



Enhancing Your 6 Meter Shack Experience With the Latest Technology

By Bob Naumann W5OV



Some background on me



- Bob Naumann W5OV
- Global Sales Manager at DX Engineering
- Formerly with Array Solutions, Heathkit, Radio Shack
- “Real career” IT Manager for various major corporations
- Licensed since 1973
- DXer (DXCC Honor Roll)
- Contester (HF and VHF Contests)
- Member CQWW Contest Committee for over 25 years
- ARRL Life Member
- Operated as DX: V26B, PJ4G, 4U1UN
- SSB, CW, RTTY, PSK31
- VHF Contests from FN10 and EM13, EM12



What will be covered?



- ▶ Do you *need* any of this new stuff?
 - A Linear Amplifier
 - Will it help you?
 - What are some of the benefits?
 - Is it a good investment?
 - Other stuff
- ▶ Show & Tell
- ▶ Q&A



What will not be covered?



- ▶ FT8 and other new digital modes
- ▶ Towers
- ▶ Coax
- ▶ Other outdoor hardware
- ▶ Radios



Do you need any of this stuff? Yes or No ?



- ▶ What is your objective?
 - Be louder / break pileups?
 - Work more DX ?
 - Having trouble hearing?
 - Try improving your antenna first!
 - Use an antenna analyzer to see what's there
- ▶ CW ? Yes or no ? Do you use a computer / paddle / both ?



Old Ham Radio Adage:

“If you can’t hear ‘em, you can’t work ‘em” (Anon.)

Is an amplifier a good investment?



- ▶ It can be
 - Good quality amplifiers hold their value
 - And can last a lifetime
- ▶ Less expensive amplifiers lose value
- ▶ Lower priced amplifiers might sell quicker if you need to liquidate
- ▶ Versatile amplifiers appeal to a larger audience
 - 6m only vs. 160 through 6m



Popular Amplifiers

- ▶ For HF, the best amplifiers available today are probably those from Acom in Bulgaria



- ▶ Acom 2100 (160 → 6m, 1500w output)

Popular Amplifiers

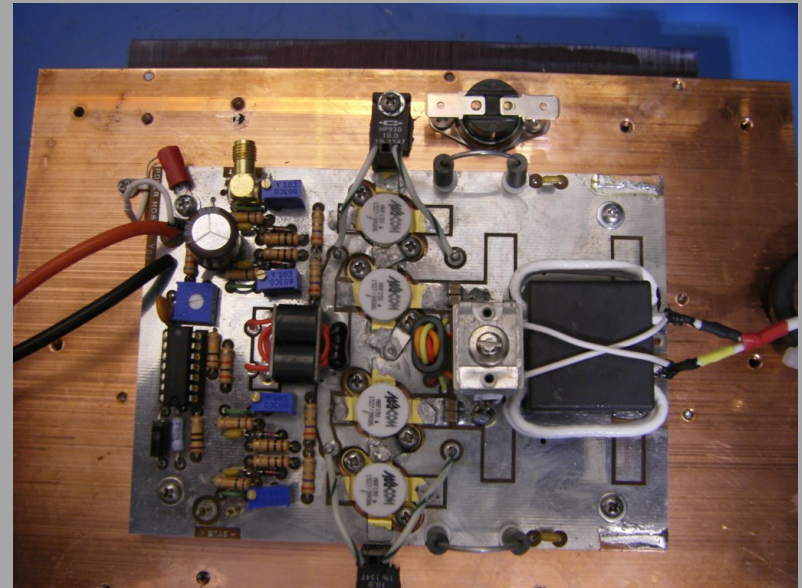
- For HF & 6M, there are now many alternatives



- For VHF/UHF, not so much, but growing.

Q: How do you choose?

- ▶ Tube or Solid State ?
- ▶ Glass or Ceramic? ->>
- ▶ 120v or 240v ?
- ▶ Auto or Manual tune?
- ▶ Are there differences?



A: Carefully!



- ▶ Establish a Budget
 - New?
 - Used?
- ▶ Clear set of requirements
 - Power output
 - Bands to cover
 - Space on operating desk
 - QSK (?) or not? (What is this?)
- ▶ List of alternatives that fit your criteria
- ▶ Prioritize your requirements and make the selection based on what's most important to *you* !



