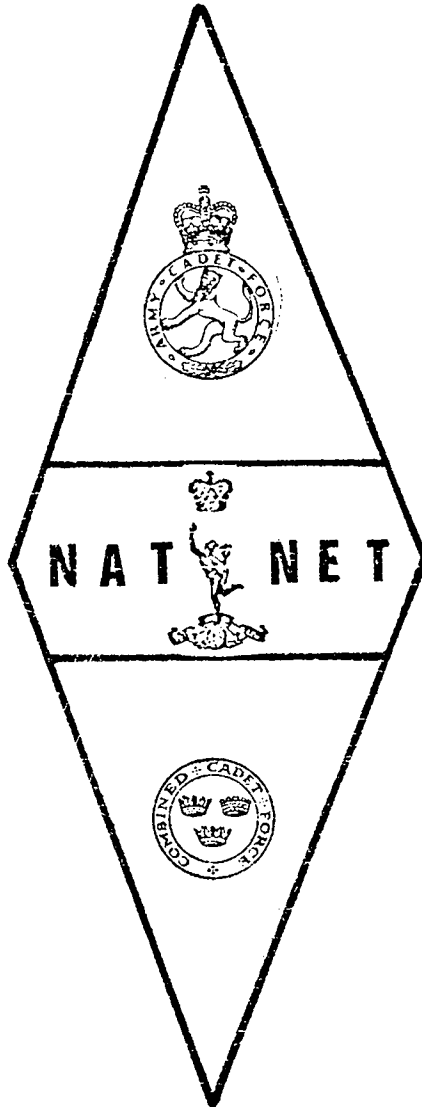


ACF/CCF INTERDISTRICT RADIO NETWORK

NEWS SHEET



FOREWORD

The following is a copy of a letter of appreciation which was sent to Captain Jack Hargreaves by Brigadier N A Butler CBE, Chief Signal Officer United Kingdom Land Forces:

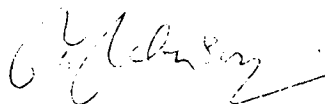
"It has been brought to my attention that you are retiring as Editor of the Cadet National Radio "News Sheet" and Official Net Monitor on or about 15 March this year after more than 21 years service and I felt that I must write to formally thank you for your outstanding contribution.

Your name is a legend in cadet circles and although I have not had much to do with your work, I have heard all about it. The effort and expertise which you have put into your voluntary duties has been quite exceptional and happily so have the results. The Services, Royal Signals and a large number of cadets are very much in your debt over the years and you are not likely to be forgotten.

As you finally hang up your pen and your headset, it must be gratifying to see the issues of the modern Clansman equipment to cadet units beginning and to know that recruiting and standards have seldom been equalled. You have played a significant part in this happy situation.

As Chief Signal Officer United Kingdom Land Forces and on behalf of the Royal Signals, I would like to express the gratitude of the whole of the Corps for your tremendous commitment in the cause of cadet radio, our congratulations on the splendid results that you have achieved and our best wishes for your future. We very much hope that you will enjoy the extra spare time that you will now have though we suspect that you will continue to maintain your contacts."

Well done Jack. We all thank you and wish you the best of luck.



T I McL ROBINSON  
Lt Col R SIGNALS

ACF/CCF INTER-DISTRICT RADIO NETWORK

NEWS SHEET NO 22.

