



RADIO LOG and LORE

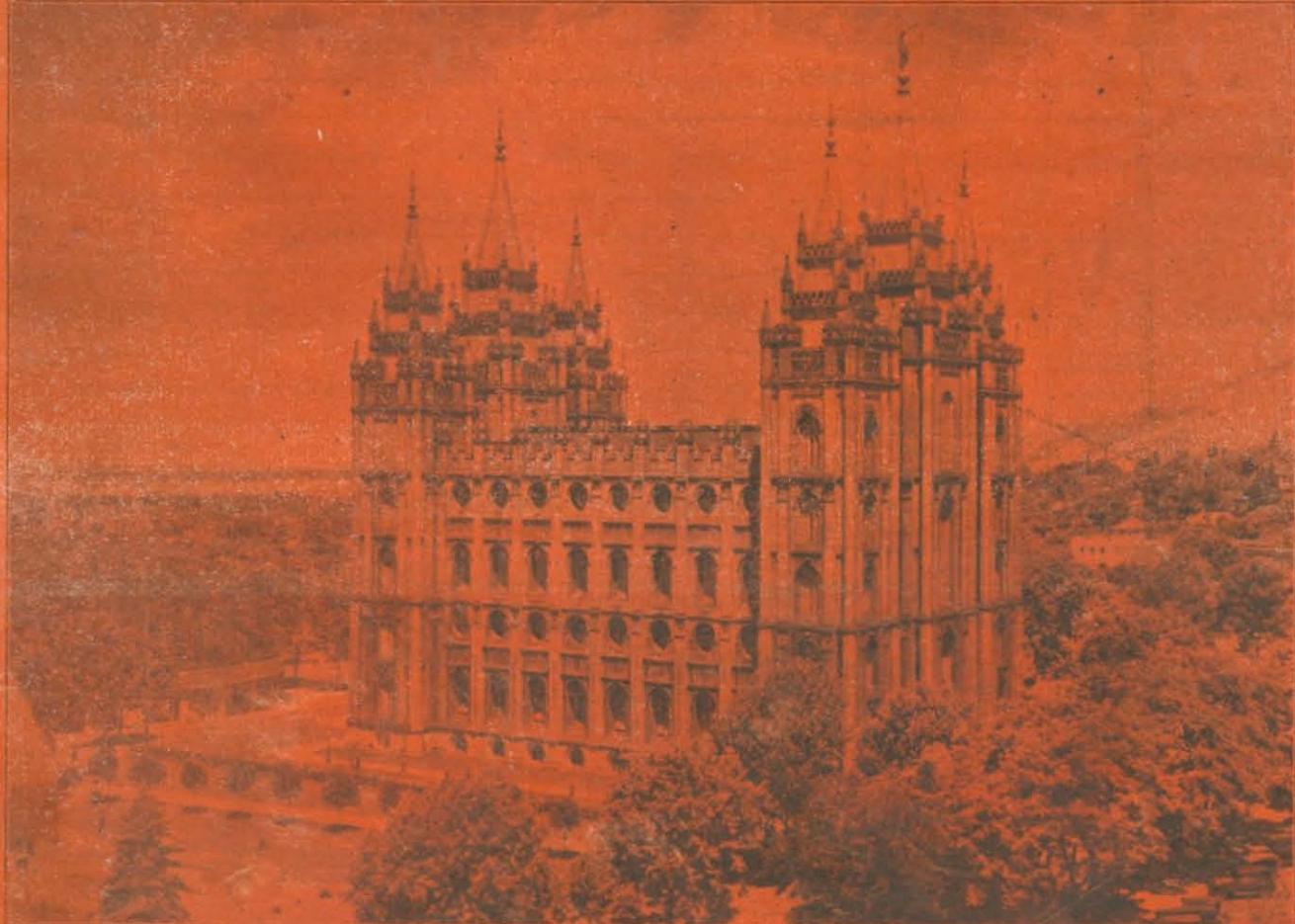
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FEBRUARY

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—a service that is needed in every home where there is a radio. A complete, concise program service of all American networks, lists of all network stations and cross-indexed listings of all North American chain and non-chain stations, as well as all radio stations of the world. Let this magazine help you enjoy your radio more. A subscription coupon, for your convenience, may be found on page 3.



"My Favorite"

=PROGRAMS=

			PROGRAMS
	Time	Channel	Station
Sunday			
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			

Radio Log and Lore

WHITMAN RADIO PUBLISHING CO.

W. R. WHITMAN, . . . PUBLISHER
ALICE M. WHITMAN, . . . EDITOR



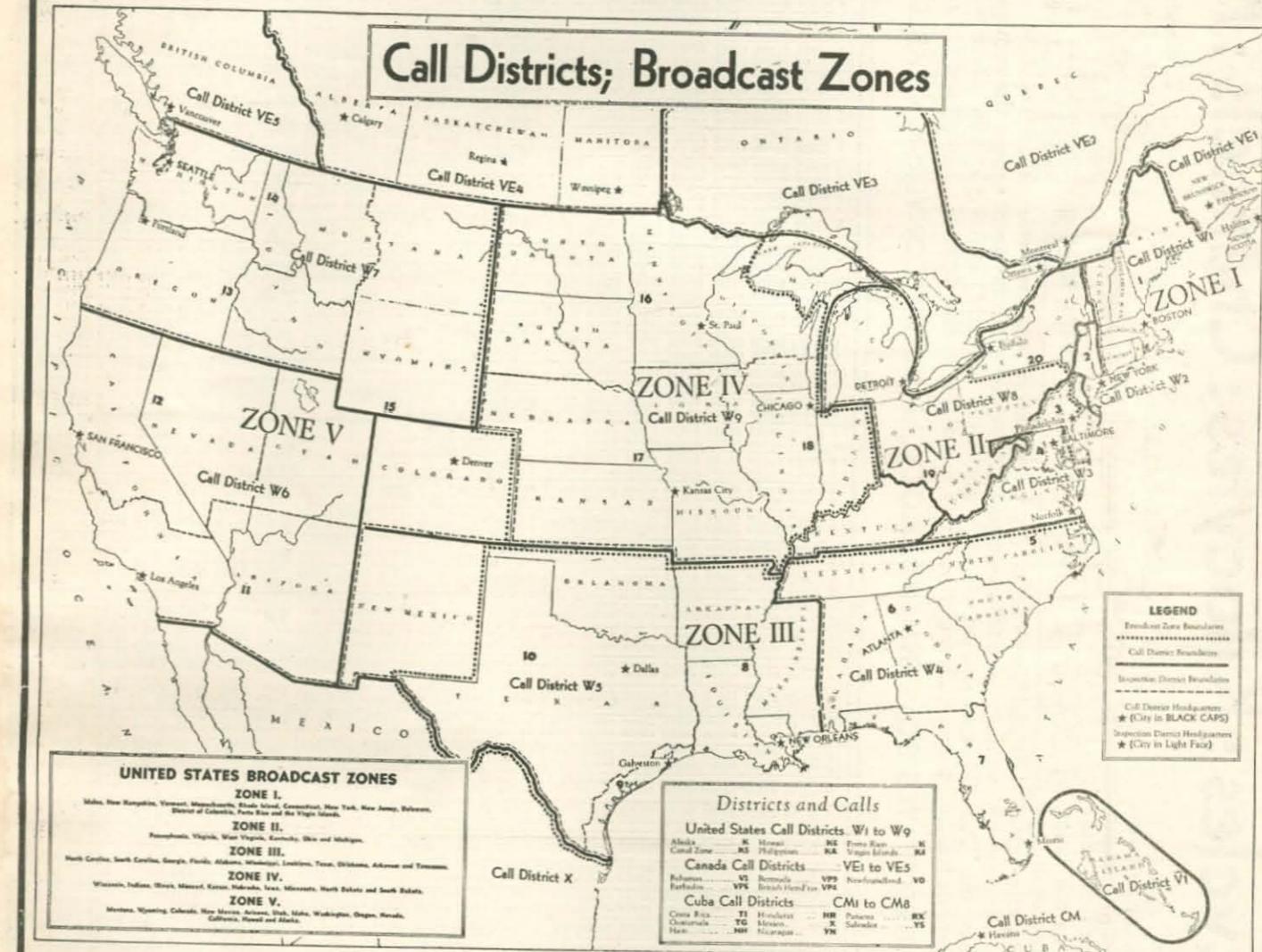
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Calls and Call Districts of NORTH AMERICA



While prefixes or certain letters, designated to distinguish calls of one nation from another, are assigned by the international authorities at Berne, most of the larger countries divide their territory into numbered call districts and these numbers in calls, designate the district in which the station is located. In the United States there are nine call districts and in Canada, five. Long wave broadcasting and commercial station calls do not include call district numbers but amateur and experimental station calls are indicated by a number immediately following the prefix letter denoting nationality.

In the United States, each radio district maintains its headquarters in a centrally located city in charge of a supervisor of radio, a number of branch offices at strategical points and a centrally located constant frequency monitoring station, the manager of which is under the direct supervision of the Washington office. A list of these district headquarters, with the territory under the jurisdiction of each, follows:

Meters vs. Cycles : Channels : Megacycles

PAGE [4] FEBRUARY

(LOG SECTION)

RADIO LOG AND LORE

There are two distinct measurements of a radio wave; first, cycles (the frequency per second) of the radio wave, and second, meters (wavelength or length of the wave). As the length in meters of the total cycles per second must equal the speed of the radio wave per second (300,000,000) the values naturally are inversable. The frequency method (cycles, kilocycles, channels, megacycles) is almost entirely in vogue in North America, even in short wave, but the Old World uses both measurements. Throughout Radio

1,000 Cycles Equal 1 Kilocycle
10,000 Cycles Equal 1 Channel
1,000,000 Cycles Equal 1 Megacycle

Log and Lore kilocycles are favored, in fact, the meter value is generally omitted. No value table between kilocycles, channels or megacycles is printed. This is accomplished obviously by a shifting of the decimal point.

UNITED STATES GOVERNMENT KILOCYCLE METER CONVERSION TABLE

	1,000 Cycles	Equal 1 Kilocycle	1,000 Cycles	Equal 1 Channel	1,000 Cycles	Equal 1 Megacycle
1	1,000	1	1,000	1	1,000	1
2	2,000	2	2,000	2	2,000	2
3	3,000	3	3,000	3	3,000	3
4	4,000	4	4,000	4	4,000	4
5	5,000	5	5,000	5	5,000	5
6	6,000	6	6,000	6	6,000	6
7	7,000	7	7,000	7	7,000	7
8	8,000	8	8,000	8	8,000	8
9	9,000	9	9,000	9	9,000	9
10	10,000	10	10,000	10	10,000	10
11	11,000	11	11,000	11	11,000	11
12	12,000	12	12,000	12	12,000	12
13	13,000	13	13,000	13	13,000	13
14	14,000	14	14,000	14	14,000	14
15	15,000	15	15,000	15	15,000	15
16	16,000	16	16,000	16	16,000	16
17	17,000	17	17,000	17	17,000	17
18	18,000	18	18,000	18	18,000	18
19	19,000	19	19,000	19	19,000	19
20	20,000	20	20,000	20	20,000	20
21	21,000	21	21,000	21	21,000	21
22	22,000	22	22,000	22	22,000	22
23	23,000	23	23,000	23	23,000	23
24	24,000	24	24,000	24	24,000	24
25	25,000	25	25,000	25	25,000	25
26	26,000	26	26,000	26	26,000	26
27	27,000	27	27,000	27	27,000	27
28	28,000	28	28,000	28	28,000	28
29	29,000	29	29,000	29	29,000	29
30	30,000	30	30,000	30	30,000	30
31	31,000	31	31,000	31	31,000	31
32	32,000	32	32,000	32	32,000	32
33	33,000	33	33,000	33	33,000	33
34	34,000	34	34,000	34	34,000	34
35	35,000	35	35,000	35	35,000	35
36	36,000	36	36,000	36	36,000	36
37	37,000	37	37,000	37	37,000	37
38	38,000	38	38,000	38	38,000	38
39	39,000	39	39,000	39	39,000	39
40	40,000	40	40,000	40	40,000	40
41	41,000	41	41,000	41	41,000	41
42	42,000	42	42,000	42	42,000	42
43	43,000	43	43,000	43	43,000	43
44	44,000	44	44,000	44	44,000	44
45	45,000	45	45,000	45	45,000	45
46	46,000	46	46,000	46	46,000	46
47	47,000	47	47,000	47	47,000	47
48	48,000	48	48,000	48	48,000	48
49	49,000	49	49,000	49	49,000	49
50	50,000	50	50,000	50	50,000	50
51	51,000	51	51,000	51	51,000	51
52	52,000	52	52,000	52	52,000	52
53	53,000	53	53,000	53	53,000	53
54	54,000	54	54,000	54	54,000	54
55	55,000	55	55,000	55	55,000	55
56	56,000	56	56,000	56	56,000	56
57	57,000	57	57,000	57	57,000	57
58	58,000	58	58,000	58	58,000	58
59	59,000	59	59,000	59	59,000	59
60	60,000	60	60,000	60	60,000	60
61	61,000	61	61,000	61	61,000	61
62	62,000	62	62,000	62	62,000	62
63	63,000	63	63,000	63	63,000	63
64	64,000	64	64,000	64	64,000	64
65	65,000	65	65,000	65	65,000	65
66	66,000	66	66,000	66	66,000	66
67	67,000	67	67,000	67	67,000	67
68	68,000	68	68,000	68	68,000	68
69	69,000	69	69,000	69	69,000	69
70	70,000	70	70,000	70	70,000	70
71	71,000	71	71,000	71	71,000	71
72	72,000	72	72,000	72	72,000	72
73	73,000	73	73,000	73	73,000	73
74	74,000	74	74,000	74	74,000	74
75	75,000	75	75,000	75	75,000	75
76	76,000	76	76,000	76	76,000	76
77	77,000	77	77,000	77	77,000	77
78	78,000	78	78,000	78	78,000	78
79	79,000	79	79,000	79	79,000	79
80	80,000	80	80,000	80	80,000	80
81	81,000	81	81,000	81	81,000	81
82	82,000	82	82,000	82	82,000	82
83	83,000	83	83,000	83	83,000	83
84	84,000	84	84,000	84	84,000	84
85	85,000	85	85,000	85	85,000	85
86	86,000	86	86,000	86	86,000	86
87	87,000	87	87,000	87	87,000	87
88	88,000	88	88,000	88	88,000	88
89	89,000	89	89,000	89	89,000	89
90	90,000	90	90,000	90	90,000	90
91	91,000	91	91,000	91	91,000	91
92	92,000	92	92,000	92	92,000	92
93	93,000	93	93,000	93	93,000	93
94	94,000	94	94,000	94	94,000	94
95	95,000	95	95,000	95	95,000	95
96	96,000	96	96,000	96	96,000	96
97	97,000	97	97,000	97	97,000	97
98	98,000	98	98,000	98	98,000	98
99	99,000	99	99,000	99	99,000	99
100	100,000	100	100,000	100	100,000	100

To illustrate with the frequency of 1,000 kilocycles in the long wave span. This wave actually has a frequency of 1,000,000 cycles per second which equals 1,000 kilocycles and is commonly designated as channel 100, or the 100 channel band. In turn, it would be 1.0 megacycles for short wave usage, since there are 1,000 kilocycles in a megacycle. In these pages the comma is used in kilocycle listings (as 1,000) and by using the comma as a period the megacycle is obtained (1.0).

UNITED STATES GOVERNMENT KILOCYCLE METER CONVERSION TABLE

	1,000 Cycles	Equal 1 Kilocycle	1,000 Cycles	Equal 1 Channel	1,000 Cycles	Equal 1 Megacycle

<tbl_r cells="7" ix="3" max

A	E	I	M	Q	U	Y
B	F	J	N	R	V	Z
C	G	K	O	S	W	E (French)
D	H	L	P	T	X	(A German)
1	3	5	7		9	
2	4	6	8		0	
(Period)	, (Comma)	! (Exclamation Point)	- (Fraction Bar)	Break (Double Dash)		
- (Hyphen)	: (Colon)	' (Apostrophe)	.. (Inverted Commas)	End Message (Cross)		
? (Interrogation)	; (Semicolon)	() (Parenthesis)	Warning (High Power)	Error		

WHY NOT LEARN MORSE CODE?

