



**Documents of the Special Regional Conference
(Geneva, 1960)**

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- This PDF includes Document DT No. 1 - 33.
- The complete set of conference documents includes Document No. 1 - 84, DT No. 1 - 33.

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Document DT No. 1
25 April 1960
Original : English

COMMITTEE 4

A G E N D A

First meeting of Committee 4 (Technical)

Tuesday 26 April 1960 at 0900 hours in Room B

1. Organization of work of the Committee.
2. Review of documents containing technical data. The following documents are relevant :

Document No. 1 (paragraph 15 of the annex)

Document No. 3

and its Addendum No. 1 contributed by the United Kingdom

"	No. 2	"	"	Sweden
"	Nos. 3 & 13	"	"	the I.B.T.O.
"	No. 4	"	"	the Federal Republic of Germany
"	No. 5	"	"	the Swiss Confederation
"	No. 6	"	"	the F.P.R. of Yugoslavia
"	No. 7	"	"	Norway
"	Nos. 8 & 9	"	"	Denmark
"	No. 10	"	"	the Netherlands
"	No. 11	"	"	Norway
"	No. 14	"	"	Denmark
"	No. 15	"	"	Greece

Document No. 10, Special Agreement between the Belgium,
Netherlands and Federal German Administrations.

3. Any other business.

Sven Gejer
Chairman

SPECIAL REGIONAL
CONFERENCE

Document DT No. 2-E
26 April, 1960
Original : French

Geneva, April-May 1960

COMMITTEE 5

A G E N D A

FIRST MEETING OF COMMITTEE 5 (PLAN)

Tuesday, 26 April, 1960 at 3 p.m., Room B

1. Organization of the work of the Committee
2. Verbal report by the representative of the I.F.R.B. on the preparatory work
3. Verbal reports on the preparatory consultations held in conformity with I.F.R.B. letter of 1 March, 1960 - Conference Document No. 2
4. Any other business

Dr. Joachim
Chairman of Committee 5

SPECIAL REGIONAL
CONFERENCE

Document DT No. 3-E
26 April, 1960
Original : English

Geneva, April-May 1960

COMMITTEE 5

TERMS OF REFERENCE OF COMMITTEE 4 (TECHNICAL)

To agree and report on the technical standards necessary for the planning of the frequency bands 68 - 73 Mc/s and 76 - 87.5 Mc/s where these bands are shared by Television and FM sound broadcasting services on the one hand and fixed and mobile communication services on the other, in order to facilitate the work of Committee 5.

Questions to be studied by Working Groups of Committee 4

Working Group 4 A : Chairman : Mr. BOUCHIER (Belgium)

1. Propagation curves to be determined for the field strength of the wanted and unwanted signals at distances up to and beyond about 100 km, taking into account aerials heights.
2. Minimum field strength to be protected for different services TV : FM broadcasting and fixed and mobile, taking into account the noise level.
3. Percentage of time for which protection is to be afforded.
4. Use of directionnel aerials and different polarizations.

Working Group 4 B : Chairman : Mr. NIELSEN (Denmark)

1. Protection ratios between FM Sound Broadcasting and mobile and fixed services.
2. Protection ratio curves for various frequency separations between the wanted and interfering signals taking into account different characteristics of receivers.

Working Group 4 C : Chairman Mr. SOWTON (United Kingdom)

1. Protection ratios between Television broadcasting and mobile and fixed services.
2. Protection ratio curves for various frequency separations between the wanted and interfering signals taking into account different characteristics of receivers.

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No. 4-E
26 April, 1960
Original: English/French

COMMITTEE 5

NOTE BY THE I.F.R.B.

EXPLANATION OF CODE NUMBERS USED IN COLUMN 13 OF THE
TABULATIONS MENTIONED IN DOCUMENT No. 13

- 15 Simplex
- 16 Duplex
- 38 This assignment is out of band in relation to the Table of Frequency Allocations, Article 5 of the Radio Regulations. Attention is invited to No. 88 of the Radio Regulations
- 44 One or more portable stations
- 46 Emergency
- 47 Police
- 54 Projected
- 65 Search and rescue (SAR)
- 69 Railways
- 73 Experimental
- 82 Effective radiated power
- 90 Customs
- 93 Notified for network; other stations unspecified
- 120 Medium power stations
- 124 Fire
- 131 Power notified is less than 5 watts
- 140/... The lower and upper limits of the channel are ...
- 202 The call sign consists of the name of place appearing in Column 4a
- 203 The call sign consists of the indication appearing in Column 3, abbreviated if necessary, followed or preceded by the name of place as shown in Column 4a
- 219 A link between a studio and its corresponding broadcasting transmitter (STL)

- T (followed by six digits representing a date)
This symbol is used in Volume III only. The date immediately following the symbol is that notified by the Administration as the date of bringing the assignment into use, whereas the date in Column 2c is that obtained by the application of the appropriate provisions of the Agreement
- V (followed by six digits representing a date)
This symbol is used in Volume III only. The date immediately following the symbol is that which appeared in Column 2c of the Provisional List of Frequencies above 27 500 kc/s, or its supplement. Notifications for individual stations in accordance with No. 275 of the Agreement will be given the date in Column 2c on which they are notified as brought into use, provided that this date is not earlier than that now indicated in Column 13 (see also paragraph 11.2 of this Preface)
- D6 - Ferry-boats
- H/... M Height of the antenna above mean sea level in metres

SPECIAL REGIONAL
CONFERENCE

Document DT. No. 5-E
27 April, 1960

Geneva, April-May, 1960

COMMITTEE 6

AGENDA

FIRST MEETING OF COMMITTEE 6

(Drafting Committee)

Friday, 29 April, 1960 at 2.30 p.m.

1. Documents for consideration by the Drafting Committee
2. Submission of texts by the Drafting Committee to the Plenary Assembly
3. Lay-out of the Final Acts
4. Miscellaneous.

Yves PLACE
Chairman, Committee 6

SPECIAL REGIONAL
CONFERENCE

Document DT No. 6-E
27 April 1960
Original : French

Geneva, April-May 1960

COMMITTEE 2

A G E N D A

FIRST MEETING OF COMMITTEE 2
(Credentials Committee)

Wednesday 27 April 1960 at 11 a.m.

1. Organisation of the work of the Committee
2. Mandate of the Committee
3. Miscellaneous

F. NICOTERA
Chairman, Committee 2

SPECIAL REGIONAL
CONFERENCE

Document DT No. 7-E
27 April, 1960
Original: French

Geneva, April-May, 1960

COMMITTEE 3

AGENDA

FIRST MEETING OF COMMITTEE 3

(FINANCE CONTROL COMMITTEE)

Wednesday 27 April, 1960 at 2.30 p.m.

1. Organization of the work of the Committee
2. Election of a reporter
3. Consideration of the budget estimates for the Special Regional Conference
4. Miscellaneous

M. Dakic
Chairman, Committee 3

SPECIAL REGIONAL
CONFERENCE

Document DT No. 8-E
27 April 1960
Original : French

Geneva, April-May 1960

COMMITTEE 1

AGENDA

FIRST MEETING OF COMMITTEE 1
(Steering)

Thursday 28 April 1960, Room B, following
the meeting of Heads of Delegations

1. Programme for the week 2 to 7 May.
2. Other business.

W. KLEIN
Chairman of the Conference

(The meeting envisaged for Friday 29 April after the Plenary Meeting
will not take place).

CONFERENCE REGIONALE
SPECIALE

Document DT N° 9/F-E
28 avril 1960

Genève, avril-mai 1960

GROUPE DE TRAVAIL 4B
WORKING GROUP 4B

CONTRIBUTION PRÉSENTEE PAR L'OBSERVATEUR DE L'O.I.R.T.
POUR INFORMATION DU GROUPE DE TRAVAIL 4B

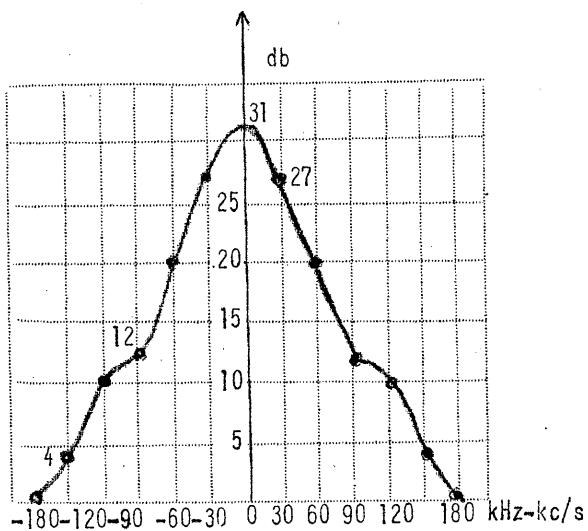
CONTRIBUTION BY THE OBSERVER OF I.B.T.O. FOR THE INFORMATION
OF WORKING GROUP 4B

Annexe : 1
Annex : 1

VALEURS ET RAPPORTS DE PROTECTION UTILISES, AU SEIN DE L'O.I.R.T.,
POUR L'ETABLISSEMENT DE PLANS D'EMETTEURS A MODULATION DE FREQUENCE

VALUES OF PROTECTION RATIOS USED FOR PLANNING OF FM TRANSMITTERS
WITHIN THE FRAMEWORK OF O.I.R.T.

Espacement des ondes porteuses kHz	0	30	60	90	120	150	180	240	300	360
Carrier frequency separation kc/s	31	27	20	12	10	4	0	- 5	-10	-15
Rapport de protection, db										
Protection ratio, db										



Espacement des ondes porteuses
kHz

Carrier frequency separation
kc/s

SPECIAL REGIONAL
CONFERENCE

Document DT No. 10-E
27 April, 1960
Original: French

Geneva, April-May, 1960

NOTE BY THE SECRETARIAT

The meeting of Committee 6 (Drafting Committee) scheduled for Friday at 2 p.m. has been put forward to 9 a.m. on the same day.