120v vs. 240v ?



- ▶ Often heard: “I’ve already got a 120 volt outlet in the shack, and I don’t want to spend a fortune putting in a 240 volt line. Electricians are expensive!”
- ▶ Typical logic:
 - “What difference could it make? I’m going to be running about a kilowatt output regardless of the line voltage. I know that a typical 1 kW output amplifier will draw a maximum of about 15 amps on 120 Vac and 7.5 amps on 240 Vac. In either case, that’s about 1,800 watts input (120V x 15A or 240V x 7.5A) and since ohm’s law tells us that volts x amps = watts, there should be no difference – right?”
- ▶ Uh, no.

120v vs. 240v ?



- ▶ Does it matter ?
 - Yes!
- ▶ Tube or solid state?
 - No difference! (shocker)
- ▶ How so ?.....

- ▶ Q: How so ?
- ▶ A: Voltage Drop !
 - Really ?
 - Yes !!!
 - Explain that!

Explanation:



- ▶ OK: Let's compare the two alternatives: 120 v and 240v:
- ▶ In both cases, we have a 75' run of 12ga copper wire and 20 amp circuit breakers.
- ▶ Here are the numbers:

	A	B	C	D	E
1	Line Voltage	Peak Current	Voltage Drop	% Drop	Net Voltage
2	120	15	4	3.00	116
3	240	7.5	2	0.75	238
4					
5		Drop %	Factor:	4 to 1	

- ▶ So, by going to 240v, we reduce the voltage drop % by 4:1 !!

Amplifier Conclusions



- ▶ Run 240v if possible – no matter what type of amplifier you have
- ▶ Put as much into your antenna system as you can first – then look at getting an amplifier
- ▶ An amplifier can be a good long-term investment, if you get a top quality one



Now, it's time to

Enter the confessional.



Enter the confessional.



