

## **The GE SuperRadio FAQ**

# Table of Contents

<b><u>The GE SuperRadio Frequently Asked Questions List</u></b> .....	<b>1</b>
<u>Contents</u> .....	1
<u>General Information</u> .....	1
<u>Technical Questions</u> .....	1
<u>Appendix A: Repairs and Modifications</u> .....	1
<u>Appendix B: Resources and Acknowledgments</u> .....	2
<u>Side Notes and Related Topics</u> .....	2
<u>General Information</u> .....	2
<u>What is the GE Superadio? Does it do shortwave?</u> .....	2
<u>Where do I find one?</u> .....	2
<u>I'm outside the US. How do I get a Superadio?</u> .....	2
<u>I'm in Australia. Can I get an SR?</u> .....	3
<b><u>GE SuperRadio FAQ -- Technical Information</u></b> .....	<b>5</b>
<u>Technical Questions</u> .....	5
<u>The Superradio III? What happened to II? Or I?</u> .....	5
<u>Does Radio Shack sell a Superadio?</u> .....	6
<u>What kind of performance can I expect from the Superadio?</u> .....	6
<u>What kind of outside/external antenna can I use for mediumwave?</u> .....	7
<u>What kind of external antenna(s) can I use for FM?</u> .....	7
<u>What about those reports I hear of problems with the SR III?</u> .....	8
<u>I just bought an SR III and it doesn't work!</u> .....	8
<u>The dial calibration on my Superadio is off!</u> .....	8
<u>My mono earphones don't work right with the SR!</u> .....	9
<u>Can the Superadio be modified for SCA reception?</u> .....	9
<u>Is a service manual available?</u> .....	9
<u>Why doesn't GE put a digital display on the Superadio?</u> .....	10
<u>Can you add a digital display to the Superadio?</u> .....	10
<b><u>GE Superadio FAQ Appendix A: Repairs and Modifications</u></b> .....	<b>12</b>
<u>Superadio II Mods</u> .....	12
<u>Disassembling the Superadio II</u> .....	12
<u>Fixing the Dial Calibration on the SR II</u> .....	13
<u>Improved FM Filter Modification, SR II</u> .....	13
<u>SR II Front End Repair</u> .....	14
<u>Superadio III Repairs and Modifications</u> .....	15
<u>Sensitivity Fix for some Superadio III's</u> .....	15
<u>SR III Power Switch Fix and Dial Light</u> .....	16
<u>Comments on SR III Alignment</u> .....	17
<u>SR III Dial Alignment</u> .....	19
<u>Food For Thought: SR AM/FM Spectrum Analyzer?</u> .....	20
<b><u>GE Superradio FAQ--Appendix B: Resources and Acknowledgments</u></b> .....	<b>22</b>
<u>Acknowledgments and Thanks</u> .....	23
<b><u>A Superadio 1-1/2? The GE #3-5280C AM/FM/cassette portable</u></b> .....	<b>25</b>

# Table of Contents

**The Superadio Plus: A Report.....26**

# The GE SuperRadio Frequently Asked Questions List

*compiled by David C. Moisan, N1KGH  
April 4th, 2003*

In this FAQ, I've assembled the net.wisdom on one of the most popular radios for AM (mediumwave) and FM DXing, the General Electric Superadio. There were four versions of the radio, and the latter two (II and III) are covered here.

Included are several Superadio mods that I know about; if you've modified *yours*, let me know about it and it'll be included here.

This FAQ is divided into sections for easier browsing. A PDF version and a zipped HTML version are also available. I no longer offer the plain text version, due to the difficulties of keeping it in sync with the HTML version.

## Contents

### General Information

- What is the GE Superadio? Does it do shortwave?
- Where do I find one?
- I'm outside the US. How do I get a Superadio?
- I'm in Australia. Can I get an SR?

### Technical Questions

- The Superadio III? What happened to II? Or I?
- Does Radio Shack make a Superadio?"
- What kind of performance can I expect from the Superadio?
- What kind of outside/external antenna can I use for mediumwave?
- What kind of external antenna(s) can I use for FM?
- What about those reports I hear of problems with the SR III?
- I just bought an SR III and it doesn't work!"
- The dial calibration on my Superadio is off!
- My mono earphones don't work right with the SR!
- Can the Superadio be modified for SCA reception?
- Is a service manual available?
- Why doesn't GE put a digital display on the Superadio?
- Can you add a digital display to the Superadio?"

### Appendix A: Repairs and Modifications

#### Superadio II

- Disassembling the Superadio II
- Fixing the Dial Calibration on the SR II
- Improved FM Filter Modification, SR II
- SR II Front End Repair

## Superadio III

- [Sensitivity Fix for some Superadio III's](#)
- [SR III Power Switch Fix and Dial Light](#)
- [Comments on SR III Alignment](#)
- [SR III Dial Alignment](#)
- [Food For Thought: SR AM/FM Spectrum Analyzer?](#)

## **Appendix B: Resources and Acknowledgments**

### Side Notes and Related Topics

- [The Superadio Plus: A Review by Dave Zimmerman](#)
  - [A Superadio 1-1/2? The GE #3-5280C AM/FM/cassette portable](#)
  - [The Carpet Loop: A High-Performance Indoor Antenna](#)
  - [Hooking up radios to your PC](#)
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## General Information

### What is the GE Superadio? Does it do shortwave?

The General Electric Superadio III (abbreviated SR III) is an AM (mediumwave)/FM radio designed for long-range, high-fidelity listening. It's the radio of choice for many AM and FM DXers.

It doesn't do shortwave. What it does do is tune the AM (mediumwave) band from 530–1705 KHz and the FM band from 88–108 MHz; it doesn't receive FM stereo (nor AM stereo either). There's a wide/narrow switch for AM reception. It has an excellent sound system, with a 2-way speaker and bass and treble controls.

Unlike most AM/FM radios the SR III has additional RF stages, a big (200 mm) ferrite loopstick for AM, and an external antenna jack.

### Where do I find one?

The GE Superadio is available from many retailers, including Sears and Canadian Tire, among others. [Bennett Brothers](#) is at least one mail-order source for the radio; Street price is between \$35–\$55. J&R Music World in NYC also has it in stock and ships fast: 1-800-221-8180.

Refurbished radios may or may not be available from Thomson Consumer Electronics at 800-933-5489; price is around \$26 + \$6 S&H, but call first.

### I'm outside the US. How do I get a Superadio?

Richard Hunt:

"For UK residents, the easiest way to get a GE Superadio is to order one from one of the dealers who advertise in the World Radio TV Handbook, for example Universal Radio in Ohio. The easiest way of paying is to use your credit card. Most companies accept Visa, Access/MasterCard and American Express. The major added cost will be shipping: surface mail will add USD 20 or so (and may take 6–8 weeks), airmail up to USD 50 (delivery in

## The GE SuperRadio FAQ

10–14 days). UK Customs & Excise will add import duty and VAT, which will be collected by the post office when they deliver (they will charge GBP 5 for this "service").

Bringing a Superadio back from a trip to the US is also possible, but it is quite large, and you may have trouble with airline/airport security. DO NOT pack it in checked baggage. Carry it on in hand luggage and be prepared to demonstrate it working. Go through the RED channel at Customs and pay the VAT. Getting caught in the Green channel will most likely result in at least public embarrassment and having to pay up anyway, at worst, confiscation of your Superadio, prosecution, a heavy fine and a criminal record.

