



North Zone Communications Committee

Repeaters & Tones



Objectives

- Review transmit options.
- What is a mountaintop repeater.
- Learn the basics of how a tone and a Mountaintop repeater work together.
- Review mountaintop repeater sites in San Diego County

Transmit Options

"Direct" i.e.. "Talk Around" or "Car to Car"

OR

Repeated through a mountaintop repeater utilizing a CTCSS tone.

Direct

- No repeater is used
- Generally limited to line of sight or your radios wattage
- Tactical and Air to Ground are examples of frequencies which are transmitted "direct"

Repeated

Mountaintop repeater sites are geographically spread across the entire state to provide coverage

They are assigned a name such as "Hot Springs Mountain", "Mount Woodson" based on there geographic location

Each repeater will be designed to work with a specific "Frequency" and specific "Tone"

Portable repeaters may be utilized for a specific incident



Red Mountain

Boucher

High Point

Hot Springs



Mount Woodson

Cuyamaca

Lyons

Tecate

White Star

May 2007

North Zone – Communications

MVU Local	Command 1	Command 2	Command 3
TONE 1 RED MTN	TONE 1 SANTIAGO-RRU	TONE 1 SANTIAGO-RRU	TONE 4 PINE COVE - BDF
TONE 2 WHITE STAR	TONE 2 STRAWBERRY – BDU	TONE 2 STRAWBERRY – BDU	TONE 5 ELSINORE PEAK - RRU
TONE 3 CUYUMACA	TONE 3 CUYUMACA	TONE 4 LYONS	TONE 6 STRAWBERRY – BDU
TONE 4 BOUCHER	TONE 4 BOUCHER	TONE 6 HOT SPRINGS	TONE 8 MT. WOODSON
TONE 5 TECATE		TONE 8 MT. WOODSON	TONE 1 WHITE STAR
TONE 6 HOT SPRINGS			TONE 2 LYONS
TONE 7			TONE 9 RED MTN
TONE 8 MT.WOODSON			
CNF FOREST NET		CTCSS TONES	
TONE 1 SIERRA ORCO		TONE 1 110.9 Hz	TONE 9 100.0 Hz
TONE 2 SANTIAGO		TONE 2 123.0 Hz	TONE 10 107.2 Hz
TONE 3 ELSINORE		TONE 3 131.8 Hz	TONE 11 114.8 Hz
TONE 4 HIGH POINT		TONE 4 136.5 Hz	Tone 12 127.3 Hz
TONE 5 CUYUMACA		TONE 5 146.2 Hz	TONE 13 141.3 Hz
TONE 6 ORTEGA		TONE 6 156.7 Hz	TONE 14 151.4 Hz
TONE 7 LOS PINOS		TONE 7 167.9 Hz	TONE 15 162.2 Hz
TONE 8 BOUCHER		TONE 8 103.5 HZ	TONE 16 192.8 Hz

NOTE: Yellow print indicates San Diego County coverage

Tones

A radio frequency which travels ahead of the transmitted frequency. The Tone frequency arrives at the repeater, “opens” the repeater allowing the transmitted frequency to be broadcasted out at a higher wattage increasing the coverage

16 standardized CTCSS tones for use by fire agencies nationally

Local Net's such as “Monte Vista Local” or “Cleveland” dispatch and Command Net frequencies such as “CDF Command 1” are examples of frequencies which use a tone.