I'm an
equipment
"junkie" ☹️

I'm an equipment "junkie" ☹



Show & Tell Time

- ▶ Antenna Analyzers
- ▶ Headphones
- ▶ CW Paddles

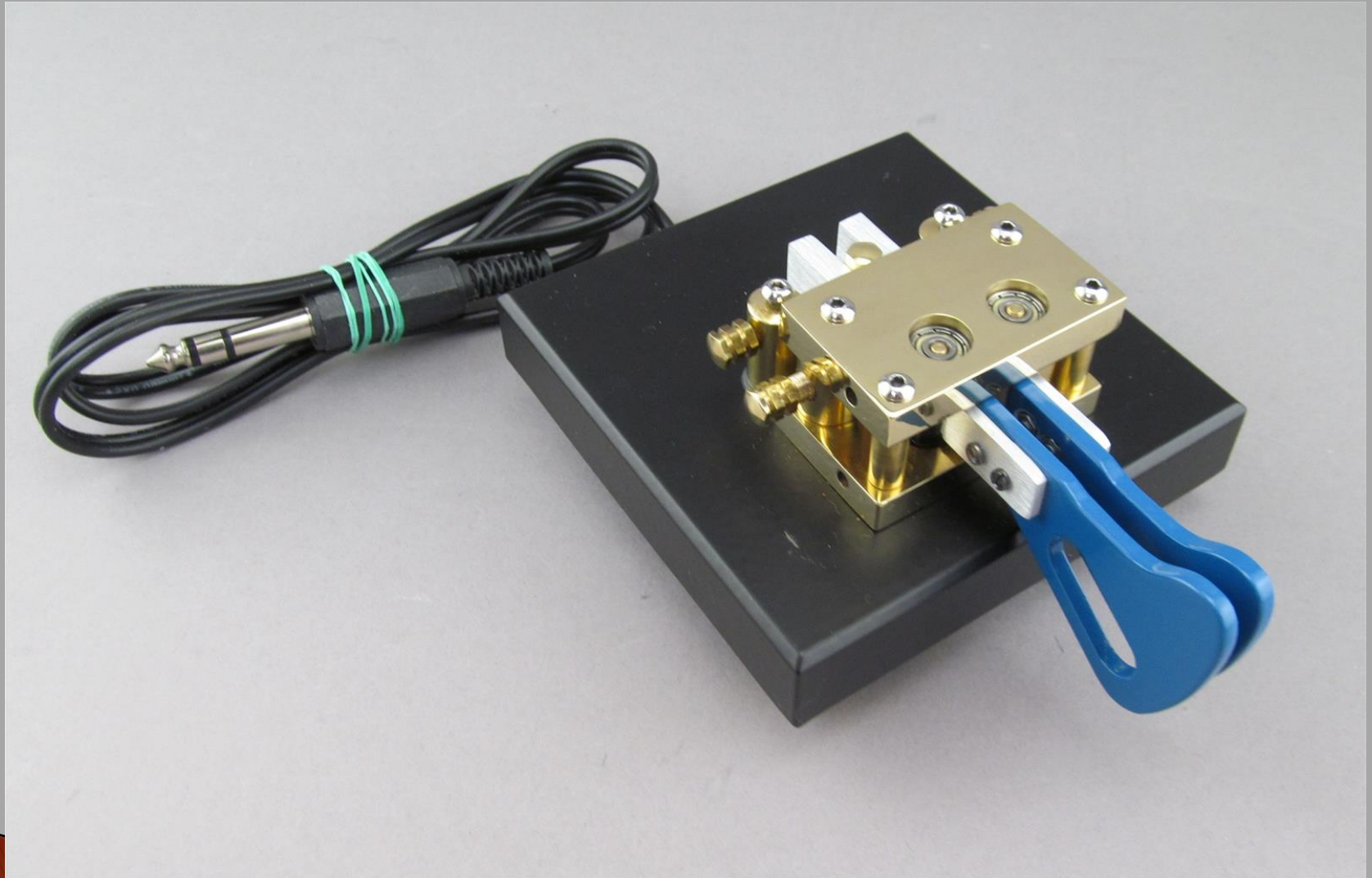
Antenna Analyzers



Headphones / Earphones



CW Paddles



DXE "RX Share" (Buddy Box)

Shown with ICOM 7610



Headphone



Operator 1
Headphones

OPERATOR 1

Shown with ICOM 7610



Headphone




Operator 2
Headphones

OPERATOR 2

Station
Ground




1-800-777-0703
My Account
Hello, Log In
My Wish List
Order Status
View Cart
Items in Cart 1

Search
Keyword or Part#
GO
No Shipping or Handling Fee
on most orders over \$99!
See Details

Shop
Hot Deals
What's New
Brands
Tech Info & News
Customer Service
About Us
Contact Us

You Have Selected

Department / Amplifiers
[\[X\] Remove](#)

Narrow Your Results

☒ Part Type

☐ Amplifiers (14)
☐ Amplifier Replacement Parts (5)
☐ VHF/UHF Amplifiers (5)
☐ Amplifier Remote Control Units (4)
☐ Amplifier Accessories (3)
☐ Amplifier Keying Interfaces (2)
☐ Amplifier Radio Interfaces (1)
☐ Amplifier Tuning Pulsers (1)
☐ Amplifier Grid Overload Protectors (1)
☐ Amplifier Inrush Current Protectors (1)
☐ Amplifier Modification Kits (1)
☐ Amplifier QSK Switches (1)


☒ Brand

☐ ACOM (13)
☐ Ameritron (13)
☐ RM Italy (4)

☐ DX Engineering (2)
☐ Yaesu (1)
☐ KD9SV Products (1)


Amplifiers

Is your DX operation hungry for power? Feed it with a power amplifier from DX Engineering. From affordable 600-watt PEP output to all-out 1,500-watt continuous power, our selection of linear amplifiers will deliver the stable, efficient power punch you need to operate with authority from 160 through 2 meters. Plus, we've got a full line of amplifier accessories, including keying interfaces and cables, amplifier remote controls, switching power supplies, and more. Don't let someone else steal your DX! Come across loud and proud with high-power HF amplifiers, solid-state amplifiers, and mobile amplifiers from DX Engineering —power shop now!




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ACOM 600S Solid State HF + 6 Meter Amplifiers
From: \$3,059.99
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RM ITALY VHF HT Linear Amplifiers
From: \$124.99
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Q&A Time: Any Questions?

Thank you!

▶ 73 de W50V