



SANGEAN

WR-1 TWO-BAND RADIO RECEIVER

Taiwan's Sangean Electronics recently celebrated its thirtieth year of operation, during which time it has grown to be one of the world's largest manufacturers of multi-band portable radios, building models under contract for such companies as Radio Shack, Panasonic, JVC, Grundig, and Philips. It recently decided to sell components under its own name, hence the new, retro-look WR-1 which sells at an introductory price of just \$199.

The Equipment

The WR-1's front panel volume control is made of brown plastic and has a smooth rotation over its range. The identically sized control adjacent immediately to the right turns the WR-1 on and off and switches between AM (MW) and FM bands. As you can probably tell from the photograph, the 'Off' position is the counterclockwise position, so when you turn the control to the right (and thus switch the radio 'On'), you're in the AM band. Switching to the FM band requires an additional turn to the right.

Sangean's large rotary tuning control isn't flywheel assisted, so if you spin it then remove your fingers, it stops instantly. This means it takes between 7 and 8 turning actions with your fingers to move the tuning needle from one end of the 'dial' to the other. This shouldn't be an issue: most people who listen to the radio tend to listen to just the one station, be it FM or AM.

The Sangean claims to have a 'wooden cabinet' and indeed it does, except that the wood is MDF and it's covered by a wood veneer that looked to me to be vinyl, rather than a true wood, but then I've been wrong about veneers before, so I'm happy to take Sangean's word for it that it is real wood. Local importer Canohm says the other 'timber' finish that's available for the WR-1 looks much more authentic. Whatever it's made of, the veneer is beautifully applied, with only a single joint underneath the radio, and perfectly wrapped around the curved edges and folded onto the rear panel.

The design of the radio is plain but satisfying. I wasn't over-enamoured of

the position Sangean has chosen for its logo, because I think it unbalances the layout. Personally, I would have placed the logo down at the bottom of the panel alongside the model number, using the same typeface and type size used for the model number.

Around the rear of the Sangean is a recess that contains an auxiliary input (a 3.5mm mono phone socket with a green collar), a record output (a 3.5mm mono phone socket with a red collar), a headphone socket (a 3.5mm mono with a black collar) and a standard 12V d.c. socket (tip positive). There's also a threaded US-style 75Ω antenna socket F-connector, for which Sangean provides an adaptor to convert it to the standard Australian Belling-Lee style. Below the r.f. socket is a switch that allows you to alternate between the internal FM antenna and an external one—either the short long-wire 'indoor' antenna provided by Sangean or a full-sized external FM antenna. There is no provision for an external AM antenna which is interesting in itself, because the versions of the WR-1

available in the US *are* fitted with external AM antenna connections, so you can connect a long-wire or loop (directional) AM antenna. I don't know why the same useful facility isn't available on Australian models. Also on the rear panel is the opening of a small bass reflex port and a two-pin 'peanut'-style 240V socket to accommodate the removable power cord.

In Use

Tuning is very straightforward, because the appropriate 'MW' and 'FM' letters at the left end of the dial face light up an 'orangey' colour according to the setting of the band selection switch. AM tuning is made easy by an LED tuning telltale that glows bright green when the radio is correctly tuned to a station. This LED tuning also works on the FM band but in this case the LED isn't sufficiently sensitive to show the exact centre of the FM band, so you're better to use the LED for the 'rough' tune then do the final fine-tune by ear. You're aided in tuning by the fact that the Sangean's tuning knob has no 'backlash', so that once you have established the perfect spot on the dial, you can remove your fingers safe in the knowledge that the dial will not move from where you've positioned it.

My only niggle about operating the Sangean is that if you mainly listen to FM and the FM station you listen to isn't positioned in a place on the dial where it 'aligns' with a station on the AM band, you'll get a blast of static (white noise) every time you turn the radio on, as you'll have to switch 'through' the unused channel on the AM band to get to the wanted channel on the FM band. It would have made much more sense for Sangean to use a three-way switch which had its 'Off' position in the centre, so moving it to the left would switch the radio both 'On' and to the AM band, and moving it to the right would switch it both 'On' and to the FM band. The fact that the bass reflex port is rear-firing—not to mention that the power cord plug protrudes from the rear—also means that you can't push the radio up against a rear wall if you're using it on a bench: two other design flaws that could easily be addressed.

FM performance was superb. It was very clean, completely free of interference and had a powerful, bassy sound that was particularly kind to male voices, particularly male speaking voices. Sangean has obviously built

frequency contouring into the amplifier to compensate for the limitations of the unit's single wide-range 75mm diameter paper-coned loudspeaker. In so doing, however, the designers may also have 'overcooked' the bass just a little, but I rarely hear anyone complain about there being 'too much bass' so Sangean has probably identified that its target audience will be impressed by the (fixed) level on offer. The amplifier is perfectly matched to the speaker as well, because with a good FM signal, it was possible to turn the volume control up to maximum without overloading either the speaker or the amplifier ... well, perhaps there was a *little* distortion, but not much—and



considering the very high volume of sound the Sangean delivers when going flat out, this small amount could easily be forgiven. Front-end sensitivity was excellent: I was picking up far-flung, low-powered community FM stations more clearly and clearly than I have ever managed before with any type of bench-style radio, and this was without the benefit of an external antenna.

The Sangean WR-1's FM performance was so good that I knew before I even tried it that the AM performance could not stand a chance of approaching it. This premonition was correct. Although I found AM performance acceptable, that's about all I could say for it; it being neither overly sensitive nor particularly selective. For stations located at the low end of the AM band such as Radio National, the ABC and 2GB, I was able to obtain generally satisfactory performance in the various suburban locations I tried, but in an inner-city location close to a number of TV and radio transmitting towers the Sangean's AM performance

Sangean


Brand: Sangean
Model: WR-1
Category: Radio
RRP: \$199
Warranty: One Year
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dropped off dramatically, exhibiting considerable interference, such that I suspected the front end of the radio was being overloaded by the high levels of local r.f. As for the AM stations located at the upper end of the band, I had little success in any of the suburban locations I tried, indicating there's probably a good argument for making provision for using an external AM antenna.

Operationally the Sangean covers the usual radio frequency ranges: 87.5–108MHz on FM and 520–1710 on AM. Output power is rated at 7 watts (at 10% THD). The radio is 240mm wide, 114mm high, 170mm deep and weighs 2.35kg. Warranty is 12 months.

Conclusion

Sangean's WR-1 has a high level of FM performance—albeit mono, rather than stereo—so its combination of retro charm, good sound, 12-volt capability and low price should see it over the line in spite of its performance at the upper end of the AM band.  *greg borrowman*