JANUARY 1980

EDITOR'S CONTENT

1. Once again it is our pleasant duty to wish all of you a very Happy New Year, and this includes everyone at Headquarters who deals with our many problems.
2. It is now 21 years since your Editor was 'press-ganged' into this job at a time when we came under the direct control of Signals 7A at the then War Office. Since then we have seen several changes in Command. First we went to Western Command and then to Northern Command and finally, under the reorganisation scheme, we went to North East District. All these people have been most helpful particularly in their efforts to get new equipment for the Net. We started with the 12 set and the R.107 receiver, some of which are still in use. As this set got past the 'obsolescent' stage into the 'obsolete' we looked around for a replacement. The 19 set was going out of regular use but we did not really like it as a Network set because of the heavy drain on batteries. Then we had a case of 'The Good News and the Bad'. We discovered hundreds of brand new C.12's in storage and tried to get them released for network use. Our discovery, however, backfired and they were issued to the Army as a stopgap and we ended up with the 19 set. Some units even got the high power version, but this was not really in order as it exceeded our power restrictions.
3. Another one of our many spies found nearly a hundred 62 sets ready to be sold off at an Ordnance auction. Somehow or other he managed to seize them all and get them issued before anyone found out! Then we had a bit of a gap, but the 62 sets were doing valiant service until someone found out that they were radioactive and consequently a danger to life. Gradually they were removed.
4. Finally, at long last, we got our C.12's back. Some were a bit dicey and we certainly had our teething troubles but most seem to be OK now. Only the occasional explosion and smoke! Now, we understand, even these are being replaced with the C.13. We are really becoming modern!
5. That, then, is a brief history covering 21 years of network sets. We have had many fluctuations in other ways. Sometimes we had a huge network and sometimes a very small one. Many schools have left the network and others joined. We lost quite a few during the change to Comprehensive Education which seemed a pity because there was no real need for CCF's to close down. However the decision rests with the Headmasters and Headmistresses. As the CCF's seemed to go down in numbers there was a gratifying increase in the ACF's on the net. One pleasing thing which has recently come about, is that we can now have girls in the CCF and also on the Network. So far we have not heard any on the air but we do know of several schools where girls are doing the Signals Classification Course - so look out chaps!
6. Having given this discourse on the past 21 years of the Network it is time to come to the main reason for it. After 21 years your Editor and Network Monitor is going to retire. He is going to retire so that a successor will not have to be 'press-ganged' and we are indeed fortunate in having a volunteer for the job. He is a very active person and we are sure he will carry on all the traditions of the Network. He is on the

RAF side of the CCF and it is to be hoped that the number of RAF Cadets joining the 'combined' net will increase. There should be no difficulty in getting them classified even though the examination team would be Army. The name of our volunteer is:

F/O A Kier RAF VR (T)  
Barnard Castle School CCF

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7. He will take over his duties on 15th March 1980 and so after that date all network correspondence to him PLEASE.

A PERSONAL MESSAGE FROM THE EDITOR

8. I would like to take this opportunity to thank publicly all our other helpers. Major C F Kirby who runs the CCF Network, Lt Col Moore who runs the 24 hour competitions, Major Buckley who runs the Christmas Competition and last but not least Capt Cogzell who is now looking after the QSL Bureau.

And a public 'Thank you' to all at North East District for their part in getting out all our 'Bumph'.

And finally a thank you to all operators who have been kind enough to send in articles for the News Sheet. I hope you will do the same for my successor.

Thank you. Gentlemen.

Capt J H Hargreaves. 33.

OTHER POINTS TO NOTE

9. Once again can you all please correct your Network Directories for call sign 21B. This has been mentioned several times but letters are still being wrongly addressed. The correct address is:

Springfields  
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Don't forget the dates for the Annual Voice Competition: -- March 10 to 21st. Full details further on.

The 24 hour Competition 3/4 May and 28/29 June.

There will be a CCF competition in Oct/Nov. Suggest convenient dates to 62A as soon as possible.

There will also be another Christmas Competition but more of that later. You will also find the results of the last one further on.

FROM 51. THE 62 SET AGAIN

10. Last December 14th we were talking to 29 using a 62 set and a half wave dipole and, as usual, despite the 62 set he gave us OK. The distance involved is 254 miles according to our computer printout. He mentioned how he once contacted 84A using a whip aerial a distance of some 140 miles so we thought we'd try using a whip to him. We put a 16 ft whip out of the window still using the 62 set and gave him a call. He gave us difficult. We switched back to the dipole, and then he tried a whip on his C.12. He was also difficult as opposed to OK with the dipole. Could this possibly be a record on the Network - 250 miles on a 62 set or C.12 and a whip aerial?

