

# Federal Aviation Agency



AC NO: 90-24

Air Traffic Control  
and General Operations

3/15/65

*Cancelled 00-20*

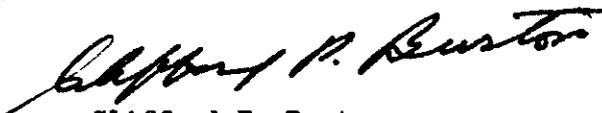
**SUBJECT :** SERVICE A WEATHER TELETYPEWRITER CIRCUIT LOADING ADJUSTMENT

1. PURPOSE. This circular advises Service A weather teletypewriter system subscribers of a pending transfer of certain data from Area to Supplemental Circuits and provides lead time for obtaining extension service on the latter where necessary to continue receiving such data.
2. REFERENCE. Service A Weather Schedules Handbook, AT P 7330.2A dated October 29, 1963.
3. DISCUSSION. The longlines portion of the Service A system consists of two channels (Area and Supplemental) for general distribution of weather information. The Area Circuits are carrying data which, because of their distant originating points and infrequent usage within the area concerned, rightfully belong on the companion Supplemental Circuits. This has resulted in overloading during peak operating periods and the loss or lengthy delay of weather information which is more urgently required. It has become necessary to draft criteria for use as a basis for equalizing system loading and for determining which of the two channels will be used for the relay of additional data.

Attachment 1, "Criteria Governing Eligibility of Data for Relay to Service A Area Circuits," sets forth in detail how such determination will be made. Attachments 3 and 4 are tabulations showing to what extent data now in the system will be rescheduled. Because of the grouping of the 12-hour aviation terminal forecasts in blocks to permit maximum use of system capability, it will not be possible to transfer all forecasts on the effective date of this program. Only the underlined locations will be moved to Supplemental Circuits at this time; the remainder will be shifted as regrouping can be accomplished. The United States Weather Bureau has regrouped the winds aloft forecasts in accordance with the above criteria. As further circuit loading adjustments become necessary, some transfer of data to Supplemental Circuits will occur.

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4. IMPACT OF CIRCUIT LOADING ADJUSTMENTS. These changes, while easy to make at system relay points, will have a marked effect on government and industry subscribers alike and require preparation well in advance in order to continue receiving needed data.
- a. It will be necessary for the government to extend Supplemental Circuits to areas not presently served. Some government users will have to install additional printers on these circuits to continue receiving data they require.
  - b. Some industry users will have to make arrangements with serving companies for Supplemental Circuit service to continue receiving data now available on Area Circuits.
  - c. Present system operation should improve sufficiently to permit at least minimum acceptable service until planned Automatic Data Processing (ADP) improvements can be implemented in early 1967.
  - d. The effective date for the transfer of data contained in the attachments to this circular is June 15, 1965. This should allow sufficient time for subscribers to obtain additional service where required.



