

JRC HF GENERAL COVERAGE COMMUNICATIONS RECEIVER

NEW



NRD-525

General Coverage of MF / HF

VHF / UHF Reception (Option)

Large Memory Capacity of 200 Channels

Computer Control (Option)



Japan Radio Co., Ltd.

A High-Class, General Coverage Receiver

The NRD-525 Communications Receiver is now offered by JRC to change your shack into a new universe. The traditional radio technology unique to JRC is combined with the most advanced digital technology to develop the sophisticated communications receiver with a PLL frequency synthesizer and a microprocessor.



FEATURES

Wide Frequency Range

The NRD-525 can receive a wide range of frequencies covering the MF/HF/VHF/UHF bands. Its general coverage is from 90kHz to 34MHz. With an optional plug-in VHF/UHF converter, the receiver can operate in the ranges of 34 – 60MHz, 114 – 174MHz and 423 – 456MHz, ensuring its use for various applications.

Large Memory Capacity

The receiver incorporates a CMOS-RAM backed by a lithium battery. This memory has a large capacity of 200 channels, each channel storing data on frequency, mode, bandwidth, AGC, and ATT.

Scan Reception

If a start channel and an end channel are assigned, all the channels between both are scanned. The scan speed and the automatic stop level can be adjusted.

Sweep Reception

If a start frequency and an end frequency are assigned, all the frequencies

between both are swept. The sweep speed

Teletype Reception

With an optional plug-in RTTY demodulator in conjunction with a printer for personal interface).

Electronic Tuning

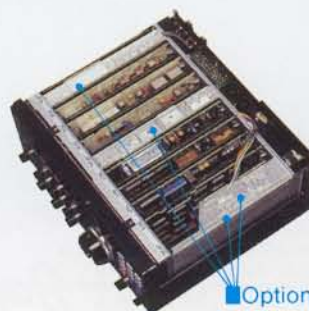
The receiver employs the same capacitor diodes which is common to professional receivers. This system of tuning improves antenna matching.

Direct Access Tuning

Any frequency can be selected from the ten-key pad speedily.

Wide Dynamic Range

The use of a gate-grounded circuit ensures a wide dynamic



With Expandability Looking to the Future.

The new receiver is also designed for expandability to meet today's needs for compatibility with teletype reception and personal computers. You will find satisfaction in its cost performance and easy-to-operate design.



Front panel

- 1 POWER/TIMER ON-OFF switch
- 2 AF GAIN control
- 3 TUNING control (This control also works as RIT control when characters "RIT" are on.)
- 4 UP switch
- 5 LOCK switch
- 6 DOWN switch
- 7 RF GAIN control
- 8 BFO control
- 9 TONE control
- 10 NOTCH control (It also works as P LEVEL (pause level) control during scan or sweep reception.)
- 11 SQUELCH control
- 12 PBS (pass band shift) (It also works as the SPEED control during scan or sweep reception.)
- 13 PHONES jack
- 14 RECORD jack
- 15 NB LEVEL (noise blanker level) control
- 16 RIT switch
- 17 DIMMER switch
- 18 MONI (monitor) switch
- 19 CLOCK/TIMER switch
- 20 SCAN switch
- 21 SWEEP switch
- 22 RUN switch
- 23 ATT (attenuator) switch
- 24 AGC control
- 25 Vacuum Fluorescent Display (VFD)
- 26 BANDWIDTH switch
- 27 MODE switch
- 28 Numerical keys
- 29 FREQ (frequency) switch
- 30 CHANNEL switch
- 31 CLR (clear) switch
- 32 MHz switch
- 33 ENT/kHz switch
- 34 MEMO (memory) switch

and the automatic stop level can be adjusted.

the receiver can be used for teletype reception and personal computers (compatible with Centronics

automatic tuning system developed for JRC. The system consists of a double tuning circuit with control by a microprocessor. The electronic tuning, selectivity and other characteristics.