The major problem is likely to be power supply. The mains transformer on the Superadio works off 110 volts, 60 Hz. The US plug molded onto the wire won't fit a UK socket – just as well as UK mains is 240V, 50Hz. Feeding 240V into a 110V device will damage it instantly beyond repair. There is no 9V dc input, so you have to rely on batteries, obtain a 240v–110v stepdown transformer or modify the radio internally.

The SR is also available from Bennett Brothers; here's some info from rats@ihlpm.ih.att.com:

I often wonder how many GE Superadio II and III sales I've responsible for at Bennett Brothers, being I believe the first one to post about their availability and price there... (they also sell SONY SW sets, but obviously, no one has ever talked them lowering their prices...) If only I got a commission for each Superadio sale stemming from rec.radio.shortwave...

People who want to visit the store at 30 East Adams should note that store is located directly west (within a 100 feet) on the north side of the street of the Adams & Wabash train station serving the Midway, Ravenswood and Lake Street routes. The showroom of the store is located on the Second floor and is served by both stairs and an elevator equipped with a human elevator operator(!). You can pre-order the radio so that it is available for pick-up when you get there, so as to avoid delays (It's basically a big warehouse with a showroom.) Their number is (312) 621–1600.

In case overseas readers are wondering what train route this is, the Randolph & Wabash train stop is two stops north, and is the train station where the assassin hides in the movie "The Package" starring Gene Hackman. (Tommy Lee Jones may have played the assassin)...

Bennett Brothers' will ship the SR overseas.

### **I'm in Australia. Can I get an SR?**

Yes. Several vendors (Grace Bros. and Dick Smith Electronics) sell the SR II, locally modified for 240V operation. Price is A\$100.

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[Next: GE Superadio FAQ Technical Information](#)

[N1KGH Radio Page](#)

[Dave Moisan's Home Page](#)

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## The GE SuperRadio FAQ

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[http://www.davidmoisan.org/radio/superadio/gesr\\_faq.html](http://www.davidmoisan.org/radio/superadio/gesr_faq.html)

[About davidmoisan.org](http://www.davidmoisan.org)

# GE SuperRadio FAQ -- Technical Information

## Technical Questions

### The Superradio III? What happened to II? Or I?

The SR III is the latest version of the radio. The SR II, which many people, myself included, still own, had a different cabinet and AM coverage only to 1600 KHz; the SR III accommodates the expanded AM band. The II does not have a AM wide/narrow filter switch.

There are some technical changes as well; the III uses varactor tuning compared to the II, which uses a conventional variable capacitor.

Dave Markson has this to say about the II vs. the III:

"I have an original Superadio and just bought a SR3 (modified on FM with a 110/280 KhZ IF filter, and SCA by SCS Radio Tech). As for MW, here are my findings:

1. The SR3 has much better sound.
2. Although the SR3 has a wide bandwidth position, it is almost useless, but does increase the highs on local stations. The normal position is close to the bandwidth of the original SR.
3. The SR3 is more sensitive (by a small amount)
4. The SR3 has about the same selectivity of the original SR, my findings show it a little bit less selective.
5. The SR3 workmanship is not quite as good as the original SR.
6. The SR3 is harder to tune. Where as the original SR band was spread out pretty evenly across the dial, the SR3 uses 1/2 the tuning dial to go from 530–1000kHz, then crams the rest on the right half of the dial. Tuning the upper portion takes a very steady hand! Calibration is terrible also.

Note: I bought a Select–A–Tenna, and it improves reception on both SRs. A GREAT DEAL. Well worth the \$40–\$50 (hmmm, same cost as the SR3.)

As for FM, here are my findings:

1. The SR3 has much better sound.
2. The original SR is MUCH more sensitive than the SR3. It is possible that this is due to the modifications, but I'm not sure. Anyone comment on this?
3. The 110/280 kHz IF filter is a great idea. The SR3 has a stock 180kHz filter.
4. Using SCA is great. I am a little disappointed that there are so few SCA programs in the greater Boston area. Most stations are transmitting data on their subcarriers. SCA requires a very clean local signal. There is no DXing SCA stations.
5. SCS does a very clean, professional mod. [No relation to SCS]

The original Superadio resembles the SR II, except that it has only one speaker; performance is similar [Scott Fybush]

There was a *digital* Superadio, the Superadio Plus.

To paraphrase Dave Zimmerman, this model (#7–2882) was introduced in 1982, with many of the same



## The GE SuperRadio FAQ

features as the original SR, but with PLL synthesized tuning! No keypad, but there were eight presets for each band, a lighted display, and a 9 kHz/10 kHz tuning step switch in the back.

Compared to the analog SR, the performance is close, but with increased noise on AM probably due to synthesizer noise. For the same reasons, weak FM signals were difficult to "lock on" to, compared with an analog radio.

It was a pricey radio in 1982, at \$139.95, which likely made it a quick departure from the market.

Dave's full [review](#) is available elsewhere in the FAQ pages.  
See also my [comments](#) on a digital SR.

### Does Radio Shack sell a Superadio?

Radio Shack does not sell any rebranded GE radios. They do sell some "high performance" AM/FM portable radios that are similar.

A current model of theirs is the Optimus #12-903.; this seems to be the successor to the Optimus #12-603, an AM/FM radio and Optimus #12-604, which is an AM/FM/TV-sound radio (which includes the UHF channels, unusual for a TV-sound radio.)

A report on the #12-603 from C.D. Kolyer:

I bought this "new product offering" from Radio Shack, because it looks like and has many features of the GE Superadio III- separate Bass and Tweeter speakers, "tuned RF on AM and FM", wide-normal bandwidth switch, external antenna screw terminals, obnoxious top-mounted Power switch. Knowing how Radio Shack buys its product designs from others, I believe this is a clone of the Superadio.

Like everything electronic in my house, I opened the radio. I found "SUPER RADIO PCB TOPSIDE CITY 50496" silkscreened on the PCB. The ferrite bar is 140 mm long, which is not as long as the one mentioned in advertisements for the GE Superadio III at web sites such as Universal Radio or Grove.

I'm not an experienced DXer, and I usually laugh at Radio Shack's products, but this relatively inexpensive (\$ 59.99) receiver performs very well. Also, remember Radio Shack's return policy (90 days w/o hassle- buy one, save the box, test it out, return it if you're disappointed...) I know of no retailer near me who offers the GE Superadio, and I have a problem with re-stocking fees associated with mail order. Besides, Universal Radio and Grove have a price within pennies of \$60.00 for the GE Superadio.

Columbia River Consultants has written a review of the RS radio in which the reviewer finds the radio poorly aligned as it comes from the factory. A realignment gave excellent results. The review's at <http://www.geocities.com/CapeCanaveral/Hangar/8905/RSSR.html>.

### What kind of performance can I expect from the Superadio?

Compared to the average radio, you will get better reception. In 1994, over a few weeks of listening, I compared the SR II to my Realistic DX-400 (with an external antenna), listening both in the day and at night;

Does Radio Shack sell a Superadio?

## The GE SuperRadio FAQ

I lived (and still live) directly on the East Coast, 25 miles NE of Boston, Massachusetts. The results:

Daytime AM (mediumwave)—I found a dramatic improvement. I could regularly get several New Hampshire news/talk stations, including WNVU 900 and WZNN 930, that come in weakly with the DX400, if at all. Not to mention New York stations like WCBS 880 and WNYC 830, plus the stupendous (and, alas, now off the air!) CHSJ 700 in St. John's, New Brunswick, Canada. The SR's antenna really cuts down the noise that is ever-present during the day.