Clifford P. Burton  
Acting Director  
Air Traffic Service

CRITERIA GOVERNING ELIGIBILITY OF DATA FOR RELAY TO SERVICE A AREA CIRCUITS

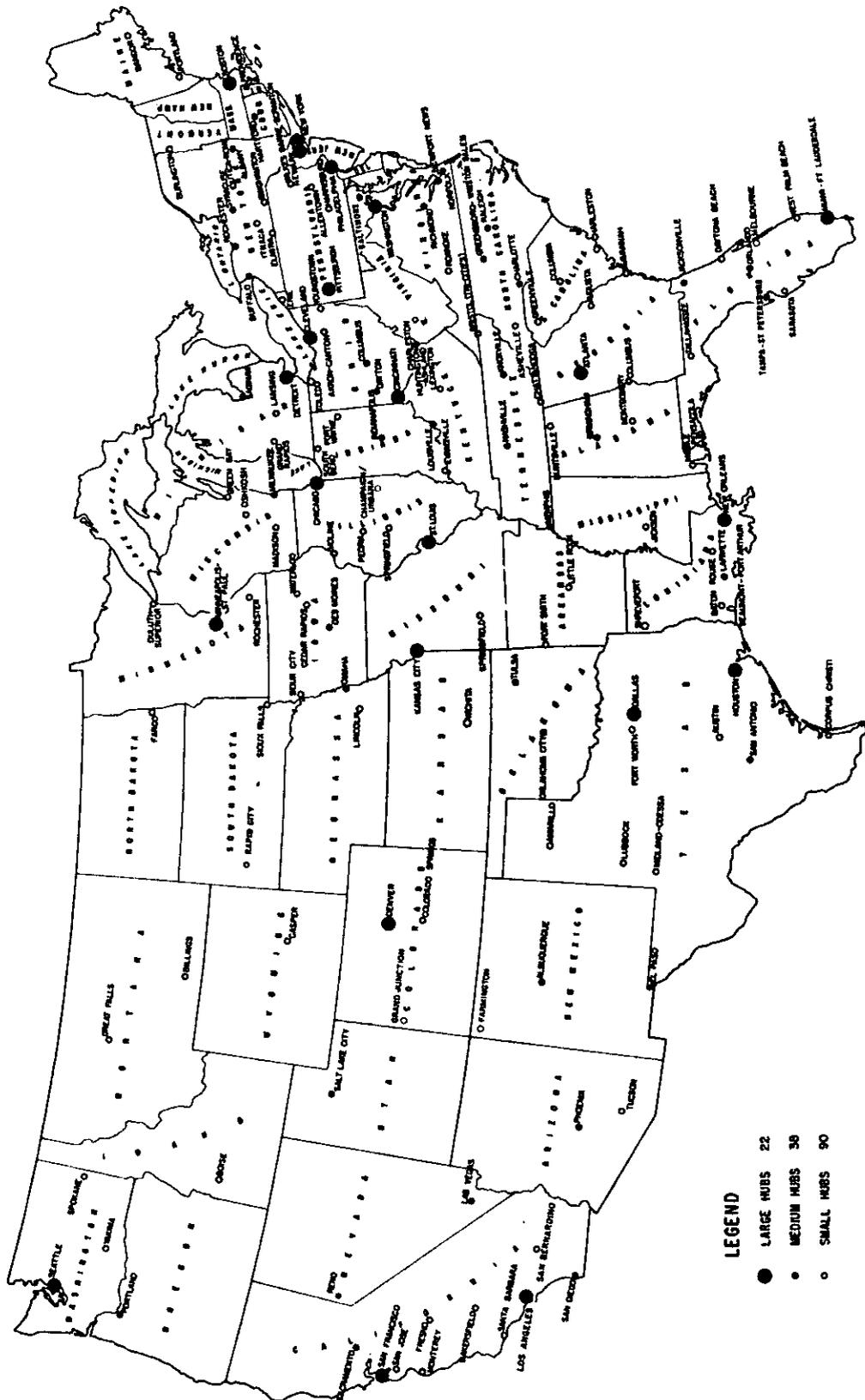
- 1.1 This paper sets forth criteria for determining the eligibility of certain data for relay on the Area Circuits of the Service A System. It is necessary to enable the system to operate with a reasonable degree of efficiency and provide acceptable service to the subscribers until improved equipments and techniques can be employed within the next several years.
- 1.2 Several factors are combined in these criteria to determine if certain data are eligible for relay on the Service A Area Circuits. They are designed to take into consideration the requirements of small and large users alike. These factors are:
  - a. The recognition that a maximum number of hourly aviation weather reports can be handled on the Area Circuits and still permit the distribution of other required data.
  - b. There is a maximum distance beyond the boundaries of a Service A Area Circuit from which certain data can be relayed into the circuit and still permit efficient operation.
  - c. Although certain data are from locations which are outside the maximum distance in (b.) they must be considered as eligible for relay to the Area Circuit because of the amount of air traffic between them and points within the boundaries of the Area Circuit.
- 1.3 To assure uninterrupted delivery of the hourly aviation weather reports on Service A Area Circuits the maximum number to be accommodated on a given circuit is 235. This total is determined by a criterion combining distance from the circuit of concern and importance of terminals from which reports originate. All reports in excess of this number must be handled on Supplemental or Local Circuits.
- 1.4 On Service A Area Circuits, other than those principally bordering on oceanic areas, including the Gulf of Mexico, the distance, as measured from peripheral circuit transmitting stations, from which originating reports may be relayed into the circuit is 450 miles. This applies to circuits 8022, 8025, 8026, 8027, 8030, 8031, 8032 and 8033. For those circuits bordering on the foregoing bodies of water a distance of 700 miles from peripheral circuit transmitting stations shall apply. This affects circuits 8021, 8023, 8024, 8028, 8029, 8034 and 8035.
  - 1.4.1 An exception to 1.4 is in the case of certain western circuits having less density of observation points than the average Service A Area Circuit. An added distance of 200 miles beyond the distance criteria

