

# KA165 NAV/COM Radio



Version 1.5

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**EULA**

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**Getting Started**

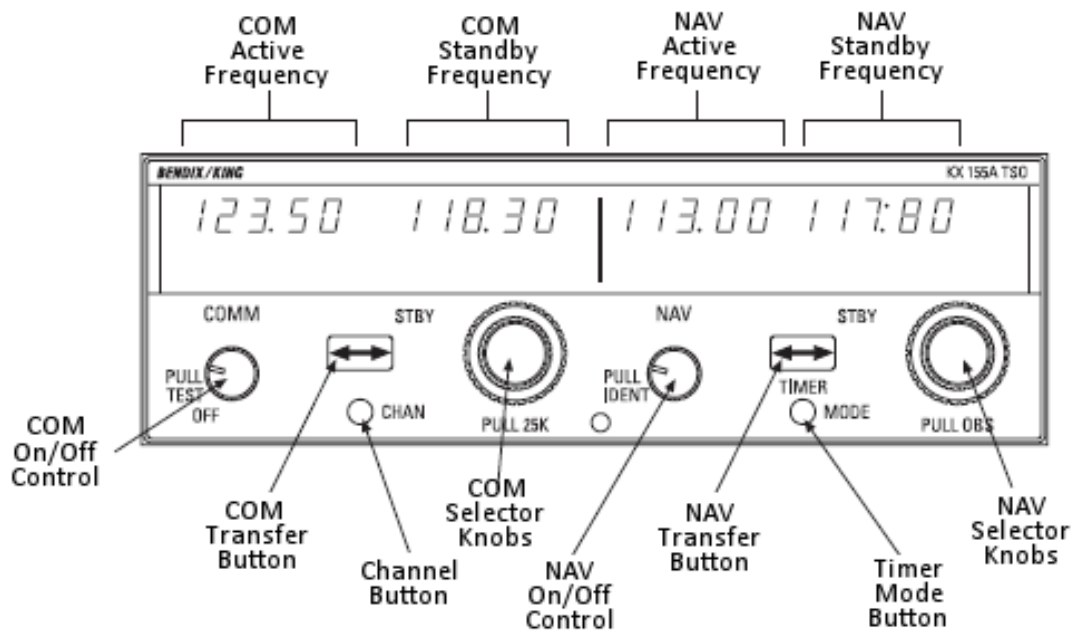
This system utilizes advanced computer technology normally found only in high end general aviation avionics. It does this by utilizing state of the art computer components. It is strongly recommended that pilots acquaint themselves with the features and controls described in this manual prior to using it in flight.

**System Requirements**

- Microsoft Flight Simulator X
- Windows XP, Windows Vista, or Windows 7 - 32 or 64 bit versions.

**1. Basic Operation**

All controls required to operate the KX 165 are located on the unit front panel.



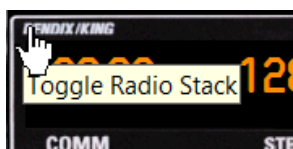
## DISPLAY TOOLTIPS



In addition to the digital output display, a tooltip over each individual display is available, showing the display data.

This is particularly useful on panels where the gauge is sized very small, and the display may be difficult to read.

## TOGGLE RADIO STACK POPUP



In the upper left-hand corner of the unit, a small mouse hotspot can toggle the radio stack popup panel on/off, for convenience.

## COMM TRANSCEIVER

## OPERATING MODES



Use the **Channel Button** to select the COM operating Mode.

Each button press advances the Operating Mode:

- Frequency Mode (Default)
- Recall Mode
- Storage Mode

## FREQUENCY MODE

Rotate the On/Off knob clockwise from the OFF position to turn the unit on. The left portion of the digital display readout is allocated for COM ACTIVE and COM STANDBY frequencies.



Select the desired operating frequency in the standby display by rotating the **Com Selector Knobs** either clockwise or counterclockwise. A clockwise rotation will increment the frequency while a counterclockwise rotation will decrement the frequency. The outer knob will change the MHz portion of the standby display. At one band-edge (118 or 136 MHz), the following 1 MHz change will wrap around to the other band-edge.

The inner knob will change the kHz portion of the standby display. It will change in increments of 50 kHz. The frequency wrap around at the edge of the band is also utilized when incrementing or decrementing the kHz portion of the standby display.



