

C. S. O.

0438/II

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/
II

TEL/GEN/2#2

(Formerly)

SUBJECT :

WIRELESS COMMUNICATIONS - COMMITTEE APPOINTED to
REPORT UPON.

CONNECTED FILES.

NUMBER AND YEAR.

94/46	Rental of Buildings by Admiralty.
170/46	F. Is. W/T Station.
0492	" " " (being Vol. II of 170/46)

EX. CO. REPORTS

Cs.

When the Wireless
Communications/Broadcasting
Sis I want them to give
particular attention to

- (a) Improvement of Camp Broadcasting
- (b) W.T. Communications to Camp
- (c) Educational broadcasts.

M.C. 5/11

M.C.

A.C.S.

Has 39 issues? / have 2 issues

The list of names shd. be:-

C.S.

Chairman

li: Kiff

Secretary

li: Lewis S.E.T.

li: Hodson M.O.

li: Baker Lec. F.I.O.S.

li: Cunningham I.O.

li: Spence

li: Hallett

+ li: McNaughton

Secretary

Members

The list at 70 is 0435 is as the
 names occurred to me & shd. be
 listed up. For future guidance —
 Serinity (then Serinus) is most
 convenient. Failing that, alpha-
 betical order. His letter will
 be preferable in his case.

2. Re issue letter to the
 Naughton (whom I had not looked
 & since the Public Office.

l
 6.12

Colonial Secretary's Office,
Stanley.

3rd December, 1948.

It is hereby notified that His Excellency has been pleased to appoint the following gentlemen to constitute a Committee to enquire into and report upon all outstanding W/T requirements and to recommend the best means of meeting them:-

Colonial Secretary.	Chairman
F. Kift, Esq.	Deputy "
D. McNaughton Esq.	Hon. Secretary.
Major K.S.P. Butler. Sec. F.I.D.S.	Member.
K.A. Cunningham, Esq. Information Officer	"
D. Hallett, Esq.	"
G.A. Howkins, Esq. Met. Officer	"
A. Mercer, Esq., Supr. E. & T. Dept.	"
V.H. Spencer, Esq.	"

By Command,

Sgd/ A.B. Mathers

Colonial Secretary.

Handled in by book
Office 6.12.48 43

COMMUNICATIONS REQUIRED FOR METEOROLOGICAL PURPOSES

EXPLANATION I. Collection and Distribution of Met Information.

1. Met. observations are taken, by international agreement, at :-
1200, 1800 and 2300 GMT.

2. It is a generally accepted national commitment for each nation to collect reports from stations in its own territory and to rebroadcast these in collective messages, as soon as possible after the times of observation. These messages are intercepted by countries requiring the information for immediate use for forecasting.

The countries known to be interested in reports from the Falklands and Dependencies are :-

Brazil (Rio de Janeiro), Uruguay (Montevideo),
Argentina (B.Aires), Peru (Lima), Chile (Santiago).

3. It is also the practice for certain countries to rebroadcast selected stations from a group of national collectives, in the form of a regional or continental message. Thus Uruguay was appointed by a recent regional conference of the International Met. Organisation, held in B.Aires, to issue regional collectives three times daily (190 minutes after the hour of observation) and covering Southern Brazil, Paraguay, Bolivia, Uruguay and The Falklands and Dependencies. Such regional collectives are designed for use by more distant groups of countries which do not require such a dense pattern of reports or such early transmissions as in para. 2 above.

The Naval authorities in South Africa (Simonstown) are known to be particularly interested in such reports from the Falklands and Dependencies.

II. Issue of Bulletins containing Forecasts and Gale Warnings

1. These are based on synoptic maps constructed from the observations made at the above standard hours, and the bulletins are normally available for issue three to four hours after the corresponding time of observation.

Bulletins should be issued for the benefit of farmers, local shipping and aircraft operation. It may also be necessary to provide a similar service for ships at sea in the area 40 S to 70 S and 70 W to 30 W.

Note. Gale warnings issued for a shipping area should be repeated at regular intervals so long as the warning remains current.

Communications Required.

1. Collection of reports from Dependencies and Falklands outstations within one hour of observation time.
2. Issue of Falkland Islands Collective Message (FICOL) within one and a half hours of observation time.
3. Collection of South American national collectives from Chile, Argentine, Uruguay (these fall between one hour and three hours after time of observation, though some sections may soon be available within 0 - 1 hour.)
4. Collection, once daily of a New Zealand area message at about 1600z.
5. R/T communications with camp stations and the aircraft, to collect auxiliary reports whenever the aircraft is in operation.
6. Issue of local bulletins by ^{broadcast} ~~R/T~~ at about 1530, 2130 (and possibly also at 0100). ~~G.M.T.~~
7. Issue of shipping bulletins by W/T at about 1530, 2130 and possibly 0100 (but see also note at bottom of page one).

All times are G.M.T.

MINUTES OF MEETING OF W/T COMMITTEE - SECRETARIAT 2.15 P.M. 6/12/48.

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M^r

Chairman: Hon. A.B. Mathews, Colonial Secretary.

Present: Messrs. F. Kift (Deputy Chairman), K. Cunningham (Information), D. Hallett (Ionospheric), G. Howkins (Met), A. Mercer (Supt. E & T) and V. Spencer (Pilot).

The remaining member of the committee, Major Butler, was unable to be present as he was visiting the Dependencies. Secretary: D. McNaughton.

The Chairman opened the meeting by outlining briefly the purposes for which the committee had been set up. These were broadly:

1. To investigate the radio requirements of the Colony.
2. To recommend ways and means in which to meet them.

- in both cases co-ordinating, (as far as possible), the views of the various interested parties.

The Committee had been ~~set up~~ ^{revived} as a direct result of a request recently received by The Governor from the Director of the Uruguayan Meteorological Service, who had asked that the Falkland Islands collective Meteorological message ("FICOL") should be transmitted from Stanley about an hour after the taking of the routine observations at 1200, 1800 and 2500 G.M.T. daily, to enable them to be rebroadcast by the Uruguayans at 190 minutes after the hours of observation. In addition to this, however, the Committee would discuss the whole matter of radio communications in the Colony and for this reason the aircraft pilot and the Information Officer had been included.

The Secretary was instructed to prepare minutes in a fairly concise form, avoiding reporting long and complicated discussions. He should, however, try to mention important points particularly when these were overridden by other members of the Committee or vetoed on financial or other grounds.

Mr Howkins opened the discussion by presenting each member with a copy of a prepared statement of the radio requirements of the Met. Service as a whole. Considerable discussion followed. Mr Mercer stated that, while the times concerned lay within the normal working periods of the W/T Station, his difficulties in supplying the W/T services outlined in the Met. Officer's memo were mainly concerned with three points:

1. Equipment and power supplies.
2. Staff.
3. Other fixed-time commitments such as the commercial routines with Dorchester and Bergen.

The Committee agreed that it seemed undesirable to try to change the times of 5. above, and suggested that the problem should first be tackled on the assumption that these would remain fixed as at present. The possibility of using a G.40 transmitter for Met. broadcasts, on a frequency allocated to this area for shore-ship communications was noted, and also a suggestion that FICOL messages might be broadcast by means of a key-line direct from the Met. Office, by the W/T operator at present employed there. Mr Mercer agreed to investigate possible arrangements to cover the new times, and the Chairman emphasised that, since this was the only channel by which the outside world could obtain meteorological information from the Dependencies, we should accordingly make every effort to meet our international obligations.

The Chairman then turned the discussion to the question of R/T communication with Camp stations. The scheme envisaged called for R/T "send-receive" sets at a number of stations in the Camp, working daily schedules at fixed times with Stanley. Mr Hallett mentioned that he had also suggested to His Excellency the possibility of a frequency-operated relay installed in some constantly-manned point in Stanley, (say the telephone exchange), so that a Camp station could call Stanley, in emergency, at any time. Discussion followed and soon led to the question of communications during aircraft operations. Mr Hawkins emphasised the importance of constant touch being kept with Camp stations, especially those further West, if an efficient weather-watch was to be maintained. Mr Spencer stated that his aircraft would be fitted with VHF equipment, and that communication with his base in Stanley was his main concern. The VHF equipment supplied included a D/F section, but he was doubtful whether he would make use of this except in an emergency. It was not a landing aid.

Agreement was reached that:

1. R/T communication with Stanley should be provided at Camp stations.
2. The aircraft should carry VHF equipment and communicate with Stanley.

3. The Stanley R/T point should assist the Met. Officer to keep a watch on weather conditions etc. at various points and keep the pilot informed.

4. In Stanley, the VHF equipment should be installed in a high, open location. The possibilities of installing the aerial and transmitter on a suitable hill, with "talking points" at the Met. Office and the airfield (for example), should be investigated.

The Chairman then directed attention to the question of ordinary broadcasting. The aim was to provide a reliable service covering the Falklands and the Dependencies, and it was pointed out that if this requirement were met, a coverage of South America to about as far North as Montevideo and Buenos Aires would be provided incidentally. The general opinion was that the requirements could best be met by the use of two low-power transmitters - one operating on medium waves for local listening, and one on short waves to ensure reception at more distant points. Mr Mercer emphasised the advantages of medium-wave reception, especially for schools broadcasts.

Mr Cunningham suggested that a medium-wave transmitter with a little more power might be sufficient to ensure reception anywhere, and urged the purchase of American equipment which, he stated, would cost very much less. The Chairman doubted that dollars would be released for equipment of a type which could be purchased in a sterling area, and questioned the wiseness of buying American equipment which might not have long-lasting qualities, and for which spares might be difficult to obtain.

The Chairman then summarised the discussion. He pointed out that much had been said, and the general scope of the Committee's work outlined. The first question to be discussed in detail was the requirements of the Met. Service. To this end:

1. Mr Mercer was to investigate the possibilities of fitting in the required services without altering the present fixed commercial routines.
2. He was to report on the matter direct to the Colonial Secretary.
3. A further meeting was then to be held, of a sub-committee consisting of the Chairman and Messrs. Kift, Mercer and Howkins, to deal with this particular problem.

The meeting then closed.

Cupris A.B. L. ... PA
 Chairman ~~Secretary~~
 13.12.45

MINUTES OF MEETING OF W/T COMMITTEE 2.30 P.M. DECEMBER 13TH. 1948.

Chairman: Hon. ^{Mr}/A.B. Mathews, Colonial Secretary.

Present: Messrs. F. Kift (Deputy Chairman), G. Howkins (Met. Officer), A. Mercer

(Supt. E & T). Secretary: D. McNaughton. (being discussed)

Others members were absent as they were not concerned with the matter
The Chairman opened the meeting by considering the minutes of the last one.

These had been circularised to members, and he suggested several slight amendments. When these had been incorporated, the minutes were taken as read, and approved.

The Chairman then asked Mr Mercer to indicate what steps could be taken to provide FICOL transmissions at, or about, the times specified in the Met. Officer's memorandum. Mr Mercer said that, by adjusting local routines, the W/T station could issue FICOL's at 1315, 1915 and 2350 G.M.T. Mr Howkins said that the first two times were excellent, but that 2350 G.M.T. was rather too early. He felt it would be unwise to change to a time which might entail difficulty in getting the information ready - especially since it was possible that the South American countries might adopt normal international practice and change over to observations at midnight on January 1st. In this case the present 0100 G.M.T. broadcast of FICOL could be used, and he suggested leaving this time for the present.

Discussion followed on the reception of Dependencies information in time for inclusion in these broadcasts and it was agreed that the following time-table should become effective on January 1st.

1230 G.M.T. Weather broadcast (1200 G.M.T. observations), from Duty Base, followed by check, (if necessary), and normal bases traffic.

