

# COMMUNICATIONS RECEIVER

# VR-5000

0.1~2599.99999MHz LSB/USB/CW/AM-N/AM/WAM/FM-N/WFM  
All-Mode Wide-Band Receiver



Actual Size

**YAESU**  
Choice of the World's Top DJs

# The exciting world of communications listening, from Longwave to Microwave, comes to your home or station with Yaesu's new VR-5000 Communications Receiver.

Professional features, professional ergonomics, and professional DSP-based selectivity\* are yours to enjoy today-and only from Yaesu! \*Optional DSP-1 Unit required

## ULTRA-CONVENIENT AUTO-MODE, AUTO-STEP, HIGH-PERFORMANCE RECEIVER!

Despite its incredibly compact size, the VR-5000 provides coverage from 100 kHz to 2599.99998 MHz on all popular operating modes: LSB, USB, CW, AM-Narrow, AM, Wide AM, FM-Narrow, and Wide FM. Making operation simple and efficient is the "Auto" mode, whereby the tuning steps and operating mode are automatically programmed according to the frequency you have selected. You won't miss those quick, important transmissions with the VR-5000!

### ■Dual Receive

When monitoring on the "main" displayed frequency, you can simultaneously listen to a second station operating within 20 MHz of the main frequency in the AM and FM-Narrow modes. This can be especially helpful while monitoring public safety communications.



### ■Preset Shortwave Broadcast Station Memory Bank

Featuring a handy world map showing the station's location, the special Shortwave Broadcast Station Memory Bank includes several different frequencies from a number of popular shortwave stations, including Voice of America, BBC, Radio Japan, Voice of Russia,

etc. The operating frequencies may be changed by the owner, to keep up with changing station schedules!



## WORLD CLOCK WITH UTC/LOCAL SETTINGS AND PROGRAMMABLE TIMER

The World Clock will show you local time anywhere in the world, and you can label the cities in each time zone according to your individual requirements.

### ■Program Timer

Don't miss important broadcasts while you're busy monitoring other frequencies! With the Program Timer feature, the VR-5000 will automatically switch to a designated frequency at a programmed time, ensuring that you don't miss an important broadcast.



### ■Alarm Timer

The VR-5000 also includes a handy Alarm Clock feature, which will wake you up via a broadcast (Radio Alarm) or a beeping tone (Beep Alarm).

### ■Sleep Timer

Go to sleep listening to your favorite program! The VR-5000 can be set to shut off after 30/60/90/120 minutes. It's a great way to begin a great night's sleep!

## REAL-TIME SPECTRUM SCOPE FOR VISUAL ACTIVITY VIEWING

To aid in finding band activity, the VR-5000's Real-Time Band Scope, used while operating in the "VFO" mode, will sweep the band in search of activity, displaying the received signals graphically according to frequency and signal strength. The sweep width can be set to 1/2/5/10 MHz. The sweep rate can be set to 100/200/250/300 or 500 kHz, and you can adjust the channel steps for best resolution of the frequency range in use.



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## NEW! RADIO-CONTROL BAND SEARCH

For checking activity on popular radio-control frequencies, a special graphical display feature is available for the U.S., British, and Japanese RC frequency banks. This feature is ideal for monitoring activity during races, and you have a selection of "Surface," "Aircraft," and "27 MHz" frequency graphs.



## POWERFUL MEMORY SYSTEM PROVIDES 2000 CHANNELS OF OPERATING VERSATILITY!

The incredible 2000-channel memory capacity of the VR-5000 allows an astounding array of operating possibilities! The memories may be arranged in up to 100 Memory Groups, and you can attach an alpha-numeric label to both Memory Channels and Memory Groups to aid in channel identification. The memories store operating frequency, noise blanker status, and DSP information separately, so each channel is optimized for best reception. The VR-5000 provides a number of other special features.

### ■PS (PreSet) Memories

Five special PreSet memories provide one-touch access to favorite channels, such as local AM broadcast stations. Just press the large PS key on the front panel to step through the PreSet channels!



