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IONOSPHERIC DATA IN JAPAN

FOR JUNE 1950

Vol. 2 No. 6

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(DENPACHO)

TOKYO, JAPAN

RADIO REGULATORY AGENCY

(DENPACHO)

TOKYO, JAPAN

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CONTENTS

FOREWORD

Since November 1949, the observation of ionosphere and most part of the research related to the propagation of radio wave excepting those parts directly connected with the Telecommunication Service were transferred to the jurisdiction of the Radio Regulatory Agency from that of the Electrical Communication Laboratory.

Considering the role played by the reports related to the results of the ionospheric observations hitherto prepared by the Laboratory to the world scientific circles, we would like to continue the issue of this pamphlet.

Taking this happy occasion when Japan has resumed the membership in the International Telecommunication Conference, we wish to make every efforts in contributing to the improvement and development of radio communications.

We shall be very much obliged to receive the similar publications from the organizations concerned with radio propagation in the world.

JUNE 1950

Tsuyoshi Amishima
Radio Regulatory Commissioner

SITE OF THE IONOSPHERIC STATIONS

Ionospheric observation is carried out at five stations in Japan.

The stations are situated as follows:

	longitude	latitude	site
Wakkanai	141° 41.1′ E	45° 23.6′ N	Wakkanai-shi, Soya-gun, Hokkaido
Akita	140° 08.2′ E	39° 43.5′ N	Tegata Nishishin-machi, Akita-shi, Akita-ken
Kokubunji	139° 29.3′ E	35° 42.4′ N	Koganei-machi, Kitatama-gun, Tokyo-to
Yamagawa	130° 37.7′ E	31° 12.5′ N	Yamagawa-machi, Ibusuki-gun, Kagoshima-ken

REMARKS ON SYMBOLS

Except Zd, f_{min} E and f_{min} F, other symbols are used in accordance with recommendation of C.C.I.R. Zd, f_{min} E and f_{min} F in the table are defined as follows:

Z_d. Half breadth of the layer, calculated by the method of Booker.

f_{min} E Minimum frequency, on which echo reflected from E-layer begins to appear by use of the observation equipment on routine work.

f_{min} F Minimum frequency, on which echo reflected from F-layer begins to appear by use of the observation equipment on routine work.

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF2 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7.0F	5.9V	6.8FV	6.7H	7.3H	7.9H	7.8	7.0	6.8	6.8	7.4	7.7	7.8	8.4	8.6	8.3	8.4P	7.6	7.5	7.7	7.8	(8.2)JP	8.2P	7.0P
2	7.0	6.8	6.2H	6.3H	6.3	6.7K	6.1K	6.4K	6.2K	6.5JK	6.5K	6.5K	7.0K	8.2P	8.5	8.4	8.0	7.5	6.7	6.9	7.3	7.5	7.6	7.3
3	7.4V	6.8V	6.6PV	6.1	6.4	7.7	9.0P	8.7	7.3	7.1	7.7	7.9	8.2	8.5	7.9	8.1	7.5H	7.9H	7.7H	(8.2)PS	7.6H	8.0	8.6	8.1H
4	8.7H	8.0P	7.3	7.1	6.9	7.4	7.5	7.8	8.7	8.0Z	8.1	7.9	7.7	8.2	8.4	8.7	9.2	[8.7]C	8.2	8.1	7.7	8.4	8.4	8.5
5	8.5	7.8	7.8P	7.2	7.0	7.6	7.6	8.3	7.4	7.2	7.2	7.1	7.0	7.5	7.5	7.4H	7.3	7.8	(7.9)PS	7.8P	7.6	7.5H	(7.7)P	(7.8)P
6	7.7P	7.5	7.1	6.9	7.0H	7.6	7.7	8.6F	7.5	6.6	7.2	7.8	6.8	7.0	7.3	7.4	7.8	7.6	7.8	7.2	8.1	(8.0)P	7.8P	7.6
7	7.8	8.1	7.6	7.7	6.7	7.2	7.6	8.3	8.1	8.1	7.7H	7.4	7.0	7.5	7.7	7.5	7.9	7.9	7.9B	8.8	8.7	7.7	7.6	7.8
8	7.8	7.6	7.4	7.0	6.5	6.4	7.2	7.8	7.6	A	7.6	6.8	7.0	7.9	7.6	8.5	8.7	8.5	8.0	7.9	8.0	8.2V	8.3	8.2H
9	(8.1)P	7.9H	7.5H	7.1	6.0H	6.2	6.6H	7.3	7.0	7.0F	7.8	7.4	7.6	7.7	7.9	(8.5)P	8.4H	(7.2)PS	A	7.2	(7.9)P	7.7H	7.3	7.7H
10	7.8H	8.3	7.1	6.2	5.7	6.3F	7.4F	8.3Z	7.1F	6.4F	6.5	7.1	A	7.5	7.6	8.7	8.8	7.5	S	7.1	7.5	7.1	(7.6)JPS	(8.4)P
11	7.8	7.1	6.3	6.2	6.4	7.0	8.2	C	C	C	C	C	C	C	C	C	7.1	7.9	7.9	8.0	8.4	8.5	7.7	7.5
12	6.9	6.9	*6.5	6.2	6.2	7.1	7.3	7.7	7.2	6.9PS	6.6	7.1	6.8	7.2	7.1	7.3	7.3	7.8P	7.2	7.2	A	(7.4)P	8.1	7.6
13	7.6	7.1	6.6F	6.8	6.8F	7.0F	7.7	8.6	7.4	7.7	7.1	7.3	7.5	7.5	8.0	8.2	7.8	7.7	8.0	(7.9)P	(7.9)P	(7.7)PS	(8.0)P	7.8
14	8.0P	7.6	7.3	7.2	6.8	7.6	8.6	8.1V	8.2	7.0	6.8	7.1	6.7	A	7.0	7.0	7.2S	7.8PS	8.2JH	7.9	(8.2)PS	8.6	8.7H	8.6H
15	8.3	7.8H	7.8	8.1	7.5	8.4	8.1	8.8	8.2	7.5	8.1	7.5	7.5	7.2	A	7.8	7.6	A	(7.5)P	(8.2)P	(8.5)P	A	7.4P	9.2
16	8.2P	8.4P	(8.0)P	7.4H	7.6	7.6	7.4	8.0	7.8	7.6	7.6	7.2	A	7.3	7.3	7.3	7.8	8.3	7.8	8.6	8.5	8.4	7.9	7.6
17	7.4H	7.3H	7.3	7.0	7.0H	8.2	8.5	7.7	8.3J	7.3	6.4	6.4	6.9	6.8	6.8	7.0	7.3	7.9H	6.9	7.5A	7.6	7.5	7.3H	7.2
18	6.5	6.0P	5.9P	5.4	5.5	6.1Z	(7.2)P	7.8Z	6.9	6.4	6.0	6.5	6.4	6.5	6.5	6.8	6.8	6.6	6.8	7.5	7.6H	7.4	7.3	7.2
19	7.0	6.6	6.3H	5.8H	6.6	7.1	7.5	8.8	9.0	8.5	7.5	7.2	6.2	6.9	7.3	7.3	7.7	7.4	7.5	8.0F	8.3	8.3	7.9	7.5
20	7.3H	6.8H	7.2	7.1	6.5	7.3	8.0	8.8H	8.9H	8.5	7.6	7.3	7.2	7.1H	7.4	C	C	8.9H	(8.3)JPS	A	7.8	(8.2)JS	8.0	7.7
21	7.8	7.0	6.6	6.4	7.0	7.1	7.6	7.8	7.6	6.8	6.6	A	6.1F	6.0	(6.2)P	6.3	6.7	6.6	6.5	6.5J	6.3	6.3	6.4	6.6
22	6.7	6.4ZH	6.0P	5.7Z	6.0F	7.1F	7.7F	7.2FK	AK	AK	6.5K	6.3K	GK	6.6K	AK	6.4K	6.4K	6.1K	6.6H	6.6H	6.9H	7.2	6.7F	6.5F
23	6.5F	6.0H	5.9	6.2F	6.1	6.8	7.8H	7.9	6.7	7.3	7.2	7.5	7.7	6.7	6.8	7.1	7.4	6.2	7.5H	7.8H	8.0	S	S	7.8
24	7.3H	6.9ZF	(6.9)VF	6.7F	6.7	6.5H	7.0H	7.0FH	7.7	6.7	7.1J	8.4P	7.2	7.8	7.7	7.6	(7.6)PF	7.0PS	(7.7)JPS	8.5JH	8.0	7.5H	7.3H	7.2
25	7.6JH	7.1	6.8	6.2H	6.3	6.3H	A	B	C	C	C	C	C	C	6.7	7.3	7.2	A	6.4	A	6.9	7.3	(7.6)P	(8.1)JP
26	7.4H	7.1H	7.0H	6.2H	6.3H	6.6H	C	C	AK	6.2K	6.1JK	5.7K	AK	6.5JK	6.1K	6.0K	AK	6.4	6.2	6.9	A	A	8.0JF	[7.5]C
27	7.0JF	6.8	6.7HF	6.1JHF	6.0F	5.9	(8.3)JP	6.9	6.8	6.6	7.1	7.3	7.2	A	A	7.4	7.4	7.8P	7.7H	8.1	A	7.4P	7.8P	7.7
28	7.2F	7.1F	(7.3)FP	6.7	5.6H	6.6	7.2	A	A	A	A	A	C	7.0	A	7.1	7.2	7.0	7.4	8.2PS	7.8	7.7	7.8	7.6
29	7.6	7.1H	6.8	6.3	7.5	7.4	7.9	7.6	7.2	6.9	6.7	6.7	6.8	7.1PS	7.3	7.2	7.2	7.7	7.8	8.8	8.7	7.6ZF	(6.7)ZF	7.6ZF
30	6.6Z	6.3	6.5H	5.5H	C	C	6.0K	6.7K	7.3SK	AK	AK	6.9BK	7.7K	7.3HK	6.8FK	6.8K	6.4K	5.9K	5.7K	4.4K	5.6K	6.2K	6.4K	5.7K
31																								
Median Value	7.5	7.1	6.8	6.6	6.5	7.1	7.6	7.8	7.4	7.0	7.2	7.2	7.0	7.2	7.3	7.4	7.4	7.6	7.6	7.8	7.8	7.7	7.7	7.6
Count	30	30	30	30	29	29	28	26	25	24	26	26	24	26	25	28	28	28	28	28	27	27	29	30

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h_pF2 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	430F	480V	440FV	390H	360H	360H	330	300	300	350	410	410	380	350	400	370	380P	330	360	370	380	(400)TF	380P	410P
2	430	430	430H	440H	410	320K	360K	350K	GK	GK	GK	GK	460K	360P	370	390	400	350	360	380	410	390	390	430
3	470V	450V	420PV	440	440	360	(370)PB	300	300	300	330	380	390	390	380	320	360H	340H	320H	(380)PS	390H	420	450	410H
4	410H	400P	440	410	420	430	390	340	390	(370)ZB	400	360	360	360	390	360	360	(340)C	320	340	350	410	400	380
5	380	350	350P	330	(340)B	400	360	370	330	400	400	400	390	400	380	360H	400	390	(320)PS	360P	350	350H	(420)P	(400)P
6	390P	370	370	370	410H	360	(340)B	320F	310	G	380	370	400	400	400	400	380	390	320	340	400	(370)P	410P	410
7	390	370	400	380	430	360	410	390	320	330	330H	350	340	370	400	410	360	350	300B	380	320	320	370	350
8	340	390	330	330	340	350	360	350	A	A	390	G	440	460	380	400	400	310	320	350	370	(420)VB	400	420H
9	(440)F	450H	380H	390	400H	430	450H	400	390	380F	420	440	450	420	400	(390)P	390H	(340)PS	A	330	(350)P	400H	450	450H
10	410H	380	370	410	420	470F	400F	340Z	390F	380F	G	G	A	440	440	400	370	510	S	(390)B	430	370	(360)TFS	(320)P
11	350	340	360	370	400	350	380	C	C	C	C	C	C	C	C	C	420	400	370	310	410	380	420	400
12	410	390	400	380	360	370	350	320	300	G	G	340	G	390	390	360	370	370	350	350	A	(360)P	390	400
13	370	370	420F	420	390F	400F	410	350	400	400	400	410	420	390	400	410	360	350	350	(340)P	(330)P	(340)FS	(420)FH	380
14	410P	390	360	340	330	310	330	300V	330	320	G	G	400	A	390	370	390S	380PS	(370)TH	300	(320)FS	400	420H	330H
15	410	400H	440	370	360	340	360	360	340	310	310	340	340	410	A	350	350	A	(350)P	(340)P	(310)P	A	390P	350
16	460P	430P	(300)P	450H	410	320	320	350	320	360	390	390	A	400	400	410	330	380	390	380	340	370	360	390
17	400H	400H	380	410	470H	360	400	420	(370)J	400	400	G	460	G	450	440	410	380H	340	A	330	420	420H	360
18	370	390P	400P	390	430	320Z	(420)P	410Z	A	G	G	400	G	G	G	390	350	350	320	300	300H	340	310	310
19	340	370	390H	410H	390	380	390	390	340	300	300	390	G	410	410	420	430	390	360	(370)TF	350	(380)F	400	390
20	400	390H	430	440	420	430	420	390H	380H	330	320	400	400	380H	400	C	C	410H	(320)TFS	A	360	(350)TFS	340	380
21	370	370	370	380	350	360	410	390	A	A	400	A	G	G	G	G	380	380	340	A	340	340	370	350
22	360	370ZH	370P	480Z	390F	410F	400F	360KF	AK	AK	AK	GK	GK	390K	AK	430K	GK	390K	370H	340H	340H	420	370F	410F
23	370F	400H	420	400F	380	340	390H	320	320	G	320	380	340	G	390	340	380	410	350H	380H	360	S	S	400
24	420H	390ZF	410VF	380F	390	420H	360H	420HF	440	350	(400)J	(360)FB	G	350	340	380	(410)F	400PS	(400)TFS	(330)TH	390	410H	380H	430
25	(400)TH	350	380	400H	360	330H	A	B	C	C	C	C	C	C	400	380	340	A	A	A	A	400	(410)F	(380)TFP
26	400H	390H	370H	380H	410H	450H	C	C	AK	GK	AK	GK	AK	GK	GK	GK	AK	370	350	(410)B	A	A	380	[400]C
27	(410)TF	390	(420)HF	(350)TF	(410)F	410	(350)TF	300	330	G	410	400	G	A	A	400	340	400P	380H	330	A	380P	400P	350
28	420F	420F	(380)PF	440	410H	400	400	A	A	A	A	A	C	400	A	G	380	410	310	290PS	280	330F	310	410
29	400	400H	380	370	420	(370)B	360	340	370	320	A	410	G	380PS	350	340	380	350	320	330	310	410ZF	(390)HF	(350)HF
30	390Z	420	380H	420H	C	C	GK	410K	490KS	AK	AK	500KB	470K	400KH	420FE	AK	400K	400K	410K	400K	440K	430K	(370)AK	430K
31																								
Median Value	400	390	380	390	400	360	380	350	340	380	400	400	440	400	400	390	380	380	350	340	350	380	390	400
Count	30	30	30	30	29	29	28	26	22	23	23	26	24	26	25	27	28	28	27	26	26	27	29	30

h_pF2 , Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 2

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F2 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	340	350	300	300	(300)$^{A}_{H}$	300^{H}	280	300	300	300	410	400	380	350	390	350	320	300	300	270	270	300	280	290
2	300	310	320^{H}	310^{H}	290	280^{K}	320^{K}	350^{K}	330^{K}	450^{K}	400^{K}	500^{K}	460^{K}	350	360	360	350	310	280	280	290	300	290	290
3	350	350	350	370	300	320	300	280	300	280	320	360	L	370	350	310	260^{H}	280^{H}	280^{H}	250	270^{H}	390	330	310^{H}
4	300^{H}	300	330	310	300	370	340	300	340	320	350	340	340	340	330	320	300	[300]^{C}	300	300	290	290	300	290
5	300	270	260	250	260	290	310	330	320	400	400	400	390	400	370	300^{H}	390	350	270	320^{A}	270	250^{H}	290	300
6	290	260	280	250	270^{H}	230	300	300	310	310	380	360	400	400	400	400	360	390	300	280	(300)^{A}	340	300	300
7	310	300	340	350	390	290	400	310	300	320	300^{H}	340	340	350	400	370	350	230	250	260	270	250	310	(300)^{A}
8	280	290	280	280	260	290	290	310	390	A	380	430	440	450	380	390	380	300	300	290	290	300	300^{A}	300^{H}
9	300	300^{H}	300^{H}	300	300^{H}	300^{A}	410^{H}	400	390	380	(390)^{A}	380	450	400	400	330	350^{H}	330	A	320	300	280^{H}	410	380^{H}
10	320^{H}	300^{A}	280	300^{A}	390	400^{A}	370	310	380^{F}	370	430	450	A	440	430	360	330	500	A	260	310	A	310	310
11	270	260	290	310	380	270	340	C	C	C	C	C	C	C	C	C	400	400	360	300	300	300	300	300
12	(310)^{A}	300	300	290	280	320	280	290	300	380	400	340	390	390	360	350	350	340	330	310	A	290	370	300^{A}
13	290	(300)^{A}	(300)^{A}	310	300	360	370	330	400	400	380	390	420	390	390	390	300^{A}	290	300	280	290	300^{A}	300^{A}	300
14	300	(300)^{A}	(300)^{A}	(300)^{A}	250	230	290	300	320	310	430	370	390	A	390	350	370	320	250^{H}	290	250^{H}	300	(350)$^{A}_{H}$	240^{H}
15	340	320^{H}	300	300^{A}	280	280	310	320	320	310	300	310	330	410	(400)^{A}	320	340	A	280	280	240	A	360	290
16	A	320^{A}	280	330^{H}	370^{A}	290	310	340	300	350	380	380	A	400	400	410	320	350	320^{F}	300	260^{F}	280	270	280
17	300^{H}	310^{H}	300^{A}	290	310^{H}	320	390	410	370	400	400	490	460	410	450	440	400	300^{H}	300	A	250	310	300^{H}	300
18	280	320	310	(300)^{A}	L	270	400	400^{A}	380	500	490	400	500	430	400	390	340	290	300	290	280^{H}	280	(300)^{A}	270
19	280	310	280^{H}	(300)$^{A}_{H}$	390	270	L	330	310	300	300	390	430	410	400	410	400	360	290	300	290	290	290	290^{A}
20	330$^{A}_{H}$	350$^{A}_{H}$	360^{A}	360^{A}	350^{A}	280	(300)^{A}	360^{H}	330^{H}	320	310	400	400	AH	400	C	C	310^{H}	270	A	310	270	270	280
21	270	290	300	300	300	350	390	380	(400)^{A}	A	400	A	500	510	440	390	370	380	280	A	280	310	330	290
22	280	250^{H}	310	380	300	260	240	260^{K}	A^{K}	A^{K}	A^{K}	400^{K}	G^{K}	380^{K}	A^{K}	420^{K}	400^{K}	380^{K}	300$^{A}_{H}$	270^{H}	260^{H}	330	270	300
23	290	260^{H}	(320)$^{A}_{F}$	(310)^{A}	310	260	(230)^{H}	310	320	290	320	380	310	420	390	340	370	360	300^{H}	300^{H}	270^{A}	310	310	300
24	310^{H}	(330)$^{A}_{F}$	320	(300)^{A}	330	350	270^{H}	270^{H}	430	350	360	330	430	340	330	380	380	380	350	260^{H}	280	320^{H}	300^{H}	340^{A}
25	300$^{A}_{H}$	270	290	310^{H}	300	290^{H}	A	A	C	C	C	C	C	C	400	380	330	A	(340)^{A}	A	A	380^{A}	(370)^{A}	350
26	320$^{A}_{H}$	310^{H}	290$^{A}_{H}$	300^{H}	290^{H}	(350)$^{A}_{H}$	C	C	A^{K}	540^{K}	400^{K}	600^{K}	A^{K}	470^{K}	500^{K}	380^{K}	A^{K}	A	320	A	A	A	AF	C
27	AF	A	290^{H}	240^{H}	290	380	320	300	320	340	400	400	400	A	A	400	310	370	300^{H}	300	A	340	320	320
28	(400)^{F}	350^{F}	360	340	310^{H}	380	350	A	A	A	A	A	C	400	A	270	380	380	300	280	260	300^{A}	270^{F}	290
29	280	300^{H}	300	300	310	340	330	330	300	320	A	410	360	380	350	310	380	A	300	280	250	340^{F}	330	280^{F}
30	(330)^{A}	(320)^{A}	300$^{A}_{H}$	320^{H}	C	C	410^{K}	410^{K}	450^{K}	A^{K}	A^{K}	500^{K}	460^{K}	400$^{H}_{K}$	420^{K}	A^{K}	390^{K}	400$^{A}_{K}$	400$^{A}_{K}$	380^{K}	(400)$^{A}_{K}$	(400)$^{A}_{K}$	(370)$^{A}_{K}$	430$^{A}_{K}$
31																								
Median Value	300	300	300	300	300	290	320	320	320	340	380	400	400	400	400	370	360	340	300	290	280	300	300	300
Count	28	29	30	30	28	29	27	26	25	23	24	26	23	25	26	27	28	26	28	25	26	27	29	29

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 3

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF1 | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1					Q	Q	Q	A	4.7	4.6	5.3	5.7	5.7	A	5.3	(5.1)^{L}	4.5	4.4	4.3	Q				
2					L	Q	4.2	4.7	4.7	5.2	5.2	5.3	5.1	5.0	5.0	5.0	5.0	L	Q	Q				
3					Q	L	L	B	4.5^{J}	(5.0)^{L}	Q	5.3	L	5.1	5.3	4.8	Q	Q	Q	Q				
4					Q	L	L	L	4.9	L	4.8	L	L	5.2	4.9	L	L	C	L	L				
5					Q	L	L	4.8	5.0^{B}	Q	5.0	4.8	4.7	5.2	5.0	L	4.7	4.3	Q	A				
6					Q	Q	L	L	4.8^{B}	5.3	5.1	5.1	5.1	5.5	5.1	4.9	L	L	Q	Q				
7					A	Q	4.5^{J}	Q	5.0	L	5.1	(5.1)^{J}	5.1	5.1^{F}	4.8	A	4.7	Q	Q	Q				
8					Q	Q	Q	Q	A	A	5.3	5.4	5.3	5.3	5.2	5.3	4.7	(4.3)^{J}	L	Q				
9					Q	A	(4.8)^{L}	4.9	5.0	L	5.0^{A}	L	5.4	5.2	4.8	(5.1)^{A}	4.7^{J}	A	A	A				
10					A	Q	(4.4)^{A}	4.7	4.8	A	5.2	5.3	A	5.2	5.1	5.0	4.8	L	A	Q				
11					4.4	Q	L	C	C	C	C	C	C	C	C	C	L	A	A	A				
12					Q	L	Q	L	L	L	5.2	5.2	L	L	5.1	4.9	4.8	L	L	A				
13					Q	L	4.0	L	L	5.1	L	5.0	5.3	5.2	5.1	5.0	Q	A	L	Q				
14					Q	Q	L	4.6	4.8	5.2	5.6	5.2	5.0	A	5.0	5.0	L	Q	Q	L				
15					Q	Q	L	A	L	L	5.0	5.0	5.2	A	A	5.2	5.0	A	Q	Q				
16					A	(4.4)^{J}	L	L	L	A	5.1	5.0	A	5.3	5.3	5.2	5.1	A	Q	Q				
17					Q	L	L	L	4.9	5.1	5.1	5.2^{F}	5.2	5.2	5.1	4.9	4.9	4.4	4.0	A				
18					L	Q	A	A	A	5.0^{J}	L	5.1	5.1	5.1	5.4	4.6	4.7	Q	A	A				
19					L	Q	L	4.7	4.7	5.0	5.1	4.9	5.2	5.1	5.2	5.0	L	A	Q	Q				
20					A	Q	Q	5.1	L	L	5.0	5.3	A	A	A	C	C	A	Q	A				
21					Q	4.8	L	L	A	A	5.2	5.0	(5.0)^{P}	4.8	4.9	4.8	4.4	L	Q	A				
22					Q	Q	Q	Q	A	5.0^{A}	A	5.2^{A}	5.3	5.0	5.0	4.8	5.1	4.6	Q	Q				
23					Q	Q	Q	L	5.0	5.1	L	5.1	5.2	5.4	L	5.0	5.0	(3.8)^{N}	Q	Q				
24					L	L	Q	Q	A	L	L	5.0	5.5	5.3	5.3	L	L	4.9	5.0^{H}	Q				
25					Q	Q	A	A	C	C	C	C	C	C	5.0	4.9	L	A	A	A				
26					Q	Q	C	C	A	5.3	A	5.0	A	5.0	5.0	L	A	A	Q	A				
27					Q	L	5.3	L	L	5.2	4.9	5.0	5.2	A	A	5.2	L	A	L	A				
28					Q	4.3	4.4	A	A	A	A	A	C	5.0	A	5.1	4.6	L	L	L				
29					Q	A	A	L	4.8	4.9	A	5.3	L	5.2	L	A	L	A	A	Q				
30					C	C	4.8^{A}	L	4.9	A	A	5.1^{A}	4.9	5.0^{J}	4.9^{F}	A	4.6	A	A	Q				
31																								
Median Value					—	—	4.4	4.7	4.8	5.1	5.1	5.1	5.2	5.2	5.1	5.0	4.7	4.4	—					
Count					1	3	8^{m}	7	15	14	18	25	19	22	23	21	17	7	3					

foF1

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 4

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F1 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1					Q	Q	Q	A	A	230[A]	230	A	A	A	250	230	230	230	240	Q				
2					310	Q	220	(290)[B]	230	A	A	200	240	270	230	230	240	290	Q	Q				
3					Q	270	260	250	270	200	Q	280	230[B]	290	240[B]	250	Q	Q	Q	Q				
4					Q	290	290	260	250	260	230	220	220	220	220	230	240	[250][C]	260[F]	260				
5					Q	250	250	270	A	Q	(290)[A]	210	240	230	280	210	220	250	Q	A				
6					Q	Q	260	230	280	220	(340)[A]	210	240	230	230	220	250	A	Q	Q				
7					A	Q	280	Q	220	260	230	(300)[A]	220	250[F]	290[B]	A	220	Q	Q	Q				
8					Q	Q	Q	Q	A	A	A	230	230	230	240	250	(350)[F]	A	260	Q				
9					Q	A	300	300	240	A	A	A	A	AF	A	A	300	A	A	A				
10					A	Q	A	250	290	A	A	A	A	(250)[A]	A	290	300	A	A	Q				
11					280	Q	240	C	C	C	C	C	C	C	C	A	A	A	A	A				
12					Q	280	Q	A	270	300[A]	260	A	A	A	300[A]	A	210	230	240	A				
13					Q	270	260	A	290	(320)[A]	A	250	A	240	200	A	Q	A	280[A]	Q				
14					Q	Q	230	240	260	260	(250)[A]	250	270	A	270	A	A	Q	Q	220				
15					Q	Q	220[F]	A	A	270	210	200	210	A	A	A	A	A	Q	Q				
16					A	250[A]	250	A	270[A]	A	280[A]	250	A	260	250	230	310	A	Q	Q				
17					Q	220	220	300	270	290	300[F]	220	270	A	210	250	220	300	280[A]	A				
18					300	Q	A	A	A	A	A	280[A]	250	A	A	200	210	Q	A	A				
19					370	Q	270	280	270	300	300	240	220	230	220	(250)[A]	300	A	Q	Q				
20					A	Q	Q	A	250	A	200	210	A	A	A	C	C	A	Q	A				
21					Q	260	A	A	A	A	A	A	A	230[B]	270	A	A	260	Q	A				
22					Q	Q	Q	Q	A	A	A	A	220	300	430	A	270	A	Q	Q				
23					Q	Q	Q	230	A	260[A]	A	220[A]	A	A	220[A]	200	270	290	Q	Q				
24					270[A]	280	Q	Q	A	A	250	250	220	240	250	250	B	270	290[H]	Q				
25					Q	Q	A	A	C	C	C	C	C	C	270[A]	240	230	A	A	A				
26					Q	Q	C	C	A	220[A]	A	(270)[A]	A	A	A	A	A	A	Q	A				
27					Q	270	270	240	A	240	240	300[A]	240	A	A	240	240	A	A	A				
28					Q	300	260	A	A	A	A	A	C	300[A]	A	A	210	270	A	240				
29					Q	A	A	290	260	240	A	270[A]	A	300	A	A	350	A	250	Q				
30					C	C	A	A	A	A	A	A	A	310	240	A	280	A	A	Q				
31																								
Median Value					300	270	260	260	270	260	250	240	230	250	240	240	240	260	260	—				
Count					5	11	16	13	15	15	14	20	15	17	20	16	21	10	8	3				

