Cancelled 9/27/74

AC NO: AC-90-50

DATE: 9/29/70

ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SUBJECT: AIR TRAFFIC CONTROL RADIO FREQUENCY ASSIGNMENT PLAN FOR VFR AND IFR COMMUNICATIONS

1. PURPOSE. This Circular describes the civil air traffic control assignment of frequencies in the very high frequency (118-136 MHz) band.

2. CANCELLATION. Advisory Circulars AC-90-33, VFR Communications for General Aviation, and AC-90-11A, Air Traffic Control Radio Frequency Assignment Plan, are cancelled.

3. GENERAL. The steady growth of aviation has brought about corresponding growth in air/ground communications requirements. Further, the growing diversity of air traffic has resulted in an increasingly complex air traffic control environment. In 1960, additional radio spectrum was reallocated for air traffic control and a long range air traffic control radio frequency plan, extending beyond 1966, was announced to the public. The plan included advice regarding the necessity for 50 kHz channeling in aircraft and, to meet the need, FAA modernized its ground communication facilities.

   In order to improve the capability to control air traffic, the FAA is expanding its enroute and terminal air traffic control facilities by establishing additional radar operating positions. These new positions create a requirement for additional channels which necessitates the use of more 50 kHz assignments. These frequencies are included in the Airman's Information Manual, the enroute low and high altitude charts, and new sectional charts.

   The pilot should be aware that full 50 kHz channel deployment excludes adjacent channel interference protection for equipment capable of operating only on 100 kHz increments and interference caused by proximity to aircraft and ground stations operating on adjacent 50 kHz channels should be anticipated. For unrestricted IFR operation, 360 channel communications capability is necessary.

Initiated by: RD-520

The quality and kind of communications equipment a pilot needs depends on the services desired and the scope of flying activity. The decision on the type of radio and the number of communications channels should be governed accordingly. The use of 720 channels (i.e., 25 kHz spacing) will be required at some future date. Therefore, purchase of this capability would insure full service for a greatly extended period.

4. FREQUENCY ASSIGNMENT PLAN.

   a. The emergency frequency 121.5 MHz will continue to have 100 kHz protection.

   b. ARTCC enroute assignments will be on any 50 kHz or 100 kHz air traffic control channel in the 118-136 MHz band.

   c. Terminal assignments will be on any 50 kHz or 100 kHz air traffic control channel in the 118-136 MHz band.

5. SUGGESTION. For unrestricted aircraft operations, 360 channel aircraft radio communications capability is necessary. The FAA strongly suggests a minimum 360 channel communications equipment capability.

6. FREQUENCY ALLOCATION. Attachment 1 shows the national allocation of frequencies in the 118-136 MHz aeronautical mobile service band.

K. M. Smith
Acting Administrator

ALLOCATION OF FREQUENCIES FOR THE AERONAUTICAL MOBILE SERVICE

FREQUENCIES	USE	SPACING	ATC CHANNELS	OTHER CHANNELS
118.0-121.4	Air Traffic Control	50 kHz	69	
121.5	Emergency	100 kHz		1
*121.6-121.9	Airport Utility	50 kHz		7
121.95	Flight Test			1
122.0-123.05	Private Aircraft	50 kHz		22
123.1	Search & Rescue			1
123.15-123.55	Flight Test - Flying School	50 kHz		9
123.6-128.8	Air Traffic Control	50 kHz	105	
128.85-132.0	Aeronautical Enroute (Air Carrier)	50 kHz		64
132.05-135.95	Air Traffic Control	50 kHz	79	___

Number of Air Traffic Control Channels----------253
Number of channels other than Air Traffic Control----------105

Total----------358

The radio spectrum between 118.0 and 136.0 MHz on 50 kHz channeling could contain 360 channels. By affording 100 kHz protection to 121.5 MHz, the maximum number is 358; on 25 kHz channeling, the maximum number is 716.

*May be used for control of airport lights by keyed RF signals from aircraft.

The frequencies listed below, in conjunction with the 100 kHz channels below 127 MHz, will permit aircraft to obtain all of the basic VFR services. Except as noted, the channels are simplex (transmit and receive on the same frequency).

a. 121.5 - Emergency
b. 121.6 - Control Tower, Ground Control
c. 121.65- Control Tower, Ground Control
d. 121.7 - Control Tower, Ground Control
e. 121.75- Control Tower, Ground Control
f. 121.8 - Control Tower, Ground Control
g. 121.85- Control Tower, Ground Control
h. 121.9 - Control Tower, Ground Control
i. 122.0 - FSS's, Weather, General Aviation, and Air Carriers at selected stations
j. 122.05- FSS's
k. 122.1 - FSS's Receive-Only (simplex in Alaska)
l. 122.15- FSS's
m. 122.2 - FSS's
n. 122.25- FSS's
o. 122.3 - FSS's

p. 122.35 - FSS's
q. 122.4 - Control Tower, Receive-Only
r. 122.45 - FSS's
s. 122.5 - Control Tower, Receive-Only
t. 122.55 - FSS's
u. 122.6 - FSS's
v. 122.65 - FSS's
w. 122.7 - Control Tower, Receive-Only
x. 122.75 - FSS's
y. 122.8 - UNICOM, Non-Tower, Non-FSS Airports, General Aviation, and Air Carriers
z. 122.85 - UNICOM, High Altitude
aa. 122.9 - MULTICOM - Air to air, air to ground
bb. 122.95 - UNICOM - High Altitude
cc. 123.0 - UNICOM - Tower and FSS Airports
dd. 123.05 - UNICOM for Heliports
ee. 123.1 - Search and Rescue, Temporary Control Towers
ff. 123.6 - FSS's Airport Advisory Service (FSS's enroute in Hawaiian Islands)
gg. 123.65 - FSS's Enroute

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Washington, D.C. 20590

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