



Section 3

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3.1 Introduction

Section 3 of this manual contains descriptions of each module of the CAT III Systems.

The primary difference between the CAT III and the CAT III ProPanel is the ProPanel Enclosure. The ProPanel adds an aircraft like professional enclosure. Both systems utilize the Cirrus Rudder Pedals GA.

The CAT III Propanel System can be divided into 5 modules. The modules are the C2 Professional Console, Enhanced or Standard Avionics, ProPanel Enclosure and Cirrus Pedals. The modules for the CAT III System is as listed for the CAT III ProPanel with the exception of the ProPanel Enclosure.

3.2 The C2 Professional Console

The C2 Professional (C2Pro) Console has many features and they are as described below.



3.2.1 The Twin Master Panel

The Twin Piston Master Panel is standard on the C2Pro. It will work for both single and twin-engine piston aircraft models. This panel is equipped with:

- ➔ Battery Master Switch
- ➔ Left Alternator Switch
- ➔ Right Alternator Switch
- ➔ Avionics Master Switch
- ➔ Left Magneto Switch with start position
- ➔ Right Magneto Switch with start position



Note: For single engine operation, use the Left Battery, Left Alternator and Left Magneto switches.

3.2.2 Parking Brake

The Parking Brake switch is a push-pull style switch. Pull the switch to enable the parking brake and push to disable

3.2.3 Lights Panel

The Lights Panel controls the external lighting of the aircraft and includes a panel light dimmer to control the lights on the C2Pro console. The aircraft light switches includes:

Nav Light: Toggles the aircraft navigation lights.

Strobe Light: Toggles the aircraft strobe lights.

Taxi Light: Toggles the aircraft taxi lights.

Ldg Light: Toggles the aircraft landing lights.

3.2.4 Panel Light Dimmer

Controls the brightness lampposts, clock backlighting and RIC backlighting

3.2.5 Pitot Heat Switch

Toggles heater to pitot tube on / off.

3.2.6 Anti-Ice Switch

Toggles the anti-ice feature on aircraft equipped with anti ice system.

3.2.7 Alternate Air Knob

Toggles the alternate air source.



Note: Alternate Air functionality can be changed between alternate static air source and alternate engine air source. See Section 4 for Configuration of Optional Items.



3.2.8 Fuel Boost Switches

Left Fuel Boost: Toggles the left fuel boost pumps

Right Fuel Boost: Toggles the right fuel boost pumps

3.2.9 Prop Synch

Toggles Prop Synch on / off. Used on twin engine aircraft.

3.2.10 Aileron Trim

The Aileron Trim is operational on all aircraft regardless if the real aircraft is equipped with aileron trim or not.

3.2.11 Rudder Trim

The Rudder Trim is operational on all aircraft regardless if the real aircraft is equipped with aileron trim or not.

3.2.12 Remote Instrument Console (RIC)

The Remote Instrument Console (RIC) makes it possible for the pilot to control the following items:

Single RMI Needle: Toggles the single RMI needle from ADF to NAV1.

Double RMI Needle: Toggles the double RMI needle from ADF to NAV1.

A/S: Adjusts the Calibrated Airspeed if aircraft is equipped.

ADF: Adjusts the adjustable compass card on and ADF.

R-ALT: Controls the radar altimeter decision height aural warning value.

CRS / DG: Adjusts the CDI needle or DG compass card.

HDG: Adjusts the heading bug position.

 Adjusts the Aircraft Reference Symbol.

BARO: Adjusts the barometric pressure setting in the Kollsman window.

OBS 1/2: Adjust the OBS 1 or OBS2 compass card.



Note: The CRS/DG and OBS 1/2 knob includes a mode indicator. The green light indicates the mode the knob control when turned. To switch modes, press and hold the knob for 1.2 seconds.



Note: Pressing and holding the HDG knob for 1.5 seconds will activate the heading synch function. Heading synch will position the heading bug to your current heading.



3.2.13 Landing Gear Panel

The Landing Gear Panel consists of the Gear switch and knob and the gear position lights. This is a panel for ease of service.

Landing Gear Switch: Toggles the aircraft landing gear up or down if equipped with retractable gear.