set forth in 1.4 shall apply in such instances. Circuits in this category are 8032, 8033, 8034 and 8035.

- 1.4.2 Further exception to 1.4 is made in the case of air traffic hubs as defined in the Federal Aviation Agency Document "Airport Activity Statistics of Certificated Route Air Carriers," dated June, 1964. These hubs are shown in Attachment 2, which is a chart abstracted from the foregoing publication.
- 1.5 Reports from air traffic hubs outside of the boundaries set forth in 1.4 and 1.4.1 shall be acceptable for relay on an area circuit in the descending order of air traffic activity, i.e. large, medium and small hubs up to the maximum allowable limit of reports. At large hub locations certain hub alternates may likewise be permitted. The distance at which a hub is located from the boundaries of a given Area Circuit shall determine priority for selecting one of like activity for relay on the circuit, i.e. a large hub 500 miles beyond the boundaries in 1.4 and 1.4.1 would be given preference over a large hub 1,000 miles beyond such boundaries.
  - 1.5.1 When there is a requirement to add a report to an Area Circuit and the maximum allowable limit of hourly aviation reports on the circuit has been reached, a report from an air traffic hub location in ascending order of air traffic density and originating at the greatest distance from the Area Circuit boundary shall be removed. For example, a small hub 400 miles outside of the criteria boundaries would be removed before a small hub 200 miles beyond such boundaries.
  - 1.5.2 When an area circuit is carrying the maximum number of hourly aviation weather reports allowed, and all of them are from locations within the boundaries set forth in 1.4 and 1.4.1, then the report from the farthest non-hub location from the area circuit boundary shall be a prime candidate for removal in order to add a report closer to the circuit. This reasoning shall likewise apply when the addition of a report from a large hub location and its alternate is required.
- 1.6 The criteria set forth in 1.4 through 1.5.2 shall govern the eligibility of all other data except SIGMETS and Hurricane Advisories, for relay to Service A Area Circuits. No criteria shall limit the distribution of these excepted data.
- 1.7 A maximum of 115 aviation terminal forecasts are authorized on a Service A Area Circuit provided they meet the criteria set forth in 1.4 through 1.5.2.
- 1.8 A maximum of 9 aviation area forecasts are authorized on a Service A Area Circuit provided they meet the criteria set forth in 1.4 and 1.4.1.

- 1.8.1 When any portion of a forecast area lies within the limits of a mileage criteria set forth in 1.4 and 1.4.1 the forecast is eligible for relay to the area circuit.
- 1.9 A maximum of 90 winds aloft forecasts (45 in each time group) are authorized on a Service A Area Circuit provided they meet the criteria set forth in 1.4 through 1.5.2.
- 2.0 All data not meeting the criteria set forth in the foregoing paragraphs shall be carried on either supplemental or local circuits.

