JRC

HF RECEIVER
NRD-345

Shaped Up Receiver

JRC Japan Radio Co., Ltd.

HF RECEIVER

NRD-345

Let's Listen
Clear Sound

The NRD-345 HF Receiver is developed for BCL and SWL fans who want to enjoy the world's broadcast programs and shortwave communications with sound clarity under good, interference-free air conditions.

In shortwave propagation, however, there is a typical phenomenon called fading. Fading deteriorates the received signal quality, making the sound loud or low. Shortwaves travel in the atmosphere, reflecting between the ionosphere and the surface of the earth. The radio waves reflecting on different paths interfere with one another, resulting in loud or low sounds. When the AM carrier is affected by fading, its level is distorted, causing an overmodulation of more than 100% and distorting the received signals.

To solve the problem of overmodulation distortion, the NRD-345 incorporates an AM synchronous detection circuit which produces a constant level of regenerative carrier synchronized with the received carrier in terms of frequency and phase. The received signals are demodulated on the regenerative carrier, ensuring low signal distortion and clear sound listening.

The NRD-345 HF Receiver is of compact, lightweight, refined design, and offers advanced multifunctions to meet the exquisite requirements of enthusiastic BCL and SWL friends.

en to the World's Waves with nd and Sharp Tuning

FEATURES

AM Synchronous Detection
The NRD-345 incorporates an AM synchronous detection circuit, ensuring effective interference rejection and high sound quality for BCL and SWL.

Use of One-Chip DDS-IC
A one-chip direct digital synthesizer (DDS) IC is employed in the phase locked loop (PLL) circuit to miniaturize the PLL circuit and to enhance the C/N (carrier to sideband noise) ratio.

High Sensitivity and Wide Dynamic Range
The RF amplifier and the first mixer in the front-end stage incorporate 4 low-noise, junction-type FETs with excellent cross modulation characteristics respectively to ensure high sensitivity and wide dynamic range.

Noise Blanker (NB)
A noise blanker (NB) which works effectively on narrow noises like automobile ignition noise is used for interference rejection. A wide range of noises can be rejected by adjusting the NB level control.

Clock/Timer Function
The NRD-345 has a built-in real-time clock, which enables the timer mode to turn the power on/off at a specific time. The clock can display the UTC (Universal Time Coordinated) or a local time.

Personal Computer Control
Operational functions including receiving frequency setting can be remote-controlled from a personal computer connected with an RS-232C interface cable (option).

100-Channel Memory Capacity
Various status items including frequency, mode, AGC time constant, ATT on/off, VFO, IF filter bandwidth and NB can be stored each per channel in a 100-channel internal memory.

Tone Control
The high-tone level of the AF output can be controlled to adjust tone quality to a favorable level.

Scan Reception
The NRD-345 offers memory channel scan and frequency scan functions.

OPERATING PANEL AND DISPLAY

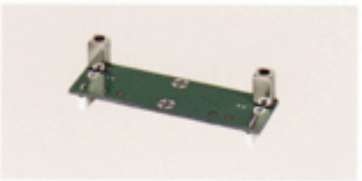
1. TONE control
2. AF GAIN control
3. Up switch
4. VFO switch
5. MODE switch
6. LOCK switch
7. Main tuning control
8. Down switch
9. MEMORY switch
10. Memory Write switch
11. FILTER switch
12. Noise Blanker switch
13. PASS switch
14. SCAN switch
15. Noise Blanker Level control
16. Headphone jack
17. TIMER mode switch
18. CLOCK mode switch
19. Power and timer on/off switch
20. SIGNAL meter
21. LCD Display
22. Ten-key pad
23. CLEAR switch
24. MHz switch
25. kHz switch
26. ENTER switch
27. METER switch
28. AGC switch
29. ATT switch