On the subject of 62 sets - we use ours regularly in preference to the C.12 and get excellent results with it. Our aerial is quite good it is high and so has a low take off angle and we couldn't be much further south and away from many stations or much lower without being below sea level. Also we have a 400 ft hill about 5 miles north of us. The 62 sets often gets us OK reports when we have to return a signal strength of difficult and often unworkable

No 1 Op. 51.

CW NOTES

11. Not much Sunday activity this term but there are hopes of improvement next year 1980.

43A again won the Horse Operating Competition though 'with a decreased majority'. 62A listened to part of the Christmas 24 hour Competition. It was noticeable that even if the operators had only worked at 8 wpm they would have handled at least twice the traffic since there would have been hardly any need for "Words twice" or "Say Again" to cope with the interference.

SLOW HORSE TRAINING NET

12. Talking to quite a few stations on the Net recently there seems to be an interest in starting a slow morse training net. The aim of most operators would seem to be to pass the GPO 12 wpm test. I am prepared to set up such a net if people who are interested would contact me stating their preferred times for joining such a net. It won't of course be possible to please everybody but we can try.

Lt. S J Harding 530  
Pronto 51A

CLOSED CIRCUIT TELEVISION

13. From Major Sugden who is an ex operator of 26B and now stationed with the 1st British Corps in Germany comes the following information about closed circuit television. He states that he is sure that many schools must by now have video equipment and thought it may be of interest.

The School of Signals is now equipped to produce high quality colour video tapes and cassettes which may be used with closed circuit television as a training aid. Copies are being made for Cadet Force units.

The following titles are offered for selection:

Colour or Monochrome.

Ex CHATTY CHATTY BANG BANG. The Task Force and its communications. Originally designed for Cadet Forces. It includes diagrams, film extracts and models.

The 62 Set - Instruction on operation.

C12 - Instruction on operation.

Monochrome.

C42 - Instruction on operation.

Do not hesitate to ask the School for help with your closed circuit television material.

DIRECTORY AMENDMENTS

14. Call Sign 51 - Delete Telephone number  
Insert: Portsmouth (0705) Removed for security

COMPETITIONS

15. Details of the Voice Competition 1980 are attached at Annex A.

ENCLOSURES

16. The following enclosures are also attached.

Results of Christmas Voice Competition 1979.  
SR C13 Tuning Drills.  
SR C13 Fault Finding  
National Net Directory - Amendment No 4

ANNEX A TO  
NEWS SHEET NO 22

THE VOICE COMPETITION 1980

Aim. To give operators practice in passing simple UR messages and setting up on different frequencies.

Dates. March 10th to March 21st 1980 inclusive.

Frequencies. 2275 (A): 4030 (B): 4972.5 (C): 5330 (D): 6915 (E).  
Arranging schedules and normal traffic can take place on any other Network frequencies.

Equipment. Only authorised equipment to be used.

Times. Daily, Monday to Friday inclusive.  
0001 - 0900; 1200 - 1400; 1600 - 2359.

Execution Normal Network procedure will be used with the Control station in absolute control. The station putting out a tuning call will be Control although this may be changed later.

No station will join the net until control asks if any other station wishes to join. This he will do at the end of every 'Round' If the net should be very large he may ask at the half way point. When he has got all new stations wishing to join he will then ask if any stations wish to close or change frequency. Once this traffic is cleared Control will issue a fresh list of stations on net and will start again at the top of the list unless he asked at the half way stage in which case he will continue.

A station will pass a simple message to another station when asked to send by Control. He will pass a message to ONE station only and get a similar reply from that station. Only one message will be sent to any one station on one day but a message can be sent on all five frequencies in use.

The message will consist of a single letter, a three figure serial number commencing at 001 and finally the signal strength report. The single letter will change each day. Thus for the first day it will be 'A' and the second day 'B' and so on. (eg. B.138 Diff).

If messages cannot be passed directly they must be relayed through another station, but the distance count will only be that from the sender to the relay station.

Where a station is contacted on more than one frequency the score for that station can be multiplied by the number of frequencies on which it was worked. Thus if for example 88 was contacted by 99 on three frequencies on the one day, the normal score of 2 for the contact would count as 6 points.

