GLOBAL NR-82 F1

SPECIFICATIONS OVERLEAF

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WORLD WIDE RECEIVER

The **GLOBAL NR-82F1** opens up a whole wide world of radio reception. Frequency coverage includes everything from Aeronautical and Marine beacons, AM broadcast, the entire Short Wave band, and on up through TV, FM broadcast, Aircraft, Police, Ham and Marine VHF, to the UHF Ham and Public Service band.

On the Short Wave bands, a calibrator, BFO, Upper/Lower sideband switch, Wide/Narrow bandwidth switch, RF gain control, and an antenna adjust control help you to bring in those hard to find stations.

On the VHF and UHF bands, the squelch control assures a noise-free background. The 5″ (12.5 cm) speaker, together with the bass and treble controls, provide an excellent tonal quality for listening to AM or FM broadcasts. Three separate telescopic antennas (one each for SW, VHF, and UHF) plus a built-in ferrite bar antenna, and two jacks for external antennas (one for VHF/UHF, one for AM) provide maximum flexibility for portable or base operations.

Worldwide operation can be achieved from one of four sources of power supply. Either 110-120V or 220-240V, 50/60 Hz may be selected by a slide switch. A power cord with cigarette lighter plug is included to allow you to run 12-14 V DC from your car. For completely independent operation, the receiver will operate from 8 x "D" size dry cell batteries (not included). You can even switch off the light display to conserve power when running on batteries.

The digital frequency display permits extremely accurate tuning over a broad spectrum. On the Short Wave bands it has an accuracy of up to 1 KHz. On the VHF bands it is accurate up to 10 KHz. It does not operate on the UHF band.

The GLOBAL NR-82F1 is truly a receiver which you can operate anywhere in the world. The frequency coverage is much wider than most other receivers offer. Here is a receiver which will satisfy a variety of tastes and interests in the exciting world of radio reception.

SPECIFICATIONS

Semiconductors:	1-LSI, 4-ICs, 7-FETs, 34-Transistors, 1-Voltage regulator and 42-Diodes.							
Frequency Range:	LW	145 —	360	KHz	VHF1	30 —	50	MHz
	MW	525 —	1600	KHz	VHF2	68 —	86	MHz
	SW1	1.6 —	3.8	MHz	VHF3	88 —	108	MHz
	SW2	3.8 —	9	MHz	VHF4	108 —	136	MHz
	SW3	9 —	22	MHz	VHF5	144 —	176	Mz
	SW4	22 —	30	MHz	UHF	430 —	470	MHz
IF:	LW.MW.SW1 — 455 KHz VHF4— 10.7 MHz SW2-SW4 1st. IF: 2 MHz.2nd. IF: 455 KHz. VHF1.2.3.5.UHF. 1st. IF: 10.7 MHz.2nd. IF:455 KHz.							
Output Power:	5W (Max) 3W (10%)							
Power Supply:	AC 110-120/220-240 Volt. 50/60 Hz DC 12V (8 "D" cells). Ext. DC 12-14V.							
Speaker:	12.5cm. Permanent Dynamic Speaker (3.2 ohm).							
Antenna:	Ferrite Bar Antenna for LW, MW & SW1. 3 Telescopic Antenna for SW, VHF & UHF.							
Display:	LW-SW4 Read-Out up to 1 KHz. VHF1-VHF5 Read-Out up to 10 KHz.							

FEATURES

- Double conversion
- USB/LSB Switch
- Antenna adjust control
- RF Gain control
- Squelch control
- SW Calibrator
- Highly accurate digital read-out
- BFO
- Speaker/Headphone jack
- Tape record/playback switch
- Bass and Treble controls
- Light display ON/OFF switch
- V.UHF ANT. Connector (Coaxial).
- SW Ext. Ant. Terminal (Screw).
- Ext. Battery Jack.
- 452mm(W) x 288mm(H) x 130mm(D).
- 17.8 (W) x 11.3(4) x 5.1 (D) in.
- Weighs 5.4 kg

INTRODUCTION

This is an All-wave Transistor Radio Receiver capable of listening to the broadcasts and receiving communications from all over the world in full range of radio waves, thoroughly from the Long wavelength (LW) to the Ultrahigh wave frequency band (UHF). In this respect, this is the first of its kind in the world. Being equipped with the digital Frequency Counter, it will enable you to read the frequency of the waves you receiving exactly.

