

The Kenwood TS890 : Analogue's last stand?

Better than a TS590 in a real-world situation, or just in the lab?

For some reason I've always had a preference for Kenwood gear. From my TS520 in the late 70's, and the TS930 that I bought in 1984 and kept for 29 years (plus the TS480 I used as a holiday rig) up to the TS590 I bought 5 years ago. I never had a problem with any of them so reliability and ergonomics may be why I like the brand.

Over those years I managed to get 5 band DXCC with low, wire aerials, despite only being an 'accidental' DXer.....I don't chase DX, I stumble across it by accident inbetween ragchews.

When rumours of the TS890 started to circulate I was interested, but when the preliminary information from Kenwood showed the expected RX performance figures I knew this would be as significant a piece of kit as the TS930 was in its day.

I'd always said I'd never like a rig with an 'arcade game' in the front panel, and with current levels of electrical interference in urban areas I doubted whether the expected performance improvement over my TS590 would actually be discernible outside a laboratory. The TS590 is a great rig to start with, so the bar was pretty high. But as you'll see later I was wrong on both counts.

I'm usually very cautious about major purchases but I threw caution to the winds and put my name down for a TS890 well in advance of the actual launch date. What some might consider a leap of faith was pretty much a no-brainer really. Most problems with new rigs can be fixed in firmware, and on the one occasion a hardware fix was required (the TS590s ALC glitch) Kenwood offered a free fix.

Kenwood opted not to follow the current fashion for 'Direct Sampling SDR' and produced a down-conversion analogue superhet with a DSP 'back-end'. This prompted criticism in some quarters, but surely it is the performance that counts, not the manner in which it has been achieved?

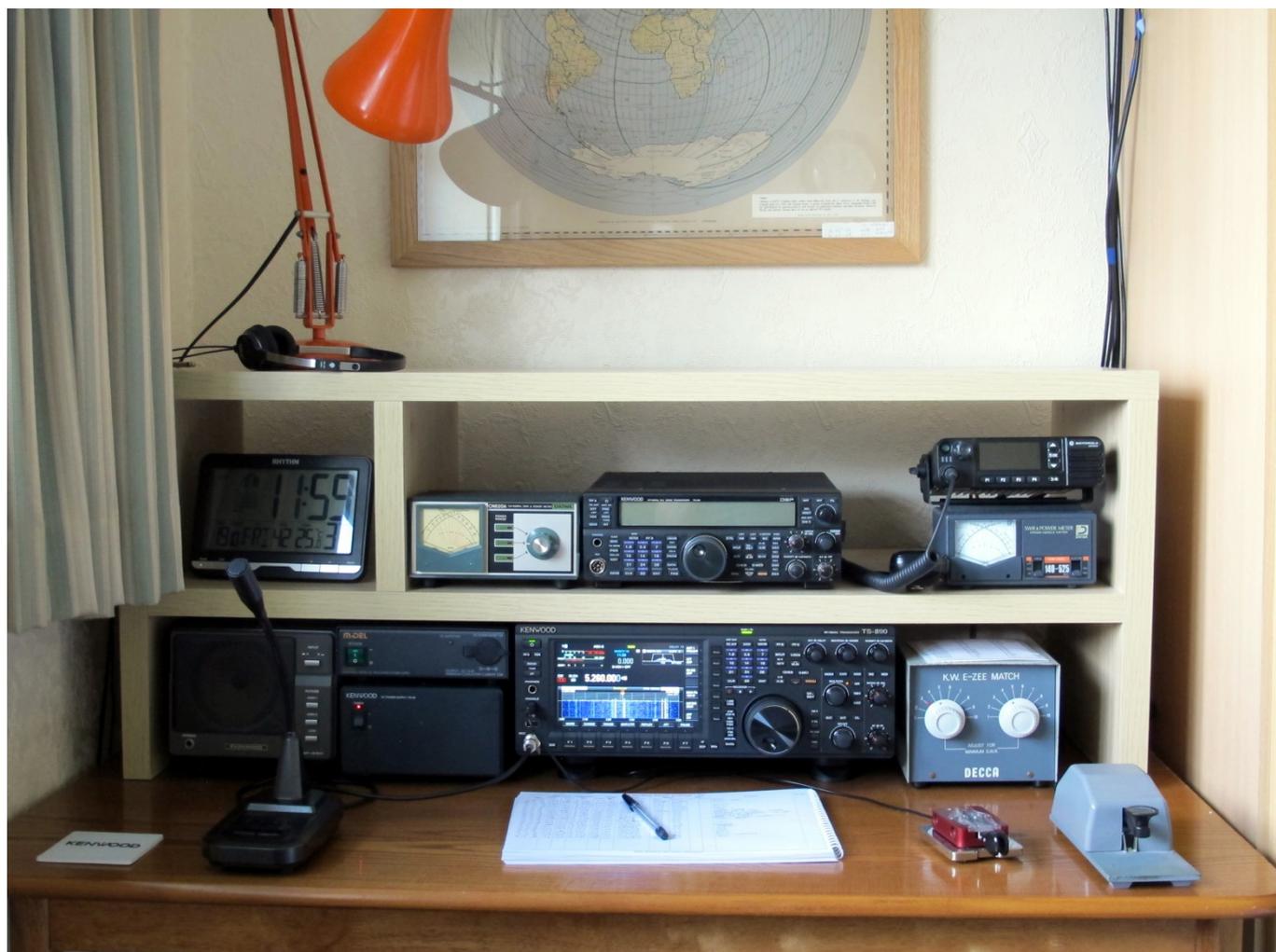
When I picked up my TS890 I was in for a surprise. Knowing my penchant for Kenwood gear, Martin (of Martin Lynch & Sons) and Mark Haynes at KenwoodUK, arranged for me to get s/n 0001. The very first one! The full s/n is B8730001 but the first cluster of characters is a code that determines the year/month of build.