ed not only by the main tuning control, but also

push-pull FET mixer and an electronic tuning range to improve multiple signal characteristics.

o Clock/Timer

The receiver incorporates two clocks which can be used for local time and UTC (GMT). They can also be used as timers to control any associated equipment such as a tape recorder.

o Interface with PC

A personal computer can be connected to this receiver through RS-232C interface (option). Under the PC control, the receiver can be operated as a programmable receiver by entering frequency, mode, bandwidth, time and other data into a program.

o Fully Solid-State, Modular Design

The receiver is manufactured by the newest automated production technology, employing chip components throughout, in order to assure uniform quality and cost reduction. Its completely modular design with plug-in PC boards ensures high reliability and serviceability.



SPECIFICATIONS

Receiving frequency range 0.09 - 34MHz
34 - 60MHz (*1)
114 - 174MHz (*1)
423 - 456MHz (*1)

Receiving mode RTTY, CW, SSB(USB/LSB)
AM, FM, FAX

Channel memory 200 channels

Receiving system Double superheterodyne
1st IF 70.45399 - 70.453MHz
2nd IF 455kHz

Sensitivity

MODE FREQUENCY	RTTY, FAX CW, SSB	AM	FM
0.09 - 1.6MHz	5.0 μ V	15 μ V	0.7 μ V
1.6 - 34MHz	0.5 μ V	2 μ V	
34 - 60MHz	1.0 μ V	3 μ V	1.5 μ V (*1)
114 - 174MHz	1.0 μ V	3 μ V	1.5 μ V (*1)
423 - 445MHz	1.0 μ V	3 μ V	1.5 μ V (*1)

S/N = 10dB, AF output = 100mW, bandwidth = INTER modulation = 400Hz, 30% (in AM)
NQL = 20dB (in FM)
antenna impedance = 50 Ω

Selectivity

Attenuation Bandwidth	6dB	60dB
AUX	12kHz or more	— (*2)
WIDE	4 kHz or more	10kHz or less
INTER	2 kHz or more	6 kHz or less
NARR	1 kHz or more	3 kHz or less (*3)
FM	12kHz or more	—

Image frequency rejection 70dB or more

Intermediate frequency rejection 70dB or more
 ± 3 PPM

Frequency stability 100dB or more (500Hz in IF band)

Dynamic range ± 1 kHz or more
-30dB or more

PBS variation range ± 1 kHz or more

Notch attenuation -30dB or more

BFO variation range 455kHz \pm 2kHz or more
 ± 5 kHz or more

RIT variation range 0.09 - 34MHz

Nominal antenna impedance
50 Ω (Lo-Z terminal)
600 Ω (Hi-Z terminal)
34 - 60MHz
50 Ω (VHF terminal)(*1)
114 - 174MHz
50 Ω (VHF terminal)(*1)
423 - 456MHz
50 Ω (UHF terminal)(*1)

AF output

Speaker: 0.5W or more (at 4 Ω load and 10% distortion)
Line/Recording: 1mW or more (at 600 Ω load and 10% distortion)

Antenna input attenuation AGC characteristic

Approx. 20dB for HF
Approx. 10dB for VHF/UHF (*1)
Output variation is 10dB or less for antenna input variation of 3 μ V to 100mV.

Power supply

100/120/220/240VAC $\pm 10\%$, max. 35VA
12 - 16VDC (13.8V, standard), max. 25W

Auxiliary circuits

Noise blanker, S-meter, side-tone input, mute input, transmission monitor, squelch, dimmer, tone control, clock, timer, IF notch filter, pass band shift