Please enjoy yourself with the splendid sound quality and power output of this radio set.

IMPORTANT SPECIFICATIONS

1. Full coverage of 12 bands:
   LW, MW, SW x 4, VHF x 5 and UHF.

2. Equipped with Frequency Counter Display:
   LW ~ SW (Direct reading up to 1 KHz).
   VHF1 ~ 5 (Direct reading up to 10 KHz).
   UHF (Not displayed)

3. Three way system available of AC, Batteries (UM-1 x 8) and External Supply (Car or Boat Batteries) for source power.

4. IC-power-amplifier for 5W power output.

5. Equipped with Bass, Treble Tone Control circuits capable of sound quality adjustment in full-fledged perfection.

6. Gear system adopted as tuning mechanism.

7. External antenna terminals additionally provided with a coaxial jack.

8. Additionally provided with three independent Telescopic Antennas matching to each band.

9. Adoption of low noise FET for AM and VHF tuners to improve anti-interference and sensitivity characteristics.

10. Double superheterodyne system highly effective against image interference:
    SW2, 3, 4, VHF1, 2, 5 and UHF.

11. RF Gain control for AM provided for the best adjustment of radiowave intensity.

12. Antenna adjusting control for AM capable of best matching with the antenna.

13. BFO pitch control for AM well facilitating the selection of SSB/CW reception.

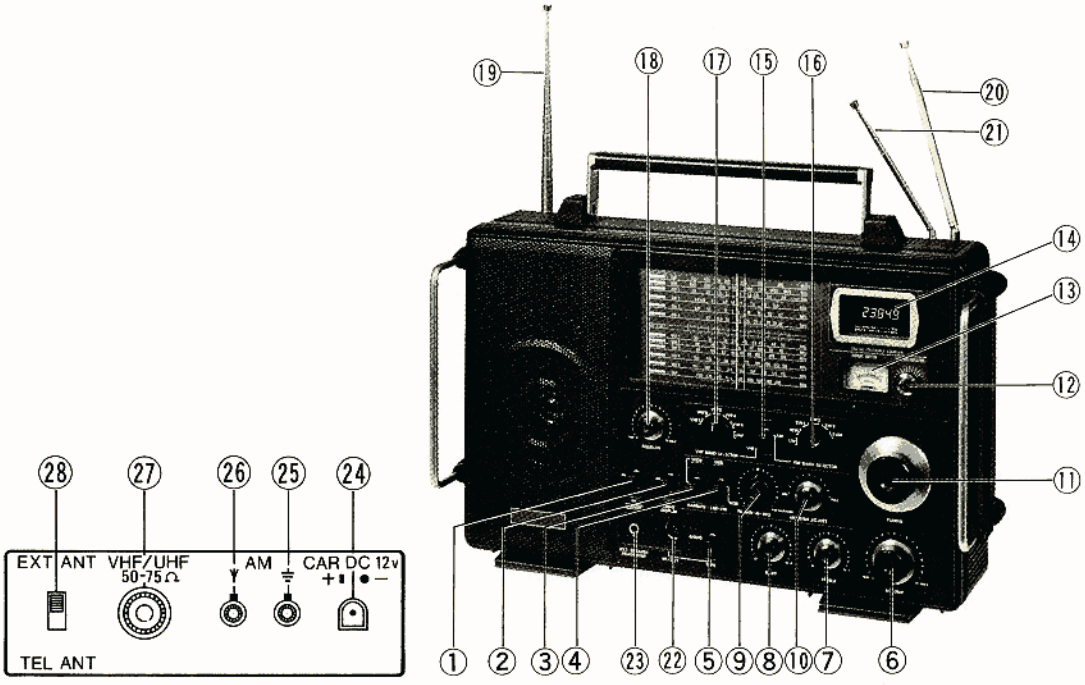
14. Wide-Narrow switch for AM capable of change-over in selectivity corresponding to an aimed radiowave.