[International Morse Code and Conventional Signals]

To Be Used for All General Public - Service Communication]

PLEASE NOTE:

- (1) A Dash Is Equal to Three Dots
- (2) The Space Between Parts of the Same Letter Is Equal to One Dot
- (3) The Space Between Two Letters Is Equal to Three Dots
- (4) The Space Between Two Words Is Equal to Five Dots

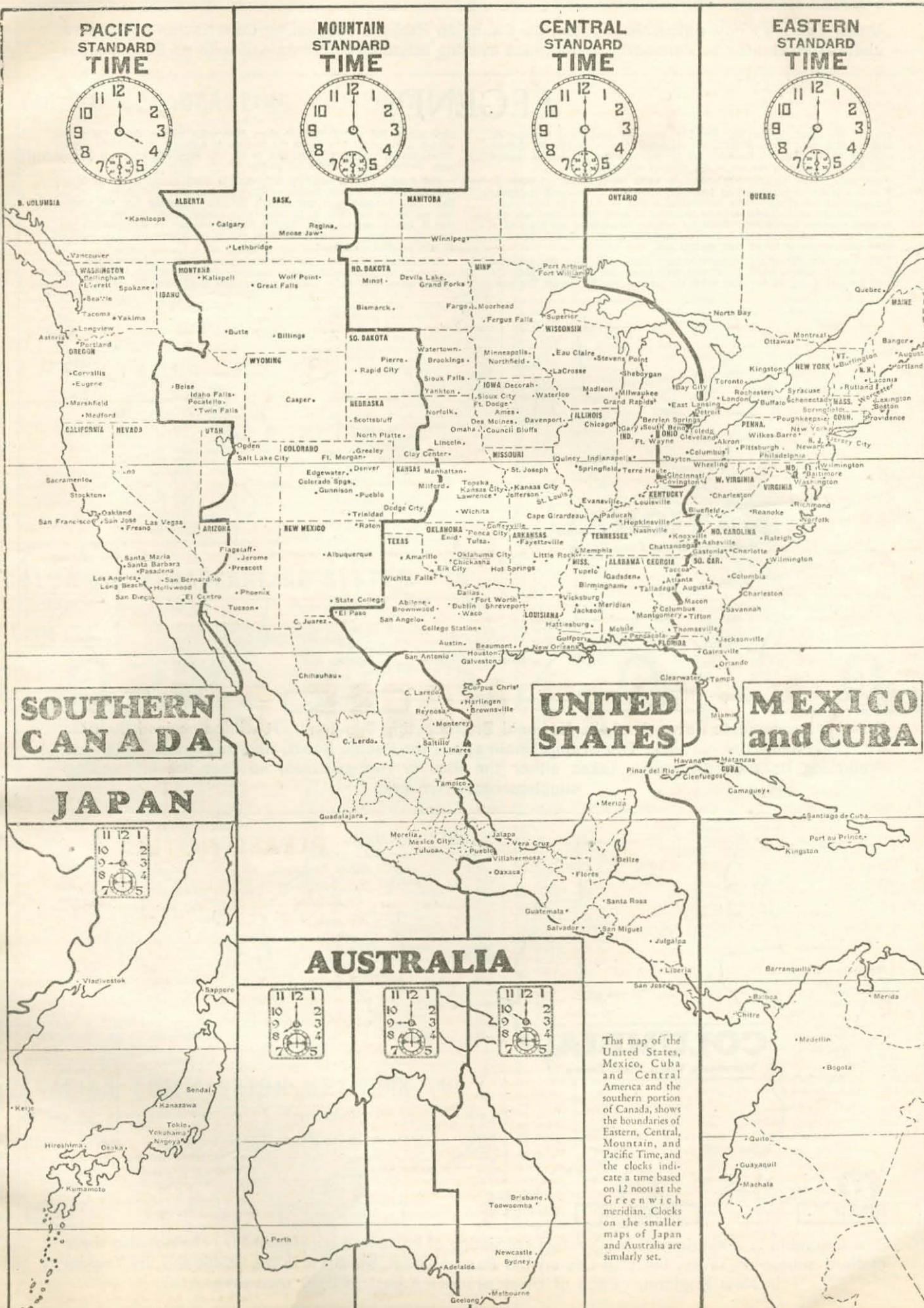
Radio has been instrumental in bringing about a universal understanding of Morse Code. As proficiency in its use is necessary to the securing of an amateur license, thousands upon thousands of "Hams" in all parts of the world have become expert in its use; whereas this knowledge was previously possessed only by persons employed professionally in the transmission of messages by wire.

This knowledge of the alphabet, acquired by amateurs and others, is the source of much entertainment in gleaning press, weather and other information from the air.

QRA.....What is the name of your station?
QRB.....At what approximate distance are you?
QRD.....Where are you going?
QRE.....What is the nationality of your station?
QRF.....Where do you come from?
QRQ.....Will you indicate my exact frequency in kilocycles?
QRH.....What is your exact frequency in kilocycles?
QRI.....Is my tone bad?
QRJ.....Are you receiving me badly? Signals weak?
QRK.....Are you receiving me well? Are my signals good?
QRL.....Are you busy?
QRM.....Are you being interfered?
QRN.....Are you troubled by atmospherics?
QRO.....Must I increase my power?
QRP.....Must I decrease my power?
QRQ.....Must I send faster?
ORS.....Must I send slowly?

QRT.....Must I stop sending?
QRU.....Have you anything for me?
QRV.....Must I send a series of V's?
QRW.....Must I advise.....that you are calling him?
QRX.....Must I wait? When will you call me again?
QRY.....Which is my turn?
QRZ.....By whom am I being called?
QSA.....What is the strength of my signals (9 to 5)?
QSB.....Does the strength of my signals vary?
QSC.....Do my signals disappear entirely at intervals?
QSD.....Is my keying bad?
QSE.....Are my signals distinct?
QSF.....Is my automatic transmission good?
QSK.....Must I suspend traffic? When will you call?
QSL.....Can you give me acknowledgment of receipt?
QSM.....Have you received my acknowledgment?
QSN.....Can you receive me now? Must I listen?

QSP.....Will you relay to..... free of charge?
QSQ.....Must I send each word or group once only?
QSX.....Does my wave length (frequency) vary?
QSZ.....Must I send each word or group twice?
QTA.....Must I cancel telegram No.....?
QTB.....Do you agree with my word count?
QTC.....How many telegrams have you to send?
QTD.....Is the word "count" accepted?
QTE.....What is my true bearing?
QTH.....What is your position in latitude and longitude?
QTI.....What is your true course?
QTJ.....What is your speed?
QTK.....What is true bearing of relative to you?
QTP.....Are you going to enter the dock?
QTR.....What is the exact time?
QTS.....What is true bearing of your station relative to me?
QTU.....What are hours during which your station is open?



Under Canada's new nationalized radio, the Canadian Radio Broadcasting Commission operates a chain from Halifax to Vancouver. A complete evening schedule is maintained with no day releases

LEGEND:

These two pages dealing with the four great transcontinental broadcasting networks that cover North America, are published in order to give the listener a better understanding of the source of his entertainment and how it reaches him; also to make clear the use of the program schedules.

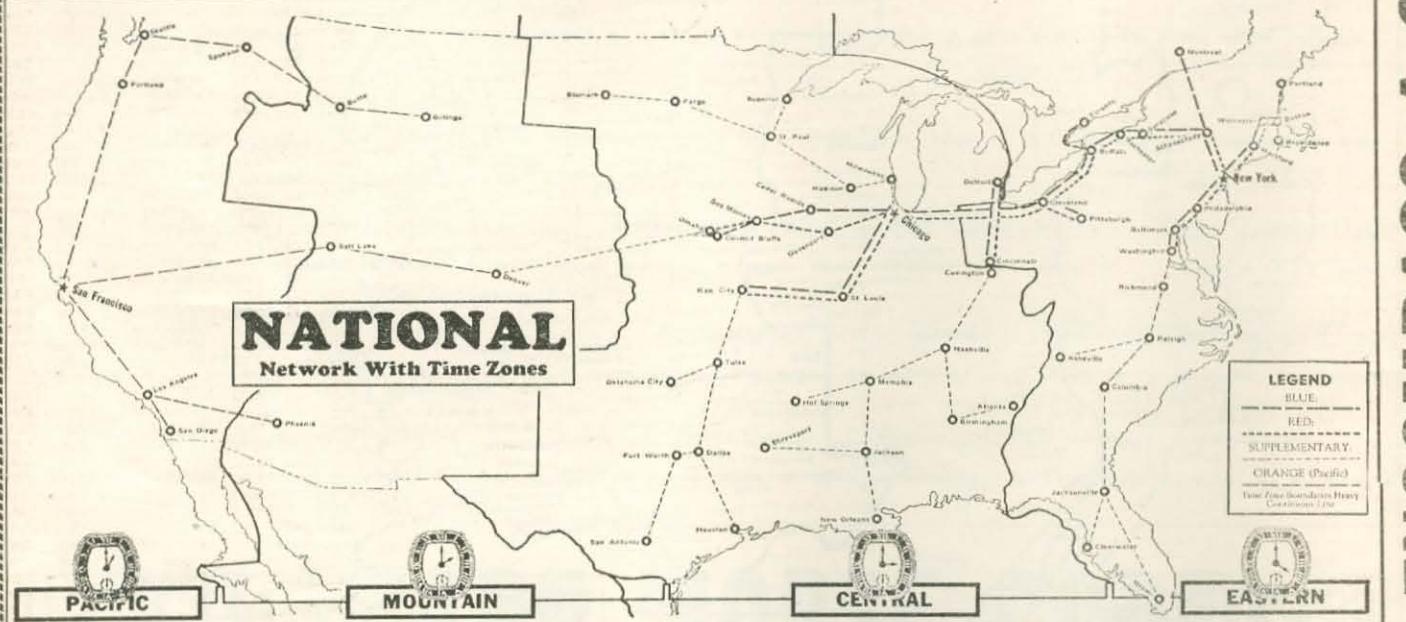
An overwhelming majority of interest in radio entertainment generally, is of course in the so-called network programs, which may be produced anywhere, but generally are released from key station studios in New York or Chicago. Thus, from one small studio, a single broadcast is heard by countless millions, in many different time zones. While the program is produced and heard at a given time in New York, it is heard simultaneously in San Francisco, yet some three hours earlier as far as clock reading goes.

The time zone map of the networks on these pages, make clear why programs are received at various hours in different time zones, and also makes clear the zone location of any station from which the program may be coming. The com-

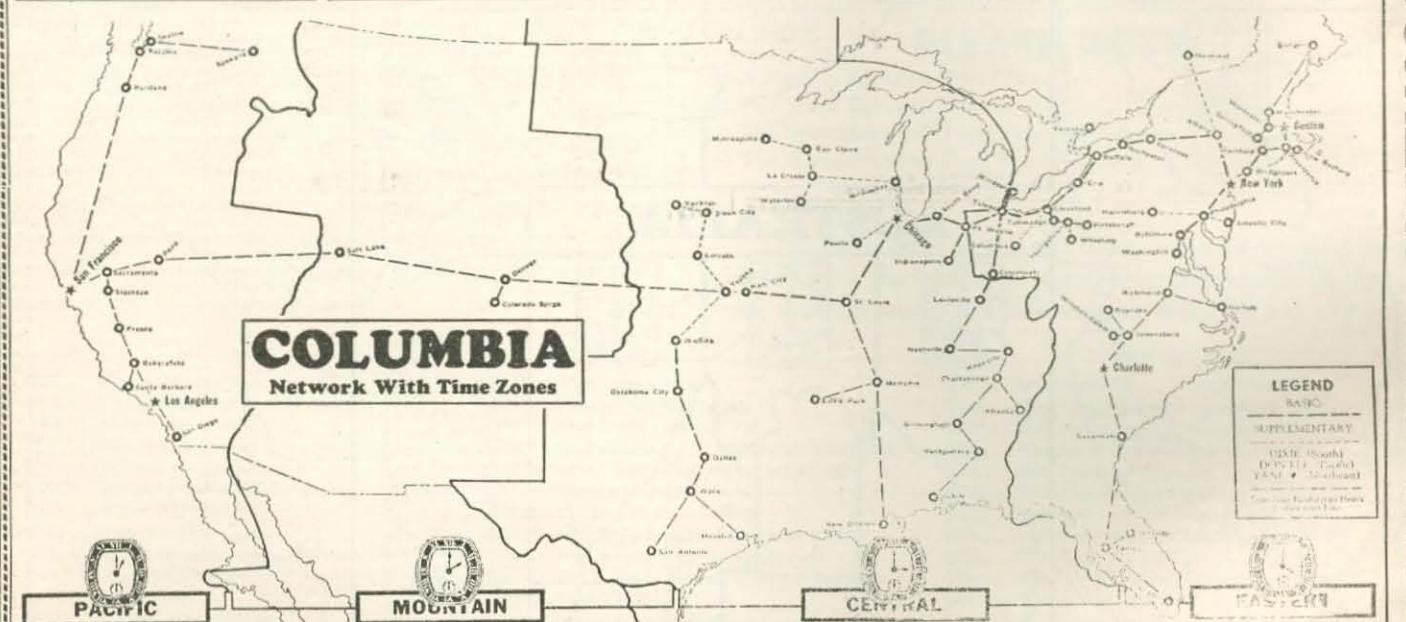
plete station list of each chain is given, from which may be dialed the nearest station of the chain from which the program is desired. It should be remembered, however, that member stations do not take every release; if one does not carry the program you desire, try another.

One condition in broadcasting incidental to many popular programs is very confusing to the average listener—split networks. Amos 'n' Andy is one of these. In this particular case Eastern listeners complained that the program was on the air too late; at the same time Pacific Coast listeners complained that it was coming too early. Thus it became necessary to broadcast the program at a suitable time for the Eastern part of the country and to re-broadcast it later for Western listeners.

Both National and Columbia maintain separate Pacific Coast networks. On account of the great distance and consequent difference in time, these stations operate several hours after Eastern stations have closed down for the night.



This is the complete network of the National Broadcasting Company. It will be noticed the Blue and Red chains run parallel. The Orange chain spans the Pacific Coast, and this circuit, when not producing its own programs, takes either the Blue or Red releases, as does the intervening supplementary networks.



The Columbia is a single network system consisting of basic and supplementary chains; also three distinct subsidiary units: the Don Lee on the Pacific Coast, the Dixie in the South and the Yankee in New England. Each of these produce a part of their own programs.

This is a complete list of all chain stations in North America. The three transcontinental networks are presented below, with the auxiliary chains of both NBC and CBS. At the right all stations are arranged in numerical order by kilocycles, with an abbreviation showing chain affiliation.