AIR TRAFFIC HUBS



- LEGEND**
- LARGE HUBS 22
  - MEDIUM HUBS 39
  - SMALL HUBS 90

HOURLY AVIATION WEATHER REPORTS ON SERVICE A AREA CIRCUITS TO BE TRANSFERRED  
TO SUPPLEMENTAL CIRCUITS IN ACCORDANCE WITH NEW CIRCUIT LOADING CRITERIA

Circuit 8021

BWG - Bowling Green, Kentucky	MCN - Macon, Georgia
MKL - Jackson, Tennessee	CBI - Columbia, Missouri
RMG - Rome, Georgia	UIN - Quincy, Illinois
INL - International Falls, Minnesota	VLA - Vandalia, Illinois
LSE - La Crosse, Wisconsin	STC - St. Cloud, Minnesota
QK - Kenora, Ontario, Canada	BFF - Scottsbluff, Nebraska
XL - Sioux Lookout, Ontario, Canada	MLC - McAlester, Oklahoma
YW - Armstrong, Ontario, Canada	CYS - Cheyenne, Wyoming

Circuit 8022

MKL - Jackson, Tennessee	CBI - Columbia, Missouri
INL - International Falls, Minnesota	VIH - Vichy, Missouri
DLH - Duluth, Minnesota	DYR - Dyersburg, Tennessee
IRK - Kirksville, Missouri	QM - Moncton, N. B., Canada
OTM - Ottumwa, Iowa	SC - Sherbrooke, Que., Canada
ALO - Waterloo, Iowa	MYR - Myrtle Beach, S. C.
STJ - St. Joseph, Missouri	

Circuit 8023

MSS - Massena, New York	MCB - McComb, Mississippi
MPV - Montpelier, Vermont	BPT - Beaumont, Texas
HUL - Houlton, Maine	CEW - Crestview, Florida
DLH - Duluth, Minnesota	BDF - Bradford, Illinois
LSE - La Crosse, Wisconsin	CBI - Columbia, Missouri
MQT - Marquette, Michigan	UIN - Quincy, Illinois
PBF - Pine Bluff, Arkansas	FSM - Fort Smith, Arkansas
HRO - Harrison, Arkansas	ARG - Walnut Ridge, Arkansas
	MLC - McAlester, Oklahoma

Circuit 8024

PNE - Philadelphia, Pennsylvania	CLL - College Station, Texas
LSE - La Crosse, Wisconsin	LRD - Laredo, Texas
MBS - Saginaw, Michigan	VCT - Victoria, Texas
MLC - McAlester, Oklahoma	CRP - Corpus Christi, Texas
ABI - Abilene, Texas	QB - Quebec, Que., Canada

Circuit 8025

BGM - Binghamton, N. Y.	GNV - Gainesville, Florida
ELM - Elmira, New York	FMY - Fort Myers, Florida
TEB - Teterboro, New Jersey	VRB - Vero Beach, Florida
PNE - Philadelphia, Pennsylvania	MLB - Melbourne, Florida
STJ - St. Joseph, Missouri	MYR - Myrtle Beach, S. C.
LFK - Lufkin, Texas	CLL - College Station, Texas
CEW - Crestview, Florida	NAS - Pensacola, Florida
MLC - McAlester, Oklahoma	

Circuit 8026

TEB - Teterboro, New Jersey	HLC - Hill City, Kansas
POU - Poughkeepsie, New York	DDC - Dodge City, Kansas
ORH - Worcester, Massachusetts	HUT - Hutchinson, Kansas
BFF - Scottsbluff, Nebraska	MLC - McAlester, Oklahoma
CDR - Chadron, Nebraska	SBY - Salisbury, Maryland
SNY - Sidney, Nebraska	MLU - Monroe, Louisiana
IML - Imperial, Nebraska	MCN - Macon, Georgia
AIA - Alliance, Nebraska	NEL - Lakehurst, New Jersey
MCK - McCook, Nebraska	NGU - Norfolk, Virginia
YN - Swift Current, Sask., Canada	NKT - Cherry Point, N. C.
	NTU - Oceana, Virginia