Gear Light: Show the status of landing gear if aircraft is equipped retractable gear.



Caution: Gear switch is a latching style switch. As on a real aircraft, you will need to pull out the switch prior to moving it up or down. Failure to follow this procedure will result in damage to the switch.

3.2.14 Fuel Tank Selector

Left Tank Selector: Toggles the left fuel source from Off, On and Cross feed.

Right Fuel Boost: Toggles the right fuel source from Off, On and Cross feed.

3.2.15 Elevator Trim

The Elevator Trim is operational on all aircraft. The segmented LED trim indicator will be green if the trim is the take-off or T/O position, amber when in the range and red when the full trim up or full trim down position is reached. Though you can continually turn the wheel once the indicator is in red, you will not see additional trim input. The red line means that the trim has reached its limit.

3.2.16 Flap Selector Lever

The Flap Selector Lever is a momentary switch. Pressing the switch up or down will incrementally increase or decrease the flaps.

3.2.17 Cowl Flap Levers

The Cowl Flap Lever is a momentary switch. Pressing the switch up or down will incrementally increase or decrease the cowl flaps position. Left and Right Cowl Flaps can be operated independently.



Note: For single engine operation, use the Left Cowl Flap switch.



3.2.18 Carburetor Heat Switch

The Carb Heat Switch is a push-pull switch that toggles the carburetor heat on and off for aircraft with carbureted engines. Push is off and pull is on.



Note: For single engine operation, use the Carb Heat switch.

3.2.19 Power Quadrant

The Power Quadrant of all PFC devices is interchangeable. There are twenty-four quadrants to choose from that includes single engine piston, twin piston, jets, turbo props and vernier style.

See Section 4 for Configuration of Optional Items.

3.2.20 Hour / Hobbs Meter

This keeps the time of console usage. It is controlled by the Battery Master Switch.

3.2.21 Clock

The Clock on this console is a Davtron M800. The complete operation manual can be downloaded here: http://www.davtron.com/cmsAdmin/uploads/m800_brochure.pdf

3.2.22 Panel Lamp Post

The C2Pro Console is equipped with six panel lampposts to provide additional lights to the switches when necessary.



3.2.23 Control Yoke

There are different available yoke styles they are the Mooney, the Saab, the Boeing 737, the real Cessna and the most popular is the Beech. Each of these yokes, have different sets of switches and corresponding function.

Beech / Mooney Yoke			
<i>Left Stem Switch Position</i>	<i>Default Function</i>	<i>Right Stem Switch Position</i>	<i>Default Function</i>
Left Back (Trigger) Button	Autopilot Disconnect	Right Back (Trigger) Button	Pitch Synch
Left Rocker Top	Trim Down	Left Rocker Top	Assignable
Left Rocker Bottom	Trim Up	Left Rocker Bottom	Assignable

Saab Yoke			
<i>Left Stem Switch Position</i>	<i>Default Function</i>	<i>Right Stem Switch Position</i>	<i>Default Function</i>
Left Front (Thumb) Button	Autopilot Disconnect	Right Front (Thumb) Button	Pitch Synch
Left Back (Trigger) Button	Not Assigned	Right Back (Trigger) Button	Assignable
Left Rocker Top	Trim Down	Left Rocker Top	Assignable
Left Rocker Bottom	Trim Up	Left Rocker Bottom	Assignable
Right Rocker Top	Not Assigned	Right Rocker Top	Assignable
Right Rocker Bottom	Not Assigned	Right Rocker Bottom	Assignable



Boeing 737 Yoke			
Left Stem Switch Position	Default Function	Right Stem Switch Position	Default Function
Left Front (Thumb) Button	Autopilot Disconnect	Right Front (Thumb) Button	Pitch Synch
Left Back (Trigger) Button	Assignable	Right Back (Trigger) Button	Assignable
Left and Right Rocker Top pressed simultaneously (Dual Switch Trim)	Trim Down	No Rocker Switch on Right	N/A
Left and Right Rocker Bottom pressed simultaneously (Dual Switch Trim)	Trim Up	No Rocker Switch on Right	N/A

