

KENWOOD

150 kHz ~ 30 MHz

118 MHz ~ 174 MHz (With optional VC-10 converter)

COMMUNICATIONS RECEIVER

R-2000



The R-2000 is an innovative all-mode SSB, CW, AM, FM receiver that covers 150 kHz – 30 MHz, with an optional VC-10 VHF converter unit to provide coverage of the 118 – 174 MHz frequency range. New microprocessor controlled operating features and an "UP" conversion PLL circuit assure maximum flexibility and ease of operation. Key features include digital VFO's, ten memories that store frequency, band and mode information, memory scan, programmable band scan, digital display and 24 hour dual clock with timer, plus a host of other features to enhance the excitement of listening to stations around the world.

R-2000 FEATURES

COVERS 150 KHZ – 30 MHZ IN 30 BANDS.

- The R-2000 covers 150 kHz – 30 MHz in 30 bands. Use of an innovative UP-conversion digitally controlled PLL circuit provides maximum ease of operation and superior receive performance.
- Front panel UP/DOWN band switches allow easy selection within the full coverage of the receiver. The VFO's are continuously tunable across the band, and from band to band.

OPTIONAL 118 – 174 MHZ COVERAGE

Through use of innovative microprocessor technology, frequency, band, and mode data of stations in the 118 – 174 MHz range may be tuned, displayed (full frequency in kHz., ie., 146000.0), stored in memory, recalled, and scanned, using the R-2000 front panel controls and frequency display, allowing maximum convenience and ease of operation.

The optional VC-10 VHF converter unit may be easily installed on the rear panel of the R-2000. (The VC-10 may not be available, depending on the regulations of each specific country.)

ALL MODES: SSB, CW, AM, AND FM

Combined with a wide frequency coverage, the all mode R-2000 receives USB, LSB, CW, AM, and FM, providing expanded flexibility in receiving the various signal types. Mode selection is quickly accomplished through use of front panel mode keys having adjacent LED indicators.

DIGITAL VFO'S FEATURE EXCELLENT STABILITY

- Use of 50 Hz step digital VFO's results in superior frequency accuracy and stability.
- Tuning speed switches allow changing the size of the tuning step, for efficient operation, as follows: 50 Hz (10 kHz/360 degree knob rotation), 500 Hz (100 kHz/360 degree knob rotation), and 5 kHz (1 MHz/360 degree knob rotation).
- F.Lock switch protects against accidental frequency shift that might occur if the tuning knob were accidentally bumped.

TEN MEMORIES STORE FREQUENCY, BAND, AND MODE DATA

- Each of ten memory frequencies may be tuned by the VFO, operating as ten built-in digital VFO's. The original memory frequency may be recalled by simply pressing the appropriate memory channel key.
- All information on frequency, band, and mode is stored in memory, assuring ease of operation.
- The AUTO.M switch allows two types of memory storage: When the AUTO.M switch is OFF, data is memorized by pressing the M.IN switch. When the AUTO.M switch is ON, the current operating data is automatically being memorized.

LITHIUM BATTERY MEMORY BACK-UP

Memory and VFO information is backed-up by an internal lithium battery (estimated 5 year life), an important convenience when moving the receiver from one location to another.

MEMORY SCAN

Scans all memory channels, or may be user programmed to scan specific memory channels. Frequency, band, and mode are automatically selected in accordance with the memory channel being scanned. The scanning time is approximately 2 seconds for each channel, and a HOLD switch is provided to interrupt the scanning process.

PROGRAMMABLE BAND SCAN

Scans automatically within the programmed bandwidth. Memory channels 9 and 0 establish upper and lower scan limits. The HOLD switch interrupts the scanning process; however, the frequency may be adjusted, using the tuning knob, while in the scan HOLD mode.

HIGH PERFORMANCE RECEIVER CIRCUITS

The R-2000 is designed to exhibit communications receiver levels of performance in sensitivity, selectivity, stability, and in all key receiver performance areas, a result of the use of the latest design technology throughout. This assures reliable reception across its wide frequency range, and in every mode.

FLUORESCENT TUBE DIGITAL DISPLAY (100 HZ RESOLUTION)

- The built-in 7 digit fluorescent tube digital display indicates frequency (or time), as well as selected memory channel number. The receiving frequency is displayed to 100 Hz, on any band, and in any mode, without the need for re-calibration when changing band or mode.
- The unique white fluorescent tube provides fatigue-free viewing over long operating periods, or during field operation. A DIM switch is provided for dimming the display and meter, if desired.
- The display is switched to indicate frequency, clock-1, clock-2, and timer ON-OFF by the front panel function switch.