A 2-way contact will normally count 1 point for each 100 miles of distance (this is radius from the sending station) except that no contact under 25 miles will count for points. Logs showing Date, Time, Frequency, Station contacted, message sent, message received, Distance in miles, claimed score and operators initials must be sent to:

P/O A Keir RAF VR(T)  
Barnard Castle School CCF

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They must arrive on or before April 3rd. Should any station not be able to operate due to holidays or other official function, enclose a note giving the reason and if the reason is acceptable an average score will be awarded for the missed days.

Make sure your package has the correct postage as postage due packets will not be accepted.



CHRISTMAS VOICE COMPETITION 1979

1	Sedbergh School	(29)	1376 points	C12 & Racal RA117
2	Ellesmere College	(77)	1061 $\frac{1}{2}$	C13 & Eddystone 730/4 with 19 sa
3	Reading School	(52)	962	C13 & PRC 320
4	Ardingly College	(43A)	789 $\frac{1}{2}$	C11
5	Marlborough College	(69A)	584	C11 & Eddystone 730/4
6	Charterhouse	(44A)	541 $\frac{1}{2}$	C12
7	Bancrofts	(25)	528	C12 & Eddystone 730/4
8	Queen Marys CCF	(53C)	453 $\frac{1}{2}$	C12 & Eddystone 730/4
9	Stowe School	(53A)	208 $\frac{1}{2}$	C12 & Eddystone 730/4
10	Cheltenham Grammar	(65B)	155	C13 & 62 with Racal RA117
11	Berkhamsted School	(2)	135	C13
12	Queen Marys CCF	(51A)	130	C13 & PRC 320(Clansman)
13	Bancrofts	(25/1)	118 $\frac{1}{2}$	C12 & 62 with R107
14	Ardingly College	(43A/1)	80 $\frac{1}{2}$	C13
15	Queen Marys CCF	(58B)(51a/1)	5	(They scored more MINUS points than plus ones)
	St Dunstans	(20A)		submitted 47 Pages of Log with 329 entries as a chec
	Portsmouth GS	(51)		submitted a check log - a number of stations
				communicated with this C/s - I regarded this as
				contact with the enemy as they were not on the list:
				(THanks though to both these stations)
	Haversham GS	(35B)		Appear to have died since last years win, and
				submitted no log
	St Benedicts	(20)		No log submitted
	Pocklington GS	(28)		No log submitted
	Campbell College	(84A)	299	Not included in above used C12

Well thats the bald statement of facts!

The truth is that a number of stations worked very hard for 23 $\frac{3}{4}$ Hours and passed no less than 620 Messages (105 passed by C/s 29); though there were a number of mistakes the greater part were without error.

Some messages did get lost in transit and stations were deducted a -5 for these.

Scoring, finally was:

Message Sent	10
Message Received	5
Minus for mistakes - 1 each	
Plus for use of	5
freq, A, V, W, O, E, Z, X	
Plus if over	
120Miles	50%

Thus it was possible to get 22 $\frac{1}{2}$  points for sending one message or 112 $\frac{1}{2}$  if sent to the maximum of five stations. In fact the maximum scored on one transmission to five stations was by C/s 43A, sending to 25, 29, 65A, 69A & 77 on Freq D (total 65 points) 52 also scored a 60 when sending to 25, 29, 44A, 53A & 77 o Freq Q

Only one proper log was received. As pointed out a Log is a record of all your transmissions, this would include Radio Checks etc.

One bright spark (who should be instantly dimmed) sent all the frequencies and operating times in clear to C/s 51. I only hope that he is not on our side in the next war!!

Some of the messages were not exactly military and I think next year this must be tidied up. The replies must also have something to do with the message sent. A nice touch at the end was C/s 77 who informed E/s 53A (at 14.40) 'The armistice is signed, its all over - we won' Unfortunately his facts were not quite correct, though nearly so! (How did you manage to get the time correct?)

Generally, I think, the rules were observed though there is an obvious need for some stations to re read the Voice Procedure booklet. One can only wonder how they managed to pass their Crossed Flags test.