Nighttime AM (mediumwave)—When the ionosphere is 'on', almost any radio will hear DX. But the Superadio receives DX more consistently, and with better selectivity than any other cheap radio I've used.

Although the Superadio has only imprecise slide-rule tuning, I can regularly resolve different stations 10 KHz away from each other. And unlike so many shortwave portables, there's no overloading, at least not on the internal antenna.

Also, as mentioned previously, the radio has excellent sound that'll enhance your listening in almost any situation.

### **What kind of outside/external antenna can I use for mediumwave?**

People have spoken well of the Select-A-Tenna, an external loop antenna, sold by Grove Enterprises, C. Crane, and other, and is about \$60.

I've used my Superadio with a homemade clone of the Select-A-Tenna, available from Werner Funkenhauser's site at <http://www.carcanada.net/dx/>. I've also used it with Radio Shack's loop antenna (#15-1853). These antennas don't make as dramatic a performance jump as you might see with other receivers, since the ferrite rod in the SR is already a good performer as it is.

I've used the SR with my Carpet Loop antenna, with good results. A few years ago, I had some very interesting results using that antenna for MW with the DX400; I once was able to receive both WJR and Radio Reloj on 760 KHz at will by flipping a knob on the antenna.

In general, loop antennas are a good choice for mediumwave listening. The National Radio Club publishes loop plans; their address is in the appendix.

### **What kind of external antenna(s) can I use for FM?**

Generally, any antenna labeled as "FM" or "TV/FM" should work. The FM antenna terminal on the SR will accept the usual 300-ohm TV twinlead terminals. Some suggestions from the Radio Shack catalog, from least to most elaborate:

Indoor antennas:

"Budget UHF/VHF TV Antenna": RS #15-1864, \$7.99

*The familiar rabbit ears that you or your kids have probably broken more than once.*

"Indoor FM Antenna": RS 15-1843, \$9.99

*Square FM antenna. Looks like a Terk active antenna but is passive.*

Active antennas:

"FM/AM Amplified Antenna": RS #15-1832

*Active FM antenna with an AM antenna built in.*

What kind of outside/external antenna can I use for mediumwave?

## The GE SuperRadio FAQ

Outside antennas:

"FM/FM–Stereo Antenna": RS #15–2164, \$14.99

*Omnidirectional turnstile antenna. A good choice for general listening.*

"High Gain FM Stereo Antenna": RS #15–2163, \$21.99

*A directional Yagi. It's best suited if the FM stations you want to receive are all in the same locale.*

"Antenna Rotator": RS #15–1245, \$69.99

*The rotor you may want for the Yagi, if the stations you want are all scattered around the compass. Total system cost, including the rotor cable, will be about \$120.*

Don't overlook the TV antenna you may already have; it should work fine with the SR.

### **What about those reports I hear of problems with the SR III?**

Some people have reported poor sensitivity on the III when it was first released. Radio World (3/24/93) quoted a spokesman for Thomson Consumer Electronics indicating that some early models of the SR III have severe sensitivity problems.

These early models had the following date codes, a 4–digit code found on the box or in the battery compartment: (the first digit is ignored) x201 through x241. There is a suggested fix in [Appendix A](#)

### **I just bought an SR III and it doesn't work!**

During 1996, many people reported buying SR's that turned out to be defective, usually with poor sensitivity. Sadly, it's not uncommon to go through several SR's before finding one that's satisfactory.

GE's parent company, Thomson, is experiencing business difficulties which may account for the severe quality–control problems the SR seems to be experiencing. Indeed, this has put the future of the Superadio in doubt.

In the meantime, if you haven't bought an SR yet, make sure you pick a retailer with a liberal return policy. If you're buying used, insist on operating the radio and checking it thoroughly before money's exchanged.

If you've already bought an SR and suspect problems, read the suggestions here and in [Appendix A](#)

### **The dial calibration on my Superadio is off!**

This is a common problem with slide–rule radios such as the SR. Many of us who are used to digital displays are thrown by this.

Andy Sennitt suggests using graph paper to plot frequencies of known stations versus the dial log, which is marked from 0 to 10, in tenths, on the Superadio.

I'd suggest graphing small segments of the band (say, 800 to 900 kHz), until you get the hang of it. One can get within 10 kHz, which is good enough for most purposes.

(I last did this trick with a Realistic DX–160, which I used aeons ago. How soon I forget.—DM :))

## **My mono earphones don't work right with the SR!**

The Superadio has an earphone jack—but it's a stereo 1/8" jack, the same as in your portable CD player. You can get a stereo-to-mono adapter at Radio Shack (RS #274-374). When my mother had an SR, I put a 1/8" stereo plug on her pillow speaker so she could use it with the radio.

*NOTE: The SR is still **mono**, whether you use a stereo headset or not.*

## **Can the Superadio be modified for SCA reception?**

Yes. Several manufacturers sell kits and assembled boards that can be used with the SR. SCS and Ramsey sell boards, while Bruce Elving sells complete Superadios with the modification. Here are Joe Jesson's comments on the SCS board:

"I recently ordered and received three SCA demodulator boards from SCS Radio Technology after noticing an advertisement in Radio News. Bruce Elving's SCA design uses a CA3089 IF/detector chip and a PLL (I designed his XR2211 PLL SCA demodulator) SCA. Bruce also sells FM receivers modified with the boards.

What was interesting about the SCS SCA board design, while it uses a CA3089E IF chip also, a multipole filter in front of the 3089 decreases main channel crosstalk interference (by 60 dB). David's board is of excellent construction, with no jumpers and small size to be inserted in an FM receiver's FM detector stage (before deemphasis attenuates the SCA signals).

Anyway, three pretuned boards are available from SCS, 57Khz, 67Khz, and 92Khz – \$20.00 each, \$60 plus \$6.00 P&H for all three. I am satisfied with the design and construction of each board. One area of modification I would make is to monitor the SCA signal's multipath and level with an x-y monitor. Use pin 13 of the 3089 chip for a signal level (scope y) output and pin 7 for the x axis output. Of course levels must be set to set vertical and horizontal traces. A flat vertical line, max amplitude, is the ideal signal for tuning. A "wavy" line illustrates multipath. This is a great tool for tuning FM signals...

## **Is a service manual available?**

GE sold the Superadio rights to Thomson Consumer Electronics, El Paso, Texas. The Superadio III will continue to be sold under the GE name.

Thomson Consumer Electronics has told at least one person that service manuals are no longer available.

There's a copy of the SRIII service manual at <http://users.netonecom.net/~swordman/Radio/GEsrIIIAlign.htm>.

The last known address for service manuals was:

Thomson Consumer Electronics Publications  
Customer Service  
10003 Bunsen Way  
Louisville, KY 40299  
Phone: 1-502-491-8110

## The GE SuperRadio FAQ

Price of the manual in 1993 was \$6 plus \$3 handling; it's recommended you call first to confirm pricing. When ordering the manual, be sure to include the model number *and suffix*, as the service data is revised with production changes. (My SR II is #7-2885F; the SR III is #7-2887.)

Additional alignment instructions are available at <http://www.paulplu.demon.co.uk/sr3/>.

### Why doesn't GE put a digital display on the Superadio?

There are several reasons for this:

Remember that the Superadio is aimed for the "average" consumer; at US\$50 retail, it's near the high end for a radio of its type (AM/FM, no stereo, no cassette). A digital display would make the SR more expensive than it is already. GE isn't Grundig. Nor is it Bose.