### ■Graphical Memory Display (PMR)

For monitoring activity patterns on up to 50 channels, use the Programmable Memory Readout display mode. Similar to the RC Graphical Display mode, the PMR Display mode will show active channels as a black square on the display's memory matrix, allowing you to gauge activity levels while investigating possible operating frequencies.

■Memory Over-write Protection Mode Prevents accidental erasure of channel information. ■Memory Offset Tuning Allows tuning away from a memorized frequency in a pseudo-VFO mode. ■Memory-Skip during Scanning Prevents annoying lock-up of scanning on Weather-alert and other broadcast stations. ■Memory Sort Mode Sort according to channel name, ascending/descending frequency, or operating mode.



## CATCH ALL THE ACTION WITH THE VR-5000'S EXTENSIVE SCANNING CAPABILITIES.

The VR-5000's versatile scanning system allows lightning-fast scanning of operating frequencies, so you won't miss any of the excitement on the bands! The scanner allows you to select from three scan-resume options, too: "Delay" Scan, which lets scanning resume after a programmed interval of waiting on an active channel; "Pause" Scan, which holds on an active channel until the incoming signal disappears; and "Hold" Scan, whereby scanning stops when activity is encountered. There is a wide array of scanning features available to the VR-5000 user.

### ■VFO Scan

Sweeps the entire frequency range of the receiver (0.1 ~ 2599.99998 MHz).

### ■Memory Scan

Choose from scanning of all memory channels, or channels within a particular memory group.

### ■PMS (Programmable Memory Scan)

Scan within user-defined band limits, as though you were on a VFO. As many as 100 band-limit memories may be utilized for the setting of scanning borders.

### ■Smart Search™

Automatically loads up to 100 channels where activity is found.

### ■Main-Sub Two-Channel Scanning

Allows watching of the Main and Sub VFO frequencies without listening to them simultaneously.

### ■Priority Operation

Allows operation on one channel while periodically watching a "Priority" channel for activity. Operation will shift to the Priority channel if it becomes active.

## DIGITAL SIGNAL PROCESSING FOR LEADING-EDGE SELECTIVITY

The optional DSP-1 Digital Signal Processing Unit includes a number of features which can significantly enhance reception through improved interference rejection.

### ■Digital Bandpass Filter (SSB/AM/FM Modes)

Provides razor-sharp selectivity for reducing adjacent-frequency interference and for shaping of the incoming stations audio frequency response. Both the low-cut and high-cut frequencies of the DSP Bandpass Filter are adjustable.

### ■Digital Noise Reduction Filter

The DSP will analyze the incoming passband and suppress noise which is not directly associated with the incoming signal, providing quieter reception.

### ■Digital Notch Filter

Automatically notches out annoying "beat" signals ("heterodynes") which can spoil reception, especially when listening to the Shortwave Broadcast bands.

### ■CW Narrow-Bandwidth Peaking Filter

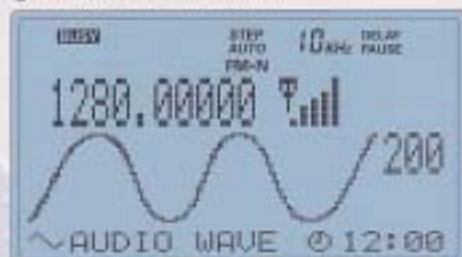
Provides ultra-narrow bandwidths of 25/100/200/400 Hz for single-signal reception.

### ■CW Tone Pitch Control

Allows you to adjust the center frequency of the CW filter for most comfortable reception.

## AND MUCH, MUCH MORE. . .

■"RF Tune" Front-end preselection bandpass filter (1.8 ~ 1000 MHz) for excellent rejection of out-of-band signals. ■20 dB Attenuator for comfortable reception of extremely strong signals. ■IF Noise Blanker for reduction of impulse noise. ■Optional DVS-4 Digital Voice Recorder provides two recording memories of 8 seconds each. ■Optional FVS-1A Voice Synthesizer provides audible announcement of the operating frequency for owners with vision impairments. ■10.7 MHz IF Output Jack for connecting external decoders eg FM Stereo or Data. ■Field Strength Meter for comparison of peak signal strength as compared to a reference level. ■Audio Tone Control. ■All-Mode Squelch Control for silent monitoring in "standby" mode. ■Password-controlled Panel and Dial "Lock" feature to avoid unauthorized frequency change. ■Front Panel Key "Beep On/Off" selection. ■Display Dimmer/Contrast Control. ■Clone Capability for copying memory information from one VR-5000 to another. ■Personal Computer Interface Port with serial data speed selection of 4800/9600/57600 bps. ■Two Antenna Ports: One for "Long Wire" type antenna, one "M" (SO-239) connector. ■Audio Wave Meter provides display of incoming signal's wave characteristics.