EG: Rpggr, Roger, Rpggr, Roger Roger 21, over. (Once is adequate)

To finish - Well done C/CSM Savage, your shield will be with you soon! (C/s 29 in person)

OPENING UP DRILL

- a. ERECT A MINIMUM OF 8ft ANTENNA
- b. CHECK THE CONNECTION FROM ANTENNA BASE TO ATU
- c. CHECK THE CO-AX CONNECTOR FROM ATU TO SET (Red end to ATU)
- d. CHECK THAT SET, PSU, ATU ARE ALL EARTHED
- e. CHECK THAT SET IS SWITCHED TO RT, LP AND NORMAL, BFO SWITCH IS AT ZERO (in line with mark in case)
- f. CHECK BATTERIES/POWER (24v +)

TUNING DRILL

- a. SWITCH POWER ON AND TURN UP GAIN FULLY
- b. UNLOCK ALL CONTROLS
- c. MOVE THE RF TUNING CONTROL UNTIL THE REQUIRED FREQUENCY APPEARS IN THE CENTRE OF THE WINDOW.
- d. TURN THE MC/s SWITCH SO THAT THE CORRECT MC/s APPEARS IN THE M WINDOW
- e. MOVE THE CHANNEL SCALE UNTIL THE NEAREST 100 KHZ TO THE REQUIRED FREQUENCY APPEARS IN THE MIDDLE OF THE CHANNEL WINDOW.
- f. SWITCH TO CURSOR ADJ
- g. CENTRE THE NEEDLE (NEEDLE MUST SWING SAME WAY AS HAND)
- h. PUT CURSOR HAIR LINE OVER 100KHZ MARK
- j. MOVE CHANNEL SCALE UNTIL NEAREST 10KHZ COMES UNDER CURSOR HAIR LINE
- k. SWITCH TO CHANNEL ADJ
- l. CENTRE THE NEEDLE (NEEDLE MUST SWING SAME WAY AS HAND).
- m. PUT CURSOR HAIR LINE OVER 10KHZ. LOCK CONTROL.
- n. SWITCH TO TUNE RF
- c. CENTRE NEEDLE (NEEDLE CAN SWING IN ANY DIRECTION)
- p. LOCK CONTROL
- q. LIFT HP/LP SWITCH AND TRIM ANTENNA, (MAXIMUM RISE ON METER.) SWITCH TO HP.
- r. CHECK SCALE ON PLATE ON ATU, MOVE ATU CONTROL UNTIL SCALE IS IN WINDOW (MUST BE ON FIGURES)
- s. SWITCH TO TUNE AE
- t. OBTAIN MAXIMUM RISE ON CENTRE ZERO METER, USING AE TRIMMER TRY AND INCREASE RISE.
- u. LOCK ATU CONTROL
- v. SWITCH TO REQUIRED SYSTEM

**ATU range scale settings**

The ATU scales are designed so that, if the correct letter is set on the range scale, the minimum amount of turning of the control knob is necessary to obtain an aerial reading. In other words the necessity, as with older sets, to go to send for long periods, is avoided and enemy DF has less chance of obtaining a bearing. When the frequency is known, reference will be made to charts below and the required letter is put on the range scale.

**8-ft rod AE**

Mc/s	Letter
1.6 — 2.4	A
2.4 — 3.6	B
3.6 — 5.0	C
5.0 — 7.4	D
7.4 — 9.5	E
9.5 — 12.0	F

**16-ft rod AE**

Mc/s	Letter
1.5 — 2.1	A
2.1 — 3.0	B
3.0 — 4.3	C
4.3 — 6.0	D
6.0 — 8.4	E
8.4 — 11.2	F

**Skywave**

Mc/s	Letter
1.5 — 2.1	A
2.1 — 2.8	B
2.8 — 4.1	C
4.1 — 6.1	D
6.1 — 9.0	E
9.0 — 12.0	F

SRC 13

NB: 'Report' below means hand in to nearest Command or Royal Signals Sponsor Unit WORKSHOPS for repair action. Do not open set yourself

