



NEW YORK CITY continues far ahead of other U. S. cities in shipments of television receivers by member companies of Radio Mfrs. Assn., according to a fourth-quarter summary which includes figures for all of 1948 [BROADCASTING, March 7].

RMA's shipments are believed to comprise about 90% of the industry. From Jan. 1, 1947, to Jan. 1, 1948, 964,206 sets had been shipped to 42 states and the District of Columbia. Fourth quarter shipments by member companies totaled 354,314 compared to 188,210 in the third quarter.

Shipments run behind production reports, RMA explained, its members having produced 866,832 TV receivers during 1948 whereas shipments totaled only 802,025 for the period.

Tabulation of TV set shipments by areas for the fourth quarter, and 1948 follow:

Television Broadcast Service Area	Fourth Quarter 1948	Entire Year 1948
ALABAMA		
Birmingham	21	23
ARKANSAS		
Little Rock	19	19
Other Cities	41	42
CALIFORNIA		
Fresno	8	11
Los Angeles	29,060	67,392
Long Beach	54	54
Oakland	58	60
Santa Barbara	201	201
San Diego	337	536
San Francisco	8,698	11,638
Other Cities	470	1,144
COLORADO		
Denver	25	37
CONNECTICUT		
Bridgport	963	2,039
Hartford	2,730	8,546
New Britain	37	144
New Haven	748	2,012
Waterbury	23	117
Other Cities	147	331
Cities not stated	214	580
DELAWARE		
Wilmington	1,157	2,550
Other Cities	7	7
DISTRICT OF COLUMBIA	10,124	25,556
FLORIDA		
Miami	52	748
Tampa	..	44
Cities not stated	..	54
GEORGIA		
Atlanta	2,215	4,455
Other Cities	31	376
ILLINOIS		
Chicago	25,419	58,622
Moline	26	26
Peoria	304	365
Rockford	52	82
Rock Island	20	20
Sterling	20	37
Tuscola	16	16
Other Cities	416	729

TV SET figures reported to BROADCASTING during the past week:

WAVE-TV Louisville Area (Kentucky, Indiana and Jefferson County, Ky.)—5,673 as of March 1, reported by WAVE Inc., Louisville. Seattle, Wash.—4,000 as of March 1, estimated and reported by KRSC-TV Seattle.

Chicago, Ill.—100,447 as of Feb. 1, reported by city's Electric Assn.

Television Broadcast Service Area	Fourth Quarter 1948	Entire Year 1948
INDIANA		
Gary	1,931	2,261
Fort Wayne	47	47
Hammond	214	214
Indianapolis	301	423
South Bend	705	1,172
Cities not stated	..	91
Other Cities	144	206
IOWA		
Madison	42	42
Other Cities	6	6
KANSAS		
..	8	9
KENTUCKY		
Louisville	2,002	2,897
Other Cities	49	57
Cities not stated	..	165
LOUISIANA		
New Orleans	3,338	3,970
Other Cities	13	13
MAINE		
..	9	14
MARYLAND		
Baltimore	12,115	24,219
Other Cities	258	318
MASSACHUSETTS		
Boston	11,692	27,728

Television Broadcast Service Area	Fourth Quarter 1948	Entire Year 1948
Cambridge	2,182	3,797
Springfield	46	159
Taunton	48	48
Worcester	152	994
Other Cities	120	229
Cities not stated	46	321
MICHIGAN		
Detroit	12,602	21,090
Grand Rapids	117	148
Pontiac	24	24
Other Cities	126	187
MINNESOTA		
Minneapolis-St. Paul	2,407	5,823
Other Cities	9	13
MISSISSIPPI		
..	27	30
MISSOURI		
Kansas City	18	502
St. Louis	5,718	11,759
Other Cities	25	76
NEBRASKA		
..	1	31
NEW HAMPSHIRE		
Manchester	100	309
Other Cities	36	46

