

ARIZONA 70CM BAND PLAN

440.00000 MHz – 450.00000 MHz

Revision 2022-08-15 ARCA

Introduction

Arizona adopted the ARRL UHF band plan with a few minor changes and additions as shown under Arizona Option and Narrowband Allocation. The band plan is designed to maximize the available pairs and increase frequency re-use and will supersede any, and all, prior 70 cm band plans in the state of Arizona.

NOTE: Repeater pairs with a valid coordination certified prior to January 1, 2022 will be grandfathered on their current allocation as long as it remains in good standings. All new coordination will follow this band plan.

Emission Designators

Every Coordination Application must contain the appropriate Emission Designator for the transmissions permitted on the repeater being coordinated. Improper declaration of the Emission types, or changing the Emissions without re-coordinating, will invalidate the coordination and, if not corrected, can lead to decoordination.

Table of Common Emission Designators

Emission Designator	Allocation	Common Usage
7K60FXD	Narrowband (<12.5KHz)	2-slot DMR TDMA Data (MOTOTURBO)
7K60FXE	Narrowband (<12.5KHz)	2-slot DMR TDMA Voice (MOTOTURBO)
7K60FXW	Narrowband (<12.5KHz)	2-slot DMR TDMA Data + Voice (MOTOTURBO)
8K10F1D	Narrowband (<12.5KHz)	P25 Phase I C4FM Data
8K10F1E	Narrowband (<12.5KHz)	P25 Phase I C4FM Voice
8K10F1W	Narrowband (<12.5KHz)	P25 Phase I C4FM Data + Voice
16K0F1D	Wideband (<25KHz)	Yaesu Fusion Analog Data
16K0F2D	Wideband (<25KHz)	Yaesu Fusion Analog Data
16K0F3E	Wideband (<25KHz)	Yaesu Fusion Analog Voice
12K5F7W	Narrowband (<12.5KHz)	Yaesu Fusion Digital Data + Voice
11K2F3E	Narrowband (<12.5KHz)	Frequency modulated (FM) 2.5 kHz deviation analog voice
20K0F3E	Wideband (<25KHz)	Frequency modulated (FM) analog voice, 5 kHz deviation

Allocation Types

The Band Plan accommodates several types of allocations within the band.

Repeater (TX/RX)

Repeater allocations are granted as a Narrowband or Wideband allocation. Narrowband allocations are allocated for all emissions of 12.5 KHz or less will be granted a Narrowband allocation. No allocation will be made for emissions greater than 25 KHz.

PL tones are required and are specified by the owner on their application. Closed repeaters will not have their PL published. Each repeater will be assigned a frequency with a 5 MHz offset in accordance with the band plan. Frequency pairs are not permitted to deviate from the coordination and must adhere to the transmit and receive frequencies in the band plan and coordination.

Low Level Repeaters (TX/RX)

Low Level Repeaters are intended for shared, local and portable operations. Some overlap is expected. Repeater owners agree to accept co-channel occupation and act to prevent inadvertent access by co-channel users.

The use of some type of "PL" or input protection is mandatory on these pairs. Owners are responsible for "PL" or access coordination and need to advise the coordinator of their choice.

Owners agree not to operate on these pairs in "beacon" mode, interfere to other frequencies, internet or otherwise monopolize the "channel"

Transmitter power is limited to a max of 25 watts output and 50 watts ERP on these pairs with an antenna not to exceed 50ft AGL.

Simplex Operation (SX)

Simplex Frequencies are allocated in this band plan but are not formally coordinated. Simplex is intended for shared, local and portable operations. Some overlap is expected. Users agree to accept co-channel occupation and act to prevent inadvertent access by other co-channel users.

446.0000S is designated by the ARRL as the National simplex frequency. As such, this simplex channel should be used for making contact, or short QSOs only. Extended QSOs should QSY to another Simplex or Repeater frequency.

Hot Spot Operation (SX (HS))

Hot Spots are a special designation of Simplex Frequencies allocated for local proximity use and should only be used with low power hot spots. As these frequencies are highly re-used, the hot spot, and its users, should not radiate more than ¼ mile from the hot spot. The TX Power for the hot spot and its users should not exceed 1-watt Effective Radiated Power (ERP) with an antenna with 0 db gain or less. The top of the antenna shall not be higher than 10 feet AGL.

Control Operations (Control)

Control Operations are designated in the band plan. These are Simplex shared frequencies for intermittent control of repeater or remote base. As a shared frequency, minimum power and antenna should be used to prevent interference with co-channel users.

Arizona Band Plan for 440-450 MHz

Transmit Frequency	Receive Frequency	TX/RX/SX	Allocation
440.0000-440.0125	440.0000-440.0125	SX	Narrowband (<12.5KHz) Simplex
440.9250-440.9250	440.9250-440.9250	SX	Narrowband (<12.5KHz) Simplex
440.9375-440.9875	440.9375-440.9875	SX (HS)	Narrowband (<12.5KHz) (Hot Spot)
441.0250-441.0750	441.0250-441.0750	SX	Wideband (<25KHz) Simplex
441.4750	441.4750	SX (PKT)	Wideband (<25KHz) (Packet)
442.5000-444.4750	447.5000-449.4750	TX/RX-1	Wideband (<25KHz) (Wide Area)
444.5000-444.9875	449.5000-449.9875	TX/RX-2	Narrowband (<12.5KHz) (Wide Area)
445.0000-445.0125	445.0000-445.0125	SX (HS)	Narrowband (<12.5KHz) (Hot Spot)
445.0250-445.8875	440.0250-440.8875	TX/RX-3	Narrowband (<12.5KHz) (Wide Area)
445.9000	440.9000	TX/RX-4	Wideband (<25KHz) (Test Pair)
445.9250	445.9250	SX	Wideband (<25KHz) (APRS)
445.9500-445.9875	445.9500-445.9875	SX (HS)	Narrowband (<12.5KHz) (Hot Spot)
446.0000-446.0750	446.0000-446.0750	SX	Wideband (<25KHz) Simplex
446.1000-446.4500	441.1000-441.4500	TX/RX-5	Wideband (<25KHz) (Wide Area)
446.4750	446.4750	SX (PKT)	Wideband (<25KHz) (Packet)
446.5000	446.5000	SX	Wideband (<25KHz) Simplex
446.5250-446.6000	441.5250-441.6000	TX/RX-6	Wideband (<25KHz) (Low Level)
446.6250-447.4750	441.6250-442.4750	TX/RX-7	Wideband (<25KHz) (Wide Area)

NOTE: Repeaters are designated by “TX-n” and “RX-n” where “n” designates the partner TX and RX pairs. TX denotes the Repeater Transmitter (Output) frequency with the RX representing the Repeater Receive (Input) frequency.