NATIONAL BROADCASTING COMPANY (91)

Channel Call City Power Channel Call City Power Channel Call City Power

Blue (21)

Key Station, WJZ, New York

56 WFI	Philadelphia	500	66 WEAF	New York	50,000	143 KECA	Los Angeles	1,000
57 WSYR	Syracuse	250	79 WJAR	Providence	500	147 KGA	Spokane	5,000
60 CFCF	Montreal	500	87 WLS	Chicago	50,000			
67 WMAQ	Chicago	5,000	90 WBEN	Buffalo	1,000			
70 WLW	Cincinnati	50,000	92 WJW	Detroit	1,000			
75 WJR	Detroit	10,000	94 WCSH	Portland	1,000			
76 WJZ	New York	30,000	97 WCFL	Chicago	5,000			
87 WENR	Chicago	5,000	100 WOC	Des Moines	50,000			
95 WRC	Washington	500	105 WTIC	Hartford	50,000			
96 CRCT	Toronto	5,000	107 WTAM	Cleveland	50,000			
98 KDKA	Pittsburgh	50,000	108 WPTF	Raleigh	1,000			
99 WBZ	Boston	25,000	112 WCAE	Pittsburgh	50,000			
102 KYW	Chicago	10,000	115 WHAM	Rochester	25,000			
105 WBAL	Baltimore	10,000	117 WJAX	Jacksonville	1,000			
115 WHAM	Rochester	25,000	120 WKY	Okla. City	1,000			
122 WREN	Kansas City	1,000	125 WWDY	Fargo	1,000			
126 KOIN	Cou. Bluffs	1,000	126 KPRC	Houston	1,000			
135 KWK	St. Louis	1,000	128 WAVE	Louisville	1,000			
138 KSO	Des Moines	500	130 KFH	Portland	1,000			
142 KWCR	Cedar Rap.	100	132 KTAR	Phoenix	500			
145 KGAR	Cleveland	500	134 KPO	S. Francisco	50,000			

Supplement'ry (30)

Keys, KGO, KPO, San Francisco

55 WFI	Philadelphia	500	55 KFYR	Bismarck	1,000			
57 WSYR	Syracuse	250	57 WVNC	Asheville	1,000			
60 CFCF	Montreal	500	62 WFLA	Cleawater	1,000			
67 WMAQ	Chicago	5,000	62 WTMJ	Milwaukee	1,000			
70 WLW	Cincinnati	50,000	65 WSM	Nashville	50,000			
75 WJR	Detroit	10,000	68 WPTF	Raleigh	1,000			
76 WJZ	New York	30,000	74 WSB	Atlanta	50,000			
87 WENR	Chicago	5,000	78 WMC	Memphis	50,000			
95 WRC	Washington	500	80 WFAA	Dallas	50,000			
96 CRCT	Toronto	5,000	80 WBAP	Fort Worth	10,000			
98 KDKA	Pittsburgh	50,000	90 WJAX	Jacksonville	1,000			
99 WBZ	Boston	25,000	90 WKO	Okla. City	1,000			
100 WJZ	New York	50,000	92 KPRC	Houston	1,000			
105 WBAL	Baltimore	10,000	94 WAVE	Louisville	1,000			
115 WHAM	Rochester	25,000	101 WIS	Columbia	500			
122 WREN	Kansas City	1,000	104 KTHS	Hot Springs	10,000			
126 KOIN	Cou. Bluffs	1,000	106 KWTB	Shreveport	1,000			
135 KWK	St. Louis	1,000	108 WPRO	Providence	100			
138 KSO	Des Moines	500	110 WJDX	Jackson	1,000			
142 KWCR	Cedar Rap.	100	112 WIBA	Madison	500			
145 KGAR	Cleveland	500	114 WEBC	Superior	1,000			

Orange (18)

Keys, KGO, KPO, San Francisco

122 WREN	Kansas City	1,000	125 WFLA	Cleawater	1,000			
126 KOIN	Cou. Bluffs	1,000	126 KPRC	Houston	1,000			
135 KWK	St. Louis	1,000	128 WAVE	Louisville	1,000			
138 KSO	Des Moines	500	130 KFH	Portland	1,000			
142 KWCR	Cedar Rap.	100	132 KTAR	Phoenix	50,000			
145 KGAR	Cleveland	500	134 KPO	S. Francisco	50,000			
150 WJZ	New York	25,000	136 WMBG	Richmond	5,000			
152 WBBM	Chicago	25,000	138 WDAE	Tampa	1,000			
154 WENR	Chicago	25,000	140 WMBD	Pearl. Ill.	500			
156 WGR	Buffalo	1,000	142 WPSO	Providence	100			
158 WTAG	Worcester	500	144 WKTB	Shreveport	1,000			
160 WWT	Omaha	1,000	146 KSTW	St. Paul	10,000			
162 WDAF	Kansas City	1,000	148 KGIR	Covington	5,000			
164 WMAL	Washington	250	150 WCKL	Bangor	500			

Red (22)

Key Station, WAFB, New York

55 KSD	St. Louis	500	110 WPG	Atlantic C	5,000			
55 WFI	Philadelphia	500	112 WISN	Milwaukee	250			
57 KLY	St. Louis	500	116 WVVA	Wheeling	3,000			
57 WTAG	Worcester	500	120 WREC	Memphis	500			
59 WWT	Omaha	1,000	122 WMBG	Richmond	250			
59 WEEI	Boston	1,000	124 WHEC	Rochester	500			
61 WDAF	Kansas City	1,000	126 WPSO	Providence	100			
63 WMAL	Washington	250	128 WCKL	Bangor	500			

Basic (24)

Key Station, WABC, New York

55 WGR	Buffalo	1,000	110 WPG	Atlantic C	5,000			
55 WKRC	Cincinnati	50						

Afternoon PROGRAMS (Eastern):

Let These Pages Help You Find the Programs You Will Enjoy

Because most of the interest in radio programs is in the transcontinental features, attention is paid in these pages only to these releases. An orchestra begins to play in New York City; far away in another time zone, you listen to the music. You hear it regularly each day until you come to fix in your mind a certain hour; yet others are listening in other zones at a different time, and both are still different from the time in the studio where the orchestra is playing. Yet the music that is going across the continent is going on the air at precisely the same second and the answer to this is the changes in standard time that have a great deal to do with radio programs. Time-zone network maps are published frequently in this magazine, showing the time changes that occur, while program time (for the Evening programs that go across the continent) are given in each of the five zones.

Just as the day begins first in the East, so do the first programs appear. On this page are listed the afternoon chain releases, from noon to six in the evening (Eastern time). A few of these programs go across the continent, but in the main it is too early for Coast-to-Coast releases.

Following these are the Evening Programs, listed on the following double page. Practically this is the entertainment guide of the nation, and the programs listed include radio's most important. From six in the evening until midnight (Eastern time) all releases on four networks are shown, the majority of which go from Coast to Coast.

The period, however, is a little too early for the Pacific Coast (three in the afternoon to nine in the evening). So on the following page the Pacific Coast networks are shown — from four in the afternoon to midnight (seven to three in the morning Eastern time). While these schedules over-

lap the Evening Program schedules, the Coast networks do not carry all of the Eastern releases, supplanting a part of them with their own attractions.

All three schedules are based on 15-minute periods—four to the hour. Three simultaneous releases are listed, one for Columbia and two for NBC (the Blue and Red in the East; the Orange and Gold in the West). The Evening Program schedule includes a fourth network—the Canadian chain. This schedule also gives, where possible, the point of origination of each program, and the zones covered.

NBC has but one chain on the Coast (the Orange) but a second program schedule is maintained alternately by the two San Francisco key stations, KGO and KPO, the one broadcasting singly while the other heads the chain on which are carried either Coast NBC programs or Eastern Blue and Red releases.

Quarter Hour Periods in Eastern Standard Time		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
12	00	NBCBlue. NBCRed. COLUM.	Don Hall Trio..... Capitol Family..... Salt Lake Organ.....	The Commodores..... Piano Duo..... Voice of Experience.....	U. S. Marine Band..... Johnny Marvin, Tenor..... Home Circle.....	Eva Taylor, Crooner..... Henriett Schumann..... Voice of Experience.....	Astrid Fjelde, Soprano..... Johnny Marvin, Tenor..... Betty Barthell, Songs.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Man. Merry-Go-Round..... Gunnar Johansen.....
NOON	15	NBCBlue. NBCRed. COLUM.	Baby Rose Marie..... Wendell Hall..... Salt Lake Organ.....	Wendell Hall..... Johnny Marvin, Tenor..... Connie Gates, Songs.....	Farm and Home Hour..... Round Table..... Madison Ensemble.....	Wendell Hall..... Johnny Marvin, Tenor..... Betty Barthell, Songs.....	Rex Battle Orch..... Concert Ensemble..... Angela Rhumba Orch.....	Boy Scouts..... Genia Toranivo..... Vincent Travers Orch.....	Organ Concert..... Canzonetta.....
15	30	NBCBlue. NBCRed. COLUM.	Radio City Concert..... COLUM.	Radio City Concert..... Round Table..... Madison Ensemble.....	Farm and Home Hour..... Round Table..... Madison Ensemble.....	Farm and Home Hour..... Concert Ensemble..... Angela Rhumba Orch.....	Farm Bureau Fed..... Rex Battle Orch..... Farm and Home Hour.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Doris Quartet..... Canzonetta.....
30	45	NBCBlue. NBCRed. COLUM.	Radio City Concert..... COLUM.	Radio City Concert..... Round Table..... Madison Ensemble.....	Farm and Home Hour..... Concert Ensemble..... Angela Rhumba Orch.....	Farm and Home Hour..... Rex Battle Orch..... Farm and Home Hour.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....	L. Stokowski Orch.....
45									
1	00	NBCBlue. NBCRed. COLUM.	Radio City Concert..... Russian Choir..... Church of the Air.....	Farm and Home Hour..... Markets, Weather..... French Princess.....	Farm and Home Hour..... Markets, Weather..... French Princess.....	Farm and Home Hour..... Markets, Weather..... French Princess.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....	Arion Trio..... L. Stokowski Orch.....
15	30	NBCBlue. NBCRed. COLUM.	Radio City Concert..... Russian Choir..... Church of the Air.....	Farm and Home Hour..... Pinkey Hunter Orch..... Church of the Air.....	Farm and Home Hour..... Pinkey Hunter Orch..... Church of the Air.....	Farm and Home Hour..... Pinkey Hunter Orch..... Church of the Air.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....	Doris Quartet..... Canzonetta.....
30	45	NBCBlue. NBCRed. COLUM.	Youth Conference..... Maltex Program..... Minstrel Man.....	Vic and Sade..... Concert Ensemble..... New York Conference.....	Vic and Sade..... Concert Ensemble..... Easy Aces.....	Vic and Sade..... Concert Ensemble..... Easy Aces.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....	Arion Trio..... L. Stokowski Orch.....
45									
2	00	NBCBlue. NBCRed. COLUM.	Bar-X Days, Nights..... The Commodores..... Broadway Melodies.....	Happy Days in Dixie..... Bar-X Days, Nights..... The Commodores..... Broadway Melodies.....	Happy Days in Dixie..... Bar-X Days, Nights..... The Commodores..... Broadway Melodies.....	Happy Days in Dixie..... Bar-X Days, Nights..... The Commodores..... Broadway Melodies.....	Musical Originalities..... Revolution Stage..... Ann Leaf, Organ.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....
15	30	NBCBlue. NBCRed. COLUM.	Perfect Circle Program..... Elizabeth Lennox..... Hollywood Show.....	Smack Out..... Revolving Stage..... School of Air.....	Smack Out..... Revolving Stage..... School of Air.....	Smack Out..... Revolving Stage..... School of Air.....	Musical Originalities..... Revolution Stage..... Ann Leaf, Organ.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....
30	45	NBCBlue. NBCRed. COLUM.	Perfect Circle Program..... Elizabeth Lennox..... Hollywood Show.....	Smack Out..... Revolving Stage..... School of Air.....	Smack Out..... Revolving Stage..... School of Air.....	Smack Out..... Revolving Stage..... School of Air.....	Musical Originalities..... Revolution Stage..... Ann Leaf, Organ.....	Fireside Songs..... Boy Scouts..... Vincent Travers Orch.....	Seven Star Revue..... Genia Toranivo..... Vincent Travers Orch.....
45									
3	00	NBCBlue. NBCRed. COLUM.	International Tid-Bits..... Wayne King's Orch..... Symphony Orchestra.....	Joe White, Tenor..... Ma Perkins..... Oahu Serenaders.....	Reed Kennedy..... Ma Perkins..... Metropolitan Parade.....	Reed Kennedy..... Ma Perkins..... Metropolitan Parade.....	Metropolitan Opera..... Metropolitan Opera..... Metropolitan Opera.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	Corn Cob Pipe Club..... Southern Harmony.....
15	30	NBCBlue. NBCRed. COLUM.	Irene Rich, Drama..... Wayne King's Orch..... Symphony Orchestra.....	Heinie's German Band..... Ray Heatherton..... Voice of Experience.....	Heinie's German Band..... Ray Heatherton..... Artist Recital.....	Heinie's German Band..... Ray Heatherton..... Artist Recital.....	Musical Program..... Upstate Quartet..... Metropolitan Parade.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	Marshall's Mavericks.....
30	45	NBCBlue. NBCRed. COLUM.	The Yeast Foamers..... Spartan Troilians..... Symphony Orchestra.....	Heinie's German Band..... Woman's Radio Review..... U. S. Marine Band.....	Heinie's German Band..... Woman's Radio Review..... U. S. Marine Band.....	Heinie's German Band..... Woman's Radio Review..... U. S. Marine Band.....	Musical Program..... Upstate Quartet..... Metropolitan Parade.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	First Nighter.....
45									
4	00	NBCBlue. NBCRed. COLUM.	Dog Drama, Terhune..... To Be Announced.....	Betty and Bob..... Headlines in Song..... Bob Nolan Orch.....	Betty and Bob..... Headlines in Song..... Bob Nolan Orch.....	Betty and Bob..... Headlines in Song..... Bob Nolan Orch.....	Musical Program..... Dancing Echoes..... Artist Recital.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	Hart Instrumentalists.....
15	30	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	Congress Musicale..... Wildroot Program..... Symphony Orchestra.....	Congress Musicale..... Wildroot Program..... Symphony Orchestra.....	Congress Musicale..... Wildroot Program..... Symphony Orchestra.....	Musical Program..... Dancing Echoes..... Artist Recital.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	Mary Eastman, Soprano.....
30	45	NBCBlue. NBCRed. COLUM.	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Music Magic..... Jack-Loretta Clemens..... Enoch Light Orch.....	Music Magic..... Jack-Loretta Clemens..... Enoch Light Orch.....	Music Magic..... Jack-Loretta Clemens..... Enoch Light Orch.....	Musical Program..... Dancing Echoes..... Artist Recital.....	Amos 'n' Andy..... N. La Salle, Songs..... Harlem Serenaders.....	Gilmore Circus.....
45									
5	00	NBCBlue. NBCRed. COLUM.	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Dramatic Sketch..... Hoover Sentinels..... Symphony Orchestra.....	Hollywood on the Air.....
15	30	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	Musical Program.....
30	45	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.	NBCBlue. NBCRed. COLUM.
45									
Eastern ST	4								
Eastern ST	5								

Night PROGRAMS (Pacific Coast):