Television Broadcast Service Area	Fourth Quarter 1948	Entire Year 1948
NEW JERSEY		
Atlantic City	915	1,109
Camden	11	11
Irvington	587	587
Jersey City	286	286
Newark	23,120	65,301
New Brunswick	21	21
Paterson	958	1,864
Rummedo	13	13
Trenton	1,832	3,942
Newark-Trenton	..	2,155
Cities not stated	4,019	6,579
Other Cities	861	1,445
NEW MEXICO		
Albuquerque	118	225
NEW YORK		
Albany	3,836	9,015
Binghamton	20	53
Buffalo	3,320	8,044
Long Island	5,217	9,342
Middletown	153	153
Newburg	34	34
New Rochelle	63	110
New York City	79,047	200,228
Poughkeepsie	251	677
Rochester	57	65
Schenectady	85	453
Syracuse	1,679	1,734
Tarrytown	33	33
Utica	45	66
Westchester	929	1,231
Other Cities	474	677
Cities not stated	..	729
NORTH CAROLINA		
Charlotte	202	219
Other Cities	1	12
NORTH DAKOTA		
..	..	1
OHIO		
Akron	840	1,319
Canton	89	186
Cincinnati	3,449	7,457
Cleveland	7,878	16,880
Columbus	16	22
Dayton	995	1,763
Toledo	2,716	5,346
Youngstown	135	142
Other Cities	289	843
OKLAHOMA		
Oklahoma City	13	18
Other Cities	9	10
OREGON		
Portland	123	125
Other Cities	4	9
PENNSYLVANIA		
Allentown	700	2,024
Easton	46	46
Erie	248	303
Harrisburg	195	201
Hazletine	2	2
Lancaster	139	285
Philadelphia	34,874	79,446
Pittsburgh	4,544	5,652
Pottsville	122	144
Reading	563	1,224
Sunbury	80	119
Williamsport	21	31
Other Cities	304	720
RHODE ISLAND		
Providence	1,610	3,263
Other Cities	142	1,115
TENNESSEE		
Knoxville	10	19
Memphis	2,212	3,057
Nashville	39	40
Other Cities	22	30
TEXAS		
Dallas	1,495	3,979
El Paso	63	163
Fort Worth	800	2,093
Houston	1,981	2,047
Other Cities	33	249
Cities not stated	..	175
UTAH		
Salt Lake City	473	577
Cities not stated	23	24
VERMONT		
..	..	3
VIRGINIA		
Alexandria	15	15
Norfolk	196	286
Richmond	648	2,452
Other Cities	46	168
WASHINGTON		
Seattle	4,123	4,450
Tacoma	43	47
Other Cities	66	72
WEST VIRGINIA		
Clarksburg	30	41
Wheeling	94	97
Other Cities	21	29
WISCONSIN		
Madison	73	96
Milwaukee	6,129	10,544
Other Cities	49	80
AREAS NOT DETERMINED	6,366	26,991
TOTAL SHIPMENTS	354,314	802,025

TELEVISION TRANSMISSION

Crosley Plans Interconnection Facilities

A COMPLEX system of relay equipment is being installed by Crosley Broadcasting Corp. which will enable WLWC (TV) Columbus and WLWD (TV) Dayton to receive and rebroadcast the programs of WLWT (TV) Cincinnati. DuMont and NBC network programs, in addition to WLWT shows and films, will be carried by the facilities.

Plans also call for WLWD sending programs to WLWC in the future. WLWD is to start this month. Additional equipment eventually will be installed for two-way transmission of programs at all sites.

In its present form the system operates as follows:

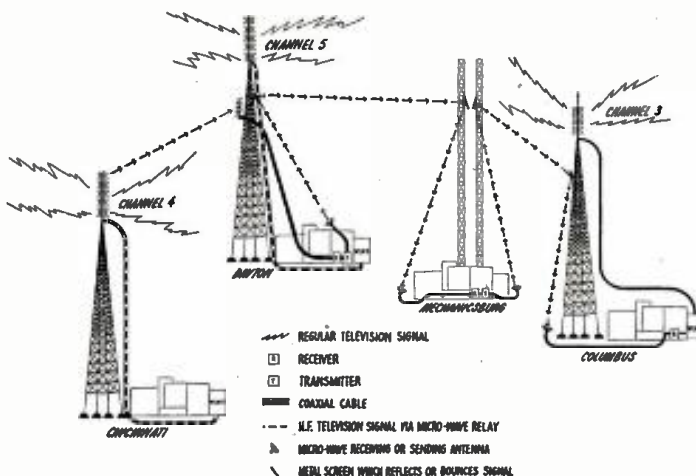
WLWT programs, telecast on Channel 4, are picked up by a special antenna on the WLWD tower and are carried by coaxial cable to a modified receiver in the WLWD transmitter building. From there they go to a micro-

wave transmitter and out to an eight-foot micro-wave antenna set up near the tower. This antenna focuses the signal into a beam, much in the manner of a search-light beam.

The beam is focused on a perforated metal screen on the tower which "bounces" the signal out into the air, aiming it at the next relay in Mechanicsburg. This signal is sent at a frequency about 30 times that of ordinary video.

At Mechanicsburg the signal hits another screen and is "bounced" down to a receiving antenna at the ground. The signal travels through another receiver and transmitter and is rebroadcast through the "bounce" technique used at WLWD.

At Columbus the signal is received and amplified and rebroadcast on WLWC's Channel 3. The program may also be broadcast in Dayton as well as relaying it through.



Artist's drawing of the relay system to be used.