Circuit 8027

TCC - Tucumcari, New Mexico	VCT - Victoria, Texas
MOT - Minot, North Dakota	ALI - Alice, Texas
BIS - Bismarck, North Dakota	INW - Winslow, Arizona
BFF - Scottsbluff, Nebraska	FMN - Farmington, N. Mex.
DUJ - DuBois, Pennsylvania	ROA - Roanoke, Virginia
JCT - Junction, Texas	RDU - Raleigh, N. C.
DRT - Del Rio, Texas	FMY - Fort Myers, Florida
LRD - Laredo, Texas	AND - Anderson, S. C.

Circuit 8028

NEL - Lakehurst, New Jersey	HON - Huron, S. Dak.
NYG - Quantico, Virginia	MUHA - Havana, Cuba
BGM - Binghamton, New York	MYNN - Nassau, New Providence I.
TEB - Teterboro, New Jersey	INW - Winslow, Arizona
DLH - Duluth, Minnesota	TCS - Truth or Consequences, New Mexico
BIS - Bismarck, North Dakota	CYS - Cheyenne, Wyoming

Circuit 8029

LAF - Lafayette, Indiana  
PKB - Parkersburg, West Virginia  
LOZ - London, Kentucky  
LOL - Lovelock, Nevada  
WMC - Winnemucca, Nevada  
BAM - Battle Mountain, Nevada  
EKO - Elko, Nevada  
BDF - Bradford, Illinois

NAU - Nautla, Ver., Mexico  
TMN - Tamuin, S. L. P., Mexico  
TUX - Tuxpan, Ver., Mexico  
BFL - Bakersfield, California  
ROA - Roanoke, Virginia  
FMY - Fort Myers, Florida  
DLH - Duluth, Minnesota  
BIL - Billings, Montana

Circuit 8030

BWG - Bowling Green, Kentucky  
LOZ - London, Kentucky  
WMC - Winnemucca, Nevada  
ELY - Ely, Nevada  
EED - Needles, California  
BLH - Blythe, California  
MFE - McAllen, Texas  
PNS - Pensacola, Florida

BIS - Bismarck, North Dakota  
MLS - Miles City, Montana  
NQL - Kingsville, Texas  
AUW - Wausau, Wisconsin  
MKG - Muskegon, Michigan  
LAN - Lansing, Michigan

Circuit 8031

LOL - Lovelock, Nevada  
WMC - Winnemucca, Nevada  
BAM - Battle Mountain, Nevada  
EKO - Elko, Nevada  
ELY - Ely, Nevada  
DTA - Delta, Utah  
MLF - Milford, Utah  
CDC - Cedar City, Utah  
BCE - Bryce Canyon, Utah  
FDY - Findlay, Ohio

TCS - Truth or Consequences, New Mexico  
MXN - Mullan, Idaho  
BYI - Burley, Idaho  
LWS - Lewiston, Idaho  
PDT - Pendleton, Oregon  
MEH - Meacham, Oregon  
BKE - Baker, Oregon  
TXK - Texarkana, Arkansas  
MLU - Monroe, Louisiana

Circuit 8032

SNS - Salinas, California  
SMX - Santa Maria, California  
LGB - Long Beach, California  
SDB - Sandberg, California  
IPL - Imperial, California  
INL - International Falls, Minnesota  
LSE - La Crosse, Wisconsin

STC - St. Cloud, Minnesota  
IRK - Kirksville, Missouri  
ABI - Abilene, Texas  
QH - Watson Lake, Y. T., Canada  
QX - Gander, Nfld., Canada  
YE - Fort Nelson, Y. T., Canada