Also, a digital tuner (PLL frequency synthesizer) has some associated performance disadvantages: Synthesizer noise affects audio, causing hiss and low bass response. "Birdies" and intermodulation distortion, all too familiar to shortwave portable owners would probably make an unwelcome visit, especially as any digital tuner suitable for the SR's price range would likely be single-conversion, rather than the double-conversion used in most shortwave sets.

The biggest problem with a GE SR digital tuner, though, is one that could alienate many Europeans, Asians, Australians and trans-Atlantic/trans-Pacific DXers: The 9 kHz/10 kHz split.

Most of you know that North American MW stations are separated every 10 kHz and European and Asian MW stations are, in contrast, separated every 9 kHz. I'm sure more than one American tourist has cursed when they can't tune local stations from their hotel room overseas.

As mentioned earlier in the FAQ, GE doesn't market, let alone modify, the SR outside of North America. Given this, the splits in a hypothetical digital SR would probably be hardcoded for 10 kHz. If it were Sony we were referring to, there'd probably be a 9 kHz/10 kHz switch in the back. But the SR? I don't think so.

That said, I've owned three different portable digital radios, and all of them have had some provision for changing the MW channel spacing, usually through a switch in the battery compartment, though my latest Sony radio requires you to hold down a button while turning the radio on.

Dave Zimmerman has an alternate opinion: a very interesting [review](#) of the Superadio Plus which is presented elsewhere in this FAQ.

### Can you add a digital display to the Superadio?

A generic frequency readout is available as a kit from [Almost All Digital Electronics](#) ; this can be added to many older analog radios. Cost is \$50, and detailed connection diagrams are provided for many different models.

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[Previous: GE Superadio FAQ General Information](#)

[Next: GE Superadio FAQ Appendix A: Repairs and Modifications](#)

[N1KGH Radio Page](#)

[Dave Moisan's Home Page](#)

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## The GE SuperRadio FAQ

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[http://www.davidmoisan.org/radio/superadio/gesr\\_tech.html](http://www.davidmoisan.org/radio/superadio/gesr_tech.html)

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# GE Superadio FAQ Appendix A: Repairs and Modifications

## Superadio II Mods

### Disassembling the Superadio II

[Summarized from comments by Bruce Bacon, Ralph Brandi, R. Hardin, and Gregory Doerschler]

1. Remove ALL knobs in front, including the tuning knob, by pulling them straight off. A plastic fork is a good tool to use and won't bend the shaft. Be patient but firm—the knobs may be glued or taped on.
2. Remove the back screws, except the antenna screw. Don't forget the screw in the battery compartment.
3. Remove the front cover by pulling it from the rear and *upwards* so that it clears the power switch. The power switch is fragile, and a real bear to fix if you break it, so be VERY careful here. You may want to try removing the button from the switch *carefully*—or else pushing it in so it'll clear the case.
4. If you do break the switch, here are R. Hardin's instructions for repair:

"The power switch is very entertaining to reconstruct, especially if you don't have all the pieces. Unscrew it, take off terminal plate if it's still on (mine wasn't), find little metal slider thingy that grips the terminals on the inside – it slides between terminals 1 and 2, or 2 and 3. There might be two of them, I only found one; shake the radio over some surface where you can find it when it falls out. Put it on terminals 1 and 2 (the off position).

The mechanical parts can be removed now for experimentation:

The button, switch case, and a plate with a funny wire in it that's supposed to be in the back of the switch. There's, what, 8 ways to try assembling it. Well, 4 ways if you consider that POWER ON OFF has to be legible from the front of the radio, and only 1 way if the plate is still in the case.

Put in plate with wire, put in button, and see if the button then has two positions it's happy in, on and off.

(If you have a plate and a wire, instead of a plate with a wire, there are more ways to try I guess.)

Leave the switch in the off position, which is the only one it's really stable in without the terminals on, and put the terminal plate on, the slider fitting into the slot in the button. You may have to spread the fingers that were supposed to keep the switch case together a bit.

See how nice the switch works now? Screw it back in, and swing case back on, putting it on the top first and swinging it closed. There's a little forcing past the tuning shaft. Stress the tuning shaft, not the power button!

## Fixing the Dial Calibration on the SR II

by Bruce Bacon:

I've had my SR II for a couple of years now, primarily tuning on the MW side of the dial. The SR II is a great MW DX machine except for one main drawback—dial resolution. Last weekend, I made a modification which has made the resolution much more livable. If you're into taking radios apart, give the following a try:

CAVEAT: If you haven't had an SR II apart before, be very careful with the power switch. Take careful note of what it looks like before removing it! I gave up and installed an NCR receipt printer rocker switch (P/N 006-1050121). Much better, but a bit of a hack.

1. Remove the knobs from the front of the chassis (volume, bass, treble, tuning). Remove the 6 screws from the back of the chassis. Remove the screw from the battery compartment. Rock the handle and the chassis should split open (watch out for the power sw). The speaker wires connect both sides of the chassis, so be careful.
2. The pointer is a piece of plexiglass with an orange colored stripe in the middle. You won't be using the orange stripe anymore for frequency identification, you'll use the left side of the plexiglass!
3. Find yourself a suitable scribe (I used an exacto knife). The receiver should still operate (careful with the power switch) even though it's opened up. I used batteries to reduce the chance of electrocution.
4. Turn the dial shaft and start identifying stations. Using the scribe and the left side of the plexiglass, make a vertical mark every 50Khz (550Khz, 600Khz, 650Khz, etc). Be careful to tune the *center* of each station! I made a double vertical line for each 100Khz marker (600Khz, 700Khz, etc..) I guess you could get fancy and make a mark every 10Khz, but I think the dial face would get too crowded.
5. When you've finished with your scribe marks, you can button it back up. I've found by using the scribe marks in conjunction with the left side of the plexiglass, parallax is virtually eliminated. Frequency identification is much easier. The main thing is to take your time and make sure the frequency you think you are on *is* the frequency you are on!

## Improved FM Filter Modification, SR II

by Ralph Brandi:

I've found it a worthwhile modification to the Superadio II to replace the stock ceramic bandwidth filter (230 kHz? 280?) with a narrow filter 150 kHz wide. It doesn't improve sensitivity, but it does wonders for selectivity. For instance, with the 150 in, I can now receive WXPN-FM in Philadelphia, 88.5, (not *well*, but well enough) right next to local powerhouse WBGO-FM in Newark on 88.3.

I got my filter from a friend, along with some articles in the hobby press from a couple of years ago. The source I have listed for 150 kHz ceramic filters operating at an IF of 10.7 MHz is:

Hosfelt Electronics, Inc.  
2700 Sunset Blvd.



## The GE SuperRadio FAQ

Steubenville, OH 43952  
(800) 524-6464  
Part # 27-109, \$1

I understand there's a minimum purchase, but I don't know what it is, since I didn't get mine there. I'm lucky if I grab the correct end of the soldering pencil, but I installed mine this past weekend. I installed a Radio Shack IC socket in place of the old filter (8-pin wire wrap, cut in half and with one pin removed, then cut off the excess wire), then plugged the new filter into the socket.