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4:00 NBCOran. NBCGold. COLDL.	Dance Masters..... Art and Music..... Hodge Podge Lodge.....	Musical Program..... Family Cook Book..... Correct English.....	Green Brothers Orch..... Society Sidelines..... Melodies Organistique.....	Studio Chatter..... Dance Masters..... Hodge Podge Lodge.....	Jack Denny, Orch..... Stringwood Ensemble..... Elder Michaux Cong.....	Jack Denny, Orch..... Stringwood Ensemble..... Elder Michaux Cong.....
4:15 NBCOran. NBCGold. COLDL.	Dance Masters..... Community Forum..... Hodge Podge Lodge.....	Your Government..... John and Ned..... Texas Rangers.....	Russo, Oriental Orch..... Tone Portraits..... Texas Rangers.....	Dance Masters..... Hodge Podge Lodge.....	Dance Masters..... Hodge Podge Lodge.....	Religion in News..... Tom Coakley, Orch..... Elder Michaux Cong.....
4:30 NBCOran. NBCGold. COLDL.	J. Penner, Comedian..... Silhouettes..... H. V. Kaltenborn.....	Mary and Her Garden..... Stringwood Ensemble..... Vidacrin Laboratories.....	Mary and Her Garden..... Silhouettes..... Vidacrin Laboratories.....	Mary and Her Garden..... Silhouettes..... Vidacrin Laboratories.....	Mary and Her Garden..... Silhouettes..... Vidacrin Laboratories.....	Arion Trio..... Tom Coakley, Orch..... Vidacrin Laboratories.....
4:45 NBCOran. NBCGold. COLDL.	J. Penner, Comedian..... Silhouettes..... H. V. Kaltenborn.....	Little Orphan Annie..... Stringwood Ensemble..... Cello and Organ.....	Little Orphan Annie..... Silhouettes..... Town Topics.....	Little Orphan Annie..... Silhouettes..... Town Topics.....	Little Orphan Annie..... Silhouettes..... Town Topics.....	Arion Trio..... Tom Coakley, Orch..... Vidacrin Laboratories.....
5:00 NBCOran. NBCGold. COLDL.	Cantor and Rubinoff..... Silhouettes..... Stringwood Ensemble.....	Dramatic Sketch..... Stringwood Ensemble..... Hawaiian Strings.....	Dramatic Sketch..... Stringwood Ensemble..... Hawaiian Strings.....	Dramatic Sketch..... Stringwood Ensemble..... Hawaiian Strings.....	Dramatic Sketch..... Stringwood Ensemble..... Hawaiian Strings.....	Stringwood Ensemble..... Art in America.....
5:15 NBCOran. NBCGold. COLDL.	Irv. Kennedy, Tenor..... NRA Speaker.....	Irvin Kennedy, Tenor..... NRA Speaker.....	Irvin Kennedy, Tenor..... NRA Speaker.....	Irvin Kennedy, Tenor..... NRA Speaker.....	Irvin Kennedy, Tenor..... NRA Speaker.....	Irvin Kennedy, Tenor..... NRA Speaker.....
5:30 NBCOran. NBCGold. COLDL.	Leo Reisman's Orch..... News Broadcast.....	Leo Reisman's Orch..... News Broadcast.....	Leo Reisman's Orch..... News Broadcast.....	Leo Reisman's Orch..... News Broadcast.....	Leo Reisman's Orch..... News Broadcast.....	Leo Reisman's Orch..... News Broadcast.....
5:45 NBCOran. NBCGold. COLDL.	H Bar O Rangers.....	H Bar O Rangers.....	H Bar O Rangers.....	H Bar O Rangers.....	H Bar O Rangers.....	H Bar O Rangers.....
6:00 NBCOran. NBCGold. COLDL.	Billy Batchelor..... Piano Pals.....	Billy Batchelor..... Piano Pals.....	Billy Batchelor..... Piano Pals.....	Billy Batchelor..... Piano Pals.....	Billy Batchelor..... Piano Pals.....	Billy Batchelor..... Piano Pals.....
6:15 NBCOran. NBCGold. COLDL.	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....
6:30 NBCOran. NBCGold. COLDL.	Henry M. Hyde Atrs..... Waring's Pennsylvan's	Henry M. Hyde Atrs..... Waring's Pennsylvan's	Henry M. Hyde Atrs..... Waring's Pennsylvan's	Henry M. Hyde Atrs..... Waring's Pennsylvan's	Henry M. Hyde Atrs..... Waring's Pennsylvan's	Henry M. Hyde Atrs..... Waring's Pennsylvan's
6:45 NBCOran. NBCGold. COLDL.	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....	Bing Crosby.....
7:00 NBCOran. NBCGold. COLDL.	Eileen Piggot..... Organ Concert.....	Eileen Piggot..... Organ Concert.....	Eileen Piggot..... Organ Concert.....	Eileen Piggot..... Organ Concert.....	Eileen Piggot..... Organ Concert.....	Eileen Piggot..... Organ Concert.....
7:15 NBCOran. NBCGold. COLDL.	Maxwell House..... Arion Trio.....	Maxwell House..... Arion Trio.....	Maxwell House..... Arion Trio.....	Maxwell House..... Arion Trio.....	Maxwell House..... Arion Trio.....	Maxwell House..... Arion Trio.....
7:30 NBCOran. NBCGold. COLDL.	Andre Kostelanetz..... Texaco Fire Chief.....	Andre Kostelanetz..... Texaco Fire Chief.....	Andre Kostelanetz..... Texaco Fire Chief.....	Andre Kostelanetz..... Texaco Fire Chief.....	Andre Kostelanetz..... Tex	

This table covers six hours of evening broadcasting for each day of the week, each day being in a vertical panel and the six from six to midnight New York time (3 to 9 Pacific Coast). Consider only the time in your own time zone.

IF YOU LIVE IN NORTH AMERICA, HERE'S YOUR

EVENING PROGRAM

SIX HOURS OF NETWORK RELEASES IN ALL ZONES

Each hour is divided into quarter hour periods and each of the four transcontinental broadcasts running simultaneously are listed—the Blue and Red networks of NBC, the Columbia and the CRB of Canada. The origin of each program is at the left; the zones at the right.

In this column time is shown in five zones, each hour divided into quarter hour periods and each of these showing the four chains whose programs are listed on these pages.

7654	3:00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

7654	00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

98765	00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

109876	00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

1110987	00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

12111098	00	NBC Blue, NBC Red, COLUM. CANADA
	:15	NBC Blue, NBC Red, COLUM. CANADA
	:30	NBC Blue, NBC Red, COLUM. CANADA
	:45	NBC Blue, NBC Red, COLUM. CANADA

SUNDAY EVENING PROGRAMS

Origin	Title	Zones
NY	Cadillac Concerts	EandC
NY	Catholic Hour	ECMP
NY	Songs My Mother Sang	EandC
Ott	Origin of Our Indians	AtoP
NY	Cadillac Concerts	EandC
NY	Catholic Hour	ECMP
NY	Songs My Mother Sang	EandC
Tor	Leonard Wooley, Vocal Recital	AandE
NY	Cadillac Concerts	EandC
NY	Dramatic Sketch	ECMP
NY	The American School	EandC
Hal	Smiling Ed McConnell	EandC
Hal	Atlantic Nocturne	AandE
NY	Cadillac Concerts	EandC
NY	Our American School	ECMP
NY	Charles Carllie, Tenor	EandC
Hal	Atlantic Nocturne	AandE

Origin	Title	Zones
Chi	Ted Weems' Orchestra	ECMP
Chi	Dramatic Sketch	EandC
Chi	The American Revue	Eonly
Mon	Le Vieil Album	AandE
Chi	Ted Weems' Orchestra	ECMP
Chi	Dramatic Sketch	EandC
Chi	Ace Bridge Orchestra	ECM
Mon	Le Vieil Album	AandE
NY	The Bakers' Broadcast	ECMP
NY	Dramatic Sketch	EandC
NY	H. V. Kaltenborn	Eonly
Mon	Masters of Music	AandE
NY	The Bakers' Broadcast	ECMP
NY	The Fitch Program	EandC
NY	The Goldbergs	EandC
Mon	Masters of Music	AandE

Origin	Title	Zones
Chi	To Be Announced	EandC
NY	Chase & Sanborn Hour	EandC
NY	Evening in Paris	ECMP
NY	Chateau Laurier	AECM
NY	To Be Announced	EandC
NY	Chase & Sanborn Hour	EandC
NY	Evening in Paris	ECMP
NY	Chateau Laurier	AECM
NY	To Be Announced	EandC
NY	Chase & Sanborn Hour	ECMP
NY	Dramatic Guild	ECMP
NY	Angelus Vocal Ensemble	AtoP
NY	To Be Announced	EandC
NY	Chase & Sanborn Hour	ECMP
NY	Dramatic Guild	ECMP
NY	Angelus Vocal Ensemble	AtoP

Origin	Title	Zones
NY	Gulf Headliners	EandC
NY	Manhattan Merry-Go-Round	ECMP
NY	The Seven Star Revue	ECMP
NY	Operetta	AtoP
NY	Gulf Headliners	EandC
NY	Manhattan Merry-Go-Round	ECMP
NY	The Seven Star Revue	ECMP
NY	Operetta	AtoP
NY	Walter Winchell	EandC
NY	American Album Familiar Music	ECMP
SF	Capt. Dobbiss, Ship of Joy	EandC
NY	The Seven Star Revue	ECMP
NY	Operetta	AtoP
NY	Nat Shilkret, Orchestra	EandC
NY	American Album Familiar Music	ECMP
NY	The Seven Star Revue	ECMP
NY	Operetta	AtoP

Origin	Title	Zones
NY	To Be Announced	EandC
Chi	Chevrolet Program	ECMP
NY	"Patri's Drama Of Childhood"	ECMP
NY	Artist Series	AtoP
NY	To Be Announced	EandC
NY	Chevrolet Program	ECMP
NY	The Meistersingers	EandC
NY	Artist Series	AtoP
NY	C. Gardel, Baritone	EandC
NY	Hall of Fame	ECMP
NY	Conclave of Nations	ECM
NY	Artist Series	AtoP
NY	C. Gardel, Baritone	EandC
NY	Hall of Fame	ECMP
NY	Conclave of Nations	ECM
NY	Mendelssohn Choir	AtoP

Origin	Title	Zones
Chi	Amos 'n' Andy	CMP
NY	John Fogarty, Tenor	EandC
NY	Little Jack Little	ECM
Reg	Twilight Echoes From the Fires	ECMP
Chi	Ennio Bolognini	EandC
NY	John Fogarty, Tenor	EandC
NY	Little Jack Little	ECM
Reg	Twilight Echoes From the Fires	ECMP
NY	Buddy Rogers Orchestra	EandC
NY	Master Singers	EandC
NY	Henry Busse Orchestra	ECMP
Edm	To Be Announced	ECMP
NY	Buddy Rogers Orchestra	EandC
NY	Master Singers	EandC
NY	Henry Busse Orchestra	ECMP
NY	To Be Announced	ECM

MONDAY EVENING PROGRAMS

Origin	Title	Zones
Wash	U. S. Army Band	EandC
NY	Xavier Cugat's Orchestra	ECMP
NY	Buck Rogers in 25th Century	Eonly
NY	To Be Announced	EandC
NY	Xavier Cugat's Orchestra	ECMP
NY	Al and Pete	ECM
Chi	Three X Sisters	EandC
Chi	Irene Beasley	EandC
Chi	George R. Holmes, News	ECMP
Que	Musicale	AandE
Hal	Lowell Thomas; News	EandC
Sch	Horsemen Philosophy	ECMP
Hal	Charles Carllie, Tenor	EandC
Que	Musicale	AandE

Origin	Title	Zones

<tbl_r cells="3" ix="4" maxcspan="1" maxrspan="

Airline Distances (Western Hemisphere)

TABLE NO. 2

It is possible to arrange only a limited number of cities in a distance table, for quick finding and on this page is a table that is one of a series that embraces

No. 1: United States-Canada Distances

No. 1: United States-Canada Distances
No. 2: Western Hemisphere Distances

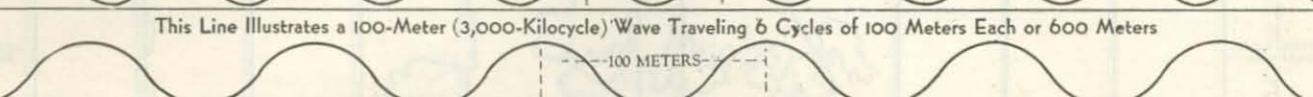
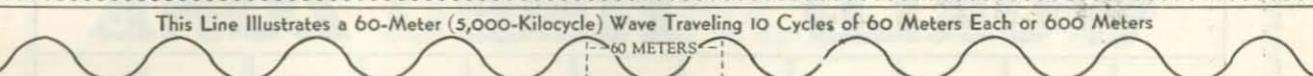
It will be noted that 48 cities are included in this chart and the arrangement places 48 on each side and 24 each on top and bottom. The diagonal row of hands in the upper and lower halves divides the figures applying to the cities at the left and those at the right.

	FROM	TO
Anchorage, Alas.		
Bogota, Col'mbia		
Boston, Mass.		
Bow manville, On.		
Buenos Aires, Ar.		
Calgary, Alta.		
Caracas, Venz.		
Chicago, Ill.		
Cincinnati, Ohio..		
C. Juarez, Mex....		
Denver, Colo.....		
Drum'ndville, Q.		
Edmonton, Alta...		
Guatimal, Guat.		
Halifax, N. S.....		
Havana, Cuba.....		
Heredia, C. Rica..		
Honolulu, Hawaii		
Juneau, Alaska....		
Lima, Peru.....		
Los Angeles, Cal...		
Mexico City, Mex.		
Miami, Fla.....		
Monterrey, Mex..		
Montevideo, Ur.		
Montreal, Que....		
New Orleans, La...		
New York, N. Y...		
Philadelphia, Pa...		
Pittsburgh, Pa...		
Port au Pr., Haiti		
Quito, Ecuador....		
Reykjavik, Icel...		
Reynosa, Mex.....		
Rio de Janeiro....		
St. Johns, Nwf...		
St. Louis, Mo...		
San Francisco.....		
San Jose, C. Rica..		
San Juan, P. Rico		
San Juan, P. Rico		
San Salvador, Sal.		
S. Dom., D. Rep.		
Seattle, Wash....		
Tegucigalpa, Hn.		
Toronto, Ont.....		
Vancouver, B. C...		
Villa Acuna, Mex.		
Winnipeg, Man...		
Montevideo, Ur.		
Montreal, Que....		
New Orleans.....		
New York.....		
Philadelphia, Pa...		
Port au Pr., Haiti		
Quito, Ecuador...		
Reykjavik, Icel...		
Reynosa, Mex.....		
Rio de Janeiro....		
St. Johns, Nwf...		
St. Louis, Mo...		
San Francisco.....		
San Jose, C. Rica..		
San Juan, P. Rico		
San Juan, P. Rico		
San Salvador, Sal.		
S. Dom., D. Rep.		
Seattle, Wash....		
Tegucigalpa, Hn.		
Toronto, Ont.....		
Vancouver, B. C...		
Villa Acuna, Mex.		
Winnipeg, Man...		
Montevideo, Ur.		
Montreal, Que....		
New Orleans.....		
New York.....		
Philadelphia, Pa...		
Port au Pr., Haiti		
Quito, Ecuador...		
Reykjavik, Icel...		
Reynosa, Mex.....		
Rio de Janeiro....		
St. Johns, Nwf...		
St. Louis, Mo...		
San Francisco.....		
San Jose, C. Rica..		
San Juan, P. Rico		
San Juan, P. Rico		
San Salvador, Sal.		
S. Dom., D. Rep.		
Seattle, Wash....		
Tegucigalpa, Hn.		
Toronto, Ont.....		
Vancouver, B. C...		
Villa Acuna, Mex.		
Winnipeg, Man...		

ULTRA SHORT; ULTRA LONG

THE SHORT WAVES

This Line Illustrates a 6-Meter (50,000-Kilocycle) Wave Traveling 100 Cycles of 6 Meters Each or 600 Meters.



THE LONG WAVES

This Line Illustrates a 200-Meter (1,500-Kilocycle) Wave Traveling 3 Cycles of 200 Meters Each or 600 Meters.

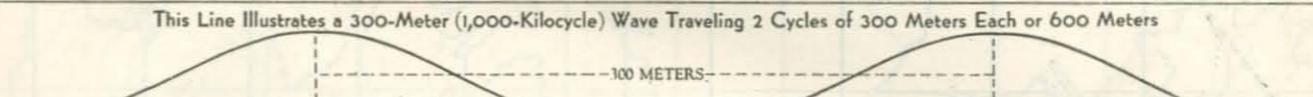


Fig. 10. Wavelengths of the first 1000 modes for $R = 5$ GeV.

These lines are correct reproductions of the relative length of radio waves—from the ultra short (50,000 kilocycles) to the ultra long (500 kilocycles) just outside the broadcast band.

In North America, long wave broadcasting begins at 550 and ends at 1500 kilocycles; but in Europe, stations are assigned as high as 155 kilocycles. Short wave is generally known as the frequencies below 3000 kilocycles.