The transceiver is always tuned to the frequency appearing in the ACTIVE display. It is therefore possible to have two different frequencies stored in the ACTIVE and STANDBY displays and to change back and forth between them at the simple push of the transfer button.

RECALL MODE



A non-volatile memory stores up to 32 channels. Pressing the Mode button once will cause the unit to enter RECALL mode. Upon entering RECALL mode, "PG" is displayed next to the channel number.



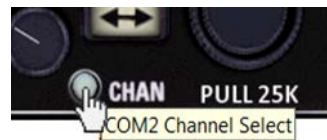
The desired channel is selected by turning the *Inner Selector Knob*. The saved frequency is seen flashing on the standby display.



The stored frequency can be entered into the active frequency by pushing the COMM TRANSFER button.



STORAGE MODE



Advance the COM Operating Mode past Recall Mode to *Storage Mode*.

The Active Frequency will flash, indicating that this frequency can be stored. "CH" is displayed next to the last used channel number.

Turn the Inner Selector Knob to the channel number where you want to store the current active frequency.

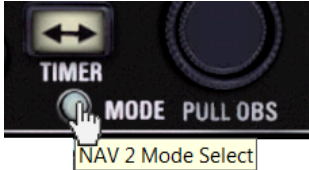


Press the COM Transfer Button to store the frequency on the current selected channel.

**NAV RECEIVER**

The right portion of the display is allocated to NAV receiver information.

**OPERATING MODES**



Use the *Timer/Mode Button* to select the NAV operating Mode.

Each button press advances the Operating Mode:

- Frequency Mode (Default)
- OBS/CDI Mode
- Elapsed Timer Mode
- Countdown Timer Mode

**FREQUENCY MODE**

The frequency channeling is similar to the COMM when operating in the frequency mode.



The *NAV increment/ decrement knobs* are located on the right hand side of the front panel. The outer knob operates in 1 MHz steps and increments/decrements the STANDBY frequency display. The inner knob operates in 50 kHz steps. The NAV receiver's lower and upper frequency limits are 108.00 MHz and 117.95 MHz. Exceeding the upper limit of frequency band will automatically return to the lower limit and vice versa.

To enter the selected frequency into the active frequency receiver, press the *NAV Transfer Button*.



**OBS/CDI MODE**

Depressing the *Timer/Mode Button* will cause the NAV display to go from Frequency Mode to the OBS/CDI (Course Deviation Indicator) format. The vertical “needle” moves side to side similar to a mechanical CDI. When the needle is centered, the aircraft is on the selected OBS course, which is displayed in place of the standby frequency. When the active frequency is tuned to a VOR frequency, the display shows “TO” or “FR”.



When there is no signal, or the received signal is too weak to ensure accuracy the display will “flag”.



**ELAPSED TIME MODE**



Push the *Timer/Mode Button* once more, when in *OBS/CDI Mode*, to change the *NAV Mode* to *Elapsed Time Mode*.



Press the *NAV Transfer Button* to start and stop the timer. A double press will reset the timer to zero.

The timer continues to run if you change the *NAV Mode*.

**COUNTDOWN TIMER MODE**



Push the *Timer/Mode Button* once more, when in *Elapsed Time Mode*, to change the *NAV Mode* to *Countdown Timer Mode*.

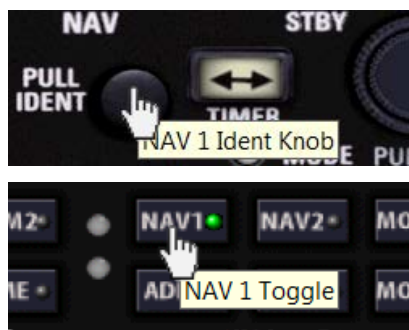


The countdown time is adjusted by rotating the inner **NAV increment/ decrement knob** clockwise (+) or counter-clockwise (-).

Start and stop the timer using the **NAV Transfer Button**.



#### NAV MORSE IDENTITY SIGNAL



The Morse Identity signal from the Nav 1 or Nav 2 receivers can be channeled through the audio panel as follows:

1. Pull the IDENT knob on the respective Nav receiver out by clicking on it.
2. Select the respective Nav receiver on the KMA28 Audio Panel.

*Note: If both steps are not followed, no audible signal will be played through the speakers.*