CONFERENCE REGIONALE
SPECIALE

Document DT N° 11 F/E
28 Avril 1960

Genève, Avril-Mai 1960

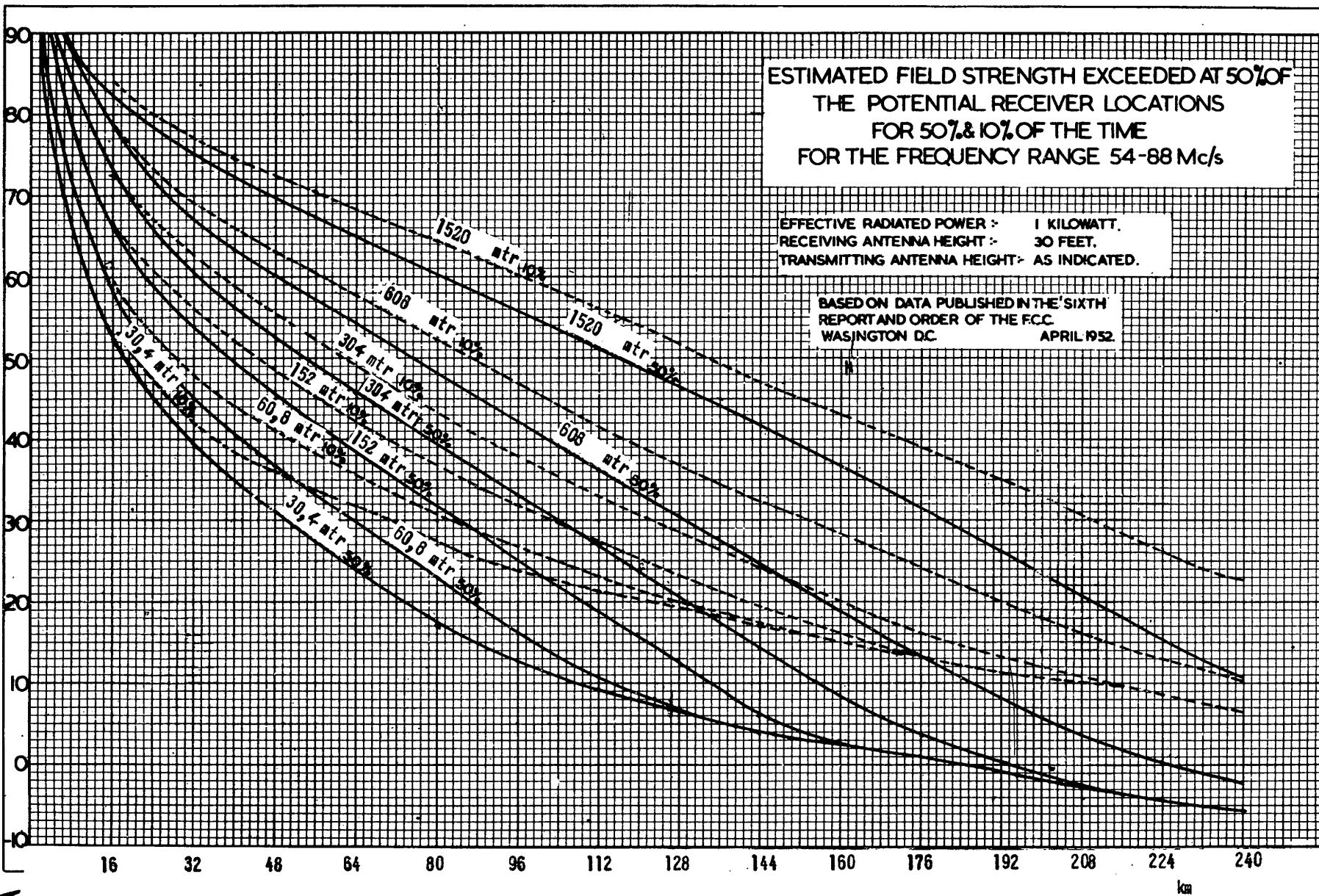
COMMISSION 4A
COMMITTEE 4A

CONTRIBUTION PRÉSENTÉE PAR LE ROYAUME-UNI

CONTRIBUTION BY THE UNITED-KINGDOM

Annexe : 1
Annex : 1

RECEIVED FIELD STRENGTH IN DECIBELS RELATIVE TO ONE MICROVOLT PER METRE



WI 2/2

ML86063

SPECIAL REGIONAL
CONFERENCE

Document DT No.12-E
28 April, 1960
Original: French

Geneva, April-May, 1960

COMMITTEE 5

AGENDA

SECOND MEETING OF COMMITTEE 5

(Planning Committee)

Thursday, 28 April, 1960 at 2.30 p.m., Salle B

1. Method of preparing the plan for the sharing of the frequency bands 68-73 and 76-87.5 Mc/s by broadcasting stations and fixed and mobile service stations.
2. Instructions for the preparation of planning material.
3. Other business.

Dr. JOACHIM
Chairman, Committee 5

CONFERENCE REGIONALE
SPECIALE

Document DT N° 13/F-E
28 avril 1960

Genève, avril-mai 1960

GROUPE DE TRAVAIL 4 A
WORKING GROUP 4 A

CONTRIBUTION DE L'O.I.R.T.

CONTRIBUTION BY THE I.B.T.O.

COURBES TIREES DU DOCUMENT V/42 (C.E. V) DES REUNIONS
INTERIMAIRES DU C.C.I.R., GENEVE, 1958.

CURVES CONTAINED IN DOCUMENT V/42 (S.G. V) OF THE INTERIM
MEETINGS OF THE C.C.I.R., GENEVA, 1958.

