
Technician Question Pool

July 2018 to June 2022

The MORE Project

<http://n2re.org/m-o-r-e-project>



Amateur Radio Signals

No-Nonsense pages 42 - 43

Modulation Modes and Signal Bandwidth

Modulation is the process of adding information to a radio wave. To send a voice signal, the radio wave is modulated with your voice wave. Different types of modulation include: Frequency Modulation (FM), Amplitude Modulation (AM), and Single Sideband (SSB) which can be Upper Sideband (USB) or Lower Sideband (LSB).



T8A04

Which type of modulation is most commonly used for VHF and UHF voice repeaters?

- A. AM
- B. SSB
- C. PSK
- D. FM



ARS1 Q1 of 15

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- A. AM
- B. SSB
- C. PSK
- D. FM**



T8A02

What type of modulation is most commonly used for VHF packet radio transmissions?

- A. FM
- B. SSB
- C. AM
- D. PSK



ARS1 Q2 of 15

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T8A02

What type of modulation is most commonly used for VHF packet radio transmissions?

- A. FM
- B. SSB
- C. AM
- D. PSK



ARS1 A2 of 15

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T8A01

Which of the following is a form of amplitude modulation?

- A. Spread spectrum
- B. Packet radio
- C. Single sideband
- D. Phase shift keying (PSK)



ARS1 Q3 of 15

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T8A01

Which of the following is a form of amplitude modulation?

- A. Spread spectrum
- B. Packet radio
- C. Single sideband**
- D. Phase shift keying (PSK)



T8A03

Which type of voice mode is most often used for long-distance (weak signal) contacts on the VHF and UHF bands?

- A. FM
- B. DRM
- C. SSB
- D. PM



ARS1 Q4 of 15

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Modulation and Bandwidth

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T8A03

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- A. FM
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- C. SSB**
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T2B13

Where may SSB phone be used in amateur bands above 50 MHz?

- A. Only in sub-bands allocated to General class or higher licensees
- B. Only on repeaters
- C. In at least some portion of all these bands
- D. On any band as long as power is limited to 25 watts



T2B13

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T8A06

Which sideband is normally used for 10 meter HF, VHF, and UHF single-sideband communications?

- A. Upper sideband
- B. Lower sideband
- C. Suppressed sideband
- D. Inverted sideband



ARS1 Q6 of 15

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T8A07

What is an advantage of single sideband (SSB) over FM for voice transmissions?

- A. SSB signals are easier to tune
- B. SSB signals are less susceptible to interference
- C. SSB signals have narrower bandwidth
- D. All of these choices are correct



ARS1 Q7 of 15

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T8A08

What is the approximate bandwidth of a single sideband (SSB) voice signal?

- A. 1 kHz
- B. 3 kHz
- C. 6 kHz
- D. 15 kHz



ARS1 Q8 of 15

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T8A08

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ARS1 A8 of 15

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T8A09

What is the approximate bandwidth of a VHF repeater FM phone signal?

- A. Less than 500 Hz
- B. About 150 kHz
- C. Between 10 and 15 kHz
- D. Between 50 and 125 kHz



ARS1 Q9 of 15

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T8A10

What is the typical bandwidth of analog fast-scan TV transmissions on the 70 centimeter band?

- A. More than 10 MHz
- B. About 6 MHz
- C. About 3 MHz
- D. About 1 MHz



ARS1 Q10 of 15

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T8A10

What is the typical bandwidth of analog fast-scan TV transmissions on the 70 centimeter band?

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- B. About 6 MHz**
- C. About 3 MHz
- D. About 1 MHz



T8D04

What type of transmission is indicated by the term "NTSC?"

- A. A Normal Transmission mode in Static Circuit
- B. A special mode for earth satellite uplink
- C. An analog fast scan color TV signal
- D. A frame compression scheme for TV signals



ARS1 Q11 of 15

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- C. An analog fast scan color TV signal**
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T8A05

Which of the following types of emission has the narrowest bandwidth?

- A. FM voice
- B. SSB voice
- C. CW
- D. Slow-scan TV



ARS1 Q12 of 15

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T8A05

Which of the following types of emission has the narrowest bandwidth?

- A. FM voice
- B. SSB voice
- C. CW**
- D. Slow-scan TV



T8A11

What is the approximate maximum bandwidth required to transmit a CW signal?

- A. 2.4 kHz
- B. 150 Hz
- C. 1000 Hz
- D. 15 kHz



ARS1 Q13 of 15

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Modulation and Bandwidth

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ARS1 A13 of 15

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T8D09

What code is used when sending CW in the amateur bands?

- A. Baudot
- B. Hamming
- C. International Morse
- D. All of these choices are correct



ARS1 Q14 of 15

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Modulation and Bandwidth

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ARS1 A14 of 15

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T8D14

What is an electronic keyer?

- A. A device for switching antennas from transmit to receive
- B. A device for voice activated switching from receive to transmit
- C. A device that assists in manual sending of Morse code
- D. An interlock to prevent unauthorized use of a ' radio



ARS1 Q15 of 15

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Modulation and Bandwidth

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A non-profit initiative by the IEEE and ARDC to increase the numbers of youth (12-18) and non-males in Amateur Radio. Participants earn FCC licenses and receive free 2-way radios.

For MORE information: n2re.org/m-o-r-e-project
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