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 5

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foE | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1					A	2.3[J]	2.9	2.9	3.5	3.5[A]	3.6	3.8	3.7	3.8	A	3.0	A	2.8	A	A				
2					1.6	2.2	2.7	3.1	3.2	3.5[B]	3.5	3.6	3.6[A]	(3.3)[N]	3.5	3.3	3.2	3.0	2.3	A				
3					(1.5)[A]	2.4	3.0	3.4[F]	3.4	3.5[B]	A	B	B	3.8[J]	A	3.2	3.0	3.0	2.4	1.8				
4					1.6[F]	2.2	2.7	3.1	3.4	A	3.7	A	A	A	A	A	A	C	A	A				
5					1.8[A]	2.4	3.0	3.1	(3.4)[F]	3.7	3.8[H]	A	3.8	3.6	3.8[H]	A	A	2.6	A	A				
6					1.5[H]	2.2[H]	2.8	2.8	A	(3.8)[A]	A	(3.6)[A]	3.6	3.7	3.6[A]	AF	3.4	3.0	A	A				
7					A	2.3[J]	A	3.4	3.3	3.5	3.6	3.5	3.6	3.7	B	A	3.3	3.1	A	1.4[B]				
8					A	2.3[F]	2.9	3.3	3.6	A	3.5	3.5	3.6	A	A	3.2	A	A	2.3[A]	A				
9					A	A	2.7[A]	3.3[H]	3.5	4.0	3.8	3.5	B	A	A	A	A	A	A	A				
10					A	2.3	2.7[B]	3.1	3.3[F]	3.4	3.7[H]	3.6[B]	3.7	3.6	3.4	3.3	3.0	2.8[B]	2.0	1.5				
11					1.6	2.4	A	C	C	C	C	C	C	C	C	C	3.2	2.8	A	A				
12					B	2.3	2.6	3.2[F]	3.5[H]	3.6	3.6	3.6	A	B	A	(3.3)[A]	3.3	2.9	2.3	A				
13					1.5[H]	A	3.0[H]	A	3.4	3.5	3.5	3.5	(3.5)[A]	(3.5)[A]	A	A	A	A	A	A				
14					1.6	2.2	2.5[B]	3.0[B]	3.4	3.6	(3.8)[J]	3.8[H]	3.4	3.4	3.6	3.5[H]	3.0	3.0	2.4	B				
15					A	2.3[F]	2.8[F]	AF	3.3	3.6	3.6	3.7	3.6	3.7	AF	3.1[J]	A	A	A	A				
16					A	A	A	(3.4)[A][H]	A	3.5	A	A	A	A	A	3.4	3.4	2.8	2.5	1.3				
17					A	2.3	2.7	2.8	3.4	3.6[B]	A	3.6	3.7	3.8[B]	3.5	3.4	3.0	2.8	2.5	1.6				
18					1.5	2.0	(2.7)[B]	3.1	3.5	3.6	3.6	A	3.6	3.6	3.6	3.6	3.3	3.2	A	A				
19					A	2.4	2.9	3.5	3.3[F]	3.6	3.5	3.5	3.7	3.8	3.5	3.5	3.2	2.9	2.4	A				
20					1.7[J]	A	2.8	3.1	3.2	3.3[B]	3.6	3.6	3.7	3.4	A	C	C	A	2.5	A				
21					1.6	(2.0)[A]	2.9	3.1	3.4	3.4	3.5	A	A	B	3.4	A	A	3.3	A	A				
22					1.6[H]	2.2	2.9	3.1	3.7	3.5	3.6	3.7	3.7	3.6	3.5	3.4	3.3	3.0	2.4[J]	A				
23					1.5[F]	2.4[F]	2.7	3.0	3.4	3.5	3.6	A	3.6[B]	A	(3.5)[A]	3.6	3.2	3.0	A	A				
24					A	2.4	3.0[F]	3.2	3.3	B	(3.6)[B]	(3.7)[B]	(3.6)[B]	3.5	3.6	3.5	3.5	3.4	2.7[J]	A				
25					(1.5)[F]	A	2.8	3.0	C	C	C	C	C	C	A	A	A	A	2.2	A				
26					A	A	C	C	A	3.6	3.6	3.6	3.6	A	A	A	3.3	2.8	A	A				
27					1.5	2.4	3.2[J]	3.0	3.5	(3.6)[A]	(3.6)[A]	3.6	(3.7)[B]	(3.6)[B]	(3.6)[B]	3.5	3.2[H]	3.2	2.6[J]	2.4[J]				
28					1.5[J]	2.6[J]	3.3	3.4	[3.4][B]	3.4[B]	(3.2)[N]	3.4	C	A	A	A	A	2.8	A	A				
29					A	(2.3)[A]	2.8[F]	3.1[F]	2.8[F]	3.0[H]	3.2	3.3[B]	3.3[B]	3.2	2.9[B]	A	A	A	A	A				
30					C	C	2.2[J]	2.6[F]	2.6	A	B	3.2	A	3.5	3.5	3.3	3.2	3.0	A	AF				
31																								
Median Value					1.6	2.3	2.8	3.1	3.4	3.5	3.6	3.6	3.6	3.6	3.5	3.4	3.2	3.0	2.4	1.6				
Count					16	23	26	26	25	24	23	21	20	19	15	17	18	22	14	6				

foE

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'E | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1					A	110	110	110	100	100	110	110	100	120	A	110	A	100	A	A				
2					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	A				
3					A	100	100	100	100	100	100[A]	100	110	110	A	100	100	100	100	100				
4					110	110	100	100	100	A	100	A	A	A	A	A	100	C	A	A				
5					110	110	100	110	100	100	100[H]	100	100	100	100[H]	A	A	100	A	A				
6					100[H]	120[H]	110	100	100	100	100	100	100	100	100	100	100	100	100	100[A]				
7					A	110	A	110	100	100	100	100	100	110	100	A	100	100	A	110				
8					A	100	100	110	100	A	100	100	100	A	A	100	110	A	A	A				
9					A	A	130	120[H]	100	100	100	110	100	100	A	A	A	A	A	A				
10					A	110[H]	110	110	100	110	100[H]	100	100	100	100	100	100	100	110	110				
11					100	100	A	C	C	C	C	C	C	C	C	C	100	110	A	A				
12					B	110	100	100	110[H]	100	100	100	A	100	100[A]	100	100	100	100	A				
13					100[H]	100	100[H]	100	110	110	110	110	100[A]	100	A	A	A	A	A	A				
14					100	100	100	110	100	100	100	100[H]	100	100	100	100[H]	110	100	100	120				
15					A	110	100	A	100	100	100	100	100	100	A	100	A	A	A	A				
16					A	A	A	100[H]	A	100	A	A	A	A	A	100	100	100	100	100				
17					A	100	100	120	100	110	110	110	110	110	110	110	100	110	110	100				
18					100	110	100	100	100	100	100	A	100	100	100	100	100	100	A	A				
19					A	120	100	100	100	100	100	100	100	100	100	100	110	110	110	A				
20					120	A	110	100	110	100	100	100	100	100	100	C	C	100	110	A				
21					120	A	110	110	100	100	100	A	A	140	100	A	A	100	A	A				
22					100[H]	110	100	100	100	100	100	100	100	100	100	100	100	100	100	A				
23					110	110	100	100	100	100	100	A	100	A	100	100	100	110	A	A				
24					A	100	100	100	100	100	100	110	110	110	100	100	100	100	100	A				
25					100[F]	A	100	100	C	C	C	C	C	C	A	A	A	A	100	A				
26					A	A	C	C	A	100	100	100	100	A	A	A	100	100	A	A				
27					100	100	100	100	100	100	100	100	100	100	100	100	100[H]	110	120	100				
28					110	110	120	100	[100][B]	100	100	100	C	A	A	A	A	100	A	A				
29					A	(150)[A]	140	110	110	110[H]	100	100	100	110	100	A	A	A	A	A				
30					C	C	110	110	100	A	100	100	A	110	110	110	100	130	A	AF				
31																								
Median Value					100	110	100	100	100	100	100	100	100	100	100	100	100	100	100	100				
Count					15	23	26	27	26	25	27	23	22	22	18	18	20	23	14	8				

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 7

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fEs | 135° E Mean Time | **Wakkanai** | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	3.0	3.0	3.0	2.7	G	6.0	5.4	5.8	4.3	G	7.6	5.8	6.0	6.2	5.7	4.3	3.8	5.0^{Y}	2.6	4.4	3.8	2.2	2.1
2	G	G	2.2	2.2	G	3.0^{Y}	G	5.0^{Y}	4.5	5.0	5.5	5.0	4.8	4.3	4.6^{Y}	G	G	G	3.8^{Y}	3.7	3.3	3.2	2.7	2.6
3	4.6	4.8	4.4	3.6	3.2	3.8	G	5.6^{Y}	5.8	5.5^{Y}	5.7	5.4^{Y}	B	B	3.9	G	G	G	G	G	3.3	3.8^{B}	2.4	3.5
4	2.2	2.2	2.7	2.8^{Y}	3.3^{F}	G	4.2	4.4	4.4^{Y}	5.8	G	7.1	4.1	4.4	4.2	4.3	5.0	C	5.0	5.6	3.4	3.2	3.2	4.2
5	3.8	2.4	3.0	2.6	G	3.5^{B}	5.6	4.4	4.4	6.9	5.2	4.1	4.8	4.6^{Y}	G	4.6	4.4	4.4	7.8	5.2	4.4	G	G	G
6	G	G	G	G	G	3.5	G	5.8^{Y}	4.8	5.0	7.4^{Y}	5.2	5.4	5.4	6.7	G	G	5.8^{Y}	4.8	4.6	4.8	5.2	3.2^{BY}	2.0
7	G	4.7	5.2	6.4	5.7	4.4	6.3	4.6^{BY}	5.3	5.4	5.8	5.6	5.4	G	G	7.5	4.4	G	4.4	4.4^{Y}	4.4	5.0	4.4	5.0
8	4.0	3.4	4.6	3.4	3.6	4.0	5.8	8.2	6.8	9.0	6.2	5.4	5.1	4.6	4.4	4.8	5.8	5.0	4.0	5.3	4.6	4.6	4.7	4.4
9	3.0	4.3^{BY}	G	G	2.2	4.1	3.8	G	5.0^{Y}	7.8$^{BY}_{F}$	8.8$^{BY}_{F}$	5.6	7.6$^{BY}_{F}$	8.8$^{BY}_{F}$	9.0$^{BY}_{F}$	8.6$^{BY}_{F}$	6.3	7.8	8.3	5.2	5.8	3.4	5.8	3.8
10	3.4	4.4	3.1	5.2	3.5	4.7	5.5^{Y}	(5.2)^{B}	5.8	7.4^{Y}	9.1	5.0^{Y}	10.0	6.5	6.0	G	5.2	8.6	9.0	3.6	2.4^{Y}	5.2	3.6	6.6
11	3.7	3.6	4.2	3.4	G	G	4.4	C	C	C	C	C	C	C	C	C	5.0	7.8	6.6	6.5	5.0	4.7	4.4	3.0
12	4.0	3.6	3.2	2.0	G	4.4	4.8	6.4	G	5.1	5.0	6.2^{Y}	5.7	4.7^{Y}	5.9^{BY}	5.2	G	G	4.5^{Y}	6.8	7.4	4.1	5.2	2.4
13	3.6	2.5	3.2	2.4	3.0	3.4^{B}	B	5.6	5.4	6.6	6.6	5.0	6.6	4.8	4.0	5.3	5.4	5.3	4.4	4.7	4.8	3.0	5.8	4.4
14	2.2	6.5	4.7	4.9	5.0	4.6^{Y}	4.8^{Y}	5.3^{Y}	5.4	9.0^{B}	G	G	5.8	7.8^{Y}	5.5^{Y}	7.4	5.8^{B}	4.3	G	3.6^{Y}	5.6^{B}	2.9	(5.6)^{B}	3.5
15	3.6	3.1	3.5	4.0	2.6	3.3$^{Y}_{F}$	4.4$^{Y}_{F}$	6.0	7.8	6.5	9.4	8.0	9.4	8.8	13.4	6.8	7.2	8.8	9.4	4.8	4.4	7.8	6.5	6.4
16	6.5	6.0	6.5	4.6$^{B}_{F}$	4.8^{Y}	5.3	4.7	6.4	6.6	7.1	6.8	4.4	9.6	4.5	4.7	4.3	6.2	7.8	8.2	4.8	3.4	3.4	1.4	1.4
17	G	G	2.2	B	1.3	G	G	G	5.5	6.0	G	4.9	G	G	G	4.6^{Y}	5.7	4.2	4.8	7.8	6.8	6.8	2.6	3.8
18	3.6	3.3	4.3	3.3	G	5.3	5.1	6.0	7.5	6.0	6.3	5.5	G	6.4^{Y}	6.3	4.6	4.2	G	4.8	6.0	4.8	3.6^{B}	6.8	3.6
19	4.2	3.4	2.2	3.4	3.0	3.1	G	4.5	5.8	5.6	6.5	G	G	G	G	G	G	5.4	5.2	3.7	B	2.9	2.2	4.8
20	6.0	5.7	5.2	5.8	4.5	3.2	5.2	5.0	6.9^{Y}	7.2^{Y}	5.7	8.7	8.1	6.3	6.1	C	C	7.4	7.8	8.8	7.0	4.2	3.8	2.5
21	3.4	G	G	2.5	2.2^{Y}	3.8	5.5	5.2	7.6	8.8	8.0	8.2	8.0	B	5.8	4.6	4.8	G	4.1	7.6	6.3	4.2	2.4	3.8
22	3.1	3.4	3.6	G	G	(3.5)^{Y}	G	5.2	5.7^{Y}	6.4	7.0	6.7	4.5	5.7	6.2	6.3	5.8	7.4	5.0^{B}	3.5	4.6	5.4	2.2	2.2
23	G	2.2	3.6	4.2	2.8	3.6	4.6	4.2	6.5^{Y}	6.5	8.6	5.5	9.6^{BY}	9.8	4.8	4.8^{Y}	4.8^{Y}	5.5^{Y}	5.4	3.7	5.1	3.8	3.0	3.1
24	5.0	5.4	5.0	4.0	3.6	G	G	4.8^{Y}	6.1	5.0^{Y}	G	G	5.0^{Y}	5.0^{Y}	5.5	G	G	G	3.9^{Y}	2.7	G	1.9	3.4	4.3
25	2.6	G	3.0^{Y}	G	3.4	5.3	8.4	8.3	C	C	C	C	C	C	5.6	3.6	8.4	7.8	7.8	8.3	7.4	5.6	5.1	5.4
26	4.4	3.5	6.0	2.5	3.2	3.7	C	C	7.3	7.8^{Y}	8.5^{Y}	7.8	9.1	7.2	4.4	8.5	7.8	6.0	4.4	7.1	8.4	9.1	8.5	C
27	7.0^{F}	5.5	3.0	2.8	2.4^{Y}	G	G	G	5.6	7.8	5.0	G	7.0^{Y}	8.8	8.2^{Y}	5.0	G	5.8	4.0	5.3	8.9	5.4	5.4	6.0
28	6.2^{F}	5.7^{F}	7.8	5.0	G	G	G	9.4	7.4	8.2	8.8	7.6	C	5.7	D	6.4	5.5	4.0	8.2^{Y}	4.8	6.4	6.2	5.2	2.8
29	1.8	2.0	3.0	3.4	3.4	5.3	5.8	4.4	4.4	4.2^{Y}	5.0^{Y}	4.7^{Y}	5.7^{BY}	4.6^{Y}	5.5^{B}	6.6	5.9	7.6	8.2	6.2	5.8	7.4	5.6	5.6
30	5.8	4.4	4.5	4.4	C	C	5.2	4.8^{Y}	6.0	7.6	8.0^{Y}	9.2	5.9	6.2^{Y}	G	8.1	4.2	6.5$^{B}_{F}$	5.9	5.1	5.7	5.0	4.5	5.4^{BF}
31																								
Median Value	3.6	3.4	3.4	3.4	2.8	3.5	4.6	5.2	5.8	6.5	6.2	5.4	5.8	5.6	5.5	4.8	5.0	5.4	5.0	5.0	4.8	4.2	4.1	3.8
Count	30	30	30	29	29	29	28	28	28	28	28	28	26	26	29	28	29	29	30	30	29	30	30	29

fEs

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 8

11

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | (M3000)F2 | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.5F	2.4V	2.6FV	2.7H	2.7H	2.7H	2.9	3.1	3.0	2.8	2.6	2.6	2.7	2.8	2.6	2.7	2.6P	2.8	2.8	2.7	2.6	(2.5)J	2.6P	2.6P
2	2.6	2.5	2.5H	2.4H	2.6	2.9K	2.7K	2.9K	3.0K	(2.6)JK	2.7K	2.5K	2.4K	2.8P	2.7	2.6	2.6	2.9	2.7	2.7	2.5	2.7	2.7	2.4
3	2.4V	2.5V	2.6PV	2.4	2.5	2.8	2.7P	(3.1)B	3.1	3.1	2.9	2.8	2.8	2.7	2.6	2.9	2.7H	2.8H	2.9H	(2.6)PS	2.8H	2.6	2.4	2.5H
4	2.6H	2.6P	2.4	2.6	2.5	2.5	2.6	2.9	2.6	2.7Z	2.6	2.8	2.8	2.8	2.6	2.7	2.7	[2.8]C	2.9	2.8	2.9	2.6	2.7	2.7
5	2.8	2.8	2.8P	2.9	2.8	2.6	2.7	2.8	2.9	2.7	2.8	2.8	2.7	2.8	2.7	2.8H	2.7	2.7	(2.9)PS	2.8P	2.8	2.9H	(2.6)P	(2.6)P
6	2.6P	2.7	2.6	2.7	2.6H	2.8	2.8	2.9F	3.0	3.1	2.7	2.8	2.7	2.7	2.6	2.6	2.6	2.8	3.0	2.8	2.6	(2.7)P	2.5P	2.6
7	2.7	2.7	2.7	2.7	2.6	2.8	2.6	2.7	2.9	3.0	2.9H	2.8	2.9	2.6	2.6	2.6	2.8	2.8	(3.1)B	2.7	2.9	2.9	2.8	2.8
8	2.8	2.7	2.9	2.9	2.8	2.6	2.7	2.8	2.8	A	2.8	2.6	2.5	2.4	2.7	2.7	2.6	3.0	3.0	2.8	2.7	2.5V	2.6	2.5H
9	(2.4)P	2.4H	2.7H	2.7	2.7H	2.5	2.4H	2.8	2.8	2.7F	2.5	2.5	2.5	2.4	2.7	(2.6)P	2.7H	(2.9)PS	A	2.9	(2.7)P	2.7H	2.5	2.4H
10	2.6	2.6	2.8	2.6	2.6	2.4F	2.6F	2.8Z	2.6F	2.7F	2.7	2.6	A	2.5	2.5	2.6	2.8	2.4	S	2.7	2.5	2.8	(2.8)JPS	(2.9)PB
11	2.8	2.8	2.7	2.7	2.6	2.8	2.7	C	C	C	C	C	C	C	C	C	2.6	2.6	2.8	3.0	2.6	2.7	2.6	2.6
12	2.6	2.6	2.6	2.6	2.8	2.7	2.8	2.9	3.1	2.9PS	2.8	3.0	2.8	2.7	2.8	2.8	2.7	2.8P	2.9	2.8	A	(2.7)P	2.7	2.6
13	2.7	2.7	2.6F	2.6	2.6F	2.5F	2.7	3.0	2.7	2.7	2.6	2.6	2.6	2.7	2.7	2.6	2.7	2.8	2.8	(2.9)P	(2.9)P	(2.8)PS	(2.5)FH	2.7
14	2.6P	2.6	2.7	2.8	2.9	3.1	2.8	3.1V	3.0	2.9	2.7	2.9	2.7	A	2.9	2.9	2.9S	2.8PS	(2.8)JH	3.0	(2.9)PS	2.5	2.5H	3.0H
15	2.5	2.7H	2.5	2.7	2.7	2.8	2.8	2.9	2.8	3.0	3.0	2.8	2.9	2.6	A	2.8	2.9	A	(2.8)P	(2.9)P	(2.9)P	A	2.6P	2.8
16	2.4P	2.6P	(3.1)F	2.5H	2.5	2.9	3.0	2.9	3.0	2.8	2.7	2.7	A	2.6	2.7	2.6	2.9	2.6	2.7	2.6	2.9	2.7	2.8	2.7
17	2.6H	2.7H	2.7	2.5	2.5H	2.7	2.6	2.5	(2.7)J	2.8	2.6	2.4	2.6	2.7	2.7	2.6	2.6	2.7H	2.9	2.8A	3.0	2.5	2.6H	2.8
18	2.7	2.6P	2.6P	2.5	2.6	2.9Z	(2.5)P	2.5Z	2.9	2.5	2.6	2.6	2.5	2.6	2.7	2.7	2.9	3.0	3.0	3.1	3.0H	2.7	3.0	3.0
19	2.8	2.7	2.7H	2.5H	2.7	2.6	2.7	2.8	2.8	3.1	3.0	2.8	2.6	2.7	2.6	2.6	2.5	2.7	2.8	(2.7)J	2.8	(2.6)F	2.7	2.6
20	2.6H	2.6H	2.5	2.6	2.5	2.4	2.5	2.6H	2.9H	3.0	3.0	2.7	2.6	2.6H	2.7	C	C	2.6H	(2.9)JPS	A	2.8	(2.8)JPS	2.8	2.7
21	2.7	2.8	2.8	2.8	2.9	2.8	2.7	2.8	2.8	A	2.7	A	2.5F	2.5	(2.6)P	2.7	2.8	2.8	2.9	A	2.8	3.0	2.9	2.8
22	2.8	2.8ZH	2.7P	2.3Z	2.7F	2.5F	2.5F	2.8FK	AK	AK	AK	2.7K	GK	2.6K	AK	2.5K	2.8K	2.7K	2.7	2.8H	2.9H	2.6	2.7F	2.5F
23	2.7F	2.6H	2.5	2.6F	2.7	2.8	2.6H	3.0	3.1	3.0	2.9	2.7	2.8	2.6	2.7	2.9	2.8	2.6	2.8H	2.6H	2.8	S	S	2.8
24	2.6H	2.7ZF	(2.6)VF	2.6F	2.6	2.6H	2.8H	2.8HF	2.5	2.9	(2.6)J	(2.7)PB	2.7	2.9	2.9	2.8	(2.5)PF	2.7PS	(2.6)JPS	(3.1)JH	2.6	2.6H	2.8H	2.6
25	(2.6)JH	2.8	2.7	2.6H	2.9	2.8H	A	B	C	C	C	C	C	C	2.7	2.7	2.9	A	2.9	A	2.7	2.7	(2.7)P	(2.7)JP
26	2.6HF	2.7H	2.8H	2.7H	2.5H	2.5H	C	C	AK	2.4K	(2.9)JK	2.3K	AK	(2.5)JK	(2.5)BK	2.9K	AK	2.8	2.8	(2.5)B	A	A	(2.7)JF	[2.6]C
27	(2.6)JF	2.6	(2.5)FH	(2.7)JF	(2.6)JF	2.5	(2.7)JP	3.1	2.8	3.1	2.5	2.7	2.8	A	A	2.7	2.9	2.7P	2.7H	2.9	A	2.7P	2.6P	2.8
28	2.5F	2.6F	(2.7)PF	2.6	2.6H	2.7	2.6	A	A	A	A	A	C	(2.5)S	A	3.5	2.8	2.7	3.1	3.1PS	3.3	2.9	3.0	2.6
29	2.6	2.6H	2.7	2.8	2.5	2.7	2.8	3.0	2.7	2.9	2.9	2.7	2.8	2.7PS	2.9	2.9	2.7	2.8	2.9	2.9	2.9	2.6Z	(2.7)ZF	(2.8)ZF
30	2.6Z	2.5	2.6H	2.5H	C	C	2.7K	2.6K	2.3KSF	AK	AK	2.4BK	2.5K	2.5KH	2.6KF	AK	2.7KF	2.7K	2.6K	2.7K	2.5K	2.5K	2.9K	2.7K
31																								
Median Value	2.6	2.6	2.7	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.7	2.7	2.7
Count	30	30	30	30	29	29	28	26	25	23	25	26	24	26	25	27	28	28	28	27	27	27	29	30

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 9

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fminF | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.1	1.1	E	1.7	A	3.0	3.0	A	A	4.3	4.2	A	A	A	3.9	3.6	3.3	2.9	2.6	2.3	A	A	1.3	E
2	E	E	E	E	1.6	2.8	3.0	4.1	4.0	A	A	4.4	4.0	A	3.7	3.5	3.2	3.2	2.4	1.7	A	A	1.3	1.4
3	A	A	A	A	1.5	2.6	3.1	3.6	4.0	4.0	A	4.2	4.2	4.5	4.3	3.7	3.1	3.0	2.4	1.8	1.3	A	1.5	1.4
4	E	E	E	E	1.6[F]	2.2	2.7	3.4	3.8	3.7	4.0	3.9	3.9	3.8	3.7	3.4	A	C	N	2.0	1.8	1.7	1.4	1.4
5	1.8	E	E	1.4	1.8	2.5	3.2	3.3	5.0	A	(4.7)[A]	4.2	4.1	3.7	3.8	3.8	3.4	2.6	A	A	A	E	E	E
6	E	E	E	E	1.5	2.6	3.6	4.1	3.6	3.8	A	4.0	4.0	3.9	3.8	3.7	3.4	A	A	A	A	A	A	1.4
7	E	E	A	A	A	4.4	3.7	4.3	3.9	3.8	4.4	A	4.5	3.9[F]	4.0	A	3.6	3.1	A	1.6	E	A	E	A
8	A	A	1.5	1.8	1.3	2.3	3.3	4.0	A	A	A	4.3	3.9	4.1	4.3	3.8	AF	A	2.3	A	A	A	A	A
9	1.5	1.2	E	1.2	1.3	A	3.0	3.3	3.6	A	A	A	A	A	A	A	A	A	A	A	A	1.3	A	E
10	E	(1.9)[A]	1.5	E	A	2.3	A	3.4	3.7	A	A	A	A	(4.3)[A]	A	4.2	3.3	A	A	1.6	1.4	A	A	A
11	A	A	A	A	1.8	2.5	3.7	C	C	C	C	C	C	C	C	C	A	A	A	A	A	A	A	1.6
12	1.8[A]	1.6	1.2	E	1.7	2.3	3.0	A	3.8	4.3[A]	4.0	A	A	A	A	A	3.5	2.9	2.4	A	A	A	A	1.3
13	A	E	E	E	1.8	2.5	3.0	A	A	A	A	4.2	A	3.9	3.9	A	(3.7)[A]	A	3.3[A]	A	A	A	1.6	A
14	1.1	A	A	A	1.8	2.3	3.1	3.0	3.4	4.0	4.6[A]	4.2	4.2	A	4.4	A	A	A	2.6	2.0	A	E	A	A
15	1.1	1.2	1.1	1.1	A	2.4	2.9[F]	A	A	4.0	4.0	3.8	3.8	A	A	A	A	A	2.8	A	A	A	A	A
16	A	A	A	A	A	A	A	A	A	A	4.4[A]	4.3	A	4.2	4.2	3.8	4.3	A	3.0[F]	2.0	A	1.5	1.1	1.2
17	E	E	E	E	1.1	2.3	2.8	2.8	3.8	4.3	4.2[F]	4.2	4.2	A	3.8	3.6	3.8	3.2	A	A	A	1.4	1.6	A
18	1.8	E	E	A	1.7	2.2	A	A	A	A	A	(4.6)[A]	4.0	A	A	4.0	3.3	3.6	A	A	A	A	A	A
19	A	A	1.4	E	1.8	2.6	3.4	3.6	2.7	3.5	4.6[A]	3.7	3.8	3.8	3.7	3.8[A]	3.4	A	2.4	1.7	1.2	A	E	A
20	1.2[A]	1.2[A]	1.2[A]	1.1[A]	A	N	A	A	3.9	A	4.1	4.2	A	A	A	C	C	A	2.7	A	A	1.6	A	1.7
21	1.3	1.2	1.1	1.1	2.1	2.7	A	A	A	A	A	A	A	4.2	4.2	A	A	3.5	2.8	A	A	A	3.6	A
22	E	E	A	E	1.7	2.2	2.9	3.3	A	A	A	A	4.3	4.5	4.0	A	A	A	3.2[A]	1.7	1.4	A	1.7	1.7
23	E	E	AF	A	1.5	2.5[F]	2.8	3.2	A	4.4	A	4.4[A]	A	A	4.2	4.0	N	N	A	4.0	A	A	A	1.6
24	1.2	AF	A	A	1.6[A]	2.6	3.2	3.8	A	A	4.1	4.3	4.1	4.1	4.4	3.7	4.6	N	3.3	2.3	1.4	2.2	1.2	1.8
25	A	E	E	E	2.1	2.3	A	A	C	C	C	C	C	C	4.3	3.4	2.8	A	A	A	A	A	A	A
26	A	1.8	A	1.8	1.6	A	C	C	A	4.0	A	4.4	A	A	A	A	A	A	A	A	A	A	A	C
27	A	A	A	E	1.7	N	3.9	3.0[B]	A	4.2	4.2	4.5	4.3	A	A	4.2	3.4	A	A	A	A	A	A	A
28	AF	A	A	A	3.0	3.4	3.3	A	A	A	A	A	C	A	A	3.6	2.6[A]	3.3	A	A	A	A	AF	1.5
29	1.1	1.3	1.5	1.5	2.0	A	A	4.0	A	A	A	A	A	A	A	A	3.3	A	2.7	A	A	A	A	A
30	A	A	A	1.5	C	C	A	A	A	A	A	A	A	A	4.0	A	3.5	A	A	A	A	A	A	A
31																								
Median Value	1.1	E	E	E	1.7	2.5	3.1	3.4	3.8	4.0	4.2	4.2	4.1	4.1	4.0	3.7	3.4	3.2	2.7	1.9	1.4	1.4	1.3	1.4
Count	19	20	18	21	23	23	21	17	13	13	13	18	15	13	19	17	19	10	15	12	7	8	13	15

fminF

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 10

13

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fminE | 135° E Mean Time | Wakkanai | Lat. 45° 23.6' N | Long. 141° 41.1' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	E	E	E	E	E	1.4	1.1	1.1	1.1	1.3	1.2	1.1	1.2	1.2	1.2	1.2	1.3	1.2	E	E	E	E	E	E
2	E	E	E	E	E	E	E	1.3	1.6	1.4	1.4	1.5	1.4	1.4	1.4	1.4	1.2	1.2	1.1	E	E	E	E	E
3	E	E	E	E	E	E	E	E	1.3	1.4	1.2	1.3	1.4	1.5	1.3	1.4	1.2	1.1	1.1	1.2	E	E	E	1.1
4	E	1.8	1.9	E	E	E	E	1.2	1.2	1.4	1.4	1.5	1.5	1.7	1.7	1.3	1.1	C	E	E	E	1.1	1.1	E
5	E	E	E	E	E	E	E	1.4	1.3	1.2	1.1	1.1	1.2	1.5	1.7	1.3	1.2	1.2	E	1.2	E	E	E	E
6	E	E	E	E	1.1	1.2	E	1.3	E	1.2	1.3	1.4	1.3	1.4	1.3	1.3	E	E	E	1.1	E	E	E	E
7	E	E	E	E	E	1.2	1.3	1.4	1.2	1.3	1.4	1.5	1.4	1.5	1.4	1.4	1.4	1.1	E	E	E	E	E	E
8	E	E	E	E	E	E	1.1	1.2	1.3	1.3	1.6	1.6	1.7	1.7	1.7	1.4	1.1	E	E	1.4	1.1	1.1	1.3	1.5
9	1.1	E	E	E	E	E	E	1.1	E	E	E	2.0	1.4	1.5	E	E	1.4	E	E	E	E	E	E	E
10	E	E	E	E	E	E	E	1.3	1.1	1.2	1.4	1.3	1.3	1.5	1.2	1.4	1.2	E	E	E	E	E	E	E
11	E	E	E	E	E	1.2	1.3	C	C	C	C	C	C	C	C	C	1.2	E	E	E	E	E	E	E
12	E	E	E	E	B	E	1.1	1.1	1.2	1.1	E	1.1	1.1	E	E	1.1	1.1	1.1	E	E	E	E	E	E
13	E	E	E	E	E	E	E	E	1.4	1.4	1.5	1.4	1.4	1.5	1.7	1.4	1.2	1.2	1.2	1.2	1.2	1.2	E	E
14	1.1	1.1	E	E	E	E	E	E	E	E	E	1.2	E	E	E	E	1.1	1.1	1.1	1.1	E	E	1.1[B]	E
15	1.1	1.2	1.1	1.1	1.2	E	1.1	1.2	1.3	1.3	1.2	1.2	1.6	1.4	1.2	1.3	1.2	1.2	1.1	1.1	E	E	E	E
16	E	E	E	E	E	E	E	E	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.3	1.1	1.1	E	E	1.1	E	E
17	E	E	E	E	E	E	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.1	1.3	1.3	E	E	E	E	1.1	E
18	E	E	E	E	E	E	E	E	1.2	1.2	1.2	1.4	1.3	1.3	1.2	E	E	E	E	E	E	E	E	E
19	E	E	E	E	E	E	1.2	1.3	1.3	1.4	1.1	1.3	1.3	1.2	1.2	1.2	1.4	E	1.2	1.4	E	1.3	1.9	E
20	1.2	1.2	1.2	1.1	1.1	1.3	1.2	1.3	E	E	1.2	1.2	1.4	1.6	1.5	C	C	1.1	1.1	1.1	1.1	1.1	1.1	1.1
21	1.2	E	E	1.3	1.2	1.4	1.4	1.4	E	2.3	1.6	1.2	E	1.6	1.4	1.2	1.1	1.1	E	E	E	E	1.4	E
22	E	E	E	E	E	E	1.2	1.3	1.3	1.3	1.4	1.4	1.3	1.4	1.4	1.3	1.2	E	1.3	1.2	1.1	E	E	E
23	E	E	E	1.1	E	E	1.1	1.1	1.2	1.2	1.3	1.2	1.2	1.4	1.6	1.2	1.1	1.1	E	1.2	1.1	1.1	1.1	1.2
24	1.2	E	E	E	E	E	E	E	1.1	1.3	1.3	1.5	1.6	1.5	1.2	1.2	1.3	1.3	1.3	1.3	B	1.3	1.4	1.4
25	E	E	E	E	E	E	E	E	C	C	C	C	C	C	1.2	1.2	1.2	1.2	1.2	1.2	E	E	E	E
26	E	E	E	E	E	E	E	C	E	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.5	1.1	1.2	1.4	[1.3][C]
27	1.2	E	E	E	E	1.1	E	1.4	1.6	1.4	1.6	1.8	1.8	1.7	2.0	1.5	1.2	1.3	1.3	1.1	1.1	1.2	1.3	1.3
28	E	E	E	E	E	E	E	E	3.8	1.2	E	1.3	[1.4][C]	1.5	1.4	1.2	1.4	1.1	1.1	1.1	1.1	1.1	1.2	1.2
29	1.1	E	E	E	1.4	1.4	1.6	1.2	1.3	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.2	1.6	E	E	E	1.5	E
30	E	1.1	1.1	1.2	C	C	1.2	1.2	1.5	1.5	2.0	1.2	2.0	2.0	1.7	1.5	1.6	1.4	1.1	E	1.5	1.4	1.3	1.3
31																								
Median Value																								
Count																								