15. Enhanced stability by employing crystal for the VHF second local oscillator.

16. VHF second IF circuit adopting a ladder type ceramic filter which brings sharp selectivity.

17. Squelch control for VHF and UHF (not workable for VHF4) for stable reception and for cutting interstation noise in selecting station.

18. Provided with a jack for tape recording and playback, and a Headphone jack.



LOCATION OF CONTROLS

1. Power switch
2. Light and Display ON-OFF switch
3. Wide — Narrow Selector
4. USB — NOR — LSB·CW selector
5. Radio — Tape selector
6. Volume control
7. Treble control
8. Bass control
9. RF Gain and BFO pitch control
10. Antenna adjust control
11. Tuning control
12. SW calibrator
13. Signal meter
14. Digital frequency counter display
15. AM — VHF selector
16. AM Band selector
17. VHF Band selector
18. Squelch control
19. Telescopic antenna for SW_2 ~ SW_4
20. Telescopic antenna for VHF
21. Telescopic antenna for UHF
22. Tape (IN — OUT) jack
23. EXT. Speaker and Headphone jack
24. Car or DC 12V Supply jack
25. Earth (Ground)
26. EXT. SW Antenna jack
27. EXT. VHF and UHF Antenna jack
28. EXT. ANT — TEL. ANT selector

A. PREPARATION FOR RECEPTION

1. ANTENNA CONNECTION

For LW, MW and SW1, you can enjoy them with a built-in ferrite bar antenna, and can also enjoy satisfactorily local reception of SW2, 3, 4 and VHF broadcasts even with the Telescopic antenna provided in this set.

For regular reception of shortwave broadcasts and amateur stations, however, the use of external antenna explained in another item is recommended.

In addition, since an antenna change-over switch is mounted in the rear cabinet of this set, extend the Telescopic antenna with the switch set to TEL position when used, and mount the external antenna with the switch set to EXT position when used.

2. BUILT-IN BATTERIES AND EXTERNAL POWER SUPPLY

1) This set provided a three way system available for built-in batteries and external DC power supply as well as AC power supply.

In normal use, the AC power supply operates first with priority, being switched over automatically to the built-in batteries when the AC power supply is stopped due to a power failure or else.

2) The built-in batteries are used with eight UM-1("DD"size dry cell) batteries connected in series. Insert the dry batteries in the rear battery case placing in correct polarization of + − .

3) The external power supply can be used within a voltage from 12 to 15V, on the basis of 13.2V such as car battery, etc.

3. HOW TO USE DIGITAL FREQUENCY COUNTER

1) When the Light and Display switch is turned ON, a light on the scale board is lit and the Frequency Counter displays figures in fresh green color.
This Frequency Counter reads directly the AM Band up to 1 KHz and the VHF Band up to 10 KHz, so that the receiving frequency can be correctly read, but the UHF Band is not displayed.

2) You can save battery power consumption by turning the Light and Display switch OFF during operation other than tuning in the case of operation with power supplies other than the AC power supply.

3) When selecting stations on SW2, 3, 4 Bands, make use of the SW calibrator to pinpoint the tuning.
First, tune in to the 'Standard Signal' which can be obtained in your locality, usually at 5.0, 8.0, 10.0 or 15.0 MHz., and then, adjust the SW calibrator to the position where the pointer of the Signal Meter swings to the extreme right. Now you will obtain the most accurate SW frequency read-out.

