

# VXA-700

RUGGED AIR BAND TRANSCEIVER

# SPIRIT



## Multi Band / Multi Mode Operation

- Air Band (108 MHz – 137 MHz) including NAV (108 MHz – 118 MHz)  
AM 5 W P.E.P. (1.5 W Carrier)
- VHF Amateur Band (144 MHz – 148 MHz)\*  
FM 5 W / AM 4 W  
\*Amateur Band Operation requires Amateur Radio License
- Wide-Band FM Broadcast Receiver 88 MHz – 108 MHz
- NOAA Weather Channel Receive with NOAA Severe Weather Alert (U.S.A. Only)

## True Heavy Duty Construction

- Rugged Magnesium Die-Cast Casing
- Submersible (3 ft. 30 minutes)

## Ultimate Air-Band Features

- Long-Life Lithium-Ion Battery included
- RX Battery Saver Mode
- 192 Memories with Pre-programmed BOOK memories
- Multi-Color Strobe LED for Status Indication and Emergency Light in Dark
- VOR Navigation Display
- Back-lit Keypad and Display with Dimmer
- One-Touch Emergency Frequency Access (121.5 MHz)



Actual Size

**Air Band**  
(108 MHz – 137 MHz)  
including NAV (108 MHz – 118 MHz)  
AM 5 W P.E.P. (1.5 W Carrier)



**VHF Amateur Band**  
(144 MHz – 148 MHz)\*  
FM 5 W / AM 4 W  
\*Amateur Band Operation  
requires Amateur Radio License



**FM Broadcast**  
Wide-Band Receiver  
88 MHz – 108 MHz



**NOAA**  
Weather Channel Receive  
with NOAA Severe  
Weather Alert (U.S.A. Only)

 **Vertex Standard**



# Vertex Standard Presents the Ultimate Air-Band Transceiver

**SPIRIT**  
AIR BAND TRANSCEIVER  
VXA-700

## Air Band Operation, VOR Navigation, and Amateur Radio Communications, All In One!

The VXA-700 is the world's first Air Band transceiver featuring both VOR Navigation and Amateur Radio transceiver operation, all in one. Many pilots are also Amateur Radio operators, as well, and the VXA-700 provides 5 Watts of AM P.E.P. power on the Aviation band, along with 5 Watts of FM power on the 2-meter Ham band, to keep you in touch wherever you operate.

## FM Broadcast Receive (88-108 MHz)

The VXA-700, besides being a valuable communications tool, also includes high-quality reception of the FM Broadcast Band at 88-108 MHz.

## 192 Memory Channels (Incl. Pre-programmed "Book" Memories)

The extensive Memory system of the VXA-700 includes 102 "Main" memories, plus ninety pre-programmed "Book" memories, for quick and easy recall of often-used frequencies. The memories may be labeled with a title, for quick recognition.

## Submersible (JIS-7)

The VXA-700's case, speaker enclosure, and controls are carefully sealed against water ingress, allowing the transceiver to be specified for protection against water ingress per JIS-7 specifications (immersion to 3 feet for 30 minutes). So you need not fear using your VXA-700 during severe weather.

## Rugged Magnesium Die-Cast Construction

The unmatched ruggedness of the VXA-700 is coupled with ultra-light weight, thanks to the die-cast magnesium case and chassis construction. Rubber bumpers on the bottom corners of the case protect it against damage from every-day bumps and scrapes.



## Supplied Rechargeable Lithium-Ion Battery

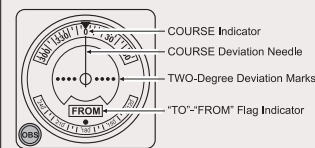
The VXA-700 is supplied with a super-long-life 7.4 V, 1300 mAh Lithium-Ion Battery Pack (FNB-80LI), providing many hours of operation and reliable charging without the "memory" effects that can plague other battery types. With the optional CD-15A Charging Stand and NC-72B/C AC Adapter, the FNB-80LI may be charged in as little as 2.5 hours, so you'll quickly be ready for more operating action! And the optional FBA-23 Alkaline Battery Case will accept two "AA" batteries (not supplied) for low-power emergency operation. The VXA-700's EXT DC jack will also accept 12 Volts from the NC-72B/C directly (RX only), or from an external power supply.

## Receive Battery Saver

This feature helps maximize battery life by de-energizing the receiver section during periods of no activity, waking the receiver up at user-selected intervals to sample for channel activity. If no activity

## VOR NAVIGATION: AIR BAND

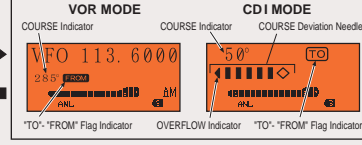
### GENERAL VOR EQUIPMENT



### COM BAND (118.0000 - 136.9750 MHz)



### NAV BAND (108.0000 - 117.9750 MHz)



is detected, the Spirit goes back into its "sleep" mode. Current consumption is significantly reduced, thereby maximizing battery life. This feature is only found on Vertex Standard Airband Transceivers.

## Multi-Color Strobe LED Status Indicator

Among the more innovative features introduced in the VXA-700 is the full-color Strobe LED, which provides indication of a number of transceiver status items using different colors. Different colors may be selected for each of the above conditions, and a total of 256 color shades are available, for customizing the colors just the way you like them.