Why [WAVE LENGTHS (METERS) DECREASE] *As*
[FREQUENCIES (CYCLES) INCREASE]

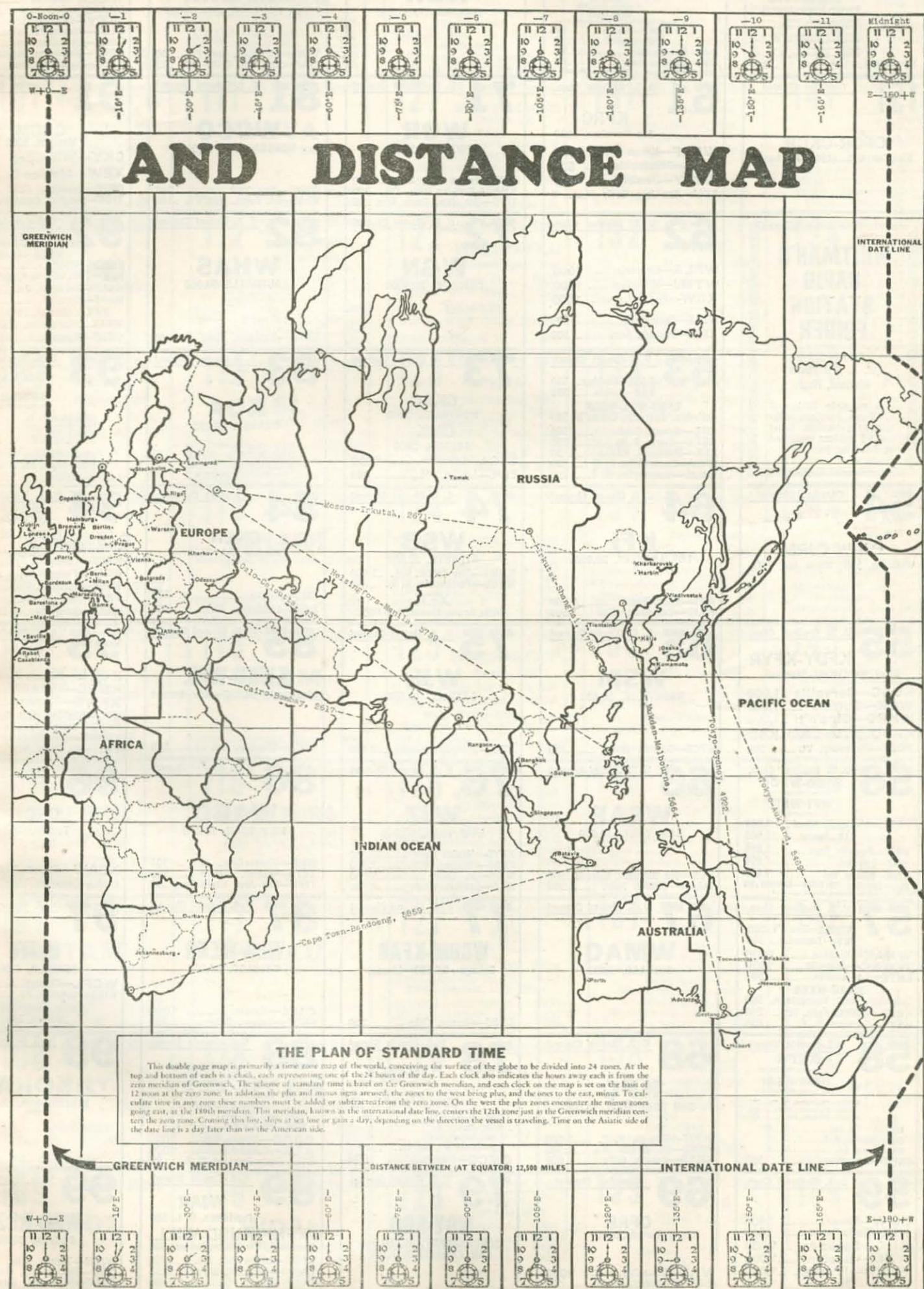
Meters Multiplied By Cycles Must Equal Distance the Wave Travels Per Second

As a kilocycle is equivalent to one thousand cycles, it will readily be seen that the ultra short wave illustrated at the top of this page, known as the 50,000 kilocycle wave, is in reality a 50,000,000 cycle wave, meaning that 50,000,000 is the number of cycles it makes in one second. As radio waves are known to travel 300,000,000 meters per second, it follows that a wave making 50,000,000 cycles per second must travel in cycles or waves of 6 meters each in order to travel at its given speed of 300,000,000 meters per second. This particular ultra-short wave is known either as a 50,000,000 cycle (or 50,000 kilocycles) wave, from the number of waves it makes a second, or as a 6-meter wave, the length of each wave so covered. Thus it is in each of the waves illustrated above. The number of cycles described by the wave multiplied by meters (the length of each wave) must equal the 300,000,000 meters each wave must travel in one second, bearing in mind that one kilocycle is the equivalent of 1,000 cycles. Thus do wavelengths (meters) and frequencies (kilocycles) increase and decrease conversely, not unlike the tall and the short man walking side by side. The latter takes more steps (kilocycles) but shorter ones (meters) than the tall man who takes fewer but longer steps and reaches his destination at the same time.

This illustration is presented, however, not to emphasize the theory of meter and kilocycle designation, but to illustrate the great difference between even the short waves themselves—the 100-meter wave and the ultra short 6-meter wave, which descends into an almost straight line of tiny pulsations.

So called short waves are below 100 meters and long waves, utilized for program broadcasting, above. Practically all broadcasting assignments are between the 500 kilocycle (600 meter) wave at the bottom and the 1500 kilocycle (200 meter) wave above, while practically all short wave broadcasting and commercial communications are carried on between the 6 and 100 meter bands.

It is interesting to note that the six waves, from the ultra-short to the ultra-long, actually travel the 100 meters as pictured above in a five hundred thousandth part of a second.



150 U. S. Local Channel
KREG-KDB
Santa Ana...100-Santa B.
WBHQ-WCHW-NWBL
Brooklyn, Brooklyn Woodside, 100
★ KNOW—Austin, Texas.....100
KPIJ—Prescott, Ariz.....100
WBZ-TV—Des Moines, Ia.....100
WKZB—Ludington, Mich.....100
WMPC—Lapeer, Mich.....100
WNBF—Binghamton, N. Y.....100
KPQ—Wenatchee, Wash.....100

151 Canadian Channel

CFCR-CKCR
Kingston, Ont...100..Kitchener

**WHITMAN'S
RAPID
STATION
FINDER**

Copyright by
W. R. WHITMAN
Kirkland, Wash.

A complete listing of
all North American radio
stations by channels. Local
channel stations continued
on following page.

54 Canadian Channel

CJRW-CJRM
Winnipeg, 500; Moose Jaw, 1000

55 U. S. Regional Chan.
KFDY-KFYR
Brookings...1000..Bismarck
KOAC—Corvallis...1,000
WGR—Buffalo.....1,000
WKRC—Cinc'n'ti.....1,000
KFUO...St. Louis, 500..KSD
WDEV—Waterbury, Vt.....500

56 U. S. Regional Chan.
WIBO-WPCC
1,000-Chicago-500
WFI-WLIT
Philadelphia, 500

WQAM—Miami.....1,000
WLZ—Denver.....1,000
WNOX—Knoxville, Tenn.....1,000
WIND—Gary, Ind.....1,000
KTAB—Oakland, Cal.....1,000
KGIZ—Springfield, 500/KDFM-Bennett, 500
XEAO—Mexicali, Mexico

57 U. S. Regional Chan.
WMCA—New Yk...500
KVI—Tacoma.....500

WNAX—Yankton.....1000
WWNC—Asheville.....1000
KMTR—Los Angeles.....500
WOSU-WKBN
Columbus, 1000; Youngstown, 500
KGKO—Wichita Falls, Tex.....250
WSYR—Syracuse, N. Y.....250

58 U. S.-Canada Shared
XEPM
1,000-Mexico, 50
JIBW-KSA
1,000-Manhattan, 50
WBOW—Charleston, W. Va.....250
WTAG—Worcester, Mass.....250
DBD—Orlando, Fla.....50
CKCL—10, Oct.....5
CRCA—Macon, N. B.....5
KMF—Fresno, Cal.....5
CKUA—Edmonton.....500

59 U. S. Regional Chan.

CMW—Havana.....1400
HIX—Santo Domingo.....1000
KHQ—Spokane.....1,000
WEI—Boston.....1,000
WKZO—K'lmaz.....1,000
WOW—Omaha.....1,000
CMDD—Havana, Cuba.....150

60 U. S.-Canada Shared
KFSO
San Diego, 1,000
CJOR
Vancouver, B. C., 500
WMT
Waterloo, Iowa, 500
WICC-WCAC
Westport, Conn, 500
WREC—Memphis.....500
CFCT—Memphis.....500
NCAO—Baltimore, Md.....250
FQD—Anchorage, Alaska.....250
GPO—Chicago, Ill, 1,000/See Chicago

61 U. S. Regional Chan.

KFRC
San Francisco, 1000
WDAF—Kansas City.....1000
WIP—Philadelphia.....500
WJAY—Cleveland.....500
TIXA—San Jose, Costa Rica.....8

62 U. S. Regional Chan.

WFLA—Clearwater.....1000
WTMJ—Milwaukee.....1000
KGW—Portland, Ore.....1000
WLBZ—Bangor, Me.....500
KTAR—Phoenix, Ariz.....500

63 U. S.-Canada Shared

CJGX—Yorkton, 500
XEZ—Merida, 500

KFRU—WOS—WGBF
Col'mbia, Jefferson, Evans'le, 500
CMQ—Havana, Cuba.....500
KGFX—Pierre, S. D.....200
XEX—Monterrey, Mexico.....50
CFCY—Charlottet'n, P. E. I.....500
WMAL—Washington, D. C.....250

64 U. S. Cleared Channel

KFI
LOS ANGELES, 50,000

WQI—Ames, Iowa.....5,000
WAU—Columbus, Ohio.....500

65 U. S. Cleared Channel

WSM
NASHVILLE, 50,000

KPCB—Seattle, Wash.....100

66 U. S. Cleared Channel

WEAF
NEW YORK, 50,000

XEYZ—Mexico City.....10,000
XEOT—Tijuana, Mex.....2,500
WEW—St. Louis.....1,000
KXA—Seattle, Wash.....250

67 U. S. Cleared Channel

WMAQ
CHICAGO, 5,000

CMBS—Havana, Cuba.....200

68 U. S. Cleared Channel

KPO
SAN FRANCISCO, 50,000

WPTF—Raleigh, N. C.....5,000
KFEQ—St. Joseph Mo.....2,500
CMAF—Havana, Cuba.....1,000

CMCQ—Havana.....1000

69 Canadian Channel

CFRB
Toronto, 5000

VAS—Glace Bay, N. S.....2000
XET—Monterrey, Mexico.....500
CJCI—Calgary, Alta.....500

70 U. S. Cleared Channel
WLW
CINCINNATI, 50,000

71 U. S. Cleared Channel

WOR
NEWARK, 50,000

XEN—Mexico City, Mex.....1,000
KMP—Beverly Hills, Cal.....500
TIFB—San Jose, Costa Rica.....30

72 U. S. Cleared Channel

WGN
CHICAGO 50,000

CMGC—Matanzas, Cuba.....30

73 U. S. Cleared Channel

CKAC
MONTREAL, 5000

CMK
HAVANA, 5000

CJCA—Edmonton.....1000
CFPL—London, Ont.....100

74 U. S. Cleared Channel

WSB
ATLANTA, 50,000

KMMJ—Clay Center, Neb.....1,000
WHEB—Portsmouth, N. H.....250

75 U. S. Cleared Channel

WJR
DETROIT, 10,000

KGU—Honolulu, Hawaii.....2,500

76 U. S. Cleared Channel

WABC
NEW YORK, 50,000

XEYZ—Mexico City.....10,000
XEOT—Tijuana, Mex.....2,500
WEW—St. Louis.....1,000
TIVL—San Jose, Costa Rica.....30

77 U. S. Cleared Channel

WBBM-KFAB
CHICAGO, 25,000—Lincoln

CMBS—Havana, Cuba.....200

78 U. S.-Canada Shared

KTM-KELW
Long Beach, Calif—500—Burbank

WEI—Providence, R. I.....250
CHV—Chilliwack, B. C.....100
CKF—For William, Ont....100

WMC—Memphis, Tenn.....500
WTAR—Norfolk, Va.....5
CJCS—Sudbury, Ont.....5
XEP—Mexico City, Mex.....500

CRCO—Ottawa, Ont.....1000
KLX—Oakland, 1000

HIL—Santo Domingo, D. R.....25

79 U. S. Cleared Channel

WJAR
Providence, R. I., 500

KFNF-KUSD—WILL
Shen'doh, Vermillion, Urb'n'a, 500

KARK—Little Rock, Ark.....250

WMMN—Fairmont, W. Va.....250

WGST—Atlanta, Ga.....250

XETU—Pachuca, Mexico.....100

80 U. S. Cleared Channel
WBAP-WFAA
FORT WORTH—50,000—Dallas

VOAC—St. Johns, Newf'l'd.....40

TIGP—San Jose, Costa Rica.....75

80 U. S. Cleared Channel
WBEN
BUFFALO, 1000

WJAX
Jacksonville, 1000

WKY
OKLAHOMA CITY, 1000

WLBL—Stevens Pt., Wisc.....2500

VOWR—St. Johns, Newf.....500

KGBU—Ketchikan, Alaska.....500

KSEI—Potatello, Idaho.....250

81 U. S. Cleared Channel

WCCO
MINNEAPOLIS, 50,000

CKY—Winnipeg.....5,000

CMJF—Camaguey, Cuba.....200

TICR—San Jose, Costa Rica.....75

82 U. S. Cleared Channel

WHAS
LOUISVILLE, 50,000

CMGC—Matanzas, Cuba.....30

83 U. S. Cleared Channel

KOA
DENVER, 50,000

WUP—Salisbury, Pa.....300

WEI—Benton, Ky.....1,000

WHD—Austin, Tex.....1,000

CMGA—Colón, Cuba.....100

TIEA—San José, Costa Rica.....5

CMDE—Havana.....250

84 Canadian Channel

CKLW
Windsor, Ont., 5000

CMC—Havana.....500

CJOC—Lethbridge, Alta.....100

85 U. S. Cleared Channel

KWKH-WWL
Shreveport—10,000—New Orleans

KIEV—Glendale, Cal.....100

86 U. S. Cleared Channel

WABC
NEW YORK, 50,000

WHD—Elmira, N. Y.....1,000

WKAR—E. Lansing, Mich.....1,000

CMHI—Santa Clara, Cuba.....250

CMGH—Matanzas, Cuba.....15

87 U. S. Cleared Channel

WLS-WENR
CHICAGO, 50,000

CMX—Havana.....1000

CMCF—Havana, Cuba.....250

88 U. S.-Canada Shared

KFKA-KPOF
Grove, Okla—500—Oklahoma City

WIC—Iowa City, Iowa.....100

WCOC—Meridian, Miss.....5

CRCO—Ottawa, Ont.....1000

KLX—Oakland, 1000

HIL—Santo Domingo, D. R.....25

89 U. S.-Canada Shared

WJAR
Providence, R. I., 500

KFNF-KUSD—WILL
Shen'doh, Vermillion, Urb'n'a, 500

KARK—Little Rock, Ark.....250

WMMN—Fairmont, W. Va.....