4) Beating noise may sometimes occur a little on some bands at the "ON" position of Display, and in such case, you can receive with clear sound by turning the Display switch OFF. Whether the noise comes from beating or not, it can be made sure by turning the Display switch from ON to OFF.

B. RECEPTION OF SIGNALS OF LW, MW AND SW1 ~ SW4

1. Set the knobs of the receiver as follows:
   - Power switch — ON
   - Display switch — ON
   - WIDE — NARROW — WIDE position
   - USB — NOR — LSB — NORMAL position
   - RF Gain control — Extreme right (Normal position)
   - Radio — Tape selector — Radio position
   - SW calibrator — Approx. center (Refer to A-3-3) when the SW2, 3, or 4 Band is required to be set correctly.
   - AM — VHF selector — AM position
   - AM Band selector — Desired Band

2. When using the Telescopic antenna in the case of receiving SW2~4 Band, extend the SW Telescopic antenna with the ANT selector in the rear cabinet turned to the TEL position (lower side).

3. Receive signals by turning the Tuning control knob. At this time, correct read-out of frequency can be made since the Frequency counter operates as well as the dial pointer. Set the Tuning knob and the Antenna adjust knob so that the signal meter indicator will swing to a maximum, and adjust the Volume control knob so that the sound volume will become easily audible, and at this time also adjust the Bass and Treble controls to obtain the desired sound quality.

4. When any voice distortion exists due to an excessively intense signal, turn down adequately the RF Gain control counterclockwise.
In addition, in the case of intense jamming, turn the WIDE — NARROW selector to NARROW, and the receiving bandwidth will become narrow to improve the articulation.

C. RECEPTION OF SSB SIGNAL OR CW SIGNAL

* You can receive the SSB signal if you search for amateur bands.
The SSB signal switches the pointer of the Signal Meter when the meter setting is left at the AM position, therefore the contents of the signal are difficult to be understood.
The CW signal is composed of intermittent carrier waves (in a form of Morse code) without voice on various other frequencies besides the amateur bands.

1. Make settings in the same manner as in the case of B, except for the following knobs:

USB – NOR – LSB·CW	• USB or LSB·CW position (For SSB, set the knob to USB at frequencies not less than 10 MHz, and to LSB position at frequencies less than 10 MHz. • LSB – CW position at CW reception.
BFO pitch control	• Approx. center.

2. For the SSB signal, receive it with the Tuning control knob turned slowly and tune so that the contents may be understood.
Next, adjust the sound so as to be easily audible by turning the BFO pitch control clockwise and counterclockwise.
When the contents of the signal cannot be understood by all means, reverse the positions of LSB and USB and try again.

3. For CW signal, adjust the sound so as to be easily audible by turning the BFO pitch control.

4. When an intensive signal is present close to the aimed signal and its sidebands or other noises come into the set, these noises are sometimes eliminated by turning down the RF Gain a little counterclockwise. That is to say, turn the Volume control a little clockwise in advance, and try to adjust the sound volume with the RF Gain control, then the reception of the SSB signal will become easily audible.

D. RECEPTION OF SIGNALS OF VHF1 ~ 5 AND UHF

1. Set the knobs of the receiver as follows:

• Power switch	ON
• Display switch	ON
• Radio – Tape selector	Radio position
• AM – VHF selector	VHF position
• VHF Band selector	Desired band
• Squelch cotrol	Extreme left (MIN position)

2. When using the Telescopic antenna, extend the VHF or UHF Telescopic antenna with the rear cabinet ANT selector turned to TEL position (lower side).

3. Receive signal by turning the Tuning control. Turn the Tuning knob slowly so that the swing of the Signal Meter will become maximum. At this time turn the Telescopic antenna slightly or adjust its length corresponding to the frequency, and you will find a point where the pointer of the Signal Meter swings further clockwise. This point will give the best receiving condition.

