First Impressions: Yaesu VL-1000 Quadra & IC-756

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Comments

This message was originally posted to the Icom and Yaesu reflectors on 12/8/98. I felt that it might be worth

reposting here.

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The following may be of interest to Icom HF radio owners who are contemplating the purchase of a solid-state

kilowatt linear:

I got the VL-1000 linear up and running with my IC-756 very easily. First, I reprogrammed it per Yaesu's

instructions, to activate 10 and 12m; this 15-minute task in effect reconfigured the amplifier as the "International"

model. I then connected it to the 756, via 4 cables: RF, ALC (mandatory), PTT and remote keying. The latter

allows the Quadra to key the exciter for tuning when the F SET or TUNE button is pressed.

The remote keying cable is a shielded cable which connects VL-1000 Amplifier Band Data 2 (DB15) to Icom

ACC2 (8-pin DIN). Connect Band Data 2, Pin 9 (F SET COMMON) via shield to ACC2 Pin 2 (GND). Connect

Band Data 2, Pin 11 (F SET 2) via center conductor to ACC2 Pin 3 (SEND). Plug the DB15 connector into

The DB15 BAND DATA socket on the rear of the Quadra, and the 8-pin DIN plug into the ACC2 socket on the rear panel of the Icom transceiver.

The final step was ALC calibration; the Quadra's ALC level was set to limit power output to 1 kW, corresponding

to approximately 80W of drive. The power output is almost constant across all HF bands. (Note: If the exciter

power output can exceed 100W, as is the case for the IC-775 or IC-781, the input attenuator ATT should be enabled).

I initially tested the setup at the 500W output level, with the amp powered from 120V mains. Operation is

flawless; tuning is smooth, and the fans in the amp and power supply are whisper-quiet! The amp has a small fan

which runs once the interior reaches 40 C. It also has two large muffin fans on the rear panel; these run when the

amp is keyed. Two similar fans on the rear panel of the power supply run as needed, when the interior temperature rises to 40 C.

When using the VL-1000 with an Icom radio and the remote keying cable, pressing the F SET button on the amp

keys the exciter. The VL-1000 counts the excitation frequency to the nearest 100 kHz, and sets the

bandswitching and pre-positions the tuner for the correct band. The tuner is a T-network with two series

air-variable capacitors driven by stepper motors, and a shunt inductor with relay-switched taps. When setting up

the system, a midband frequency is selected in each band, and the TUNE button is pressed. This keys the

exciter and amplifier, and starts the tuning cycle. An interesting graphic display, with an SWR bargraph and two

rotating capacitor images, appears on the LCD screen. When tuning is complete, the display switches to a chart

of frequency vs. SWR at the tuner input & output. Tuner set points are memorized. and displayed as a graph of

SWR at the tuner input and output against frequency. Other selectable displays include peak and average power output, SWR, operating frequency to the nearest 100 kHz, DC input voltage and current.

Overall, I am “thrilled to bits”; after getting the 220V mains hooked up, I stayed up very late working the European

80m DX window, then ran the Icom Users’ Net on 20m. Operation is not quite as automated as it was with my

old IC-2KL setup; one must press F SET every time one changes bands. This is not a major inconvenience,

however. Automatic antenna selection by band does not occur in the frequency-counting mode; it works only if

the exciter is a Yaesu transceiver which provides band data to the VL-1000. I can live with that, as I am only

running 2 antennas - a Hy-Gain DX-77 and a Cushcraft AV-80 80m vertical.

Excellent reports are received from Europe on 80m, and also on other bands, with the 756 and the Quadra.

I have been running this station for four months now. The IC-756 and the Quadra are performing flawlessly together.

In conclusion, I can heartily endorse teaming up the Quadra with an Icom HF transceiver. The Quadra is a marvellous piece of equipment; it offers the added bonus that it can be operated with any exciter, and still maintain almost all its automation.

Best 73, Adam, AB4OJ mailto:farson@ibm.net