UNITED STATES

Alabama (10)

Georgia (12)

Covington, **WCKY** 149

Louisville, **WHAS** 82

Atlanta, **WBRC** 93

WAPI 114

WKBC 131

Dothan, **WHEP** 137

Gadsen, **WJBY** 121

Huntsville, **WBHS** 120

Mobile, **WDXD** 141

Montgomery, **WSFA** 161

Muscle Shoals, **WNRA** 142

Alaska (3)

Anchorage, **KFQD** 60

Juneau, **KIFH** 131

Ketchikan, **KGBU** 90

Arizona (8)

Jerome, **KCRJ** 131

Lowell, **KSUN** 120

Phoenix, **KTAR** 62

KOY 139

Prescott, **KPJM** 150

Tucson, **KVOA** 126

KGAR 137

Yuma, **KUMA** 142

Arkansas (9)

Blytheville, **KLCN** 129

Fayetteville, **KUOA** 126

WKBF 140

Fort Smith, **KFPW** 121

Hot Springs, **KTHS** 104

Jonesboro, **KBTM** 120

Little Rock, **KARK** 89

KGHI 120

KLRA 139

Texarkana, **KCMC** 142

California (43)

Bakersfield, **KERN** 120

Berkeley, **KRE** 137

Beverly Hills, **KMPC** 71

Burbank, **KELW** 78

El Centro, **KXO** 150

Eureka, **KIEM** 131

Fresno, **KMFJ** 58

Gendale, **KIEV** 85

Hollywood, **KFWB** 95

Long Beach, **KFOX** 125

KGER 136

Los Angeles, **KMTR** 57

KFI 64

KTM 78

KNX 90

KRKD 112

KFSG 112

KFAC 130

KECA 143

Oakland, **KTAB** 56

KLX 88

KROW 93

KLS 144

KFVD 100

KRFD 112

KFSD 133

KGB 133

San Francisco, **KFRC** 61

KPO 68

KGO 79

KFWI 93

KJBS 107

KYA 123

KGGC 142

San Jose, **KQW** 101

Santa Barbara, **KREG** 150

Santa Barbara, **KDB** 150

Stockton, **KGDM** 110

KWG 120

Colorado (12)

Alamosa, **KGIW** 142

Colorado Spgs., **KVOR** 127

Denver, **KLZ** 56

KOAL 83

KPOF 88

KFEL 92

KFXF 92

Grand Junc., **KFXJ** 120

Greeley, **KFKA** 88

Lamar, **KIDW** 142

Pueblo, **KGHF** 132

Yuma, **KGEK** 120

Connecticut (4)

Bridgeport, **WICC** 60

Hartford, **WTIC** 106

WDRC 133

Storrs, **WCAC** 60

Iowa (16)

Ames, **WOI** 64

Boone, **KFGQ** 131

Carter Lake, **KICK** 142

Cedar Rapids, **KWCR** 142

Council Bluffs, **KOIL** 126

Decorah, **KGCA** 127

KWLC 127

Des Moines, **WOC-WHO** 100

KSO 137

Grand Junc., **WWSI** 88

Iowa City, **WFJB** 121

Marshalltown, **KFJB** 120

Ottumwa, **WIAS** 131

Shenandoah, **KFNF** 89

KMA 93

Sioux City, **KSCJ** 133

Waterloo, **WRT** 60

Kansas (9)

Abilene, **KFBI** 105

Coffeyville, **KGGF** 101

Dodge City, **KGNO** 134

Kansas City, **WLBF** 142

Kalispell, **KGEZ** 131

Lawrence, **KFKU** 122

Wolf Point, **KGCX** 131

Manhattan, **KSAC** 58

Topeka, **WIBW** 58

Wichita, **KFH** 130

Delaware (2)

Wilmington, **WDEL** 112

WILM 142

Dist. of Col. (4)

Washington, **WMAL** 63

WRC 131

WOL 131

WJSV 146

Florida (9)

Clearwater, **WFLA** 62

Gainesville, **WRUF** 83

Jacksonville, **WJAX** 90

WMBR 137

Miami, **WQAM** 56

WIOD 130

Orlando, **WDBO** 58

Pensacola, **WCOA** 134

Tampa, **WDAE** 122

Kentucky (5)

Covington, **WCKY** 149

Louisville, **WHAS** 82

WAVE 94

WLAP 142

Paducah, **WPAD** 142

Maine (5)

Augusta, **WRDO** 137

Bangor, **WLBB** 62

WABI 120

Portland, **WCSH** 94

Presque Isle, **WAGM** 142

Mass. (13)

Boston, **WEI** 59

WHDH 83

WCBM 137

Cumberland, **WTBO** 142

Hagerstown, **WJEJ** 121

Indiana (16)

Anderson, **WHRB** 121

Culver, **WCMA** 121

Elkhart, **WTRC** 131

Evansville, **WGBF** 99

Ft. Wayne, **WWOW** 116

Complete
for
North
America

Alpha Call

Call	Location	Owner	Watts	Channel
CFAC	Calgary, Alta.	(100) The Calgary Herald	93	
CKMC	Cobalt, Ont.	(50) H. L. MacAdam	121	
CKMO	Vancouver, B. C.	(100) Sprott-Shaw Radio Co.	141	
CKNC	Toronto, Ont.	(500) Canadian Natl. Carbon Co., Ltd.	103	
CKOC	Hamilton, Ont.	(500) Wentworth Broadcast. Co., Ltd.	112	
CKOV	Kelowna, B. C.	(50) J. W. B. Browne	121	
CKPC	Brantford, Ont.	(100) Cyrus Dolph	93	
CKPR	Fort William, Ont.	(50) Dougall Motor Car Co., Ltd.	78	
CKCT	Victoria, B. C.	(50) Victoria Broadcasting Assn.	145	
CKCY	Charlottet'N, P.E.I.	(500) Island Radio Broadcasting Co.	63	
CFJC	Kamloops, B. C.	(100) Kamview Publishing Co., Ltd.	131	
CKUA	Edmonton, Alta.	(500) University of Alberta	58	
CKWX	Vancouver, B. C.	(100) Western Broadcasting Company	101	
CFNB	Fredericton, N. B.	(500) James S. Neill & Sons, Ltd.	103	
CFPL	London, Ont.	(100) London Free Press & Ptg. Co.	73	
CFQC	Saskatoon, Sask.	(500) The Electric Shop, Ltd.	123	
CFRB	Toronto, Ont.	(10,000) Rogers Majestic Corp., Ltd.	69	
CFRC	Kingston, Ont.	(100) Queen's University	151	
CFTP	Edmonton, Alta.	(100) Taylor & Pearson, Ltd.	112	
CHAB	Moose Jaw, Sask.	(100) Moose Jaw Radio Association	120	
CHCK	Charlottetown, P. E. I.	(50) W. E. Burke & J. A. Gesner	131	
CHGS	Summerside, P. E. I.	(50) R. T. Holman, Ltd.	112	
CHLP	Montreal, Que.	(100) La Patrie Pub. Co., Ltd.	112	
CHML	Hamilton, Ont.	(50) Maple Leaf Radio Co., Ltd.	101	
CHNC	New Carlisle, Que.	(100) Dr. Charles Houde	121	
CHNS	Halifax, N. S.	(500) Maritime Broadcast. Co., Ltd.	105	
CHPR	St. John, N. B.	(100) H. P. Robinson	137	
CHRC	Quebec, Que.	(100) CHRC, Limited	93	
CHWC	Regina, Sask.	(500) K. H. Williams & Sons, Ltd.	101	
CHWK	Chilliwack, B. C.	(100) Chilliwack Broadcasting Co., Ltd.	78	
CJAT	Trail, B. C.	(50) Trail Amateur Radio Ass'n	120	
CJCB	Havana	(100) Antonio Capablanca	105	
CJCA	Edmonton, Alta.	(1000) The Edmonton Journal, Ltd.	73	
CJCB	Sydney, N. S.	(50) N. Nathanson	88	
CJCJ	Calgary, Alta.	(500) The Albertan Pub. Co., Ltd.	69	
CJCH	Havana	(20) Wilfredo Fontanals	141	
CJCS	Surbury, Ont.	(500) Geo. McLeod Coates	78	
CJGX	Yorkton, Sask.	(500) The Winnipeg Grain Exchange	63	
CJKL	Kirkland Lake, Ont.	(100) O. J. Thorpe & Branchaud	131	
CJLS	Yarmouth, N. S.	(100) Laurie & Smith	131	
CJOC	Lethbridge, Alta.	(100) Harold R. Carson	84	
CJOR	Vancouver, B. C.	(500) G. C. Chandler	60	
CJRC	Middlechurch, Man.	(100) James Richardson & Sons	139	
CJRM	Moose Jaw, Sask.	(1,000) Jas. Richardson & Sons, Ltd.	54	
CJRW	Winnipeg, Man.	(500) Jas. Richardson & Sons, Ltd.	54	
CKAC	Montreal, Que.	(5000) LaPresse Pub. Co., Ltd.	73	
CKBI	Prince Albert, Sask.	(100) Prince Albert Radio Club	121	
CKCD	Vancouver, B. C.	(100) Vancouver Daily Province	101	
CKCH	Hull, Quebec	(100) Dr. J. L. Chabot	121	
CKCK	Regina, Sask.	(500) Leader-Post, Limited	101	
CKCL	Toronto, Ont.	(500) The Dominion Battery Co.	58	
CKCO	Ottawa, Ont.	(100) Dr. G. M. Geldert	101	
CKCR	Kitchener, Ont.	(100) W. C. Mitchell and G. Liddle	151	
CKCV	Quebec, Que.	(50) Vandry, Inc.	131	
CKFC	Vancouver, B. C.	(50) United Church of Canada	141	
CKGB	Timmons, Ont.	(100) R. H. Thompson	142	
CKIC	Wolfville, N. S.	(50) Acadia University	101	
CKLW	Windsor, Ont.	(5000) Western Ontario Broadcast. Co., Ltd.	84	

betical List

Every
Station
Listed
Here

Call	Location	Owner	Watts	Channel
CMHH	Cienfuegos	(100) San Carlos No. 106	120	
CMJC	Camaguey	(150) Felix Sanchez	138	
CMJE	Camaguey	(50) Manuel Fernandez	117	
CMJF	Camaguey	(200) John L. Stowers	91	
CMJG	Camaguey	(50) Jose Antonio Lefran	105	
CMJH	Ciego de Avila	(50) Luis Marauri Mendosa	115	
CMJI	Ciego de Avila	(45) Gilberto Gesso Lopez	134	
CMJJ	Camaguey	(50) Enrique Artimes	96	
CMBK	Havana	(15) Alberto Alvarez	148	
CMBL	Havana	(200) Julio C. Hidalgo	145	
CMBN	Havana	(150) G. de Sequeira	119	
CMK	Havana	(5,000) Nat. Broadcasting Co. of Cuba	73	
CMBS	Havana	(200) Enrique Artalejo	77	
CMBW	Havana	(600) Alvarez-Moris	114	
CMKJ	Havana	(20) Luis Morote	130	
CMBY	Havana	(250) Callejas-Estefani	123	
CMQ	Havana	(500) Miguel Gabriel	63	
CMW	Havana	(1400) Troncoso-Gil	60	
CMX	Havana	(1000) Casa "Lavin"	88	
CRCA	Moncton, N. B.	(500) Canadian Radio B'd'casting Com.	58	
CRM	Montreal, Que.	(500) Canadian Radio Broadcast. Com.	91	
CRG	Ottawa, Ont.	(1000) Canadian Radio B'd'casting Com.	88	
CRFZ	Havana	(250) Manuel Cruz	123	
CMCA	Havana	(150) Antonio Capablanca	105	
CMCD	Havana	(250) Angel Beremay	92	
CMCF	Havana	(250) Raoul Karman	87	
CMCH	Havana	(20) Wilfredo Fontanals	141	
CMCJ	Havana	(400) Rafael Rodriguez	118	
CMCM	Havana	(15) Aurelio Balino	141	
HHK	Port au Prince	(1000) Garde d'Haiti	92	
HIJ	Santo Domingo, D. R.	(15) F. A. Baez	119	
HIL	Santo Domingo, D. R.	(25) J. C. Teixido	88	
HIT	Santo Domingo, D. R.	(10) F. A. Sanabria	105	
HIX	Santo Domingo	(1000) Government	60	
HIZ	Santo Domingo, D. R.	(10) Frank Hatton	130	
HFZ	Tegucigalpa	(2300) Tropical Radio Telegraph Co.	137	
JRL	San Pedro Sula	(8) Jose Lopez	135	
KFJU	Grand Forks, N. D.	(100) University of North Dakota	137	
KFJB	Marshalltown, Iowa	(100) Marshall Electric Co., Inc.	120	
KFJH	Portland, Ore.	(500) Fort Worth Broadcast. Co., Inc.	137	
KFJL	Klamath Falls, Ore.	(100) KFJL Broadcasters, Inc.	121	
KFJM	Fond du Lac, Wis.	(100) Fond du Lac Reporter Printing Co.	142	
KFJN	Wichita, Kan.	(1000) KFJN Broadcasters, Inc.	130	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	131	
KFJU	Wichita, Kan.	(100) KFJU Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	131	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFJU	Wichita, Kan.	(100) KFJU Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFJU	Wichita, Kan.	(100) KFJU Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	
KFKA	Wichita, Kan.	(100) KFKA Broadcasters, Inc.	137	
KFJL	Wichita, Kan.	(100) KFJL Broadcasters, Inc.	137	
KFJQ	Wichita, Kan.	(100) KFJQ Broadcasters, Inc.	137	
KFJY	Wichita, Kan.	(100) KFJY Broadcasters, Inc.	137	
KFJZ	Wichita, Kan.	(100) KFJZ Broadcasters, Inc.	137	