TEST	RESULT	FAULT	ACTION
Bty Volt Meter ( should read between 21 $\frac{5}{8}$ & 29 $\frac{5}{8}$ )	Correct Voltage 24 Volts	No reading Low "	Check Bty - Bty connections Lt Fuse (10 Amp) Report (PSU u/s)
Switch Power on	Lamp Lights VIB HUMS	No Light	Check Dimmer bulb $\frac{1}{2}$ s
		No Lighting Hum	Check Bulb, 'R' Fuse (4A) Report (PSU u/s)
Receiver Switch All on	Noise in H/Set VIB Hums	No Noise	Check 18 way lead Check Gain up H/Set Connections Report (Set u/s)
Switch to RT	Stations & Noise	No Noise or Stas	Check Tune RF Report (Set u/s)
Switch to Cursor Adj	Meter Deflects Every 100 KHz, $\frac{2}{3}$ of scale. Calib noise in phones.	No Deflection	Check 18 Pt Connector Report (Set u/s)
Switch to Channel Adj	Meter Deflects Every 10 KHz	No Deflection	Report (Set u/s)
Switch to Tune RF	Meter Deflects	No Deflection	Report (Set u/s)
Switch to A/E Trim	Meter Deflects	No Change	Check 'S' Fuse (7A) Report (Set u/s)
Release Switch	Switch to LP Needle to Centre Zero	No Change	Report (Set u/s)
Switch to Tune A/E & Tune	Needle Rises	No Rise	Check Coax and Connections Report Coax or ATU
Switch to RT Press Pressel Adjust A/E Trim	Slight Rise on Needle	No Rise	Report (Set u/s)
Switch to RT Phase & Normal	Noise Alters	No Alteration	Report (Set u/s)
		Transmitter not sending.	Check Fuse 'S' Should be 7 Amp
		Receiver, pilot light & Vib motor not working.	Check fuse 'R' Should be 4 Amp

See overleaf for correct voltages on pins of PSU and 18 way connector. Check set output with 24v bulb across a/e coax socket.

18-WAY CONNECTOR ①

REMARKS	PIN	VOLTAGE	FUNCTION	P.S.U. SWITCH POSITIONS			
				POWER	W.S.	STANDBY/ TRAFFIC	I.C.
	A	300/150V D.C.	P.A. screen (voltage switched by HP/LP)	ON	ON	TRAFFIC	ANY
	B	600/300V D.C.	P.A. anode (voltage switched by HP/LP)	ON	ON	TRAFFIC	ANY
	C	150V D.C.	Main H.T.	ON	ANY	ANY	ANY
	D	-	-	-	-	-	-
	E	Battery voltage	Relays	ON	ON	ANY	ANY
	F	-	-	-	-	-	-
	G	-	-	-	-	-	-
	H	Earth	-	-	-	-	-
24V PSU only	J	24V D.C.	Receiver filaments	ON	ON	ANY	ANY
12V PSU only	K	12V D.C.	Receiver filaments	ON	ON	ANY	ANY
24V PSU only	L	24V D.C.	Sender filaments	ON	ON	TRAFFIC	ANY
12V PSU only	M	12V D.C.	Sender filaments	ON	ON	TRAFFIC	ANY
	N		Send/receive switching (earth to send)	-	-	-	-
	O	12V D.C.	I.C. filaments	ON	ANY	ANY	ON
	P	-	-	-	-	-	-
	Q		High/low power switching (earth for HP)	-	-	-	-
	R	12V D.C.	Calibrator filament	ON	ON	STANDBY	ANY
	S	12V D.C.	Calibrator filament	ON	ON	TRAFFIC	ANY

12-WAY CONNECTOR ②

A	Set Microphone
B	Microphones Common Return
C	I.C. Microphone
D	Pressel Switch (S/R switching)
E	-
F	Battery Voltage
G	Phones Common Return
H	Detector Current
J	I.C. Phones
K	-
L	-
M	Set Phones

HEADSETS ③

A	Microphone
B	Microphone Return
C	Pressel Switch
D	Phone Pressel Return
E	-
F	Phone