4. Since the squelch control is effective except for VHF4, turn the Squelch control clockwise until the noise disappears when bothered by it at detuning, thereby the inter-station noise in selecting stations is cut off and the stable reception will be obtained.

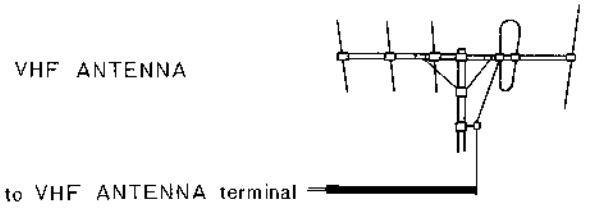
E. OTHER HANDLING EXPLANATIONS

1. When the Tape (IN – OUT) jack is connected to a tape deck at hand with the Din cord, radiowave recording can be made. At this time, the Radio – Tape switch is to be turned to the Radio position.
   The playback sound of the tape deck is audible by turning the switch to the Tape position.

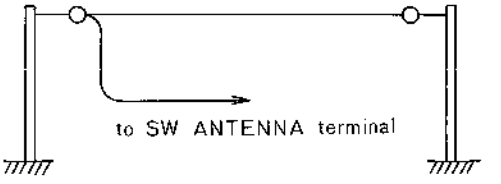
2. Since the Headphone jack is also provided, use it for midnight reception, etc.
   The built-in speaker is disconnected when the Headphone plug is inserted.
   You can also operate another speaker through this jack.

Connection of outdoor antenna

There are two antenna tarminals for VHF and SW on right side of the set.
VHF: Use 50 - 100 ohm balanced antenna.



SW: Connect the antenna wire of more than 5 meters long to SW antenna terminal and extend it outdoors as high as possible.

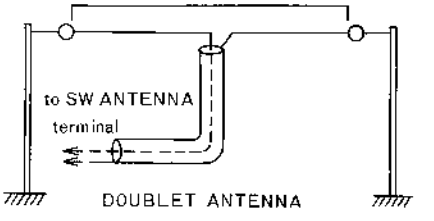


It is recommendable to use Doublet antnna for receiving specified broadcast.

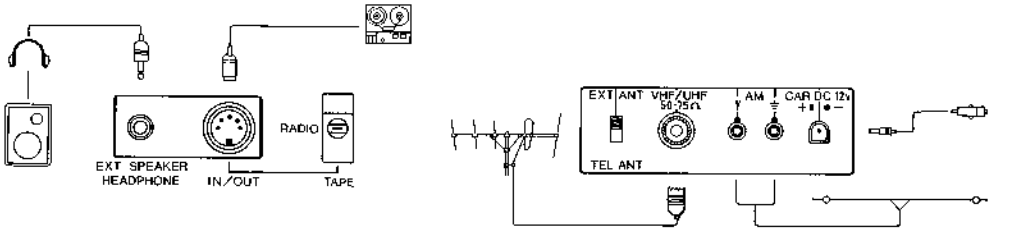
The length of"L" can be found with following formation.