1830 G.M.T. Ditto for 1800 G.M.T. observations.

The reception of the 1200 and 1800 G.M.T. observations from South Georgia could be made at any time between 1200 and 1245 G.M.T. and 1800 and 1845 G.M.T. The Supt. E & T and the Met. Officer should settle this between them.

All evening routines would remain fixed as at present.
The Committee suggested that

/Senor Galimberti should be informed of the new times in a letter from the Governor, through the appropriate channels, but the Met. Officer would also take the customary steps to inform all interested Meteorological Services through the FICOL messages themselves, and by circular letter.

Approved
A.B.M.

Discussion then turned to the reception of incoming synoptics from South America for the Meteorological service. Mr Howkins stated that the 1200 G.M.T. and 1800 G.M.T. synoptics were being received at present by a W/T operator (Mason) working at the Met. Office. The 2300 G.M.T. observations were not being received. Mr Mercer had suggested that Mason should now be transferred to the W/T station, and the Met. traffic received there and sent to the office by messenger. This he felt to be a retrograde step, and one which should be considered only as a temporary measure. In the circumstances, however, it seemed the most reasonable move. Mr Mercer said that the question was largely one of shortage of trained personnel, and a rapidly increasing volume of traffic with the approach of Christmas. Mason was familiar with the equipment at the W/T station and could materially help to relieve the pressure.

* Mr Howkins suggested that consideration should be given to the employment, on a temporary basis, of Bruce Tough, an ex-R.N. W/T operator at Port Stephens, who had expressed a desire to work in Stanley. Discussion followed and the following recommendations emerged:

1. The principle of receiving Met. messages at the Met. Office is generally accepted but, as a temporary measure, Mason should be transferred to the W/T station, and the Met. traffic handled by the W/T apprentices acting as messengers.
2. Enquiries should be made at once about Tough's personal and professional qualifications. If suitable he should be offered a contract for two years, (subject to the satisfactory completion of a 3 months period of probation), to cover the training period of the two apprentices at the W/T station. A starting salary of £175 is suggested. * *xx extracted to 0062 Ex J. Staff.*
3. When the situation at the W/T station becomes easier the practice of having one operator at a time at the Met. Office should be re-started - but not using one operator only. At least two operators should be employed on the work - say Tough and one other - doing a week at a time at the Met. Office.

A brief discussion followed on the allocation of responsibility for Meteorological messages both in and out. Mr Howkins said that the Air Ministry had made it quite clear that they did not regard it as their business, but the Chairman felt that no useful purpose could be served by discussing the matter

/matter before the receipt of the official minutes of his (the Met. Officer's) recent London talks.

It was agreed that the next meeting of the Committee should discuss: R/T communications with the Camp, and communications for the Aircraft.

Mr Kift felt that a precise specification of the type of equipment required, preferably submitted direct to likely suppliers, would produce the best results. The Chairman doubted the possibility of circumventing the Crown Agents and again expressed reluctance to recommend the purchase of American equipment.

The question of Meteorological bulletins for shipping was touched on briefly. Mr Howkins pointed out that these were normally likely to be available at 1500 to 1530 and 2100 to 2130 G.M.T. daily. It was agreed that the "full operating periods" on the 600-metre watch should be investigated to see whether any suitable times for the issue of these bulletins could be found, and to bear these times in mind, together with all other relevant points, when fixing W/T routines with the "John Biscoe" and similar vessels.

The meeting was then adjourned.

D. McNaughton

Secretary.

Approved

A. B. Chambers

Chairman

15.04.48

SPECIFICATION FOR DISCUSSION.

Transmitter:

R/T only.

Depth of modulation - 80-100%.

Approx. 8 W. to aerial, not more.

Frequency range: two frequencies only are required, at 2 Mc/s and 4.5 Mc/s, Xtal controlled, but variable tuning covering this band wd. be satisfactory, with Xtal control at 2 and 4.5 Mc/s.

Construction to be simple and robust--no meters, subsidiary switches, or delicate controls.

Receiver:

Output to one pair headphones (no L/S reqd.).

Straight or super-het.

Sensitivity requirements not stringent, but receiver must provide intelligible speech with signal input of a few μ V.

Robust construction and simple operation (no more than a trans/rec. switch, a gain control, and a tuning control, are necessary).

Power:

Transmitter and Receiver to operate from a 6V. car type battery (say 60 AH) and vibropack (or rotary converter, if vibropack impracticable). If 6V. type not available, low current consumption at 12 V (two 6V 60 AH batteries) wd. be satisfactory.

General:

A complete Trans/Rec. Unit with built-in power pack wd. be preferred.

General (cont.):

Equipmt will normally be operated for two periods of 1 hour every day, mostly on REC.

New or used equipment wd. be suitable, preferably ex-Service, if available.

Quantity:

Not more than 14 (?).

An
under-
estimate.

Maximum cost: £ ? each.

Firms to be contacted:

MOS.

Berry's (Short Wave) Ltd., 25 High Holborn, W.C.1.

Webb's. 14 Soho St., Oxford St., W.1.

Premier Radio Co. Ltd., 167 Lower Clacton Rd. E.5.

? ? ? ? ? ? ? ? *Unia Radio, Anydor; Marconi;*
and E.M.I.

Also Required:

Windchargers--6V. 20 Amp. (£14-10-0)

Batteries--6V, approx. 60 AH, car type. (£3)

Notes:

See advt. Wireless World (w. Mr. Hallett) for a transmitter of the kind visualized (GP1154 at £5-17-6) and a receiver (type 18 Mk.III at 37/6). Also a Trans/Rec. Unit complete (ex-RAF at £6). This gives a general indication of the prices to be expected, although these particular equipts are probably no longer available. Intelligent enquiries at Home are likely to find the same sort of thing available now.

Y.E.

Saw 50-52 in Dept.

- 2. 53-55 fi. before contracts are made.
- 3. 56-59 was put in by Lt: Kift at yesterday's meeting, minutes of it. I will submit it. As I inform Y.E., there appears to have been some confusion in 0031/I p. 56-59 and 0031/II p. 88 & x, 89, 90. Personally, I doubt the wisdom of carrying on for U.S. sets. Major Kift says the Army 19's are v. G.
- 4. Await Major Baker for this? The claim is to send 1/56 to C.A.A. to write letter: but I shd. check Major B. to see.

But doesn't x on 91 put it out of context? i.e. unless it can be worked off a wind-changer & can type battery it is no good?

16.12

As indicated.

The only thing about the hand-generated type referred to in 90 is that it is completely self-contained; no winding, no batteries.

MC. 16
XII

But can
2A-4
90

MINUTES OF W/T COMMITTEE MEETING - SECRETARIAT WEDNESDAY 15/12/48 AT 2.30 P.M. 59

Chairman: Hon. Mr. A.B. Mathews, Colonial Secretary.

Kift (Deputy Chairman)

Present: Messrs. Hallett, Hawkins, Mercer, Spencer. Secretary: D. McNaughton.

The Minutes of the previous meeting had been circulated, and when two slight amendments suggested by the Chairman, had been made, they were taken as read, and accepted.

The Chairman asked the Committee to consider first -

R/T COMMUNICATIONS WITH CAMP STATIONS - CHOICE OF EQUIPMENT:

A "specification for discussion" of suitable equipment had been prepared by Messrs. Kift and Hallett, and several copies were circulated. There was general agreement with this specification and with the idea that a number of commercial radio firms (such as those listed on page 2 of the specification) should be approached.

Frequency: There was a brief technical discussion of the frequencies to be used. It was agreed that the figures of 2 Mc/s and 4.5 Mc/s (150 and 72 metres) should provide good service over the next few years at least.

Price: Mr Kift felt that the Crown Agents could not understand clearly just what was wanted when they offered equipment which would cost £200-300 per set. Messrs. Kift, Mercer and Hallett agreed that suitable equipment, (complete with wind chargers, if required), should be obtainable for £35-50 per set, if enquiries were made in the right quarters. The Chairman mentioned that when the question of these sets had originally been brought up, a figure of this order had been mentioned, and the Sheep Owners Association had intimated that they would require 14 sets. The possible increase in cost had caused them to revise this figure, but he felt that a return to the original price range would probably encourage them to return to their original estimate.

Army 19 Sets: Mr Kift was anxious to know why Army 19 Sets, (which had been offered by the Crown Agents in February, at a very reasonable price), had been turned down. An examination of correspondence revealed that, although the latest statement to the effect that these sets were unsuitable ~~had~~ had come from the Secretary of State, the original decision appeared to have come from Major Butler. The correspondence did not reveal why the sets were considered unsuitable, and Messrs. Kift and Hallett could see no reason why they should be. Mr Mercer said he had never seen a specification of this equipment, and could not offer a considered opinion.

Recommendation:

Recommendation: The Committee recommended that a specification of suitable equipment, (such as that discussed at the meeting), should be forwarded to the Crown Agents, who should be asked to contact specific radiofirms (a list of which should be supplied), as well as those with whom they normally deal, and to communicate the results of their enquiries to this Administration. At the same time enquiries should be made as to the continued availability of Army 19 sets.

R/T COMMUNICATIONS WITH CAMP STATIONS - OPERATION AND LOCATION:

The Chairman stated that, in so far as Stanley was concerned, the equipment was primarily intended for emergency use. It was hoped to have two routines per day between Stanley and the Camp Stations, one in the morning and one in the evening, to provide a reliable means of sending emergency calls, of warning the Camp about the movements of the aircraft, and so on. It was agreed that, since all stations would operate on the same frequencies, these routine periods would have to be carefully guarded, and other traffic on the R/T network prohibited at that time. Similar difficulties would arise when the aircraft was operating, or when urgent traffic (such as medical advice) was being passed from Stanley. For these reasons the Committee agreed to a -

Recommendation: That very strict regulations as to the operation of R/T equipment should be drawn up, and that these must provide for the Control of the whole network, when necessary, from Stanley.

X
 XX Location: The Committee discussed where, in Stanley, the R/T equipment should be installed. Mr Howkins said that the Met. Office would be most interested in the morning and evening routines for getting in weather reports from Camp stations, and would also have to keep in close touch with some of them when the aircraft was flying or about to fly. The Met. Office stands on a good open site and is normally open 12 to 14 hours a day. For these reasons the Met. Office might be a suitable place in which to install the equipment, provided it was used for brief periods only, and provided that the Met. staff would not be entailed in prolonged discussions with Camp stations. The Chairman assured him that this would not be the case.

Recommendation: The Committee recommended that the R/T equipment in Stanley should be installed at the Meteorological Office.

XX

XX - XX extracted to 0408 F. Is. Met. 8. Communications &c.

COMMUNICATIONS WITH THE AIRCRAFT:

VHF EQUIPMENT IN STANLEY:

At a previous meeting the question was raised of modulating the VHF transmitter from a distance. Mr Kift now said he was sure that it could be done and the Committee reaffirmed their opinion that the equipment should, if possible, be installed on the top of Sapper~~XX~~ Hill, with the microphone at the Met. Office. Mr Spencer ~~XXX~~ said that he did not think another microphone at the airfield would be required.

The Secretary was asked to record the work entailed (as a basis for the estimation of cost etc.) This would be:

1. The provision of a small building to house and protect the transmitter.
2. The erection of a suitable aerial as close to the transmitter as possible.
3. The laying of an AC. mains connection from the town electricity supply.
4. The provision of a telephone link with the Met. Office for modulation purposes.

The question of protecting the equipment from stray bullets from the rifle range was discussed. It was agreed that the matter should be looked into, and that members of the Committee might pay a visit to the proposed site.

VHF equipment in the Camp:

It was pointed out that the aircraft would be able to carry only VHF equipment and that, since this had a comparatively short range, the pilot would be out of touch with Stanley when operating over the West Island. The Committee discussed means of overcoming this difficulty and eventually agreed on a -

Recommendation: That a subsidiary VHF transmitter should be installed at the Government wireless station at Fox Bay, to be used for passing messages to the aircraft when operating over the West Island.