Sweep 1.0 Mc to 14.0 Mc in 15 min Manual

W 11

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF2 | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7.5	7.6	7.6	7.6	8.0	7.7	7.7	7.7	8.3	c	c	c	c	9.3	9.3	9.0	9.4	8.9	9.0	9.2	9.6	9.1	9.1	7.7
2	7.4	7.2	6.9	6.7	6.7	5.9	5.7	6.5	6.3	6.9	6.7	6.8	[7.8]	9.4	9.4	9.5	8.9	8.3	7.1	6.8	7.5	7.8	7.6	7.4
3	6.8	6.2	6.6	6.4	6.7	9.6	10.1	7.6	7.8	7.6	8.0	9.0	9.2	9.5	9.6	10.4	9.6	7.9	8.6	9.0	9.1	8.3	8.8	9.2
4	9.3	9.1	8.2	(7.4)	7.1	7.6	8.9	9.0	8.4	7.8	8.4	8.5	9.2	9.2	10.5	10.5	9.9	9.4	8.3	7.5	7.9	7.9	7.5	8.8
5	7.9	7.5	7.5	7.2	6.8	7.5	8.2	8.5	8.4	7.7	A	7.7	8.3	8.6	8.7	8.8	8.5	9.2	9.4	9.6	8.4	8.3	9.1	(8.1)
6	9.2	8.4	8.0	7.0	6.4	7.6	8.3	8.0	A	7.7	8.3	8.4	7.9	8.1	8.4	8.5	[8.6]	8.7	AF	S	S	7.9	7.9	7.0
7	7.7	7.6	(7.6)	6.2	6.0	7.2	9.0	9.6	9.2	9.3	8.7	8.0	8.0	8.8	9.2	9.8	9.5	9.8	9.5	9.2	8.6	9.0	8.9	9.6
8	8.7	8.0	8.2	6.6	6.0	6.1	8.4	7.8	8.7	8.6	A	A	8.6	9.1	9.8	10.2	10.2	9.8	9.8	8.7	8.1	8.6	8.7	8.2
9	9.0	F	7.1	7.0	6.2	5.8	6.8	7.3	7.5	A	A	A	8.3	9.3	9.4	9.5	A	A	8.3	8.0	8.4	8.4	8.3	8.1
10	8.6	8.8	8.2	7.1	6.4	6.4	8.5	8.8	A	6.6	7.7	7.7	8.2	8.6	9.4	10.1	9.9	A	A	A	8.5	8.9	8.7	8.5
11	7.6	6.9	7.0	7.0	7.1	8.2	7.8	8.8	7.8	6.9	7.0	7.5	7.7	8.0	8.8	8.4	8.4	8.1	A	A	(8.9)	8.4	7.9	8.2
12	8.0	7.4	6.9	6.7	6.5	7.3	8.5	8.4	7.8	7.3	7.2	7.4	8.2	8.1	8.2	8.8	8.7	8.5	A	8.0	8.1	8.5	9.0	8.5
13	8.9	9.1	7.7	7.0	6.8	7.2	8.2	8.8	8.8	8.0	7.5	7.6	A	9.0	9.1	9.4	9.4	9.2	8.9	9.0	8.1	8.2	8.6	9.4
14	8.7	F	8.6	(8.0)	8.0	8.3	8.4	8.5	8.5	8.1	7.3	7.6	7.5	A	7.8	8.1	9.2	9.4	9.1	A	7.8	8.3	8.8	8.2
15	8.2	(7.9)	7.4	F	F	(8.0)	8.2	9.2	9.0	8.2	8.0	A	8.0	8.2	8.2	A	9.0	A	9.4	9.2	9.4	8.9	8.5	7.9
16	8.2	8.8	9.1	9.0	8.0	7.3	8.0	9.1	8.9	A	7.5	7.6	7.9	8.9	9.3	9.1	9.2	9.2	9.1	B	A	(8.6)	8.1	8.1
17	7.8	8.2	7.7	6.9	6.8	7.4	8.7	10.0	8.2	8.0	7.0	7.3	8.4	8.6	8.2	8.2	8.4	9.5	8.7	8.2	6.9	7.4	7.2	7.5
18	6.8	6.4	5.8	5.7	5.4	6.9	7.2	8.4	C	B	B	7.4	7.7	[8.0]	8.2	8.1	7.7	7.5	7.6	7.8	8.0	S	8.2	7.5
19	(6.6)	7.1	6.5	6.5	6.6	6.9	7.4	9.3	10.4	10.1	7.4	(6.5)	8.1	8.8	9.3	9.2	9.1	8.4	8.2	8.7	7.9	8.7	F	F
20	8.1	7.2	7.4	C	F	7.8	8.8	9.9	9.1	8.2	8.0	A	A	B	7.7	A	9.4	A	8.8	8.5	8.5	8.8	F	F
21	F	F	F	7.1	7.4	(6.8)	7.2	8.7	9.0	8.6	A	A	A	A	7.2	7.2	7.3	7.4	7.2	6.9	7.2	A	7.8	7.1
22	(6.8)	6.6	5.6	(5.7)	(5.7)	7.3	7.3	7.2	A	6.9	6.4	6.9	7.0	7.3	7.5	7.1	7.2	A	7.4	8.0	8.4	7.1	7.6	7.5
23	7.2	(7.7)	6.2	(6.3)	6.1	7.1	7.5	8.2	8.0	8.1	8.8	7.7	8.4	7.6	7.9	8.0	8.3	8.4	8.5	8.0	8.0	7.8	8.1	8.3
24	7.9	8.0	7.1	7.1	7.1	6.8	8.1	8.5	8.2	8.8	7.8	9.7	8.8	8.8	8.9	8.8	A	9.4	9.2	10.2	8.5	8.6	(8.9)	(8.5)
25	(8.4)	(9.0)	7.3	7.0	7.0	5.8	6.4	6.1	9.8	A	A	A	6.7	A	A	A	A	6.9	7.2	7.0	7.8	8.0	(9.9)	(9.3)
26	(8.2)	8.2	7.7	6.6	6.1	6.8	7.9	7.8	A	6.0	6.2	6.4	6.9	7.0	8.0	7.4	7.0	7.3	7.1	7.5	8.5	7.6	AF	(8.7)
27	7.7	7.8	6.9	7.0	6.8	7.0	8.4	7.2	6.8	A	A	7.0	6.9	8.0	8.0	8.3	8.4	8.9	9.0	8.6	8.3	7.7	8.0	8.2
28	8.1	7.8	7.6	7.9	6.9	7.8	8.5	9.2	9.5	7.0	A	A	8.2	A	8.0	8.6	8.7	8.5	8.9	8.4	(7.1)	F	B	A
29	F	7.3	6.6	(6.8)	6.2	7.2	8.8	8.4	A	6.9	6.4	A	A	8.2	8.7	9.1	8.9	8.6	8.7	9.0	8.4	7.7	F	F
30	F	(8.3)	6.8	5.7	5.1	6.3	7.5	8.1	7.4	A	7.2	8.0	A	9.9	9.0	8.5	7.8	9.1	A	6.0	6.5	(7.3)	7.1	6.9
31																								
Median Value	8.0	7.8	7.4	7.0	6.7	7.2	8.2	8.4	8.4	7.8	7.5	7.6	8.0	8.6	8.7	8.8	8.9	8.7	8.7	8.4	8.2	8.3	8.3	8.2
Count	27	27	29	28	28	30	30	30	24	23	21	21	24	25	29	27	27	25	25	25	28	27	25	26

foF2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 1

15

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h_pF_2 | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	400	440	400	330	320	280	310	320	A	C	C	C	C	370	330	380	330	350	360	350	360	330	340	330
2	390	390	390	400	370	300	330	330	310	G	360	320	[320	390	380	340	330	300	310	370	400	380	370	390
3	380	360	390	380	440	380	280	270	300	310	330	330	380	370	370	340	330	300	330	330	370	350	410	390
4	410	320	(450	(420	400	B	330	320	310	350	340	370	350	380	360	340	320	390	290	360	400	(440)	(390	370
5	370	370	340	400	370	330	320	320	300	400	A	370	B	340	380	360	380	370	340	320	350	380	420	(400
6	(410	(340	(340	(330	370	(370	330	340	A	330	370	350	400	400	380	400	(380	350	AF.	AS	S	390	SA	380
7	430	400	(330	390	430	380	330	310	340	340	370	360	350	370	340	330	330	310	290	310	340	410	460	420
8	(420	410	330	290	330	330	310	280	310	310	A	A	420	380	A	370	340	330	310	330	370	380	370	400
9	370	F	(350	290	320	A	330	330	A	A	A	A	380	330	340	320	A	A	340	370	330	410	380	430
10	430	360	310	340	430	370	380	330	A	B	(320)	400	370	410	370	360	310	A	A	A	(420	(430	(400	340
11	320	320	400	380	370	320	310	320	290	330	350	360	390	380	360	340	JA	350	A	A	A	330	380	380
12	360	390	360	380	400	440	330	310	320	330	370	A	380	400	370	360	360	350	A	A	410	(390	380	(380
13	370	350	370	370	350	320	A	320	300	310	290	400	A	350	370	340	370	320	340	320	320	400	380	420
14	360	F	350	(320	310	320	330	320	310	310	370	400	410	A	410	370	360	340	330	A	400	410	380	360
15	380	(370	370	F	F	350	330	330	340	B	370	A	410	360	380	A	370	A	320	300	300	340	340	380
16	380	380	360	310	290	330	330	320	300	A	A	JA	A	400	360	360	340	330	320	B	A	(430	340	380
17	380	390	360	360	350	360	390	310	330	370	420	430	430	380	400	400	390	330	310	340	350	400	410	360
18	380	420	360	370	420	330	310	310	C	B	B	400	380	[370	360	330	340	350	340	340	400	S	340	(320
19	(360	350	390	360	320	310	340	380	330	290	350	(380	390	370	400	370	330	320	330	330	320	420	F	F
20	320	370	370	C	F	480	370	310	290	320	280	A	A	B	380	A	330	A	330	340	360	430	F	F
21	F	F	F	(360	400	(370	360	370	330	330	A	A	A	A	440	400	360	320	320	320	370	A	410	420
22	[390	(360	(330	(410	(410	350	(310	400	A	A	470	420	350	B	A	400	360	A	330	330	350	370	420	370
23	390	(410	410	(360	360	350	340	300	330	310	370	370	360	380	390	370	340	310	340	330	380	390	410	360
24	410	380	370	350	330	360	360	340	380	310	430	390	360	360	330	380	A	390	310	320	380	440	(400	(430
25	(400	(390	320	AF	300	330	370	330	260	A	A	A	400	A	A	A	A	A	350	370	410	420	(380	(380
26	(380	340	340	300	370	380	340	310	A	G	460	A	410	450	350	330	400	310	360	400	330	(380	AF	(390
27	360	SF	360	380	370	320	290	280	360	A	A	420	370	380	A	360	350	330	340	320	340	330	370	370
28	380	430	390	400	370	380	370	350	320	290	A	A	370	A	360	350	340	330	330	300	(330	F	B	A
29	F	370	350	(320	390	350	300	300	A	340	400	A	A	380	380	340	380	360	310	330	320	A	F	F
30	F	(370	380	380	440	B	420	320	A	B	A	A	A	370	340	360	320	A	A	380	370	(420	390	440
31																								
Median Value	380	370	360	360	370	350	330	320	310	330	370	380	380	380	370	360	340	330	330	330	360	400	380	380
Count	27	26	29	27	28	27	29	30	21	20	19	17	22	24	26	27	26	23	25	24	27	26	24	26

Sweep 4.0 Mc to 17.0 Mc in 15 min Manual

A 2

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F2 | 135° E Mean Time | **Akita** | Lat. 38° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	320	300	300	290	270	230	240	250	A	C	C	C	C	340	310	350	300	300	290	(310)	(310)	280	(340)	290
2	A	310	310	290	300	240	330	L	300	G	320	410	(410)	380	330	330	300	290	300	280	310	290	290	300
3	290	290	290	(300)	360	280	250	A	280	290	320	320	370	320	320	320	300	210	250	270	280	310	380	310
4	280	290	A	290	300	380	260	290	290	280	290	310	320	350	330	310	290	280	250	250	320	360	A	270
5	290	320	300	240	290	240	300	300	300	300	A	370	400	340	360	350	340	370	290	260	260	280	*280	330
6	(300)	270	250	260	290	260	220	300	A	330	360	350	360	400	340	370	(340)	320	AF	A	A	AF	sA	(320)
7	320	(310)	250	(250)	300	260	290	290	300	320	340	310	300	360	320	320	320	300	250	240	250	300	310	300
8	300	300	300	250	250	250	290	250	300	310	A	A	390	760	AF	330	300	(300)	(300)	(300)	(300)	300	280	300
9	290	300	350	240	290	A	290	310	A	A	A	A	380	330	340	320	A	A	340	310	290	(300)	(300)	A
10	300	300	240	270	310	350	330	300	A	B	320	380	350	400	320	320	280	A	A	A	400	340	350	290
11	260	260	280	280	310	280	280	280	290	330	340	350	390	380	330	340	A	320	A	A	A	280	280	(300)
12	(310)	(300)	(300)	290	290	350	330	290	300	310	370	A	360	390	360	330	330	350	A	A	350	350	350	(350)
13	320	290	(310)	280	300	260	380	300	290	300	280	400	A	340	350	340	350	300	240	250	270	(320)	(310)	(320)
14	280	360	260	260	260	270	230	270	300	300	360	370	380	A	390	370	340	300	300	A	280	(350)	300	350
15	340	290	290	290	280	290	260	300	300	B	330	A	400	360	370	A	340	A	300	290	250	290	280	(330)
16	(320)	(310)	290	250	(210)	220	250	300	290	A	A	A	A	390	340	320	310	260	290	300	AF	AF	300	300
17	300	300	290	260	280	250	330	290	300	360	390	400	400	370	390	380	360	320	280	270	280	300	300	290
18	260	290	290	280	360	270	280	300	C	B	B	380	370	(360)	340	310	330	290	310	240	290	290	300	260
19	270	280	250	(300)	270	230	240	250	310	270	290	380	390	350	360	330	300	300	300	270	240	A	300	260
20	240	270	300	(320)	330	380	350	290	240	310	270	A	A	260	360	(260)	330	(240)	300	270	(310)	360	(310)	(260)
21	260	270	(290)	290	280	240	270	320	310	310	A	A	A	A	390	380	340	310	220	280	310	AF	340	390
22	360	290	(310)	A	350	290	300	300	A	A	460	400	360	450	450	400	360	A	320	270	250	270	300	280
23	280	290	300	290	290	250	300	290	310	310	340	360	340	380	290	370	330	300	300	270	300	330	340	300
24	(320)	290	290	290	240	260	270	320	320	310	410	340	310	320	320	380	A	370	260	250	300	330	280	(260)
25	280	280	230	A	280	260	330	330	260	A	A	A	400	A	A	A	A	340	330	330	(330)	(330)	(330)	(320)
26	(320)	290	(310)	270	(300)	300	310	310	A	G	430	(420)	410	440	330	320	370	300	300	300	290	300	AF	(330)
27	310	(300)	(300)	300	(310)	250	260	250	240	A	A	410	370	370	370	350	330	310	290	270	240	270	(250)	(330)
28	(300)	320	(300)	320	300	350	330	330	290	290	A	A	350	A	330	340	300	310	300	260	320	350	(220)	A
29	(320)	250	270	270	270	250	280	280	A	340	A	A	A	370	330	320	370	300	300	270	270	A	(300)	A
30	A	280	(320)	(300)	320	(490)	400	320	(330)	A	280	370	A	330	330	330	300	(330)	A	290	310	(300)	370	360
31																								
Median Value	300	290	290	280	290	260	290	300	300	310	340	370	370	360	340	330	330	300	300	270	290	300	300	300
Count	28	30	29	28	30	29	30	28	22	20	19	19	23	26	28	28	26	26	25	25	27	25	27	27

h'F2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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17

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF1 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	Q	A	c	c	c	c	5.1	B	L	(4.5)L	L	L					
2						Q	L	L	B	5.4	5.0	5.1	[5.2]C	5.2	5.0	5.0	A	L	L					
3						A	A	A	A	A	A	A	5.7	5.8	L	(5.0)L	L	Q	Q					
4						3.8	Q	(4.4)J	4.7	Q	4.9	5.3	5.5	5.5	5.4	5.2	Q	L	Q					
5						Q	L	L	5.0	A	A	A	5.5	L	5.0	L	A	A	Q					
6						Q	Q	4.4J	A	A	L	5.3	5.0	L	4.6	4.6	[4.4]C	4.2	AF					
7						Q	L	A	A	(5.0)B	5.0	L	L	(5.2)B	B	5.0	A	A	A					
8						Q	L	Q	A	A	A	A	A	L	A	4.6J	4.7	A	A					
9						A	L	B	A	A	A	A	(5.5)B	5.5	(5.6)A	A	A	A	A					
10						(3.6)L	A	Q	A	4.8J	B	5.2B	L	A	5.3	5.0	L	A	A					
11						Q	L	L	L	5.3	A	A	L	L	4.9	A	A	A	A					
12						Q	L	A	L	A	5.4	A	L	L	A	A	A	A	A					
13						Q	A	A	A	A	A	A	A	A	A	A	A	A	Q					
14						L	Q	Q	L	A	L	5.4	A	A	5.1	A	A	A	L					
15						A	A	L	A	B	A	A	A	L	B	A	A	A	A					
16						Q	Q	A	L	A	A	A	A	A	5.2	5.1	4.8A	(4.4)A	AF					
17						L	L	L	L	5.4	5.1	(5.0)J	L	4.9	L	4.8	4.5	(4.4)L	(4.0)L					
18						Q	L	L	C	A	A	A	5.2	[5.1]C	5.0	B	L	4.0F	L					
19						Q	Q	Q	L	Q	A	5.1	5.7	5.3	5.2	L	4.2	4.0	L					
20						A	A	L	Q	L	5.1	A	A	A	A	A	A	Q	A					
21						Q	Q	A	4.9	A	A	A	A	A	5.0	(5.0)A	4.7	L	Q					
22						Q	L	A	A	A	5.2	L	5.1	B	A	A	(4.7)A	A	A					
23						Q	L	Q	4.8	B	B	L	B	L	5.0	5.2	L	L	L					
24						Q	Q	(4.4)J	A	L	(5.3)A	L	5.0	4.7	4.8A	A	A	A	A					
25						L	L	L	A	A	A	A	5.4	A	A	A	A	A	A					
26						(3.3)L	L	(4.6)L	A	5.0A	5.2	A	L	(5.3)B	L	4.8	L	4.4	L					
27						Q	L	Q	Q	A	A	L	(5.4)A	A	A	4.9	4.6	4.3	4.1					
28						Q	A	A	A	A	A	A	B	A	A	B	4.6B	L	L					
29						Q	L	4.5	A	A	A	A	A	A	A	L	A	4.4	A					
30						A	(4.1)F	A	A	A	A	A	A	A	A	(5.2)A	L	A	A					
31																								
Median Value						—	—	4.4	—	5.2	5.1	5.2	5.4	5.2	5.0	5.0	4.6	4.4	—					
Count						3	1	5	4	6	9	7	12	11	14	14	10	8	2					

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F1 | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	Q	A	c	c	c	c	A	B	A	A	240	A					
2						Q	A	240	B	B	210	B	C	B	A	230	A	240	230					
3						A	A	A	A	A	A	A	A	A	A	A	A	Q	Q					
4						230	Q	240	250	Q	230	250	A	A	270A	280	Q	250	Q					
5						Q	240	250	A	A	A	A	A	B	A	A	A	A	Q					
6						Q	Q	230	A	A	A	250B	250	A	240	A	C	220	AF					
7						Q	270	A	A	A	250	(200)A	A	B	A	300	A	A	A					
8						Q	A	Q	A	A	A	A	A	A	A	290	A	A	A					
9						A	230	B	A	A	A	A	A	A	A	A	A	A	A					
10						260	A	Q	A	A	B	B	A	A	B	A	B	A	A					
11						Q	260	(220)A	250	240A	A	A	A	A	240	A	A	A	A					
12						Q	220	A	(230)A	A	A	A	A	A	A	A	A	A	A					
13						Q	A	A	A	A	A	A	A	A	A	A	A	A	Q					
14						210	Q	Q	260	A	A	240	A	A	250	A	A	A	250					
15						A	A	270	A	B	A	A	A	B	B	A	A	A	A					
16						Q	Q	A	A	A	A	A	A	A	A	A	A	A	AF					
17						210	220	B	A	280A	B	B	A	B	B	210	240	A	270					
18						Q	250	250	C	A	A	A	B	C	220A	B	240A	230F	250A					
19						Q	Q	Q	A	Q	A	270	230	A	300A	A	190	220	260					
20						A	A	A	Q	B	A	A	A	A	A	A	A	Q	A					
21						Q	Q	A	250	A	A	A	A	A	270	A	230	A	Q					
22						Q	280	A	A	A	A	A	A	B	A	A	A	A	A					
23						Q	250	Q	230	210	B	B	B	B	220	A	A	240	270					
24						Q	Q	230	A	A	A	A	220	200A	A	A	A	A	A					
25						Q	240	290A	A	A	A	A	A	A	A	A	A	A	A					
26						220	240	A	A	250A	240A	A	B	A	A	(250)A	220	240	A					
27						Q	230	Q	Q	A	A	B	A	A	A	230	240	230	260					
28						Q	A	A	A	A	A	A	B	A	A	(280)A	270A	(220)A	(220)					
29						Q	240	220	A	A	A	A	A	A	A	A	A	A	A					
30						A	250F	A	A	A	A	A	A	A	A	A	A	A	A					
31																								
Median Value						220	240	240	250	—	—	250	—	—	240	260	240	240	260					
Count						5	14	10	6	4	4	5	3	1	8	8	7	10	8					

h'F1 | Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foE | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						2.0 J A	A	3.0 J A	A	C	C	C	C	B	B	A	A	A	A					
2						2.0 F	2.6	3.2	3.4 B	3.5	B	3.8 B	[3.9] C	4.0 B	A'	A	3.2 A	3.0	2.3					
3						A	A	3.1 F	3.3 F	A	A	A	A	3.4	3.3	3.0	A	A	24					
4						A	3.0	3.0	3.4	A	A	A	A	A	A	A	3.0	2.9	2.3					
5						2.1 H	2.6 H	3.1 H	3.5	3.6	3.7 B	B	B	B	B	B	A	A	A					
6						2.2 H	2.6	3.1	A	3.5	A	B	B	B	3.5 B	3.4	[3.1] C	2.8	2.3					
7						1.9	2.6 F	3.0 F	A	(3.6) A	B	3.8 A	A	B	B	3.6	3.2	2.8 H	A					
8						A	(2.7) A	A	3.4	3.5	A	B	A	B	A	A	A	A	A					
9						A	2.5	B	3.5	B	A	A	A	A	A	A	A	A	A					
10						2.2	2.6	3.0	A	A	B	B	A	A	3.6	A	(3.2) J P	2.9	A					
11						A	A	A	3.2	3.5	3.6	B	A	A	3.7	3.5	3.3	2.9	(2.2) A					
12						2.0 A F	2.6 A	3.0	3.5	3.6	(3.7) B	B	B	3.9 A	3.5 A	3.4 A	A	A	A					
13						A	2.4	A	3.4	A	A	A	A	A	A	A	A	A	A					
14						2.2	A	A	A	3.4	A	B	B	B	B	A	3.4	2.9	2.3					
15						A	A	3.2	3.4	B	B	A	B	B	A	B	A	3.0 A	A					
16						2.0 H	A	3.0	3.4	3.6	B	B	B	3.6	3.5	3.4	A	3.0	2.4 B					
17						2.1 F	(2.3) A F	AF	A	A	3.7	A	A	3.8	3.6	3.5	3.3	2.8	2.4					
18						1.9	2.6	3.0	[3.2] C	3.5	3.6 H	A	A	C	B	A	A	2.9 A F	2.3					
19						2.0	2.6	3.0	3.2	A	A	A	B	A	A	A	3.0	3.0	24					
20						2.0 H	2.5	3.0	3.4	A	A	A	B	A	A	3.5	3.3	3.2	A					
21						1.7	(2.6) A	(3.4) A	3.5	3.5	(3.7) B	A	B	3.6	3.6	A	(3.4) A	A	A					
22						1.9	2.7	3.0	3.5	3.6 B	(3.8) B	(4.0) B	4.0 B	B	A	A	A	A	A					
23						2.3	2.7	3.2	3.4	3.5 A	A	B	B	A	A	A	3.4	3.2	24					
24						1.9 A	2.5	A	3.4	A	A	3.8	3.6	3.7	3.6 J	(3.4) A J	3.4	3.0	A					
25						1.9	2.5	3.0	3.3	3.4	3.6	3.6	3.6	A	A	A	A	3.0	A					
26						A	24	3.0	3.0	3.2	3.4	A	A	A	A	3.7	3.4	3.0	2.3					
27						2.2	2.7 H	3.0	A	A	A	A	A	A	B	3.6 B	3.3	2.8 B	A					
28						A	A	A	A	A	B	B	B	A	A	A	A	A	A					
29						2.3	2.6	3.1	3.4 A	3.6	A	B	B	A	A	A	A	2.9	2.3					
30						2.0 A F	2.6	3.0	3.3	A	A	B	A	A	A	A	A	3.3	A					
31																								
Median Value						2.0	2.6	3.0	3.4	3.5	3.7	3.8	—	3.7	3.6	3.5	3.3	3.0	2.3					
Count						21	23	22	22	16	9	5	4	7	9	11	15	20	13					

