterton	G8PNT
Arthur Butcher	G3KPF	Ernie York	G8HCH
Ray Ferrance	G3TRH	K. Martin	G3FHC
C. Elliott	G3FMO	Ken Fulton	G8BUD
John Hollasen	G3WCO	Ian Smith	G8GUB
Geoff Blake	G8GNZ	Andy Dormont	G8BGT
Dave Elwell	G8CVI	Nick Lockett	G4ENB
Norman Miller	G3MVB	Dick Brooks	G3WHK
Greg Trice	G8DAV	Colin McEwen	G3VKG
Gordon Yarnold	G4CNG	Chris Baker	G8JGK
Dave Cawley	G8EAO	Phil Eaton	G8DHV
Mike Maxey	G8CTJ		

That's all for this time, see you at the meeting.

Bill.

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