## Alinco DJ-V57 Hand-Held, Dual-Band Transceiver

Review by Bob Grove W8JHD

am always amazed when a new piece of radio equipment is released which has an impressive list of features at an astonishingly low price. Such is the case with the release of a new hand-held, two-way radio from Alinco – the DJ-V57 hand held.

### Advantages and disadvantages of portability

If you can put an entire two-way radio in a pocket, why would anyone want to pay extra for a base/mobile transceiver? Because such compact portability comes with compromises.

Handy-talkie programming can be a challenge for large fingers on teensy keys. Displays are smaller and often harder to read than those of their base/mobile counterparts. Speakers are small, limiting fidelity. Battery power means restricted operating time before recharge. Transmit power is lower. Frequency bands may be fewer than on bigger multiband radios. Range of operation is smaller because of the shorter antennas and lower power.

With such well-acknowledged compromises, how does this new HT from Alinco measure up?

### The new player in the compact HT marketplace

The Alinco DJ-V57 transceiver is a dual-band (144-147.995, 420-449.995 MHz transmit, 136-173.995, 400-511.995 MHz receive) radio with selectable outputs of 0.5 low power, user-selectable 1-3 watts mid power, and 5 watts high power.

The seven-inch rubberized whip may be unscrewed, revealing an SMA connector to accommodate the user's choice of another portable, mobile, or base antenna if desired.

Ergonomically, the fist-size DJ-V57 cradles nicely in an adult hand. The 16 rubberized keys are easy to press with a fingertip without bumping into an adjacent key. A selectable backlight enables night viewing of the display and keypad.

The dual-function keypad allows direct frequency entry and up to seven characters for alphanumeric identification as well. The decimal is entered automatically as you press your frequency setting, and a beep informs you that your frequency has been accepted when the last numeral is pressed.

Clear voice reproduction is available from the internal 1-1/2 inch speaker at full volume. The actual rating is 10 percent total harmonic distortion (THD) at 500 mW of audio power.

A top-mounted mini phone jack allows attachment of an earphone and doubles as an access port for cloning another identical scanner. The port is secured by a thumb-screw cap with a rubber hermetic seal for protection against water intrusion.

This feels like a "real radio," compact (2-1/4 inches wide by 4-1/3 inches high by 1-1/3 inches deep) and husky (10 ounces). The rugged polycarbonate body resists dirt and dust accumulation and water-resistant materials make the HT stormy-weather repellant. A sturdy belt clip is included, as are a

wrist strap, battery charger, 70 page manual, and schematic diagram.

Although a 120 VAC/12 VDC wall charger/adapter is included, an optional drop-in charger may be ordered. For higher power and longer charge life, the slip-off, 700 mAh, NiMH battery may also be optionally changed by ordering rechargeable 1100, 1600, or 2000 mAh NiMH and Li-ion battery options. It takes an overnight charge to fully recharge the battery. The supplied charger is intended only for charging the battery, and cannot be used to

power the radio during transmit operation.

A quick-write memory procedure allows entry of a current VFO frequency into one of 200 memory channels by pressing a single key. Frequencies and channels may be manually slewed with the top tuning knob or scanned automatically. A search feature is also provided.

The DJ-57V has three operational modes: VFO (operates on any displayed frequency), memory (operates on any of the 200 memorized



channels), and call (operates on one primarily-selected VHF and one UHF channel). A handy BAND key allows instant toggling between the VHF and UHF bands. Alternatively, the user may enter any valid frequency in the transceiver's dual range while currently in either band.

Two levels of receiver sensitivity attenuation are accessible for interference reduction in strong-signal environments.

A VOX (voice-activated transmit) function is also provided if desired; speaking into the HT automatically keys the transmit function, and the radio reverts back to receiving when the voice stops.

For emergency messages or signaling, a five-second bell-tone alert signal can be activated. Tone bursts of 1000, 1450, 1750, and 2100 Hz can be selected to activate repeaters requiring that function. CTCSS tone and DCS codes are available for tone-encoded repeaters so extant in the VHF/UHF ranges. The tones may be used for transmitting only, or for both transmitting and receiving. DTMF auto dialing/redialing is also provided for telephoning through suitably equipped repeaters.

Transmit/receive offset frequencies for repeater use may be custom-selected in kilohertz intervals up to 99.995 MHz separation. The input/output frequencies may be reversed by a simple key press. Band splitting is also easily key-entered, allowing transmitting in one band and receiving in another.

# So, can I use it as a scanner?

The DJ-V57 incorporates a very flexible scanning receiver. Any frequency between 136-174 and 406-512 MHz may be entered in up to 200 memory channels which can be sequentially scanned for activity.

In addition, any segment of a band, or the total band, may be auto-searched for signal activity in the program scan mode.

Does the 5 kHz step intervals for tuning skip some of the new narrow band channels? Not at all. It might be a couple of kilohertz off frequency, but the filters are wide enough to hear all the action.

The scanning routine includes a skip function to avoid hanging up on memory channels likely to be active but not desirable to be heard during the scan sequence.

As in virtually all receivers, there are some frequencies that detect the oscillator's own

signal products. If this CPU clock noise should occur on the DV-V57, simply tap the shift key and rotate the tuning dial to change the frequency of that interference.