One thing I immediately noticed about the TS890 was its weight. In its packing it tips the scales at 21.8Kg ! The rig itself weighs 15Kg (quite heavy for a 12v rig) with the rest being manuals & packing.

When I took it out of its box my first thought was that it looked even better in the flesh than the brochure. I'd never really liked the 'rubber' buttons on my TS590. Perfectly functional, but tend to collect dust that is awkward to remove. The 'hard' buttons on the TS890 are much more to my liking.

As soon as I powered it up I noticed that the RX audio sounded much fuller and more rounded than that from my TS590. I'd never had any problem with the TS590 audio but the TS890 feels slightly easier on my ears, somehow.

As you can see in the photo its quite big too, compared to the TS590. Pretty much the same size as my old TS930 was. Having spent all those years in front of a TS930 prior to the 590 it was nice to get back in front of a larger rig again.



Anyone upgrading from a TS590 will feel at home with the basic controls, but the 196 pages in the manual mean this is a rig that you'll have to 'grow into' over time. Around 100 pages of the manual are devoted to explaining the menu options!

On the TS590 you can program PF-A to give 10w out for tuning an external ATU, and this is available on the 890 too. A TCXO and Voice Announcement are optional extras on the 590, but fitted as standard on the 890. Brail 'bumps' are provided on the front panel, next to each of the 3 Programmable Function buttons.

My old gnarly fingers don't seem to interact with some touch screen technologies but the TS890 recognises my finger presses perfectly. Not that it needs to. I was pleased to find that you can do everything with buttons & knobs. You can even turn off the 'touch' feature completely if you want.

Being predominantly a CW operator the one feature on my TS930 that I really missed when I had my TS590 was the audio peak filter (APF) so I was glad to see that again. It is really very effective, with a wide range of adjustment.

I like the way that as you dial down the DSP bandwidth the quartz filters are automatically switched to a narrower one, but you can change that if you want.

One thing I didn't realise I'd missed during my time with the TS590 was the large, weighted, tuning knob on the TS930, with flywheel action and variable rate tuning. The TS890 has a really nice one.

In modern rigs it is not actually something you need because you can tap a frequency on the keypad or poke the waterfall display for large QSY but it is somehow very satisfying spinning the dial to move up the band. Pure decadence. But if that doesn't suit you, there is an adjustable friction clutch on the tuning knob to provide resistance to it being turned.

With CW being my mode of choice, the following comments will inevitably be skewed in that direction, but I've received several compliments on my SSB transmitted audio. People who have met me say it sounds exactly like me.

My training was in structural engineering, not electronics, so as I'm not in a position to quote spec numbers meaningfully I'll confine myself to comparing it with my TS590.

For what its worth, as a one-time structural engineer I can say the TS890 is substantial enough to shelter behind in the event of a nuclear attack ☺

One thing I noticed straight away was that CW signals sounded more like a pure tone in the absence of local noise. For some reason the 18MHz band is immune to the electrical interference around my home and very weak CW did not have the *very slight* 'warble' on its tone that I'd grown used to on the TS590. An effect that was more noticeable on my old TS930. I'm guessing this is down to lower phase noise in the TS890 than the previous two rigs but even on noisy bands CW is easier to listen to for extended periods.