Circuit 8033

MHK - Manhattan, Kansas  
EMP - Emporia, Kansas  
CNU - Chanute, Kansas  
ADM - Ardmore, Oklahoma  
MLC - McAlester, Oklahoma  
LRD - Laredo, Texas  
GGW - Glasgow, Montana  
RWF - Redwood Falls, Minnesota

LRF - Jacksonville, Arkansas  
IRK - Kirksville, Missouri  
OTM - Ottumwa, Iowa  
STJ - St. Joseph, Missouri  
CBI - Columbia, Missouri  
UIN - Quincy, Illinois  
VLA - Vandalia, Illinois

Circuit 8034

MHK - Manhattan, Kansas  
INK - Wink, Texas  
ACT - Waco, Texas  
LRD - Laredo, Texas

ATY - Watertown, South Dakota  
GRI - Grand Island, Nebraska

Circuit 8035

MHK - Manhattan, Kansas  
LRD - Laredo, Texas  
STC - St. Cloud, Minnesota  
PIR - Pierre, South Dakota  
HON - Huron, South Dakota  
CDR - Chadron, Nebraska  
GRI - Grand Island, Nebraska  
ZT - Port Hardy, B. C., Canada

NUW - Whidbey Island, Washington  
DCA - Washington, D. C.  
INL - International Falls, Minn.  
DLH - Duluth, Minnesota  
LAP - La Paz, B. C., Mexico  
MTY - Monterrey, N. L., Mexico

12-HOUR AVIATION TERMINAL FORECASTS ON SERVICE A AREA CIRCUITS TO BE TRANSFERRED TO SUPPLEMENTAL CIRCUITS IN ACCORDANCE WITH NEW CIRCUIT LOADING CRITERIA

Circuit 8021

None

Circuit 8022

None

Circuit 8023

INR - Sault Ste. Marie, Michigan  
LCH - Lake Charles, Louisiana  
SHV - Shreveport, Louisiana

LFT - Lafayette, Louisiana  
PNS - Pensacola, Florida

Circuit 8024

SPS - Wichita Falls, Texas  
GGG - Longview, Texas  
BPT - Beaumont, Texas  
MFE - McAllen, Texas  
IPT - Williamsport, Pennsylvania  
GRW - Greenwood, Mississippi

LIT - Little Rock, Arkansas  
PBF - Pine Bluff, Arkansas  
ELD - El Dorado, Arkansas  
DRT - Del Rio, Texas  
ART - Watertown, New York  
BFD - Bradford, Pennsylvania

Circuit 8025

DDC - Dodge City, Kansas  
ICT - Wichita, Kansas  
ART - Watertown, New York

FYV - Fayetteville, Arkansas  
SGF - Springfield, Missouri  
GLS - Galveston, Texas

Circuit 8026

ECG - Elizabeth City, North Carolina  
EWN - New Bern, North Carolina  
RMT - Rocky Mount, North Carolina  
LBF - North Platte, Nebraska  
GLD - Goodland, Kansas

GCK - Garden City, Kansas  
DDC - Dodge City, Kansas  
CNU - Chanute, Kansas  
GRI - Grand Island, Nebraska  
ILM - Wilmington, N. C.  
RDU - Raleigh, N. C.

NOTE: Underlined items to be transferred on effective date of the circular.

Circuit 8027

<u>AVL</u> - Asheville, North Carolina	<u>BUF</u> - Buffalo, New York
<u>CSG</u> - Columbus, Georgia	<u>GJT</u> - Grand Junction, Colorado
<u>AND</u> - Anderson, South Carolina	<u>LBB</u> - Lubbock, Texas
<u>HKY</u> - Hickory, North Carolina	<u>BGS</u> - Big Spring, Texas
<u>AHN</u> - Athens, Georgia	<u>MCN</u> - Macon, Georgia
<u>CLT</u> - Charlotte, North Carolina	<u>GSO</u> - Greensboro, North Carolina
<u>INT</u> - Winston Salem, North Carolina	<u>GSP</u> - Greer, South Carolina
<u>INR</u> - Sault Ste. Marie, Michigan	<u>SAT</u> - San Antonio, Texas
<u>FNT</u> - Flint, Michigan	<u>DRT</u> - Del Rio, Texas

