

Digital modes  
for amateur radio

**A Basic Understanding**

By  
John King W9KXQ  
Presented to ARC of Mt. Vernon  
November 21, 2023



# NOTES

Website:

[www.w9kxq.com/dmr](http://www.w9kxq.com/dmr)

- P25: <https://www.retevis.com/blog/what-is-p25-radio->
- D-STAR go to website: <http://www.dstarinfo.com/home.aspx>
  - DMR: <https://www.dmrfordummies.com>
  - Yaesu System Fusion: <https://3fs.net.au/c4fm/>

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YOUR NOTES BELOW

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# NOTES

Analog Channel X

Channel Name	OVARC/V		
Receive Frequency	147.16500	<input type="checkbox"/> PTT Prohibit	<input type="checkbox"/> Talk Around(Simplex)
Transmit Frequency	147.76500	<input type="checkbox"/> Work Alone	<input type="checkbox"/> DataACK Disable <input type="checkbox"/> Auto Scan
Correct Frequency[Hz]	0	Digital	
Channel Type	A-Analog	Contact	STL Metro
Transmit Power	High	Radio ID	W9KXQ
Band Width	12.5K	Color Code	1
Busy Lock	Off	Slot	Slot1
Scan List	None	Receive Group List	None
		Digital Encryption	Off
Exclude channel from roaming	off	AES Digital Encryption	Off
DMR MODE	Repeater	Multiple Key	Off
		Random Key	Off
		SMS Forbid	Off
		<input type="checkbox"/> Call Confirmation	<input type="checkbox"/> Ranging
		<input type="checkbox"/> Slot Suit	<input type="checkbox"/> SMS Confirmation
Analog			
CTCSS/DCS Decode	Off	<input type="checkbox"/> Reverse	
CTCSS/DCS Encode	CTCSS		
Squelch Mode	Carrier	2TONE Decode	
Optional Signal	Off	Custom CTCSS	251.1
DTMF ID		R5toneBot	1
2Tone ID	1	R5toneEot	1
5Tone ID	1		
PTT ID	Off		

OK Cancel Previous Next

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# NOTES

Digital Channel ×

Channel Name

Receive Frequency   PTT Prohibit  Talk Around(Simplex)  APRS RX  
Transmit Frequency   Work Alone  DataACK Disable  Auto Scan  
Correct Frequency[Hz]

Channel Type   Digital

Transmit Power   AES Digital Encryption   
Band Width   Multiple Key   
TX Permit   Random Key   
Scan List   SMS Forbid

Exclude channel from roaming   Call Confirmation  Ranging  
DMR MODE   Slot Suit  SMS Confirmation

Contact   
Radio ID   
Color Code   
Slot   
Receive Group List   
Digital Encryption

Analog

CTCSS/DCS Decode   Reverse  
CTCSS/DCS Encode   
Squelch Mode   
Optional Signal   
DTMF ID   
2Tone ID  2TONE Decode   
5Tone ID  Custom CTCSS   
PTT ID  R5toneBot   
R5toneEot

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## How to Program a DMR Radio