The filter is a little tough to get to; it's on the second PC board under the dial. It basically involves disassembling the entire radio, more or less. It's right next to a "square metal box-shaped thing" as my friend with the filters put it (yes, I'm electrically incompetent). Things to beware of:

1. Don't break the power switch. It's a bear to put back together correctly.
2. Make sure you remove the tuning dial from the outside before you open the radio. Despite the radio's best efforts to fool you into thinking that it doesn't come loose, it does.
3. Don't mess with the dial cord. If it comes loose, it's a pain to get back on, if you can figure out how it goes.
4. Of course, you shouldn't infer from this that any of this happened to me.... :-)

### SR II Front End Repair

Michael.B.Hayden@cc.gettysburg.edu (Michael B. Hayden) writes:

My SR II was zapped big time by a proximity lightning strike. The AM section was killed, but FM is OK.

I replaced the first transistor I came to in the front end with the first thing I came across in the junk box, but the SR II is now just a radio rather than a Superadio. It lacks decent sensitivity indicating the replacement transistor is not a good match for what was there.

Does anybody have the schematic for the SR II and could tell me the specs for the first couple of transistors in the front end section (just in case the first was not the only one to blow).

Many thanks,  
Mike Hayden  
hayden@gettysburg.edu

Mike,

I looked at my repair documentation for my SR II (model 7-2885F) and found, or inferred the following information:

#### *AM RF Q5*

silicon NPN bipolar transistor, plastic TO92 type case with an ECB pin configuration looking from the non-leaded side and the flat portion of the package under the ECB pin labelling as in ECB. The replacement transistor is listed not as a 2Nxxxx transistor type but as cat. no. EA15X2024, available from GE.

## The GE SuperRadio FAQ

Parts and service information are given in the Technical Information section of the FAQ.

This transistor feeds directly into the IC chip that does the rest of the signal processing, so if anything else is zapped, it might be the IC. It doesn't sound like this from your description though.

From a practical standpoint, this same transistor is used in the RF amp stage for the FM portion of the receiver, and is biased at  $\sim 1\text{ma}/3\text{v}$  for the AM section and  $\sim 0.6\text{ma}/3\text{v}$  for the FM section. These bias points, and use as the FM RF section indicates that the transistor needs to have a good FT, on the order of 200–300MHz at fairly low current, so something like the common 2N2222 transistor would likely give poor results.

The BVCEO break down voltage need not be much higher than 10 volts as there is a simple internal regulator for the collector voltage. The other unknown here is the capacitance spec of the part for collector–base capacitance. Being in the tuned RF stage, the part might spec a low cb capacitance. I cant tell this from the information that I have.

With this information, I would look for a small signal 2N.. number with BVCEO > 12v, and FT specified at low currents, around 1ma. This type of transistor should be readily found in the small signal RF transistor listings for several manufacturers. A transistor fitting this category which should work is the **2N918**. It is a metal TO18 4 lead transistor with one lead connected to the case. This case lead can be left floating, or preferably, cut off.

Hope this information helps you out. Mail me back your experience with this repair when you are done.

Fred

## Superadio III Repairs and Modifications

### Sensitivity Fix for some Superadio III's

From the March 1993 edition of *DX Ontario*:

"Dave Maunder of Brigus, Newfoundland, has had some interesting experiences with his Superadio. He writes, 'Although an R-5000 is my 'workhorse', I've often used a GE Superadio II for medium-wave listening. When the Superadio III became available last fall, I ordered one from Universal Radio. Anxious to do a side-by-side comparison with the old model II, using only the built-in ferrite rod antenna for the test, I was disappointed to find that my new model III exhibited a high background noise level and much poorer sensitivity.

So I disassembled the Superadio III to do a little 'tweaking', and was surprised to find that performance instantly improved when the 2 halves of the cabinet were separated by the length of the speaker connecting wires. The noise level dropped drastically, and the sensitivity came way up. I now could easily hear VOUS, a 50-watt U.S. Armed Forces station in Argentina, Nfld, on 1480 kHz, and St. Pierre–Miquelon on 1375 was easy. (This at 1:00 p.m. local time at my home about 40 miles from St. John's.)

But when I reassembled the radio, performance deteriorated to the original level. There seemed to be some kind of interaction between the speakers in one half of the case and the circuitry in the other half. I suspected that it was the strong magnetic field saturating the

## The GE SuperRadio FAQ

antenna rod's ferrite core, so I wrote GE asking if they had a fix.

They seem aware of the problem, and suggested simply reversing the two leads from the circuit board to the speaker unit. I was skeptical, but I tried it and their cure worked perfectly. Not only is the GE Superadio III a hot MW-band receiver, (British, German and many other European MW stations are audible nightly here on the edge of the North Atlantic, especially when using my 100-foot long wire) but, on strong signals, the audio in the "wide" position is exceptional...indeed, very close to FM quality in range and clarity.

Perhaps this tip might be useful to someone else who buys a GE Superadio III. Not all units may be affected, but if the noise floor seems high and sensitivity poor, try reversing the speaker leads!"

### SR III Power Switch Fix and Dial Light

Bill Bonner:

I read the FAQ about the Superadio and decided to buy one. I bought the Superadio III. Of course, I broke the POWER switch taking the radio apart. After I saw it was hopeless to fix the switch, I went down to Radio Shack and bought one of their small slide switches which fitted in the hole left by the broken switch and could be held in place with the same screw. The part number for the switch is 275-409.

The disadvantage of this is that you have to reach your finger into the hole left by the POWER switch to turn the radio on and off. The advantage is that the radio does not inadvertently get turned on in baggage, etc.

The Superadio III is held together by 7 screws in the back, six visible and 1 in the battery compartment. The tuning knob on the side and the volume and 2 tone control knobs on the front pull off. The 3 slide switches on the front do not need to be removed. The POWER push button also comes off; it is held on only by friction helped by a little piece of tape (no kidding). I did not learn this until after I broke the switch. The front and back separate with everything but the speaker going with the back.

I also bought a small 3" ball bearing rotator for lazy-susans at a hardware store and screwed it to the bottom of the radio so it rotates with a feather; great for nulling AM stations. I put stickem felt pads on the bottom of the rotator so it wouldn't mar furniture.

One surprise was that the rotator worked well for FM. By extending the FM rod horizontally and rotating the radio, I could pick up two stations on several of the frequencies I tried; Baltimore vs W.Va for example from here near Washington DC.

I also found the lack of calibration annoying on AM. I measured the distance in mm for the pointer every 50 kHz (helped by a digital radio I admit) and drew the lines on white paper with a number below every 100 kHz. (I actually used DrawPerfect which will transfer measurements without distortion, but a fine tipped felt tip will do fine.) I cut out the strip of paper and taped it to the black plastic "runway" behind the pointer. It works well during the day; the lines and numbers show up fine through the AM and FM windows.

I also found it annoying that the radio had no light to use in the dark. I am used to a Sony SW7600 which has a light which goes on for 5 sec when you press the button. I wired a tiny

## The GE SuperRadio FAQ

12v lamp from Radio Shack through one of their tiniest momentary push switches. The part number for the lamp is 272-1141 and 275-1571 for the push button switch. I placed the lamp with tape on top of the runway; there is just enough space for it to fit when you put the cabinet together. I drilled out one of the two guide holes for the POWER button used to use and placed the switch in it. I ran wires from the battery pack contacts (9v) for power. The light switch is next to the new slide power switch. The lamp though dim gives enough light on the white paper to easily see the dial placement at night. I may wire two 6v lamps in series to cover the dial scale better.

As you can see, this radio has brought out the tinkerer in me. I hope some of these ideas are useful to other Superadio fans. I can often pick up WOR 710 kHz, WFAN 660 kHz, and WCBS 880 kHz during the day at listenable levels.

Bill Bonner

### Comments on SR III Alignment

Paul Nix:

Has anyone else found the dial calibration on the GE Super Radio III unacceptable?