Mr Spencer noted that this system of regional controls was in common use to cover aircraft operations all over the world, and it was agreed that Fox Bay should keep in touch with Stanley by R/T, and act only in the capacity of a relay station to the aircraft.

As a temporary measure the R/T equipment from one of the aircraft, might be installed at Fox Bay, but it would be better eventually to have a ground-type transmitter such as that installed in Stanley, though the D/F section could be dispensed with. This equipment could be operated from the 52-volt battery bank at Fox Bay through the use of a rotary converter. The site at Fox Bay was considered suitable for the installation of the VHF aerial.

Next meeting: The Chairman asked the Committee to discuss next the technical aspects of "BROADCASTING", and the meeting was then adjourned.

Comptroller
A.B. Leckner
 29/12/43 Secretary *Chambers*

File No. 0438/11
 Mr. MacLennan p.c.
 8.1.49

Q.

Has any decision been reached or recommendation made in regard to new broadcasting transmitter studio? (Item 26 of Development Programme).

Majors Buller who has more up-to-date knowledge of these matters than anyone else available to us should take over the Chairmanship of this Committee, and I should like them to consider it above before he leaves again for the Antarctic. Gaydie accy.

McC. 6
 7.49

Broadcasting
 to 0655
 Broadcasting
 in F.1s

Colonial Secretary's Office,
Stanley.

17th January, 1949.

42.
With reference to Gazette Notice No. 67 of 1948
His Excellency has been pleased to appoint

LIEUTENANT-COLONEL K.S. PIERCE BUTLER

to be Chairman (vice the Colonial Secretary) of the
W/T Committee.

By Command,

K. H. M. G.

Acting Colonial Secretary.

M.P. No. 0438/II

94
73

MINUTES OF MEETING OF W/T COMMITTEE 2.30 P.M. MONDAY DECEMBER 20TH. 1948:

Chairman: Hon. Mr A.B.Mathews.

Present: Messrs. Kift (Deputy Chairman), Cunningham, Hallett, Howkins, Mercer and Spencer.

Secretary: D.McLaughton.

89-61 The Minutes of the last meeting were read and approved.

There were several points arising out of the minutes.

1. Mr Kift pointed out that, since there was only one VHF aerial available, (the one for the Stanley transmitter), it would not be possible to install the spare aircraft-type equipment at Fox Bay. A ground-type transmitter, complete with aerial, would have to be obtained from U.K.
2. The Secretary expressed the view of several members that an extraordinary meeting of the Committee might be held during the holiday period, to which some farmers might be invited, and perhaps a representative of the Sheep Owners Association. This would provide an opportunity for a mutual exchange of views on the whole subject, and might produce some important information, such as how many sets of R/T equipment might be ordered if the price could be kept within a specified range.
3. The Secretary noted the fact that the aircraft had now begun to make flights. The suggestion had been put forward that the VHF ground equipment should be installed at once at the Met. Office as a temporary measure, until the final installation could be made on Sapper Hill or some other suitable point. Mr Mercer agreed that this should not be a very long or difficult job, and the Committee agreed to recommend that it should be done as soon as possible.

The Chairman then opened the discussion on the "technical side of broadcasting" by repeating his conviction that American equipment should not be considered when suitable substitutes could be obtained from the U.K., and informed Mr Cunningham that there was therefore no hope of American equipment being purchased. Mr Cunningham accepted the decision and said that his only reason for having advanced the idea of American equipment was the price factor, and that if a medium-power transmitter was required, America was more likely to be able to provide it, as those produced in the U.K. were either too big or too small, and this aggravated the purchase-price trouble.

Mr Mercer immediately asked what was wrong with the G.40 transmitter, several of which are installed at the W/T station.

Some discussion followed. Mr Cunningham suggested using one G.40 on suitable frequencies for the whole job (Falklands and Dependencies). This suggestion was not supported by the technical members who again advocated a transmitter on medium wavelengths for the Falklands themselves, and a short-wave transmitter for the Dependencies. Mr Howkins pointed out that this suggestion was in direct agreement ~~XX~~ with para.3 of a pamphlet issued by the Colonial Office entitled "Broadcasting Services in the Colonies - Choice of suitable wavelengths for broadcasting" (25 in File 178/30), and after further discussion the Committee eventually agreed that two transmitters should be installed - one operating on short waves for the Dependencies, and one on medium waves for the Colony itself.

The short-wave transmitter was not discussed in detail but some discussion on the medium-wave transmitter followed. Mr Mercer said that a wavelength of about 540 metres, in the medium wave-band (200-550 metres) had been allocated to the Falklands, and Mr Kift pointed out that this might be too long for adequate reception if a transmitter of the G.40/^{type}were used. Discussion revealed that a balance would have to be struck between wave-length and power - the shorter the wavelength the less the power required for the same coverage. The ideal was therefore to select the shortest wavelength which would give reliable reception, without fading, at all times of the day, and then choose a transmitter of the lowest power to give the necessary coverage. Mr Hallett's first impression was that a 500 watt transmitter operating on a wave-length of about 300 metres with a semi-directional rhombic aerial would be suitable. This was also Mr Mercer's impression. (However, the absence of one member of the Committee, Major Butler, and the complexity of the discussion at this point leaves the question in some doubt, and further technical discussions will be required). Mr Hallett pointed out that if a shorter wavelength in the medium wave-band were applied for, some indication of the power to be used and of the direction of the transmission would have to be given.

Studio equipment: There was a considerable amount of discussion on this point and reporting in any detail is impossible. Agreement was eventually reached that the studio requirements were these:

Studio requirements:

1. The reception of short-wave broadcasts from the B.B.C. for relaying over the local loudspeakers and the medium-wave transmitter. This should, if possible, be done by means of diversity reception, i.e. the reception of the required programme on several frequencies at the same time to minimise fading etc.
2. The ability to broadcast recordings on 10-in. 12-in. and 16-in. discs. (B.B.C. recordings are usually on 16-in. discs).
3. Some provision for "outside broadcasts".

Mr Kift thought that a quotation from G.E.C. (32a. in File 11/46) was very reasonable, and the kind of thing we should aim at. Mr Cunningham opposed this equipment on the grounds that it was not laid out for ease of operation. He pointed out that if one person was expected to operate all the studio equipment then it should be compact and efficient. He made a strong plea for equipment (such as that produced by Rediphon) in which the operator can perform all his normal functions (operating, announcing, relaying etc) with the maximum ease, and without impairing the efficiency of the transmission. The Committee agreed that, once the equipment required had been decided upon, there was no reason at all why it should not be arranged in the most efficient manner, provided that such rearrangement as was required did not unreasonably inflate the purchase price.

On the subject of ordering equipment Mr Cunningham pointed out that there was at the Colonial Office a B.B.C. Liaison Officer, (Mr Whitley) whose function was the co-ordinating of all matters pertaining to broadcasting in the Colonies, and who was responsible to the Secretary of State through the Information Office. He suggested that, where difficulties might be encountered with the Crown Agents in the purchasing of equipment, Mr Whitley might be informed, since he had stated that he was in a position to effect a priority order. The Chairman informed Mr Cunningham that the indents for equipment must go the Crown Agents, but that he could see no reason why he (Cunnington) should not write to Mr Whitley at the same time, if he thought some useful purpose would be served.

C.S. I do not (r) not propose that Mr C. should put his oar in at all in this matter.

MC.

26/12

Location of studio:

Location of Studio: There were two possibilities:

1. The studio might be situated in the town, or
2. It might be located out of town

in either case it was agreed that the transmitters themselves, and the transmitting aerials, should be out of town. The W/T station might accommodate these and the W/T staff would then be able to assist in switching on and off, checking during operation, etc.

The arguments in favour of 1. were many. The central location was an advantage and the Secretary urged the investigation of a possibility that the studio might be put inside the new Town Hall. The Committee agreed that this would be an excellent move, but there was considerable doubt that space could be found.

Mr Hallett, who advocated 2. did so because he said that aerials suitable for the reception of short-wave broadcasts would be difficult to build in town owing to the space required for arrays such as the "rhombic" type. Mr Kift doubted whether a very elaborate aerial array would be strictly necessary.

It was eventually agreed:

1. That the possibility of including the studio in the Town Hall should be investigated. V. doubtful. HC.
2. That the possibility of building a semi-directional aerial array for short-wave reception near the sea-front in Stanley, to accommodate a studio there, should also be investigated.

The Chairman said that a good deal had been done by the meeting, but that many of the technical points would have to be more definitely expressed later. He agreed to try to arrange a meeting with some of the farmers over the holiday and the meeting was adjourned.

J. McNaughton

Secretary.

Chairman.

76D

SUB-COMMITTEE MEETING (TECHNICAL) : DECEMBER 24TH. 1948 AT 2.30.

Chairman: Mr F.Kift.

Present: Major Butler, Messrs. Hallett . Sec: D.McNaughton.



The purpose of the meeting was to try to reach final agreement amongst the Technical members of the Committee including Major Butler, on some of the technical points arising from recent full committee meetings. In view of the shortage of time it was decided to deal with the problem of most importance to farmers - i.e.

R/T COMMUNICATIONS WITH THE CAMP:

Army 19 sets: After considerable discussion all members agreed not to recommend these sets for the following reasons:

1. The sets are complicated in appearance and operation and maintenance. They are therefore not suitable for Camp users.
2. New sets (complete) would cost about £300 each - the only case for their purchase would be if they could be obtained cheaply from Army disposals.
3. The sets offered cheaply (as in 2 above) are second-hand and incomplete. Many necessary plugs, connectors, etc. are missing, and the work and expense required to put them in working order might well be recurrent even during the first few years of use.

(C.A. have quoted £55/40?)

MC

This replies to comments above

MC

Specification: The technical members were again in agreement that suitable equipment was most likely to become available through smaller radio firms. They eventually agreed that a set suitable in every way could be built to specification for £50 or less (without batteries or windcharger). They also agreed on the following specification:

Specification of suitable R/T equipment:

General: Unit to be of the "Transceiver" type with built-in power pack.

Modulation depth: Fixed.

Power output: 10 watts into a dipole aerial.

Frequency: Spot frequencies 3 Mc/s and 4.5 Mc/s, crystal controlled.

External controls: Only the following:

1. Volume control/on-off switch.
2. Common frequency selector switch.
3. Aerial trimmer for transmitter with neon indicator.
4. Frequency trimmer for receiver.
5. Equipment to be fitted with standard G.P.O. handset with "Pressel" microphone switch.

Circuit: Simple superhet receiver.

Sensitivity: to be such that speech may be received from a similar transceiver at a maximum distance of 200 miles, by sky wave.

Construction: To be as rugged and robust as possible.

Power supply: 12 volt (or more preferably 6 volt) car-type accumulators (60 ampere hours). The sets will normally operate about 2 hours per day and battery charging will be by wind charger as a rule.

At a maximum of 2 hours/day - I should think about 10 minutes at the outside

MC

Quantity: To be decided.

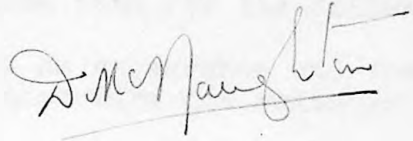
Maximum cost: without a) Aerial
b) Batteries
c) Wind charger

but otherwise ready to operate, should be £50 or less.

Additional firms to be approached:

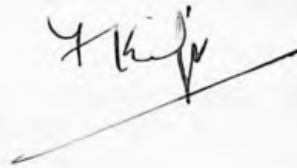
Teleradio, Edgewars Road, London.

Union Radio, Croydon.



Secretary.

Approved:



Chairman.

At
2 h
shou
10 m.
outsi

12. 1. 49.