Cessna Yoke			
<i>Left Stem Switch Position</i>	<i>Default Function</i>	<i>Right Stem Switch Position</i>	<i>Default Function</i>
Left Button	Autopilot Disconnect	No Rocker Switch on Right	N/A
Left and Right Rocker Top pressed simultaneously (Dual Switch Trim)	Trim Down	No Rocker Switch on Right	N/A
Left and Right Rocker Bottom pressed simultaneously (Dual Switch Trim)	Trim Up	No Rocker Switch on Right	N/A

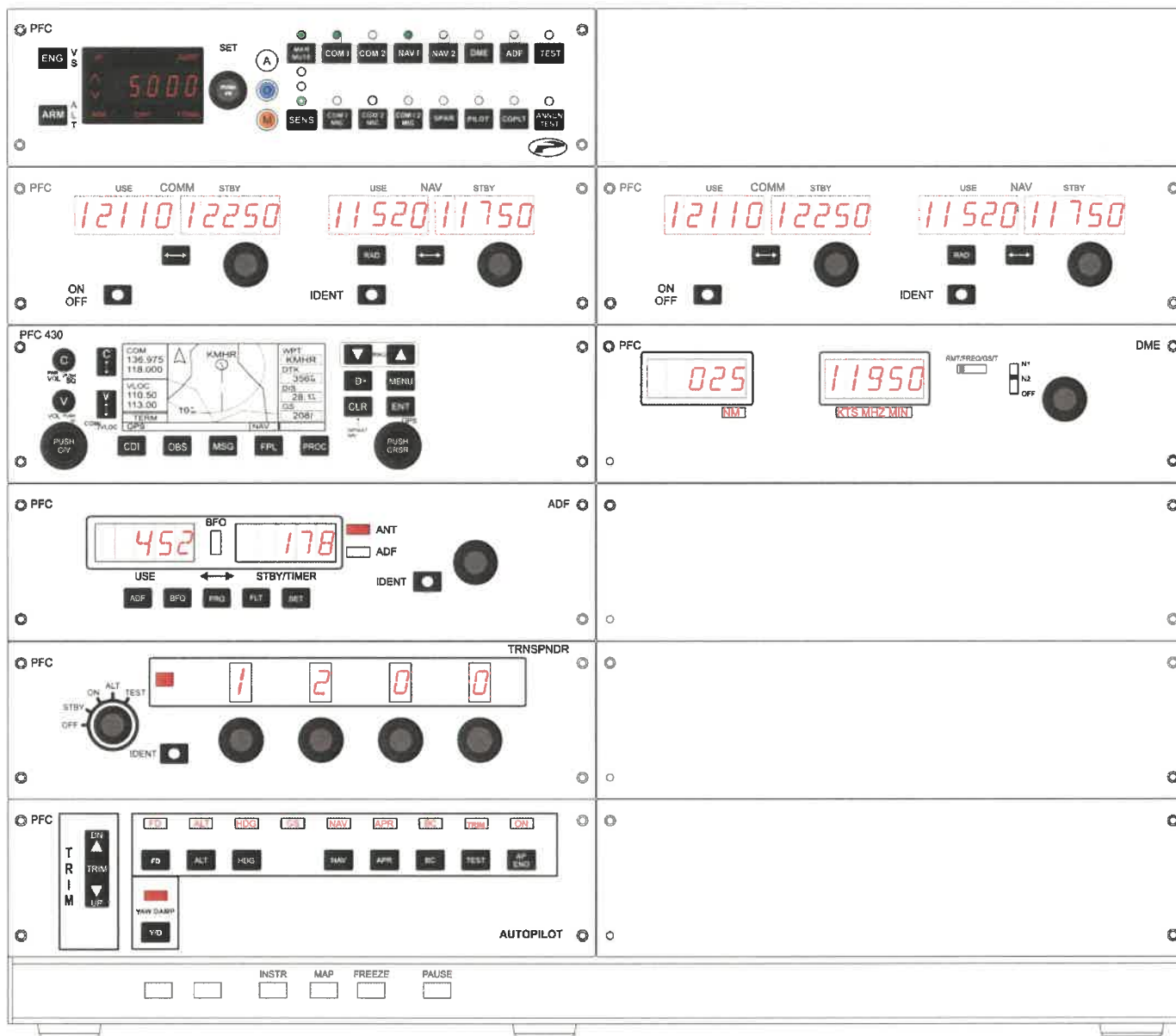


Note: The Autopilot Disconnect in all yoke styles can be reassigned as a Push-To-Talk button. See Section 4 for Configuration of Optional Items.