DUAL 24-HOUR QUARTZ CLOCKS, WITH TIMER

Dual 24-hour quartz clocks are built-in to allow programming two different time zones, such as local time and GMT. A built-in timer provides ON and OFF programming, and remote control output from the timer (does not control AC power) is provided on the rear panel remote terminal.

THREE BUILT-IN IF FILTERS WITH NARROW-WIDE SELECTOR SWITCH. (CW FILTER OPTIONAL)

In the AM mode, 6 kHz wide or 2.7 kHz narrow may be selected. In the SSB mode, 2.7 kHz bandwidth is automatically selected. In the CW mode, 2.7 kHz wide or, if optional YG-455C is installed, 500 Hz narrow may be selected. In the FM mode, 15 kHz bandwidth is automatically selected.

SQUELCH CIRCUIT, ALL MODE, BUILT-IN

The squelch circuit is effective in suppressing back-ground noise in any operating mode.

NOISE BLANKER BUILT-IN

The R-2000 features an effective communications-type noise blanker circuit, which eliminates pulse-type noise on SSB, CW, and AM. In FM, pulse noise is automatically suppressed by FM receiver circuitry.

LARGE FRONT MOUNTED SPEAKER

A large, four inch speaker is front panel mounted, providing excellent sound quality.

tone control

Audio frequency response may be adjusted by a front panel tone control.

RF STEP ATTENUATOR

The carefully designed R-2000 front-end includes a convenient, front panel, 0-10-20-30 dB RF step attenuator. The antenna input circuit is fused to minimize the possibility of damage due to lightning or other static electricity discharge.

AGC SWITCH

Slow or fast AGC is selected in SSB, CW, or AM modes.

"S" METER WITH SINPO "S" SCALE

The "S" meter reads 1 to 5 on the SINPO "S" scale as well as having a conventional "S" meter scale.

HIGH AND LOW IMPEDANCE ANTENNA TERMINALS

A high impedance (500 Ω) terminal, and a low impedance (50 Ω) co-axial connector are provided.

100 – 240 VAC OPERATION

AC power supply voltages of 100, 120, 220, and 240 VAC, 50/60 Hz, may be selected, using the rotary switch located on the rear panel.

OPTIONAL 13.8 VDC OPERATION

The R-2000 may be operated from a 13.8 VDC supply, using the optional DCK-1 DC power cable kit.

RECORD OUTPUT JACK ON FRONT PANEL

An output jack is located on the front panel for convenience in recording received signals.

REMOTE TERMINAL

Remote control output from the timer-operated relay, plus muting contacts, are available through the REMOTE terminal on the rear panel.

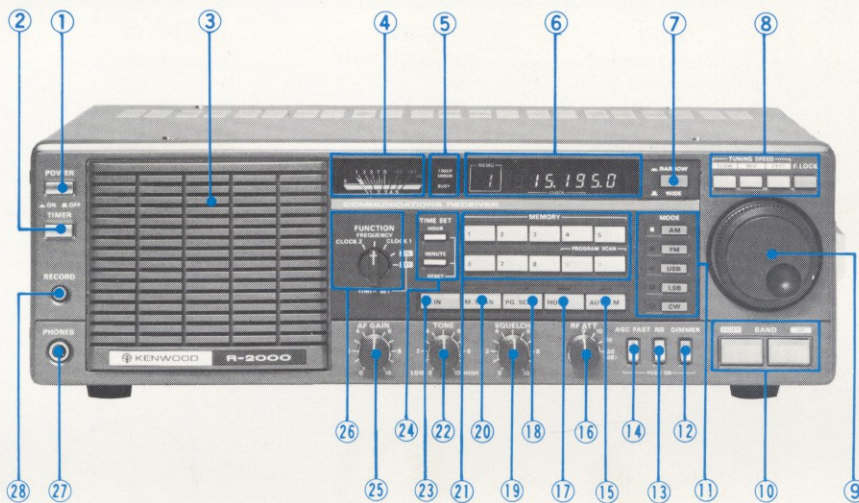
OTHER PROVISIONS FOR VERSATILITY AND EASE OF OPERATION

- LED indicators for BUSY, M.SCAN, PG.SCAN, HOLD, AUTO.M, TIMER ERROR.
- An audible "beep" from the speaker confirms operations such as memory entry and UP/DOWN band selection.
- Carrying handle, plus 2-level front support.
- Headphone jack, plus external speaker jack.