Hon. Sec.

I have previously agreed that these are a true record of proceedings at the last meeting, but detailed consideration of the various problems involved in providing coverage (without fading or distortion), (see attached sheet), for both the Falklands and Dependencies, has left me in doubt as to whether the recommendations agreed to at the last meeting are, in fact, satisfactory.

Mr Hallett and I have again discussed the proposals for both medium and short wave transmitters and feel that we cannot now make a recommendation regarding suitable transmitter power.

We suggest that an experienced authority (e.g. the B.B.C.) be supplied with full details of our requirements, and that they be asked to make necessary recommendations.

J.P.

MEDIUM WAVE TRANSMITTER.

Consideration of figures for primary (fade-free and undistorted) coverage on medium waves at reasonable power (e.g. 2-5 kw) makes me very doubtful that the medium wave transmitter suggested recently will give the service required.

For example, even with a frequency as high as 1 Mc/s, primary coverage obtains over about 75 miles only, while secondary (i.e. fading) coverage obtains from 75 to 150 miles during the day even when 50 kw. is used; whereas at night primary coverage extends, with the same power, only to 50 miles, then a belt of high distortion occurs between 50 and 100 miles from the transmitter, and the secondary service extends from 100 miles to 300-500 miles.

Griff

12. 1. 49.

Col Butler.

For info

x 11/1/49. 72

S.W. TRANSMISSION

PROPAGATION CONDITIONS FOR F.I.D.S.

e.g.

At 1200 miles 3kw gives c. 170 μ V/m above necessary for strength

1 kw 75

@ 6 M/s.

500w 40

All @ 40 M/s.

NOISIER PERIOD 20.00 hrs.

NOISE ZONE I (i.e. F.I.D.s) R/T.

(Reqd. fld strength for CW. is approx 0.14 of R/T fld strength reqd for phone reception)

BCD FIELD INTENSITY

200
250
200
150
100

1kw

3kw

500w

Max Dist Reqd 1200 miles (?)

Figures not available for Medium waves.

μ V/m

Mazin Bucher.

84-92 these are a bit rough but they're about as close as I can get I think — a decent of a lot was said.

D. Me

Read with interest.

Ethe Sappa Hill site is in my opinion quite hopeful for the VHF ~~unstable~~ ^(or transmittance station) for the seasons given; if the M.O. site proves unworkable is the Wuelan Station a possible alternative? We may have to provide VHF for seaplane service one day. M.C. 8/1. ag.

45

Read with interest.

The Sapper Hill site is in my opinion quite hopeless for the VHF installation for the reasons given: if the M.O. site proves unsuitable, is the Wireless Station (or Ionospheric Station) a possible alternative? We may have to provide VHF for seaplane service one day.

(Info.) MC. 8/1.49.

W/T COMMITTEE: MINUTES OF SUB-COMMITTEE (TECHNICAL) MEETING JAN. 7TH. 1949:

Chairman: Major Butler.

Present: Messrs. F. Kift (Deputy Chairman), D. Hallett, A. Mercer.

Secretary: D. McNaughton.

The Chairman announced that the meeting had been called for the purpose of coming to final decisions on as many of the technical points raised at other meetings as possible. The minutes of the last sub-committee meeting were taken as read, and approved.

The first matter dealt with was broadcasting. The Secretary informed the Chairman that the Information Officer, Mr Cunningham, had asked whether he would be invited to take part in technical discussions dealing with broadcasting equipment. The Chairman replied that H.E. had instructed the previous Chairman to the effect that Mr Cunningham's views need not be sought on purely technical discussions on which he was not qualified to express an opinion; this applied also to equipment.

Broadcasting: It was again generally agreed that two transmitters would be required to provide the services envisaged in the Falklands and the Dependencies. The Committee felt that best results would probably be obtained by approaching the larger radio-manufacturing firms in the U.K. (Marconi, G.E.C., Standard Telephones and Cables etc.) through the Crown Agents, and asking them to quote prices, specifications etc. of equipment, (as far as possible from their standard lists), likely to meet the whole requirements of the services. In the case of rather specialised pieces, (e.g. high-diversity reception equipment), the Crown Agents should be asked to consult the B.B.C. (or their representative at the Colonial Office). I didn't know they had one - they have a Liaison Officer (Witley) but he would not be a technician. MC.

Considerable technical discussion followed and it was agreed that the following equipment would be adequate to meet the requirements of the service:

1. Short-wave transmitter:

The purpose of this was to serve the Dependencies all the way from South Georgia to South Grahamland. It was agreed that a frequency of about 6 mc/s would be suitable for the next few years, but Mr Kift felt that something of the order of 3 mc/s would be required in about 5 years' time.

Specification: a) Short-wave - approx. 3 and 6 mc/s.

- b) Maximum power $3\frac{1}{2}$ Kw.
- c) To operate on a dipole aerial.
- d) To broadcast all normal programmes - speech & music.
- e) To be power-modulated with provision for M.C.W.
- f) To operate from 3-phase, 50-cycles supply. The nominal voltage will be 400. (N.B. This is the new power supply)

2. Medium-wave transmitter:

The purpose of this was to provide reliable programmes in the Falklands, (including rebroadcasts of B.B.C. programmes), on medium waves, without fading. Educational broadcasts were of particular importance.

Specification: a) Medium-wave - approx. 250 metres. (This would call for the allocation of a new frequency).

- b) Maximum power $2\frac{1}{2}$ Kw. (It was agreed that the use of a directional aerial could materially reduce this, but that this was not practical).
- c) To operate from same power supply as 1. above.

3. Studio equipment:

This should include full remote-control equipment for both transmitters. These will frequently be used at the same time, but it is not expected that they will be used to broadcast different R/T programmes simultaneously.

(Certainly not. MC)

Provision will be required for the reception and rediffusion of B.B.C. programmes. This will involve the use of a first-class high-diversity receiver and, in this connection, the advice of the B.B.C. should be sought, (possibly through their representative at the Colonial Office). See previous page MC.

The same remark holds good of other studio equipment—dual-purpose turntables, microphones etc. As stated at a previous meeting the studio should provide:

- a) Reception and rebroadcasting of B.B.C. features over a local loudspeaker network, and the medium-wave transmitter.
- b) Broadcasts of gramophone records and B.B.C. recordings.
- c) A simple system of "outside broadcasts".

4. Aerials:

The transmitters should be supplied complete with aerial masts, stays, leads etc. Masts of the "Adastra Pole" type will be suitable as erection equipment will be held in the Colony by that time.

5. Rediffusion equipment:

Relay equipment, amplifiers etc. will be required to serve the local loud-speaker system. This consists of about 230 high-impedance speakers at present, but as the service improves some increase is to be expected. Yes. MC.

The equipment should therefore be capable of feeding up to 400 high-impedance speakers at a maximum distance of 1 1/2 miles.

The equipment should be such that the output from a single point (microphone, gramophone record, or incoming B.B.C. programme), can be fed simultaneously to loud-speaker system, medium-wave and short-wave transmitters, or to any combination of these three.



The sub-committee also discussed the location of the various units in Stanley.

1. Broadcast transmitters:

It was again agreed that these should be installed at the W/T station where the W/T staff could presumably switch on and off etc. The building of suitable transmission aerials in this area should give no difficulty.

2. Broadcast studio:

It was pointed out that, owing to interference from the transmitters, high-fidelity diversity reception at the W/T station itself would be out of the question. The studio must be elsewhere.

After a brief discussion the sub-committee agreed to make a strong recommendation that every effort should be made to put the studio inside the new Town Hall. The advantages of this move were obvious - amongst them:

- a) Economy - the studio need not be very large - two small rooms, or one room sub-divided should suffice.
- b) Central location - has obvious advantages.
- c) Convenience for broadcasts from the Town Hall itself. The Town Hall will become the social centre, not only of Stanley but of the whole Colony, and anything taking place in it -(concert, dance, meeting etc.) will be of particular interest to all.

(I am in sympathy with this recommendation and will endeavour to implement it.)

The sub-committee agreed that there should be no difficulty in building an aerial system suitable for diversity reception near the Town Hall. Even a rhombic array might be built if necessary.

3. VHF equipment for the aircraft: (MC)

The Chairman insisted that the VHF installation cannot be remote-controlled without the use of very expensive remote-control equipment. This was partly due to the fact that the D/F section must be located and operated at the transmitter itself. The other members recalled that Mr Spencer had indicated that he would prefer not to use the D/F section unless he could be quite certain that it was being operated efficiently. Major Butler replied that the D/F section should be used, and that anyone with any intelligence could soon operate the equipment efficiently.

The objections to the Sapper Hill site were therefore:

1. Difficulty of getting staff there.
2. Difficulty of getting services (power, telephone) there.
3. Difficulty of protecting the apparatus from unauthorised interference.

Since the VHF equipment would only be used at infrequent intervals and since there would be long periods of inaction, the obvious system was to locate it where there was already staff available. Since the Met. Office will be the chief user of the equipment, and since the Met. Office is on an open site, Major Butler advocated installing the VHF equipment (including the D/F section) in the Southwest corner of the office, and using the Met. staff as operators. The Secretary raised a number of objections:

a) Loss of range: This might be considerable. At a distance of 60 miles West or Northwest of Stanley, the aircraft would need to fly at a height of about 6000 feet in order to be in VHF contact with the Met. Office site, and this might not always be practical. (Mr. Kift supported this view and submitted a few rough calculations vis.

$$\text{Max. possible range (miles)} = \sqrt{2 \times h_s} + \sqrt{2 \times h_r}$$

where h_s = height of E/K mast (above M.S.L.) in feet.
 h_r = " " Aircraft " " "

e.g. Transmitting ae. at 200 ft. $\sqrt{2h_s} = 20$ miles } Total range
Aircraft at 1000 feet $\sqrt{2h_r} = 42$ miles } = 62 miles.

H.R. This takes no account of obstacles between the transmitter and the horizon).

b) Interference with Radio-Sonde Balloons: The anemometer mast at the office, with its stays, was already a serious obstacle to gale launches in Northwely winds. Further masts and aeriels might increase the difficulties, especially when it was borne in mind that another two masts might eventually be needed for wireless reception of weather messages. Major Butler assured him that the VHF aeriels could be installed South of the Office so that they were completely shielded by the anemometer and its stays, and that these same masts could also accomodate an ordinary aerial.

c) Staff: The addition of D/F meant the training of all Met. Office staff in D/F operation. There was also no guarantee that staff would be available for this whenever required. Major Butler felt that this operation would not occupy a great deal of time, but agreed that trials would provide the only real answer.

d) Space: All the space at the office was being occupied or would shortly be occupied. Major Butler replied that he had in mind an extension of the building at the Southwest corner to provide the extra space required.

e) Interference from Radar set: Indications were that this might be appreciable up to about 1/2 mile but that, with efficient earthing of the GL III and normal screening on the VIF, installations at less than 100 yards should be possible. The only real way to find out was to install the equipment and carry out a series of tests.

Major Butler felt that these objections were considerably less serious than those to be encountered in considering the Sapper Hill site and suggested the installation of the equipment at the Det. Office as soon as possible in order to carry out a series of tests on:

1. Range at various heights.
2. Use and accuracy of D/F side.
3. Time required.
4. Interference from Radar.

The sub-committee agreed to recommend this course of action - provided of course that the Det. Officer, when consulted, was agreeable.

On the question of the second VIF installation at Fox Bay, Major Butler said the complete equipment would cost about £400, and while this might be reduced by the omission of the D/F section, he felt it would be wise to make tests in Stanley before reaching a final decision.

D. McNaughtan.

Secretary.

W. Butler

Chairman.

67.99

LOOSE MINUTE.

Major Butler,
Chairman, W/T Committee.