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'E | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						A	A	A	A	C	C	C	C	110	110	A	A	A	A					
2						110^{F}	110	110	110	110	110	110	110	110	110	A	110	120	110					
3						A	A	110	110	110^{A}	110^{A}	A	A	110	110	110	110	A	120					
4						A	110	110	110	100^{A}	A	A	A	A	110^{A}	A	110	120	120					
5						130^{H}	110^{H}	110^{H}	110	110	110	110	110	B	110	110	A	A	A					
6						140^{H}	100	110	110^{A}	110	A	110	110	110	110	110	(110^{C})	110	110					
7						130	110	110	110^{A}	110	110	110	110	110	110	110	110	110^{H}	A					
8						A	A	A	110	110	110^{A}	110	110^{A}	110	A	A	A	A	A					
9						A	110	B	110	B	A	A	A	A	A	A	A	A	A					
10						110	120	110	A	A	B	B	A	A	110	110	110	110	A					
11						(110^{A})	A	A	110	110	110	110	A	110	110	110	110	120	A					
12						AF	A	110^{A}	100	110	100	110	110	110	110	110	A	A	A					
13						A	110	A	110	A	A	A	A	A	A	A	A	A	A					
14						110	A	(110^{A})	A	110	A	110	110	B	B	110	110	110	120					
15						A	A	110	110	110	110	(110^{A})	110	100	A	B	A	110	A					
16						110^{H}	A	110	110	110	110	110	110	110	110	110	A	110	130					
17						130^{A}	110^{A}F	AF	110^{A}	110^{A}	110	110	110	100	110	110	110	110	120					
18						(150^{B})	110	110	(110^{C})	110	100^{H}	A	A	C	110	A	A	A	110					
19						120	110	110	110	110^{A}	A	110	B	A	A	A	100	110	120					
20						140^{H}	110	110	110	A	A	A	B	110^{A}	110	110	110	110	A					
21						120	A	A	110	110	110	A	110	110	110	A	A	A	A					
22						120	110	110	100	110	110	100	110	110	A	A	A	A	A					
23						120	110	110	110	110	A	110	110	A	A	110^{A}	110	110	110					
24						110	110	110^{A}	100	110	A	100	100	110	100	110	110	110	(A					
25						120	110	110	110	110	110	110	110	A	A	100^{A}	A	110	A					
26						A	110	110	110	110	110	A	110	A	A	110	110	110	100					
27						110	110^{H}	100	A	A	A	A	A	A	110	110	110	100	A					
28						A	A	A	A	A	110	110	B	A	A	A	A	A	A					
29						110	100	110	110	110	A	B	B	A	A	A	A	100	100					
30						AF	110	110	100	110	A	B	A	A	A	A	A	110	A					
31																								
Median Value						120	110	110	110	110	110	110	110	110	110	110	110	110	120					
Count						19	20	22	25	23	16	17	16	15	17	16	15	19	12					

h'E

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 7

21

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fEs | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	12.5	10.4	5.0	5.2	6.2	3.6	4.0	4.6	7.8	c	c	c	c	5.6Y	(5.0)B	6.0	4.2	4.0	4.8	7.6	5.8	4.4	8.2	3.7
2	3.6	2.5	3.4	G	G	G	G	G	G	G	G	G	c	5.4Y	5.0	4.8	5.4	G	3.3Y	3.2	4.2B	3.4	4.2	2.3
3	3.1	2.6	3.6	3.6	3.3B	4.6	4.0	4.4	5.8	6.2	6.8	5.4	5.9	6.6B	6.2	4.4	4.8	4.1	3.6Y	3.6	5.1	6.3	5.3	7.0
4	2.5B	3.3B	3.5	G	G	3.0	G	G	4.7	5.3	4.8	6.1	7.5	7.0	6.6	5.4	3.7	G	5.0	3.6	5.2B	5.0	5.2B	3.5B
5	5.4	4.6	3.4	G	G	G	4.2	4.6	5.7Y	7.0Y	8.8Y	6.8Y	7.2Y	B	7.8Y	6.7Y	8.4	8.6	3.0	(4.0)B	3.2	4.2	3.0B	9.2
6	4.4	5.5F	2.0	2.0	G	G	G	5.6Y	14.5	12.4	6.8	G	G	7.0Y	4.8Y	6.7	C	6.0B	11.6	7.4	8.8	8.4	7.0Y	4.8
7	5.8	4.6	2.5	3.0	3.3	4.0	4.7	8.4	7.0	4.6	G	G	G	5.9Y	4.6Y	5.0	7.4	5.8	5.8	4.0	4.2	5.8	5.0	5.2
8	4.4	6.0	4.8	4.8	3.8	3.9B	4.7	5.8	6.6	9.1	10.8	9.2	7.2	9.0Y	9.6F	5.8F	3.8	5.0	9.0	5.6	4.8	3.4B	3.2	3.3B
9	3.2B	4.0	6.3	3.8	4.0	6.3	G	B	7.2	10.8B	10.8B	6.6F	4.8	6.8	8.4	12.5B	14.5	12.5B	6.9B	6.6B	3.5	3.6B	4.5	7.1
10	6.3	6.0	3.2	4.5B	4.0B	G	7.9	6.6	9.2	5.4	5.9	B	6.6	7.0	B	4.6	G	12.2	13.2	14.7F	9.2F	5.7BF	4.4	5.0
11	3.5	3.0	3.0	3.4	4.2B	(4.0)B	4.2B	4.9	9.0	6.1	6.4	8.6	6.0	9.0	G	7.9	12.0B	7.5	13.2B	10.4B	10.2	4.6B	4.6	4.8
12	4.6	3.6BF	3.5	3.4F	2.6	3.0F	3.8	5.5	5.2	5.6	5.7Y	9.2Y	6.2Y	7.2	7.0	8.5	12.4	9.8	9.4	9.3	5.8B	4.8	6.7	6.0
13	6.6	5.0	3.8	3.8B	3.0	3.3	7.4	5.2	5.8	5.4	5.4	7.8	11.2	7.4	7.2	8.8	9.7B	7.3	3.8	2.8B	3.4	3.4B	3.4	5.4
14	3.0B	6.6	2.2	G	G	3.5	4.0	4.8	7.3B	7.7	5.7	G	6.1Y	9.4	5.0	6.6	8.7B	10.6B	5.7	10.0	4.8	6.4	6.4	7.3
15	5.8	5.8	2.0	5.0	7.6	7.8B	4.9	4.9	7.4	8.2Y	9.4	14.4	7.6Y	9.2Y	4.0	9.2	7.2	14.7	6.0	4.2	4.4	3.6B	4.8B	8.0
16	4.6	3.7FB	3.8	3.4	3.4	G	4.6	6.0	6.0	11.0	7.8Y	13.8	9.0	8.2	6.0	6.8	6.7	5.1	8.6	9.2	10.4	(7.1)FB	3.8B	2.6
17	1.4B	2.5	3.0B	2.8	2.7	3.2YF	3.9F	3.8	5.2	4.6	G	4.4	4.4	G	G	6.0Y	6.5	6.8	4.2	2.8	4.0	3.3	3.4	3.2
18	2.6	2.3	3.5	2.9	3.1B	G	3.6	6.5	C	10.2BY	6.8Y	7.4Y	4.2	C	G	4.6Y	4.8	3.8	4.6	4.0	4.0	G	4.0	G
19	3.0	4.0	3.4	3.8	3.0	G	G	G	5.0	7.0	5.8	G	B	5.1	5.1	6.5	3.7	G	7.5	3.0	4.9Y	7.0	3.6	3.8
20	3.6B	4.4	4.0	C	5.6	7.2	5.0	5.2	6.8	4.0	6.2	12.0	12.4B	10.2	6.0	9.4	10.6B	12.4	7.6	6.7	10.6	6.8	10.7	4.0
21	3.6	3.4BF	5.8	4.4	3.6	3.0	4.0	5.0	5.0	6.8	13.0	12.3F	13.0Y	10.2Y	6.8Y	7.0	4.1	6.2	3.9	5.2	5.0	8.7	5.0	4.8
22	5.2	3.4	4.8B	5.2	3.4	G	4.2	7.2	9.3	9.0BF	5.7Y	6.8Y	4.9	5.4	7.6	7.0	6.2	11.2	5.0	4.9	5.2	3.4	6.4	G
23	G	G	G	G	G	G	G	5.0	4.0	4.0	4.2	B	5.6Y	4.8	4.6	6.1B	6.2	G	3.2	4.2	3.6	4.4	3.8	4.8
24	4.0B	G	3.8	2.5	2.8	2.6	G	4.0	6.0	5.8	6.7	6.5	G	G	4.4	7.6	10.8	13.6B	5.8	3.2	5.0	6.0	6.4Y	6.0B
25	3.8B	4.2	3.7	6.5	4.2	3.8	4.4	4.6	11.4B	10.0	11.8B	14.4	6.2	8.7	8.0	9.6	9.2	9.0	6.0	6.8	5.8	6.0	6.6B	6.2
26	6.0	6.4	5.6	6.3	4.8	3.2	4.0	5.3	7.8	7.0	6.6YF	6.4	5.6Y	8.0	7.2	5.6Y	4.5Y	5.9	4.6	3.6	3.5	3.8B	9.2	5.6
27	7.0	6.2	9.0	4.6	5.2	3.3	3.6	5.4	4.2	8.6	9.0	5.0	7.2	6.0	7.7Y	G	G	G	4.4B	3.6B	3.6	4.4B	7.0	6.0
28	4.2	6.3	7.8	6.8	2.9	9.1	6.4	10.5	6.6	6.9Y	15.9Y	13.5Y	6.6Y	10.2	6.6	4.4	4.1	3.8	3.2	4.6	7.4	5.0	7.0	9.8
29	7.0	2.0B	2.6	3.6F	3.6	3.3	3.8	6.2	9.6	7.2F	6.2	7.4	8.7	9.1	5.7	5.7	8.6	4.7	8.7	5.9B	13.4	8.6	14.0	6.4
30	5.9B	3.8	5.6	4.8	3.4	4.4	4.4	6.8	9.5	7.2	7.0	7.5	9.0	10.4B	9.2	6.0	5.4	13.6	10.8B	4.6	5.0	5.7	6.2	5.6
31																								
Median Value	4.3	4.0	3.6	3.6	3.4	3.2	4.0	5.2	6.6	7.0	6.6	6.8	6.2	7.1	6.0	6.3	6.2	6.1	5.4	4.6	5.0	4.9	5.1	5.1
Count	30	30	30	29	30	30	30	29	29	29	29	27	27	28	29	30	29	30	30	30	30	30	30	30

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 8

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | (M3000)F2 | 135° E Mean Time | **Akita** | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.6	2.5	2.6	2.8	3.0	3.3	3.2	3.0	A	C	C	C	C	2.8	2.9	2.7	2.9	2.8	2.7	2.8	2.8	2.9	2.8	2.9
2	2.7	2.6	2.6	2.6	2.7	3.1	3.0	2.9	3.0	2.5	2.8	2.6	(2.6)	2.7	2.7	2.8	2.9	3.1	3.0	2.6	2.7	2.7	2.8	2.7
3	2.9	2.7	2.6	2.7	2.4	2.7	3.2	3.4	3.1	3.0	3.0	2.9	2.7	2.8	2.8	2.8	2.9	3.0	2.8	2.8	2.9	2.8	2.5	2.7
4	2.6	2.9	(2.3)	(2.5)	2.7	2.7	2.9	3.0	3.0	2.8	3.1	2.9	2.8	2.7	2.7	2.8	3.0	3.1	3.1	2.8	2.6	(2.5)	(2.7)	2.8
5	2.8	2.7	2.8	2.7	2.7	2.9	3.0	2.9	3.1	3.3	A	2.8	(2.8)	2.9	2.8	2.8	2.7	2.8	2.8	2.9	2.9	2.6	2.5	(2.6)
6	(2.6)	(2.7)	(2.7)	(3.0)	2.8	(2.7)	2.9	2.8	A	2.9	2.8	2.8	2.7	2.7	2.7	2.7	(2.8)	2.8	AF	AS	S	2.7	2.5	2.7
7	2.6	2.7	(2.8)	2.7	2.5	2.7	2.9	3.0	2.8	2.9	2.8	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.0	2.8	2.6	2.5	2.5
8	(7.5)	2.7	2.9	3.2	3.0	2.9	3.0	3.2	3.0	3.0	A	A	2.6	2.8	A	2.9	2.9	2.9	3.0	2.9	2.8	2.6	2.8	2.6
9	2.8	F	(3.0)	3.2	2.9	2.8	2.8	2.9	A	A	A	A	2.7	2.8	2.8	2.8	A	A	2.9	2.7	2.5	2.6	2.6	2.5
10	2.6	2.8	3.1	2.8	2.5	2.9	2.7	2.8	A	B	(3.1)	2.8	3.0	2.5	2.8	2.7	3.0	A	A	A	(2.6)	(2.6)	(2.6)	2.9
11	2.7	2.9	2.6	2.7	2.7	2.8	3.0	2.9	3.3	2.9	2.8	2.8	2.8	2.7	2.8	2.9	A	2.9	A	A	(2.8)	2.8	2.6	2.6
12	2.8	2.7	2.7	2.7	2.6	2.5	2.9	3.0	2.9	3.0	2.8	A	2.8	2.7	2.8	2.9	2.8	2.9	A	2.7	2.6	(2.7)	2.7	(2.7)
13	2.7	2.7	2.7	2.6	2.8	3.0	2.7	3.1	3.2	3.1	3.3	2.7	A	2.9	2.7	2.9	2.7	2.9	2.9	3.0	2.9	2.7	2.6	2.5
14	2.7	F	2.8	(2.9)	3.0	2.8	2.9	2.9	3.0	3.0	2.8	2.8	2.6	A	2.6	2.7	2.8	2.9	2.8	A	2.7	2.6	2.6	2.8
15	2.6	(2.7)	2.7	F	F	(2.8)	2.8	2.9	2.9	3.1	2.7	A	2.7	2.9	2.7	A	2.7	A	2.9	3.0	3.0	3.0	2.8	2.6
16	2.7	2.7	2.7	3.0	3.1	2.8	2.9	3.0	3.1	A	2.8	A	2.7	2.7	2.8	2.7	2.8	3.0	3.0	B	A	(2.5)	2.9	2.7
17	2.7	2.6	2.8	2.8	2.9	2.7	2.6	3.1	2.9	2.7	2.7	2.5	2.6	2.7	2.6	2.6	2.7	2.9	3.0	2.9	2.8	2.6	2.6	2.8
18	2.6	2.5	2.8	2.7	2.5	2.8	3.0	3.1	C	B	B	2.7	2.8	(2.8)	2.9	2.9	2.9	2.8	2.8	2.8	2.7	S	2.9	(3.0)
19	(2.9)	2.8	2.8	2.8	3.0	2.9	2.9	2.6	2.9	3.1	2.7	(2.8)	2.7	2.6	2.6	2.8	2.9	2.9	2.9	2.8	3.0	2.9	F	F
20	2.9	2.7	2.7	C	F	2.6	2.7	3.0	3.2	2.9	3.2	A	A	B	2.7	A	2.9	A	2.9	2.8	2.8	2.5	F	F
21	F	F	F	(2.6)	2.5	(2.6)	2.7	2.7	3.0	2.9	A	A	A	A	2.7	2.9	2.8	3.0	2.9	3.0	2.8	A	2.5	2.6
22	SF	(2.6)	(2.9)	(2.5)	(2.4)	2.9	(3.0)	2.6	A	A	2.5	2.8	2.7	2.6	2.6	2.6	2.9	A	2.9	2.8	2.9	2.9	2.6	2.6
23	2.6	(2.6)	2.6	(2.8)	2.7	2.9	2.9	3.1	3.0	3.1	2.8	2.8	2.8	2.9	2.8	2.8	2.9	3.0	2.9	2.9	2.6	2.7	2.6	2.7
24	2.6	2.7	2.7	2.8	2.9	2.7	2.8	2.9	2.7	3.1	2.5	2.7	2.8	2.8	3.0	2.8	A	2.7	2.9	2.9	2.6	24	(2.6)	(2.6)
25	(2.8)	(2.6)	2.9	2.7	3.1	2.9	2.7	3.0	3.5	A	A	A	2.8	A	A	A	A	2.9	2.9	2.7	2.6	2.6	(2.7)	(2.6)
26	(2.6)	2.8	2.8	3.1	2.7	2.6	2.8	3.0	A	B	2.7	2.7	2.7	2.6	2.9	3.0	2.9	3.1	2.8	2.8	3.3	(2.7)	AF	(2.8)
27	2.8	(2.7)	2.7	2.6	2.7	3.1	3.2	3.3	2.9	A	A	2.7	2.8	2.6	2.8	2.8	2.8	2.9	3.0	3.0	2.8	2.9	2.7	2.8
28	2.8	2.6	2.7	2.5	2.7	2.7	2.7	2.8	2.9	3.3	A	A	2.8	A	2.8	2.9	2.8	2.9	2.9	3.1	(2.9)	F	B	A
29	F	2.7	2.8	(2.9)	2.6	2.8	3.1	3.1	A	3.0	2.6	A	A	2.7	2.8	2.9	2.7	2.8	2.9	2.9	2.9	2.6	F	F
30	F	(2.7)	2.7	2.7	2.5	2.4	2.5	2.9	3.1	B	3.5	2.8	A	2.8	2.9	2.8	3.0	3.2	A	2.6	2.8	(2.7)	2.7	2.6
31																								
Median Value	2.7	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.0	2.8	2.8	2.7	2.7	2.8	2.8	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.7
Count	26	27	29	28	28	30	30	30	22	20	21	19	24	25	28	27	26	25	25	25	28	27	25	26

(M3000)F2 | Sweep 1.0 Mc to 17.0 Mc in 15 min Manual | A 9

23

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fmin F | 135° E Mean Time | **Akita** | Lat. 38° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	A	A	A	A	A	3.3	A	C	C	C	C	A	5.0	A	A	3.2	A	A	A	A	A	A
2	A	1.2[A]	1.1	1.1	1.2	2.1	A	3.4	4.6	4.7	4.4	4.7	(4.9)[C]	5.0	A	4.0[A]	A	3.4	2.7	A	A	A	A	1.8
3	1.8	1.8	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	2.4	A	A	A	A	1.2
4	1.2	A	A	E	1.4	A	3.2	3.3	4.4	4.8[A]	(4.5)[A]	4.4	A	A	4.6[A]	3.8	A	3.2	2.8	1.5	A	A	A	2.0
5	1.7	1.2	1.2	1.2	1.2	2.3	2.8	3.4	A	A	A	A	A	6.2	A	A	A	A	2.8[A]	A	A	A	1.8	1.8
6	A	1.4	1.4	1.4	1.4	2.2	2.7	3.3	A	A	A	4.7	4.4	A	4.2	A	C	2.8	AF	A	A	AF	AF	A
7	(1.3)[A]	(1.2)[A]F	1.5	(1.1)[A]F	1.2	2.2[F]	2.7	A	A	(4.2)[A]	4.4	(3.8)[A]	4.4	5.2	4.9	4.6	A	A	A	A	A	A	A	A
8	A	A	A	1.9	1.6	2.0	(2.7)[A]	(3.8)[A]	A	A	A	A	A	A	A	3.9	4.0	A	A	A	A	A	1.6	1.5
9	1.3	A	A	A	A	A	3.0	5.0	A	A	A	A	A	A	A	A	A	A	A	A	1.9	A	A	A
10	A	A	A	A	A	2.2	A	A	A	A	5.3	5.2	A	A	5.3	A	4.4	A	A	A	A	1.6	1.7	A
11	1.2	1.2	1.2	1.3	A	A	A	A	3.5	4.6[A]	A	A	A	A	4.3	A	A	A	A	A	A	A	A	A
12	A	AF	1.6[A]	1.2	1.1	2.2	2.7	A	(4.0)[A]	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
13	A	1.2	A	1.3	AF	A	A	A	A	A	A	A	A	A	A	A	A	A	2.6[A]	A	A	A	A	A
14	A	A	1.4	1.5	1.6	2.2	A	A	A	A	A	4.6	A	A	A	A	A	A	2.8[A]	A	A	A	A	A
15	A	1.7	E	1.2	1.8	A	A	A	A	A	A	A	A	6.0	6.1	A	A	A	A	A	A	A	A	A
16	A	A	1.6	A	A	2.1	A	A	A	A	A	A	A	A	A	A	A	A	AF	AF	AF	AF	AF	1.3[A]
17	1.2	A	1.1	E	1.8[F]	2.1	2.9[F]	4.7	A	A	4.8	4.7	4.8	4.7	(4.2)[B]	4.0	3.8	A	3.2	1.5	A	1.3	1.2	1.3
18	1.6	E	E	E	A	2.2	2.7	3.3	C	A	A	A	4.9	C	A	6.1	A	2.9[F]	(3.0)[A]	1.7	1.8	1.7	A	1.8
19	1.8	1.4	A	A	1.2	2.1	2.7	3.2	A	4.3	A	4.7	4.4	A	A	A	3.4	3.1	3.0	A	1.5	A	1.4	1.4
20	1.4	1.2	A	C	A	A	A	A	A	4.8	A	A	A	A	A	A	A	A	A	A	A	A	A	A
21	1.3	1.8[F]	A	A	1.8	2.0	2.6	A	4.0	A	A	A	A	A	4.3[A]	A	3.4	A	A	AF	A	AF	A	A
22	AF	AF	A	A	AF	2.3	2.7	A	A	A	A	A	A	6.6	A	A	A	A	A	A	1.7	1.6	(1.6)[A]	1.1
23	1.1	1.1	E	E	1.2	2.3	2.7	A	4.0	3.9	6.2	5.6	6.3	5.2	4.2	A	A	3.2	3.4	A	A	A	1.8	A
24	A	1.8	A	1.7	1.8	1.9	3.0	3.4	A	A	A	A	4.5	4.4	4.0[A]	A	A	A	A	1.8[F]	A	A	A	(1.8)[A]
25	A	A	1.4	A	A	1.9	2.7	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
26	A	A	A	A	A	2.6[A]	2.8	A	A	A	A	A	5.4	A	A	A	3.7	3.2	A	AF	AF	A	AF	A
27	AF	AF	AF	AF	A	2.2	2.8	3.2	4.0[A]	A	A	5.8	A	A	A	4.0	4.0	3.2	3.2[A]	A	1.3	A	(1.2)[A]	A
28	A	1.2	(1.4)[A]	1.1	1.2	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
29	A	1.6[F]	1.6	A	A	2.3	2.7	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
30	A	1.5[F]	A	1.2[A]	1.2	A	2.7	A	A	A	A	A	A	A	A	A	A	A	A	A	A	(1.7)[A]	A	A
31																								
Median Value	1.3	1.2	1.4	1.2	1.2	2.2	2.7	3.4	4.0	4.6	4.6	4.7	4.8	5.2	4.3	4.0	3.8	3.2	2.8	—	1.7	1.6	1.6	1.5
Count	12	17	15	17	16	20	19	12	7	7	6	10	9	8	11	7	7	9	11	4	5	5	8	11

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 10

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fminE | 135° E Mean Time | Akita | Lat. 39° 43.5' N | Long. 140° 08.2' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.8	C	C	C	C	2.7	2.3	2.2	2.6	1.8	1.7	1.7	1.6	1.8	1.6[B]	1.2
2	1.2	1.2	1.8	E	E	1.4[F]	1.6	1.7	1.6	1.6	1.8	1.8	2.0	2.2	2.0	2.1	1.6	1.6	1.6	1.5	1.4	1.4	1.4	1.1
3	1.1	E	E	E	E	1.4	1.6	1.8	1.7	1.8	2.8	2.4	2.0	2.1	1.8	2.0	2.0	1.7	1.8	1.5	1.5[B]	1.5	1.5	1.5
4	1.2	1.3[B]	1.3	E	1.8	1.8	1.8	1.7	1.8	1.8	2.1	2.4	2.6	3.2	2.4	2.4	1.8	1.6	1.8	1.5	1.7	1.3	1.6[B]	2.0[B]
5	1.8	1.2	1.2	E	E	1.8	1.8	1.8	1.9	1.8	2.0	2.0	2.4	B	1.8	1.8	1.8	1.8	1.6	1.6	1.6[B]	1.4	1.5	1.5
6	1.4	1.4[F]	2.9	1.8	B	1.6	1.6	1.6	1.8	2.3	2.4	2.2	1.9	2.4	1.8	1.8	[1.8][C]	1.8	1.6	1.6	1.5	1.5[F]	1.6	E
7	1.1	1.1	1.1	1.1	1.1	1.4	1.5	1.5	1.6	1.8	1.8	1.8	1.8	2.7	2.1	1.6	1.6	1.6	1.7	1.4[B]	1.6	1.4	1.4	1.2
8	E	E	E	E	E	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.8	2.2	2.3	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.3
9	1.3	1.4	1.8	1.8	1.8	1.8	2.3	B	1.7	3.9	1.6	1.8	2.7	2.0	1.6	1.7	1.8	1.6	1.4	1.6	1.6	1.5[B]	1.5	1.2[B]
10	1.2	1.1[B]	1.1	1.1[B]	1.1	1.5	1.5	1.6	1.8	2.2	5.3	B	2.2	2.4	2.4	2.4	2.0	2.0	1.4	1.4	1.6	1.5	1.5	1.1
11	1.2	1.2	1.4	1.4	1.6	1.4	1.6	1.5	1.7	1.7	1.9	2.0	1.9	2.4	1.8	2.0	1.8	1.8	1.7	1.8	1.8	1.8[B]	1.8	1.5
12	1.1[B]	1.1	E	E	E	1.5[F]	1.6	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	2.0	1.6	1.6	1.6	1.5	1.3	1.4	1.4	1.2[B]
13	1.1[B]	1.1	E	E	1.2[F]	1.4	1.6	1.6	1.7	1.8	2.4	2.2	1.8	2.2	2.4	1.7	1.7	1.5	1.6	2.0[B]	1.6[B]	1.4[B]	1.5	1.4
14	1.4[B]	1.8	1.6	B	B	1.5	1.8	1.8	2.1	2.1	1.9	2.1	2.7	4.0	4.0	2.3	1.7	1.7	1.7	1.8	1.4	1.5	1.5	1.5
15	1.6	1.2	1.2	E	E	1.4	1.4	1.6	1.8	2.6	2.6	2.0	2.2	1.8	1.8	4.0	1.8	1.8	1.6	1.4	1.4	1.4	1.4	1.4
16	1.4[B]	1.2	1.3	1.2	1.2	1.4	1.5	1.5	1.7	1.8	1.8	2.2	2.3	2.0	2.0	1.8	1.6	1.5	1.7	1.4	1.4[F]	1.5[F]	1.4[F]	1.1
17	1.1[B]	E	E	E	E	1.5[F]	1.6	1.8	2.0	2.4	1.8	2.0	2.0	2.0	1.8	1.8	1.8	1.6	1.8	1.5	1.6	1.3	1.2	1.3
18	1.1	E	E	E	E	1.6	1.6	1.7	[1.8][C]	1.8	1.7	1.7	1.8	[1.7][C]	1.6	1.8	1.6	1.6	1.8	1.7	1.8	B	1.8	B
19	1.8	1.6	E	1.2[B]	1.8	1.4	1.8	1.8	1.7	1.7	1.8	1.7	B	2.2	2.5	2.0	1.7	1.7	1.5	1.5	1.5	1.5	1.5	1.4
20	1.7[B]	1.5	E	C	1.1	1.4	1.6	1.5	1.8	1.8	1.7	1.8	4.9	2.0	2.0	2.0	2.0	2.0	1.4	1.6	1.4	1.4	1.4	1.2
21	1.2	1.2	1.4[B]	1.4[B]	1.4	1.4	1.6	1.6	1.8	1.8	2.0	1.9	2.0	2.2	2.2	2.0	1.8	1.8	1.5	1.5	1.5	1.4	1.5	1.3
22	E	1.1	E	E	E	1.6	1.6	1.7	1.8	1.8	1.8	2.0	2.1	2.2	2.0	1.8	1.8	1.8	1.7	1.6	1.7	1.6	1.5	E
23	E	E	E	E	E	1.7	1.6	1.8	1.9	1.8	1.9	1.8	1.8	2.2	2.4	1.8	1.8	1.6	1.7	1.8	1.8	1.3	1.5[B]	1.4
24	1.2	B	1.8	1.7	1.8	1.7	1.8	1.8	1.6	1.7	1.9	2.2	2.1	2.3	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6	1.6	1.6
25	1.6	1.2	E	E	E	1.5	1.6	1.6	1.8	1.8	1.8	1.8	2.0	3.0	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.4	1.4	1.4
26	1.4	1.2	1.2	1.2	1.2	1.3	1.5	1.7	1.6	1.8	3.2	2.4	2.0	3.4	1.8	1.9	2.0	1.8	1.5	1.5	1.5	1.5	1.5	1.1
27	1.1	E	E	E	E	1.3	1.5	1.6	1.6	1.6	2.6	3.2	2.8	3.0	1.7	1.7	1.8	1.7	1.7	1.7	1.3	1.2	1.2	1.2
28	1.2	1.1	1.1	E	E	1.4	1.5	1.5	1.8	1.8	1.8	2.2	(4.2)[B]	1.8	1.8	1.8	1.7	1.5	1.7	1.8	1.7	1.8	1.8	1.7
29	1.8	E	E	E	E	1.4	1.6	1.6	1.6	2.3	2.0	5.2	4.2	3.3	3.0	2.1	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.2
30	1.1	E	E	E	E	1.5	1.6	1.7	1.8	2.3	3.0	4.9	3.0	2.6	2.4	2.2	1.8	1.8	1.6	1.6	1.4	1.4	1.4	1.1
31																								
Median Value	1.2	1.2	1.1	E	E	1.4	1.6	1.6	1.8	1.8	1.9	2.0	2.0	2.2	2.0	1.8	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.3
Count	30	29	30	28	28	30	30	29	30	29	29	28	28	29	30	30	30	30	30	30	30	29	30	29