OPTIONS

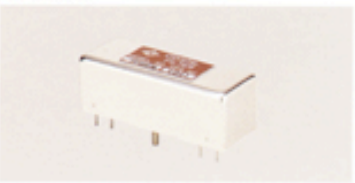
■ST-3 Headphones

Weight ..... Approx. 300g

■CFQ-8673 AUX Filter Board



■IF Filters



- CFL-231 (300Hz)
- CFL-232 (500Hz)
- CFL-233 (1kHz)
- CFL-218A (1.8kHz)
- CFL-251 (2.4kHz)

■RS-232C Cable (6ZCJD00350)

SPECIFICATIONS

Frequency range:	0.1 to 30MHz
Type of reception:	AM, SAM (synchronous detection), CW, SSB, FAX
Frequency stability:	±10ppm or less 5min. to 60min. after powering on and within ±5ppm for one hour thereafter
Adjustable frequency step:	5Hz, 100Hz, 1kHz, 10kHz
Frequency memory:	100 channels
Receiving system:	Double superheterodyne

Sensitivity:

	CW, SSB, FAX	AM
0.1 to 0.54MHz	0dBμ (1μV)	10dBμ (3.2μV)
0.54 to 1.8MHz	15dBμ (5.6μV)	25dBμ (17.8μV)
1.8 to 30MHz	−10dBμ (0.3μV)	6dBμ (2μV)

S/N: 10dB Bandwidth: 2.4kHz
Modulation (AM): 400Hz, 30%

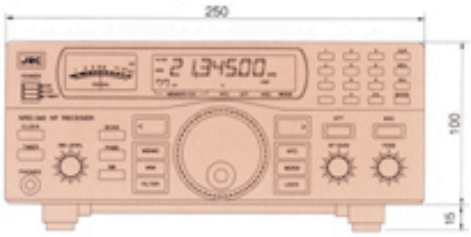
Selectivity:

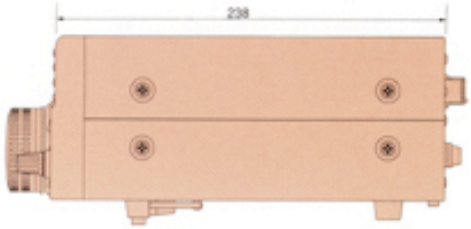
Bandwidth	6dB	60dB
WIDE	4kHz or more	10kHz or less
NARR	2kHz or more	6kHz or less
AUX*	500Hz or more	1.6kHz or less

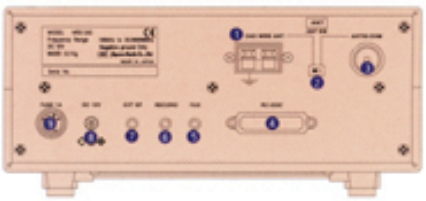
*Fitted with the CFL-232 filter option.

Dynamic range:	100dB (500Hz IF bandwidth)
Image rejection:	70dB or more
IF rejection:	70dB or more
Antenna impedance:	50Ω (Lo-Z terminal), 450Ω (Hi-Z terminal)
Antenna input attenuator:	20dB
AGC characteristics:	The AF output varies 10dB or less for the antenna input of 3μV to 100mV
AF output-Speaker:	1W or more with 8Ω load at 10% distortion
Clock accuracy:	Within ±2minutes per month
RS-232C interface:	25PIN D SUB connector 4800baud (character format: 1 start bit, 8 data bits, non-parity bit, 1 stop bit)
Power supply:	Performance guarantee voltage 12VDC ±10% (12V standard), approx. 0.8A Operating guarantee voltage 10.5 to 16VDC
Dimensions:	250(W)×100(H)×238(D)mm *including no projections
Weight:	Approx. 3.5kg
Temperature:	0 to +50°C (performance operating guarantee) −20 to +70°C (in storage)
Accessories:	Instruction manual, fuse (1A), AC adapter

DIMENSIONS







Rear Panel Description

1. Antenna terminal (low impedance)
2. Antenna switch
3. Antenna terminal (high impedance)
4. RS-232C connector
5. FAX (line output) jack
6. Recording jack
7. External speaker jack
8. Power connector
9. Power fuse

Specifications may be subject to change without notice. *For further information, contact:*

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