Electronic Equipment Bank ('EEB') has sent me two radios now, and the 2nd is worse than the first.

The folks at EEB have been very 'open' about the problem, with one of their technical guys telling me last Friday (Jan 6th, 1995) that I wasn't the only customer fussing ... and that they (EEB) had checked 10 new receivers ... and ALL of them had some degree of noticable dial inaccuracy.

I'm not talking about a little inaccuracy ... but rather the kind that might keep you from finding a station unless it was really strong.

Here in the Dallas area, WBAP is on 820 kHz, and on the 2nd GE SR III, that shows-up EXACTLY half-way between the "7" and the "8", which (except for the expectable scale compression) would indicate around 740 - 750 kHz.

I've run checks all across both the AM and the FM bands (using my Sony ICF 2010; which I've adjusted its synthesizer crystal so that all the WWV freqs 'track' VERY well), with the following results:

#### *AM*

Is off only slightly at the high-frequency end (found a good, strong, Spanish language station right on 1600 kHz), with the error steadily increasing as you go down in frequency. The only problem (in thinking about a 'fix') is that, right at the 'bottom end' (using a station on 540 kHz as the test), it look like the calibration suddenly is OK ... so that there's not a continual, uniform, trend that would seem to offer the chance of a slight 'tweak' of what used to be called the "bandsread adjustment" (I have the flimsy schematic, and so can see what adjustments are available).

#### *FM*

Here the error (on the receiver tested) is almost perfectly uniform across the band, leading me to believe that the calibration could be brought into pretty close alignment without too much effort.

## The GE SuperRadio FAQ

### Technical comments

GE (if you want to call it that ... it's made in China) uses varactor diodes to do all the tuning. That makes me VERY suspicious about the capacitance/voltage linearity.

There's what appears to be an oscillator (running in the 3 – 3.5 MHz range) that's used as a voltage inverter/multiplier (I haven't puzzled that out completely). That voltage runs through a resistive network ... with a potentiometer sitting 'between' two pots wired as rheostats. It is through that resistive network that the tuning voltage is developed, with the receiver tuning (I believe this to be true, although the 'service instructions' don't say this, and I haven't opened-up the receiver to check, since it may get sent back) being varied by that potentiometer. The 'service instructions' are VERY sketchy, providing NO data as to what the desired DC voltage range is supposed to be across the tuning diodes.

You can see (viewing the schematic) that by tweaking the pots, the tuning range could be radically changed, but what's needed is some information concerning what the design spec's called-for, in terms of 'tracking'.

Even though varactor diodes perform the function, the 'mechanics' of getting the oscillator to track the RF tuning in a superhetrodyne receiver still hold true. The 'service instructions' provide essentially NO information on how to set up the range of the tuning voltage.

Paul Nix, WB5AGF

Christopher King:

I really wanted to be a whiz and post the alignment instructions here, but to be honest with you, it's been several months since I've had my SRIII open, and I can't remember all of the details now. I will go back for a second look and provide more detail, but for the time being, suffice to say that this radio pretty much aligns like any other traditional superheterodyne design.

Essentially, you have two adjustments for the local oscillator, a coil for the low end of the dial, and a trimmer capacitor for the high end. These two adjustments interact with one another. You'd want to make sure that the pots you mentioned are somewhat correctly adjusted, to get the dial at least somewhat in the ballpark. After this, it's a matter of:

- tuning to a station around 600KHz (or set signal generator for 600KHz)
- adjusting the coil for best accuracy
- tuning to a station around 1400KHz (or set signal generator for 1400KHz)
- adjusting the capacitor for best accuracy

...and repeating these steps until no further improvement is obtained. What will happen is that you'll pull the marker in one direction, then the next, as well as lengthing or shortening the distance between 600 and 1400.

You also have to RF adjustments on the radio; again, an inductor for the low end and a capacitor for the high end.

Alignment of these is pretty much like the oscillator adjustments -- back and forth until no further improvement is obtained. Funny thing about the oscillator coil, though: not only does it position the dial pointer and varactor tuning, but it also raises and lowers the signal strength. So you have to be careful to not only tune this for dial accuracy, but also for maximum signal. Suggestion here would be to tune the coil for strongest AM reception, then get the dial position as close as possible using the two potentiometer adjustments you mentioned, before starting the back-and-forth procedure I previously mentioned.

## The GE SuperRadio FAQ

But before you start to mess with these, you should make sure that the 455KHz IF is correctly adjusted... if I remember right, there's about three or four transformers to tweak here. You'd want to set your signal generator for this frequency and pick a point just before the first IF stage to feed it into the radio (you can find this with the schematic). Hook your VTVM to the speaker leads and adjust for maximum audio signal (be sure that your 455KHz signal is modulated, usually with a 400Hz tone). You'll find that one of the IF transformers will adjust frequency (I think the one closest to the radio's mixer stage), and the rest only affect signal strength. Again, you'll be going back to re-adjust and re-re-adjust until no further improvement is obtained.

I was able to get my dial extremely accurate, but it was quite a bit of work, as you might have gathered from this note. Mine, for the most part, tracks perfectly. What I have NOT corrected, however, is the problem of the two "birdies" my SRIII has, one at 790KHz and a weaker one at 1240KHz. I have not yet been able to figure out where the false signals are coming from.

I've gotten as far as determining that one of the FM adjustments in the front end moves the birdies around, but I have not been able as of yet to remove them completely. I'm just sort of living with it for the time being, until I get in a masochistic enough mood to pull the cover off again...

If you have or get the SRIII service manual, the AM alignment instructions are there, and they work well if followed...

If someone out there knows how to get rid of the "birdies", please make my day and email... :)

Perhaps someone at GE ought to spring for some basic electronics/radio training for the Chinese political prisoners they have building these radios, so consumers like us wouldn't have to grapple with stuff like this...

C.K.

January 9, 1995

### **SR III Dial Alignment**

From Bob, N1KPR:

Dial miscalibration: Forget about it when you first get the radio.

Go directly inside, observing all the precautions as described elsewhere, and adjust the two pots, both wired as rheostats, for dial linearity. They are R1 and R3. Best to use a signal generator rather than station markers since this is a tedious, but rewarding, process. You must first know how far off the dial cursor is; not in KHz but in inches (mine was off one-half inch). Then go about the business of making the entire dial linear. I started at the low end and adjusted R3 (one leg of R3 goes to ground), then proceeded to R1 ((third leg goes nowhere). Back and forth several times checking linearity at .5, .7, 1.0, 1.2, & 1.5 MHz. Once this is done go have a coffee.

After relaxing for a minute take an eyedropper or better yet a syringe with a few drops of mineral spirits in it and carefully soak the adhesive which holds the dial string to the cursor. Don't put too much so that it drips down to the face plate. When the glue softens, set the signal generator to 1 MHz or a known station at center dial and carefully slide the cursor into its new and correct position. I did it by holding the string and carefully wiggling the cursor to free it of its sticky binding to the string. Don't force anything – apply a second or third application of mineral spirits as required.

## The GE SuperRadio FAQ

Once in position, check calibration at both ends of the spectrum. Then apply some contact cement or other rubber based adhesive. Use hush a little as there is really no stress on this free sliding part.

On one occasion, loosening the cursor was not necessary since the two pot adjustments did the trick. Always try it that way first.