fminE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

A 11

25

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(8.1)P	FS	8.2P	8.2S	7.3	6.6	6.8	7.4	7.1	7.9	A	9.1	10.1	9.4	(9.0)P	(9.6)P	9.7	9.9	10.3	A	A	8.9	8.4H	8.7JH
2	8.0Z	7.5	7.1F	7.2	6.7	6.3	6.5K	6.5K	6.0K	6.3K	7.1K	7.4K	7.6K	9.3K	9.6H	10.2J	9.5	9.0S	7.4	6.8	7.4JS	7.5	7.7	7.4S
3	7.1	7.0	6.3	6.4	6.7	(8.4)PS	(8.6)P	7.1	7.6	7.7	7.9	9.2	9.7	10.4	10.4	A	10.3J	(10.0)J	B	B	A	8.8P	8.7PF	F
4	(8.6)PF	9.5	F	7.2JF	7.4P	7.9	9.6PS	9.0	8.1	8.0	9.1	9.4	10.0	10.9	12.3	11.8	11.5	(9.9)P	(9.2)JS	7.6	7.7J	S	8.1PV	FS
5	8.2JF	F	F	F	F	7.8F	8.7	8.3	(8.5)J	8.2P	(7.3)P	F	A	9.2	9.1	9.6	8.8	9.5	B	10.3JP	(8.5)P	8.3P	(8.5)P	A
6	A	A	A	A	6.8	7.9S	9.2F	8.7P	8.6F	9.0PS	9.0PS	A	9.0	(9.4)B	(9.9)P	B	11.4	10.3	9.0J	7.8	7.6	(8.0)PS	8.1	7.6
7	7.6F	7.3F	7.2	6.4H	6.0F	7.8	9.5PS	9.8F	A	8.7J	(8.8)P	9.0J	9.2J	9.5	10.8	11.0	11.0B	10.9	10.0S	(8.5)PS	(6.7)JS	(7.4)JP	B	BF
8	10.2	9.6PS	9.5	8.1	6.1	6.9	8.5	8.7J	A	7.3	7.5	A	A	(10.0)P	A	A	11.5	11.5	10.7	(9.8)P	(8.6)P	9.4	9.1J	8.9J
9	9.2JF	9.5F	8.9F	7.6JF	(6.4)JF	6.1F	6.8F	7.5	(8.5)P	8.0	A	A	9.4	C	C	10.1	9.6	(9.6)P	8.7J	8.1	6.9	7.9P	8.0PH	9.0J
10	8.9	S	(8.7)P	6.5	(6.5)PF	6.8F	8.7	B	6.9	A	8.0	A	A	A	A	B	B	A	B	A	6.1J	B	B	(7.3)P
11	7.9	7.3J	(6.9)B	(7.3)B	B	B	8.8	8.8	8.7	A	7.4	A	8.0S	9.0J	[9.1]C	9.2	8.9	8.6	A	9.2J	8.3	7.9	7.9H	(8.3)PF
12	8.4B	8.0PF	7.9F	7.1	[7.1]C	7.1	8.8	8.6	(10.0)B	8.2	7.6	(7.3)B	8.4J	8.8J	10.3J	10.3	9.5J	8.7J	7.9	7.2	7.6	6.9S	7.6S	7.5S
13	8.5JF	(8.9)PF	B	BF	8.3PF	7.8F	8.6	9.2	9.5	8.6	S	8.1	S	9.7	A	A	B	(10.5)B	F	9.0	(7.1)PS	(8.0)P	8.8	8.5F
14	9.3JF	9.2JF	F	8.4JF	8.1P	8.0PF	8.0F	8.5	(8.2)A	(8.2)J	7.3	7.3	7.8	AF	AF	9.7J	(10.6)P	11.0	(9.5)JP	B	A	7.3	B	B
15	8.0P	7.8	C	C	C	C	8.8	8.8	AF	AF	A	A	A	9.2	9.0	9.6	9.9	A	(8.6)P	9.6S	9.9	9.3	C	7.9
16	7.5	9.4F	9.2F	8.8F	7.9	7.6F	8.7	9.6	8.5	7.4	A	A	8.5	9.7	11.2	10.9	9.8	10.2	9.5H	A	A	BF	BF	(8.0)P
17	7.9	8.4JF	(8.0)P	C	C	C	C	10.1	9.3	7.5J	7.0	7.0B	9.5	9.7	9.7	9.5	9.8	10.9	9.8	8.8S	7.0	7.2	7.5	7.1HS
18	7.1	6.6	6.0	6.0	5.4F	6.9	S	7.6	A	A	F	9.0F	8.7	9.6	9.2	8.8	7.8	7.9	7.5	S	S	(7.5)PS	(8.4)PS	(7.1)PS
19	S	(6.6)JF	7.1JF	7.6PF	(6.8)PF	7.0F	7.9	9.0	9.9	9.2	C	A	A	9.6	10.1P	10.8	9.5	8.8	9.0J	8.7	7.5	B	7.3J	(9.4)JF
20	(9.1)JF	(9.3)JF	B	6.5	6.3H	7.2	8.3	10.5P	8.8	A	7.4H	A	8.7	8.8J	A	A	A	9.4J	8.9J	8.4	7.5H	(8.7)PH	10.0F	(9.1)P
21	B	SF	7.2SF	7.5F	7.2JPFH	7.0	8.0	S	9.6	9.2	A	7.8	7.5	8.4P	(8.8)P	A	8.8	8.3	8.1	7.4	7.0	7.5	6.6	7.4
22	5.9F	6.2F	6.5F	6.1	6.4F	7.8	7.0H	7.5	7.8	7.6	(7.3)S	7.1	7.5	7.3A	7.2	7.6	8.0	7.8	8.8J	9.1J	8.6	7.0	(7.4)PF	(8.1)PF
23	(8.1)FS	(7.5)PF	6.6	6.5PFS	6.5PF	7.0	(8.1)P	(8.8)P	7.9	B	7.6	8.4J	8.6H	B	A	7.7JS	9.0J	(10.0)P	(9.4)P	8.7J	S	7.7F	F	F
24	FS	F	F	(7.6)JF	7.1	6.9	8.2	8.4	8.2P	A	A	9.8	9.7	9.2	9.4	9.5P	9.2	9.7	S	10.2J	8.2	8.6JH	B	9.7B
25	(8.0)J	9.5P	(8.3)P	7.8	7.6	6.7	6.3	7.4	6.7	A	A	A	7.2	7.5	8.2	8.1	7.7	A	7.5	7.3	7.8	7.8	9.4	8.2
26	8.1JHF	AF	AF	(6.3)P	(6.4)JPF	6.8	7.7	7.8	7.4K	6.6K	AK	AK	AFK	8.2PS	9.5	8.4PS	8.0J	7.9	7.3B	(7.5)P	8.8S	7.9S	8.1	F
27	F	8.0JF	7.2F	7.2JFH	7.0P	7.9	8.6	6.9	6.7	A	A	A	8.3J	A	9.3J	8.8B	9.2	9.3	9.6	9.0	8.9S	8.8	8.3F	8.6JF
28	(8.4)PF	(7.0)P	B	SF	(7.4)JF	SF	8.6J	9.3J	A	A	C	8.4P	9.0	9.3	9.3	10.1J	(10.2)P	10.3	9.7	S	6.8	6.6JF	AF	(7.6)JPF
29	A	F	F	F	F	F	8.1P	9.5	A	5.7	A	7.2	8.2	8.2H	A	10.1	9.5	9.0P	8.2B	B	7.9	(7.0)PB	AF	(7.5)JH
30	F	F	7.3JF	F	4.9F	5.5	8.8	8.6	A	A	8.2	A	A	A	9.1PH	(9.6)PS	(7.7)P	7.0	6.3	A	A	5.9P	A	6.0
31																								
Median Value	8.1	8.0	7.2	7.2	6.8	7.0	8.6	8.6	8.2	8.0	7.6	8.2	8.6	9.3	9.4	9.6	9.5	9.6	9.0	8.7	7.6	7.8	8.1	8.0
Count	23	21	19	22	25	25	28	28	23	19	16	16	22	24	22	23	27	27	24	21	23	26	20	23

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 1

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h_pF2 | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(360)^{P}	FS	330^{P}	340^{S}	300	270	330	290	280	320	A	360	340	350	(360)^{P}	(350)^{P}	320	330	A	A	A	330	400^{H}	A
2	280^{Z}	400	390^{F}	380	360	310	350^{K}	310^{K}	320^{K}	340^{K}	370^{K}	400^{K}	430^{K}	390^{K}	360	(350)^{J}	A	320^{S}	310	A	(320)^{JS}	390	360	380^{S}
3	370	360	370	420	300	(290)^{PS}	(250)^{P}	260	300	300	340	330	A	340	330	A	(300)^{J}	(300)^{J}	B	B	A	330^{P}	320^{PF}	F
4	(380)^{PF}	300	F	(350)^{JF}	350^{P}	370	300^{PS}	270	250	270	310	310	350	340	320	300	310	(290)^{P}	(300)^{JS}	330	A	S	380^{PV}	FS
5	(390)^{JF}	F	F	F	F	290^{F}	250	260	(300)^{J}	290^{P}	(320)^{P}	F	A	330	330	320	A	320	B	(280)^{JP}	(350)^{P}	340^{P}	(400)^{P}	A
6	A	A	A	A	340	290^{S}	270^{F}	270^{P}	290^{F}	320^{PS}	300^{PS}	A	360	(360)^{B}	(350)^{P}	B	320	300	(260)^{J}	290	360	(330)^{PS}	340	350
7	360^{F}	330^{F}	360	370^{H}	460^{F}	370	350^{PS}	310^{F}	A	(310)^{J}	(350)^{F}	(360)^{J}	(370)^{J}	350	340	340	B	290	280^{S}	(290)^{PS}	(310)^{JS}	(330)^{JP}	B	BF
8	380	350^{PS}	280	270	320	340	290	(340)^{J}	A	330	390	A	A	(380)^{P}	A	A	340^{A}	A	290	S	B	390	(340)^{J}	(340)^{J}
9	(340)^{JF}	360^{F}	F	(300)^{JF}	(320)^{JF}	310^{F}	320^{F}	310	(310)^{P}	290	A	A	350	C	C	300	310	(280)^{P}	(310)^{J}	290	350	370^{P}	380^{FH}	(410)^{J}
10	380	S	(290)^{P}	(350)^{S}	(390)^{F}	410^{F}	270	B	A	A	320	A	A	A	A	B	B	A	B	A	(360)^{J}	B	B	(360)^{P}
11	340	(320)^{J}	(310)^{B}	(380)^{B}	B	B	270	240	300	A	360	A	340^{S}	(340)^{J}	(320)^{C}	290	290	300	A	(300)^{J}	310	370^{AF}	380^{AF}	(350)^{P}
12	(370)^{B}	350^{PF}	330^{F}	340	(340)^{C}	350	290	270	(300)^{B}	290	320	(340)^{B}	(360)^{J}	(370)^{J}	A	320	A	(290)^{J}	290	350	360	370^{S}	350^{S}	370^{S}
13	(390)^{JF}	(370)^{PF}	B	BF	290^{F}	250^{F}	280	A	300	240	S	370	S	S	A	A	B	(320)^{B}	F	300	(350)^{PS}	(390)^{P}	(390)^{B}	(340)^{F}
14	(350)^{JF}	(320)^{PJF}	F	(300)^{JF}	280^{P}	290^{P}	250^{F}	280	A	A	350	340	360	AF	AF	(360)^{J}	(350)^{P}	300	(310)^{PJ}	B	A	360	B	B
15	340^{P}	370	C	C	C	C	310	300	AF	AF	A	A	A	350	360	320	330	A	A	290^{S}	340	310	C	320
16	410	340^{F}	300^{F}	260^{F}	270	300^{F}	300	290	270	290	A	A	390	360	340	310	300	300	300^{H}	A	A	BF	BF	(340)^{P}
17	380	(360)^{JF}	(350)^{P}	C	C	C	C	280	240	(340)^{J}	A	370^{B}	360	380	340	370	340	320	320	310^{S}	380	380	390	380^{SH}
18	340	310	320	350	350^{F}	320	S	290	A	A	F	280^{F}	350	360	330	280	270	270	270	S	S	(320)^{PS}	(310)^{PS}	(280)^{PS}
19	S	(310)^{JF}	(310)^{JF}	310^{PgF}	(370)^{P}	300^{F}	310	340	320	310	C	A	A	A	350^{P}	330	300	280	(320)^{J}	290	310	B	(370)^{J}	(360)^{JF}
20	(340)^{JF}	(350)^{JF}	B	300	350^{H}	340	330^{A}	280^{P}	250	A	AH	A	340	(330)^{J}	A	A	A	(300)^{J}	(290)^{J}	300	310	(410)^{PH}	370^{F}	(350)^{P}
21	B	SF	410^{SF}	350^{F}	(350)^{JPH}	260	270	S	300	310	A	420	310	A	(360)^{P}	A	A	320	280	310	370	360	370	350
22	400^{F}	350^{F}	340^{F}	360	370^{F}	270	360^{H}	340	310	340	(360)^{S}	370	320	A	350	330	A	360	(360)^{J}	(310)^{J}	290	390	(430)^{PF}	(420)^{PF}
23	(420)^{ES}	(340)^{PF}	350	330^{PSF}	300^{PF}	280	(300)^{P}	(310)^{P}	330	B	330	(360)^{J}	410^{H}	B	A	(360)^{JS}	(360)^{J}	(340)^{P}	(320)^{P}	(320)^{J}	S	400^{F}	F	F
24	FS	F	F	(330)^{JF}	320	370	350	370	300^{P}	A	A	400	350	370	360	350^{P}	340	330	S	(280)^{J}	(320)^{B}	(410)^{JH}	B	360^{B}
25	(260)^{J}	290^{P}	(260)^{P}	320	290	270	300	320	310	A	A	A	370	360	360	320	290	A	320	390	380	400	370	320
26	(340)^{JF}	AF	AF	A	(370)^{JPF}	310	B	320	AK	SK	AK	AK	AFK	390^{PS}	320	310^{PS}	(320)^{J}	320	290^{B}	(320)^{P}	330^{S}	390^{S}	380	F
27	F	(340)^{JF}	340^{F}	(350)^{JF}	330^{P}	290	250	280	300	A	A	A	A	A	A	280^{B}	320	320	330	300	330^{S}	320	330^{F}	(370)^{JF}
28	(340)^{PF}	(290)^{P}	B	SF	(310)^{JF}	SF	A	(270)^{J}	A	A	C	(400)^{P}	390	340	340	(360)^{J}	(300)^{P}	310	280	S	(350)^{B}	(370)^{JF}	AF	(320)^{JF}
29	A	F	F	F	F	F	310^{P}	260	A	G	A	400	A	350^{H}	A	340	330	300^{P}	320^{B}	B	360	(420)^{PB}	AF	(410)^{JH}
30	F	F	(320)^{JF}	F	440^{F}	480	330	300	A	A	390	A	A	A	350^{PH}	(360)^{PS}	(310)^{P}	(270)^{B}	320	A	A	330^{P}	A	370
31																								
Median Value	360	340	330	340	340	300	300	290	300	310	340	360	360	360	340	330	320	300	300	300	350	370	370	360
Count	23	21	18	21	25	25	26	27	20	17	14	16	19	20	20	23	21	26	22	19	21	26	20	22

h_pF2

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	270	(290)A	270F	250	220	220	230	270	270	290	A	350	310	330	340	350	300	310AF	A	A	A	270A	300AH	AF
2	310F	300F	300F	290	260	250	340K	300K	370K	L.K	370K	400K	430K	380K	350H	330	A	230	240	A	(320)A	(340)A	280A	270
3	320A	(300)A	310A	310	250	230	230	220A	300	300	330	300	A	310	300	A	(300)A	250	A	230AF	A	(310)A	(300)A	280A
4	(300)A	240	320A	(300)AF	270	250	240	230	240	270	310	290	340	320	300	280	280	220	230	230	A	290	300	A
5	A	270	260	240	250	230	230	260	290	270	270	(230)AF	A	320	310	300	A	300	260	240	240	250	A	A
6	A	A	A	A	240	240	240	250	280	300	290	A	330	330	340	A	300	260	240F	240AF	270	270	280	290
7	290AF	300AF	240AF	240H	(400)A	300	310A	280F	A	310	310	340	340	350	310	300	A	280	250	230	260A	(310)A	320A	290A
8	(300)A	280	240	230	270	260	240	340	A	270	A	A	A	380	A	A	340A	A	280	(250)A	280	290A	280A	260
9	300	310	310	280	280	240	300	300	300	280	A	A	330	C	C	290	300A	250	280	280	(300)A	300A	(300)AH	(340)AF
10	300A	250	230	(220)AF	320	240	250	B	A	A	310	A	A	A	A	300	(270)B	A	(240)AF	300A	310	(330)A	300	300
11	250A	(300)A	260A	(310)A	290A	240	240	240	260	A	360	A	340	320	[300]C	270	260	270	A	250AF	250AF	A	AH	(300)A
12	(300)A	270F	260F	250	[270]C	290	220	250	A	270	320	340	350	370	400	300A	280A	260	270	250	260	300A	290	290
13	310	A	A	290	240	220	230	A	270	S	S	260	S	S	A	A	300	280	240AF	240F	250A	300A	300	300A
14	300	270	270F	280F	220	230F	230	230	270A	(290)A	270	310	360	AF	A	340	320	280	270	280	A	340	B	280
15	280AF	250F	C	C	C	C	AF	250A	AF	A	A	A	A	340	330	320A	(300)A	A	A	A	270A	270	C	290A
16	330A	310A	250AF	250	250	250	250	230	250	270	A	A	370	340	320	270	270	270	230H	A	A	A	A	260F
17	300A	270F	250	C	C	C	C	270	240	340	A	350	330	350	320	340	310	290	240	230	280A	310A	300A	AH
18	(300)A	250F	280	260	310	230	230	250	A	A	260F	280F	350	330	320	260	260	260	230AF	A	260AF	240	240	230
19	250	270	270	240	250	250	240	300	290	280F	C	A	A	A	330	300	280	270	260F	240AF	210	(300)AF	(250)A	
20	A	250	(200)A	(200)A	(200)AH	300	(330)A	260	240	A	400H	A	340A	310	A	A	A	(300)A	280AF	260A	250AFH	(320)AFH	300A	(240)AE
21	A	250F	240F	260F	220H	230	220	290	290	300	A	420	300	320	340	A	A	280	250	240	AF	(240)AF	AF	(300)AF
22	(340)AF	300AF	260F	300AF	350F	240	220H	290	300	340	360	370	320	A	350	330	A	280	320	250	250	240	350A	320
23	310A	290	290	290	260F	230	250	290	310	320	320	360	340H	(360)B	A	360	330	300	250	250	A	310F	320F	310F
24	(330)AF	280F	300A	280	270A	260	250	260	290	A	A	380	310	360	330	330	320	300A	220	220	(200)A	(300)AH	290	280
25	(200)A	250F	250AF	240F	210F	250	270	310	230	A	A	A	370	360	350	320	300A	(240)AF	270AF	320A	320	340	320A	270
26	(300)AH	(300)A	(280)AF	A	(350)A	250	B	320	330KA	360K	AK	AK	AFK	390	310	300	320	300	270	270A	250	260	310A	360A
27	260	270AF	260	260H	270	280	250	270	300	A	A	A	350	A	A	280	310	280	280	240	260	250	260	(300)A
28	260	250	290B	280	280F	280F	A	250A	A	A	A	360	370	320	320	330	290	300	250	220A	220	340	AF	270AF
29	A	(260)AF	280AF	250F	290	250	280	240	A	250	A	390	A	350H	A	310	310	300	300	260A	(300)A	300A	A	(300)AH
30	(300)A	(300)A	270	A	(300)A	480	300	290	A	A	270	A	A	A	320H	310	300	250A	300	A	A	(310)A	A	350
31																								
Median Value	300	270	270	260	270	250	240	260	290	300	310	350	340	340	320	300	300	280	260	240	260	300	300	290
Count	25	28	27	25	28	28	26	28	21	18	15	17	20	22	21	24	24	27	26	24	22	28	21	26

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 3

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF1 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	L	A	A	A	A	A	L	A	A	L	A	A					
2						Q	L	L	L	L	4.9[J]	5.5	5.4	5.1	L	L	A	Q	Q					
3						Q	Q	Q	L	L	A	A	A	L	A	A	A	Q	A					
4						Q	Q	Q	L	A	A	5.5	(5.6)[L]	A	A	5.0	L	Q	Q					
5						Q	Q	L	A	A	L	A	A	L	A	5.0	A	L	A					
6						A	A	A	L	L	L	A	L	5.4	5.4	A	4.7	A	Q					
7						A	A	AF	A	5.5	5.5	5.4[J]	Q	5.8	L	A	A	L	L					
8						Q	Q	A	A	A	A	A	A	A	A	A	A	A	A					
9						Q	L	L	A	A	A	A	5.5	A	C	A	A	L	A					
10						Q	LF	A	A	A	(5.1)A	A	A	A	A	A	L	A	A					
11						A	LF	A	A	A	L	A	5.6	5.4	[5.2]C	5.0	L	AF	A					
12						L	Q	Q	A	L	A	A	A	A	A	A	A	L	Q					
13						Q	A	A	L	S	A	L	S	S	A	A	A	A	Q					
14						Q	Q	Q	A	A	L	L	L	A	A	L	L	5.0[J]	L					
15						C	A	A	A	A	A	A	A	A	A	A	A	A	A					
16						Q	Q	Q	5.0	A	A	A	5.5	A	L	5.1	4.7	4.3	A					
17						C	C	L	4.8	(5.3)[L]	A	Q	5.2	L	5.5	5.1	L	(4.6)[L]	Q					
18						Q	Q	A	A	A	A	A	A	A	A	L	L	L	Q					
19						Q	Q	L	L	L	C	A	A	A	A	L	4.7	L	AF					
20						L	A	L	L	A	5.4[S]	A	A	A	A	A	A	A	A					
21						Q	Q	L	L	4.9	A	5.4[J]	L	A	4.9	A	A	(4.1)[L]	L					
22						Q	Q	L	4.5	5.0	5.0	5.2	5.5[B]	A	5.2	5.0	A	Q	L					
23						Q	L	L	L	B	L	(5.1)[B]	B	A	A	L	4.7	L	Q					
24						Q	Q	L	L	A	A	5.5	A	L	A	5.2	A	A	Q					
25						Q	Q	4.5	Q	A	A	A	5.2	A	A	L	(4.8)[L]	Q	A					
26						Q	(5.0)[L]	L	A	L	A	A	A	5.2	5.2	L	4.8	L	L					
27						L	L	L	L	A	A	A	A	A	A	A	4.7	L	L					
28						A	A	A	A	A	A	5.0	A	L	5.1	5.1	L	L	Q					
29						Q	L	L	A	L	A	5.4[A]	A	A	A	L	L	A	A					
30						3.1	(4.0)[A]	L	A	A	5.0	A	A	A	Q	A	L	A	A					
31																								
Median Value						—	—	—	—	—	5.0	5.4	5.5	5.4	5.2	5.0	4.7	—						
Count						1	2	1	3	4	6	9	8	5	7	8	7	4						

foF1

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F1 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						Q	Q	Z10	A	A	A	A	A	310^{A}	A	A	Z40	A	A					
2						Q	Z50	Z50	Z30	Z50^{A}	Z20	Z00^{B}	Z40	A	A	A	A	Q	Q					
3						Q	Q	Q	Z30	Z30	A	A	A	A	A	A	A	Q	A					
4						Q	Q	Q	Z30	A	A	Z50^{A}	Z20	A	A	Z40	Z20	Q	Q					
5						Q	Q	Z40	A	A	A	A	A	A	A	Z30	A	A	A					
6						A	A	A	(Z50)^{A}	(Z60)^{A}	A	A	(Z60)^{A}	(Z40)^{A}	Z40^{A}	A	Z50	A	Q					
7						A	A	Z70^{F}	A	Z50^{A}	Z40	(Z50)^{A}	Q	350	A	A	A	Z70^{A}	Z50					
8						Q	Q	A	A	A	A	A	A	A	A	A	A	A	A					
9						Q	Z30	Z10	A	A	A	A	A	A	C	A	A	A	A					
10						Q	Z30	A	A	A	A	A	A	A	A	A	A	A	A					
11						A	A	A	A	A	A	A	190	Z20	C	A	A	AF	A					
12						Z50	Q	Q	A	A	A	A	A	A	A	A	A	Z40	Q					
13						Q	A	A	Z20	A	A	B	S	S	A	A	A	A	Q					
14						Q	Q	Q	A	A	Z00	Z00	A	A	A	A	A	A	A					
15						C	AF	A	A	A	A	A	A	A	A	A	A	A	A					
16						Q	Q	Q	Z00	A	A	A	Z10	A	A	Z20	Z40	Z00	A					
17						C	C	Z50	Z00	(Z70)^{A}	A	Q	(Z50)^{A}	A	320	Z20	A	Z60^{A}	Q					
18						Q	Q	A	A	A	A	A	A	A	A	A	190	Z20	Q					
19						Q	Q	(Z40)^{A}	Z40	(Z20)^{A}	C	A	A	A	A	A	Z40	(Z40)^{A}	AF					
20						Z60	A	Z40^{A}	A	A	A	A	A	A	A	A	A	A	A					
21						Q	Q	A	300	A	A	(Z70)^{A}	A	A	(Z30)^{A}	A	A	(Z30)^{A}	A					
22						Q	Q	Z00	Z20	Z20	Z00	Z00	A	A	Z20	A	A	Q	Z60^{A}					
23						Q	A	Z40	(Z40)^{A}	Z30^{A}	(Z40)^{A}	Z10	A	A	A	A	(Z60)^{A}	A	Q					
24						Q	Q	Z30	Z40	A	A	Z90^{A}	A	A	A	320	A	A	Q					
25						Q	Q	Z40	Q	A	A	A	A	A	A	A	Z70	Q	A					
26						Q	Z10	Z70^{A}	A	Z50	A	A	A	Z10	Z10^{A}	Z40^{A}	Z20	Z40	Z20					
27						Z50	Z30	Z20	Z40	A	A	A	A	A	A	A	Z30	Z40	Z40					
28						A	A	A	A	A	A	A	A	A	Z20	Z20	Z20	Z50^{B}	Q					
29						Q	Z20	Z20	A	(Z30)^{A}	A	A	A	A	A	A	Z30	A	A					
30						(Z70)^{A}	A	A	A	A	Z10^{A}	A	A	A	Q	A	A	A	A					
31																								
Median Value						—	Z30	Z40	Z30	Z40	Z20	Z30	Z30	Z40	Z20	Z30	Z40	Z40	—					
Count						4	6	15	13	10	6	8	6	5	6	7	12	10	4					

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foE | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						(2.0)A	2.6	A	A	A	A	A	A	B	3.4A	A	A	A	A					
2						2.0H	2.4	3.1	3.4	3.9J	B	(3.8)B	A	B	B	(3.4)B	3.2	2.9	A					
3						(2.0)A	(2.8)F	3.1	A	4.0H	B	B	B	B	B	A	A	A	A					
4						2.1A	2.6	3.1	3.5	3.6	A	A	A	3.9	A	3.6H	3.6	2.9	(2.4)A					
5						2.2	A	A	3.4H	3.6F	(3.8)A	A	A	(3.7)A	A	A	A	A	A					
6						A	A	(3.2)F	A	(3.7)A	A	A	B	B	A	A	3.2	2.8	A					
7						2.1	2.5	3.1	A	B	A	A	A	B	B	A	A	2.6	A					
8						2.3B	2.6	A	3.4A	A	3.5A	A	A	A	A	A	A	A	A					
9						A	A	(3.2)A	3.4	(3.6)B	3.7B	(3.7)B	A	A	C	A	A	A	A					
10						2.0	2.6F	3.0	A	A	A	3.6A	A	B	A	(3.6)F	3.2H	A	A					
11						A	A	A	3.5A	3.5A	B	B	(3.9)B	B	C	3.6	(3.3)F	2.8A	2.1					
12						A	2.6	3.3	3.6A	3.6H	3.6	B	A	A	A	A	A	A	A					
13						(2.0)A	A	A	A	A	3.4B	B	3.5	A	B	A	A	A	A					
14						A	A	A	A	A	3.4	3.9B	(3.8)B	(3.8)B	3.7H	3.5	3.4H	2.8	2.2					
15						C	A	A	3.4	B	B	A	A	A	A	A	A	A	A					
16						A	A	B	A	A	A	A	B	A	A	A	3.2	2.6J	A					
17						C	C	3.3	A	B	(3.7)B	B	A	B	B	A	A	A	A					
18						(2.0)A	2.6	A	A	A	A	A	A	A	A	A	3.2A	A	2.2					
19						2.0	2.5	3.1A	(3.3)A	3.5	A	3.7	A	A	A	A	(3.3)B	A	A					
20						2.0	2.7	3.0A	3.4F	A	A	(3.6)F	A	B	B	A	A	A	A					
21						2.0A	2.8F	A	(3.5)A	A	A	A	A	(3.7)A	B	A	A	A	A					
22						A	2.5A	3.1	3.4	3.6H	3.9J	4.0A	3.8J	B	3.8	A	A	A	A					
23						1.9H	A	(3.2)A	(3.4)A	A	B	B	B	A	B	B	3.5	A	A					
24						A	2.7A	3.1	3.3	3.5B	3.7	3.8F	A	3.6	3.5B	(3.4)J	3.2	A	A					
25						A	A	A	A	A	A	A	A	A	A	A	3.2	2.8	A					
26						A	A	3.2A	(3.7)A	A	B	B	A	3.8J	B	3.6	B	A	A					
27						2.1	2.6	3.2	3.3	A	A	A	A	A	B	B	A	(2.8)A	A					
28						A	A	3.0A	A	A	A	B	B	A	A	B	3.5B	A	2.6					
29						A	2.8	A	3.3B	3.4B	A	B	(3.5)B	3.4	A	A	A	A	A					
30						A	2.4	3.0	A	A	A	A	A	(3.8)A	3.8J	A	A	A	A					
31																								
Median Value						2.0	2.6	3.1	3.4	3.6	3.7	3.8	3.8	3.8	3.7	3.6	3.2	2.8	2.2					
Count						15	17	18	17	12	9	8	5	8	5	7	13	9	5					

foE

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 6

31

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'E | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1						A	100	A	100	100	100	A	A	100	100	A	A	A	A					
2						110H	100	100	100	100	100	100	A	B	B	100	100	110	A					
3						100	100	100	100	100	110	100	110	110	100	A	A	A	A					
4						120	100	100	100	100	A	100A	A	100	A	100H	100	100	100					
5						120	100	A	100H	100	100	100	A	100	100	100	A	A	A					
6						A	100	100	100	100	100	A	B	100	100	100A	100	100	A					
7						120	100	110	100	100	A	100	100	B	100	100	100A	110	A					
8						A	140	120	100	100	A	110	100	110	A	A	A	A	A					
9						A	A	(100)A	100	100	100	110	A	A	C	A	A	A	A					
10						B	110	100	100A	A	A	100	A	100B	A	100	100H	100	A					
11						A	A	100	100	100	B	100	(100)B	B	C	100	100	100	110					
12						A	100	100	100	100H	100	110	A	A	A	A	A	A	A					
13						A	A	100	100	A	100	B	100	A	(100)B	A	A	A	A					
14						A	A	A	A	100	100	100	110	100	100H	100	100H	100	100					
15						C	A	A	100	B	B	A	A	A	A	A	A	A	A					
16						A	A	100	100	100	100	100	B	A	A	100	100	100	100					
17						C	C	100	A	100	100	100	A	100	100	100	A	100	A					
18						A	100	100	100A	A	A	A	A	A	A	A	100	A	100					
19						110	100	100	100	100	100	100	A	100	100	100	100	A	A					
20						110	100	100	100	100	A	100	100	(100)B	100	100	100	A	A					
21						110	100	A	100	100	100	100A	110	(110)B	B	100A	A	A	A					
22						A	100	100	100	100H	A	(100)A	100	(100)B	100	A	100	A	A					
23						100H	100	100	100	110	100	B	B	A	B	B	100	100	100					
24						A	110	110	100	100	110	110	100	110	(100)B	100	100	A	A					
25						100A	100	A	100	A	A	A	A	A	A	A	100	100	A					
26						100	100A	100	100	100	100	(100)B	A	100	100	100	B	A	A					
27						100	110	110	100	A	A	A	A	A	(100)B	B	100	110	A					
28						A	100	100	100	100	A	100B	B	B	B	100	100	100	100					
29						A	100	100	100	100	100	B	B	100	100	A	A	A	A					
30						A	110	100	A	100	A	A	A	100	(100)B	A	100A	A	A					
31																								
Median Value						110	100	100	100	100	100	100	100	100	100	100	100	100	100					
Count						12	23	24	27	24	17	20	10	17	16	16	18	13	7					