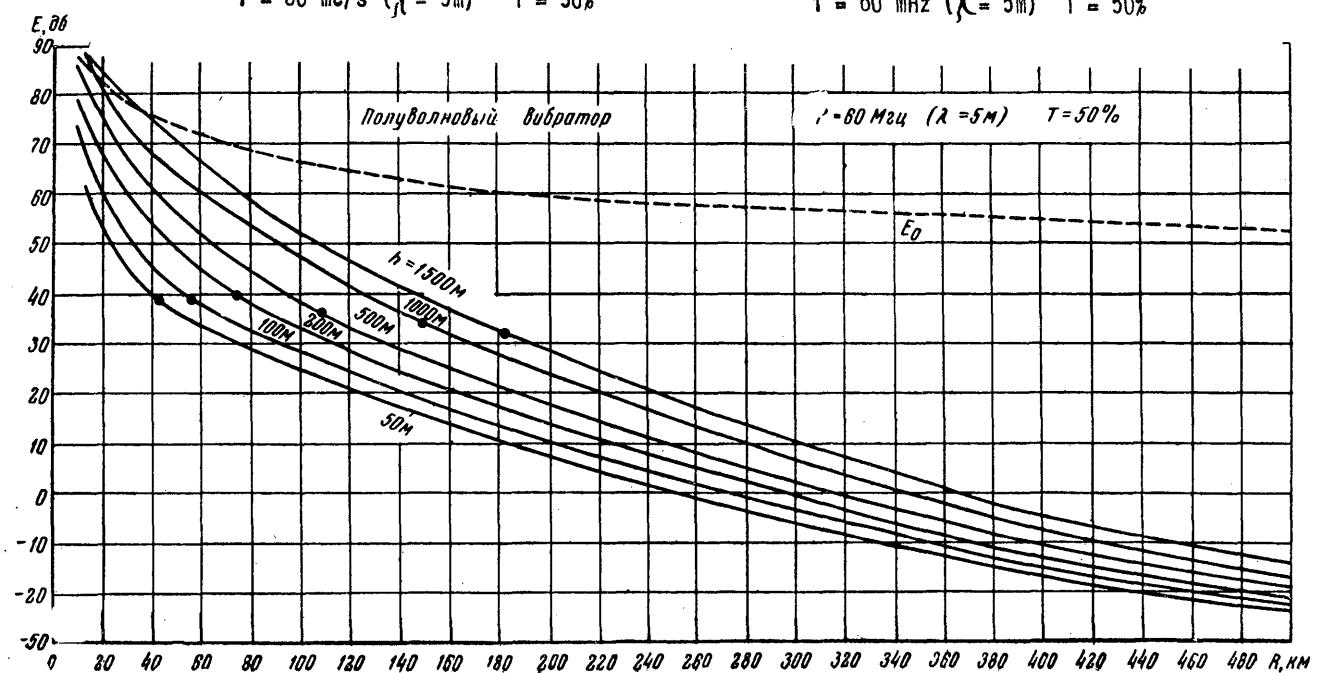
Annexes : 2

1/2 dipole

$f = 60 \text{ Mc/s } (\lambda = 5\text{M}) \quad T = 50\%$

Antenne 1/2 onde

$f = 60 \text{ MHz } (\lambda = 5\text{M}) \quad T = 50\%$

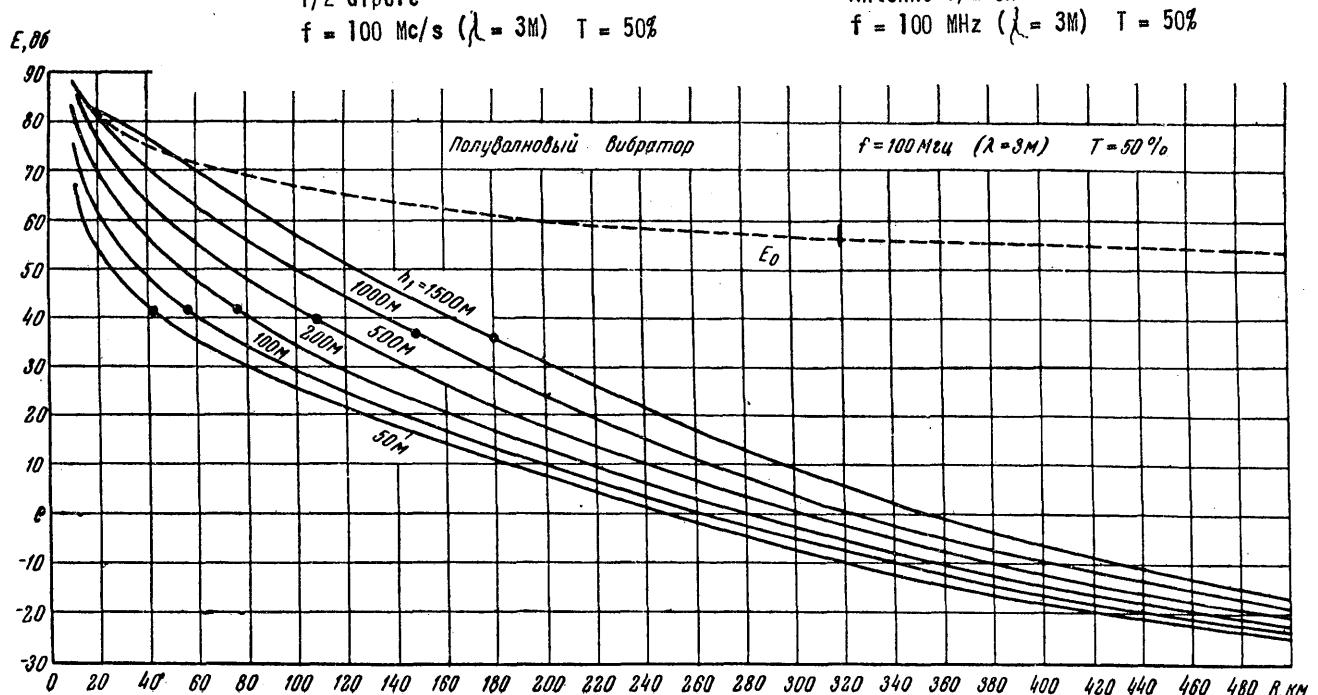


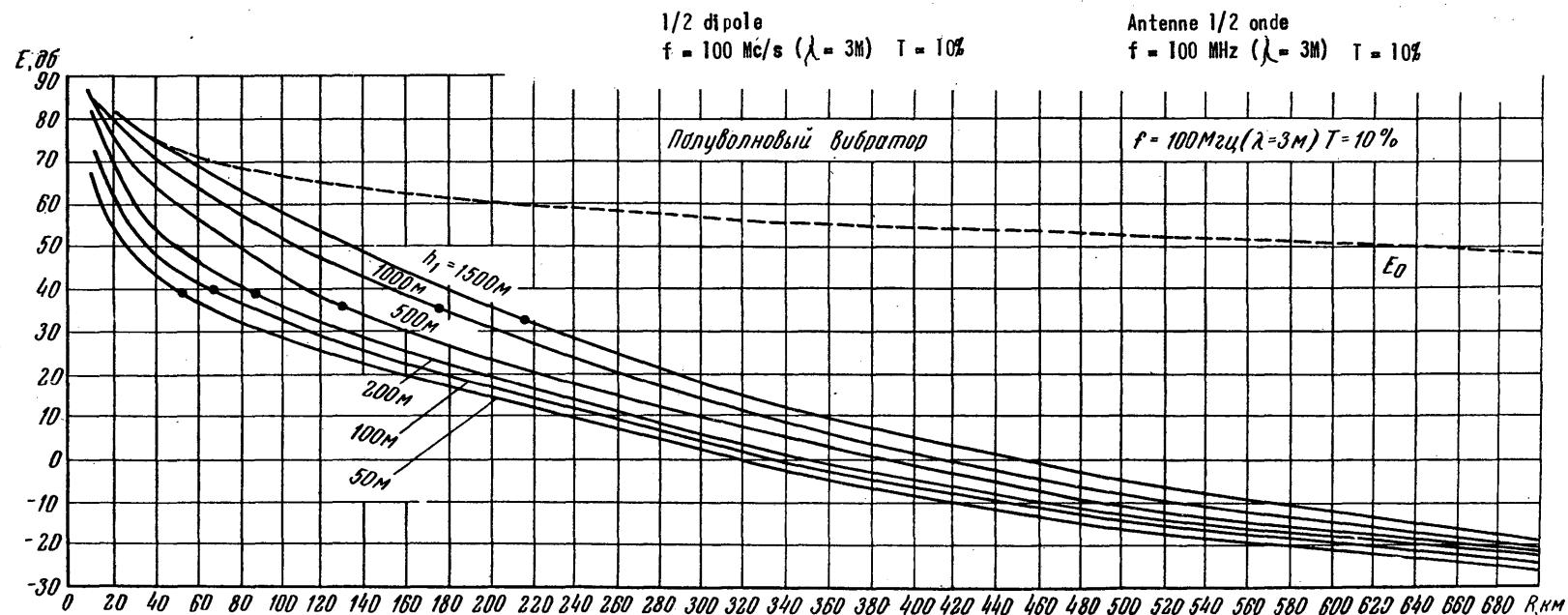
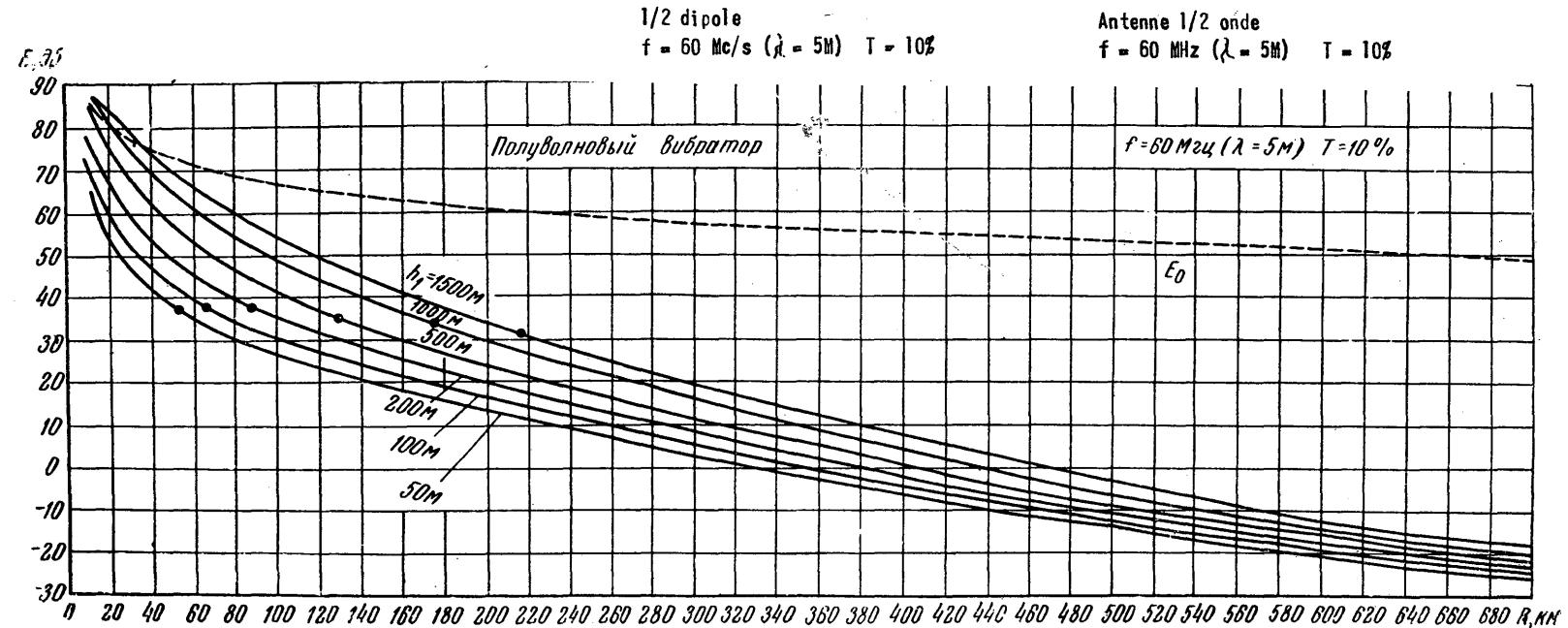
1/2 dipole

$f = 100 \text{ Mc/s } (\lambda = 3\text{M}) \quad T = 50\%$

Antenne 1/2 onde

$f = 100 \text{ MHz } (\lambda = 3\text{M}) \quad T = 50\%$





SPECIAL REGIONAL
CONFERENCE

Document DT No. 14-E
28 April 1960
Original : French

Geneva, April-May 1960

SUB-WORKING GROUP 4A

REPORT OF SUB-WORKING GROUP 4A1
TO WORKING GROUP 4A

Subject : Question No. 1 (See Document DT. No. 3)

"Propagation curves to be determined for the field strength of the wanted and unwanted signals at distances up to and beyond about 100 km taking into account aerials heights."

Documents used

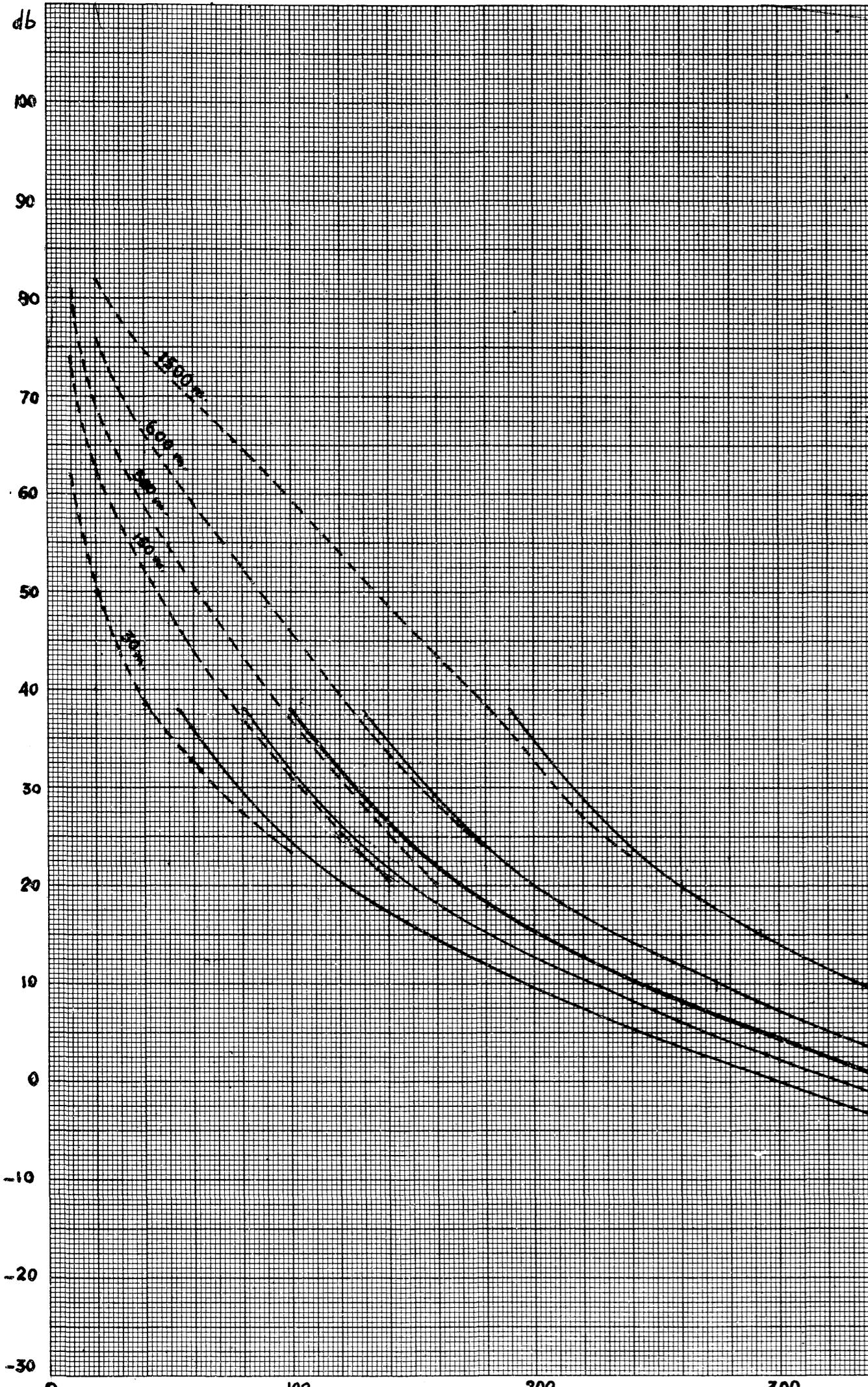
1. Recommendation No. 12 of the Administrative Radio Conference (Geneva, 1959)
2. Atlas of ground-wave propagation curves for the frequencies between 30 and 10,000 Mc/s (1st and 2nd Atlas of the C.C.I.R.)
3. Recommendation No. 312 of the C.C.I.R. (page 303 of Volume 1 of the Documents of the IXth Plenary Assembly, Los Angeles, 1959).
4. I.B.O. proposal for a meeting of International Radio Consultative Committee Study Group V (Geneva, 1958), Document No. V/42.
5. F.C.C. Sixth Report and Order, 1952.

Conclusions

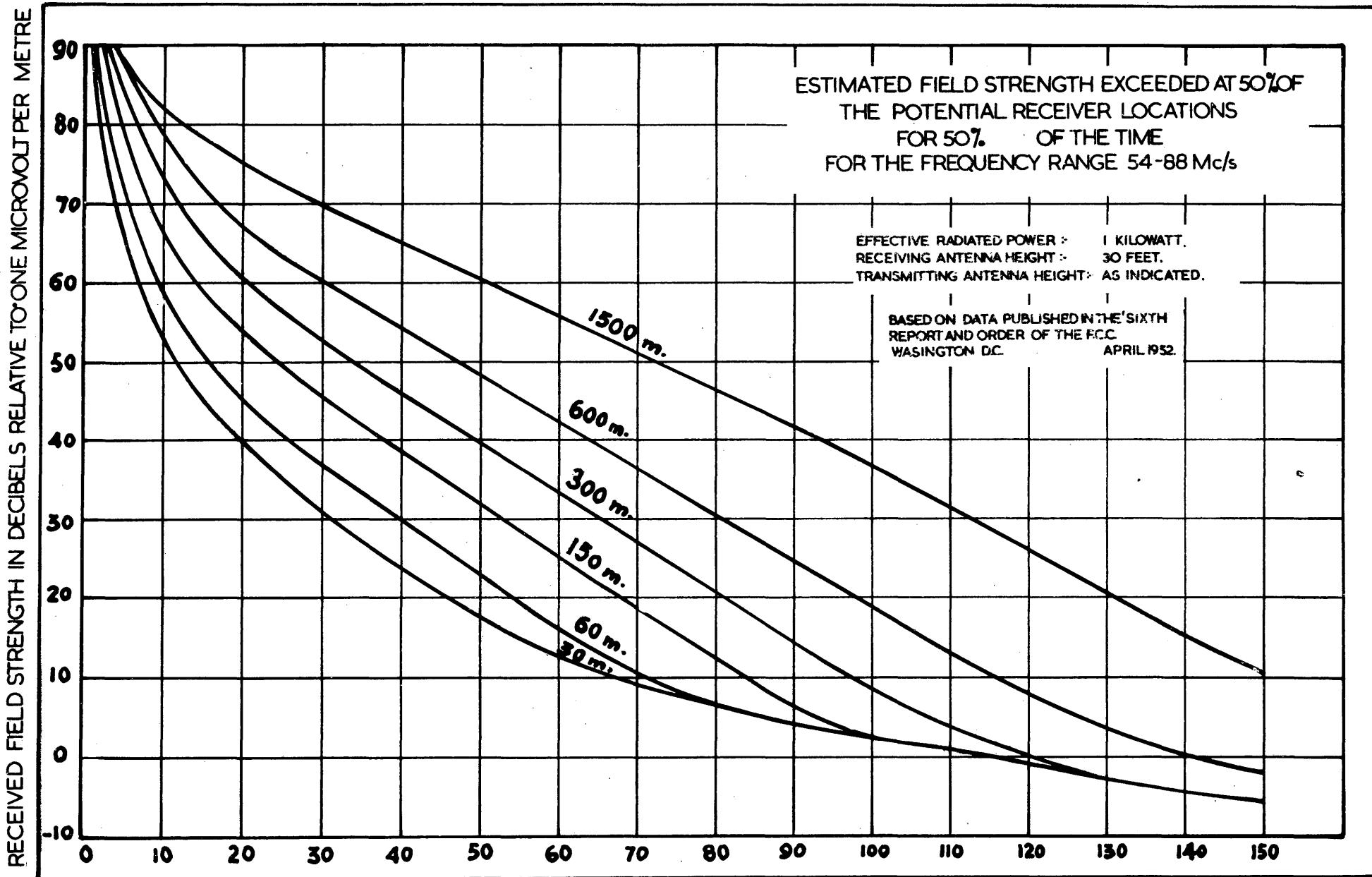
1. Having studied available documents it is proposed that Committee 5 should use the following for its work :

- 1.1 For field strength values for 10% of the time (interfering field) the F.C.C. curves (Document No. 5) for short distances and the curves in C.C.I.R. Recommendation No. 312 for long distances;
 - 1.2 For field strength values for 50% of the time (wanted field) the F.C.C. curves (Document No. 5)
 - 1.3 For field strength values for 1%, if required, reference should also be made to C.C.I.R. Recommendation No. 312 (Be it observed that for distances greater than 150 km these figures are about 10 db higher than the corresponding 10% ones).
2. To simplify matters, sets of curves corresponding to points 1.1 and 1.2 are set out in Annexes 1 and 2 respectively.