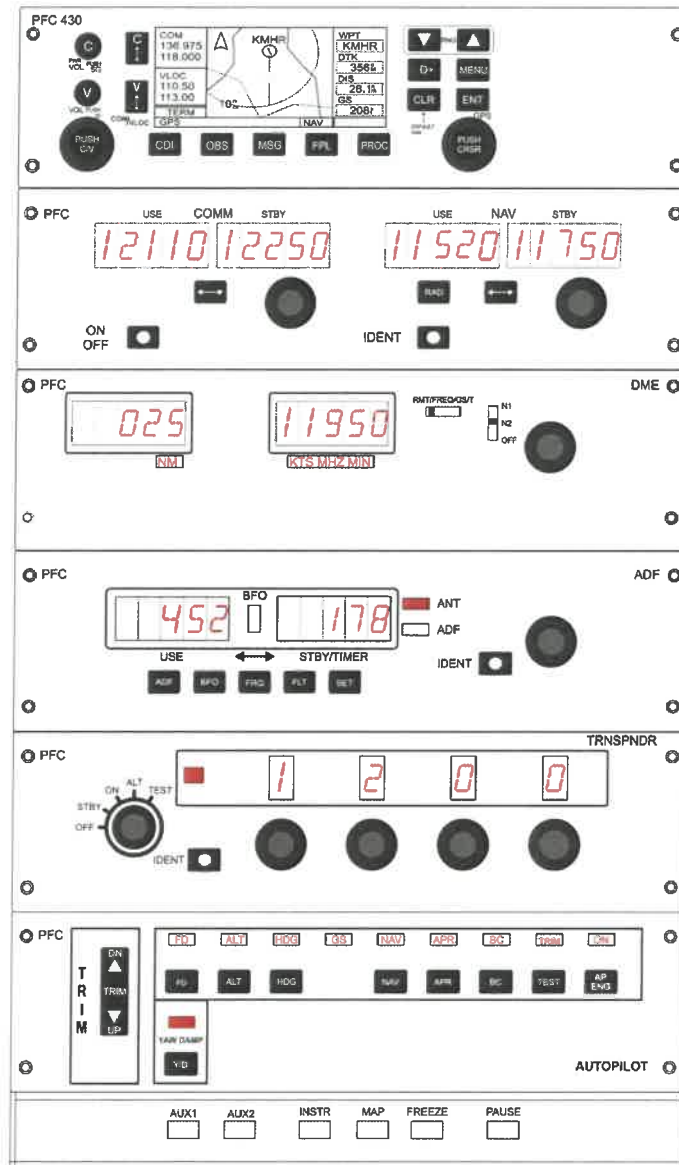


3.3 The Digital Avionics Stack

The CAT III / CAT III ProPanel can be equipped with the Digital Avionics Standard or Enhanced. Each stack comprised different panels and the picture below may not reflect the order of the panels on your device. An optional PFC530W is available for the Enhanced Avionics (not shown) but not for the standard.