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 7

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fEs | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8	3.6	4.4^{Y}	3.4	2.8	3.0^{Y}	G	3.4	6.2	5.7^{Y}	9.0^{Y}	9.2	7.1	5.8^{Y}	9.5^{Y}	10.8	5.4^{F}	7.5^{F}	10.6	12.2	9.2	6.2	(5.2)^{F}	9.4
2	4.2^{F}	2.9^{F}	2.4	3.1	2.2	G	G	G	G	G	B	G	4.5	5.3	5.2	5.1	8.7	4.5	3.5	7.3	8.7	5.2	4.3	4.5
3	3.8	2.6	5.4	2.2	3.2	G	G	G	5.2	G	7.0^{Y}	7.8^{Y}	7.8^{Y}	6.6^{Y}	6.8^{Y}	13.4	9.0	8.3	9.0	6.3	13.7	8.4	7.4	8.9
4	5.5	(3.4)^{Y}	5.6	3.6	1.6	B	3.6^{B}	B	4.8	7.4	7.2	5.8	5.8	6.5	9.9^{Y}	G	3.7	3.5	3.5	3.0	(8.2)^{Y}	5.0	3.7	5.8
5	7.2	5.8	5.2	3.5	3.9	G	3.6	5.1	6.6	6.6	5.4	7.4	19.8^{Y}	6.4	7.4	4.4	8.4$^{YF}_{B}$	6.4	4.0	3.6	2.8	2.2	7.0	9.4
6	7.8	9.0	9.0	9.6	3.2^{Y}	5.2	7.4	6.1	4.5	5.7	7.0	10.4	6.5	4.7^{Y}	4.8	6.4	B	5.8	6.2	4.6	3.2	3.4	2.4	3.4^{F}
7	3.7^{F}	7.7	4.9	3.0	4.9	4.5	7.7	7.7	8.7	6.3^{Y}	6.3	5.3	5.0	B	6.2^{Y}	8.3^{Y}	8.8	5.0	4.0	2.8	2.6	5.2$^{F}_{B}$	3.6^{B}	3.6
8	6.2	3.6	5.2	3.8	2.7	G	4.6^{Y}	8.5$^{F}_{B}$	12.2^{B}	10.2$^{F}_{B}$	(10.4)$^{YF}_{B}$	15.3	D	13.6	13.4	15.3	14.4$^{F}_{B}$	13.4	9.0	6.5	5.0	3.4	3.5	2.8
9	5.2	6.4	7.2	7.2	7.0	4.7^{F}	5.7	5.2^{Y}	8.7$^{F}_{B}$	6.6	(12.9)$^{F}_{B}$	(13.2)$^{F}_{B}$	5.4	C	C	7.2	8.0	8.4	7.0	7.0	4.7	4.1	5.5	5.0
10	4.0	3.2	3.0	3.6	2.0	B	3.4	6.2	9.4	9.0^{Y}	5.2	10.3	12.4	11.0^{Y}	13.8	8.8$^{F}_{B}$	5.8	7.1	5.4	5.5	2.9	5.2	3.6	(4.1)^{Y}
11	(3.5)^{Y}	6.6	(4.5)^{Y}	3.7^{B}	5.2	4.7	(4.5)^{Y}	6.2^{Y}	(7.9)$^{YF}_{B}$	9.4	8.8	9.4^{Y}	G	B	C	5.4	5.4	7.4	13.2$^{F}_{B}$	(7.8)$^{YF}_{B}$	7.2	7.4	7.0	5.9
12	5.4	(5.0)^{F}	3.7	3.6	C	3.8	3.6	7.1	7.0^{Y}	5.7^{B}	7.6	7.9	7.8	10.0	10.6	7.0	8.5	3.2	4.5	3.9	3.7	4.0	4.5	3.5
13	5.5	7.6	6.4	7.1	2.8	3.0	4.8	9.2$^{YF}_{B}$	(5.4)^{Y}	(5.3)^{Y}	6.5^{Y}	B	S	9.0	9.5	11.5	5.8	8.5	5.4	8.2	3.6	3.4	5.0	8.3
14	4.8	3.4	(8.6)^{Y}	7.4	7.6	5.0	4.2	7.2	8.7	(10.0)$^{B}_{F}$	4.9^{Y}	G	6.7	10.5^{Y}	9.5^{Y}	7.2	6.6	5.8^{Y}	5.2	7.4	(8.6)^{Y}	4.8	2.8	4.0
15	6.0	7.0	C	C	C	C	6.3	6.0	12.0	10.2$^{B}_{F}$	10.3	10.5	12.3	8.2	6.5	10.9	7.9	12.0	9.0	9.0	6.4	4.9	C	5.5
16	5.0	6.4	6.0	5.2	5.2	5.0	3.0	G	6.2	6.8	11.0	10.0$^{B}_{F}$	6.6	9.4	7.4	4.4	4.4	4.2	6.4	12.8^{B}	9.4	4.8	4.6	3.6
17	2.6	6.2	2.6	C	C	C	C	4.3^{YB}	4.8	5.5^{YB}	6.1^{YB}	6.0^{YB}	6.3	4.8^{Y}	G	4.7	4.5	4.2	3.8	5.2	4.3	4.2	2.7	4.3
18	4.2	3.4	3.8	(3.3)^{Y}	2.0	3.6^{Y}	5.0	5.4	7.8	13.1^{B}	8.5	7.4	7.4	7.8	7.1	5.9	3.7	4.1	4.8$^{B}_{F}$	6.7	3.8	2.0	3.6	3.6
19	2.6	3.4	5.0	G	B	G	G	4.6	5.0	7.5$^{YF}_{B}$	C	(14.1)$^{B}_{F}$	(16.0)$^{YF}_{B}$	15.0$^{B}_{F}$	14.1$^{B}_{F}$	5.7	4.3$^{Y}_{B}$	5.5	9.2	5.5	2.8	6.3	7.1	3.7
20	6.3	1.6	3.8	4.2	4.0	4.2	7.4$^{B}_{F}$	6.4	5.7	9.4	11.2	14.0	10.2^{YB}	6.6^{Y}	14.6^{Y}	14.0^{Y}	14.4	7.8^{B}	6.8	5.6	5.4	4.4	5.2	6.4
21	7.8	6.6	4.6	3.7	3.6	B	G	6.2	5.0	5.2	12.4	5.6	(7.2)^{Y}	7.8	4.9	10.6	9.5	5.2	7.2	5.3	5.5^{B}	7.5	8.8	7.0
22	4.0^{F}	4.8^{F}	3.4	3.7	5.3	4.9	G	G	4.6	4.8	4.2	5.2	5.2	7.2^{Y}	G	5.5	8.5	5.7	3.5	2.8	3.7	2.3	3.4	7.5
23	4.4	3.4	2.6	2.8	2.7	G	4.4	4.4	4.7	4.8	5.2^{Y}	B	4.6	6.0	8.6	5.2	4.7	4.6	4.0	4.6	6.5^{Y}	4.8	2.8	3.6
24	5.8	2.0	5.0^{Y}	2.4	2.8	3.6	3.6$^{Y}_{F}$	3.8	4.8^{Y}	8.7^{B}	9.5	5.7	9.2^{Y}	8.8	9.2	4.8^{Y}	7.4	6.4	7.6	3.6	3.6	3.0	(3.6)^{Y}	3.6
25	5.5	4.3$^{B}_{F}$	6.3	5.3	2.8	3.0	3.6^{B}	3.9^{B}	G	10.1^{F}	11.4	12.6^{F}	7.2	6.4	7.4	10.2	9.0	9.7	7.4	7.5	4.8	3.5	7.4	7.4
26	7.0^{Y}	8.0	8.6	8.7	5.6	3.6	3.7	5.0	7.3	5.2	7.6^{Y}	15.0^{G}	15.0	B	B	4.8	B	3.2	3.2	2.8	3.8	2.6	4.5	4.0
27	6.7	4.6	2.6	5.8^{F}	3.4	3.0	3.7	4.6	5.4	9.2	13.6	8.8	8.8	7.8	9.0	7.1	4.4	4.7	5.6	6.2	4.5	3.8	3.8	6.3
28	6.2	2.6	B	2.4	4.2	5.8	8.6	10.2$^{G}_{Y}$	10.4^{F}	13.2^{Y}	C	5.0^{Y}	6.6^{Y}	5.8	5.8	G	G	G	3.7^{Y}	3.2	2.2	4.5	8.6	9.4
29	8.3	5.2^{F}	4.6	3.4	3.6	2.2	G	4.6	7.9	7.8	(14.7)$^{G}_{F}$	11.6^{Y}	8.3	6.5	13.7	7.0	5.8	5.0	6.7	4.4	7.5	4.6	7.0	6.3
30	5.8	6.0	2.8	3.6	(2.8)^{Y}	3.8	4.9	7.1	11.4	14.6^{F}	12.3$^{G}_{F}$	15.0	14.5	14.3	G	7.7	4.3	5.4^{Y}	3.8	8.9^{Y}	6.0	3.8	6.6	4.7
31																								
Median Value	5.4	4.7	4.8	3.6	3.3	3.6	3.7	5.2	6.2	7.1	8.8	9.0	7.2	7.5	7.4	7.0	6.2	5.6	5.5	5.6	4.8	4.4	4.5	4.8
Count	30	30	28	28	26	25	29	29	30	30	27	28	29	26	27	30	28	30	30	30	30	30	29	30

fEs

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 8

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | (M3000)F2 | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(2.9)P	F S	2.9 P	3.0 S	3.0	3.3	3.0	3.2	3.1	3.1	A	2.8	2.9	2.8	(2.9)P	(2.8)P	3.0	3.0	A	A	A	2.9	2.6 H	A H
2	2.7 Z	2.7	2.7 F	2.7	2.8	3.0	2.8 K	3.1 K	3.3 K	3.0 K	2.9 K	2.7 K	2.6 K	2.8 K	2.8 H	(2.9)J	2.9	2.9 S	2.9	A	(2.9)J S	2.6	2.8	2.7 S
3	2.8	2.8	2.8	2.5	3.1	(3.1)P S	(3.4)P	3.5	3.2	3.1	3.0	2.9	2.9	2.9	2.9	A	(3.2)J	(3.0)J	B	B	A	2.9 P	2.9 P F	F
4	(2.6)P F	3.2	F	(2.9)J F	2.8 P	2.7	3.1 P S	3.2	3.3	3.3	3.1	3.0	2.8	2.9	3.0	3.1	3.0	(3.1) P	(3.0)J S	3.0	(2.8)J	S	2.8 V P	F S
5	(2.6)J F	F	F	F	F	3.1 F	3.4	3.3	(3.2)J	3.1 P	(3.0)P	F	A	3.1	2.8	3.1	A	2.9	B	(3.4)J P	(2.8) P	2.9 P	(2.6)P	A
6	A	A	A	A	2.9	3.1 S	3.3 F	3.3 P	3.0 F	2.9 P S	3.1 P S	A	2.8	[2.8] B	(2.9)P	B	3.3	3.1	(3.5)J	3.2	2.8	(3.0)P S	2.9	(2.7) B
7	2.8 F	(2.9) F	2.9	2.7 H	2.4	2.7	2.7 P S	2.9 F	A	(3.3)J	(2.7) P	(2.8)J	(2.7)J	2.9	2.9	2.9	B	3.2	S	(3.2)P S	(3.0)J S	(3.0)J P	B	B F
8	2.7	2.8 P S	3.2	3.2	2.9	2.8	3.2	(3.1)J	A	2.9	2.6	A	A	(2.8)P	A	A	2.9	A	3.2	S	B	2.7	(2.9)J	(2.9)J
9	(2.9)J F	2.7 F	F	(3.0)J F	(2.9)J F	2.9 F	2.9 F	3.0	(3.0)P	3.2	A	A	2.9	C	C	3.1	3.0	(3.3)P	(3.0)J	3.1	2.9	2.8P	2.7 P H	(2.6)J
10	2.7	S	(3.1)P	2.6 S	(2.6)P F	2.5 F	3.3	B	3.0	A	3.1	A	A	A	A	B	B	A	B	A	(2.9)J	B	B	(2.9)P B
11	2.9	(3.0)J	(3.1) B	(2.8) B	B	B	3.4	3.6	3.0	A	2.9	A	2.9 S	(2.9)J	(3.0)C	3.1	3.2	3.1	A	(3.0)J	3.0	2.7	2.8 H	(2.7)P F
12	2.8 B	2.8 P F	2.9 F	2.9	[2.8]C	2.8	3.0	3.2	(3.0)B	3.1	3.0	(2.9) B	(2.8)J	(2.7)J	(2.7)J	3.0	(3.3)J	(3.1)J	3.1	2.8	2.8	2.7 S	2.9 S	2.7 S
13	(2.6)J F	(2.9)P F	B	B F	3.1 P F	3.3 F	3.1	3.1	3.3	3.3	S	2.8	S	2.8 S	A	A	B	(3.0)B	F	3.0	(2.8)P S	(2.7)P	2.7	F
14	(2.8)J F	(2.9)J F	F	(3.1)J F	3.2 P	3.1 P F	3.3 F	3.1	(3.3)A	(2.9)J	2.8	2.8	2.8	A F	A F	(2.8)J	(2.8)P	3.2	(3.0)J P	B	A	(2.9)B	B	B
15	3.0 P	2.8	C	C	C	C	2.9	3.1	A F	A F	A	A	A	2.8	2.8	2.9	2.9	A	(2.7)P	3.2 S	2.9	3.1	C	3.0
16	2.6	2.9 F	3.2 F	3.2 F	3.2	3.1 F	3.1	3.2	3.4	3.2	A	A	2.7	2.8	2.9	3.1	3.1	3.1	3.1 H	A	A	B F	B F	(2.9)P
17	2.7	(2.7)J F	(2.8)P B	C	C	C	C	3.1	3.5	(2.9)J	2.5	2.7 B	2.7	2.7	2.9	2.8	2.9	3.0	2.9	3.0 S	2.7	2.7	2.6	2.7 S H
18	2.9	3.1	3.0	2.8	2.8 F	3.0	S	3.1	A	A	F	3.3 F	2.9	2.9	3.1	3.3	3.4	3.2	3.3	S	S	(2.9)P S	(3.0)P S	(3.3)P S
19	S	(3.1)J F	(3.0)J F	2.9 P F	(2.7)P F	3.0 F	3.0	2.9	3.0	3.0	C	A	A	2.8	2.8 P	3.0	3.1	3.2	(3.0)J	3.1	3.0	B	(2.7)J	(2.8)J F
20	F	(2.7)J F	B	3.0	2.8 H	2.9	3.0	3.3 P	3.5	A	2.8 H	A	2.8	(2.9)J	A	A	A	(3.1)J	(3.2)J	3.2	3.1 H	(2.6)P H	2.7 F	(2.7)P
21	B	S F	2.6 S F	2.8 F	(2.8)J P H	3.4	3.2	S	3.0	3.1	A	2.7	3.1	3.1 P	(2.9)P	A	(2.7)A	2.9	3.2	3.0	2.7	2.8	2.8	2.8
22	2.6 F	2.7 F	2.9 F	2.7	2.8 F	3.2	3.0 H	2.8	3.3	2.9	(3.1) S	2.7	3.0	2.9 A	3.0	3.0	A	2.8	(2.8)J	(3.0)J	3.2	2.6	(2.5)P F	(2.5)P F
23	(2.5)P S	(2.8)P F	2.9	2.9 P F S	3.0 P F	3.2	(3.1)P	(3.1)P	2.9	B	2.9	(2.8)J	2.6 H	B	A	(2.9)J S	(2.8)J	(2.8)P	(2.9)P	(3.0)J	S	2.6 F	F	F
24	F S	F	F	(2.9)J F	2.9	2.7	2.8	2.7	3.1 P	A	A	2.6	2.8	2.7	(2.8)B	2.8 P	2.9	2.9	S	(3.3)J	2.9	(2.6)J H	B	2.8 B
25	(3.2)J	3.2 P	(3.2)P	3.0	3.1	3.2	3.0	3.0	3.1	A	A	A	2.9	(2.8)B	2.8	3.1	3.1 A	A	3.0	2.7	2.7	2.7	2.7	3.1
26	(3.0)J F H	A F	A F	A	(2.8)J P F	3.0	2.9	3.1	3.1 K	S K	A K	A K	A F K	2.7 P S	3.0	3.1 P S	(3.0)J	2.9	3.2 B	(3.1)P	2.9 S	2.6 S	2.7	F
27	F	(2.9)J F	3.0 F	(2.8)J F H	3.0 P	3.2	3.4	3.3	3.1	A	A	A	(3.0)J	A	A	3.3 B	3.0	2.9	2.9	3.1	2.9 S	2.9	2.9 F	(2.8)J F
28	(2.8)P F	(3.2)P	B	S F	(3.0)J F	S F	A	(3.4)J	A	A	C	2.6 P	2.9	2.9	2.9	(2.8)J	(3.1)P	3.0	3.2	S	2.9	(2.8)J F	A F	(3.0)J P F
29	A	F	F	F	F	F	3.1 P	3.4	A	3.8	A	2.8	2.7	3.0 H	A	2.9	3.0	3.2 P	3.0 B	B	2.7	(2.6)P B	A F	(2.6)J H
30	F	F	(2.9)J F	F	2.5 F	2.4	2.9	3.0	A	A	2.7	A	A	A	2.9 P H	(2.7)P S	(3.1)P	3.2	2.9	A	A	2.9 P	A	2.8
31																								
Median Value	2.8	2.9	2.9	2.9	2.9	3.0	3.1	3.1	3.1	3.1	2.9	2.8	2.8	2.8	2.9	3.0	3.0	3.0	3.0	3.1	2.9	2.8	2.8	2.8
Count	22	21	18	21	25	25	27	28	23	18	16	16	22	24	21	23	24	26	22	19	22	26	20	21

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fmin F | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	(1.4)A	AF	A	2.0A	A	2.8	3.2	A	A	A	A	A	A	A	A	3.8	A	A	A	A	A	A	A
2	AF	1.1F	E	1.2	1.1	2.0	2.5	3.2	3.7	4.5A	4.4	4.4	4.4	A	A	A	A	3.2	A	A	A	A	A	1.6
3	A	A	A	1.5	1.5	2.0	2.8	3.8	3.6	4.0	A	A	A	A	A	A	A	3.3	A	A	A	A	A	A
4	A	1.8	A	A	1.4	2.1	3.2	3.5	4.0	A	A	4.8A	4.2	A	A	4.0	3.7	3.1	2.6	2.2	A	A	A	A
5	A	A	A	1.4	E	2.2	2.9	3.2	A	A	A	A	A	A	A	4.2	A	A	A	A	A	1.4	A	A
6	A	A	A	A	A	A	A	A	A	A	A	A	4.7A	4.7A	4.4	A	4.1	A	AF	AF	A	A	1.4	A
7	AF	A	AF	1.1	A	A	A	A	A	A	A	4.6A	A	5.0	A	6.2	10.0	A	A	A	A	A	A	A
8	A	A	A	A	1.9	2.3	2.6	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9	A	A	A	A	A	A	A	3.2	A	A	A	A	A	A	C	A	A	A	A	A	A	A	A	AF
10	A	A	A	AF	1.8	2.1	3.0	A	A	A	A	A	A	A	A	A	A	A	A	A	(1.6)B	A	A	A
11	1.7A	A	A	A	A	A	A	A	A	A	A	A	4.0	4.2	C	A	A	AF	A	AF	AF	A	A	A
12	A	1.1F	1.1F	1.1	C	2.4	2.7	A	3.8	A	A	A	A	A	A	A	A	3.2	A	A	A	A	A	1.1
13	A	A	A	1.8	A	2.4F	A	A	4.1	7.0S	A	5.2	S	S	A	A	A	A	A	AF	A	A	1.5	A
14	A	1.4	A	AF	1.8F	A	A	A	A	A	4.4	4.2	A	A	A	A	A	A	A	AF	A	A	A	A
15	AF	AF	C	C	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
16	A	A	AF	A	A	A	N	N	3.8	A	A	A	4.4	A	A	4.0	4.0	3.2	A	A	A	A	A	1.8
17	A	1.3F	1.1	C	C	C	C	3.6	4.0	A	A	A	A	A	4.8	4.1	A	3.7	2.8	A	A	A	A	A
18	A	AF	(1.6)F	1.3	1.4	2.4	A	A	A	A	A	A	A	A	A	A	3.2	3.3	A	A	A	A	1.4	A
19	1.4	1.7	A	1.1	1.1	2.0	2.8	(3.3)A	(3.5)A	(4.3)A	C	A	A	A	A	A	3.8	(3.6)A	A	AF	A	A	AF	(1.4)A
20	A	1.1	E	A	(1.2)A	2.0	A	3.2A	A	A	A	A	A	A	A	A	A	A	A	A	A	AF	A	1.6A
21	A	1.8F	1.8F	1.4F	1.2	2.0	3.0	A	A	A	A	(4.7)A	A	A	(4.3)A	A	A	(3.5)A	(2.8)A	2.0A	A	(1.8)A	AF	AF
22	AF	AF	1.3F	1.3AF	AF	2.2	2.7	3.4	4.1	4.4	4.6	(4.0)A	5.5	A	4.4	4.5A	A	A	A	2.4A	A	1.5	A	A
23	A	A	1.2	1.2	1.2F	1.9	A	4.0	A	4.3A	A	4.2	6.0	A	A	A	4.2A	A	3.0A	2.9	A	AF	A	A
24	A	1.2F	A	1.4	A	A	2.7	A	4.1	A	A	A	A	A	A	A	A	A	A	2.4A	A	A	1.6	1.4
25	A	AF	AF	1.6F	AF	N	A	4.0A	3.8	A	A	A	A	A	A	A	A	2.8	AF	A	A	A	1.3A	A
26	A	A	AF	A	A	2.4	N	A	A	4.4	A	A	A	4.3	4.3	4.2	3.8	3.7	A	A	1.6	1.5	A	A
27	1.6	AF	1.7	1.4	1.6	2.1	2.7	3.4	A	A	A	A	A	A	A	A	3.8	3.5	A	A	1.5	A	A	1.7A
28	1.3	A	3.2	A	AF	AF	A	A	A	A	A	A	A	A	4.2	4.2	3.8	(3.0)A	3.2	A	1.8	A	A	A
29	A	(1.4)A	AF	AF	A	2.0	2.9	3.6	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
30	A	A	A	A	A	2.5	A	A	A	A	4.4	A	A	A	4.6	A	A	A	4.4	A	A	A	A	A
31																								
Median Value	—	1.4	1.2	1.4	1.4	2.1	2.8	3.4	3.8	4.4	—	4.5	4.4	—	4.4	4.2	3.8	3.3	2.9	2.4	—	—	1.4	1.6
Count	4	11	10	14	14	18	14	14	11	7	4	8	7	4	7	8	11	13	6	5	4	4	5	7

fmin F

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | $f_{min}E$ | 135° E Mean Time | Kokubunji Tokyo | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.8	1.9	2.5	2.7	2.8	2.8	2.7	2.5	1.8	1.6	1.4	1.2	1.2	1.3	1.2	E
2	E	1.1F	E	1.1	E	1.4	1.2	1.4	1.4	1.8	2.0	2.0	2.6	4.1	3.8	2.0	1.4	1.5	1.2	1.2	1.2	1.2	1.2	1.2
3	1.1	1.2	1.1	1.2	1.2	1.3	1.7	1.8	1.4	1.6	2.6	2.8	2.5	3.0	2.6	2.0	1.8	1.6	1.6	1.4	1.4	1.4	1.5	1.4
4	1.1	1.1B	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.5	1.8	2.4	1.8	1.8	1.4	2.1	1.8	1.7	1.7	1.7	1.6	1.7	1.6
5	1.6	1.1	1.1	1.1	E	1.1	1.2	1.3	1.6	2.0	2.0	2.0	2.0	2.6	2.0	2.0	1.8	1.4	1.2	1.2	1.3	1.2	1.3	1.1
6	1.1	1.2F	1.2	1.2	1.2	1.3	1.3	1.8	1.4	1.6	1.9	(2.0)B	3.9	2.1	2.0	1.9	1.5	1.4	1.3	1.2	1.2	1.2	1.1	E
7	E	1.1F	1.1F	1.1	1.1	1.4	1.4	1.4	2.0	2.0	2.0	2.0	2.5	B	2.0	2.0	1.6	1.4	1.4	1.4	1.4	1.5	1.6	1.4
8	1.3	1.1	1.1	1.1	1.1	1.6	1.8	1.8	1.4	1.4	2.0	2.0	2.0	2.7	2.0	1.4	1.9	1.7	1.7	1.4	1.5B	1.7	1.6	1.4
9	1.3	1.3	E	E	E	1.2	1.2	1.3	1.4	1.4	1.4	2.7	2.2	1.9	C	1.6	1.6	1.4	1.4	1.3	1.5	1.4	1.5	1.1
10	1.1	1.2	1.2	1.1	1.2	1.4F	1.6	1.6	1.8	1.9	3.2	2.8	3.2	3.3B	3.2	2.0	2.0	2.0	1.5	1.4	2.6	1.5	1.5	1.6
11	1.5	1.3	1.4	1.4	1.4	1.4	1.2	1.8	1.9	2.6	3.8	2.7	(2.0)B	B	C	2.1	2.0	1.3	1.1	1.4	1.2	1.6	1.4	1.1F
12	1.1F	1.1F	E	E	C	1.1	1.4	1.4	1.4	2.0	2.8	2.8	2.8	2.8	2.2	2.0	1.4	1.4	1.2	1.2	1.2	1.2	1.2	E
13	E	E	E	1.1	1.2	1.4	1.6	1.2	1.8	2.1	2.0	B	2.7	2.0	(2.2)B	2.0	2.6	2.0	1.7	1.6	1.6	1.8	1.5	1.6
14	1.1	1.2B	1.2	1.1	1.1	1.3	1.5	1.6	1.4	1.7	2.0	2.0	2.6	1.9	2.0	1.9	2.0	1.8	1.6	1.4	1.8	1.8	2.0	1.6
15	1.2	E	C	C	C	C	1.7	2.0	1.6	3.9	3.8	3.5	3.4	3.2	3.2	2.0	1.9	1.8	1.5	1.4	1.5	1.3	1.4	1.3
16	1.7	1.6	1.6	1.5	1.5	1.5	1.6	1.2	1.4	2.0	2.0	2.0	4.0	3.4	2.0	1.8	2.0	2.0	1.8	1.4	1.4	1.8	1.6	1.2B
17	1.8	1.1F	1.1	C	C	C	C	1.4	1.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.4	1.2	1.2	1.1	1.2	1.1	1.1
18	E	E	1.1	1.1	E	1.4	1.4	1.5	1.6	1.7	1.7	2.3	2.6	2.6	2.4	1.8	1.9	1.7	1.2	1.1	1.4	1.6	1.6	1.1
19	1.1	1.1	1.1	E	B	1.6	1.8	1.8	1.4	1.4	1.4	2.0	2.0	2.0	1.4	1.5	2.0	1.4	1.4	1.3	1.2	1.2	1.2	1.2
20	1.2	1.1	E	1.2	1.2	1.6	1.4	1.8	1.6	2.0	2.2	2.0	2.8	(2.0)B	(2.0)B	(2.0)B	2.0	1.4	1.4	1.6	1.4	1.5	1.6	1.6
21	1.6F	1.6	1.8	1.4	E	1.6	1.6	1.6	1.5	2.0	2.0	(2.0)B	2.8	3.6	3.5	2.8	1.4	1.2	1.2	1.2	1.4	1.8	1.8	2.0
22	1.2	1.3	1.1F	1.1F	1.1F	1.4	1.3	1.3	1.6	2.0	2.0	2.0	2.0	(2.0)B	2.2	2.0	1.8	1.2	1.1	1.2	1.2	1.2	E	E
23	E	E	E	E	E	1.2	1.6	1.6	1.6	2.8	2.8	B	4.0	3.4	4.2	3.8	2.1	1.9	1.7	1.7	2.1	1.5	1.6	1.4
24	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.6	2.0	1.6	1.4	3.1	(2.0)B	2.0	1.8	1.4	1.4	1.4	1.6	1.4	1.4B	1.6
25	1.4	1.1	1.1	1.2	1.3	1.7	1.5	1.5	1.4	1.4	1.6	1.6	1.9	1.9	2.0	2.0	1.6	1.3	1.2	1.2	1.2	1.3	1.2	1.1
26	1.1	1.1	1.1	1.1F	1.1F	1.3	1.3	1.4	1.6	1.2	2.0	(2.1)B	2.0	2.0	2.0	2.0	B	1.5	1.3	1.5	1.1	1.1S	E	E
27	E	1.1	1.1	1.1	1.2	1.3	1.3	1.5	1.4	1.4	2.0	2.8	2.8	3.3	(2.0)B	4.1	1.3	1.3	1.2	1.2	1.2S	1.2	1.2	E
28	E	E	B	E	1.2	1.2	1.2	1.6	1.4	1.5	3.6	(2.1)B	4.0	3.8	3.6	2.6	2.0	1.5	1.3	1.4	1.3	1.5	1.4	1.2
29	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.3	2.0	2.0	2.0	4.1	3.5	2.9	2.0	2.0	1.7	1.5	1.3	1.4	1.6	1.2	1.3	1.2
30	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.2	1.6	1.8	1.8	3.3	(2.0)B	(2.0)B	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
31																								
Median Value	1.1	1.1	1.1	1.1	1.2	1.4	1.4	1.4	1.4	1.8	2.0	2.0	2.6	2.6	2.0	2.0	1.8	1.5	1.4	1.4	1.4	1.4	1.4	1.2
Count	30	30	28	28	26	28	29	30	30	30	30	28	30	28	28	30	29	30	30	30	30	30	30	30

Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | Z d | 135° E Mean Time | **Kokubunji Tokyo** | Lat. 35° 42.4' N | Long. 139° 29.3E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(70)P	FS	70P	70S	170	90	120	90	110	80	A	70	90	120	(60)P	(90)P	90	90	A	A	A	150	100H	A
2	110Z	70	90F	100	100	120	120	60	60	130	60	90	50	50	100H	(90)J	A	130S	120	A	(100)JS	100	80	80S
3	70	80	90	120	100	(130)BS	(100)P	60	50	70	60	100	A	80	80	A	(90)J	(130)J	B	B	A	90P	130PF	F
4	(120)PF	60	F	(80)JF	110P	120	130PS	110	140	120	60	120	110	100	100	100	100	(130)P	(130)JS	60	A	S	70PV	FS
5	(110)JF	F	F	F	F	90F	80	100	(60)J	100P	(80)P	F	A	90	100	70	A	90	B	(70)JP	(130)P	100P	(140)P	A
6	A	A	A	A	100	90S	70F	90P	160F	120PS	120PS	A	110	(120)B	(130)P	B	80	80	(50)J	90	100	(70)BS	90	130
7	100F	110F	70	110H	130F	120	130PS	150F	A	(70)J	(170)P	(130)J	(130)J	80	90	110	B	70	(80)S	(60)PS	(100)JS	(70)JP	B	BF
8	90	110PS	90	140	110	100	100	(40)J	A	170	120	A	A	(50)P	A	A	80A	A	80	S	B	60	(90)J	(100)J
9	(100)JF	110F	F	(130)JF	(130)JF	150F	120F	90	(110)P	110	A	A	80	C	C	90	100	(80)P	(100)J	100	80	90P	80PH	(120)J
10	90	S	(110)P	(130)S	(120)PF	110F	80	B	A	A	(90)S	A	A	A	A	B	B	A	B	A	(60)J	B	B	(50)P
11	70	(60)J	(80)B	(80)B	B	B	90	60	130	A	60	A	80S	(90)J	(90)C	90	90	120	A	(130)J	110	100AF	80AFH	(110)PF
12	(70)BF	120PF	110F	100	(110)C	120	160	140	(120)B	100	120	(60)B	(80)J	(110)J	A	80	A	(130)J	100	130	90	90S	80S	90S
13	(110)JF	(30)PF	B	BF	120PF	140F	140	A	40	130	S	80	S	S	A	A	B	(80)B	F	110	(90)PS	(60)P	(70)B	(120)F
14	(100)JF	(100)JPF	F	(110)JF	100P	140PF	130F	120	A	A	150	120	90	AF	AF	(120)J	(110)P	40	(120)JP	B	A	50	B	B
15	60P	70	C	C	C	C	110	90	AF	AF	A	A	A	110	110	130	120	A	A	80S	80	80	C	90
16	90	80F	50F	150F	100	140F	130	100	100	90	A	A	120	100	100	90	100	80	70H	A	A	BF	BF	(100)P
17	90	(120)JF	(120)P	C	C	C	C	110	110	(110)J	A	90B	120	100	160	90	130	100	110	110S	100	100	100	120SH
18	90	60	80	110	100F	70	S	190	A	A	F	70F	70	70	60	70	90	140	100	S	S	(110)PS	(110)PS	(60)PS
19	S	(90)JF	(100)JF	100PFE	(80)PF	120F	130	120	90	90	C	A	A	A	120P	110	120	110	(120)J	160	80	B	(90)J	(110)JF
20	(110)JF	(130)JF	B	120	110H	80	70A	60P	70	A	AH	A	110	(120)J	A	A	A	(110)J	(60)J	70	90H	(90)PH	120F	(120)P
21	B	SF	70SF	100F	(90)JFH	90	110	S	120	100	A	50	90	A	(50)P	A	A	140	110	150	110	110	90	130
22	110F	140F	90F	120	100F	100	110H	140	110	80	(60)S	100	100	A	70	90	A	100	(100)J	(100)J	90	130	(90)PF	(90)PF
23	(100)ES	(90)PF	70	100SFF	100PF	100	(130)P	(90)P	120	B	160	(90)J	70H	B	A	(60)JS	(90)J	(120)P	(140)P	(100)J	S	90F	F	F
24	FS	F	F	(90)JF	100	150	150	180	120P	A	A	80	110	110	100	110P	120	100	S	(90)J	(130)B	(80)JH	B	120B
25	(70)J	90P	(130)P	90	110	100	120	90	60	A	A	A	70	100	90	50	100	A	120	80	100	70	110	50
26	(60)JFH	AF	AF	A	(100)JF	110	B	60	A	S	A	A	AF	100PS	90	140PS	(100)J	100	80B	(60)P	110S	110S	100	F
27	F	(110)JF	70F	(90)JH	100P	70	70	110	130	A	A	A	A	A	A	60B	80	120	120	90	120S	130	120F	(70)JF
28	(100)JF	(80)P	B	SF	(100)JF	SF	A	(60)J	A	A	C	(90)P	30	80	70	(70)J	(90)P	80	80	S	(70)B	(70)JF	AF	(100)JF
29	A	F	F	F	F	F	90P	70	A	G	A	60	A	50H	A	80	80	80P	100B	B	120	(70)PB	AF	(70)JH
30	F	F	(130)JF	F	100F	110	110	110	A	A	110	A	A	A	80PH	(130)PS	(110)P	(110)B	110	A	A	120P	A	60
31																								
Median Value	90	90	90	100	100	110	110	90	110	100	100	90	90	100	90	90	100	100	100	90	100	90	90	100
Count	23	21	18	21	25	25	26	27	20	17	14	16	19	20	20	23	21	26	22	19	21	26	20	22

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Sweep 1.0 Mc to 17.0 Mc in 15 min Manual

K 12

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	10.4	10.4	11.5	10.7	9.4	7.3	7.3	8.6	8.6	8.6	10.2	10.6	10.8	A	A	A	12.1	12.2	12.4	12.4	10.9	9.7	9.7	10.2
2	F	F	(11.7)	F	(9.7)	8.8	7.7	C	C	C	C	C	C	C	C	C	C	C	C	C	8.7	7.9	7.6	7.4
3	8.0	8.0	7.1	7.0	6.6	7.1	7.6	6.9	6.8	7.4	7.9	9.0	10.4	10.4	10.9	12.1	11.6	11.5	11.2	11.0	A	8.8	4.5	9.3
4	9.7	11.4	10.2	7.8	A	6.2	6.4	8.2	C	C	C	8.4	9.8	11.3	13.0	12.8	12.5	12.8	11.8	11.0	(10.4)	[10.2]	9.9	10.0
5	9.6	10.2	8.7	(9.3)	9.1	8.8	[8.6]	9.1	8.8	8.2	A	A	9.1	10.0	10.6	A	A	11.2	12.2	12.1	9.7	9.5	10.2	9.7
6	9.1	10.2	9.9	8.2	7.7	7.9	9.2	8.6	10.2	9.9	10.4	A	(14.6)P	10.5	10.9	11.7	12.4	11.5	10.1	8.8	8.4	8.9	8.6	(8.7)F
7	(9.1)P	9.5	9.4	8.2	6.3	6.2	7.9	9.0	10.0	8.0	A	9.2	10.7	11.7	12.9	12.6	12.7	11.7	10.6	9.5	9.3	8.8	9.9	9.7
8	9.1	9.3	9.3	8.5	8.1	7.8	8.0	8.7	8.1	7.2	8.1	9.2	10.5	11.5	12.8	12.8	13.1	13.0	13.5	13.3	12.1	11.1	11.4	10.8
9	9.6	8.5	[8.4]	8.3	(8.1)	[7.6]	7.2	8.1	9.4	A	A	9.0	9.8	10.3	11.1	11.3	11.4	11.5	10.5	8.7	(8.6)	9.1	9.5	10.0
10	10.4	11.5	9.0	6.2	5.6	6.4	8.8	8.1	8.1	7.8	8.0	8.7	10.0	11.0	12.0	11.9	11.8	10.5	9.2	8.7	9.3	9.1	8.8	9.5
11	9.7	9.9	9.1	7.6	8.0	7.7	8.1	8.8	7.7	7.5	7.3	7.6	9.2	10.7	11.3	10.9	9.9	9.2	9.8	10.1	8.7	7.6	8.0	(9.1)F
12	(8.6)F	C	C	C	C	7.1	7.2	A	8.6	9.9	A	8.5	9.5	10.5	10.9	12.4	10.9	9.2	8.5	8.3	8.7	8.8	8.1	8.8
13	9.2	9.3	8.7	7.9	7.0	7.1	7.3	8.2	8.4	C	C	A	9.5	[9.8]	10.2	10.8	11.8	12.1	11.5	9.1	8.1	8.7	9.2	9.8
14	9.7	9.1	9.2	8.0	8.1	8.6	9.1	8.7	8.5	8.2	7.3	8.0	8.8	9.6	9.7	10.2	11.8	11.9	10.6	9.5	8.3	9.0	9.3F	9.7F
15	9.5Z	F	8.3	8.0F	[8.0]	7.9	8.2	C	C	C	C	C	C	C	C	C	C	C	C	C	10.9	9.7	10.1	11.3
16	10.7	11.5	9.8	8.5	7.7	8.6	[10.0]	10.6	8.0	A	7.7	7.5	A	10.3	11.8	11.7	C	A	A	11.2	9.5	7.5	8.3	8.9
17	8.1	8.3	8.1F	8.0F	7.1	7.3Z	8.3	9.1	7.6	7.5	7.3	8.4	10.3	11.0	11.3	11.6	11.5	12.3	12.0	10.2	9.5	8.0	8.0	8.3
18	9.5	8.2	7.0	6.9	6.1H	6.1	8.4	7.6	6.9	6.9	7.0	8.0	10.2	10.5	11.0	11.0	10.8	10.1	8.9	8.9	9.1	8.6	8.4	(9.6)F
19	8.9	8.9	8.6	6.9	6.6Z	(6.6)P	7.5	8.8	8.3	A	11.3	9.3	8.7	9.9	11.3	11.0	11.3	11.4	10.8	9.4	9.6	8.9	9.0	8.4
20	7.4	8.4Z	6.8F	(6.6)F	7.0	6.6	7.2	9.2	8.3	A	6.8	8.0	8.6	9.2	10.4	10.8	9.9	10.0	10.0	9.8	9.1	8.9	9.1	9.4
21	9.6	8.8	8.5	8.8	8.4	7.2	[7.5]	8.9	10.8	A	A	A	8.7	9.8	10.0	10.0	10.1	10.1	10.0	9.2	8.2	8.4	8.3	7.9
22	8.5	8.7F	8.8F	8.5	7.2F	8.0F	[8.6]	8.6	8.9	9.2	8.6	7.2	7.4	7.9	8.3	8.5	9.7	10.1	10.5	10.2	8.2	7.9	7.5	7.7
23	8.2	8.3F	7.8	6.9	8.0F	C	C	C	9.2	8.3	8.2	8.3	8.4	9.0	[9.6]	10.1	10.2	10.8	10.2	8.9	7.9	7.4	7.5	7.6F
24	8.6	8.7	8.0	8.1	8.0	6.8	7.6	8.6	8.1	6.9	6.4	8.0	10.1	8.8	10.2	10.2	9.8	10.2	11.3	10.1	8.6	9.1	10.1	11.1
25	10.8	11.0	9.3	8.3	7.6	6.7	6.8	7.3	7.5	7.6	7.7	7.6	7.4	8.1	8.3	8.3	9.8	9.7	8.6	7.9	8.7	8.4	9.3	10.2
26	8.9	8.3	7.8	6.4	5.2	A	7.6	8.7	7.9	7.7	8.8	A	8.9	8.0	10.8	10.8	9.7	10.4	10.7	9.3	[9.0]	8.7	8.6	8.9
27	8.5	8.8	9.0	7.3	6.8	8.1	7.7	7.5	6.9	6.6	6.9	7.5	8.7	10.2	10.2	10.1	10.1	9.7	10.2	9.9	(9.2)S	8.8	8.7	8.5
28	8.2	(7.7)F	S F	(8.1)F	(6.8)F	(7.2)F	8.0	8.7	8.9	9.3	A	A	10.7	11.2	12.2	13.0	13.1	11.9	11.2	8.6	7.8	7.2	7.4	8.2S
29	8.2	8.4	7.8	7.5	6.9	7.1	9.3	8.3	7.1	6.1	A	A	8.7	9.9	11.0	11.4	11.3	11.1	11.1	11.0	A	A	8.6	6.8
30	[7.9]	9.0	8.3F	7.3F	6.8	5.2	8.2	6.8	A	A	A	A	A	9.4	10.5	9.8	10.0	8.9	8.2	7.1	7.6	7.9	7.8	6.8
31																								
Median Value	9.1	8.9	8.7	8.0	7.4	7.2	7.9	8.6	8.3	7.8	7.8	8.4	9.5	10.2	10.9	11.0	11.3	11.1	10.6	9.5	8.6	8.8	8.8	9.2
Count	29	27	28	28	28	28	29	26	26	20	18	20	26	27	27	26	26	27	27	28	28	29	30	30

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 1

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF2 | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	420	440	370	310	270	340	350	290	300	300	370	360	A	A	A	A	380	360	360	310	320	410	400	420
2	F	F	(400)	F	(410)	360	270	C	C	C	C	C	C	C	C	C	C	C	C	C	340	400	390	440
3	410	400	390	420	400	340	280	280	300	A	360	360	380	400	410	390	360	370	360	350	A	350	410	390
4	430	AF	A	A	A	370	280	A	C	C	C	370	400	330	320	350	330	390	320	340	(360)	[340]	330	330
5	360	310	310	(400)	(350)	350	[300]	310	310	290	A	A	400	400	400	A	A	390	360	310	330	370	370	370
6	350	330	330	400	390	370	300	300	350	310	260	A	(300)	410	420	400	380	300	360	370	420	420	370	(410)
7	(460)	390	350	340	460	360	300	300	330	320	A	410	410	380	370	370	330	330	320	340	350	360	350	350
8	360	360	330	300	330	300	290	290	300	290	400	410	400	A	370	370	360	360	340	310	310	400	380	350
9	380	380	[360]	340	(340)	[320]	310	310	360	A	A	330	390	370	390	370	370	(320)	310	310	(380)	400	400	420
10	400	310	340	370	320	380	300	270	340	330	410	390	400	400	380	360	360	350	350	360	400	380	420	400
11	390	360	310	360	360	370	270	300	240	300	410	420	380	350	340	320	320	350	340	330	300	370	(400)	(400)
12	(360)	C	C	C	C	310	300	A	310	360	A	400	420	410	420	350	310	340	320	360	360	360	400	420
13	400	360	320	330	320	300	300	300	280	C	C	A	390	[380]	380	(400)	350	360	330	300	360	420	410	380
14	390	370	340	370	330	350	360	310	280	320	380	430	440	420	410	A	350	330	330	340	A	(440)	400	(380)
15	360	F	330	(350)	[320]	300	280	C	C	C	C	C	C	C	C	C	C	C	C	C	350	390	420	360
16	400	360	330	330	370	350	[300]	260	290	A	350	450	A	410	370	340	C	A	A	310	320	360	350	(370)
17	400	380	(320)	390	360	410	310	280	350	350	A	460	440	420	410	390	390	380	310	320	330	430	420	460
18	360	340	410	F	420	410	300	290	350	410	460	400	390	390	390	370	350	320	320	400	340	330	430	(420)
19	340	350	330	330	(390)	(360)	300	310	320	A	260	330	430	420	390	370	370	350	320	330	350	370	370	350
20	380	380	(400)	(360)	400	390	320	310	370	A	410	420	410	400	400	350	350	350	370	330	370	390	390	400
21	380	340	330	380	360	370	[360]	320	310	A	A	A	460	400	390	390	380	370	340	340	320	390	410	410
22	370	(380)	370	370	410	(400)	[370]	310	370	360	(350)	400	410	390	400	400	370	370	360	310	290	420	420	400
23	420	(350)	360	380	(340)	C	C	C	310	350	320	370	400	400	[380]	370	390	340	320	300	350	410	400	430
24	410	380	360	440	390	320	340	320	260	310	430	460	340	410	370	380	400	420	350	390	390	350	420	400
25	400	330	320	320	330	370	320	310	320	310	330	370	380	400	360	400	350	320	350	390	400	440	380	400
26	360	330	340	330	A	A	310	310	350	420	400	A	450	410	370	360	370	380	330	330	[350]	370	430	380
27	400	310	370	320	(360)	320	370	330	300	340	390	480	420	390	390	380	370	A	350	350	(340)	380	400	360
28	380	(350)	SF	(300)	(320)	(360)	300	300	310	300	A	A	440	400	370	370	370	310	290	270	380	360	390	410
29	420	390	380	360	350	390	320	330	280	A	A	A	380	410	380	350	330	350	300	340	A	A	340	330
30	[340]	360	340	360	460	450	360	270	A	A	A	A	A	420	380	380	330	300	330	370	420	380	350	(440)
31																								
Median Value	390	360	340	360	360	360	300	300	310	320	370	400	400	400	380	370	360	350	330	340	350	380	400	400
Count	29	26	27	26	27	28	29	25	26	18	17	20	25	26	27	25	26	26	27	28	27	29	30	30

foF2

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 2

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F2 | 135° E Mean Time | **Yamagawa** | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	310H	A	(300)A	280	240	270	260	280	290	290	320	320	A	A	A	A	320	330	300	270	250	300	(310)A	300
2	(380)A	370F	300F	(300)AF	280	250	250	C	C	C	C	C	C	C	C	C	C	C	C	C	300	360A	310H	350H
3	A	320A	300	320H	350H	(300)	240	260	300	A	340A	330	340	360	360	350	320	300	300	270A	A	280	280	330
4	320H	AF	A	A	A	A	270C	290	270	C	C	270A	300A	320	390	300	300	280	290	280	270	[260]	260	280
5	(300)A	260	250A	300A	AF	280	[260]C	300	260	290	A	A	390	390	380	A	A	250H	300	270	280	(300)A	(300)A	300
6	300A	(300)A	(300)A	(300)A	(29 A	270	260	260	300	290	240	A	260H	390	390	380	320	280	290	280	290	310	A	340
7	A	A	A	(300)A	320A	230	270	230	300	270	A	350	390	370	340	330	300	300	(300)A	(300)AH	300	(300)A	(300)A	(300)A
8	(300)A	(300)A	260	240	280	270	240	250	300	290	400	390	400A	A	330	310	310A	(310)A	(300)A	260	260	(290)A	(300)A	290
9	290	290	270	250	250	[250]C	250	280	350	A	A	260	360	360	360	330	340	390AH	280	280	320	300	300	310
10	320	280	A	220	240	300	250	230	340	330	300	360	370	360	350	330	310	290	300	310	(300)A	280	300A	300
11	(300)A	(300)A	280	300H	280	300	230	250	200H	300	300H	300H	370	320	310	300	300	350FA	300FA	290	240	290FA	380FA	340FA
12	320A	C	C	C	C	270	260	A	(300)A	300	A	A	320H	380	360	300	300	250H	300	270	300A	300H	300HA	(320)HA
13	340H	300	290	290	280	270	240	280	250	C	C	A	380	[380]C	370	400	A	A	(240)A	A	(300)A	(300)A	300HA	310HA
14	(320)A	(300)AH	280	A	270	(320)A	(320)A	250	270	300	280	430	420	380	400	A	310	300	290	280	A	350	350F	320F
15	280F	(300)A	280	290	[270]C	250	240C	C	C	C	C	C	C	C	C	C	C	C	C	C	270H	280	A	290
16	(300)A	300	250	250	260	270	[260]C	250	260	A	350	450A	A	390	340	330	C	A	A	270H	260	(300)A	(280)AH	340A
17	(310)A	AH	280F	280	280	300	280	260	250	350	A	450	400	380	380	350	360	300	A	300H	A	380A	310H	(400)A
18	(310)A	300F	350F	320	300H	360	290	280	L	400	460	400A	370	370	360	320	300	300H	300	350A	(300)A	(300)A	(300)HA	390H
19	300	350A	250H	270	280	300	280	270	300	A	230	250HA	400	400	350H	340H	330	300	290	250	270	280	280	240
20	(300)A	340	350	320	370A	330	290A	300	260	A	400H	410	390	380	370	320H	300	290H	290F	280A	290AF	290F	290	300
21	300	(300)A	(300)A	(300)AH	(300)A	320	[270]C	300	A	A	A	440	380	360	370	330	310	300	290	290	240	300	300	310
22	300	340	300	300	(320)F	320	[320]C	300	340	300	320	400	400	390	380	400	350	340	320	270	250	300	330	360
23	310	320	300A	300A	300A	C	C	C	280	300	310	350	400	380	[360]C	330	340	300	290	280	290	290	320	360A
24	330	300	280	A	A	280	280	270	250	280	500	450	330	340	350	350	340	390	300	280	270	270	320	320
25	320	290	250	250	250	250	260	250	250	300	320	370	380	400	340	400	320	300	280	320	320	400A	300A	350
26	A	A	A	A	A	A	280	290	350	400	330	A	420	410	330	330	350	330	290	280	280	290	380	320
27	300A	280	300A	290	300A	280	310	260	290	330	400	480	400	340	350	340	330	A	300	280	280	300A	300A	300A
28	300	310	300	300	280	280	280	270	270	270	A	A	A	350A	320	340	320	290	260	230	250	280	300A	330
29	360	340	350	280	330	340	280	230	250	400A	A	A	360	390	350	320	310	260	270	A	A	A	A	320
30	[310]C	300A	280	A	380	390	300	270	A	A	A	A	A	400	360	360	310	290	300	270	300	330A	290	A
31																								
Median Value	310	300	290	300	280	280	270	270	280	300	320	380	380	380	360	330	320	300	300	280	280	300	300	320
Count	27	24	25	24	25	27	29	26	25	19	17	20	24	26	27	25	25	25	26	26	26	29	27	29

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 3

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foF1 | 135° E Mean Time | **Yamagawa** | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							Q	L	L	L	A	L	A	A	A	A	5.1	Q	L	L				
2							L	C	C	C	C	C	C	C	C	C	C	C	C	C				
3							Q	A	A	A	A	L	5.6	A	A	A	5.3	L	L	Q				
4							Q	Q	Q	C	C	Q	Q	L	Q	L	L	Q	L	Q				
5							C	L	Q	L	A	A	5.4	A	A	A	A	L	A	A				
6							Q	Q	A	4.4	Q	A	A	L	L	5.1	4.8	L	Q	A				
7							Q	Q	L	L	A	L	L	5.3	5.1	L	L	L	A	A				
8							Q	L	A	A	L	L	A	A	5.4[A]	(5.3)[A]	A	A	A	AF				
9							Q	Q	A	A	A	Q	L	5.1	4.8	5.1	4.8	L	L	A				
10							Q	Q	Q	L	L	L	L	5.2	L	5.3	L	L	L	L				
11							Q	Q	Q	L	L	L	5.6	5.1	5.4	4.9	L	AF	AF	AF				
12							Q	A	A	A	A	A	5.1	4.9	5.2	4.8	L	Q	L	Q				
13							Q	L	Q	C	C	A	5.1	C	A	A	A	A	A	A				
14							A	Q	L	L	Q	L	L	L	A	A	A	5.3	L	A				
15							Q	C	C	C	C	C	C	C	C	C	C	C	C	C				
16							C	L	A	A	A	A	A	5.3	L	L	L	A	A	A				
17							L	L	L	A	A	A	5.5	5.1	5.4	4.9	5.0	A	A	L				
18							L	L	L	5.2	5.7	5.1	5.1	5.1	L	4.9	L	L	L	A				
19							L	A	L	A	A	A	5.4	5.0	5.0	4.9	5.0	L	L	Q				
20							A	L	A	A	5.2	L	5.3	5.1	5.0	4.8	L	A	Q	A				
21							C	Q	Q	A	A	A	A	5.3[A]	5.1	5.0	5.0	L	A	A				
22							L	L	5.0	L	5.2	5.6	A	5.2	5.1	A	A	A	A	A				
23							C	C	Q	Q	5.3	5.6[H]	5.7[A]	5.6	[5.3][C]	5.0	(5.0)[L]	4.7	L	L				
24							Q	Q	Q	L	5.5	5.4	A	L	A	5.2	A	A	Q	Q				
25							Q	Q	Q	L	5.2	5.6	5.2[A]	5.6	5.4[A]	A	(5.1)[B]	L	Q	A				
26							Q	Q	L	L	A	A	5.6	(5.5)[B]	5.1	5.1	L	4.8	L	L				
27							Q	Q	L	L	(5.0)[A]	L	A	A	A	5.1	A	A	L	Q				
28							A	L	Q	L	A	A	A	A	A	L	L	L	L	A				
29							Q	Q	Q	A	A	A	5.0	5.6	5.1	5.0	L	(4.8)[L]	L	A				
30							L	A	A	A	A	A	A	5.2	5.1	5.0	5.0	L	L	Q				
31																								
Median Value									—	—	5.2	5.6	5.4	5.2	5.1	5.0	5.0	—						
Count									1	2	7	5	13	17	15	17	10	4						

foF1

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 4

Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | h'F1 | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							Q	240	230	(220)A	A	A	A	A	A	A	220	Q	A	250				
2							A	C	C	C	C	C	C	C	C	C	C	C	C	C				
3							Q	A	A	A	A	210	(230)A	A	A	A	240	240	270	Q				
4							Q	Q	Q	C	C	Q	Q	A	Q	250	250	Q	260A	Q				
5							C	270	Q	A	A	A	A	A	A	A	A	A	A	A				
6							Q	Q	A	240	Q	A	A	A	A	300	A	A	Q	A				
7							Q	Q	220	250	A	A	A	250	210	A	220	260	A	A				
8							Q	260	A	A	A	A	A	A	A	A	A	A	A	AF				
9							Q	Q	A	A	A	Q	A	250	(230)A	240A	260	A	A	A				
10							Q	Q	Q	210	(250)A	250A	A	A	A	(210)A	240	240	240	260				
11							Q	Q	Q	200	210	220	200	200	240	250	270	AF	AF	AF				
12							Q	A	A	A	A	A	240	210	300A	240	A	Q	250	Q				
13							Q	220	Q	C	C	A	240	C	A	A	A	A	A	A				
14							A	Q	250	280	Q	300	250	A	A	A	A	A	A	A				
15							Q	C	C	C	C	C	C	C	C	C	C	C	C	C				
16							C	250	A	A	A	A	A	250A	A	A	A	A	A	A				
17							250	200A	240	A	A	A	300A	A	300	A	A	A	A	A				
18							260	250	260	(250)A	270	220	220	210	A	A	260	A	240A	A				
19							260	A	(250)A	A	A	A	280	240	240	220	260	A	260A	Q				
20							A	A	A	A	220	200	220	250A	A	260	A	A	Q	A				
21							C	Q	Q	A	A	A	A	A	240A	210	230	A	230	260				
22							C	240	240	A	250A	A	240	210	230	A	A	240	250	Q				
23							C	C	Q	Q	(230)A	230H	A	A	C	A	A	A	260	240				
24							Q	Q	Q	A	250	250	A	A	A	230A	A	A	Q	Q				
25							Q	Q	Q	220	220	220	250A	260	A	A	240	A	Q	A				
26							Q	Q	290	280	A	A	230	A	250	250	A	270	260	240				
27							Q	Q	250	270	260	A	A	A	A	A	A	A	A	A				
28							A	250	Q	A	A	A	A	A	A	240	A	A	A	A				
29							Q	Q	Q	A	A	A	280	A	A	A	A	200	240	A				
30							A	A	A	A	A	A	A	A	250	A	A	A	250	Q				
31																								
Median Value							—	250	250	240	250	220	240	240	240	240	240	240	250	250				
Count							3	9	9	10	9	9	13	10	10	12	11	6	12	5				

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | foE | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	2.7	3.4 H	3.5	A	4.1 A	(4.0) B	3.9	(3.7) A H	A	A	A	A	A				
2							A	C	C	C	C	C	C	C	C	C	C	C	C	C·				
3							2.6 A	A	3.1	3.5	3.6	3.9	3.8	A	A	A	3.4	3.3 H	2.7	A				
4							A	(2.8) A	A	C	C	A	A	A	A	A	A	A	A	2.0				
5							C	3.0 H	A	A	3.6	A	A	A	A	A	A	A	A	A				
6							A	A	A	A	A	A	A	4.2	B	3.6 J	3.4	3.1	2.6	(2.1) A				
7							2.0	3.0 H	3.2 A	3.7	A	(3.8) J A	A	A	3.7	3.6 J	A	A	A	A				
8							A	A	3.3	A	A	3.9	3.8	3.8	3.7 A	A	A	A	A	A				
9							2.2	A	A	A	A	A	A	A	A	A	3.4 H	A	A	A				
10							2.2	(2.9) A	3.2	3.5	3.8	3.8	3.9	3.9	3.8	3.6	3.4	3.1 A H	(2.8) A	A				
11							A	A	3.4 F	3.7 A F	(3.8) A H	3.8	A	A	3.8	3.7	3.4	3.1	2.6	A				
12							A	A	A	A	A	3.8 H	A	A	(4.0) J A	A	3.4 A	3.2	2.5	A				
13							2.4	3.0 A	A	C	C	A	A	C	A	A	A	A	A	A				
14							A	A	3.2	3.8	4.3	4.3	4.3	4.2	4.2	3.7	3.5	3.0	2.7	A				
15							2.3	C	C	C	C	C	C	C	C	C	C	C	C	C				
16							[2.3] C	2.9 A	3.3	3.7	3.7	(3.8) A	3.7	A	A	A	A	A	A	A				
17							2.4 A	A	3.4	3.5	3.6 H	A	4.2	(4.2) J A	3.8	3.6 A	3.2	A	A	A				
18							2.0	2.7 H	A	(3.8) A	A	(4.0) A	(4.2) A	(4.2) A H	A	A	A	A	A	(2.0) J A				
19							A	A	A	A	A	A	A	A	A	A	3.3 A	3.2	2.6	A				
20							2.0	(2.8) A	3.3	A	3.8 A	A	4.2	4.4	(3.9) A	3.5	3.4 B	3.0	2.4	A				
21							C	A	3.2	3.4	A	A	A	A	A	3.8	3.6	A	(2.8) A	A				
22							C	2.6	3.0 A	3.4	3.7	3.8	A	3.9	3.9 B	3.7	3.4	3.2	2.4	A				
23							C	C	3.4	3.7 A	A	3.8	A	B	C	3.7	3.6	3.2	2.4	1.6				
24							A	A	A	A	A	3.9	A	A	3.8	A	3.4	3.1	2.7	A				
25							A	A	A	3.6 J	(3.8) A	A	A	(4.2) A	A	3.8	3.4	3.2	A	A				
26							A	A	A	3.7	A	3.9	4.4	A	3.8	3.8	3.4	3.2 J	2.4	A				
27							A	A	3.4 A	A	A	A	3.9	3.9	3.9	3.6	3.4	3.0	A	A				
28							A	A	(3.4) A	A	A	A	A	A	A	A	A	A	A	A				
29							A	A	3.1	3.3	3.6	B	A	A	A	A	3.5 A H	A	A	A				
30							1.8	A	A	3.6	A	A	A	A	A	A	A	A	2.6	(2.1) A				
31																								
Median Value							2.2	2.8	3.3	3.6	3.7	3.8	4.0	4.2	3.8	3.7	3.4	3.2	2.6	2.1				
Count							11	10	16	16	11	14	11	11	13	13	18	14	14	5				

foE

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 6

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | f'E | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	110 H	110	110	110	110	110	110 H	A	110 A	110 A	A	A				
2							A	C	C	C	C	C	C	C A	C	C	C	C	C	C				
3							A	A	110	110	110	110	110	110 A	A	110	110	110 H	110	A				
4							130	130	130 A	C	C	A	A	A	A	100	A	A	A	B				
5							C	110 H	110 F	A	110	A	110	110	110	110	110	A	A	A				
6							A	A	100	110	110	110	A	A	110	110	110	110	120	110				
7							110	100 H	100	100	110	A	A	100	110	110	110	A	A	A				
8							A	110 A	110	A	110	110 A	100	110	110	A	A	A	A	A				
9							120	A	120	120	110	120	120	110	110	120	110 H	A	A	A				
10							B	110	100	110	110	110	110	110	110	110	110	120 H	120	A				
11							A	A	100 A	100 F	100 H	100	100	100	100	100	110	110	110	A				
12							120	110 A	110	110	120	100 H	A	100	A	100	100	110	110	A				
13							110	A	A	C	C	A	A	C	110	A	A	A	A	A				
14							A	A	100	120	110	130	110	110	110	110	110	110	110	A				
15							130	C	C	C	C	C	C	C	C	C	C	C	C	C				
16							[110] C	110	110	110	110	110	110	110	110	110	110	A	A	A				
17							A	100	100	100	100 H	A	110	110	110	110	110	110	A	A				
18							110	120 H	110	110	110	110	110	100 H	120 A	110	A	A	A	100				
19							A	A	A	A	A	A	110 A	A	120	A	110	110	110	A				
20							130	A	120	A	(110) A	(110) A	110	110	(110) A	100	110	100	110	A				
21							C	A	100	110	A	A	A	A	A	110	110	110	110	A				
22							C	A	110	120	110	120	110	100	110	110	110	110	110	A				
23							C	C	110	A	A	110	A	110	[110] C	110	110	110	110	110				
24							A	A	A	A	A	110 A	A	A	110	A	110	110	110	A				
25							A	A	A	110	100	100	100	A	110	110	110	100	100	A				
26							A	110	A	110	100	110	110	110	110	120	110	110	110	100				
27							A	A	110	110	110	110	110	110	110	110	110	110	A	110				
28							A	110	(120) A	120	A	A	A	A	A	A	A	A	A	A				
29							A	A	110	100	110	B	A	A	110	A	100 H	110	A	A				
30							130	A	A	A	A	110	A	A	A	A	A	A	110	A				
31																								
Median Value							120	110	110	110	110	110	110	110	110	110	110	110	110	110				
Count							10	11	22	19	20	19	17	18	22	20	22	18	15	5				

