

# Qodosen SR-286 AM/LW/FM/SW High Performance Portable



There are a few other radios available which use the TEF family of DSP chips but I don't think any of them have built-in ferrite rods for AM/LW which is generally needed for indoor listening. More to come on that. I would expect that any radio using one of these chips would have similar performance other than for AM/LW using only the whip with no ferrite rod but I don't know if they utilize all of the settings and features which are available the SR-286.

This is going to be a rather unusual review of a rather singular product. The Qodosen SR-286 is based on the NXP TEF6686 DSP chip which is designed for car radio use. As such it offers levels of performance and adjustability far beyond what I have come to expect of portable radios and as this report unfolds you will see how, in some ways, this little radio has absolutely astounded me with what it can do. For those of you who have read my articles over these many years you know that I refrain from hyperbole. Many online reviewers claim certain products have "blown them away" or made every other radio obsolete. I have never said anything like that and I'm not going to now, but what I will say is that this little radio is in some ways superior to every other radio I have seen. *Not overall of course...* that would be an absurd claim, but there are *aspects of its performance* that redefine what we can expect from a portable radio.



I also have to tell you that as of this writing the designer is still trying to obtain more of these chips needed to produce this radio. From what I have been told the developer has not been able to entice any of the major manufacturers to commit to the scale of production necessary to obtain this chip from NXP. A limited production run of these radios was made as an experiment but future plans are still pending. Nevertheless I think this evaluation will be of interest to those who love radios as I do because discovering that the technology exists to produce such groundbreaking performance presents hopes of improved radios overall down the road...I certainly hope this will be the beginning of a new era. Just as the DSP chips from Silicon Labs, which are used in just about every current day portable radio have matured to the point where overall performance is better than what was possible a decade or two ago, it is possible to go further with chips which offer even higher levels of performance.



**Description:** The Qodosen SR-286 is a compact portable measuring approximately 5" x 3" x 1 1/8"...the size of the C. Crane Skywave and smaller than the Tecsun PL-320/330. It covers AM/LW/FM/SW and has settings for the different band limits and channel spacing used around the world. It also features RDS/RBDS and runs on an 18650 Li-ion battery which can be charged via its USB Micro port. It offers a host of digital features such as World/Local clocks, Alarms and Timers, Auto Scan and Memory settings, Alpha Page Labelling, the ability to use external antennas on all bands, an Antenna Attenuator and 20 db amp...again too many to list so I invite you once again to take a look at the manual for a full listing of all of its features. [Qodosen SR-296 Manual:](#)

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**Performance:** Here I will touch upon just some of the unusual things this radio can do. This is by no means going to cover everything...that would require a book, but after looking at the manual my description will give details on why I think this a ground-breaking development in the context of portable radios.

**FM Reception** is miraculous. I put the SR-286 side by side with several of my best Five Star FM portables, and found several stations on the Qodosen that were just not there on the other radios. Since this seemed unlikely I had to double check myself to be sure these were not some kind of spurious images, but the little SR-286 displayed RDS info which proved these were real stations which were either completely absent or little more than faint murmuring noises on all of the other radios....all on its 19" whip antenna. I did find it was necessary to hold the radio in my hands to get these signals because the small radio benefited from the hand capacitance/counterpoise effect. I then tried a folded dipole in place of the whip and this made the hand capacitance effect much less obvious as I had expected. But the very fact that this radio not only heard stations I couldn't receive on any other portable but also displayed the RDS info completely amazed me.



This presented me with a problem – since the SR-286 beats all my Five Star FM portables I would either have to lower all of them to Four Stars or create a Six Star rating for the Qodosen. These are interesting results to say the least.

**(Background)** My car FM radio has always outperformed all of my portables. We have a Subaru Outback and a Nissan Altima and the Altima radio is far superior...I have no portables that can match it, so I took the SR-286 out to where the car was parked and the car radio was still better. It may have an even better automotive chip and it certainly has a more sophisticated antenna plus a great counterpoise (the car's body), but still the SR-286 came closer to it than my other portables ever have. I suspect a better external antenna might close the gap as other users have suggested but I'm just guessing here.

The TEF-6686 chip has several enhancements as well such as multipath reduction, advanced blending in stereo mode, multiple bandwidths etc. How about 16 FM bandwidths including Automatic! While I consider this overkill there is no doubt that this radio will separate any receivable FM signal from any neighboring one or allow low distortion on typical signals. The Auto setting works well. There are also different FM processing settings...I found setting 1 (not the default) to be the best by a very slight margin.

**AM Performance** was also interesting. Because this is a compact radio the built-in ferrite rod is necessarily small and reception off the ferrite is consistent with the best radios of this size...it

would rate perhaps \*\*\* to \*\*\*1/2 in the AM Mega Shootout list. However, you can select the whip antenna instead of the ferrite rod, and there is also a switchable 20 db amplifier you can enable. If you then take the radio to a very low noise area, such as outdoors, the AM reception becomes phenomenal rivalling my best Five Star reference radios. The only other limitation here is that you do not have the directional characteristics of the ferrite rod so some signals cannot be peaked or nulled by aiming which can be a big problem on some stations. But on others the downright sensitivity and low noise floor are phenomenal and sometimes even better than the \*\*\*\*\* portables. This is truly outstanding performance. I didn't have a chance to test the SR-286 on LW but have been advised that it is amazing on LW as well and beats the competition...I have no reason to doubt that claim.



SW is also excellent with the 19" whip but once again, the superb chip allows the radio to really shine when using external antennas. It loved my Wellbrook loop and a random wire antenna I tried with it and there was no FM breakthrough into the SW bands which we often find on less expensive radios. There is no SSB which is unfortunate but basic reception will not disappoint you.

**Conclusion:** Although the Qodosen is not a radio you can buy at the moment I am hoping it will become available at some point and also that it will be a harbinger of future possibilities. I was completely unprepared for this level of performance and a feature set that goes way beyond what I would have even thought to wish for. I hope that one of the major manufacturers will realize there is market for radios with such performance. And although the many user settings are an incredible tool for serious radio hobbyists we must remember that car radios omit all of these arcane settings and instead use Automatic settings for simplified operation by anyone who can tune a radio. In a perfect world I would love to see a radio with this kind of reception, automatic modes which could be overridden by hobbyists or ignored by mainstream users, and a full sized portable with a ferrite rod large enough to extract superior AM performance in a typical home setting where the whip is too noisy to be practical. With a full size ferrite rod this could possibly set new levels of AM performance.

Addendum: I see the radio is now listed at Ali Express: [Qodosen SR-286](#)

[Jay Allen](#)