P. Bouchier
Chairman



Puissance apparente rayonnée	Effective radiated power : 1 kW
Hauteur de l'antenne d'émission	Transmitting antenna height (: indiquée sur les courbes : as indicated on the curves)
Hauteur de l'antenne de réception	Receiving antenna height : 10 M
Gamme de fréquence	Frequency range : 54 - 88 MHz (Mc/s)
Intensité de champ	Field strength : db (1 μ V/m)
Pourcentage des emplacements	Percentage of locations : 50%
Pourcentage du temps	Percentage of time : 10%



SPECIAL REGIONAL
CONFERENCE

Document DT No. 15-E

29 April, 1960

Original: English

Geneva, April-May, 1960

WORKING GROUP 4B

DRAFT

REPORT FROM WORKING GROUP 4B TO COMMITTEE 4

Working Group 4B was set up with the following terms of reference :

1. Protection ratios between FM Sound Broadcasting and mobile and fixed services.
2. Protection ratio curves for various frequency separations between the wanted and interfering signals taking into account different characteristics of receivers.

The group held 4 meetings and agreed to recommend for the purpose of planning the protection ratio curves which are contained in Annexes 1 and 2 to this document. The abscissae represent the frequency difference between the desired and the undesired signals, and the ordinates give the necessary ratio between the desired and the undesired signals. Annex 1 is the protection ratio curve to be used in cases where the desired signal is FM broadcasting with a maximum frequency deviation of ± 50 kc/s, and where the undesired signal is originating from FX or MOB services.

It was agreed by the working group to adopt this curve which was used in the preparation of the O.I.R.T. frequency plan for FM broadcasting. This curve is slightly different from the curve to be derived from the figures in C.C.I.R. Recommendation No. 263, paragraphs 5 and 6, which figures are recommended to be used in planning of FM broadcasting stations having a maximum frequency deviation of ± 75 kc/s.

It was pointed out that the O.I.R.T. curve relates to cases where both the desired and the undesired signals are FM broadcasting signals (± 50 kc/s), whereas the undesired signals (from FX and MOB services) in the present planning have a considerable smaller frequency deviation, ± 15 kc/s or less. Therefore, the O.I.R.T. curve is considered to contain some safety margin.

Annex 2, curve A, is the protection ratio curve to be used in cases where the desired signal is frequency modulated up to ± 15 kc/s, and where the undesired signal is originating from FM broadcasting (± 50 kc/s). The protection ratio is that tolerable for commercial grade service. For high grade service the figures should be about 10 db higher.

The curve has been drawn up on the basis of the experiments described in Document 3, ADD. No. 14 (DNK) and 16 (FRG) and represents a sort of compromise. It is to be noted that the figures for co-channel working were found to be 6 db and 9 db respectively and 5 db in the UK investigation (Document 3, ADD. No. 1). The representatives of the Federal Republic of Germany could only accept the figure of 6 db in case the minimum field strength to be protected was retained as given in Recommendation No. 12 of the Geneva Conference.

A detailed investigation by a small ad hoc group showed that the selectivity of the receivers used in the DNK and FRG experiments, corresponding to a normal channel separation of 50 kc/s, was very close to the selectivity of the typical receiver for this frequency band as described in C.C.I.R. Recommendation No. 235.

Furthermore it was found that this basic selectivity curve represents a good average between the various selectivity figures which were submitted by a number of Administrations to this Conference.

Whereas curve A corresponds to receivers designed for 50 kc/s channel spacing, which is generally used at present, curve B has been drawn up for the case of an FM receiver designed for 25 kc/s channel spacing, which spacing is intended to be employed in some countries in the future.

It is obvious that the curves in Annexes 1 and 2 apply to average conditions, and in particular cases where special circumstances so justify, other figures might be adopted by the parties directly concerned.

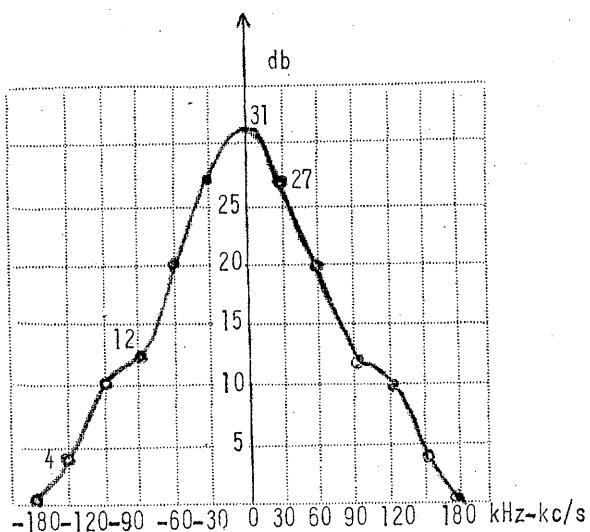
B. NIELSEN
Chairman

Annexes : 2

VALEURS ET RAPPORTS DE PROTECTION UTILISES, AU SEIN DE L'O.I.R.T.,
POUR L'ETABLISSEMENT DE PLANS D'EMETTEURS A MODULATION DE FREQUENCE

VALUES OF PROTECTION RATIOS USED FOR PLANNING OF FM TRANSMITTERS
WITHIN THE FRAMEWORK OF O.I.R.T.

Espacement des ondes porteuses kHz Carrier frequency separation kc/s	0	30	60	90	120	150	180	240	300	360
Rapport de protection, db Protection ratio, db	31	27	20	12	10	4	0	- 5	-10	-15



Espacement des ondes porteuses
kHz

Carrier frequency separation
kc/s

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A N N E X E 2

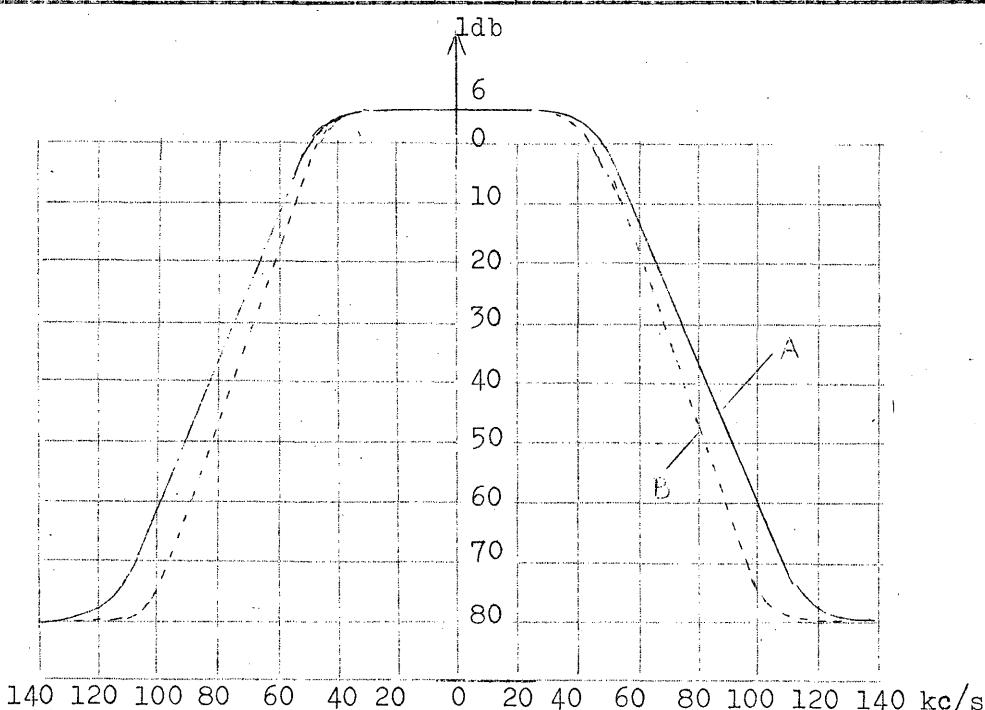
A N N E X 2

VALEURS DES RAPPORTS DE PROTECTION (SERVICE DE QUALITE COMMERCIALE) POUR LE SERVICE FIXE ET LE SERVICE MOBILE LORSQUE LE SIGNAL BROUILLEUR EST CELUI D'UNE EMISSION DE RADIO-DIFFUSION A MODULATION DE FREQUENCE AVEC UNE DEVIATION DE FREQUENCE AU PLUS EGALE A

+ 50 kHz

VALUES OF PROTECTION RATIOS (COMMERCIAL GRADE QUALITY) FOR FIXED AND MOBILE SERVICES WHEN INTERFERENCE ORIGINATES FROM FM BROADCASTING WITH A MAXIMUM FREQUENCY DEVIATION OF + 50 kc/s

Espace entre les fréquences des porteuses (en kHz)		0	20	40	50	60	80	100	120	140
Carrier frequency separation, kc/s	Rapport de protection (en db) Protection ratio, db	6	6	4	0	-11	-36	-62	-78	-80
Courbe A Curve A		6	6	3	-4	-16	-48	-75	-80	-80
Courbe B Curve B										



Courbe A : Récepteur pour espace entre voies de 50 kHz
Courbe B : Récepteur pour espace entre voies de 25 kHz

Curve A : Receiver for 50 kc/s channel separation
Curve B : Receiver for 25 kc/s channel separation

Espace entre les fréquences des porteuses

Carrier frequency separation

SPECIAL REGIONAL
CONFERENCE

Document DT No. 16-E
30 April 1960
Original: English

Geneva, April-May, 1960

WORKING GROUP 4C

DRAFT REPORT OF WORKING GROUP 4C TO COMMITTEE 4

1. General

The questions assigned to Working Group 4C concerned the protection ratios required between television broadcasting on the one hand and fixed and mobile services on the other. The Working Group were required to provide curves showing the protection ratios necessary for various frequency separations of the wanted and unwanted signals.

2. Protection Ratios required by Television

The Working Group recommend that the protection ratio curves in Report No. 125 of the IXth Plenary Assembly of the C.C.I.R., in so far as they apply to a 625-line television system, are used to determine the protection ratios necessary when the interfering signal is a frequency-modulated signal of a fixed or mobile communications service. The curve in question is reproduced in Figure 1 of this report. It has been extended from 5 Mc/s to 6 Mc/s at the 15 db protection ratio level to provide for the I.B.T.O. 625-line system which uses a 6 Mc/s video bandwidth.

Where the interfering signal is amplitude-modulated, the protection ratios shall be increased by 5 db.

It is to be noted that the curve applies to monochrome television. No adequate data are available regarding the protection ratios required by colour television, nor are the parameters known of the colour television system which may be adopted. The protection ratios required by a colour television system will, however, be appreciably greater in the vicinity of the colour sub-carrier frequency than indicated by the protection ratio curve of Figure 1.

With regard to the protection ratios required in the sound channel of the I.B.T.O. 625-line system, the Working Group recommend that the figures or curves adopted by Working Group 4B for FM sound broadcasting are used.

3. Protection Ratios required by Fixed and Mobile Services

The Working Group had no Recommendations or Reports of the C.C.I.R. to assist them, but data had been provided by Denmark, the Federal Republic of Germany and the United Kingdom in Addenda 1, 4 and 14,

respectively, of Document No. 3. After studying these data the Working Group recommend that the curve in Figure 2 of this report is adopted for use in determining the protection ratios required by a frequency-modulated fixed or mobile communication service where the interfering signal is a 625-line vision signal.