- 100 ~~18~~ 1. The accompanying letter from the Information Officer reached me today. I do not feel that I can take any action or make any comment.
2. Perhaps you would care to do so.

D. McNaughton

Secretary,
W/T Committee. 14.1.49.

18 10

Information Department,

STANLEY.

13th January, 1949.

Sir,

I have the honour to acknowledge your letter to me, dated 11th January, 1949, in which you enclosed an approved extract of the minutes of a meeting of the W/T Technical Sub-Committee, held at Government House on 7th January, under the Chairmanship of Major Butler, and of the decision contained therein that my views would not be sought on matters pertaining to broadcasting equipment, particularly with regard to studio requirements.

2. I wish to say that in enquiring whether I would be invited to take part in technical discussions dealing with broadcasting equipment, I had no intention of intervening in questions of a purely technical nature of which I had no experience. I have, however, had considerable practical experience of certain types of apparatus which might be considered for use in broadcasting here, and of which none of the rest of the Committee, so far as I am aware, have other than technical knowledge.

3. For this reason, and because it will presumably be my duty to operate the broadcasting apparatus when it is erected, I presume that my views on these matters will not be regarded as superfluous. If they are, then I shall be glad to learn whether my attendance will be required in future on occasions when such matters are discussed.

4. Finally, I think it is necessary for me to point out that my experience of studio equipment is of some four years, and that it was gained at the hands of B.B.C. engineers attached to the British Forces' Broadcasting Network, of which I was a member for part that period.

I am,

Sir,

Your obedient servant,

K.A. Cunningham

Information and Broadcasting Officer



H.C.S.

102-104

*But I have already
conceded that we are
not.*

A few days ago H.E. asked me to redraft the attached letter to the C.A. On consideration, and with respect, I suggest that we are not yet in a position to ask for quotations - this for two reasons:

1. 77,78,79 and 81 in this file indicate that the technical members of the W/T Committee are not in agreement on the type of equipment required.

2. From my talk with H.E. I am convinced that he would find the cost of transmitters like those mentioned in the letter quite out of the question.

I suggest that the advice of the B.D.C. should be sought at this stage through S. of S. I have therefore taken the liberty of preparing drafts of:

a). Letter to S. of S. stating problem briefly.

b). Summary of broadcasting requirements based on the Committee's work - separate to eliminate technical details from S. of S.'s letter, and in such a form that it can be passed straight on to the experts. The Technical members of the W/T Committee at present available in Stanley (Messrs. Mercer, Kift and Hallett) have seen and approved this summary.

On the question of finance I feel it is essential to give some guidance - without being too specific? I gather that if, (as is likely), two transmitters are required, we are unlikely to do the job for £5000. In this case H.E. might consider having FIDS.

pay for the extra transmitter - for the Dependencies service?

Certainly.

D. McNaughton

Secretary,
W/T Committee.

24/1/49.

H.C.S.

Thank you. I agree with H.E.'s amendments, but have these remarks.

105 para. 2 line 9; 'undulating pow-class procedure'
this is relevant since one of the fundamental variables governing the propagation of certain types of radio waves (ground waves) is the type of surface over which they pass.

106 para. 3 lines 10-12 and 106 para. 5 lines 5-8;
give information, (in addition to that in 107 para. 6 b), likely to assist in the choice of a control panel. i.e. they indicate what combinations of the three services may be required at a time. I feel their inclusion is desirable.

D. Men
28-1-4

this
fair
K.H.
3/4

STANLEY.

1st February, 1947.

ALKLAND ISLANDS.
S. I. COLONY.

Sir,

I have the honour to address you in regard to the need for a new Broadcasting system at Port Stanley to provide transmissions to all parts of the Colony and its Dependencies.

2. I recently appointed a Committee to investigate these requirements and to advise me as to how they should be met; the Committee has studied the problem along the lines indicated in the pamphlet "Broadcasting Services in the Colonies - Choice of suitable wavelengths for Broadcasting" (enclosed with Circular Despatch of 20th September, 1939) with particular reference to paragraph 3 thereof and following some divergence of opinion now recommend to me that more specialised advice should be sought.

3. My requirements briefly, are transmitters capable of providing clear transmission, simultaneously at need, within the Colony and at South Georgia and the Antarctic Bases. A summary has been prepared and is enclosed, based on the deliberations of the Committee, with a view to providing all the required information and it is hoped that this will enable expert advice to be given upon the type of equipment which will best serve my needs.

4. I would be grateful therefore if the problem may be referred immediately to the British Broadcasting Corporation or any other qualified agency and if you will thereafter ascertain the approximate cost of the equipment recommended. £5,000 has been earmarked in my ten year Development Programme (Serial No. 26) and I contemplate providing an additional sum from the Dependencies which will require a more powerful transmitter.

5. When this advice has been obtained I would be grateful if the Crown Agents might be instructed to submit a firm estimate, when I will address you further in regard to assistance from the Colonial Development and Welfare Fund to enable me to provide for the new installation in the 1950 Budget.

I have the honour to be,
Sir,

Your most obedient, humble servant,

(Sgd.) MILES CLIFFORD.

GOVERNOR.

HONOURABLE
GEOFFREY JONES, P.C., M.P.,
SECRETARY OF STATE FOR THE COLONIES.

76 in 78/30

111-112
triplicate.

is in custody to
be kept pending
they had well 9
be acceptable
radio's. Mc.

Handwritten notes and signatures at the bottom right of the page.

BROADCASTING IN THE FALKLAND ISLANDS.

A Committee has recently studied this question, and discussed in some detail the services which it is desired to provide. The following summary, based on the discussions of the Committee, has been prepared with the aim of giving sufficient information to enable technicians in the United Kingdom to recommend suitable equipment. In doing so they should bear in mind the question of cost. As an indication of the amount of money likely to be available for the scheme, they should note the fact that The Governor has provisionally earmarked a sum of \$5,000 for the renewal of broadcasting facilities in the Colony, basing his estimate on the assumption that one broadcast transmitter would be sufficient. Should the experts feel (as most members of the Committee do) that an additional transmitter will be ~~required~~ for the Dependencies then he would make further provision. They should note also, that the present studio equipment is of little value and will have to be replaced within the total sum available. They should therefore endeavour to ensure that the cost of the main items recommended by them lies within the desired limits in order to allow for the many additional items - switches, microphones, leads, insulators, cables, masts etc. - which will be required to complete the installation.

2. The object of the Falkland Islands Broadcasting Service is to give clear reception in all parts of the Colony itself. The service, which will operate both during the day and after dark, will be used also for educational broadcasts. Reception must therefore be of a high standard and as free as possible from fading and distortion. The direction of the transmission can lie almost entirely between South West and West North West, but there are several settlements to the North West and North within about 50 miles, and these must be adequately served. The country is in general undulating poor-class pasture, with rocky ridges up to about 1,000 feet in height but there are a number of peaks between 2,000 and 3,000 feet, especially in the West Falkland. The maximum transmitter-to-receiver distance is about 150 miles. Apart from educational broadcasts, it is hoped that programmes will include relays of features from the B.B.C. short-wave service, broadcasts of B.B.C. recordings, and local "outside broadcasts" from churches, halls, etc.

3. The Falkland Islands Dependencies Service (both operated from Port Stanley, the capital) is intended to provide good reception in the Dependencies in an arc extending from South Georgia to the Southern part of Grahamland. In this area the standard of reception need not be quite so high as in the case of the Colony service, but adequate signal strength day and night throughout the year is essential. The maximum transmitter-to-receiver distance will not exceed 1,500 miles. The reception of this service in South America as far away as the River Plate may be considered desirable but is not essential. Many of the programmes broadcast in the Colony service will be considered suitable for broadcasting to listeners in the Dependencies, who will not, however, in general, be interested in schools broadcasts and other items of restricted interest. It is not envisaged that occasions are likely to arise when the two services will be required

to.....

broadcast different programmes simultaneously.

4. The power supply will be provided from 3-phase 50-cycles mains. The transmitter (or transmitters) should naturally be capable of broadcasting both speech and music, and should a separate transmitter be considered necessary to serve the Dependencies, this should also have provision for M.C.W. operation.

5. The Local Broadcast Rediffusion Equipment at present in use in Stanley will also require replacement. The new equipment should be capable of feeding up to 400 high-impedance loudspeakers by landline at a maximum distance of one and a half miles - the loudspeakers themselves are already available and will not require to be replaced. The programme in this service will be materially those in the domestic radio service, with the addition of purely local announcements.

6. To complete these arrangements it is intended to provide a Central Broadcasting Studio in which will be located the following:-

- (a) A system of "diversity reception", to enable incoming short-wave broadcasts to be received and rebroadcast without serious fading. This would presumably entail the purchase of a first-class high-diversity receiver, and the advice of the B.B.C. (or other qualified agency) on this very specialised aspect is of particular importance.
- (b) A studio control panel to enable a single operator to handle normal studio broadcasts, the rediffusion of incoming short-wave programmes, and outside broadcasts. (These last will come from some half-dozen points in and near Stanley, by landline, a maximum distance of 2 miles.
- (c) Local rediffusion equipment (loudspeakers).
- (d) Dual-purpose turntables for the broadcasting of ordinary gramophone records and B.B.C. recordings.
- (e) Other associated studio equipment.

7. In connection with the studio the technical advisers may wish to know that the local Committee has recommended the building of receiving aeriols close to the studio, but has advocated the installation of the transmitters some distance therefrom, linked to the studio by landline. The studio itself will be located in the new Town Hall now in course of erection. This arrangement will facilitate the broadcast of social and other events.

8. Finally, an ionospheric measuring station is maintained in Stanley by the Radio Division of D.S.I.R. The results obtained by this station may be of assistance to the experts and are available on application to Dr. Smith-Rose, Radio Division, D.S.I.R.

B.M. 8/3/49 (110)
42

Chairman : Mr. F. Kift.

Present: Messrs. Hallett, Hawkins, Mercer.

Secretary: Mr. D. McNaughton.

The meeting was called at the request of Mr. Hawkins and with the authority of the Governor, to hold preliminary discussions on "The W/T Communications in Connection with the Net. Service."

Mr. Hawkins reminded members of the agreement at the 2nd Committee meeting that the reception of net. messages should be undertaken at the Net. Office (Item 4 page 54).

The sub-committee reaffirmed this recommendation and agreed that the principle should refer to all incoming and outgoing messages of a purely net. nature. Amongst the reasons for this were :-

1. Very considerable saving in time involved in passing messages to and from the W/T station by telephone or messenger.
2. Increased accuracy of the information due to it being handled once less.
3. Possibility of training combined net - W/T operators to whom the net. traffic would be "plain language".

Such staff would be eminently suitable for service in the Dependencies.

4. Other advantages which became obvious as the discussion went on.

The committee then proceeded to discuss the problems involved and came to these general conclusions :-

Staff - long term.

The best eventual answer to the problems would be to train net. office staff in W/T operating. This would have the added advantage of producing a nucleus of staff interchangeable with the Dependencies stations.

This training should, however, be approached with caution since it is common to find a certain percentage of W/T operator trainees to be unsuitable for the job and hence the W/T work might prove to be beyond the scope of some of the staff. This is particularly relevant since previous

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committee recommendations have proposed that the same staff should also work the the camp R/T and the VHF/DF for the aircraft, in addition to their present jobs in the synoptic section and upper air section.

Mr. Howkins pointed out that, on the other hand, he had two extra assistants at the Met. Office, who were undergoing training for service in the Dependencies and it seemed probable that, while some of the staff might fail to reach a high standard of proficiency in W/T, they might still be able to transmit short weather messages of 10-15 groups at slow speed for the Dependencies stations.