## Dot Matrix Display

No Airband hand-held transceiver has a display that even compares to the VXA-700's 132 x 64 dot matrix display. Providing clear, easy-to-read indication of frequency and Navigation data alike, the VXA-700's display includes an unparalleled array of graphical and pictorial tools that make operation a breeze.

## NOAA WEATHER CHANNELS (U.S.A. Only)

The Spirit can receive all 10 NOAA weather broadcast frequencies. The Automatic Active Weather Channel Locator (a Vertex Standard exclusive) automatically scans for active NOAA weather stations in your area when WX band is selected.

## NOAA "Severe Weather" Alert (U.S.A. Only)

The VXA-700 includes a special feature that sounds an alarm when the special "Severe Weather" alert tone is received from a Weather Broadcast station. This warns you of potentially life-threatening flying conditions.

## Backlit Keypad and Display with Dimmer

The front panel's keypad and LCD are illuminated in Vertex Standard's renowned Omni-Glow™ amber hue, for excellent visibility and minimal impact on your night vision. The Omni-Glow™ display/key illumination may be configured in a number of battery-saving ways. Both Brightness and Contrast are adjustable. You can set the illumination to appear



continuously, or only for a few seconds after a key is pressed. You can even turn the "Busy" Strobe off, for additional battery conservation.

## One Touch Emergency Frequency Access

For lightning-fast access to the 121.5 MHz Emergency Frequency, a dedicated key on the front panel assures you of no delays in summoning help in an emergency.

## CTCSS and DCS Operation (144 MHz Amateur Band)

For access to Amateur Radio repeaters using tone control systems, the VXA-700 is equipped with both CTCSS and DCS Encoder/Decoder circuits, the products of our decades of design and manufacturing know-how in the Amateur Radio industry. An Amateur Radio license is required for operation on the 144 MHz band.

## PC PROGRAMMABLE

The channel configurations can be easily re-programmed in minutes using the optional PC Programming cable (CT-29+CT-97), software (CE56) and your PC. As your operating needs change, you can quickly re-program your Spirit with the important frequency data you need.

## SPECIFICATIONS

<b>General</b>	
Frequency Range:	TX 118.000 - 136.975 MHz (COM Band), 144.000 - 148.000MHz (Amateur Band) RX 88.000 - 108.000MHz (FM BC Band), 108.000 - 117.975 MHz (NAV Band), 118.000 - 136.975 MHz (COM Band), 144.000 - 148.000MHz (Amateur Band), Weather Channel (WX-01 - WX-10)
Channel Spacing:	5/10/12.5/15/20/25/50/100 kHz
Emission Type:	TX: AM & FM, RX: AM & FM
Supply Voltage:	4.5 - 15.0 VDC
Current Consumption (approx.):	250 µA (Power off), 35 mA (Battery saver on, save ratio 1:5), 60 mA (Squelch on), 180 mA (Receive), 1.7 A/950 mA/650 mA/400 mA (Transmit FM: 5W/2.5W/1W/0.3W @ 7.4V) 800 mA (Transmit AM: 1.5W Carrier @ 7.4V) 400 mA (Transmit AM: 0.3W Carrier @ 4.5V)
Temperature Range:	+14° F to +140° F (-10° C to +60° C)
Case Size (W x H x D):	2.36" x 3.78" x 1.12" (60 x 96 x 28.5 mm) w/FNB-80LI
Weight (approx.):	9.9 oz. (280 grams) with FNB-80LI, antenna
<b>Receiver</b>	
Circuit Type:	Double-conversion Superheterodyne
IFs:	35.4 MHz & 450 kHz (AM / NFM), 45.65 MHz & 10.7MHz (VFM)
Sensitivity:	88-108 MHz: < 2 µV (for 12 dB SINAD with 1 kHz tone @ 22.5 kHz deviation) 108 MHz-136.975 MHz: < 1 µV (for 6 dB S/N with 1 kHz tone @ 30 % modulation) 144-148 MHz: < 0.32 µV (for 12 dB S/N with 1 kHz tone @ 3.5 kHz deviation) WX-01 - WX-10: < 0.4 µV (for 12 dB S/N with 1 kHz tone @ 3.5 kHz deviation)
Selectivity:	AM/NFM: < 8 kHz—6 dB, WFM: < 200 kHz—6 dB
Adjacent Ch. Selectivity:	AM/NFM: > 25 kHz—60 dB, WFM: > 300 kHz—80 dB
AF Output:	0.4W @ 8 Ohms, 10 % THD
<b>Transmitter</b>	
Power Output:	118 MHz-136.975 MHz: AM: 5.0 W (PEP), 1.5 W (Carrier Power) @ 7.4 V 144-148 MHz: FM: 5.0 W @ 7.4 V, AM: 4.0 W (PEP), 1.3 W (Carrier Power) @ 7.4 V
Frequency Stability:	Better than -10 ppm [+14° F to +140° F (-10° C to +60° C)]
Modulation System:	AM: Low Level Modulation, FM: variable reactance
Maximum deviation:	±5 kHz
Spurious Emission:	> 60 dB below carrier
Int. Microphone Type:	Condenser
Ext. Mic. Impedance:	150 Ohms

Specifications are subject to change without notice or obligation.

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. Precise frequency range may be different in some countries. 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 Vertex Standard Dealer for complete details.



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