Where the communication uses amplitude-modulation the protection ratios shall be increased by 10 db.

It is to be noted that this curve applies to monochrome television and no adequate data is available for an interfering colour television signal. The protection ratio required by a communications service operating on a frequency in the vicinity of the colour sub-carrier of a colour television transmission will, however, be appreciably greater than indicated by the curve in Figure 2.

With regard to the protection ratios required by a communications service against the sound channel of a television transmission, the Working Group recommend that the figures or curves adopted by Working Group 4B for FM sound broadcasting are used.

C. W. SOWTON
Chairman
Working Group 4C

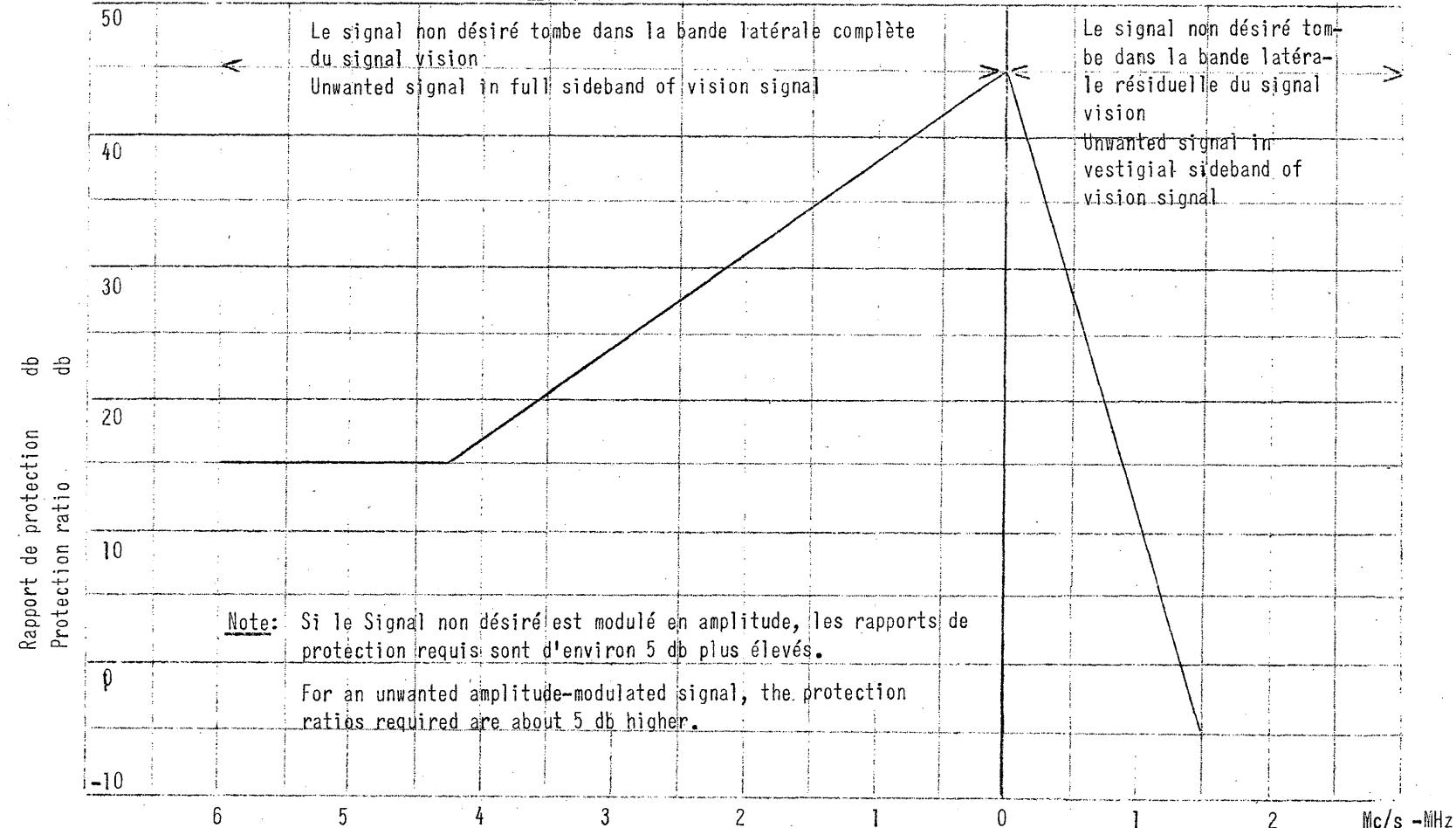
Annexes : 2

ANNEXE I - ANNEX I

RAPPORTS DE PROTECTION REQUIS POUR UN SIGNAL DE TELEVISION A 625 LIGNES CONTRE UN SIGNAL NON DESIRE PROVENANT D'UNE EMISSION
A MODULATION DE FREQUENCE DU SERVICE FIXE OU DU SERVICE MOBILE

PROTECTION RATIOS REQUIRED BY A 625-LINE VISION SIGNAL AGAINST UNWANTED FREQUENCY-MODULATED
SIGNAL OF FIXED OR MOBILE COMMUNICATIONS SERVICE

FIG.1



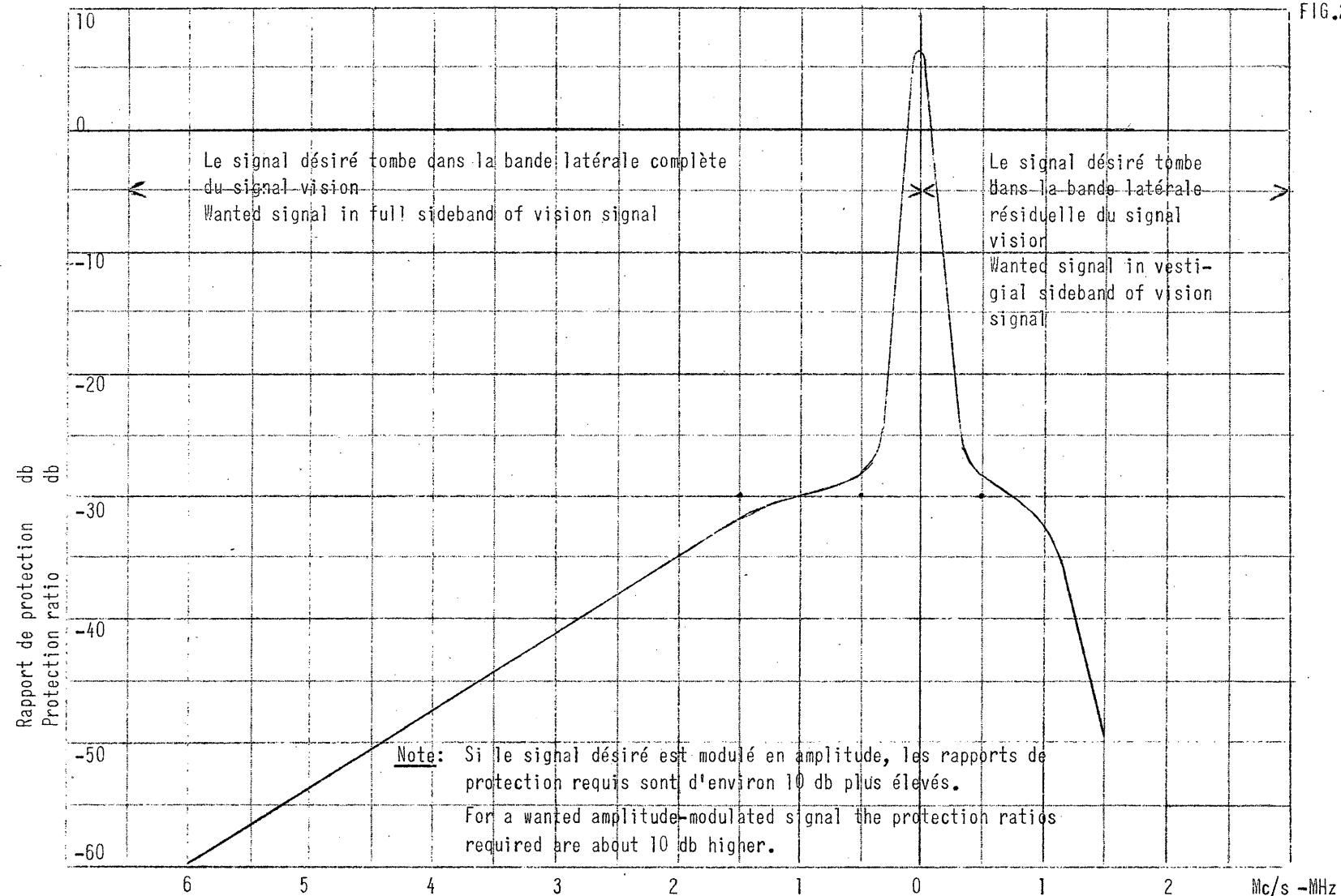
DIFFERENCE ENTRE LES FREQUENCES DES PORTEUSES DU SIGNAL DESIRE ET DU SIGNAL NON DESIRE

FREQUENCY DIFFERENCE BETWEEN WANTED AND UNWANTED SIGNAL CARRIERS

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RAPPORTS DE PROTECTION REQUIS POUR UN SIGNAL MODULÉ EN FREQUENCE DU SERVICE FIXE OU DU SERVICE MOBILE CONTRE UN SIGNAL DE TÉLÉVISION A 625 LIGNES
PROTECTION RATIOS REQUIRED BY THE FREQUENCY-MODULATED SIGNAL OF A FIXED OR MOBILE COMMUNICATIONS SERVICE AGAINST A 625-LINE VISION SIGNAL



DIFFERENCE ENTRE LES FREQUENCES DES PORTEUSES DU SIGNAL DESIRÉ ET DU SIGNAL NON DESIRÉ

FREQUENCY DIFFERENCE BETWEEN WANTED AND UNWANTED SIGNAL CARRIERS

SPECIAL REGIONAL
CONFERENCE

Document DT No. 17-E
2 May 1960
Original : French

Geneva, April-May, 1960

WORKING GROUP 4A

SECOND REPORT
by
WORKING GROUP 4A TO COMMITTEE 4

Subject : Question No. 2 (see Document DT No. 3)

"Minimum field strength to be protected for different services : TV, FM broadcasting and fixed and mobile, taking into account the noise level."

Documents

1. Recommendation No. 12 of the Administrative Radio Conference (Geneva, 1959).
2. C.C.I.R. Recommendation No. 263 (page 198 of Volume I of the Documents of the IXth Plenary Assembly, Los Angeles, 1959).
3. The following documents of the present Conference :

ADD No. 2 to Doc. No. 3 (Sweden)

" " 5 " 3 (Switzerland)

" " 6 " 3 (F.P.R. of Yugoslavia)

" " 7 " 3 (Norway)

" " 14 " 3 (Denmark)

" " 15 " 3 (Greece)

Doc. No. 10 (Belgium, Netherlands, Federal Republic of Germany)

" " 18 (France)

" " 28 (Switzerland)

Conclusions

1. As regards FM sound broadcasting on VHF, it is suggested that Committee 5 should use the figures mentioned in C.C.I.R. Recommendation No. 263 as a working basis, i.e. :

- 1.1 that generally a field of 0.25 mV/m is considered to be protected;
- 1.2 for certain special cases it might seem advisable to use the following values :

1 mV/m in urban areas
and 3 mV/m in large cities.

2. As regards television, it is suggested that as a working basis Committee 5 should use the following values for the minimum field strength to be protected :

0.5 mV/m in rural areas
and 2 mV/m in urban areas and large cities.

3. For fixed and mobile services it is suggested that the minimum field strength to be protected shall normally be 5 μ V/m -- a figure appropriate to rural areas where the level of industrial interference is low.

In urban or rural areas, where industrial interference is high, the minimum field strength to be protected shall be 10 μ V/m.

In cities or in urban areas, where industrial interference is very high, the minimum field strength to be protected shall be 20 μ V/m.