Alignment of the tuned circuits and IF coils is always off. That is to say, they are not "peaked" as received from the factory. You should have the manual for this, only because it provides a schematic of somewhat utilitarian value. However, neither the manual nor the PC board define parts placement—you'll have to figure that out yourself. Peak everything for the best signal – noise ratio. That would be T4, T5, T6, T9, T10, L5, L6, C8, C30, C37 and you are done. One confusing point L6 is the ferrite loop antenna for AM and it has no adjustments. I can only assume that they mean by adjust it is that they want it broadside to the source of the signal if you are not using a direct hookup with the sig. gen. The manual, SM72887A cost me \$9.80 plus shipping and is 5 pages long. That is more than \$2.00 per page!!!

On the bright side, it is money worth spent if you want the absolute best from your SR III. The peace of mind makes it all worth while. In A/B testing I find the SR III to be better than any of the many portables which have been in my shop, better than almost all table top radios and better than about half of the communications and Ham receivers by a small margin. The other half it is equal to or slightly worse than the big rigs (AM B'cast, only).

Here in Southern CT I can receive an intelligible signal at just about every 10KHz position. . . and the little thing does sound pretty good for a small box.

Happy listening,  
Bob Betts, N1KPR

## Food For Thought: SR AM/FM Spectrum Analyzer?

David Woo:

Also, since the receiver is tuned via varactor diodes fed from a variable DC voltage from the tuning potentiometer, one person said they were going to work on a spectrum analyzer conversion. This would have been similar to what showed up in "73" magazine some years back, where they used a SONY (SW-20?) receiver modified to use varactor diodes for tuning, which was then swept with a ramp generator.

So, in the Superadio III case, you would take sweep from an oscilloscope, feed that to the tuning diodes, and feed the audio output into the Y-axis of the scope... has anyone attempted this? Might make an interesting AM-DX (FM-DX?) band monitor...

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[Next: GE Superadio FAQ--Appendix B: Resources and Acknowledgements](#)

[Previous: GE Superadio FAQ--Technical Information](#)

[N1KGH Radio Page](#)

[Dave Moisan's Home Page](#)

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## The GE SuperRadio FAQ

Last Updated on April 25th, 2003

[http://www.davidmoisan.org/radio/superadio/gesr\\_app\\_A.html](http://www.davidmoisan.org/radio/superadio/gesr_app_A.html)

[About davidmoisan.org](http://www.davidmoisan.org)



# GE Superradio FAQ--Appendix B: Resources and Acknowledgements

Here's a list of vendors that sell the Superradio and related accessories:

DISCLAIMER: Neither myself (David Moisan) nor Shore.net have any connection to GE/Thomson Electronics nor any of the suppliers listed herein.

Bennett Brothers, Inc., will export a Superadio for you; they have addresses in both New Jersey and Illinois.

Bennett Brothers, Inc.  
30 East Adams  
Chicago, IL 60603-5676  
Orders: (312) 621-1600  
(800) 621-2626  
Fax: (312) 621-1669  
Bennett Brothers, Inc.  
211 Island Road  
Mahwah, NJ 07430  
Orders: (201) 529-1900  
(800) 631-3838  
WWW: <http://www.bennettbros.com>

Grove Enterprises  
7540 Highway 64 West  
Brasstown, NC 28902  
Orders: (800) 438-8155  
(704) 837-9200  
Fax: (704) 837-2216  
Email: [order@grove-ent.com](mailto:order@grove-ent.com)  
WWW: <http://www.grove-ent.com/>

C. Crane Company  
558 - 10th Street  
Fortuna, California 95540  
Phone: (707) 725-9000  
(800) 522-8863  
WWW: <http://www.ccrane.com/>

Sells the Superadio and the Select-A-Tenna

SCS Radio Technology  
5742 Fairoak  
Springfield, MO, 65810  
Phone: 417-881-8401

Manufacturer of add-on SCA demodulator board for the Superadio.

Bruce F. Elving, PhD  
c/o FM Atlas Publishing  
P.O. Box 336  
Esko, MN 55733-0336

## The GE SuperRadio FAQ

Sells Superadios modified for SCA on both 67 and 92 kHz subcarriers.

Universal Radio  
6830 Americana Pkwy.  
Reynoldsburg, Ohio 43068  
Orders: (800) 431-3939  
Info: (614) 866-4267  
Fax: (614) 866-2339  
SWL Catalog: \$1.00  
WWW: <http://www.universal-radio.com/>

Sells the Superadio.

NRC Publications  
Ken Chatterton, Manager  
P.O. Box 164  
Mannsville, NY 13661-0164

The National Radio Club is a MW club that sells numerous plans and references for MW antennas, including the following:

NRC Antenna Reference Manual, Volume 1  
NRC Antenna Reference Manual, Volume 2  
Loop Antennas Design and Theory (ISBN 1-878994-06-9)

Send NRC Publications a 29 cent stamp and ask for the NRC Publication Catalog for current pricing.

## Acknowledgments and Thanks

The following contributors had much to do with this FAQ. I thank them for their help and advice.

Ralph Brandi, Richard Hunt, Andy Sennitt, Mark Gilstrap, Joe Jesson, Paul R. Mount, Bradlee Beer, Dave Markson, Tim Flannery, Steve Byan, Erik Miller, Patrick McDonald, David Woo, Christopher King, Bill Bonner, and T. David Zimmerman. Special thanks to Chase Cotton for sending me over 300K worth of archived SR postings from rec.radio shortwave!

This FAQ is dedicated to my late mom, Jeanette. She owned a Superadio (that I bought for her!) and liked it a lot.

Send me your comments at [dmoisan@davidmoisan.org](mailto:dmoisan@davidmoisan.org).

Good listening!

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[Previous: Appendix A: Modifications And Repairs](#)  
[N1KGH Radio Page](#)  
[Dave Moisan's Home Page](#)

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## The GE SuperRadio FAQ

[http://www.davidmoisan.org/radio/superadio/gesr\\_app\\_B.html](http://www.davidmoisan.org/radio/superadio/gesr_app_B.html)

[About davidmoisan.org](http://www.davidmoisan.org)

# A Superadio 1-1/2? The GE #3-5280C AM/FM/cassette portable

We know that the Superadio series are GE's best radios for AM/FM DXing. But, were there other good GE radios? Here's a comment I got from hts ([beadgal@ptialaska.net](mailto:beadgal@ptialaska.net)):

Hi David-

I am familiar with the GE SR II and III, having sold them in our store for several years (although we and many others have stopped doing so because of tech, QC, and political problems with it).

Yesterday at the local Salvation Army I saw what at first appeared to be a garden-variety early-mid 80s am-fm cassette recorder. I gave Aunt Sally \$5 and tossed it in back of jeep. Thing weighed a ton, I noticed.

Just finished cleaning it up. It is a General Electric model 3-5280C has external am and fm ant. screws. plugged it in (its still 5p.m. here-and the entire am dial is filled with stations! One incredible radio working off only the built-in (huge, long) loopstick! It is pulling in stuff that my R390A is barely hearing on 300' outside delta loop. FM is pretty spectacular too as most of our stations are 10 watt translators 15-90 miles away.

Is this a Superradio 1 ? And it has mono cassette with norm/chrome, loudness contour (no filter) woofer/tweeter ins/outs on back. Ever see/hear one of these? Made in Hong Kong.

Interesting. The Superadio design team must have been at least partially responsible for this design. It makes me wonder whether there are other good "consumer" radios for DXing.