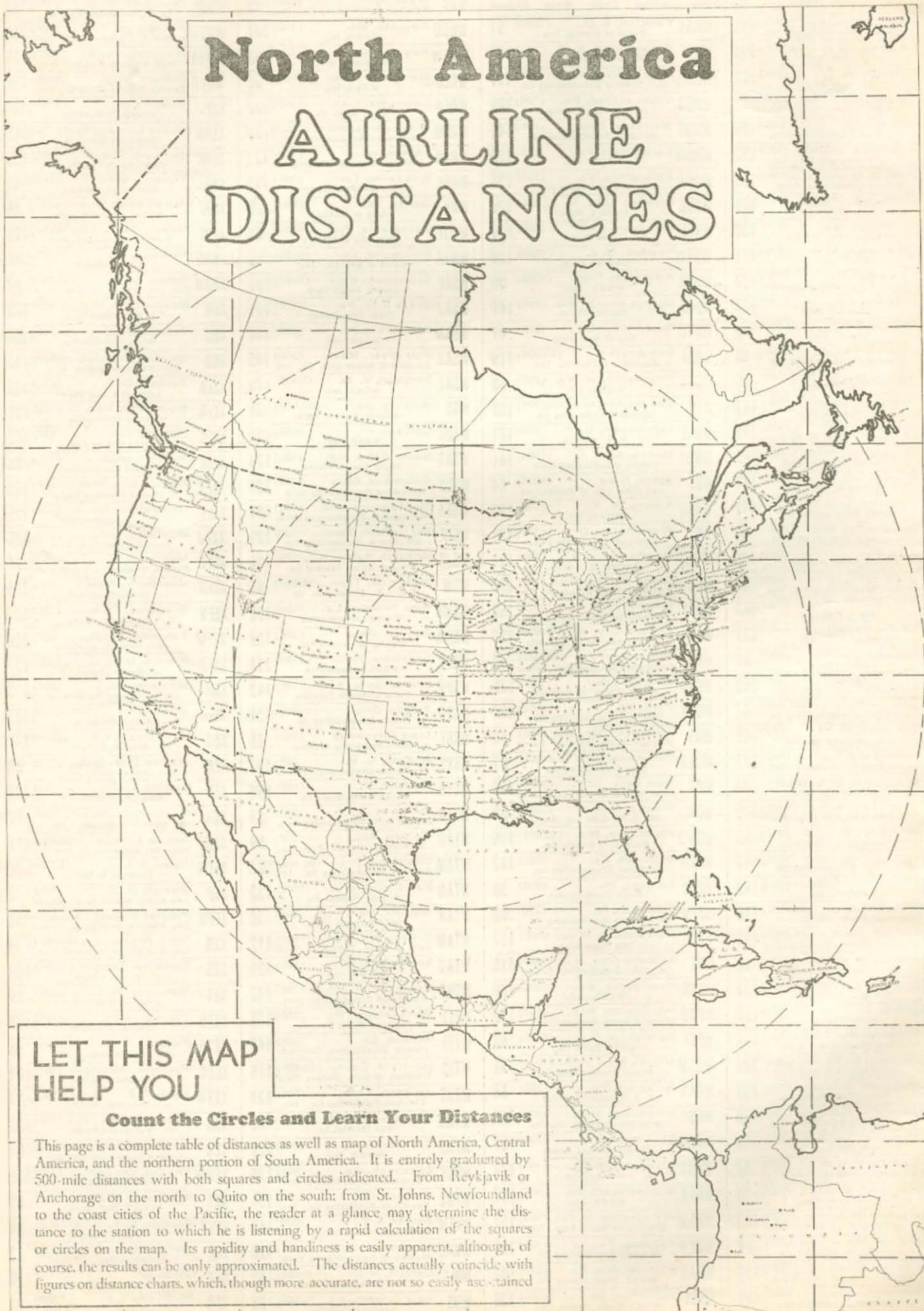
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Call	Location	Owner	Watts	Channel
WAAF	Chicago, Ill.	(500) Drovers Journal Pub. Co.	92	
WAAT	Jersey City, N. J.	(500) Bremer Broadcasting Corp.	94	
WAAW	Omaha, Neb.	(500) Omaha Grain Exchange	66	
WABC	New York, N. Y.	(50,000) Atlantic Broadcasting Corp.	86	
WABI	Bangor, Maine	(100) First Universalist Soc. of Bangor	120	
WACO	Waco, Tex.	(100) Central Texas Broadcasting, Inc.	142	
WADC	Akron, Ohio	(1,000) Allen T. Simmons	132	
WAGM	Presque Isle, Me.	(100) Aroostook Broadcasting Corp.	142	
WAIU	Columbus, Ohio	(500) Associated Radiocasting Corp.	64	
WALR	Zanesville, Ohio	(100) WALR Broadcasting Corp.	121	
WAMC	Anniston, Ala.	(100) Raymond C. Hammett	142	
WAML	Laurel, Miss.	(100) The Southland Radio Corp.	131	
WAPI	Birmingham, Ala.	(5,000) WAPI Broadcasting Corporation	114	
WARD	Brooklyn, N. Y.	(500) U. S. Broadcasting Corp.	140	
WASH	Grnd Rapids, Mich.	(500) Kunkley-Trendle Broadcast Corp.	127	
WAVE	Louisville, Ky.	(1,000) WFIW, Incorporated	94	
WAZB	Zarephath, N. J.	(250) Pillar of Fire	135	
WAZL	Hazleton, Pa.	(100) Hazleton Broadcasting Serv. Inc.	142	
WBAA	W. Lafayette, Ind.	(500) Purdue University	140	
WBAK	Harrisburg, Pa.	(1,000) Pennsylvania State Police	143	
WBAL	Baltimore, Md.	(10,000) Cons. Gas Elec. Lt. & Power Co.	106	
WBAP	Ft. Worth, Tex.	(50,000) Carter Publications, Inc.	80	
WBAX	Wilkes-Barre, Pa.	(100) John H. Stenger, Jr.	121	
WBBC	Brooklyn, N. Y.	(500) Brooklyn Broadcasting Corp.	140	
WBBL	Richmond, Va.	(100) Grace Covenant Pres. Church	121	
WBBM	Chicago, Ill.	(25,000) WBBM Broadcasting Corp.	77	
WBBR	Brooklyn, N. Y.	(1,000) Peoples Pulpit Assn.	130	
WBBX	New Orleans, La.	(100) Samuel D. Reeks	120	
WBBZ	Ponca City, Okla.	(100) C. L. Carroll	120	
WBCM	Bay City, Mich.	(500) James E. Davidson	141	
WBEN	Buffalo, N. Y.	(1000) WBEN, Incorporated	90	
WBEO	Marquette, Mich.	(100) Lake Superior Broadcasting Co.	131	
WBHS	Huntsville, Ala.	(100) The Hutchins Co.	120	
WBIG	Greensboro, N. C.	(500) No. Carolina Broadc. Co., Inc.	144	
WBMS	Hackensack, N. J.	(250) WBMS Broadcasting Corp.	145	
WBNX	New York, N. Y.	(250) Standard Cahill Co., Inc.	135	
WBOW	Terre Haute, Ind.	(100) Banks of Wabash, Inc.	131	
WBRC	Birmingham, Ala.	(500) Birmingham Broadcasting Co.	93	
WBRE	Wilkes-Barre, Pa.	(100) Louis G. Baltimore	131	
WBSO	Needham, Mass.	(500) Broadcasting Service Org., Inc.	92	
WBT	Charlotte, N. C.	(50,000) WBT, Inc.	108	
WBTM	Danville, Va.	(100) Piedmont Broadcasting Corp.	137	
WBZ	Boston, Mass.	(50,000) Westinghouse Elec. & Mfg. Co.	99	
WCAC	Storrs, Conn.	(250) Connecticut Agrl. College	60	
WCAD	Canton, N. Y.	(500) St. Lawrence University	122	
WCAE	Pittsburgh, Pa.	(1000) WCAE, Incorporated	122	
WCAH	Columbus, Ohio	(500) Commercial Radio Service Co.	143	
WCAL	Northfield, Minn.	(1000) St. Olaf College	125	
WCAM	Camden, N. J.	(500) City of Camden	128	
WCBO	Baltimore, Md.	(250) Monumental Radio Co.	60	
WCAP	Asbury Park, N. J.	(500) Radio Industries Broadcast Co.	128	
WCAT	Rapid City, S. D.	(100) S. D. State School of Mines	120	
WCAU	Philadelphia, Pa.	(50,000) WCAU Broadcasting Co.	117	

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Call	Location	Owner	Watts	Channel
WCAX	Burlington, Vt.	(100) Burlington Daily News, Inc.	120	
WCBA	Carthage, Ill.	(50) Superior Broadcasting Service	107	
WCBD	Allentown, Pa.	(250) B. Bryan Musselman	144	
WCBM	South Bend, Ind.	(100) South Bend Tribune	120	
WCFL	Greenville, S. C.	(100) Greenville News-Piedmont Co.	120	
WCFS	Zion, Ill.	(5000) Wilbur Glenn Voliva	108	
WCGB	Baltimore, Md.	(100) Baltimore Broadcasting Corp.	137	
WCBS	Springfield, Ill.	(100) WCBS, Inc.	121	
WCFB	Altoona, Pa.	(100) The Gable Broadcasting Co.	131	
WCFI	Syracuse, N. Y.	(1000) The Onondaga Broadcasting Co.	136	
WCFM	Indianapolis, Ind.	(1000) Chicago Federation of Labor	97	
WCKY	Youngstown, Ohio	(100) Indianapolis Power & Light Co.	123	
WCFR	Harrisburg, Pa.	(500) WCFR, Incorporated	127	
WCLD	Janesville, Wis.	(100) WCLD Radio Corporation	120	
WCLF	Flint, Mich.	(100) Flint Broadcasting Co.	131	
WCLV	Rome, Ga.	(100) Rome Broadcasting Corporation	150	
WCMA	Culver, Ind.	(500) General Broadcasting Corp.	140	
WFEA	Manchester, N. H.	(500) New Hampshire Broadcast. Corp.	143	
WCNW	Brooklyn, N. Y.	(100) Arthur Faske	150	
WCOA	Pensacola, Fla.	(500) Pensacola Broadcasting Co.	134	
WFLA	Clearwater, Fla.	(1000) Clearwater-St. Petersburg C. of C.	88	
WCRW	Chicago, Ill.	(100) Clinton R. White	121	
WGAL	Lancaster, Pa.	(100) WGAL, Inc.	131	
WGAR	Cleveland, Ohio	(500) The WGAR Broadcasting Co.	145	
WCSC	Charleston, S. C.	(500) Congress Square Hotel Co.	136	
WGBB	Freeport, N. Y.	(100) Harry H. Carman	121	
WGFB	Evansville, Ind.	(500) Evansville on the Air, Inc.	63	
WGDA	Tampa, Fla.	(1000) Tampa Publishing Co.	122	
WGDI	Kansas City, Mo.	(1000) Kansas City Star Co.	61	
WGDM	Amarillo, Tex.	(1000) National Radio Broadc. Corp.	141	
WGGM	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGHP	E. I. Paso, Tex.	(100) Tri-State Broadcasting Co., Inc.	131	
WGHS	Philadelphia, Pa.	(100) WDAS Broadcasting Station	137	
WGJY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGK	Roanoke, Va.	(500) Times-World Corp.	93	
WGJL	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGMC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGND	Chicago, Ill.	(100) WGN, Incorporated	122	
WGNS	Wilmington, Del.	(100) Delaware Broadcasting Co., Inc.	142	
WGOT	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGPM	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGPR	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGPM	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGPP	Newark, N. J.	(1,000) May Radio Broadcast Corp.	125	
WGQS	Chicago, Ill.	(500) WDAS Broadcasting Station	136	
WGTY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGWD	Roanoke, Va.	(500) Times-World Corp.	93	
WGWL	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGXC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGZ	Chicago, Ill.	(100) WGN, Incorporated	122	
WGZL	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGZP	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGZQ	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGZS	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGZT	Newark, N. J.	(1,000) May Radio Broadcast Corp.	125	
WGZU	Chicago, Ill.	(500) WDAS Broadcasting Station	136	
WGZY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGZV	Roanoke, Va.	(500) Times-World Corp.	93	
WGZW	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGZC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGZD	Chicago, Ill.	(100) WGN, Incorporated	122	
WGZG	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGZL	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGZQ	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGZS	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGZT	Newark, N. J.	(1,000) May Radio Broadcast Corp.	125	
WGZU	Chicago, Ill.	(500) WDAS Broadcasting Station	136	
WGZY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGZV	Roanoke, Va.	(500) Times-World Corp.	93	
WGZW	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGZC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGZD	Chicago, Ill.	(100) WGN, Incorporated	122	
WGZG	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGZL	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGZQ	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGZS	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGZT	Newark, N. J.	(1,000) May Radio Broadcast Corp.	125	
WGZU	Chicago, Ill.	(500) WDAS Broadcasting Station	136	
WGZY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGZV	Roanoke, Va.	(500) Times-World Corp.	93	
WGZW	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGZC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGZD	Chicago, Ill.	(100) WGN, Incorporated	122	
WGZG	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGZL	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGZQ	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGZS	Mississippi City	(100) Great Southern Land Co., Inc.	121	
WGZT	Newark, N. J.	(1,000) May Radio Broadcast Corp.	125	
WGZU	Chicago, Ill.	(500) WDAS Broadcasting Station	136	
WGZY	Fargo, N. D.	(1000) WDAY, Inc.	94	
WGZV	Roanoke, Va.	(500) Times-World Corp.	93	
WGZW	Ft. Wayne, Ind.	(100) Fred C. Zieg	137	
WGZC	Orlando, Fla.	(250) Orlando Broadcasting Co., Inc.	58	
WGZD	Chicago, Ill.	(100) WGN, Incorporated	122	
WGZG	WILMINGTON, DEL.	(100) Am. Broade. Corp. of Kentucky	142	
WGZL	Scranton, Pa.	(250) Scranton Broadcasters, Inc.	88	
WGZQ	Gary, Ind.	(1000) Johnson-Kennedy Radio Corp.	56	
WGZS	Mississippi City			

North America AIRLINE DISTANCES



Airline Distances (United States-Canada)

TABLE NO. 1

It is possible to arrange only a limited number of cities in a distance table, for quick finding and on this page is a table that is one of a series that embraces

No. 1: United States-Canada Distances
No. 2: Western Hemisphere Distances

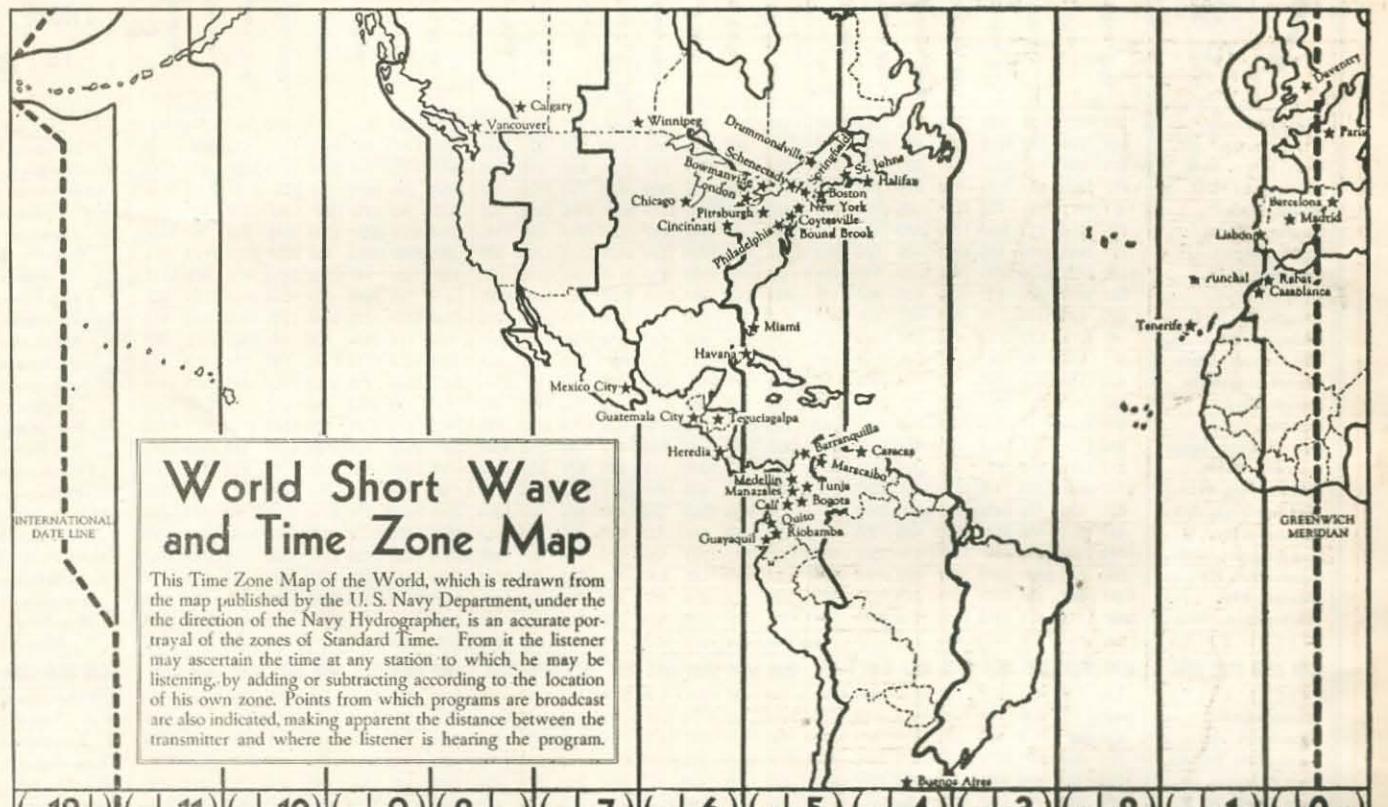
No. 3: Eastern Hemisphere Distances
No. 4: All-World Distances

It will be noted that 48 cities are included in this chart and the arrangement places 48 on each side and 24 each on top and bottom. The diagonal row of dashes in the upper and lower halves divides the figures applying to the cities at the left and those at the right.