Digital Avionics Enhanced

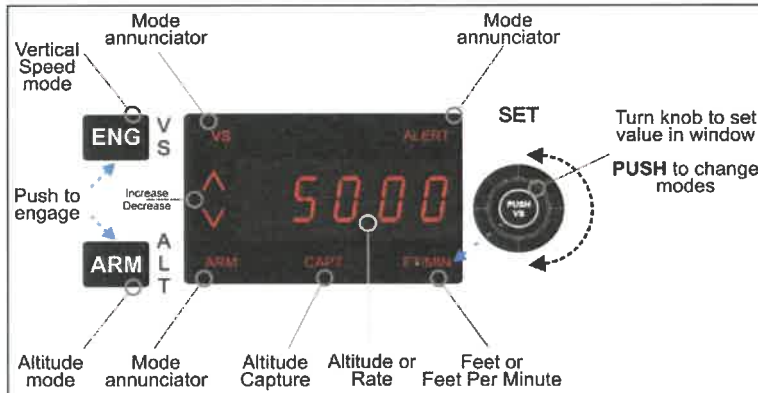


Digital Avionics Standard



3.3.1 Audio Panel / Altitude Preselect Panel

3.3.1.1 Altitude Preselect Panel



The Altitude Preselect Panel allows the pilot to preselect a desired altitude in a climb or descent. The system provides automatic capture and hold upon reaching the selected altitude.

The altitude preselect display has two modes; the Altitude indicated by the feet (FT) light on the lower right of the display and Rate indicated by the feet/min (FT/MIN). The Set knob is used to set the target altitude or rate. Pressing the knob toggles between the altitude and rate.

3.3.1.1.1 Altitude Preselect Operation

To select a new altitude the panel must be displaying feet (FT). If it is displaying feet per minute (FT/MIN), push the inner concentric knob to toggle the feet mode. Rotating the outer concentric knob will select altitude in 1000 ft. increments. The inner concentric knob controls altitude in 100 ft. increments. Once the correct altitude has been entered, push the ARM button to arm the altitude capture mode. Use pitch attitude hold or select a vertical speed to guide the aircraft to the new altitude.

As the aircraft nears the selected altitude, a pitch round out is computed based on the aircraft's vertical speed. When the round out begins, the display will change from arm (ARM) to capture (CAPT) and Vertical Speed mode will be disengaged if in use. At the selected altitude, Altitude Hold is engaged and CAPT mode is disengaged.



3.3.1.1.2 Vertical Speed Select Operation

Vertical speed may be engaged in either of two ways, one is by preselecting a vertical speed on the preselect panel. The other is by engaging vertical speed at its present value and then modifying a rate of climb or descent using the vertical trim rocker switch on the Autopilot Panel, the CWS button or rotating the select knob on the panel, making sure that the Feet / Minute mode is selected.

3.3.1.1.2.1 Preselecting Vertical Speed

To preselect a vertical speed, push the inner concentric knob. The last used vertical speed, an up or down arrow, and FT/MIN will be annunciated. Rotating the inner knob adjusts vertical speed in 100 feet per minute increments while the outer knob controls the 1,000 feet per minute digit up to a maximum of 3,000 feet/in. When the selected vertical speed passes through zero the up/down arrow will change directions.

To engage this selected rate, push the engage (ENG) button (while vertical speed is displayed). Altitude Hold, if engaged, will be canceled and the system will capture the commanded vertical speed.

If a change in vertical speed is desired, the vertical trim rocker switch may be used to slew the rate up or down at 100 feet per minute for every second the rocker switch is held down.

Vertical speed can also be modified by holding down the CWS button and changing pitch attitude until the desired vertical speed command is displayed on the altitude preselect panel. If the altitude preselect panel is displaying altitude at the time, vertical speed will be displayed until after the CWS switch is released. The inner knob on the altitude preselect panel can be pushed at any time to display the vertical speed command.

3.3.1.1.2.2 Vertical Speed Synch

Vertical Speed synch may be used to maintain the aircraft's current vertical speed by pushing the engage (ENG) button while the altitude preselect panel is displaying altitude. The Vertical Speed can be varied up or down just as described in Vertical Speed Preselect.



3.3.1.2 Audio Panel

The Audio Panel allows the pilot to select the source for the audio. Some functions in the audio panel are only procedural. These procedural functions will not interact with the software.

The operational items are:

Marker Mute: Toggles the marker beacon audible alert.

COM1: Toggles the Com 1 Audio.

COM2: Toggles the Com 2 Audio.

NAV1: Toggles the Nav 1 Morse code ID. This needs to be select in conjunction with pressing the Ident button on Nav 1 to hear morse code.

NAV2: Toggles the Nav 2 Morse code ID. This needs to be select in conjunction with pressing the Ident button on Nav 2 to hear the morse code.

DME2: Toggles the DME Morse code ID.