OPTIONAL ACCESSORIES

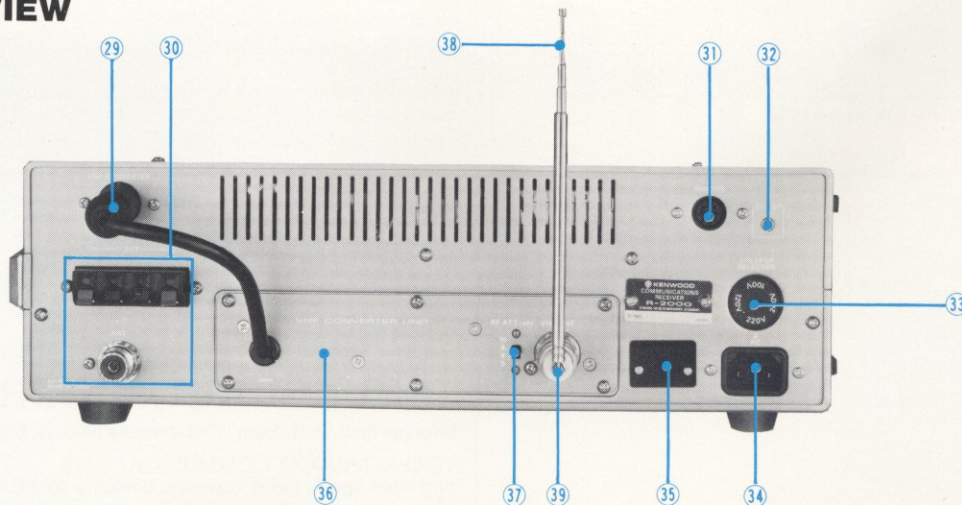
- VC-10 VHF converter (118 – 174 MHz)
- HS-4, HS-5, HS-6, HS-7 Headphones.
- YG-455C 500 Hz CW filter.
- DCK-1 DC power cable kit.
- HC-10 Digital World clock.
- AL-1/AL-2 Lightning and Static Protector

FRONT PANEL CONTROL



- ① **POWER:** Turns the R-2000 on or off.
- ② **TIMER:** Starts timer operation.
(Note: Power switch is disabled during timer operation.)
- ③ **SPEAKER**
- ④ **S-METER:** Indicates received signal strength.
- ⑤ **LED indicators**
TIMER ERROR: Indicates timer incorrectly programmed or power failure.
BUSY: Lights when the squelch is open.
- ⑥ **Display:** Shows frequency, time, and timer setting, based on setting of function switch; also shows memory channel in use.
- ⑦ **NARROW, WIDE:** Selects IF filter. Bandwidth is NARROW when switch is depressed. SSB and FM: same bandwidth either switch position. CW: same bandwidth either position unless optional CW narrow filter is installed.
- ⑧ **TUNING SPEED:** Sets frequency step used by main tuning dial.
SLOW = 50 Hz steps
MID = 500 Hz steps
FAST = 5 kHz steps
Also sets program scanning step.
- F.LOCK:** When the switch is depressed, the band switches and the VFO control are locked electronically to the preselected frequency.
- ⑨ **Main dial:** Sets receive frequency.
- ⑩ **BAND switches**
UP: Increases receive frequency in 1 MHz steps. Manual "UP" scan occurs when switch is depressed continuously.
DOWN: Decreases receive frequency in 1 MHz steps. Manual "DOWN" scan occurs when switch is depressed continuously.
- ⑪ **MODE:** Selects mode of operation. (AM, FM, USB, LSB, CW)
LED indicators display mode of operation.
- ⑫ **DIMMER**
- ⑬ **NB:** Noise blander. (Eliminates pulse noise.)
- ⑭ **AGC:** Automatic gain control, SLOW or FAST.
- ⑮ **AUTO.M:** When switch is depressed, auto memory function operates; pressing it again clears the auto memory function.
- ⑯ **RF ATT:** 4 position (0-10-20-30 dB) Step RF attenuator.
- ⑰ **HOLD:** Stops scanning at current memory channel or frequency; clears when pressed at second time.
- ⑱ **PG SCAN:** Activates scan within programmed limits at step set by F.STEP switch.
- ⑲ **SQUELCH:** Eliminates noise when no signal is being received.
- ⑲ **M.SCAN:** Initiates memory scan.
- ⑲ **MEMORY:** Switches (1 to 9 and 0) provided to access memory channels.
- ⑲ **TONE**
- ⑲ **M.IN:** Stores current frequency, band, and mode data in selected memory.
- ⑲ **TIME SET:** Sets Clock 1, Clock 2 and timer.
- ⑲ **AF GAIN**
- ⑲ **FUNCTION:** Selects display function.
- ⑲ **PHONES:** Allows use of headphones for private listening.
- ⑲ **RECORD:** Permits use of tape recorder to record signals being received.