FROM	TO	FROM	TO
Albuquerque	Winnipeg, Man.	Atlanta, Ga.	Winnipeg, Man.
Baltimore, Md.	Washington, D.C.	Baltimore, Md.	Washington, D.C.
Bismarck, N.D.	Vancouver, B.C.	Bismarck, N.D.	Vancouver, B.C.
Boise, Idaho	Tulsa, Okla.	Boise, Idaho	Tulsa, Okla.
Boston, Mass.	Toronto, Ont.	Boston, Mass.	Toronto, Ont.
Butte, Mont.	Seattle, Wash.	Butte, Mont.	Seattle, Wash.
Calgary, Alta.	Schenectady	Calgary, Alta.	Schenectady
Charlottesville, N.C.	San Francisco	Charlottesville, N.C.	San Francisco
Chicago, Ill.	San Antonio, Tex.	Chicago, Ill.	San Antonio, Tex.
Cincinnati, Ohio	Salt Lake City	Cincinnati, Ohio	Salt Lake City
Cleveland, Ohio	St. Louis, Mo.	Cleveland, Ohio	St. Louis, Mo.
Dallas, Texas	Richmond, Va.	Dallas, Texas	Richmond, Va.
Denver, Colo.	Regina, Sask.	Denver, Colo.	Regina, Sask.
Des Moines, Iowa	Portland, Ore.	Des Moines, Iowa	Portland, Ore.
Edmonton, Alta.	Portland, Me.	Edmonton, Alta.	Portland, Me.
Detroit, Mich.	Pittsburgh, Pa.	Detroit, Mich.	Pittsburgh, Pa.
Edmonton, Alta.	Phoenix, Ariz.	Edmonton, Alta.	Phoenix, Ariz.
Hot Springs, Ark.	Philadelphia, Pa.	Hot Springs, Ark.	Philadelphia, Pa.
Kansas City, Mo.	Omaha, Nebr.	Kansas City, Mo.	Omaha, Nebr.
Los Angeles, Cal.	New York, N.Y.	Los Angeles, Cal.	New York, N.Y.
Louisville, Ky.	New Orleans, La.	Louisville, Ky.	New Orleans, La.
Miami, Fla.	New York, N.Y.	Miami, Fla.	New York, N.Y.
Milwaukee, Wis.	Montreal, Que.	Milwaukee, Wis.	Montreal, Que.
Minneapolis	Nashville, Tenn.	Minneapolis	Nashville, Tenn.
Montreal, Que.	New Orleans, La.	Montreal, Que.	New Orleans, La.
Nashville, Tenn.	New York, N.Y.	Nashville, Tenn.	New York, N.Y.
New Orleans, La.	Philadelphia, Pa.	New Orleans, La.	Philadelphia, Pa.
New York, N.Y.	Phoenix, Ariz.	New York, N.Y.	Phoenix, Ariz.
Omaha, Nebr.	Pittsburgh, Pa.	Omaha, Nebr.	Pittsburgh, Pa.
Philadelphia, Pa.	Portland, Me.	Philadelphia, Pa.	Portland, Me.
Phoenix, Ariz.	Portland, Ore.	Phoenix, Ariz.	Portland, Ore.
Pittsburgh, Pa.	Portland, Ore.	Pittsburgh, Pa.	Portland, Ore.
Portland, Me.	Portland, Ore.	Portland, Me.	Portland, Ore.
Portland, Ore.	Portland, Ore.	Portland, Ore.	Portland, Ore.
Portland, Ore.	Regina, Sask.	Portland, Ore.	Regina, Sask.
Portland, Ore.	St. Louis, Mo.	Portland, Ore.	St. Louis, Mo.
Portland, Ore.	Salt Lake City	Portland, Ore.	Salt Lake City
Portland, Ore.	San Antonio, Tex.	Portland, Ore.	San Antonio, Tex.
Portland, Ore.	Seattle, Wash.	Portland, Ore.	Seattle, Wash.
Portland, Ore.	Toronto, Ont.	Portland, Ore.	Toronto, Ont.
Portland, Ore.	Vancouver, B.C.	Portland, Ore.	Vancouver, B.C.
Portland, Ore.	Washington, D.C.	Portland, Ore.	Washington, D.C.
Portland, Ore.	Winnipeg, Man.	Portland, Ore.	Winnipeg, Man.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	New Orleans, La.	Nashville, Tenn.	New Orleans, La.
New Orleans, La.	New York, N.Y.	New Orleans, La.	New York, N.Y.
New York, N.Y.	Omaha, Nebr.	New York, N.Y.	Omaha, Nebr.
Omaha, Nebr.	Philadelphia, Pa.	Omaha, Nebr.	Philadelphia, Pa.
Philadelphia, Pa.	Phoenix, Ariz.	Philadelphia, Pa.	Phoenix, Ariz.
Phoenix, Ariz.	Pittsburgh, Pa.	Phoenix, Ariz.	Pittsburgh, Pa.
Pittsburgh, Pa.	Portland, Me.	Pittsburgh, Pa.	Portland, Me.
Portland, Me.	Portland, Ore.	Portland, Me.	Portland, Ore.
Portland, Ore.	Regina, Sask.	Portland, Ore.	Regina, Sask.
Portland, Ore.	St. Louis, Mo.	Portland, Ore.	St. Louis, Mo.
Portland, Ore.	Salt Lake City	Portland, Ore.	Salt Lake City
Portland, Ore.	San Antonio, Tex.	Portland, Ore.	San Antonio, Tex.
Portland, Ore.	Seattle, Wash.	Portland, Ore.	Seattle, Wash.
Portland, Ore.	Toronto, Ont.	Portland, Ore.	Toronto, Ont.
Portland, Ore.	Vancouver, B.C.	Portland, Ore.	Vancouver, B.C.
Portland, Ore.	Washington, D.C.	Portland, Ore.	Washington, D.C.
Portland, Ore.	Winnipeg, Man.	Portland, Ore.	Winnipeg, Man.
Minneapolis	Minneapolis	Minneapolis	Minneapolis
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N.Y.	New York, N.Y.	New York, N.Y.	New York, N.Y.
Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.	Omaha, Nebr.
Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.	Philadelphia, Pa.
Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.	Phoenix, Ariz.
Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.	Pittsburgh, Pa.
Montreal, Que.	Montreal, Que.	Montreal, Que.	Montreal, Que.
Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.	Nashville, Tenn.
New Orleans, La.	New Orleans, La.	New Orleans, La.	New Orleans, La.
New York, N			

WESTERN (SHORT WAVE STATIONS OF HEMISPHERE)

Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle
UNITED STATES														
Boston, Mass.	W1XAL	6.04	New York, N. Y.	W2XE	15.27	Bowmanville, Ont.	VE9GW	11.81	Mexico City, Mexico	XDA	5.86	Barranquilla, Colom.	HKD	6.24
Boston, Mass.	W1XAL	21.46	New York, N. Y.	W2XBH	5.50	Bowmanville, Ont.	VE9GW	6.09	Mexico City, Mexico	XEW	6.03	Bogota, Colombia	HJ3ABF	7.61
Boston, Mass.	W1XAL	11.79	New York, N. Y.	W2XE	6.12	Calgary, Alberta	VE9CA	6.03	Mexico City, Mexico	XDA	14.63	Bogota, Colombia	HJK	6.20
Bound Brook, N. J.	W3XL	6.39	Philadelphia, Pa.	W3XAU	6.06	Calgary, Alta.	VE9CG	6.11	Mexico City, Mexico	XDA	11.76	Bogota, Colombia	HKF	7.56
Bound Brook, N. J.	W3XAL	6.10	Philadelphia, Pa.	W3XAU	9.59	Drumm'd'ville, Ont.	VE9DR	11.78	Call, Colombia	HJ5ABD	6.38	CENTRAL AMERICA	HJ4ABB	7.21
Bound Brook, N. J.	W3XAL	17.78	Pittsburgh, Pa.	WSXK	11.85	Guatemala City, Guat.	TGW	6.68	Manizales, Colom.	HJ4ABE	5.95	Medellin, Colombia	HJ4ABE	5.95
Chicago, III.	W9XF	17.78	Pittsburgh, Pa.	WSXK	6.14	Guatemala City, Guat.	VE9HX	8.93	Tunja, Colombia	HJ2ABA	5.88	Tquito, Colombia	HCIDR	6.38
Chicago, III.	W9XAA	17.78	Pittsburgh, Pa.	WSXK	17.78	London, Canada	VE9BY	4.79	Tegucigalpa, Hond.	HRB	6.00	Quito, Colombia	HCIDR	6.38
Chicago, III.	W9XAA	6.08	Pittsburgh, Pa.	WSXK	21.54	Tegucigalpa, Hond.	HRB	6.00	London, Ont.	VE9BY	6.43	Pittsburgh, Pa.	WSXK	15.21
Chicago, III.	W9XF	6.10	Pittsburgh, Pa.	WSXK	9.57	Heredia, Costa Rica	TI4NRH	9.68	Heredia, Costa Rica	TI4NRH	9.68	London, Ont.	VE9BY	6.43
Cincinnati, Ohio	W8XAL	6.06	Pittsburgh, Pa.	WSXK	9.57	Quite, Ecuador	HCJB	4.00	Quite, Ecuador	HCJB	4.00	London, Ont.	VE9BY	6.43
Coytesville, N. J.	W2XAL	15.25	Schenectady, N. Y.	W2XO	12.85	Riohambra, Ecuador	PRADO	6.62	Riohambra, Ecuador	PRADO	6.62	London, Ont.	VE9BY	6.43
Long Island City, N. Y.	W2XV	4.79	Schenectady, N. Y.	W2XA	15.33	Buenos Aires, Argen.	LSX	10.95	Buenos Aires, Argen.	MC2JSB	8.00	St. Johns, N. B.	VE9BJ	6.09
Miami Beach, Fla.	W4XB	6.04	Schenectady, N. Y.	W2XAF	9.53	Colombia	YV1BC	5.71	Colombia	YV1BC	5.71	Venezuela	YV1BC	6.11
New York, N. Y.	W2XE	11.83	Springfield, Mass.	W1XAZ	9.57	Barranquilla, Colom.	HJ1ABB	5.94	Barranquilla, Colom.	HJ1ABB	5.94	Barranquilla, Colom.	HJ1ABB	5.94
Havana, Cuba	CMCI	6.06	Havana, Cuba	CM6XJ	15.01	Barranquilla, Colom.	HKA	6.15	Barranquilla, Colom.	HKA	6.15	Barranquilla, Colom.	HKA	6.15
CUBA														
CANADA														
Boston, Mass.	W1XAL	6.04	New York, N. Y.	W2XE	15.27	Bowmanville, Ont.	VE9GW	11.81	Mexico City, Mexico	XDA	5.86	Barranquilla, Colom.	HKD	6.24
Boston, Mass.	W1XAL	21.46	New York, N. Y.	W2XBH	5.50	Bowmanville, Ont.	VE9GW	6.09	Mexico City, Mexico	XEW	6.03	Bogota, Colombia	HJ3ABF	7.61
Boston, Mass.	W1XAL	11.79	New York, N. Y.	W2XE	6.12	Calgary, Alberta	VE9CA	6.03	Mexico City, Mexico	XDA	14.63	Bogota, Colombia	HJK	6.20
Bound Brook, N. J.	W3XL	6.39	Philadelphia, Pa.	W3XAU	6.06	Drumm'd'ville, Ont.	VE9DR	11.78	Mexico City, Mexico	XDA	11.76	Bogota, Colombia	HKF	7.56
Bound Brook, N. J.	W3XAL	17.78	Pittsburgh, Pa.	WSXK	11.85	Guatemala City, Guat.	TGW	6.68	Call, Colombia	HJ5ABD	6.38	CENTRAL AMERICA	HJ4ABB	7.21
Chicago, III.	W9XF	17.78	Pittsburgh, Pa.	WSXK	6.14	Guatemala City, Guat.	VE9HX	8.93	Manizales, Colom.	HJ4ABE	5.95	Medellin, Colombia	HJ4ABE	5.95
Chicago, III.	W9XAA	17.78	Pittsburgh, Pa.	WSXK	21.54	London, Canada	VE9BY	4.79	Tunja, Colombia	HJ2ABA	5.88	Tquito, Colombia	HCIDR	6.38
Chicago, III.	W9XF	6.10	Pittsburgh, Pa.	WSXK	9.57	Tegucigalpa, Hond.	HRB	6.00	Quite, Ecuador	HCJB	4.00	Quite, Ecuador	HCJB	4.00
Cincinnati, Ohio	W8XAL	6.06	Pittsburgh, Pa.	WSXK	9.57	London, Ont.	VE9BY	6.43	Riohambra, Ecuador	PRADO	6.62	Riohambra, Ecuador	PRADO	6.62
Coytesville, N. J.	W2XAL	15.25	Pittsburgh, Pa.	WSXK	9.57	St. Johns, N. B.	VE9BJ	6.09	Buenos Aires, Argen.	LSX	10.95	Buenos Aires, Argen.	LSX	10.95
Long Island City, N. Y.	W2XV	4.79	Pittsburgh, Pa.	WSXK	9.57	Colombia	YV1BC	5.71	Colombia	YV1BC	5.71	Colombia	YV1BC	6.11
Miami Beach, Fla.	W4XB	6.04	Pittsburgh, Pa.	WSXK	9.57	Barranquilla, Colom.	HJ1ABB	5.94	Barranquilla, Colom.	HJ1ABB	5.94	Barranquilla, Colom.	HJ1ABB	5.94
New York, N. Y.	W2XE	11.83	Pittsburgh, Pa.	WSXK	9.57	Barranquilla, Colom.	HKA	6.15	Barranquilla, Colom.	HKA	6.15	Barranquilla, Colom.	HKA	6.15
Havana, Cuba	CMCI	6.06	Havana, Cuba	CM6XJ	15.01	Barranquilla, Colom.	HKD	6.00	Barranquilla, Colom.	HKD	6.00	Barranquilla, Colom.	HKD	6.00



WORLD BROADCAST STATIONS (Alphabetically by Cities)

Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle	Location	Call	Megacycle
Barcelona, Spain														
Barcelona, Spain	EAJ25	6.00	Chicago, III.	W9XF	17.78	Heredia, Costa Rica	TI4NRH	9.68	Paris, France	FLE	6.12	Rome, Italy	I2RQ	11.81
Barranquilla, Colombia	HKA	6.15	Chicago, III.	W9XA	17.78	Johannesburg, S. Africa	ZTJ	6.10	Paris, France	FYA	15.24	Schenectady, N. Y.	W2XAF	9.53
Barranquilla, Colombia	HKD	6.00	Chicago, III.	W9XF	6.10	Johannesburg, S. Africa	ZTJ	6.12	Paris, France	FYA	11.90	Schenectady, N. Y.	W2XO	12.05
Barranquilla, Colombia	HKD	6.24	Chicago, III.	W9XAA	11.83	Khabarovsk, Russia	RV15	4.27	Paris, France	FYA	11.70	Schenectady, N. Y.	W2XO	15.33
Barranquilla, Colombia	HJ1ABB	5.94	Chicago, III.	W9XAA	6.08	Lisbon, Portugal	CTI4A	9.60	Paris, France	FYB	10.51	Schenectady, Denmark	OXY	6.07
Bandoeng, Java	PMY	5.17	Chicago, III.	W9XAL	6.06	London, Canada	W3XAU	9.59	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJ3ABF	6.25	Chicago, III.	W9XAL	6.06	London, Ont.	VE9BY	6.43	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJK	6.20	Chicago, III.	W9XAL	6.06	Long Island City, N. Y.	W2XV	4.79	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJK	7.56	Chicago, III.	W9XAL	6.06	Nairobi, Africa	VE9CL	6.08	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJ3ABF	7.61	Chicago, III.	W9XAL	6.06	Nairobi, Africa	VE9CL	6.08	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJK	7.56	Chicago, III.	W9XAL	6.06	Paris, France	FYB	10.51	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJK	7.56	Chicago, III.	W9XAL	6.06	Paris, France	FYB	10.51	Philadelphia, Pa.	W3XAU	9.59	Skamlebaek, Denmark	OXY	9.52
Bogota, Colombia	HJK	7.56	Chicago, III.	W9XAL	6.06	Paris, France	FYB							

HOW TIME CHANGES

	DATE LINE	UNALASKA	SEWARD	JUNEAU	SAN FRANCISCO	DENVER	CHICAGO	NEW YORK	BUENOS AIRES	RIO JANEIRO	AZORES	ICELAND	LONDON	BERLIN	MOSCOW	BAKU	BAGDAD	BOMBAY	CALCUTTA	BANGKOK	MANILA	TOKYO	SYDNEY	AUCKLAND	DATE LINE
	180	165	150	135	120	105	90	75	60	45	30	15	0	15	30	45	60	75	90	105	120	135	150	165	180
MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	
1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	
2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	
3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	
4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	
5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	
6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	
7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	
8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	
9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	
10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	
11	M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	
M	1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	
1	2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	
2	3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	
3	4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	
4	5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	
5	6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	
6	7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	
7	8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	
8	9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	
9	10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	
10	11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	
11	MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	
MN	1	2	3	4	5	6	7	8	9	10	11	M	1	2	3	4	5	6	7	8	9	10	11	MN	
12P	11P	10P	9P	8P	7P	6P	5P	4P	3P	2P	1P	0	1M	2M	3M	4M	5M	6M	7M	8M	9M	10M	11M	12M	

This table contains the changes in time, in plainly marked figures, that take place as the time zones of the earth are traversed, and is designed for instant reckoning of time as given in another zone. In this chart, it will be noticed that Greenwich meridian, from whence standard time is reckoned, is in the center and the International Date Line is on either side. While identical in principle and operation with the time zone map, it affords easier reckoning. M indicates noon and MN midnight; the AM figures (from midnight to noon) are printed in lightface type, while the PM figures are dark. The degree figures at the top) indicate the meridian while the plus and minus figures (at the bottom) show the hours to be added to or taken from Greenwich time.

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