ADF: Toggles the ADF Morse code ID. This needs to be select in conjunction with pressing the Ident button on ADF to hear the morse code.

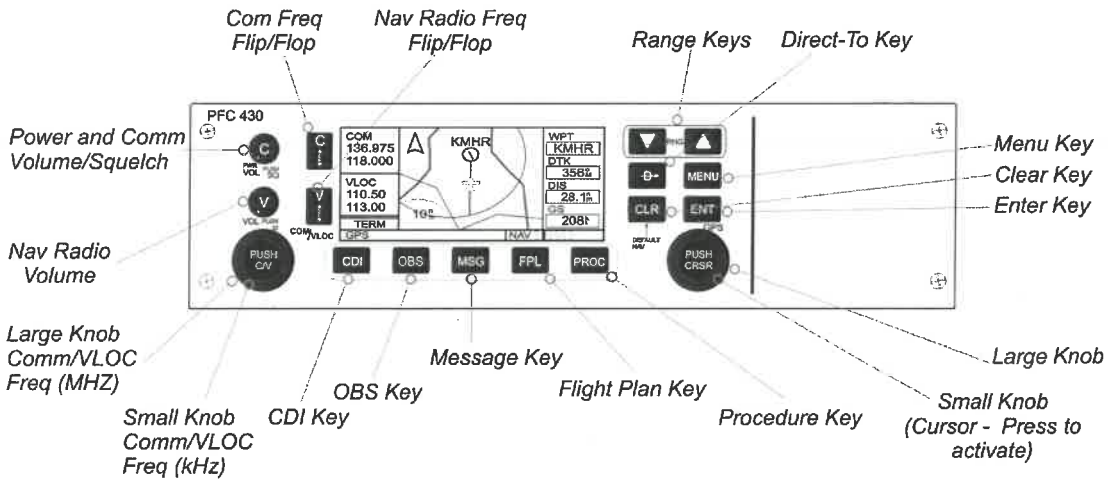
TEST: Toggles the testing of all the displays on the Enhanced Avionics

SENS: Toggles the marker beacon sensing to Hi or Lo.