## Specifications

Frequency Range: 0.1 ~ 2599.99998 MHz	4.0~29.99998 MHz:SSB/CW 0.3 $\mu$ V (10 dB S/N)
Receiving Modes: CW/LSB/USB/AM/AM-N/ WAM/FM-N/WFM	AM 1.1 $\mu$ V (10 dB S/N)
Antenna Impedance: 50 $\Omega$ unbalanced, 450 $\Omega$ unbalanced	28.0 ~29.99998 MHz:FM-N 0.35 $\mu$ V (12 dB SINAD)
Channel Steps:	30.0 ~1999.99998 MHz:
Main Band	SSB/CW 0.3 $\mu$ V (10 dB S/N)
Mode Steps Available	AM 1.2 $\mu$ V (10 dB S/N)
LSB/USB/CW: 20 Hz/100 Hz/500 Hz/1 kHz/1.5 kHz/5 kHz	FM-N 0.45 $\mu$ V (12 dB SINAD)
AM-N/AM/AM-W:1/5/9/10/20/25/50/100/500 kHz	WFM 1.5 $\mu$ V (12 dB SINAD)
FM-N: 5/6.25/10/12.5/20/25/50/100/500 kHz	2000.0 ~2599.99998 MHz:
FM-W: 10/50/100/500 kHz	SSB/CW 0.5 $\mu$ V (10 dB S/N)
Sub Band	AM 1.8 $\mu$ V (10 dB S/N)
Mode Steps Available	FM-N 0.8 $\mu$ V (12 dB SINAD)
AM: 1/5/9/10/20/25/50/100/500 kHz	Conducted Spurious Emissions:
FM-N: 5/6.25/10/12.5/20/25/50/100/500 kHz	Better than -54 dBm.
Memory Channels:	Supply Voltage: DC 13.5V $\pm$ 15 %
Regular Memories: 2000 Channels	Current Consumption:
PS "PreSet" Memories: 5 Channels	0.7 A (@ audio output 1 W)
Operating Temp. : -10 $^{\circ}$ C ~ + 50 $^{\circ}$ C	Audio Output: At least 1 W @ 8 $\Omega$
Sensitivity:	Audio Output Impedance: 8 $\Omega$
0.2 ~0.49998 MHz:SSB/CW 4.8 $\mu$ V (10 dB S/N)	Case Size: 7.1"x 2.8"x 8.0" (W x H x D) w/o knob (180 x 70 x 203 mm )
AM 10.8 $\mu$ V (10 dB S/N)	Weight: Approx. 1.9 kg
0.5 ~1.79998 MHz:SSB/CW 1.0 $\mu$ V (10 dB S/N)	Specifications are subject to change without notice.
AM 4.0 $\mu$ V (10 dB S/N)	
1.8 ~3.99998 MHz:SSB/CW 0.6 $\mu$ V (10 dB S/N)	
AM 2.5 $\mu$ V (10 dB S/N)	

## Options



DSP Unit DSP-1



Voice Synthesizer Unit FVS-1A



Digital Voice Recorder DVS-4

### Supplied Accessories

- AC Adapter PA-28B/C\*
  - DC Power Cord
- \*B: 117 VAC / C: 230~240 VAC



About this brochure: We have made this brochure as comprehensive and factual as possible. We reserve the right, however, to make changes at any time in equipment, optional accessories, specifications, model numbers, and availability. Some accessories shown herein may not be available in some countries. Some information may have been updated since the time of printing; please check with your Authorized Yaesu Dealer for complete details.

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