P. Bouchier

Chairman

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No. 18-E
2 May, 1960
Original : English

WORKING GROUP 4A

REPORT

FROM AD HOC GROUP TO WORKING GROUP 4A

The question of the influence of receiving antenna height upon the received field strength was referred to a small ad hoc group in which delegates from Federal Republic of Germany, Czechoslovakia, Denmark, Switzerland and M. Pouliquen from the C.C.I.R. Secretariat took part. The group reached unanimous agreement on the following :

As all the curves referred to in paragraph 1 of the conclusions in Document No. 32 are based upon a height of the receiving antenna of approximately 10 meters, a correction might be applied in cases where the receiving antenna height, h_2 , is considerably different from 10 meters.

C.C.I.R. Recommendation No. 312, paragraph 7, gives the following correction for cases where the transmitting antenna height, h_1 , is different from 300 m. In such cases the curves should be read for the distance $(X + 70 - 4.1\sqrt{h_1})$ km. In analogy with this the following formula is proposed to take into account also h_2 :

$$X' = X + 70 - 4.1 (\sqrt{h_1} + \sqrt{h_2} - \sqrt{10})$$

$$\underline{X' = X + 70 - 4.1 \sqrt{h'}}$$

where $\sqrt{h'} = \sqrt{h_1} + \sqrt{h_2} - \sqrt{10}$

or $\underline{X' = X + 84 - 4.1 (\sqrt{h_1} + \sqrt{h_2})}$

This formula, which is only an approximation, might be applied at distances down to approximately the optical range. Within the optical range the variation of field strength with antenna heights as given in the C.C.I.R. atlas could be used with care.

Annexes 1, 2 and 3 have been prepared on the basis of the formula mentioned above and may be useful for the planning work.

The ad hoc group did not feel competent to propose actual figures to be applied in cases of mountainous terrain, but limits itself to drawing the attention to the possibility of "obstacle gain" as described in C.C.I.R. Report No. 144 and in the relevant literature.

Annexes : 3

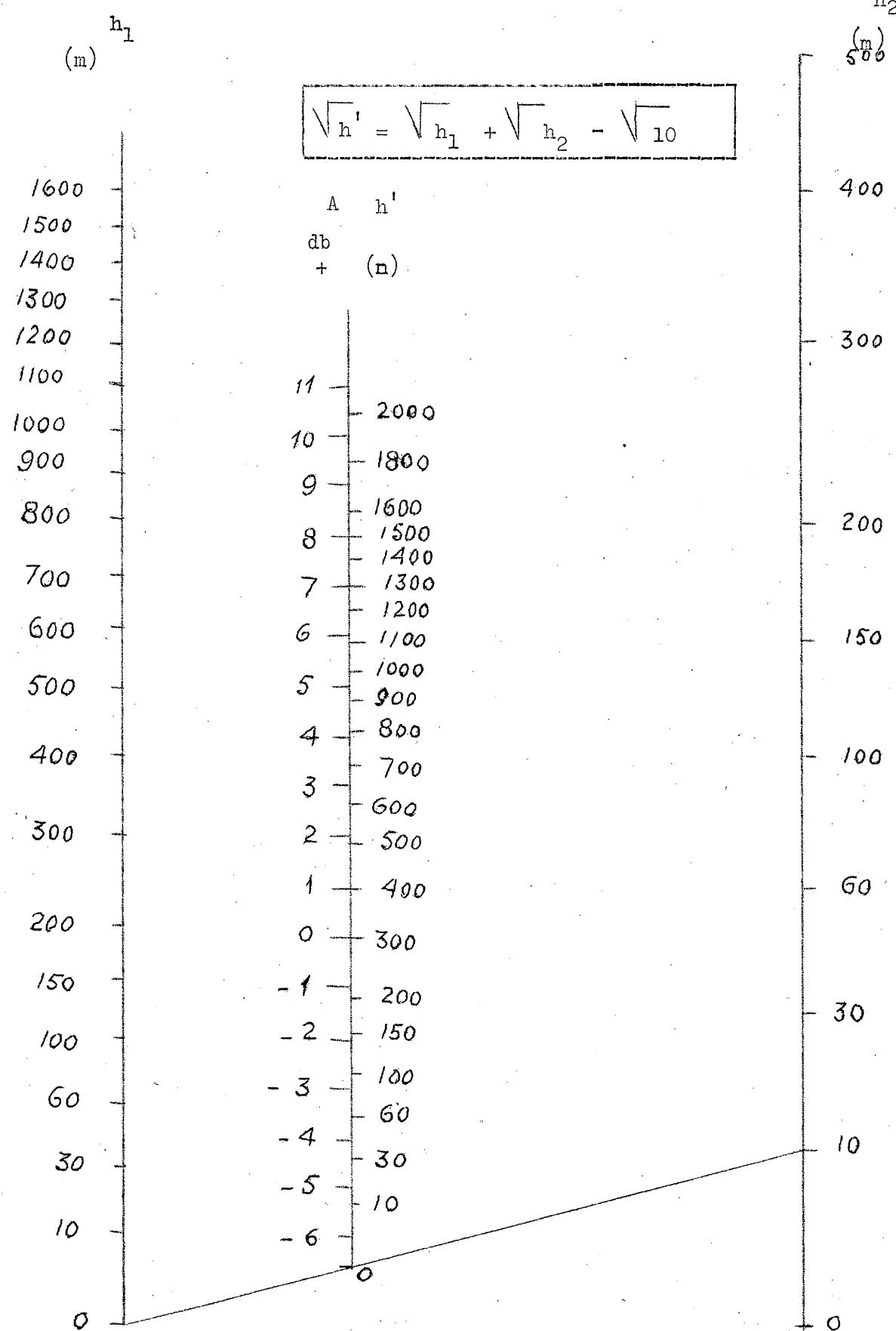
B. Nielsen
Chairman of the ad hoc group

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ANNEXE 1

ANNEXE 1



db scale applicable in the linear region of figure 1.
of Rec. 312. only.

Echelle en db applicable uniquement dans la région
linéaire de la figure 1 de l'Avis N° 312.

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A N N E X E 2 - A N N E X 2

TABLEAU

INDIQUANT LA HAUTEUR "EFFECTIVE" h_1 POUR DIFFERENTES HAUTEURS DES ANTENNES D'EMISSION h_2 ET DES ANTENNES DE RECEPTION h_2 EN METRES
(VOIR AVIS N° 312 DU C.C.I.R., § 7 ET DT 14 DE LA C.R.S.)

TABLE

GIVING THE "EFFECTIVE" HEIGHT h_1 FOR VARIOUS HEIGHTS OF TRANSMITTING ANTENNA h_2 AND RECEIVING ANTENNAS h_2 IN METRES (SEE RECOMMENDATION NO. 312 OF THE C.C.I.R., § 7 AND WD 14 OF THE SPECIAL REGIONAL CONFERENCE)

h_2	h_1	30	150	300	600	1500
0	5,4	82	200	455	1260	
1	11	101	229	498	1335	
2	13,9	110	241	519	1360	
3	16,4	116	252	533	1382	
4	18,6	122	260	545	1410	
5	20,8	127,5	267	558	1420	
6	22,7	132,1	275	568	1430	
7	24,6	136,5	281	572	1460	
8	26,5	143	288	580	1470	
9	28,4	146	294	590	1481	
10	30	150	300	600	1500	
20	46	184	346	612	1600	
30	61	211	386	715	1681	
40	74,8	236	419	768	1750	
50	88	261	450	805	1820	
60	101,2	284	485	845	1880	
70	115	308	510	884	1948	
80	127	328	534	920	2000	
90	140	348	560	953	2045	
100	151,8	367	583	980	2080	
130	188	422	652	1070	2230	
150	212	461	700	1135	2300	

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A N N E X E 3 - A N N E X 3

TABLEAU

DES DISTANCES "DE CORRECTION" A UTILISER POUR EVALUER L'INFLUENCE
DE LA HAUTEUR DE L'ANTENNE DE RECEPTION h_2

TABLE

OF "CORRECTION" DISTANCES TO BE USED WHEN ESTIMATING THE
INFLUENCE OF THE RECEIVING ANTENNA HEIGHT h_2

h_2 /m/	d_c /km/
0	13,1
1	9
2	7,3
5	3,8
10	0
20	- 5,3
50	-16,1
100	-28,1
150	-37,4

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No. 19-E
3 May, 1960
Original : French

COMMITTEE 4 A

DRAFT FOURTH REPORT OF WORKING GROUP 4 A

TO COMMITTEE 4

Subject : Question No. 3 (see Document DT No. 3)
"Percentage of time for which protection is to be afforded".

- Documents : 1. Recommendation No. 12 of the Administrative Radio Conference (Geneva, 1959);
2. C.C.I.R. Recommendation 263 (page 198 of Volume I of the Documents of the IXth Plenary Assembly, Los Angeles, 1959);
3. C.C.I.R. Recommendation 164 (page 123 of Volume I of the Documents of the IXth Plenary Assembly, Los Angeles, 1959).

It is recommended that for planning purposes protection for all the services concerned shall be afforded generally for 90% of the time.

However certain Administrations might for specific cases agree to the adoption of higher figures.

P. BOUCHIER
Chairman

SPECIAL REGIONAL
CONFERENCE

Document DT No. 20-E
3 May, 1960
Original . French

Geneva, April-May, 1960

A G E N D A

SECOND MEETING OF COMMITTEE 3

(BUDGET CONTROL COMMITTEE)

on

Thursday, 5 May, 1960 at 3 o'clock p.m.

1. Minutes of the previous meeting (Document No. 33)
2. Expenditure on 30 April, 1960 (Document No. 38)
3. Any other business.

Chairman :

M. Dakic

SPECIAL REGIONAL
CONFERENCE

Document DT No. 21-E
3 May, 1960
Original: French

Geneva, April-May, 1960

COMMITTEE 5

AGENDA

THIRD MEETING OF COMMITTEE 5

(Plan Committee)

Wednesday, 4 May 1960, 9 a.m., Salle B

1. Approval of the minutes of the 1st Meeting of Committee 5
(Document No. 23)
2. Method of work and instruments to be used in planning
3. Organization of the work of Groups 5A - 5G
4. Other business.

Dr. JOACHIM
Chairman

SPECIAL REGIONAL
CONFERENCE

Document DT No. 22-E
3 May 1960
Original : French

Geneva, April-May, 1960

WORKING GROUP 4A

DRAFT

FIFTH REPORT

OF WORKING GROUP 4A TO COMMITTEE 4

Subject: Question No. 4 (see Document DT.No. 3)
"Use of directional aerials and different polarizations."

Documents:

- 1) Recommendation No. 12 of the Administrative Radio Conference (Geneva, 1959)
- 2) Graph (Annex I) submitted by the United Kingdom Delegation
- 3) C.C.I.R. Report No. 122 (Page 155 of Volume III of the documents of the IXth Plenary Assembly of the C.C.I.R., Los Angeles, 1959)
- 4) Document No. 19 (Belgium)

Conclusions:

1. Use of directional aerials

- 1.1 Neither in the mobile services nor in VHF sound broadcasting receivers would the use of directional antennæ afford additional protection.
- 1.2 Where simple directional aerials can be used, additional protection of about 6 db., in conformity with the graph in Annex 1.
- 1.3 The use of directional antennæ in sound and television broadcasting stations provides additional protection of up to 15 db.
- 1.4 In the fixed services (point-to-point) the use of directional antennæ provides an additional protection ratio of at least 6 db.

2. Use of cross-polarization

The use of cross-polarization, in all services considered, would afford an extra 10 db protection in 90 % of sites.

The Chairman
P. Bouchier

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No. 23-E

3 May, 1960

Original : French

COMMITTEE 5

CZECHOSLOVAKIA

To make the calculations required for planning simpler, the Czechoslovak Delegation offers a few rules for calculation of propagation.