On a pre-DSP rig like the TS930, when things get 'busy' on CW then narrower bandwidth is always better. Not so with the TS590 (or the TS480) in my experience. Once the DSP is dialled down below about 50% of the quartz crystal bandwidth you enter the land of diminishing returns. Digital artifacts start to appear, and if you used the DSP noise reduction on the TS590 in very narrow bandwidths it actually made things worse in certain noise types. Almost as if the NR was having trouble telling which was the signal & which was noise.

Possibly because the DSP in the TS890 operates at a higher frequency (24Khz against 15KHz I believe), and helped by the 270Hz optional filter (which I had fitted) you can wind the DSP down as far as you like on the 890 and it just gets better. Drop in the APF and it gets better still.

In modern urban environments the noise comes at you from all directions, so using a phase canceller or moving the aerial often don't give the benefits they used to. In such

situations getting the receive bandwidth down as far as you absolutely can is a way to claw back some readability.

The Noise Reduction (NR) function seems better than it is on the TS590. Better noise suppression & fewer artifacts on SSB. Although it is intended for CW, I found that NR2 could be used for SSB on the TS890. I never liked it for SSB use on the TS590.

Contrary to what I expected, even in a noisy location I believe that the improved RX performance *can* be perceived. In a quiet location very weak signals sound cleaner too. The law of diminishing returns in performance kicks in quite early because modern low and mid-range rigs are so good, but I think it is worth the upgrade from a TS590, especially for CW buffs. Take your existing rig to a dealer with the facilities to sit down and make your own comparison. I'd be interested to know how you feel about it.

Multiple-use controls can be frustrating sometimes, but on the TS890 they have been done intelligently. The concentric knobs that control the high/low edges on SSB become the width/shift controls on CW. The knob that controls the sidetone pitch on CW becomes the mic gain control on voice modes, or the speech compression level if you have the processor turned on.

CW buffs coming from a TS590 will love the fact that keyer speed & delay can be adjusted via knobs on the front panel. I'm not a fan of full break-in operation but having tried it briefly I can say it seems to work incredibly well. Almost like full duplex on the same channel. I wasn't aware of the relay clicking.

The front panel has a socket for a CW paddle, and the back panel has one for a straight key, but you can swap them around in the menus if you fancy a session in a straight key event. The TS890 is a heavy rig & you won't want to have to maul it about to plug a straight key in the back.

The fans in the TS890 kick in after about 1hr into a CW ragchew, and even then only during transmitting. Pretty much what my TS590 does. Those in my TS590 produce a 'rushing' noise which is quite tolerable. Those in the TS890 are quieter and produce a higher pitched, 'zizzing' sound which I found quite acceptable despite being quite sensitive to fan noise.

I never thought I'd live to say this but I'm actually coming to like the presence of the waterfall display, although it can get distracting. If I'm in a net & I see a signal appear further down the band it is very tempting to nip down & see who it is, while waiting for my turn in the net to come around ☺

I was fortunate not to have to trade-in my TS590 to get the TS890 and I'm intrigued by the facility for it to be a 'slave' to the TS890 as a second receiver & follow it around. I'm stone deaf in one ear, so two RX are not really much use to me, but it is something that other people will be interested in.

There is a DVI socket on the rear of the rig to allow use of an external display, and a 3.5mm stereo jack to allow the use of two external meters.

I tried Kenwood's software that allows you to control the rig from a PC via a USB lead. Compared to the similar software for my 590, that for the 890 seems to take a while to start up. As you start the software up it creates *two* USB com ports & you need to be careful to pick the correct one. It works well enough once running but the bandscope runs very slowly on my laptop.

There is a note in the manual indicating that the bandscope via a USB connection could run slowly, so as the TS890 has a network connection perhaps that would be a better way to connect.

The only use I would have for the software is (like the 590) to set up user-defined audio passbands with the graphic equaliser function. Something you can't do directly on the rig. But I can't see myself needing to do that on the 890.

There is other Kenwood software available to allow you to operate the rig remotely via a network connection but I've not tried that.

Its early days yet, and I've only explored the basic features available in the TS890. I know I'm still in the 'honeymoon period' with the rig but I certainly do not regret buying it. Toshio Torii (Kenwood's chief engineer) seems to have excelled himself.

Back in 1984 a fully kitted out TS930 was around £2000. Equivalent to around £6000 in current terms, which makes the TS890 seem better value. It is expensive but the RX performance in the TS930 was far enough ahead of the game to keep me happy for 29 years so it worked out being a wise move.

At 67 years old I might not have 29 years left, but if I do then I expect the TS890 will still be here, although by then I think Direct Sampling technology really will have come into its own and I dare say Kenwood will be making them too ☺

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Collecting my TS890 (s/n 0001) from Martin Lynch at UK National Hamfest



My TS890 T-shirt