Dimensions

330(W) x 130(H) x 280(D)
(excluding projected parts)
Approx. 8.5 kg

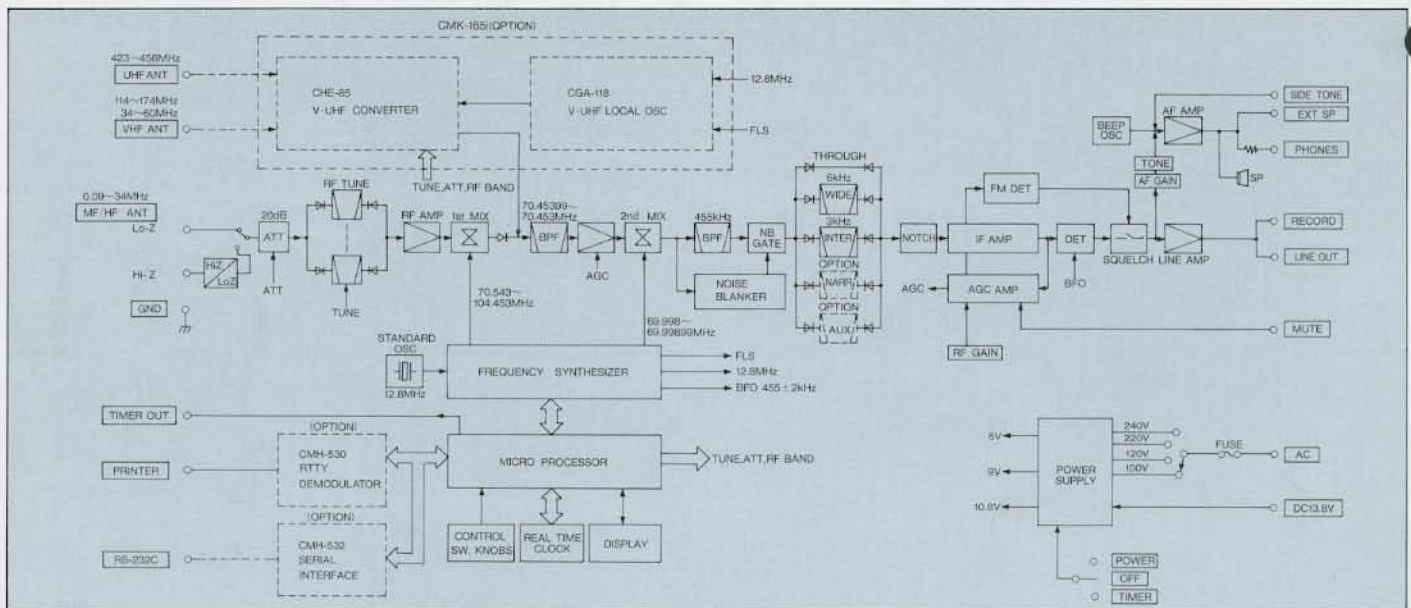
Weight

NOTES:

*1: With option mounted.

*2: With an optional IF filter (e.g. CFL-231) mounted, the band width for 6dB is 0.3kHz.

*3: With the CFL-233 optional IF filter.



Options

- V.UHF CONVERTER CMK-185
- RTTY DEMODULATOR CMH-530
- PRINTER CABLE 6ZCJ000139
- RS-232C INTERFACE CMH-532
- RS-232C CABLE 6ZCJD000140
- IF FILTER (0.3kHz) CFL-231
- IF FILTER (0.5kHz) CFL-232
- IF FILTER (1.0kHz) CFL-233
- IF FILTER (1.8kHz) CFL-218A
- SPEAKER NVA-88
- HEADPHONE ST-3



Rear Panel

- MF/HF ANT Lo-Z (low impedance) connector
- ANT switch
- MF/HF ANT Hi-Z (high impedance) terminal, GND (grounding) term
- LINE OUT (line output) jack
- EXT SP (external speaker) jack
- SIDE TONE jack
- MUTE jack
- DC OUT (DC output) jack
- TIMER OUT (timer output) terminal
- PRINTER connector
- Jack for RTTY indicator
- DC power connector
- Connector for RS-232C jack
- AC power connector
- AC fuse, voltage selector
- VHF ANT connector
- UHF ANT connector

* Specifications subject to change without notice.

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