ANNUN TEST: Toggles the annunciator test of the audio and altitude preselect



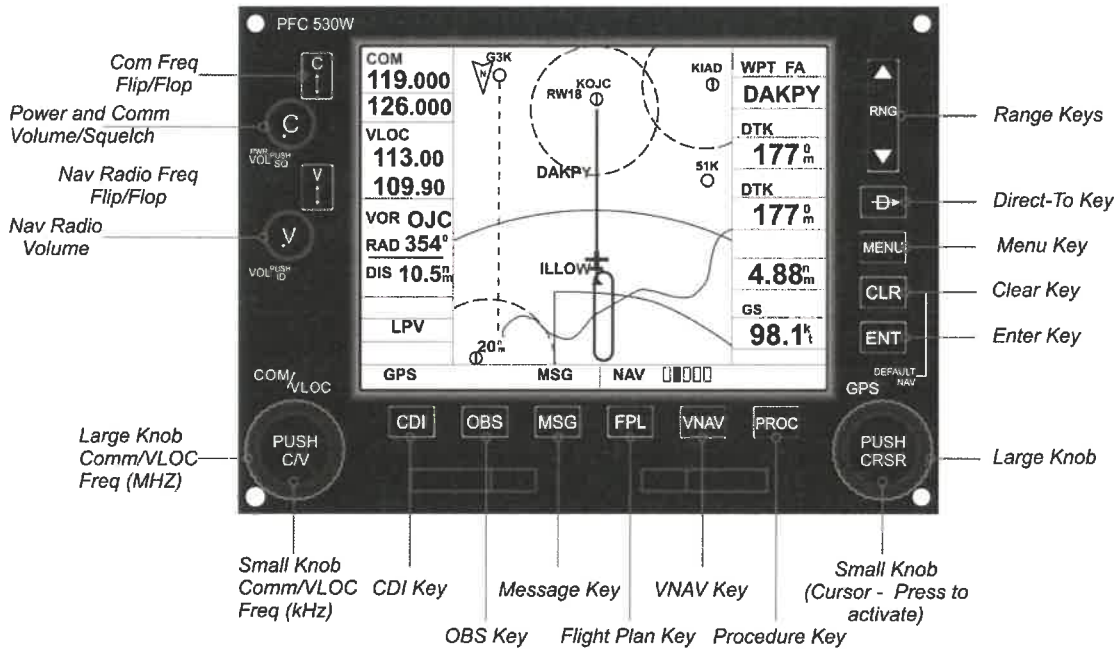
3.3.2 PFC430W



The PFC430W is a control head that interfaces with Reality XP GNS WAAS 430W software to provide GPS information, COM1 and NAV1. It will function almost exactly like the Garmin 430W. In lieu of providing detailed information here, your own Garmin 430W manual will suffice (not provided by PFC).



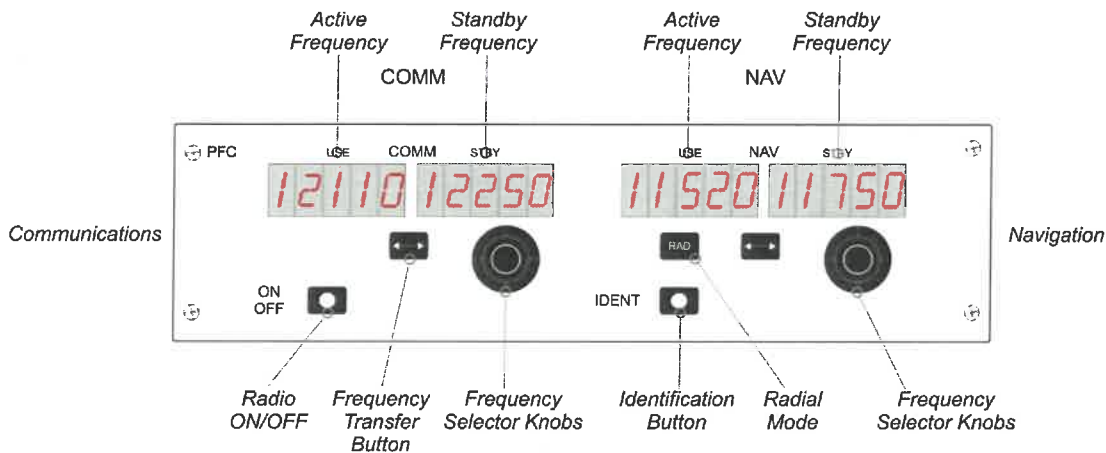
3.3.3 PFC530W (optional)



The PFC530W includes a display in the unit just as the real Garmin 530W. The PFC530W interfaces with the Reality XP GNS WAAS 530W software and will provide GPS information, COM1 and NAV1. The unit will function almost exactly like the Garmin 530W. Part of this optional package is a Garmin 530W manual. Please refer to that manual for operation.