### DJ-V57 Design Specifications

Frequency modulation (FM) is the only mode used for transmitting and receiving. For transmitting, a variable-reactance modulator is used for both wide and narrow deviation (+/-5 kHz standard FM, +/-2.5 kHz narrow band FM). Spurious emissions are suppressed at least 60 dR

Frequency steps of 5, 10, 12.5, 15, 20, 25, and 30 kHz are selectable for standard channelization band plans. Frequency stability is +/-2.5 parts per million (ppm).

The radio can be powered and the battery may be charged from any external 7-16 VDC source. Current drain during reception is 250 mA and 80 mA on standby (squelched). A battery-save function reduces the receive power drain even further (27 mA).

The receiver is a double-conversion super-

heterodyne with first and second intermediate frequencies (IFs) of 38.85 MHz and 450 kHz respectively.

Sensitivity for standard 12 dB SINAD (signal-to-noise and distortion ratio) is specified as 0.2 microvolts (uV) on VHF, and 0.25 uV on UHF. An LCD bargraph shows relative received signal strengths.

Selectivity is stated as -6/-60 dB for 12 kHz (or more)/35 kHz (or more). This seems to fudge a bit on real numbers, much like saying your car gets 25 miles (or less) per gallon. In our actual on-air operational test, selectivity was barely adequate for the frequency spacing of most channelization plans, especially in this current era of narrow-banding. More specifically, the filters should be satisfactory for separating signals of its primary intent, ham radio, where adjacent-channel operation is rare and channels are more widely separated.

But, in crowded metropolitan listening to public safety channels, adjacent-channel interference may be encountered. In such cases the attenuator function can be invoked, or the squelch may be adjusted to reduce the adjacentchannel bleed-over, or the tuning dial may need to be set another step higher or lower to get away from the interference.

# Finally, how to hit the reset button!

One of the most desirable features of any multifunction radio is the "Boy, have I ever screwed this radio up!" reset. By simply pressing two keys as the radio turned on, the original baseline factory-presets are returned and you can start all over again!

Even better, an option allows all the factory presets to be restored, but retains your customentered memory channels.

#### The bottom line

Alinco's new DJ-V57 hand-held, dual-band, VHF/UHF transceivers is a winner. Its low cost (list price \$149.95), wide frequency coverage (the two most popular VHF/UHF bands), and multiple functions combine to make this a bargain radio, both for the beginner who needs easy operation, and the experienced ham who is looking for advanced functions.

## **The Take Charge Powersavers**

Review by Bob Grove W8JHD

ne of the most overlooked power wasters in our homes and offices is the AC adapter which remains on permanently even after its accessory equipment is turned off. Many pieces of electronic equipment continue to draw current after their power switches are turned

off as well.

Take a look around your home at the number of AC cords plugged into the wall, not only in your hobby area, but even your home entertainment center. IPhones and tablets, cell phone and digital camera chargers, DVRs, printers, laptop computers – the list is considerable.

The wasted electric power when measured over time is consequential. According to the International Energy Association (IEA), these types of accessories cost on the average \$50 a year, about twice the cost of some new accessories from Take Charge called the Power Savers.

Take Charge developed a unique method of switching off multiple accessories automatically when not in use. Looking like a conventional multiple-outlet extension, it has eight AC outlets with specific capabilities.

Two of the outlets are permanently on in the usual extension mode, but five of the outlets switch on and off automatically as the equipment or appliance plugged into the eighth (control) outlet is turned on or off by the operator.

For example, suppose you have your radio

base station plugged into the control outlet. You could plug the AC adaptors or AC cords from an antenna rotator, computer, printer, scanner, and auxiliary radio into the five switched

outlets, and still have two hot outlets that remain on for an electric clock and any other item you'd like to remain on.

When you switch on the main equipment – in this example your base station – all of the accessories plugged into the five controlled outlets switch on automatically. And when you're done, simply switch off the main rig and all five accessories switch off (except for the "always on" accessories).

A circuit breaker is also mounted on the unit to reset any surge-protected shutdown.

### Let's check it out

Plugging a lamp into one of the five switched outlets, I attempted to switch it on by activating several different appliances, from a few watts up to 1600 watts, plugged into the control outlet. It activated immediately when I turned on any equipment that's plugged into the control receptacle which provided at least a 40 watt load. Switching off the main equipment,

and all the accessories switched off, just as they're supposed to do!

#### There's more

TakeCharge has also released two timed docking bays designed to shut off those chargers after they've finished refreshing rechargeable batteries. Each has three switched receptacles and one "always-on" receptacle for a total of 10 amps of current.

Both models include two indicator lights, one to reveal an ungrounded third wire which would invalidate the surge protection, and the other to show timed charging is on. A pushbutton initiates the charge time for three hours. A circuit breaker reset button is also present.

The UTC4W is a wall-plug-mount unit that attaches directly to a conventional duplex wall outlet, while the UTC4S is a traditional power strip with the same outlets and a two-foot cord with a right-angle, three-wire plug.

All three devices are warranted against equipment damages by the following deposition:

"Will replace any connected equipment, up to \$50,000, damaged by power disturbances, while connected to a functioning Take Charge Power-Saver."

The UTC8MS (\$29.95), UTC4W (\$24.95), and UTC4S (\$27.95) are all available from Grove Enterprises (1-800-438-8155) or online at www.grove-ent.com.