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 7

Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fEs | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37. 7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.3	5.1	4.3	4.8	5.4	4.4	3.8	3.8	B	(6.3)Y	7.0	8.0	9.1	13.6B	16.6B	18.0	9.4F	9.0	7.0	4.2	2.8	4.4	4.6	3.2
2	5.6F	7.0	6.6	6.6	2.2	4.4F	4.3	C	C	C	C	C	C	C	C	C	C	C	C	C	3.9	5.4	5.5	5.4
3	5.6	5.4	4.6B	2.8	3.4	2.8	4.4	6.7	5.3	7.1	6.8	7.2	5.2	6.0	9.8	8.2	G	4.9Y	4.4	4.8	10.6B	8.4	5.6	4.6
4	11.6	11.8	10.7	8.1	7.5	7.1	5.8	4.5	5.0	C	C	6.8	6.4	5.2B	5.0	5.4	5.8	5.2	3.6	3.8Y	4.4	C	4.2	6.8
5	6.0	9.0	9.2Y	9.8	9.4	5.4F	C	5.4Y	5.2F	9.0	13.8	9.0	7.0	6.6B	7.4	13.8	12.2	5.4	7.2	5.8	5.8	4.8	3.2	4.4
6	3.6	7.8	6.8	4.8	3.8	3.6	5.8	4.8	8.4	5.4	8.8	11.2B	11.0B	6.2B	6.2	5.6B	5.4	7.5	7.0	5.6B	4.8B	3.0	5.0	4.8
7	5.4	8.2	8.0	6.8	2.8	2.8	3.4Y	G	5.2Y	7.2	12.8	6.4Y	8.2	6.6	5.3F	5.8Y	4.4	4.2	7.2	6.8	6.4	5.6	4.6	3.2
8	2.4	2.8	3.6Y	G	2.0	2.8	3.0	4.8	8.0	7.9B	7.2	8.2	9.8	11.2	7.0	8.0	8.6	9.2	7.0	5.6F	5.4	4.8FB	3.8	3.2
9	2.4	2.2	G	G	G	C	3.2Y	5.0	8.4	16.0	14.0	8.0	5.8	5.0	G	5.8	7.8	12.1	7.8	6.4	7.2	3.4	2.0	3.6
10	3.8	4.4BY	(4.0)B	3.6	3.4	2.4F	G	G	5.7	4.8	5.4	7.2B	7.0	6.4Y	9.1	6.6	4.8Y	G	C	3.8B	4.4Y	3.6	4.6B	4.0
11	5.2	3.4	4.4	G	4.6Y	G	3.8	3.6	5.6F	5.8	6.2Y	6.8F	6.6	6.8Y	6.4Y	6.4	5.4	8.0	7.8	6.6	6.4Y	5.6	7.4	7.6
12	8.6	C	C	C	C	5.0	G	11.8	8.0	7.6	14.8	8.8	5.0	4.8	5.4	4.8B	4.4	4.6	4.2	3.2	4.2	3.4	3.2	4.4
13	4.2	4.2B	6.8	5.6	3.8B	3.8	G	3.4	6.6	C	C	12.0	6.6	C	6.8	10.6B	10.0	13.1	10.2BY	7.4B	6.6	3.2	3.6	7.0
14	6.6	4.4	4.0Y	3.2	3.8	5.4	6.8	5.6	4.8	6.8	6.8	6.5	G	6.3	9.2	9.5	6.6	6.0	5.8	6.0	8.2	11.0	7.8	8.4
15	7.8Y	9.5	4.6	3.8	C	2.4	3.8	C	C	C	C	C	C	C	C	C	C	C	C	C	3.0	5.8	6.4	4.4
16	4.2	4.0	4.0	3.8	2.2	2.1	C	4.0	5.6Y	10.2B	6.8	9.8	13.8B	12.2	10.5	8.0F	C	12.8	14.0	7.0	4.2	5.0	5.6	6.8
17	4.4	3.8	2.0	2.4B	2.6	2.8	3.2	4.0	5.4Y	7.1	7.9	7.4	6.4Y	5.5B	6.6	5.0	6.2	7.2	7.1Y	4.2	8.3B	6.2	6.0	5.8
18	4.9	6.0	5.2B	5.4	3.2	3.8	3.8	4.4	4.8	5.2	6.6Y	6.8Y	6.8	8.2	6.8	5.3	4.9	6.4	5.0	8.8	5.4	5.0	3.8	6.4
19	4.8F	7.4	3.5	4.6	2.8	2.8	3.8	5.6	6.8	5.6	9.6	6.8	6.6	6.2	5.8	4.8Y	G	G	4.6	3.4	3.8B	1.8	2.2	3.8
20	4.6	6.0	7.2	7.2	5.4	8.2	6.2	5.8	7.0	D	5.4	5.7	5.3Y	G	5.0	4.8Y	6.8	7.2	7.2	6.4	5.4	5.8	2.8	4.8
21	4.8	4.6	3.8	4.6	4.8	5.0	C	5.4	7.8	11.2	10.8B	15.8	7.0	7.4	5.2	4.8	G	3.8	G	4.2	5.0	7.2	5.2	4.6
22	4.8	3.4	5.4	4.6	4.2	G	C	4.2	4.1	6.6	5.1	5.7	5.4	4.7	G	6.6	6.0	4.5	4.6	4.8Y	4.6	4.8	3.4	5.4
23	6.8	4.2	4.6	4.8	3.8	C	C	C	6.6	7.1	6.9	6.3	7.2	5.8Y	C	9.4	7.6	7.6	3.7	4.1	8.3	5.0	3.4	3.4
24	3.8	5.4	3.8	7.6	8.2	5.2	4.4	4.6	7.2	5.2	5.5	6.2	6.8	10.0	6.8Y	5.4	7.0	6.8	6.6	3.8	4.4	4.8	4.4	2.8
25	4.8	3.2	4.2	4.6	3.4	G	2.4	3.2	3.8	6.8	8.6	5.8	5.4	5.6	6.8	7.2	5.0	10.7	6.4	14.8	9.6	7.2Y	4.6	6.4
26	9.4	8.5	7.3	6.3	5.9	5.8F	4.7	5.0	4.4	5.5Y	5.8	15.8	5.0	4.9	G	G	G	G	3.6	3.0	3.8	5.2	3.8	5.2
27	4.6	6.0	5.6	3.8	4.2	3.8	4.4	3.8	8.6	7.0	6.2	7.0	10.6	9.9	9.2Y	6.4	7.2	11.6	7.6	8.6	4.8	5.6	3.8	3.6
28	6.2	4.8	4.8	9.2	5.2	4.6	4.6	4.2	5.8	6.1	10.4	11.4	9.3	7.6	8.9	8.9	6.2	5.6	5.2	4.8	5.6	3.0	3.0	5.4
29	6.8	5.8B	6.0	3.8	5.0B	3.8	3.8	4.4	5.5Y	9.2	13.4	13.6	13.8	8.7	8.2	8.0	7.0	6.5	7.1	8.0	9.5	9.3	7.4	5.6
30	C	8.0	6.0	5.6	4.0	3.0	4.4	7.6	9.6	B	10.2B	16.4B	D	10.0F	5.3	5.2	4.8	7.2	G	4.2	3.0	4.8	4.6	4.2
31																								
Median Value	4.8	5.4	4.6	4.6	3.8	3.8	3.8	4.5	5.7	7.1	7.1	7.3	6.8	6.4	6.8	6.4	6.0	6.6	6.6	6.0	5.2	5.0	4.5	4.7
Count	29	29	29	29	28	28	25	27	27	25	26	28	28	27	27	28	27	28	27	28	30	29	30	30

fEs

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

Y 8

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | (M3000)F2 | 135° E Mean Time | Yamagawa | Lat. 31° 12. 5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.6 H	2.7 P	2.8	2.9	3.4	2.8	2.8	3.1	3.0	3.1	2.7	2.7	2.6	A	A	A	2.7	2.8	2.8	3.1	2.9	2.6	2.6 Z	2.5 Z
2	F	F	(2.7) F	F	(2.8) JF Z	2.7 F V	3.2	C	C	C	C	C	C	C	C	C	C	C	C	C	2.9	2.7	2.6 H	2.5 H
3	2.6 F	2.6 F	2.7	2.6 H	2.7 H	2.9	3.1	3.2	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.8	2.8	2.8	2.8	2.8	A	2.8	2.6	2.7
4	2.6 HF	(3.0) JF	3.0	2.8	A	2.7 F	3.3	3.3	C	C	C	2.8	2.6	2.9	3.0	2.9	3.0	3.1	2.5	2.8	(2.8) P	(2.8) C	2.9	2.9
5	2.8	3.0	3.2 V	(2.7) F V	(2.7) JF Z	(2.8) F	[3.0] C	3.1	3.0 V	3.0	A	A	2.7	2.6	2.6	A	A	2.7 H	2.8	3.0	2.9	2.6	2.7	2.7
6	2.8	3.0	3.0	2.6	2.6	2.7	3.1	3.2	2.9	3.1	3.4	A	(3.4) H P	2.6	2.6	2.7	2.8	2.7	2.8	2.7	2.5 S	2.6	2.8	(2.6) JF
7	(2.5) JP F	2.6 V	2.9 V	2.8	2.4	2.7	3.0	3.0	3.0	2.9	A	2.6	2.5	2.8	2.9	2.9	2.9	3.0	3.0	2.9 H	2.8	2.9	2.8	2.8
8	2.8	2.9	3.0	2.9	2.9	3.2	3.1	3.1	3.1	3.3	2.6	2.6	2.6	2.8	2.8	2.8	2.8	2.8	2.9	3.1	2.8	2.6	2.8	2.9
9	2.7	2.7	[2.8] C	2.8	(2.9) P	[3.0] C	3.0	3.0	2.8	A	A	2.8	2.6	2.8	2.8	2.9	2.8	3.0 A H	3.0	3.0	(2.7) S	2.6	2.7	2.6
10	2.6	3.1	2.8	2.7 P	2.9	2.6	3.0	3.0 V	2.9 V	2.9	2.6	2.8	2.6	2.6	2.7	2.8	2.8	2.7	2.8	2.7	2.7	2.7	2.6	2.5
11	2.6	2.8	2.9	2.8 H	2.8	2.9	3.4	3.1	3.3 H	3.0	2.6 H	2.5 H	2.7	2.9	2.9	3.0	2.9	2.8	2.8	2.9	3.1	2.6 F	(2.6) JF	2.5 FP
12	(2.8) P F	C	C	C	C	3.0	3.1	A	3.0	2.9	A	2.7	2.6 H	2.5	2.5	2.9	3.0	2.8 H	2.9	2.7	2.7	2.8 H	2.7 H	2.6 H
13	2.7 P H	2.7	2.9	2.9	3.0	3.1	3.1	3.1	3.2	C	C	A	2.7	[2.7] C	2.7	2.7	2.8	2.8	2.9	3.6	2.8	2.5	2.7 H	2.7 H
14	2.7	2.7 H	2.9	2.7	3.0	2.9	2.8	3.1	3.2	3.1	3.3	2.5	2.5	2.5	2.6	3.0 B	3.4	3.0	3.0	2.8	2.7	2.5	2.6 Z F	(2.8) JF
15	2.9 F Z	F	2.9 F	(2.9) F J	[3.0] C	3.2	3.2	C	C	C	C	C	C	C	C	C	C	C	C	C	2.8 H	2.6	2.7	2.8
16	2.6	2.8	2.9	2.9	2.7	2.8	[3.2] C	3.3	3.2	A	2.9	2.5	A	2.6	2.6	2.8	C	A	A	3.1	3.0	2.7	2.9	(2.8) J
17	(2.5) B F	2.7 H	(2.9) F J	2.6 F P	2.7 F	2.8 E Z	3.0	3.1	3.4	2.9	A	2.4	2.5	2.6	2.6	2.7	2.7	2.8	3.1	2.9 H	2.9	2.5	2.6 H	2.5
18	2.8	2.6 F	2.7	2.7 F	2.6 H F	2.6	3.1	3.3	2.9	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.9 H	2.9	2.7	2.9	(2.9) B	2.5 H	(2.5) JP F
19	2.8	2.9	2.9 H	2.9	F (2.6) Z	PF (2.7) Z	3.0	3.0	3.0	A	3.4	2.7 H	2.6	2.6	2.7 H	2.8	2.7	2.8	2.9	2.8 P	2.8	2.7	2.8	2.8 H
20	2.7 V	2.7 Z	(2.6) JF	(3.0) JF	2.6	2.7 F	2.9	3.0	3.3	A	2.5 H	2.5	2.6	2.7	2.6	2.9 H	2.7	2.8 H	2.8	2.8 P	2.8 V	2.7	2.7	2.6
21	2.7	2.9	2.9	2.8 H	2.8	2.7	[3.0] C	2.9	3.0	A	A	A	2.4	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.9	2.6	2.6	2.6
22	2.7	(2.7) JF	2.7 FP	2.7 F	(2.6) JF	(2.6) JF	[2.7] C	3.0	2.8	2.8	(2.9) J	2.7	2.6	2.7	2.7	2.7	2.7	2.8	2.8	3.1	3.0	2.5	2.5	2.7
23	2.5 V	(2.9) JF P	2.8 F	2.8 F	(2.8) JF P	C	C	C	3.0	2.7	2.9	2.7	2.6	2.7	[2.6] C	2.6	2.7	2.9	2.9	3.1	2.8	2.6	2.6	2.4 ZF
24	2.6 F	2.7	2.8 F	2.5 F	2.6	3.0	2.9	3.0	3.2	2.9	2.5	2.4	2.8	2.6	2.8	2.7	2.7	2.5	2.8	2.7	2.7	2.8	2.5	2.7
25	2.6	2.9	3.0	2.9	2.9	2.7	2.9	3.1	3.0	3.1	2.9	2.8	2.8	2.7	2.9	2.6	2.9	2.9	2.8	2.7	2.6	2.5	2.7	2.6
26	2.8	3.0	2.9	3.0	3.0	A	3.1	3.1	2.9	2.7	2.6	A	2.5	2.7	2.7	2.7	2.7	2.7 C	2.9	2.8	[2.8] C	2.7	2.5	2.7
27	2.7	3.1	2.8	2.9	2.7	3.0	2.7	2.9	3.1	2.9	2.7	2.4	2.5	2.7	2.7	2.7	2.8	2.8 P	2.8	2.8	(2.8) J S	2.7	2.6	2.7
28	2.7	(2.8) JF P	S F	(3.1) JF P	(3.0) F P	(2.7) F P	3.2	3.0	3.0	3.2	A	A	2.5 P	2.6	2.8	2.7	2.7	3.0	3.2	3.2	2.6	2.7	2.7 Z	2.6 S
29	2.6	2.7	2.8	2.8	2.9	2.7	3.0	2.8	3.3	2.8	A	A	2.7	2.5	2.8	2.9	2.9	2.9	3.0	2.9	A	A	2.9	3.0
30	[2.8] C	2.7	2.7 F	2.8 F	2.4	2.5	2.8	3.2	A	A	A	A	A	2.5	2.7	2.7	2.9	3.1	2.9	2.7	2.5	2.7	2.8	2.5
31																								
Median Value	2.7	2.8	2.9	2.8	2.8	2.8	3.0	3.1	3.0	2.9	2.7	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.8	2.8	2.7	2.7	2.6
Count	29	27	28	28	28	28	29	26	26	20	17	20	26	27	27	26	26	27	27	28	28	29	30	30

Sweep 12 Mc to 18.5 Mc in 15 min Manual -

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Radio Regulatory Agency (Denpacho)

Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 | fminF | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	A	A	A	A	A	A	A	3.1	3.4	(4.1)A	A	A	A	A	A	A	3.6	A	A	A	1.6	A	A	A
2	AF	AF	AF	(1.4)A	1.3	1.8	A	C	C	C	C	C	C	C	C	C	C	C	C	C	A	6.2	A	A
3	A	(1.4)A	1.6	1.6	1.6	E	2.6	A	A	A	A	4.3	A	A	A	A	3.8	3.3	2.8	A	A	A	A	A
4	A	A	A	A	A	A	2.8	3.0	A	C	C	A	A	A	4.6A	4.2	3.8	A	A	2.2	A	A	1.8	A
5	1.6	A	1.8	A	A	(2.0)A	C	3.0	3.6	A	A	A	A	A	A	A	A	A	A	A	6.2	A	A	A
6	A	A	A	A	A	1.5	A	A	A	4.2A	4.4	A	A	A	A	4.4	A	A	3.2A	A	A	1.8	A	A
7	A	A	A	A	1.6	1.6	2.4	3.0	3.6	4.2	A	A	A	4.8A	4.0	A	3.8	3.4	A	A	A	A	A	A
8	A	A	E	1.4	1.3	1.8	A	3.0	A	A	A	A	A	A	A	A	A	A	A	AF	AF	AF	A	AF
9	1.6	E	E	E	E	C	2.3	3.1	A	A	A	(4.6)A	A	4.2	(4.3)A	4.2	4.4	A	A	A	(1.8)A	1.5	1.5	1.4
10	A	E	A	1.4	1.6	1.6	2.2	3.2	3.7	3.8	(4.4)A	4.6A	A	A	A	(4.5)A	4.1	3.4	(3.2)A	A	A	A	A	A
11	A	A	1.6	E	E	1.4	A	A	3.4	3.7	4.2	4.2	3.9	4.3	4.1	4.3	3.9	AF	A	AF	A	A	AF	AF
12	A	C	C	C	C	A	A	A	A	A	A	A	4.2	A	4.6	A	A	3.3	3.0	3.0	A	A	A	A
13	A	A	A	A	A	1.8	2.4	3.2	3.4A	C	C	A	4.6	C	A	A	A	A	A	A	A	A	A	A
14	A	A	E	A	1.4	A	A	(3.8)A	3.3	4.4	4.5	4.7	4.6	A	A	A	A	A	A	A	A	A	(1.8)A	A
15	A	A	A	1.8	[1.8]C	1.7	2.3	C	C	C	C	C	C	C	C	C	C	C	C	C	A	1.6	A	A
16	A	A	A	1.6	1.8	1.5	[2.4]C	3.3	A	A	A	A	A	4.6A	A	A	A	A	A	A	1.6	A	(1.4)A	1.8
17	A	A	1.4F	1.3	1.8	2.0	2.5	A	3.8	A	A	A	4.8	(4.8)A	4.6	(4.5)A	A	A	A	A	A	A	A	A
18	A	AF	AF	A	A	2.2A	2.1	3.0	A	4.2	4.2	4.2	4.4	4.2	A	A	3.7	A	A	A	A	A	A	A
19	1.8	A	1.8	1.4	1.4	1.6	A	A	(3.6)A	A	A	A	4.6	4.2	4.2	4.2	4.2	A	(2.8)A	2.0	1.8	1.8	1.6	A
20	A	A	A	1.8	A	A	A	A	A	A	4.1	4.0	4.4	4.5	A	3.6	A	A	A	A	AF	A	1.4	A
21	A	A	A	A	A	1.4	[2.3]C	A	A	A	A	A	A	A	4.2A	4.0	3.8	A	N	A	A	A	A	A
22	2.0	A	A	A	A	1.6	C	A	3.5	A	A	A	4.4A	4.0	4.3	A	A	3.7	2.9	A	A	A	A	A
23	A	A	A	A	A	C	C	C	A	A	A	3.9	A	A	C	A	A	A	3.0A	2.0	A	1.8	1.9	A
24	A	A	1.8	A	A	A	A	A	A	A	4.1	4.1	A	A	A	A	A	A	A	2.6A	A	A	1.4	1.6A
25	A	A	A	1.4A	1.6	1.3	1.8	A	N	4.2	4.2	4.4	4.4	4.4	A	A	4.2	4.1	A	A	1.6	A	A	A
26	A	A	A	A	A	A	2.9	2.5	A	A	A	A	4.4	5.4	4.3	4.2	A	3.8	2.8	2.0A	A	A	1.8	A
27	1.8	A	A	A	A	2.2	1.8	3.0	3.5	A	4.5	A	A	A	A	4.6A	A	A	A	A	A	A	1.6	A
28	A	A	A	A	A	A	A	2.9	3.4	A	A	A	A	A	A	A	A	A	A	A	A	1.6	A	A
29	A	A	A	E	A	A	A	2.6	A	A	A	A	4.7	4.5	A	A	A	3.7	A	A	A	A	A	A
30	C	A	A	A	A	1.4	A	A	A	A	A	A	A	A	4.2	A	A	A	2.9	1.9	A	A	A	A
31																								
Median Value	1.8	—	1.6	1.4	1.6	1.6	2.4	3.0	3.5	4.2	4.2	4.2	4.4	4.4	4.3	4.2	3.8	3.6	2.9	2.0	1.7	1.8	1.6	—
Count	5	3	9	13	13	19	14	15	12	8	9	10	12	12	11	11	11	8	9	6	6	7	10	3

fminF

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

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Radio Regulatory Agency (Denpacho)
Aoyama-Kita-machi, Minato-Ku, Tokyo, Japan

IONOSPHERIC DATA

Jun. 1950 · | $f_{min}E$ | 135° E Mean Time | Yamagawa | Lat. 31° 12.5' N | Long. 130° 37.7' E

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.5	1.5	1.5	E	E	1.4	1.4	1.5	1.7	1.9	2.0	2.2	2.7	2.4	2.0	1.9	2.1	1.5	1.6	1.4	1.4	1.4	1.5	1.4
2	E	E	E	E	E	E	1.3	C	C	C	C	C	C	C	C	C	C	C	C	C	1.4	1.5	1.3	E
3	E	1.4	E	E	E	E	1.5	1.7	1.6	1.7	2.0	1.9	2.1	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.5	1.5	1.5	1.6
4	1.3	1.4	1.3	1.3	1.3	1.3	1.6	2.0	2.0	C	C	2.4	2.8	2.6	2.6	2.2	2.2	2.0	2.0	1.8	1.5	1.6	1.6	1.6
5	E	E	E	E	E	1.4	1.4	1.4	1.4	2.2	2.2	3.0	2.6	2.2	3.0	2.2	2.0	1.6	1.6	1.3	1.5	1.4	1.3	1.3
6	E	1.4	1.4	E	1.4	E	1.4	1.8	1.8	2.0	2.0	2.4	2.4	2.5	2.3	2.0	1.8	1.7	1.5	1.5	1.4	1.5	1.5	E
7	E	E	E	E	E	E	1.6	1.8	1.5	1.8	1.8	1.8	2.0	1.8	1.8	2.0	1.6	1.6	1.6	1.6	1.4	1.4	1.4	E
8	E	E	E	E	1.8	1.4	1.4	1.5	1.5	1.9	2.2	2.0	2.0	2.0	2.1	1.8	1.8	1.7	1.4	1.3	1.4	1.4	1.4	1.4
9	E	1.5	E	E	E	C	1.4	1.4	1.8	2.2	2.2	2.4	2.4	2.8	2.8	2.6	2.2	1.6	1.3	1.4	1.5	2.1	1.8	1.5
10	E	E	E	E	E	1.8	2.0	1.7	1.6	1.7	2.0	2.1	2.2	2.2	2.2	1.9	1.7	1.7	1.5	1.6	1.6	1.6	1.6	1.6
11	1.4	1.4	E	E	E	E	1.4	1.8	1.6	1.6	1.9	2.0	2.0	2.1	2.0	2.0	1.7	1.7	1.4	1.3	1.3	1.4	1.3	E
12	E	C	C	C	C	1.8	1.5	1.6	2.0	2.2	2.8	2.0	2.2	2.2 C	2.4	2.2	2.0	1.6	1.3	1.4	1.4	1.4	1.3	1.4
13	E	E	E	E	1.4	1.3	1.4	1.4	2.0	C	C	2.2	2.2	[2.1] C	2.0	2.2	2.2	2.0	1.8	1.8	1.8	1.8	1.6	1.8
14	1.8	1.4	E	E	E	E	1.4	1.6	1.5	1.8	1.8	(1.4) B	2.3	2.1	2.2	1.9	1.6	1.6	1.6	1.3	1.3	1.4	1.4	1.3
15	E	E	1.3	1.3	[1.4] C	1.6	1.7	C	C	C	C	C	C	C	C	C	C	C	C	C	1.4	1.4	1.4	1.4
16	E	E	E	E	E	1.4	[1.5] C	1.6	1.8	2.0	2.1	2.0	2.6	1.9	2.3	1.9	1.9	1.6	1.6	1.6	1.4	E	1.4	E
17	E	E	E	2.0 B	E	E	1.6	2.0	1.8	1.7	1.9	2.0	2.1	2.0	2.0	2.0	1.9	1.8	1.8	1.7	1.6	1.6 B	1.6	1.6
18	1.7	E	E	E	E	E	1.3	1.4	1.4	1.6	2.0	2.0	2.2	2.0	2.8	2.0	1.8	1.6	1.5	1.4	1.4	1.5	1.4	1.4
19	1.4	1.4	E	E	E	E	1.4	1.6	2.0	2.0	2.2	2.4	2.4	3.2	2.6	2.2	1.8	1.7	1.6	1.4	1.3	1.6	1.8	1.6
20	E	E	E	E	E	E	1.4	1.5	1.6	1.6	1.7	1.7	1.7	2.0	2.1	1.6	1.7	1.8	1.7	1.3	1.3	1.4	1.4	E
21	E	1.4	E	E	E	E	C	1.6	1.9	1.8	2.0	2.0	2.0	2.0	2.0	2.2	2.0	1.8	1.8	1.8	1.8	1.8	1.6	1.6
22	1.6	E	E	E	E	1.3	[1.4] C	1.3	1.7	1.7	1.9	1.9	1.9	2.0	2.3	2.0	1.9	1.8	1.6	1.4	1.4	1.5	1.4	1.4
23	1.3	E	1.4	E	E	C	C	C	1.5	1.8	2.2	2.4	2.8	2.8	[2.8] C	2.8	2.8	1.6	1.4	1.4	1.3	1.6	1.5	1.3
24	E	E	E	E	E	1.6	1.6	1.8	1.5	1.8	1.9	2.0	2.1	2.1	2.1	2.0	1.8	1.5	1.7	1.5	1.4	1.7	1.5	E
25	E	E	E	E	E	E	1.6	1.8	1.8	1.9	1.9	1.9	2.0	3.4	2.1	2.0	2.0	1.9	1.4	1.5	2.0	1.5	1.4	E
26	E	1.3	1.5	1.5	1.5	1.3	1.7	1.9	1.6	1.7	1.8	1.8	1.8	1.7	2.0	1.8	1.8	1.8	1.6	1.4	1.5	1.4	1.5	1.4
27	E	E	E	E	E	E	1.6	1.8	1.7	1.8	1.9	1.9	2.2	2.4	1.9	1.9	1.7	1.7	1.7	1.5	1.3	1.4	1.3	1.3
28	E	E	E	E	E	E	1.4	1.5	1.8	1.9	2.0	2.2	2.3	2.6	3.1	2.9	2.4	2.0	1.4	1.5	1.5	1.6	1.4	E
29	E	1.4	E	E	E	E	1.6	1.8	1.8	1.8	1.8	4.2	3.0	3.0	3.1	2.0	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4
30	C	E	1.3	E	E	1.4	1.4	1.4	1.8	1.7	2.0	2.0	1.9	2.0	2.0	1.9	1.8	1.8	1.5	1.4	1.3	1.3	1.4	1.4
31																								
Median Value	E	E	E	E	E	E	1.4	1.6	1.7	1.8	2.0	2.0	2.2	2.1	2.2	2.0	1.8	1.7	1.6	1.4	1.4	1.5	1.4	1.4
Count	29	29	29	29	29	28	28	27	28	26	26	28	28	28	28	28	28	28	28	28	30	30	30	30

Sweep 1.2 Mc to 18.5 Mc in 15 min Manual

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