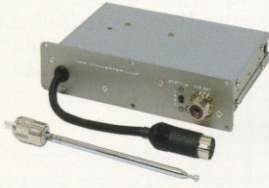
REAR PANEL VIEW



- ⑲ **VHF converter terminal.**
- ⑲ **HF (150 kHz ~ 30 MHz) Antenna terminals.** (500Ω, 50Ω wire, 50Ω coaxial).
- ⑲ **Remote terminal.**
- ⑲ **External speaker jack.**
- ⑲ **100/120/220/240V AC selector switch.**
- ⑲ **AC power receptacle.**
- ⑲ **Optional DCK-1 13.8 VDC cable port**
- ⑲ **Optional VC-10 VHF converter installed**
- ⑲ **RF attenuator switch (10 dB)**
- ⑲ **Telescoping Antenna (Supplied with VC-10)**
- ⑲ **VHF antenna connector (SO-239)**

OPTIONAL ACCESSORIES

VC-10
VHF converter unit



VHF converter (118 - 174 MHz) for the R-2000.
RF attenuator (10 dB) is built-in. (The VC-10 may not be available, depending on the regulations of each specific country.)

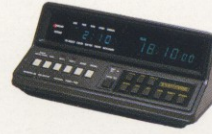
DCK-1
The DCK-1 is the DC power cable kit for DC operation of the R-2000.



YG-455C
500 Hz CW filter



HC-10
Digital World Clock



AL-1/AL-2
Lightening & Static Protector



HS-4
Headphones (8Ω)



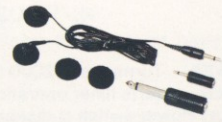
HS-5
Deluxe Headphones (8Ω)



HS-6
Light Weight Headphones (12.5Ω)



HS-7
Personal Micro Headphones (16Ω)



R-2000 SPECIFICATIONS

Frequency Range: 150 kHz ~ 30 MHz
(except West Germany and Australia)
150 kHz ~ 26 MHz (West Germany)
2 MHz ~ 30 MHz (Australia)

Mode: AM, FM, SSB (USB/LSB), CW
Sensitivity: (0 dBμ = 1 μV)

Mode	Frequency	150 kHz ~ 2 MHz	2 MHz ~ 30 MHz	(118 ~ 174 MHz)
SSB/CW (S + N/N = 10 dB)		Less than 2 μV	Less than 0.4 μV	(Less than 1 μV)
AM (S + N/N = 10 dB)		Less than 20 μV	Less than 4 μV	(Less than 10 μV)
FM (S + N/N = 20 dB)		-	Less than 1 μV	(Less than 2 μV)

Selectivity:

Mode	Selectivity	Selectivity	
AM-WIDE		6 kHz (-6 dB)	18 kHz (-50 dB)
AM-NARROW		2.7 kHz (-6 dB)	5 kHz (-50 dB)
SSB/CW		2.7 kHz (-6 dB)	5 kHz (-50 dB)
CW-NARROW		500 Hz (-6 dB)*	820 Hz (-60 dB)*
FM		15 kHz (-6 dB)	30 kHz (-50 dB)

*: with YG-455C optional CW crystal filter

Image Ratio: Better than 70 dB
IF Rejection: Better than 70 dB
Frequency Stability: Within ±300 Hz during the first hour after 1 minute of warm-up.
Within ±50 Hz during any 30 minutes period thereafter.

Frequency Accuracy: ±10 × 10⁻⁶ or better (at normal temperatures)
Squelch Sensitivity: (threshold, 0 dBμ = 1 μV)
AM/SSB/CW = Less than 3.12 μV (5 μV)
FM = Less than 0.5 μV (1 μV)

Audio Load Impedance: 4Ω to 16Ω
Audio Output Power: 1.5W (8Ω load, 10% distortion)
Antenna Impedance: 50Ω/500Ω
Power Consumption: (at no signal) = 14W AC (16W)
13.8VDC, 0.6A (with optional DCK-1) (0.8A)
(at Memory Back-up) = 3W AC
13.8VDC, 0.1A (with optional DCK-1)

Power Requirements: 100/120/220/240V AC, 50/60 Hz
13.8VDC (with optional DCK-1)
Dimensions: 375 (14.8) W × 115 (4.5) H × 210 (8.3) D mm (inch)
Weight: 5.5 kg (12.1 lbs.) approx.

(): When the VC-10 is installed on the rear panel of the R-2000.

Note: Circuit and ratings are subject to change without notice due to developments in technology.

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