It was therefore agreed that regular Morse practice of 1 hour per day for 4 of the met. staff, seemed justifiable, and that, if the training proved entirely satisfactory H.E.'s approval should be sought to retain the two assistants intended for service with the bases, in Stanley, as members of the Dependencies H.E. staff, thereby solving the present communication problem. Mr. Howkins said that the salaries of these two assistants would lie well within the estimates for meteorological W/T services recently submitted to H.E. (See ~~MEMO~~ 5/49/4 of 4th Feb.)

Mr. Mercer stated that he could arrange the training programme.

Staff - Short term.

It was agreed that the proposals contained in the previous para could not be expected to produce a final solution in less than 1½ - 2 years, and it was obvious that some interim arrangements were necessary.

Mr. Mercer stated that he had already suggested the recruitment of two more operators for the W/T station in order to provide continuous service from morning till night and he felt that when these had been obtained, the addition of one other operator would enable the station to continue to handle the met. traffic as at present.

Mr. Howkins reminded him that the information for ~~the~~ 2300 G.M.T. had not been received since the Government W/T station took over the responsibility for met. traffic in January last year and that it was desirable that this should restart as soon as possible. Mr. Mercer felt that this would entail the employment of a second extra operator - who might be made available by transferring one of his electricians who was proficient at Morse, over

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to W/T. Mr. Mercer will look into this and report later.

Technical difficulties : So far as the members of the committee could see, there are no serious technical difficulties likely to be met in attempting to handle Net. traffic from the Net. Office. A cable containing several pairs of lines has already been laid from the Net. Office to the W/T station and this could be used to "key" transmitters. The W/T staff would have to continue to switch on and off the transmitters and monitor their operation, but this would not be ^a serious difficulty since, (as Mr. Mercer had indicated previously) it was intended to maintain continuous watches there for other purposes. It would be a very good idea to have separate special frequencies for Net. broadcasts since this would not introduce any serious complications, but would add several hours per day to the times at which the W/T station could handle normal commercial traffic at the present allocated frequencies.

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A certain amount of extra equipment - receivers, automatic-sending equipment etc - would be required at the Net. Office and this is set out in an appendix to these minutes. Mr. Howkins said he would take an early opportunity to ask Air Ministry whether they would be prepared to sell the two R.206 receivers already held at the Net. Office, and whether they could provide other equipment at less cost than through normal suppliers.

The question of accommodation at the Net. Office had been dealt with at a previous meeting. The installation of W/T and Camp R/T equipment will fill up the space available at present for W/T reception, but an extension of the S.W. corner of the building would provide the extra room required. It was noted that this room could be used at very busy times of the year, as a "control" for the W/T station enabling more commercial traffic to be handled.

(Minutes of January 7th meeting para 5 (c) on page 96.)

D. McNaughton

Secretary,
W/T Committee.

Appra. by Chairman

APPENDIX - REMOTE CONTROL EQUIPMENT:

<u>Quantity.</u>	<u>Description.</u>
1	No. 11W Morse Transmitter fitted with 1 1/2" dia. friction disc, (speed range 20-150 w.p.m.) and motor for 230 volts AC. 50 C.P.S. Complete with Control Unit. Transmitting Relay (with R.I.S. V.216) usual tools and accessories.
1	850/91 B Transmitter Head C.P.
1	No. 9W Morse Keyboard Perforator Wheatstone Code, fitted with Keyboard to chart MCT. 1303, R.I.S. and motor for 230V AC 50 cycles. Complete with accessories and usual tools.
1	860/149E Punching Head C.P.
2	No.27/C Polar Relay fitted with "C" windings (25 + 25 ohms) and RIS.
1	1410/56 Relay Base C.P.
2	Elliot T. 1607 Tape Reels.
1	Elliot T. Tape Winder.

H.C.S.

117-120

attd and is copy of letter to AM. as at

para 2 of 117.

May we now take action in training staff as

at para 2 of 115. pl. 2. 2. 49

G. d.

Feb. 25. 2. 49

h.c.s.

App.

K.H.

1/3.

H.C.S.

Noted ty.

G. d.

2.3.49

Handwritten initials and scribbles at the bottom right of the page.

Meteorological Office,
Stanley, Falkland Is.

21st February, 1949.

W/T Communications

It has been proposed in FIK 5/49/4 of 4th February, to which the Governor has agreed in principle, that the cost of met. W/T communications should be provided for from Dependencies funds. (para 5 above the above letter refers); and the local W/T committee have now made recommendations to the Governor for the provision of the necessary services.

2. Briefly, the proposals are that :-

(a) all "in" and "out" met. messages should be dealt with from a small remote control at the met. office.

(b) Two extra assistants be recruited for the Dependencies Headquarters staff in Stanley and that at least four of the total staff be trained in W/T, in addition to their synoptic and upper air routine work. (this follows the line originally proposed in FIK 8/46/1 of 16th December, 1946).

This is a long term measure and, in the meanwhile, steps should be taken to increase the staff at the Government W/T station to provide for the interim period while the met. staff are under training.

(c) The remote-control equipment listed in the appendix will be necessary

3. With reference to para 2(c) above, it was understood from the Signals Office at Dunstable that Air Ministry Signals might have stocks of autoheads, tape machines relays etc for disposal. It would be appreciated if H. O. could ascertain whether this is so and how much the items listed in para 2(c) would cost.

Would H.O. also enquire whether the two ^{the appendix} 2 Ro6 radio receivers, supplied by H.O. for taking weather messages, could be transferred to the Falkland Island Dependencies.

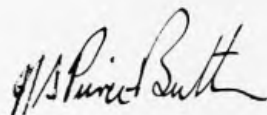
C. A. Hawkins

Meteorological Officer.

The Director,
Met. Office H.O.13.,
KINGSWAY, W.C.2.

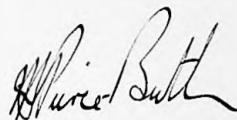
With reference to the minutes of our meeting on March 11th. I have consulted the Executive Engineer on the subject of the Broadcasting Studio in the new Town Hall. Mr Bunting confirms that the room allocated at present is under the stage and has little head room, and can see no possibility of an alternative location in the new building. I have further discussed the matter with Mr Winter who has suggested the alternative that the present E & T Building should be turned into a broadcasting station with studios etc. when the E & T Staff vacate it to take up quarters in the new building.

Appd.



Chairman.
W/T Committee. 21/3/49.

Further to the above we have now received a reply from the Crown Agents on the subject of R/T equipment. Only one firm has tendered for the supply of the specified equipment - at a price of £75 per set. Details are following by air.



Chairman.
W/T Committee. 21/3/49.

Chairman: Lt./Col Butler.

Present: Messrs. F.Kift, D.Hallett, G.Howkins and H.Slade (Acting S.E. & T).

Secretary: D.McNaughton.

The purpose of the meeting was to complete the work of the Committee as far as possible, and to "tie up any loose ends". The members ~~XXXXXX~~ reviewed briefly their work on various aspects of the communications problem and the following points were noted:

R/T Equipment: The Crown Agents were asked to invite quotations from various firms for the supply of specified equipment in a Saving Telegram dated Dec.27th. 1948. As no reply had been received it was agreed that a hastener should be sent, and the Chairman agreed to attend to this. (See file 0031 VolIII Entry 96).

Broadcast Studio: It was stated that the room allocated to the broadcasting studio in the new Town Hall was one stretching from North to South under the stage ~~XXXXXX~~ Members pointed out that this was quite unsuitable, since the use of the studio in the hall would be based largely on the ability of the operator to see into the hall itself and to observe action on the stage. The Chairman agreed to consult the Executive Engineer on the subject and, if possible, to obtain a plan of the room so that the internal layout, soundproofing etc. could receive some attention.

Broadcast programmes etc: The Committee recalled that Mr Mathews (when Chairman) had made it clear that they should not concern themselves with the actual content of broadcasts, but only with the technical arrangements required to make them possible, and that another Committee would probably be set up to deal with the former. In view of the general dissatisfaction, in the Camp & Stanley, with the present arrangements, the Committee agreed to recommend to the Governor:

That a Committee be set up at once to deal with the times and contents of broadcast programmes.

Communications with the aircraft: Mr Howkins pointed out that the installation of the V.H.F. equipment at the Met. Office had not been started, and that the matter was urgent for two reasons:

1. The aircraft was making flights without any provision for communicating with the ground.

2. It was hoped that the Met. Office would shortly get a new roof, probably of iron. Tests of the equipment before the iron was put on were most desirable owing to the possibility of D/T errors being introduced.

The Chairman agreed to take action to hasten the installation.

Training for W/T operators: Mr Howkins reported that two buzzers for Morse practice had been installed at the Met. Office and that he was now ready for his assistants to commence training. Mr Slade agreed to make arrangements for a short period of training each day - to be given either by himself or by Mr. Rieve.

Ships' Weather Reports and Forecasts for Ships: Mr Howkins said he would like improved facilities for these, but that it seemed reasonable to continue as at present until the staff situation at the W/T Station had been improved. Mr Mercer had indicated at previous meetings that he intended, if possible, to increase his services for shipping, and improved Meteorological communications could be discussed again when that had been done or was imminent. The Committee were not clear what additional staff had been approved for the W/T Station, but Mr Slade said that, so far as he was aware, there was no risk of further curtailment of the Met. services.

Report on the Work of the Committee: The Secretary was asked to prepare a general report on the activities of the Committee and to indicate, where H.E. had approved their recommendations, what steps had been taken to implement them, and what still remained to be done.

D. McNaughton
Secretary.

Approved:

W. R. Bath
Chairman.

Secretary W/T Committee

*Your (12). Give to you per
L. J. [unclear]
24/3/49*

H.E.S.
Owing to pressure of work I am afraid I have not yet had time to draft a final report. In the meantime H.E. will not have seen from endy 115 - he may care to see? May I again have the file back pl.
D. McNaughton

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4/2. They wish to see 115 on roads pending final report.

KW.
22/4.

Pen. A
MC. 21/IV

next other

like returned for report #1.

KW.
22/4.

Col. Butler.

Please put up list suggested names for

Broadcasting Ctee.

MC 7/V. 29

Y.E.

I suggest following possibles for your elimination

Mc Naughton

Honeyman

Cunnington

of H L Bound, in absence of

Harold Bennet.

J Bound

Dr Stafford

Skillington

Mrs. White

Slade.

~~Mr Kelly~~

~~Rev. Lister~~

~~Rev. Mc Whan~~

~~Mrs. A. Biggs~~

Mrs Roberts

~~Mrs. Mercer~~

~~Mrs. Howing - Scot.~~

~~Mrs Joan Biggs (Sly)~~

~~J. Miller~~

These should give a suitable cross section of community and I suggest committee should meet weekly to prepare programme

E

7/5

CS. Suggestions on 122 + 123 opp. Have you any other suggestions re D (as amended)? If not they might be invited. MC. 7/V

Extracted to 40a in 0001 (Broadcast Ctee)

143 37

Minutes of W/T Committee Meeting held on 27th June, 1949.

Chairman - Lt. Colonel K. S. Pierce-Butler.

Present - Messrs F. Kift, D. Hallett, H. Slade (Acting Supervisor Electrical & Telegraphs Department), G. Howkins, D. McNaughton, V. Spencer.

The meeting was called to consider:-

I. The Circular Despatch dated 23rd March, 1949, from the Secretary of State for the Colonies which states that a sum of £1,000,000 has now been allocated under Colonial Development and Welfare for improvement of broadcasting services in the Colonies.

II. The tenders received from the Crown Agents in answer to the specifications put forward by the committee.

III. Any other outstanding matters.

I. The new C.D.W. Grant.

The committee felt that the Governor had only placed the limit of £5,000 on expenditure for broadcasting, because this was the maximum which could be spared from the funds then available.

Members felt that extra money could be put to very good use but that since the B.B.C. had now been asked for advice on the new service, they (the B.B.C.) were the proper authority to justify a request for more funds.

