

Vintage 2 meter and HF RTTY Set-up

I came across this photo of an RTTY set-up I had in the 1970's. Unfortunately the photo isn't great. It's a scan of a Polaroid.



The set-up was used on both HF and 2 meters. The Hammond cabinet on the left is a semi home brew 2 meter station. Base stations were pretty big them days. To the right of the Heathkit scope on the bottom is an RTTY ST-5 demodulator with auto start. On the top of that is an audio interface to generate the mark and space tones for the 2 meter rig and to switch the mic in when RTTY wasn't used. I don't quite recall the purpose of the meter but it was probably used to measure the machine's loop current. The teletype machine was a Model 15 Lorenz. I built 2 ST-5 demodulators with auto start, the second one I still have and is shown below. The ST-5's could be switched between 180 Hz or 850 Hz shift using passive filters.



The transformer is large because it was also used for the machine's loop supply. The relay is missing because later the autostart was no longer required. A computer was used in place of the machine. I think the vertical mounted perf board on the back was a serial interface for the computer. I can't quite remember.

At the time there were no commercially available Ham 2 meter radios. If you wanted to get on 2 meter FM you needed to convert an ex commercial VHF 2 way radio. The earliest Japanese 2 meter FM radio I can recall was the ICOM IC2F that was available in the early 1970's.

This 2 meter station was based on Marconi VHF transmitter and receiver strips and was a mid to late 1960's project. The strips came from a mobile radio. I don't recall the model number but there was a base station version I believe was a DJ 84. It was all tubes and the transmitter used a 6252 final. There was a higher power DJ 86 version that use a 5894 final. These strips were nice to work on, much nicer than the Motorola strips of the period. I did a brief internet search for these Marconi radios but came up with no information. The internal power supply was home brew which included the HT transfer relay. The radio was crystal controlled and I used Nixie tubes to indicate the channel numbers. The channel numbers were displayed through the small window on the top center of the cabinet. Separate transistorized transmit and receive crystal oscillators were built on PC boards mounted on the back of the channel selector switches. A solid state mic pre-amp also had to be built. The meter shown monitored things like limiter current, discriminator (center zero) that gave an indication of the received frequency accuracy, relative RF power output, various voltages etc.

The oscilloscope was used to tune in the RTTY on HF but the meter on the ST-5 demodulator was useful for that also. The auto start feature on the ST-5 would turn on the machine in the present of an RTTY signal.

February 27, 2019