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[Back to GE Superadio FAQ](#)  
[Dave Moisan's Radio Page](#)  
[\[Dave Moisan's Home Page\]](#)

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# The Superadio Plus: A Report

*T. David Zimmerman*

I have been a long time fan of long-distance performance radio receivers. As a matter of fact, I collect many such radios which were made by American and German companies in the 50's and the 60's. My favorites have been the Zenith "Long Distance" AM/FM models of the period. Since the demise of the tube receivers however, the emphasis in the market place has shifted away from RF performance in favor of such things as stereo, portability, cassette recorders and especially *CHEAPNESS*.

This has made enthusiasts like myself and others look for what the market had to offer using solid state components. The closest thing one could find in the 70's was a Panasonic. They were offering surprisingly good small radios at a reasonable price. I do enjoy those but even the Tech Series Panasonics emphasized other than straight AM/FM performance. Sony and Sharp also had some fairly impressive small radios. The best of these radios did utilize state of the art technology in their IF filters and such but still did not employ basic receiver techniques such as separate oscillator and mixer and an RF stage.

Finally, in 1979, GE of all companies, announced the first Superadio (model 7-2880). The idea of such a radio which boasted tuned RF stages on AM and FM, a ceramic FM IF filter, 4 stages of AM IF tuned circuits, 6" speaker and a 200 mm ferrite loopstick antenna was very intriguing. Knowing what GE had offered previously and how they could not hold a candle to Panasonic did make me skeptical. Nonetheless, when I tried one in a department store I was able to receive numerous FM stations with the antenna down. Maybe it really is good, I thought. Needless to say I acquired one. My wife surprised me with it on my birthday in 1981. We were living in Easton, Pennsylvania at the time where there are FM's at 95.1 and 96.1 MHz—a selectivity problem for anything in between and an intermodulation problem for 94.1 and 97.1 MHz. The radio pulled in WFLN-FM from Philadelphia @ 95.7 MHz with the antenna down and WPLJ, 95.5 MHz from New York with the antenna properly positioned. Yeah, OK, but can it do AM. Yes it can; its sensitivity handily blew away the Norelco portable I had been using as a benchmark. The DAYTIME dial had few gaps. The lowest dead frequency was 640 KHz.

I knew things were different now! I joined the small army of Superadio enthusiasts to spread the word that there was finally a decent new radio for AM/FM reception. It listed for \$79.95. No, it doesn't play tapes and it isn't stereo but no other portable you could find could even touch it for RF performance.

In 1982 GE introduced a new model, the Superadio+ (model 7-2882\_). This one boasted many of the same performance features (RF stages, IF filters, 6" speaker, 200 mm ferrite antenna). The difference was it was digital. Yes, A PLL synthesized Superadio! This one was pricey. \$139.95 retail. At first, I passed. Apparently the Superadio+ didn't sell as well as the analog model because after a mere year it was already available for the closeout price of 54.55. At this price my wife and I bought one at a Murphey Mart in West Virginia.

Compared to the analog model, the performance is close but with some sacrifices. There is a noticeable increase of noise on AM when DXing requires maximum sensitivity, most likely directly related to the synthesizer. FM capture is good but sharply loses lock below a certain signal strength below which the analog radio can still receive. There are eight presets on each band, scanning features and a lighted display, but no direct frequency access. There is a switch on the back to allow the radio to tune in 9 KHz spacing for European use. The station memory requires 3 AAA batteries.

The all-time best seller among Superadios was the Superadio II (model 7-2885). This was an upgraded version of the first analog model. Obvious changes included the addition of a piezo tweeter, more chrome and a flatter speaker grille. Also depending on which revision letter follows the model number on your particular

## The GE SuperRadio FAQ

radio, later earphone outputs accepted stereo headphone plugs. Less obvious were the change in IF amplifier coupling and some device changes inside. Also, later revisions used a different variable capacitor but still 6–gang. I have tested many of these radios and compared them against my own and another original Superadio.

Compared to the original, the AM IF gain on the SRII is increased, the FM sensitivity is improved and selectivity is somewhat better on both bands. FM capture on the original is somewhat more friendly however. The actual tracking of sensitivity across the AM band seems to depend as much on the individual unit as it does the model. For AM sensitivity measurements I always use daytime signals because night skywave DXing brings questions of masking, AVC variation, antenna polarization and selectivity into the equation. My measurements use the built in ferrite for AM and the whip for FM. No external antennas. As for the sound, the frequency response is quite wide but the bandwidth available in the audio amplifier is in excess of what should be expected from a 700 mW amplifier and much of the low frequency information is wasted on a speaker that is inefficient at the low frequency extreme of the amplifier. Using the bass and treble controls to contour the sound helps a little.

Finally when Thomson bought GE and after about 10 years of Superadio IIs, a new model was introduced, The Superadio III(model 7–2887\_). This model is more plastic–intensive than any other SR and is the most hollow, too. The first production of this model, roughly through March of 1993, had serious sensitivity problems. At that point I had only tested someone else's radio but was so disappointed that I wrote to GE to tell them they had made a mistake with the varactor tuning. The varactor tuning in the front end of the receiver represents the most significant change in the model compared to the SRII. Later I started to hear that the problems had been fixed and the Superadio III really was good. So, my wife bought me a Superadio III for Christmas in 1994. I made sure the date code was of the period that was not affected by the earlier problems. Sure enough, this SRIII was much better than the first one I tried. Compared to the SRII this one has a better amplifier to speaker match and therefore gets better sound out of the same 700 mW amplifier chip. The AM (MW) now extends to 1700 KHz in hopes that the congestion will someday be relieved in the rest of the band by reassigning some stations up there. SRIII also has a wide bandwidth setting for extended audio response. This does make local stations sound good but, of course, fidelity sacrifices selectivity and sensitivity suffers quite a lot as well. The narrowband setting has good selectivity, especially at the low frequency end of the band. Based on several units tested, there is quite a bit more internal noise on the AM with the SRIII than with either of the other two analog models. There are a few new birdies too. This means that the most demanding DXing needs will favor the older variable capacitor–tuned Superadios for sensitivity. This sacrifice is undoubtedly the result of the increased noise figure of the varactor–tuned front end as well as the inability of all the varactors to track well over the required two and a half octave tuning range of the AM band. The tracking error also contributes to the absolutely abysmal dial calibration of the SRIII.

The FM on my SRIII is very nice. It can be hard to tune at the upper end because the mechanism is sloshy but the selectivity is good and the intermod and image rejection characteristics are better than with the SRII.

How do Superadios stack up to other high performance models? Compared to older multiband models like the aforementioned Norelco and the ultra–state–of–the–art models like the Sony ICF–2010 (and even supposedly the Bose Wave radio), it is clear that the emphasis on AM/FM radio receptions makes the Superadios the best at what they do. Multiband radios optimize the IF bandwidth for shortwave reception and can sacrifice BC sideband information with selectivity merits that do nothing to improve AM BC reception. Boom boxes usually have trashy radios because the emphasis is on stereo, tapes, CD's etc. The one thing the Superadios still can't do quite as well is the good old fashioned brute force sensitivity of a well designed tube radio. The wide dynamic range and quiet, high impedance amplifier stages in good tube radios has still not been matched even in the world of shortwave reception. Solid state receivers require a higher degree of complexity to accommodate dynamic characteristics that are inherent to tubes. Of course, tubes are less reliable, power hungry and more expensive.

## The GE SuperRadio FAQ

I like all good radios. Superadios provide the best reception available in today's market and at a price that anyone can afford. I own all four of the Superadio models and I know others who have even more.

*T.David Zimmermann*

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