

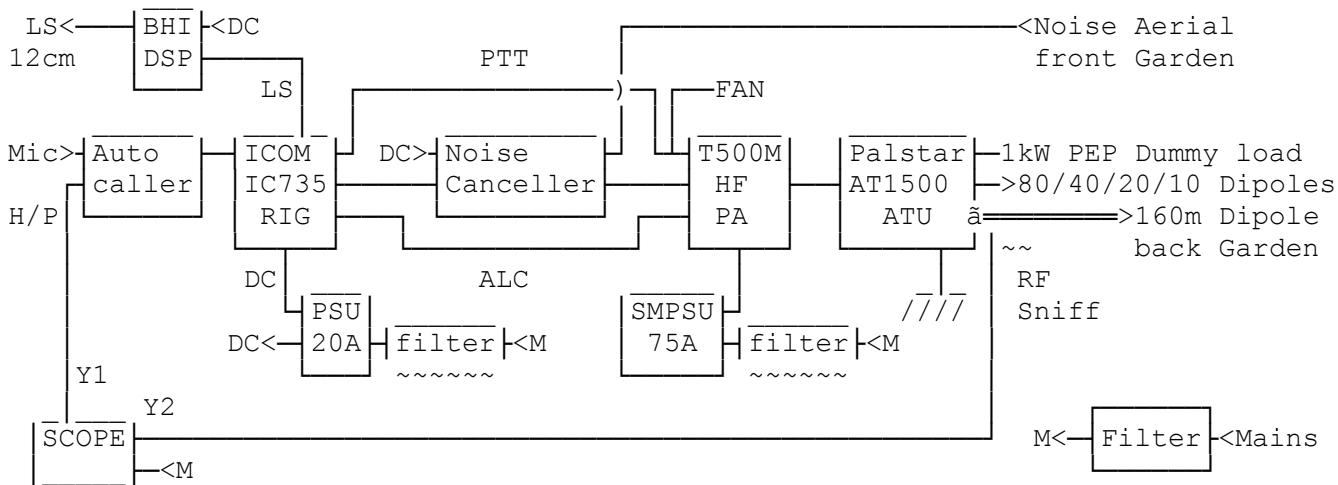
My Home HF Set-up

By G8MNY

(Updated Jul 16)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

After several years of HF of improvements, I have ended up with this....



FEATURES

PSU Homemade Linear, with 3A trip on it for low current leads, & mains filter.  
 SMPSU converted DEL Server one, with thick PA DC leads. Used with mains filter.  
 BHI DSP LS gives 10-20dB of noise reduction, used with a larger LS.  
 Noise Canceller JPS ANC4 with aerial, gives >15dB of QRM nulling on 1 source.  
 IC735 sometimes used with very effective tuneable Noise Blanker or Attenuator.  
 Home-made CQ repeating autocaller & off air record/playbacks.  
 IC735 used with it's very effective AF processor (clipper) & standard Mic.  
 T500M PA draws 75A @ 13V, so I float 2 batts with thick leads works very well.  
 My T500A ALC ensures the Amp can't be over driven even on 11V DC or bad SWR.  
 Palstar AT1500CV ATU, cross needed power, handles high SWRs & can be balanced.  
 Dummy load with PEP meter gives accurate PEP power measurements (scope option).  
 Scope for monitoring Tx envelope & Rx Noise (timebase locked to mains).  
 Mains filter includes an earth choke.

ON AIR

I often get comments on how good the AF is (especially under noisy band conditions), it is just a well set up standard AF clipper (compressor) in the IC735 with it's toppy AF (do not clip bassy AF!) But it does not suit all ears & strong QSOs, I turn the compressor off. And I always use close up mic, to reduced background noise & room echo, & keep the ALC drive level correct.

The PA helps a lot, & when I go back to QRP stations M6s etc, & run their QRP, they often can't hear me, or would not have called me with a weak QRP signal.

I have had very complementary reports on how clean (narrow) the QRO signal is. E.g. "You are much stronger than me at remote SDR Rx site & also narrower!" So the old IC735 rig with its comms quality audio, fixed narrow Tx IF, & older 1977 Commercial PA with high NFB, & my ALC are keeping the Tx signal all very clean.

My Autocaller CQ, keeps the channel busy, while I catch up with paper log, or get the perfect SWR etc. & then I get called. But it does make for lazy operating with less scanning. I do use 2nd VFO for that & go back to my CQ freq VFO.

The 3 noise systems I use, the rig's tuneable Noise Blanker, BHI DSP LS, & JPS Noise Canceller, all complement each other very well, as they work differently. Sometimes all 3 are needed to get a usable band here in RF noisy Croydon. With the JPS ANC-4, do not Rx too much Tx power on the noise aerial, as it can be damaged with nearby QRO! Using seperated aerials as I do, stops this, & also helps get deep nulls while leaving Rx signals, with same location aerials you tend to null out all signals at once!

Scope timebase is locked to mains, & both beams are added to give just 1 line. Rx AF can help adjust the Noise Canceller & rig Noise Blanker threshold, as you can see the offending neighbours PSUs, & null out one pair of 100Hz noises, but only to see 2 more appear on another mains phase. Not mains locked QRM from TV/PC screens can be seen, & other non ham things like over the horizon radar "Wood Pecker" or "QRO 50Hz FM sweep jammers" are easily identified too.

The Tx envelope display shows up the peak with or without compression, all nicely rounded under ALC power control with no hard clipped flat tops.

See all these related TECH buls....

- "Autocaller with old Maplin kit"
- "High AMP Crowbar Protected PSU"
- "DEL 7000815 SMPSU 12V 75A Mods"
- "T500 M 12V 500W HF Linear"
- "Variable Speed Thermal Fan"
- "BHI Noise Eliminating DSP LS"
- "IC 735 No RF Output Fault"
- "Palstar AT1500CV ATU"
- "QRO 1kW HF Metered Dummy Load"
- "A Nest of Dipoles for HF"
- "Mains Plugtop Filter Adapter"
- "Oscilloscopes"
- "AF 2 Tone Test Osc Design"
- "QRO v QRP".

Why Don't U send an interesting bul?

73 de John G8MNY @ GB7CIP