Annex : 1

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A N N E X E - A N N E X

REGLES TRANSPARENTES A UTILISER POUR LE CALCUL
DE LA PROPAGATION TROPOSPHERIQUE

RULES FOR THE CALCULATION OF TROPOSPHERIC PROPAGATION

Echelle : 1 : 3,500,000

Scale : 1 : 3,500,000

	$h_2 = 10 \text{ m}$	$h_2 = 10 \text{ m}$	$h_2 = 10 \text{ m}$
	$h_1 = 30 \text{ m}, 1 \text{ kW}$	$h_1 = 150 \text{ m}, 1 \text{ kW}$	$h_1 = 300 \text{ m}, 1 \text{ kW}$
	db km mm	db km mm	db km mm
-20	526 150,5	-20 548 156,5	-20 570 162,5
-15	466 133	-15 490 140	-15 512 146
-10	410 117	-10 434 123,8	-10 454 129,5
-5	354 101	-5 380 108,5	-5 400 114
0	300 85,6	0 325 92,7	0 346 98,7
5	244 69,6	5 270 77	5 292 83,4
10	196 56	10 224 64	10 243 69,3
15	156 44,5	15 182 52	15 202 57,7
20	122 34,8	20 150 42,8	20 170 48,5
25	94 26,8	25 124 35,4	25 146 41,7
30	70 20	30 105 30	30 125 35,7
35	51 14,6	35 87 24,8	35 108 30,8
40	38 10,8	40 71 20,3	40 90 25,7

Annexe au Document DT N° 23-F/E

Page 4

$$h_2 = 10 \text{ m}$$

$$h_1 = 600 \text{ m}, 1 \text{ kW}$$

$$\text{db} \quad \text{km} \quad \text{mm}$$

$$-20 \quad 600 \quad 171$$

$$-15 \quad 540 \quad 154$$

$$-10 \quad 484 \quad 138$$

$$-5 \quad 430 \quad 122,6$$

$$0 \quad 374 \quad 106,8$$

$$5 \quad 322 \quad 92$$

$$10 \quad 278 \quad 79,4$$

$$15 \quad 233 \quad 66,5$$

$$20 \quad 200 \quad 57,2$$

$$25 \quad 174 \quad 49,7$$

$$30 \quad 153 \quad 43,7$$

$$35 \quad 134 \quad 38,3$$

$$40 \quad 118 \quad 33,7$$

$$45 \quad 103 \quad 29,4$$

$$h_2 = 10 \text{ m}$$

$$h_1 = 900 \text{ m}, 1 \text{ kW}$$

$$\text{db} \quad \text{km} \quad \text{mm}$$

$$-20 \quad 625 \quad 178$$

$$-15 \quad 565 \quad 161$$

$$-10 \quad 510 \quad 145,5$$

$$-5 \quad 453 \quad 129,5$$

$$0 \quad 400 \quad 114$$

$$5 \quad 348 \quad 99,3$$

$$10 \quad 300 \quad 85,5$$

$$15 \quad 256 \quad 73,1$$

$$20 \quad 220 \quad 62,8$$

$$25 \quad 196 \quad 56$$

$$30 \quad 173 \quad 49,4$$

$$35 \quad 154 \quad 44$$

$$40 \quad 136 \quad 38,8$$

$$45 \quad 119 \quad 34$$

$$50 \quad 103 \quad 29,4$$

$$h_2 = 10 \text{ m}$$

$$h_1 = 1500 \text{ m}, 1 \text{ kW}$$

$$\text{db} \quad \text{km} \quad \text{mm}$$

$$-20 \quad 660 \quad 188$$

$$-15 \quad 602 \quad 171,6$$

$$-10 \quad 546 \quad 156$$

$$-5 \quad 490 \quad 140$$

$$0 \quad 436 \quad 124,5$$

$$5 \quad 380 \quad 108$$

$$10 \quad 332 \quad 94,7$$

$$15 \quad 292 \quad 83,4$$

$$20 \quad 260 \quad 74,2$$

$$25 \quad 234 \quad 66,8$$

$$30 \quad 212 \quad 60,5$$

$$35 \quad 192 \quad 54,8$$

$$40 \quad 174 \quad 49,7$$

$$45 \quad 154 \quad 44$$

$$50 \quad 135 \quad 38,5$$

$$55 \quad 116 \quad 33,1$$

SPECIAL REGIONAL
CONFERENCE

Document DT No. 24-E
4 May 1960
Original : English.

Geneva, April-May, 1960

WORKING GROUPS 5A-5G

D E N M A R K

The tables below give the necessary distances in km from an F.M. Broadcasting station with a given power as a function of frequency separation between the broadcasting station and a fixed or land mobile station.

Table A gives the distances when the stations are using the same plane of polarization.

Table B gives the distances when the stations are using different planes of polarization (10 db additional protection)

Material used

Document No. 32, Annex 1

Document No. 37, Annex 2, curve A

$$h_1 = 300 \text{ m}$$

$$h_2 = 10 \text{ m}$$

$$\tilde{\ell} = 10\%$$

6db protection of $5 \mu\text{V/m}$ at frequency separation = 0

TABLEAU A (même plan de polarisation)

TABLE A (same plane of polarization)

kHz kc/s	1 kW	5 kW	10 kW	20 kW	30 kW	40 kW	60 kW	80 kW	100 kW
0 - 30	260	335	365	400	420	430	455	465	475
40	245	315	345	375	400	410	430	445	455
50	210	270	305	335	355	365	387	400	410
60	145	185	202	225	245	255	270	285	295
70	102	127	137	147	160	165	177	185	190
80	60	82	90	102	107	110	120	125	127
90	30	45	52	61	65	70	77	80	82
db au-dessus de 1 kW db above 1 kW	0	7	10	13	15	16	18	19	20

TABLEAU B (plans de polarisation différents)

TABLE B (different planes of polarization)

kHz kc/s	1 kW	5 kW	10 kW	20 kW	30 kW	40 kW	60 kW	80 kW	100 kW
0 - 30	185	235	260	295	315	325	345	355	365
40	170	217	245	270	295	305	325	335	345
50	147	190	210	235	255	260	285	295	305
60	107	135	145	160	170	177	190	195	202
70	70	90	102	110	120	125	130	135	137
80	37	52	60	70	77	80	83	85	90
90	15	25	30	37	40	42	47	50	52
db au-dessus de 1 kW db above 1 kW	0	7	10	13	15	16	18	19	20

Corrections de distance à appliquer au-delà de la portée optique :

Distance corrections to be applied beyond optical range :

Aérien de réceptionReceiving aerial

10 m	0 km
20 m	+ 5 km
50 m	+16 km
100 m	+28 km
150 m	+37 km

Aérien d'émissionTransmitting aerial

100 m	- 28 km
200 m	- 12 km
300 m	0 km
400 m	+ 12 km
500 m	+ 22 km
600 m	+ 30 km

SPECIAL REGIONAL

CONFERENCE

Geneva, April-May, 1960

Document DT No. 25-E

4 May, 1960

Original : French

COMMITTEE 4

A G E N D A

FOR THE FOURTH MEETING OF COMMITTEE 4 (TECHNICAL COMMITTEE)

Friday, 6 May, 1960, at 2.30 p.m., in Room B

1. Minutes of the second and third meetings (Documents Nos. 39 and 42)
2. Proposal by the Chairman, Drafting Committee (Document No. 43)
3. Any other business.

Sven GEJER
Chairman

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No. 26-E
5 May, 1960
Original : English

WORKING GROUPS 5A-5G

D E N M A R K

The tables below give the necessary distances in km from a television station with a given power as a function of frequency separation between the television station and a fixed or land mobile station.

Table A gives the distances when the stations are using the same plane of polarization.

Table B gives the distances when the stations are using different planes of polarization (10 db additional protection).

The tables take into account only the vision signal. When considering the TV sound signal, the tables in DT 24 can be used.

Material used

Document No. 32, Annex 1
Document No. 35, Annex 2

$$h_1 = 300 \text{ m}$$

$$h_2 = 10 \text{ m}$$

$$\gamma = 10\%$$

6db protection of $5 \mu\text{V/m}$ at frequency separation = 0

TELEVISION (VIDEO SIGNAL)TABLEAU A (même plan de polarisation)TABLE A (same plane of polarization)

Canal Channel	3	4	1 kW	5 kW	10 kW	30 kW	60 kW	80 kW	100 kW	200 kW
76.0	84.25	52	70	80	90	102	107	110	120	
76.25	84.25	62	84	92	112	122	127	130	142	
76.5	84.5	80	102	112	130	142	147	150	165	
77.0	85.0	130	160	175	210	235	245	250	300	
77.25	85.25	260	335	365	420	455	465	475	515	
77.5	85.5	130	160	175	210	235	245	250	300	
77.75	85.75	85	110	120	137	150	155	160	177	
78.25	86.25	80	102	112	130	142	147	150	165	
79.25	87.25	62	85	92	112	122	127	130	142	
80.25	88.25	50	65	75	90	102	107	110	120	
81.25		35	50	60	72	82	85	87	97	
db au-dessus de 1 kW db above 1 kW		0	7	10	15	18	19	20	23	

TABLEAU B (plans de polarisation différents)TABLE B (different planes of polarization)

Fréquence Frequency	1 kW	5 kW	10 kW	30 kW	60 kW	80 kW	100 kW	200 kW	
76.0	84.0	30	42	50	62	70	75	77	85
76.25	84.25	40	58	62	80	87	90	92	107
76.5	84.5	50	70	80	92	107	108	112	122
77.0	85.0	92	120	130	150	165	170	177	195
77.25	85.25	185	217	260	315	345	355	365	400
77.5	85.5	92	120	130	150	165	170	177	195
77.75	85.75	58	77	84	102	110	115	120	130
78.25	86.25	50	70	80	92	107	108	110	125
79.25	87.25	40	58	62	80	85	90	92	107
80.25	88.25	28	42	50	62	70	75	77	84
81.25		18	30	35	45	52	55	60	65
db au-dessus de 1 kW db above 1 kW	0	7	10	15	18	19	20	23	

Corrections de distance à appliquer au-delà de la portée optique :

Distance corrections to be applied beyond optical range :

Aérien de réception

Receiving aerial

10 m	0 km
20 m	+ 5 km
50 m	+16 km
100 m	+28 km
150 m	+37 km

Aérien d'émission

Transmitting aerial

100 m	- 28 km
200 m	- 12 km
300 m	0 km
400 m	+ 12 km
500 m	+ 22 km
600 m	+ 30 km

SPECIAL REGIONAL
CONFERENCE

Document DT No. 27-E
5 May 1960
Original: French

Geneva, April-May 1960

WORKING GROUPS 5A-5G

S W I T Z E R L A N D

The attached tables give, as a function of the difference between carriers, the distance required between a television station and a fixed or mobile service station (similar to Working Document No. 24 - Denmark - for FM broadcasting).

- Documents used:

Document No. 32 Annex 1
Document No. 35 Annex 2

- Assumptions used in the calculation:

$h_1 = 300 \text{ m}$

$h_2 = 10 \text{ m}$

$\gamma = 10 \text{ per cent}$

Minimum field to be protected ($5 \mu\text{V/m}$)

- Annex 1: same polarization planes
- Annex 2: different polarization planes.

