

Dansk Radio RX 4000

Specifications

As our products are subject to current improvement, the equipment may vary in details from specifications and descriptions given in this manual.

FREQUENCY RANGE

15 kHz to 30 MHz in 10 Hz increments.
(15 kHz to 100 kHz with reduced performance)

ANTENNA IMPEDANCE

50 ohm

INPUT PROTECTION

30V EMF continuously
50V EMF for up to 15 minutes

OPERATING MODES

A1A, A2B, H2A, A3E, H3E, R3E, J3E, F1B, F3C, R3C

FREQUENCY STABILITY

0.1 ppm -15 to +45°C
0.3 ppm -25 to +55°C
aging < 1 ppm/year

FREQUENCY TUNE TIME

Typically 10 msec.

INPUT SELECTIVITY

10 Fixed filters

IF SELECTIVITY

R3E, J3E: Passband ripple < 2dB
Relative att. < 6 dB within 350 Hz to 2.7 kHz
Stopband att. > 60 dB at -400 Hz and 3.7 kHz

A1A, A2B, H2A, A3E, H3E, F1B:

Wide : -6 dB @ +- 2.7 kHz -60 dB +- 10.0 kHz
Inter : -6 dB @ +- 1.2 kHz -60 dB +- 2.05 kHz
Narrow : -6 dB @ +- 0.5 kHz -60 dB +- 1.75 kHz
Very narrow: -6 dB @ +- 0.1 kHz -60 dB +- 1.00 kHz

SIGNAL DELAY

Signal delay from antenna input to line output:

Wide - 0.45 msec.
Inter - 0.85 msec.
Narrow - 0.85 msec.
Vnarrow - 3.0 msec.

SENSITIVITY

2uV EMF for 20 dB SINAD in SSB
8uV EMF for 20 dB SINAD in AM

INTERMODULATION (Out-of-band)

100 dBuV EMF per signal more than 30 kHz offset from tune frequency produces less than an equivalent input signal of 40 dBuV EMF.

CROSS MODULATION

With a wanted J3E signal of 60 dBuV EMF, an unwanted signal of 110 dBuV EMF/30% - 400 Hz produces cross modulation output less than -30 dB relative to wanted signal level.

BLOCKING

With a wanted signal 60 dBuV EMF, an unwanted signal of 110 dBuV EMF causes less than 3 dB change in output level.

ADJACENT SIGNAL SELECTIVITY

With a wanted J3E signal at the specified sensitivity limit, an unwanted signal of 80 dBuV EMF offset -5kHz/+8 kHz from tune frequency causes less than 6 dB change SINAD.

IMAGE REJECTION

Greater than 90 dB.

IF REJECTION

Greater than 90 dB.

SPURIOUS RESPONSE REJECTION

Greater than 80 dB.

INTERNALLY GENERATED SPURIOUS RESPONSE

Internally generated spurious signals will not produce a S/N ratio greater than 10 dB (Inter).

SPURIOUS EMISSIONS

Less than 10uV/50 Ohm at antenna connector

RF ATTENUATOR

0 dB or 10 dB

AUTOMATIC GAIN CONTROL

Less than 4 dB change in output for 100 dB input signal variation from specified sensitivity limit.

Time constants A1A, R3E, J3E, F1B:

Attack time : 0.5 msec. For 70 dB signal increase
Debounce time : 5 msec.

Attack-to-hold time:

Wide : 25 msec.
Inter : 30 msec.
Narr : 50 msec.
Vnarr : 60 msec.

Hold time:

Short : 30 msec.
Long : 1 sec.

Decay time : Typical 20 dB per 100 msec.

Time constants A2B, H2A, A3E, H3E : 200 msec.

BFO RANGE

+ - 7 kHz synthesized in 10 Hz steps

BFO TUNE TIME

Less than 1 msec.

NOTCH TUNE

Typical 30 dB variable from 300 Hz to 2700 Hz

I F OUTPUT

-20dB/50 Ohm

LINE OUTPUT

Level : Adjustable up to +10 dBm
Impedance : 600 Ohm balanced, return loss better than 20 dB
Distortion : Less than 1% in J3E

LINE INTERMODULATION (In-band)

Less than -25 dB relative to either of two 90 dBuV EMF signals
(With RF Attenuator in OFF).

SIDE TONE INPUT

Max. 500 mV/600 Ohm

MONITOR OUTPUT

Speaker : 4W/4 Ohm
Phones : 10 mW/500 Ohm

MUTING

Attenuation : 60 dB typical
Attack time : 0.1 msec. typical
Decay time : 0.5 msec. typical

INPUT POWER

110-125, 220-250 v, 50/60Hz, 70 VA

OPERATING ENVIRONMENT

Temperature : Full performance range 0°C to 50°C
Operating range -25°C to 55°C
Humidity : To 95% relative humidity at 40°C
Vibration : Vibration in three planes for 30 min. each with
1 G acceleration, 5 to 50 Hz

WEIGHT

15 kg incl. cabinet

DIMENSIONS

See outline drawing table 1.2, page 1.12