It was accordingly agreed to recommend that:-

1. The S. of S. be asked at once for £5,000 from the new fund.
2. The B.B.C. be asked (by H.E., who will be in the U.K. shortly) if they could support a request for an extra allotment.

II. Choice of R/T Equipment.

The committee examined the tenders received from the Crown Agents and were unanimously in favour of accepting that from Berrys (Short Wave) Ltd.

The equipment should consist of:-

Transmitter/Receiver with vibropack	(£41. 10. 0.)
Microphone	(£1. 12. 6)
Two aerials (cut for 2.0 and 4.5 megs respectively), complete with masts etc.	(£29. 9. 0)

affordable!

It was agreed that the following spares should be ordered along with the thirty new sets:-

100% spares of each type of valve	(£117. 15. 0)
200% spare vibrators	(not known)
20% spare crystals 2.0, and 4.5 megs	(£ 1. 12. 6)
20% spare aerials with feeders, insulators etc. but without masts	(not known)

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III Other Outstanding Matters.

(a) New site for V.H.F. equipment.

Tests show that, with the equipment in its present location in the Meteorological Office, the R/T has a maximum range of 35 miles and the D.F. section will not function at all.

After discussion it was decided that the Sapper Hill site was unsuitable because:-

1. there are no materials in the Colony for laying the power and telephone lines to the site, (and, if available, the cost would be high)
2. it would be difficult to get staff to the site when required.

The committee therefore recommend that:-

1. One channel of the V.H.F./D.F. equipment be installed at a site near the Meteorological Office, but sufficiently far away to ensure that the D.F. section will work.
2. The second R/T channel with aerial and feeders should be sent to Fox Bay for installation there.

It was agreed that tests should be made in order to fix the new site for the D.F. equipment, and the Chairman undertook to approach the Executive Engineer for the loan of the G.L. 2 cabin for this purpose.

Mr. Slade undertook to ascertain whether a suitable power supply was available at Fox Bay and the Chairman (in his capacity as Controller of Aviation) would then approach the Executive Engineer for a second mast.

Messrs. Kift and Hallett undertook to maintain the V.H.F. equipment until more permanent arrangements could be made.

(b) Regulations for the use of the R/T equipment.

It was agreed that two routines should be kept each day with all stations at about 9 a.m. and 5 p.m. These routines would be used for making arrangements to cover proposed aircraft flights and also for emergency calls. In addition it might be advisable to have fixed "silence" periods for 10 minutes every 3 hours whenever the meteorological office is occupied (e.g. at 12, 15 and 21 hours). During these times a loudspeaker watch would be kept in Stanley and camp transmitters must not be used except to pass emergency messages to Stanley. It was noted that the evening routines might be used to collect news from the farms for inclusion in a broadcast news bulletin.

It was agreed that, under normal circumstances, the rest of the day might be used by the farms for their own purposes (e.g. talking between various points on the same farm or from farm to farm). If farms are allowed to use the sets in this manner then they might reasonably be expected to provide batteries and keep them charged. The technical members also thought that it might be possible to link the R/T service to the Stanley telephone system but it was agreed that this would be better left until after the emergency services had come into operation.

It was obvious that the farm R/T stations must agree

to/

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to be instructed at all times from Stanley and the Committee therefore recommend that:-

Licences should be issued with the sets binding the users to keep the twice daily routines with Stanley, and observe the silence periods. The use of the frequencies 2.0 and 4.5 megs should be forbidden to all holders of transmitting licences in the Colony except where prior arrangements are made with the Stanley control station.

(c) Allocation of frequencies for broadcasting.

The Chairman stated that correspondence was going on with the G.P.O. about allocation of a suitable frequency for broadcasting. It was agreed to recommend that:-

Action on frequency allocation should be left in abeyance until advice had been received from the B.B.C. on the type(s) and frequency(ies) of the transmitter(s) to be used for the proposed service.

The technical members noted that there were several stations in South America operating on frequencies and with powers which were probably not approved internationally. Hence, when the B.B.C. frequency recommendations are received, it will be advisable to explore the region close to these, for coast stations which might cause interference.

(d) Maintenance of Radio Equipment.

In reviewing all the proposals which have been put forward, it was agreed that provision should be made for the repair and maintenance of the new equipment which would be required to implement them. The committee therefore agreed to recommend that:-

A qualified radio mechanic be recruited to maintain the radio equipment required to implement the proposals made at previous meetings.

It was noted that the mechanic might perform a very useful service if he could also undertake repairs to private radio receivers. This might be included in his duties - particularly if special receivers are imported for receiving the Stanley broadcasts.

(e) W/T Communications, other than meteorological.

It was agreed that all recommendations should await the return of Mr. Mercer from the United Kingdom but it was noted that provision might have to be made for reception of telegrams on a large scale at Deception Islands if and when the whaling factory opens up. This, in addition to meteorological requirements, might justify a request for extra frequencies in the 4 8 and 17 megacycle bands so that two simultaneous channels can be used for working in Stanley.

Report on the Findings of the W/T Committee.

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The committee was formed to enquire into and report upon all outstanding radio requirements of the Colony and to recommend the best ways of meeting them.

The requirements fall under four main heads:-

1. The Broadcasting Service.

which is to cover the Colony and Dependencies, with particular emphasis on educational broadcasts.

2. R/T. Communications

the purpose of which would be to provide a means of passing emergency calls to Stanley and also to facilitate the operation of the aircraft.

3. Communications with the aircraft

- this covers direction finding aids in addition to ground-air communications.

4. W/T Communications.

(a) All W/T traffic (excluding Met.) in both the Falkland Islands and Dependencies.

(b) For Meteorological Purposes in both the Colony and Dependencies.

I. Broadcasting.

The Existing Service and Summary of Requirements.

The present broadcast service, which was intended to cover the Falkland Islands only, is operated from a transmitter working on 8.7 metres, which has an output of about 40 watts. Reports indicate that reception is poor at times, particularly after dark during the winter months.

The proposed new service is intended to cover both the Falkland Islands and Dependencies. Its prime function will be to provide a reliable service in the Falkland Islands, during daylight, for educational purposes but it must also be capable of reception both in the Falkland Islands and Dependencies for purposes of entertainment. These latter programmes would normally be confined to the evenings.

It is not proposed to broadcast separate programmes simultaneously to the two areas.

Findings of the Committee.

1. Frequency of Transmission.

It was agreed that high frequency transmission would give the most reliable reception in the Dependencies.

It was also generally agreed that medium frequencies would provide the most stable reception in the Falklands (and would therefore be most suitable for schools broadcasts) but it was suggested that even a high powered transmitter might not have the necessary range (about 150 miles) to cover the Falklands.

The alternative would be to use a frequency between 1.5 and 3.0 Mc/s (i.e. less than that of the existing

/transmitter

Extracted to 0663

transmitter). This would give improved reception during winter evenings but introduces a further problem because many privately owned receivers in the Falklands do not cover this frequency range. If a frequency in this band is chosen, then a solution might be to purchase a quantity of specially made receivers, built to cover the appropriate range. Recent correspondence from the Secretary of State for the Colonies suggests that these might be available at low cost and could therefore be sold or rented cheaply.

2. Location of Studio and Transmitting Equipment.

The existing aerials are in a poor location near sea level and it is recommended that:-

THE NEW TRANSMITTING AERIALS BE PLACED IN THE OPEN LOCATION AT THE W/T STATION AND THE TRANSMITTERS BE MONITORED BY W/T STATION STAFF. THE TRANSMITTER WOULD THEN BE MODULATED FROM A DISTANCE.

The ideal site for the new studio would be in the new Town Hall, but, this being impossible, the committee recommend that:-

THE EXISTING E. & F. BUILDING SHOULD BE CONVERTED TO HOUSE THE STUDIO AND A SMALL COMMENTATOR'S BOOTH BE PROVIDED IN THE TOWN HALL.

3. Specialist Advice on Broadcasting Scheme.

It was agreed that the problems of frequency and power output must be referred to a specialist authority and the committee therefore recommend that:-

THE WHOLE PROBLEM OF THE BROADCASTING SERVICE, INCLUDING THE TRANSMITTERS, STUDIO AND REDUPLICATION EQUIPMENT, BUILDINGS ETC. BE REFERRED TO THE E.B.C. OR OTHER SPECIALIST AUTHORITY WHO SHOULD BE SUPPLIED WITH THE RELEVANT INFORMATION. (see appendix 1).

II. R/T Communications

Summary of Requirements.

The prime purpose of an R/T service would be to pass emergency calls (e.g. in cases of sickness) to and from Stanley, and to assist with the operation of the aircraft.

Government and the Sheepowners' Association have already agreed that, if Government link the main farms to Stanley, the farms will provide telephone or R/T links with outlying houses.

Findings of the Committee.

1. Emergency calls.

If the R/T sets are built to work on a crystal controlled frequency (a necessity if the sets are to be easy to operate) then it should be possible to keep a loud-speaker watch in Stanley for emergency calls from any station. The watch would not need to be continuous but might be kept for several minutes after certain specified hours and, since calls of this nature are likely to be infrequent, it would not justify the employment of a full time operator.

Extracted to 0663

Extracted to 0031

2. Information for Aircraft flights.

It is desirable that weather reports should be available from several stations along the track of every proposed flight. The reports should be collected shortly before take-off, and, where flights have to be made in unfavourable conditions (e.g. for a sick case) it would be necessary to keep in touch with these stations along the route until the flight is completed.

The committee appreciate that it would be impossible for stations to stand by indefinitely and it is therefore proposed that two fixed routines, one in the morning and one in the evening, be kept daily. During these routines the farms would be told of any proposed flights during the next 24 hours and arrangements made for selected stations to pass reports to Stanley as required. These routines would also be used by the farms to indicate any requirements they might have for the aircraft. The evening routine might also be used to collect any items of news which the farms might have to offer for inclusion in a daily news bulletin to be broadcast from the Stanley radio station.

3. Use of the sets for Farm Business.

It is apparent that, under normal circumstances, the R/T sets would be available for other purposes, EXCEPT DURING THE TWO DAILY ROUTINES AND THE SILENCE PERIODS. It must however be borne in mind that, since all sets will be working on the same frequency, they can only be used for one purpose at any one time. It would therefore be necessary for inter-farm conversations to take place at pre-arranged times only, which must be respected by other stations.

If the sets are to be used in this manner, the committee suggest that FARMS BE ASKED TO PROVIDE AND MAINTAIN THE 6 OR 12 VOLT POWER SUPPLY FOR THE TRANSMITTERS.

The committee also have it in mind that farm R/T sets might be linked to the Stanley telephone system so that farms could talk direct to Stanley telephone subscribers. This is a matter which should be investigated after the equipment has been brought into use. It was noted that VHF equipment is now used in the United Kingdom for links such as these, but the cost would be prohibitive.

The committee therefore recommend that:-

1. THE R/T SETS SHOULD BE BUILT TO OPERATE ON CRYSTAL-CONTROLLED FREQUENCIES WHICH WOULD ENABLE A LOUD-SPEAKER WATCH TO BE KEPT IN STANLEY, FOR EMERGENCY CALLS.

2: THE STANLEY R/T STATION SHOULD BE AT THE METEOROLOGICAL OFFICE.

3. THE EQUIPMENT SHOULD BE OPERATED BY METEOROLOGICAL OFFICE STAFF TO:-

(a) COLLECT ROUTINE MEMBER REPORTS FROM SELECTED STATIONS (e.g. POPE STEPHENS, FOX BAY, PEBBLE ISLAND)

(b) MAINTAIN A LOUDSPEAKER WATCH FOR EMERGENCY CALLS FOR TEN MINUTES EVERY 3 HOURS WHENEVER THE OFFICE IS OCCUPIED.