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A N N E X E 1 - A N N E X 1

DISTANCE DE L'EMETTEUR TV JUSQU'AU POINT OU UN SERVICE FIXE OU MOBILE TRAVAILLANT AVEC UNE INTENSITE DE CHAMP DE 5 $\mu\text{V/m}$ JOUIT DE LA PROTECTION PREVUE
DISTANCE FROM THE TV TRANSMITTER TO THE POINT AT WHICH A FIXED OR MOBILE SERVICE OPERATING WITH A FIELD STRENGTH OF 5 $\mu\text{V/m}$ ENJOYS THE DEGREE OF PROTECTION ENVISAGED

Δf	P	10	5 +7	10 +10	20 +13	50 +17	100 +20	150 +22	200 +23	250 +24	316 +25	kW db
- 1,5 MHz	30	44	50	60	70	78	84	87	90	93		
- 1,25	54	73	82	92	104	115	122	125	128	132		
- 1,0	73	94	105	115	129	140	148	153	158	165		
- .750	78	101	110	122	136	147	158	166	170	176		
- .500	84	108	118	128	144	156	168	176	183	189	Mêmes plans de polarisation	
- .250	125	152	168	188	218	243	262	273	284	295		
- .125	192	247	280	310	350	384	404	416	427	438	Same polarization planes	
0	262	338	368	400	444	478	500	512	523	534		
+ .125	192	248	280	310	350	384	404	416	427	438		
+ .250	125	152	168	188	218	243	262	273	284	295		
+ .500	84	108	118	128	144	158	168	176	183	189		
+ 1.0	78	101	110	122	136	147	158	166	170	176		
+ 1.5	73	94	105	115	129	140	148	153	158	165		
+ 2.0	64	84	93	104	118	128	136	140	144	148		
+ 3.0	49	68	76	84	98	108	115	118	121	124		
+ 4.0	35	51	59	67	78	87	93	98	102	104	Horizon k= $\frac{4}{3}$	
+ 5.0	22	35	42	49	59	67	73	75	78	80		
+ 6.0 MHz	15	23	29	35	44	51	57	59	62	64		

Δf = Ecart des porteuses en MHz
 hauteur de l'antenne d'émission $h_1 = 300 \text{ m}$
 hauteur de l'antenne du récepteur $h_2 = 10 \text{ m}$

Δf = Carrier separation in Mc/s
 height of transmitting antenna $h_1 = 300 \text{ m}$
 height of receiving antenna $h_2 = 10 \text{ m}$

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A N N E X E 2 - A N N E X 2

Δf	1 0	5 +7	10 +10	20 +13	50 +17	100 +20	150 +22	200 +23	250 +24	316 +25	kW dB
- 1,5 MHz	15	23	29	35	44	52	56	59	62	64	horizon= k 4/3
- 1,25	31	46	54	62	73	81	87	91	93	97	
- 1,0	46	64	73	81	94	105	110	115	118	122	
- .750	52	70	78	87	100	110	117	122	125	128	
- .500	56	76	84	93	108	117	125	128	133	136	
- .250	90	115	126	136	152	168	182	188	196	202	
- .125	138	172	192	213	246	278	300	310	320	330	
0	182	234	263	293	336	368	390	400	410	420	Plans de polaris. différents
+ .125	138	172	192	213	246	278	300	310	320	330	
+ .250	90	115	126	136	152	168	182	188	196	202	
+ .500	56	76	84	93	108	117	125	128	133	136	Different polarization plane
+ 1.0	52	70	78	87	100	110	117	122	125	128	
+ 1.5	46	64	73	81	94	105	110	115	118	122	
+ 2.0	40	56	65	73	84	94	101	105	107	111	
+ 3.0	27	42	49	56	67	76	81	84	88	90	horizon= k 4/3
+ 4.0	18	29	35	42	52	60	64	67	70	73	
+ 5.0	11	18	22	27	35	42	46	49	52	54	
+ 6.0 MHz	-	12	15	18	23	29	33	35	37	40	

Δf = Ecart entre les porteuses en MHz

Hauteur de l'antenne d'émission h_1 = 300 m

Hauteur de l'antenne de réception h_2 = 10 m

Correction de distance à appliquer au-delà de la portée optique: voir Document DT N° 24 (Danemark).

Δf = Carrier separation in Mc/s

Height of transmitting antenna h_1 = 300 m

Height of receiving antenna h_2 = 10 m

Correction of distance to be applied beyond the range of vision: see Working Document No. 24 (Denmark).

SPECIAL REGIONAL
CONFERENCE

Document DT No. 28-E
5 May, 1960
Original : French

Geneva, April-May, 1960

COMMITTEE 2

FIRST REPORT

by

THE AD HOC GROUP SET UP TO EXAMINE CREDENTIALS

The Group met on 5 May at 4.30 p.m., under the chairmanship of Dr. F. Nicotera (Italy), to examine the credentials handed in to date.

The examination showed :

- a) that 17 delegations are empowered to vote and to sign;
- b) that the credentials submitted by the Delegations of the People's Republic of Albania and of the Hungarian People's Republic are valid for voting only;
- c) that the credentials of the Danish Delegation are not in conformity with Chapter 5 of the General Regulations;
- d) that the Delegations of Austria, the People's Republic of Bulgaria and Turkey have not yet submitted their credentials.

Present at the meeting :

Mr. Jean Hamon (France)
Mr. Rudolf Köhler (Federal Republic of Germany)
Mr. Ivan St. Q. Severing (United Kingdom)
Mr. Jean Kunz (Secretary of the Conference)

Dr. F. NICOTERA
Chairman

SPECIAL REGIONAL
CONFERENCE

Document DT No. 29-E
9 May 1960
Original: French

Geneva, April-May 1960

COMMITTEE 5

CZECHOSLOVAKIA

WORKING INSTRUMENT FOR PLANNING

The tables below indicate the necessary distance in km between a station of the mobile or fixed service and the edge of the reception area of a frequency modulation broadcasting station, in function of the difference between the carrier frequencies and the power of the station in the mobile or fixed service.

Documents used:

Doc. No. 32, Annex 1
Doc. No. 34, Annex 1
Doc. No. 37

Assumptions used in calculations:

$$\begin{aligned} h_1 &= 300 \text{ m} \\ h_2 &= 10 \text{ m} \\ \sigma &= 10 \% \end{aligned}$$

Minimum field to be protected:

250 $\mu\text{V/m}$

Annex: 1

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A N N E X

Tableau A : Mêmes plans de polarisation

Table A : Same polarisation planes

Δf kHz	1 kW	0,5 kW	0,2 kW	0,1 kW	0,05 kW	0,02 kW	0,01 kW	0,005 kW	0,002 kW	0,001 kW
0	188	170	150	138	125	111	100	90	78	68
30	165	150	134	122	111	98	87	78	68	59
60	134	122	107	98	87	75	68	59	49	41
90	104	93	81	73	64	54	48	39	31	25
120	98	87	75	68	59	49	41	35	27	22
150	78	68	59	52	44	35	29	23	18	15
180	68	59	49	41	35	27	22	18	14	11
240	54	48	37	31	25	19	16	13	10	10
300	41	35	27	22	18	14	11	10	-	-
360	31	25	19	16	13	10	10	-	-	-

Tableau B : Plans de polarisation différents

Table B : Different polarisation planes

Δf kHz	1 kW	0,5 kW	0,2 kW	0,1 kW	0,05 kW	0,02 kW	0,01 kW	0,005 kW	0,002 kW	0,001 kW
0	138	125	111	100	90	78	68	61	52	44
30	122	111	98	87	78	68	59	52	41	35
60	98	87	75	68	59	49	41	35	27	22
90	73	64	54	48	39	31	25	20	16	13
120	68	59	49	41	35	27	22	18	14	11
150	52	44	35	29	23	18	15	12	10	10
180	41	35	27	22	18	14	11	10	-	-
240	31	25	19	16	13	10	10	-	-	-
300	22	18	14	11	10	-	-	-	-	-
360	16	13	10	10	-	-	-	-	-	-

Corrections de distance à appliquer au-delà de la portée optique
Distance corrections to be applied beyond optical range

Antenne d'émission
Transmitting antenna

2 m	- 65 km
10	- 57
50	- 41
100	- 28
200	- 12
300	0
500	+ 22
1000	+ 60
2000	+ 113

Antenne de réception
Receiving antenna

10 m	0 km
20	5
50	16
100	28
200	45
500	92
1000	118

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May 1960

Document DT No. 30-E
10 May 1960
Original: French

COMMITTEE 2

AGENDA

SECOND MEETING OF COMMITTEE 2

(Credentials)

Friday, 13 May 1960, at 11 a.m. in Room D

1. Report of the ad hoc group.
2. Approval of the Committee's final report.
3. Other business.

F. Nicotera
Chairman of Committee 2

SPECIAL REGIONAL
CONFERENCE

Document DT No. 31-E
10 May 1960
Original: French

Geneva, April-May, 1960

COMMITTEE 5

CZECHOSLOVAKIA

WORKING INSTRUMENT FOR PLANNING

The tables below show the necessary distance in kilometres between a mobile or fixed station and the limit of the reception area of a television station (I.B.T.O. standard), as a function of the difference between the carrier (TV picture) and of the power of the fixed or mobile station.

Documents used:

Doc. No. 32, Annex 1
Doc. No. 35, Annex 1
Doc. No. 37

Assumptions used:

$$h_1 = 300 \text{ m}$$

$$h_2 = 10 \text{ m}$$

$$\gamma = 10\%$$

Minimum field to be protected:

$$500 \mu\text{V/m}$$

Annex: 1

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A N N E X E - A N N E X

Tableau A : Mêmes plans de polarisation

Table A : Same polarisation plans

Δf kHz	1 kW	0,5 kW	0,2 kW	0,1 kW	0,05 kW	0,02 kW	0,01 kW	0,005 kW	0,002 kW	0,001 kW
-1,5	39	33	25	20	16	13	11	10	-	-
-1,25	59	51	42	35	29	22	18	15	11	10
-1	81	73	61	54	46	37	31	25	19	16
-0,75	107	98	84	75	67	56	49	41	33	27
-0,5	142	130	115	104	93	81	72	65	54	46
-0,25	182	165	146	134	122	108	97	87	75	67
-0,125	214	191	167	152	140	123	113	102	89	80
0	252	225	195	176	159	142	129	118	104	93
0,5	222	199	173	157	144	127	117	106	92	83
1	195	175	155	142	129	115	104	93	82	73
1,5	173	158	140	127	117	102	92	83	72	63
2	155	142	125	115	104	95	81	73	61	54
2,5	140	127	112	102	92	80	71	63	53	45
3	125	115	100	95	81	70	61	54	44	37
3,5	112	102	89	80	71	60	53	45	36	30
4	100	90	78	70	61	51	44	37	29	23
4,5	93	84	73	64	56	46	40	33	25	20
6	93	84	73	64	56	46	40	33	25	20

Tableau B : Plans de polarisation différents

Table B : Different polarisation planes

f kHz	1 kW	0,5 kW	0,2 kW	0,1 kW	0,05 kW	0,02 kW	0,01 kW	0,005 kW	0,002 kW	0,001 kW
-1,5	20	16	13	11	10	-	-	-	-	-
-1,25	35	29	22	18	15	11	10	10	-	-
-1	54	46	37	31	25	19	16	13	10	10
-0,75	75	67	56	49	41	33	27	22	16	14
-0,5	104	93	81	72	65	54	46	39	31	25
-0,25	134	122	108	97	87	75	67	60	49	41
-0,125	152	140	123	113	102	89	80	74	60	52
0	176	159	142	129	118	104	93	84	73	64
0,5	157	144	127	117	106	92	83	73	63	55
1	142	129	115	104	93	82	73	64	54	46
1,5	127	117	102	92	83	72	63	55	45	38
2	115	104	95	81	73	61	54	46	37	31
2,5	102	92	80	71	63	53	45	38	30	24
3	95	81	70	61	54	44	37	31	23	19
3,5	80	71	60	53	45	36	30	24	18	15
4	70	61	51	44	37	29	23	19	15	12
4,5	64	56	46	40	33	25	20	16	13	11
6	64	56	46	40	33	25	20	16	13	11

Correction de distance à appliquer au-delà de la portée optique
Distance correction to be applied beyond optical range

Antenne d'émission
Transmitting antenna

2 m	- 65 km
10	- 57
50	- 41
100	- 28
200	- 12
300	0
500	22
750	43
1000	60
2000	113

Antenne de réception
Receiving antenna

10 m	0 km
20	5
50	16
100	28
200	45
500	92
750	100
1000	118

SPECIAL REGIONAL
CONFERENCE

Document DT. No. 32-E
10 May 1960
Original : French

Geneva, April-May, 1960

COMMITTEE 5

AGENDA

FOR THE FOURTH MEETING OF COMMITTEE 5

(Planning)

10 May 1960 at 5.00 p.m. Room B

1. Approval of the Summary Records of the second (Document No. 44) and the third (Document No. 51) meetings.
2. Communication from the Chairmen of the Working Groups.
3. Communication regarding the work of ad hoc Working Group 5 (Agreement).
4. Other business.

M. Joachim,
Chairman of Committee 5

SPECIAL REGIONAL
CONFERENCE

Geneva, April-May, 1960

Document DT No.33-E
12 May 1960
Original : French

COMMITTEE 5

AGENDA

FIFTH MEETING OF COMMITTEE 5
(Plans)

Thursday 12 May 1960 at 2.30 p.m. - in Room B

1. Approval of the summary record of the fourth meeting of Committee 5
(Document No.58)
2. Final Report by ad hoc Group 5 (draft Final Acts)
(Document No.57)
3. Reports by the Chairmen of the working groups of Committee 5
4. Other business.

Dr. M. Joachim,
Chairman of Committee 5