Circuit 8028

<u>ROW</u> - Roswell, New Mexico	<u>ILG</u> - Wilmington, Delaware
<u>CNM</u> - Carlsbad, New Mexico	<u>ALO</u> - Waterloo, Iowa
<u>HOB</u> - Hobbs, New Mexico	<u>OFK</u> - Norfolk, Nebraska
<u>TCC</u> - Tucumcari, New Mexico	<u>CLD</u> - Cedar Rapids, Iowa
<u>ABQ</u> - Albuquerque, New Mexico	<u>LYH</u> - Lynchburg, Virginia
<u>FMN</u> - Farmington, New Mexico	<u>MRB</u> - Martinsburg, W. Va.
<u>SAF</u> - Santa Fe, New Mexico	<u>OTM</u> - Ottumwa, Iowa
<u>LVS</u> - Las Vegas, New Mexico	<u>MCW</u> - Mason City, Iowa
<u>BTL</u> - Battle Creek, Michigan	<u>ERI</u> - Erie, Pennsylvania
<u>LAN</u> - Lansing, Michigan	<u>SYR</u> - Syracuse, New York
<u>JXN</u> - Jackson, Michigan	<u>BUF</u> - Buffalo, New York
<u>GRR</u> - Grand Rapids, Michigan	<u>TEB</u> - Teterboro, New Jersey
<u>MKG</u> - Muskegon, Michigan	<u>YNG</u> - Youngstown, Ohio
<u>FNT</u> - Flint, Michigan	<u>CAK</u> - Akron, Ohio
<u>MBS</u> - Saginaw, Michigan	

Circuit 8029

<u>EVV</u> - Evansville, Indiana	<u>RAP</u> - Rapid City, S. Dak.
<u>IND</u> - Indianapolis, Indiana	<u>GSO</u> - Greensboro, N. C.
<u>LAF</u> - Lafayette, Indiana	<u>GSP</u> - Greer, S. C.
<u>HUF</u> - Terre Haute, Indiana	<u>TEB</u> - Teterboro, New Jersey
<u>SDF</u> - Louisville, Kentucky	<u>PRC</u> - Prescott, Arizona
<u>LEX</u> - Lexington, Kentucky	<u>LGB</u> - Long Beach, California
<u>BIS</u> - Bismarck, N. Dak.	

Circuit 8030

<u>MSL</u> - Muscle Shoals, Alabama	<u>SAN</u> - San Diego, California
<u>MGM</u> - Montgomery, Alabama	<u>BUR</u> - Burbank, California
<u>TCL</u> - Tuscaloosa, Alabama	<u>DAG</u> - Daggett, California
<u>SBN</u> - South Bend, Indiana	<u>LGB</u> - Long Beach, California

Circuit 8031

FWA - Fort Wayne, Indiana  
SBN - South Bend, Indiana  
EVV - Evansville, Indiana  
IND - Indianapolis, Indiana  
LAF - Lafayette, Indiana  
HUF - Terre Haute, Indiana  
FYV - Fayetteville, Arkansas  
TXK - Texarkana, Arkansas  
OGD - Ogden, Utah  
BYI - Burley, Idaho  
ELY - Ely, Nevada

PIH - Pocatello, Idaho  
BGS - Big Spring, Texas  
LBB - Lubbock, Texas  
CAK - Akron, Ohio  
ERI - Erie, Pennsylvania  
SYR - Syracuse, New York  
FNT - Flint, Michigan  
MBS - Saginaw, Michigan  
APN - Alpena, Michigan

Circuit 8032

DLH - Duluth, Minnesota

Circuit 8033

None

Circuit 8034

None

Circuit 8035

FWA - Fort Wayne, Indiana  
SBN - South Bend, Indiana

TYR - Tyler, Texas