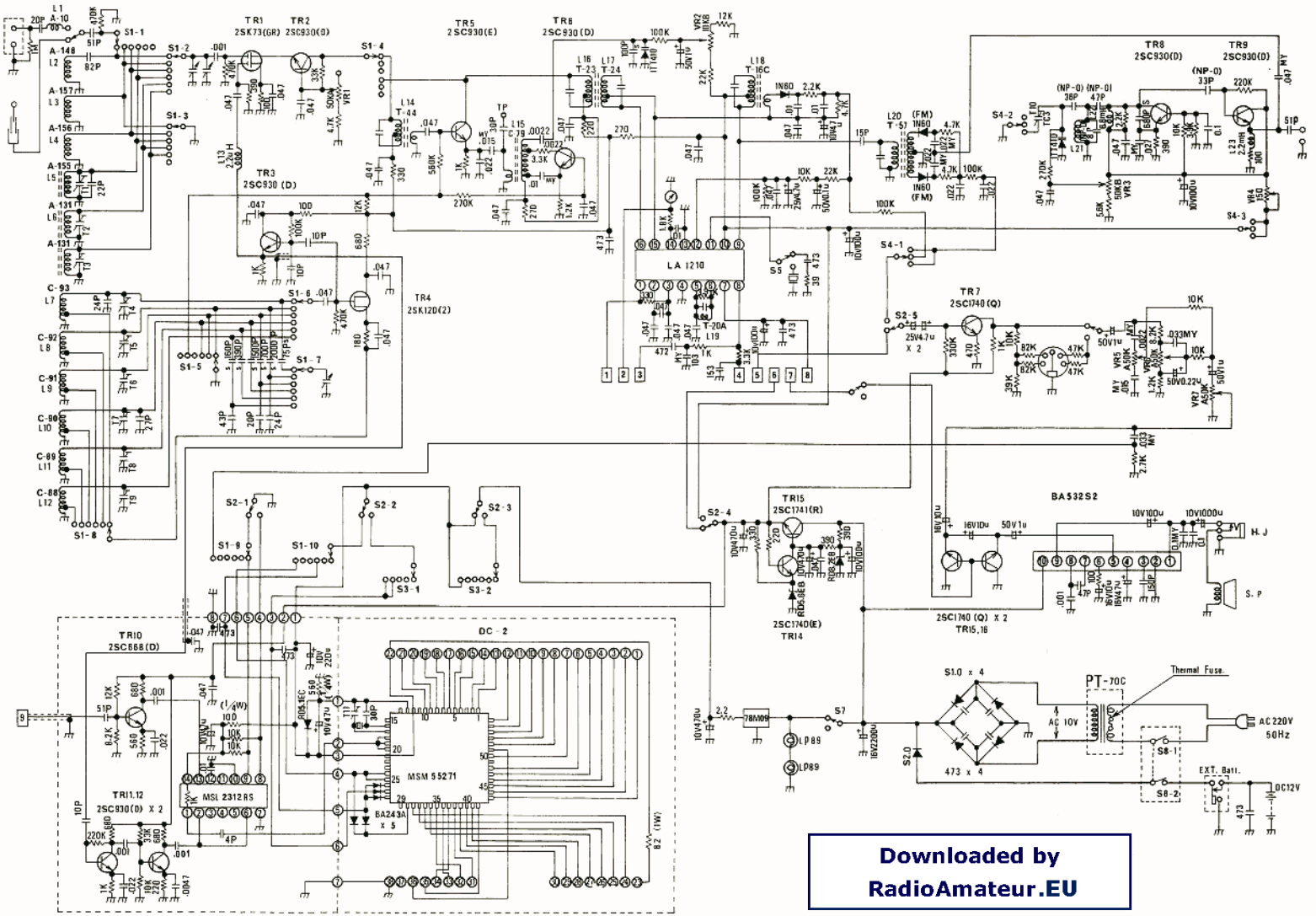
$$L(m) = \frac{143}{\text{Tuning frequency (Mhz)}}$$

Use feeder wire with 50 or 75 ohm coaxial antenna cable.



CONNECTIONS OF EXTERNAL TERMINALS




TR1 2SK73(GR)
TR2 2SC930(D)
TR3 2SC930 (D)
TR4 2SK12D(2)
TR5 2SC930(E)
TR6 2SC930 (D)
TR7 2SC1740 (Q)
TR8 2SC930(D)
TR9 2SC930(D)
TR10 2SC868(D)
TR11,12 2SC930(D) X 2
TR14 2SC1740(E)
TR15 2SC1741(R)
TR15,16 2SC1740 (Q) X 2
LA 1210
MSM 55271
MSL 2312RS
BA532S2
PT-70C
Thermal Fuse.
AC 220V 50Hz
AC 10V
EXT. Batt.
DC12V
H. J
S. P
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