(c) WORK A MORNING AND AFTERNOON ROUTINE DAILY

As I understand it the S.O.A. agreed to this →

Extracted to 0021

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TO ADVISE FARMS OF PROPOSED AIRCRAFT MOVEMENTS AND PERHAPS TO ARRANGE INTER-FARM COMMUNICATIONS.

3. Communications with the Aircraft.

A twin channel VHF/DF equipment is already available in Stanley. This equipment incorporates a direction finding aid and two crystal controlled R/T units for communicating with the aircraft from the ground.

The set is at present installed in the Meteorological Office but tests have shown that the D.F. section will not function and that the maximum range of the R/T link is only 35 miles.

Findings of the Committee.

It was agreed that, if possible, provision should be made for contacting the aircraft during flight anywhere over the Falklands. A site on Sapper Hill would probably give considerably better range on the R/T sets but the practical difficulties of laying power and telephone lines from the town and getting staff up to the site, caused this to be rejected.

Instead, the committee recommend that:-

1. ONE CHANNEL OF THE VHF/DF EQUIPMENT BE INSTALLED AT A SITE CLOSE TO THE METEOROLOGICAL OFFICE, BUT SUFFICIENTLY FAR AWAY TO ENSURE THAT THE DIRECTION FINDING APPARATUS WILL FUNCTION.

OR

2. THE SECOND R/T CHANNEL, INSTALLED IN THE W/T STATION AT FOX BAY. THERE WOULD BE NO DIRECTION FINDING AID AT FOX BAY.

4 (a) W/T Communications.

It was agreed that all recommendations on this subject should be delayed until the return of the Supervisor, Electrical and Telegraphs Department from the United Kingdom. It was however the general opinion of the other members of the committee that the transmitters at the W/T station (see appendix 2) should prove adequate for all existing W/T commitments, including meteorological, once an adequate power supply is available.

There also seems to be a case for requesting additional frequency allocations in the appropriate bands, so that two-channel working could be undertaken when necessary.

4 (b) Communications for Net.

The existing service and summary of requirements.

1. Collection and Distribution of Information

Meteorological observations are made at fixed hours which are agreed internationally. It is generally accepted international commitment that each station should collect reports from stations in its own territory and re-broadcast them in the form of national collective messages, for use by other countries.

Certain reports selected from a number of countries

are then re-transmitted in the form of regional collectives, (Uruguay performs this duty for the Falkland Islands and Dependencies).

2. Issue of Analyses, Bulletins, Forecasts & Gale Warnings.

These are all based on synoptic charts, for the completion of which it is necessary to intercept a number of national collectives. It is also desirable to collect, for purposes of comparison, map analyses issued by other countries for adjacent areas.

Map analyses are then broadcast at fixed times for use by dependent forecasters (e.g. with the whaling fleets) and by meteorological services in other countries.

Forecasts and gale warnings should be issued locally as soon as possible after the completion of each synoptic chart and a similar service should also be provided for ships operating nearby.

Route forecasts should also be issued whenever the aircraft is in operation. In order to do this, special reports must be available from stations in the line of each proposed flight.

Findings of the Committee.

1. A remote Control Station at the Meteorological Office.

In order to relieve the congestion at the W/T station and do away with the need for telephoning messages to and from the Meteorological Office, it is recommended that:-

ALL INCOMING AND OUTGOING ROUTINE METEOROLOGICAL MESSAGES SHOULD BE HANDLED BY A CONTROL STATION AT THE METEOROLOGICAL OFFICE, USING A TRANSMITTER AT THE MAIN W/T STATION.

2. Equipment for Remote Control Station.

It is desirable that meteorological transmissions be transferred to specially allocated frequencies - thereby relieving the congestion on the existing channels. It would appear that this could be done with the existing equipment, once an adequate power supply is available - but it was agreed that A DECISION ON THE TRANSMITTER TO BE USED FOR METEOROLOGICAL TRAFFIC SHOULD BE POSTPONED UNTIL AFTER THE START OF THE SUPERVISOR, ELECTRICAL AND TELEGRAPHS DEPARTMENT FROM THE UNITED KINGDOM.

TWO RECEIVERS AND THE AUTO TRANSMITTING EQUIPMENT LISTED IN APPENDIX 2 TO THIS REPORT, WILL BE REQUIRED FOR THE REMOTE CONTROL.

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3. Extension to Meteorological Office.

SMALL EXTENSION WILL BE NECESSARY TO HOUSE THE W/T SECTION AT THE METEOROLOGICAL OFFICE. A SUITABLE

4. Staff.

It was agreed that METEOROLOGICAL OFFICE STAFF COULD OPERATE THE STATION WITH TWO ADDITIONAL ASSISTANTS, PROVIDED THAT A TOTAL OF FOUR ASSISTANTS ARE TRAINED TO READ MORSE.

It would probably still be necessary for the W/T station staff to switch on and monitor the transmitter.

5. Collection of Reports from the Antarctic Dependencies.

The transmitters at most of the Dependencies stations are not sufficiently powerful to ensure good reception in Stanley. It was therefore agreed that Deception Island, which has a transmitter with an output of 500 watts, should collect reports from all stations and re-transmit these in the form of a broadcast collective message at 1215, 1315 and 2315 G.M.T.

Provision should be made for checking corrupt groups. This will presumably be done by Meteorological Office staff if a transmitter is eventually available but, in the meantime, might be done by W/T station staff in the subsequent traffic routines.

6. Collection of Reports from South Georgia.

A forecaster is to be sent to South Georgia for the 1949-50 whaling season and he will be reporting on the possibilities of compiling a short South Georgia collective message of reports from Grytviken, Husvik, Keith and any whale catchers or factories which can be induced to co-operate.

Arrangements for broadcasting these collectives should be based on the report from this officer.

7. Meteorological Services for Shipping.

The Supervisor, Electrical & Telegraphs Department is anxious to improve the present ship-shore service and provision of meteorological services for shipping should await action on this.

5. Maintenance of Radio Equipment.

In reviewing the proposals made above it was agreed that provision should be made for the repair and maintenance of the new equipment (particularly R/T) required to implement them. The committee therefore recommend that:-

A QUALIFIED RADIO MECHANIC BE RECRUITED TO REPAIR AND MAINTAIN THE RADIO EQUIPMENT REQUIRED TO IMPLEMENT THE PROPOSALS OF THE COMMITTEE.

It was noted that the mechanic might also provide a useful service if he could undertake repairs to private receivers. This work might be included in his duties - particularly if special receivers are imported in connection with the broadcasting scheme and are issued on a rental basis.

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APPENDIX I.

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BROADCASTING IN THE FALKLAND ISLANDS.

A Committee has recently studied this question, and discussed in some detail the services which it is desired to provide. The following summary, based on the discussions of the Committee, has been prepared with the aim of giving sufficient information to enable technicians in the United Kingdom to recommend suitable equipment. In doing so they should bear in mind the question of cost. As an indication of the amount of money likely to be available for the scheme, they should note the fact the Governor has provisionally earmarked a sum of £5,000 for the renewal of broadcasting facilities in the Colony, basing his estimate on the assumption that one broadcast transmitter would be sufficient. Should the experts feel (as most members of the Committee do) that an additional transmitter will be required for the Dependencies then he would make further provision. They should note also, that the present studio equipment is of little value and will have to be replaced within the total sum available. They should therefore endeavour to ensure that the cost of the main items recommended by them lies within the desired limits in order to allow for the many additional items - switches, microphones, leads, insulators, cables, masts etc. - which will be required to complete the installation.

2. The object of the Falkland Islands Broadcasting Service is to give clear reception in all parts of the Colony itself. The service, which will operate both during the day and after dark, will be used also for Educational Broadcasts. Reception must therefore be of a high standard and as free as possible from fading and distortion. The direction of the transmission can lie almost entirely between South West and West North West, but there are several settlements to the North West and North within about 50 miles, and these must be adequately served. The country is in general undulating poor-class pasture, with rocky ridges up to about 1,000 feet in height but there are a number of peaks between 2,000 and 3,000 feet, especially in the West Falkland. The maximum transmitter-to-receiver distance is about 150 miles. Apart from Educational Broadcasts, it is hoped that programmes will include relays of features from the B.B.C. short-wave service, broadcasts of B.B.C. recordings, and local "outside broadcasts" from churches, halls, etc.

3. The Falkland Islands Dependencies Service (both operated from Port Stanley, the capital) is intended to provide good reception in the Dependencies in an arc extending from South Georgia to the Southern part of Grahamland. In this area the standard of reception need not be quite so high as in the case of the Colony service, but adequate signal strength day and night throughout the year is essential. The maximum transmitter-to-receiver distance will not exceed 1,500 miles. The reception of this service in South America as far away as the River Plate may be considered desirable but is not essential. Many of the programmes broadcast in the Colony service will be considered suitable for broadcasting to listeners in the Dependencies, who will not, however, in general, be interested in schools broadcasts and other items of restricted interest. It is not envisaged that occasions are likely to arise when the two services will be required

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to broadcast different programmes simultaneously.

4. The power supply will be provided from 3-phase 50-cycles mains. The transmitter (or transmitters) should naturally be capable of broadcasting both speech and music, and should a separate transmitter be considered necessary to serve the Dependencies, this should also have provision for M.C.W. operation.

5. The Local Broadcast Rediffusion Equipment at present in use in Stanley will also require replacement. The new equipment should be capable of feeding up to 400 high-impedance loudspeakers by landline at a maximum distance of one and a half miles - the loudspeakers themselves are already available and will not require to be replaced. The programmes in this service will be materially those in the domestic radio service, with the addition of purely local announcements.

6. To complete these arrangements it is intended to provide a Central Broadcasting Studio in which will be located the following:-

- (a) A system of "diversity reception" to enable incoming short-wave broadcasts to be received and rebroadcast without serious fading. This would presumably entail the purchase of a first-class high-diversity receiver, and the advice of the B.B.C. (or other qualified agency) on this very specialised aspect is of particular importance.
- (b) A studio control panel to enable a single operator to handle normal studio broadcasts, the rediffusion of incoming short-wave programmes, and outside broadcasts. (These last will come from some half-dozen points in and near Stanley, by landline, a maximum distance of 2 miles.
- (c) Local rediffusion equipment (loudspeakers).
- (d) Dual-purpose turntables for the broadcasting of ordinary gramophone records and B.B.C. recordings.
- (e) Other associated studio equipment.

7. In connection with the studio the technical advisers may wish to know that the local Committee has recommended the building of receiving aerials close to the studio, but has advocated the installation of the transmitters some distance therefrom, linked to the studio by landline. The studio itself will be located in the new Town Hall now in course of erection. This arrangement will facilitate the broadcast of social and other events.

8. Finally, an Ionospheric measuring station is maintained in Stanley by the Radio Division of D.S.I.R. The results obtained by this station may be of assistance to the experts and are available on application to Dr. Smith-Rose, Radio Division, D.S.I.R.

W. R. Smith

APPENDIX II

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Transmitters available at the W/T Station

1. S.W.B. 3 Q - output up to $3\frac{1}{2}$ kilowatts.
- frequency coverage 4 to 17 megs.
2. S.W.B. 8. - output up to $3\frac{1}{2}$ kilowatts.
- frequency coverage 4 - 17 megs.
- lacks an alternator and is not in use.
3. R.C.A. - output up to 3 kilowatts.
frequency coverage 2 - 600 kilocycles.
4. G. 40 - output up to 500 watts.
- frequency coverage 2 - 8 megs.
- kept on 4 megs for S. Georgia and Bases
at night.
- can operate on both R/T and I.C.W.
5. G. 40 - output up to 500 watts.
- frequency coverage 6 - 25 megs.
and 137.5 - 550 kilocycles (latter range
not yet installed).

Allice Sutt

21/7/49