3.3.4 Comm / Nav Panel

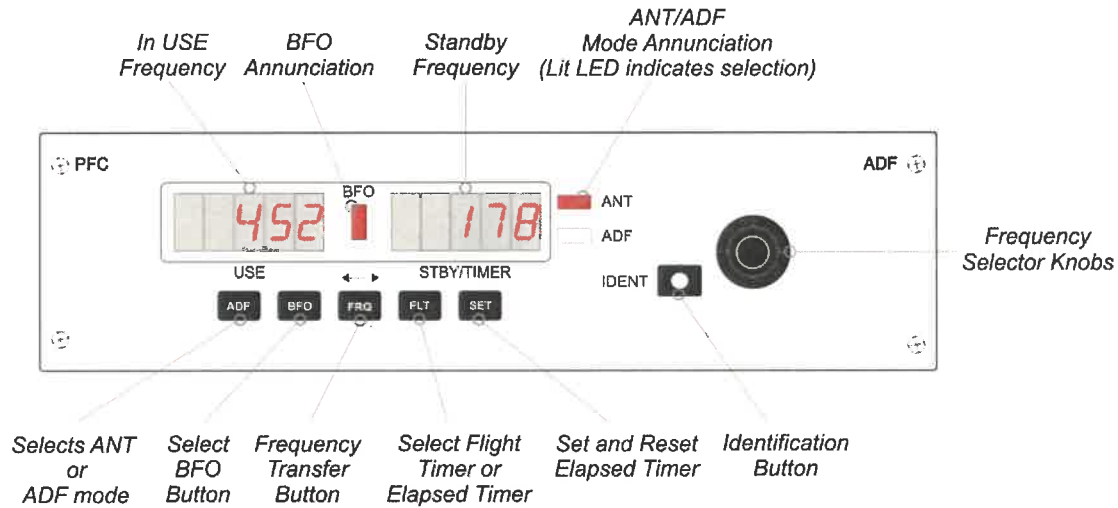


The PFC Enhanced Stack comes with two independent NAV/COMM radios. The COMM side is used for communication while the NAV side is used for Navigation. Turning the associated knob will increase or decrease the frequency selection for the associated radio. The radio frequencies are displayed in four separate windows and denoted by either "USE" or "STBY." The RAD button which stands for radial will change the active frequency window to radial mode and display which radial you are currently tracking based on the frequency on the use side.

The comm and nav panel below the PFC430 or PFC530 are Comm 2 and Nav 2



3.3.5 Automatic Direction Finder (ADF) Panel



The PFC ADF panel operates similar to a King ADF KR-87.

3.3.5.1 ADF Frequency Selection

The active frequency (to which the ADF is tuned) is displayed in the left side of the window at all times. A standby frequency is displayed in the right side when “FRQ” is annunciated. The standby frequency is placed in “blind” memory when either FLT (Flight Time) or ET (Elapsed Time) mode is selected. With “FRQ” annunciated, the standby frequency is selected using the frequency select knobs, which may be rotated either clockwise or counterclockwise.

Turn the small inner knob out to tune 1’s. The outer knob tunes the 100’s and the 1000’s up to 1799. The standby frequency selected may then be put into the active window by pressing the “FRQ” button. The standby and active frequencies will be exchanged (flip-flopped), the new frequency will become active, and the former active frequency will go into standby.

3.3.5.2 ADF Modes

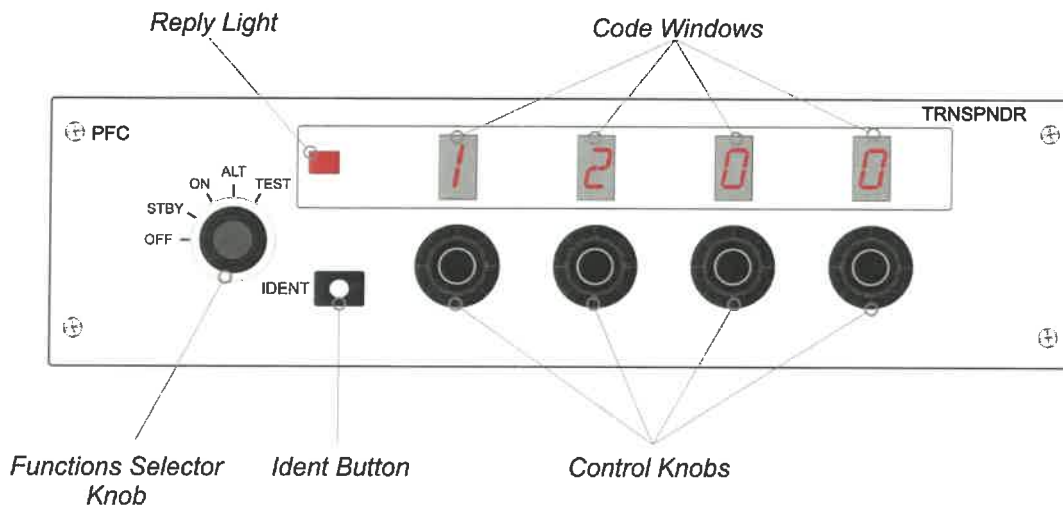
The ADF Panel has a toggle between ADF and antenna. The ADF mode is the only working mode. The antenna (ANT) is only procedural. The ADF / ANT light on the right side of the panel indicate the current mode.



3.3.5.3 Timer Mode

The flight timer will always be automatically reset to 00 whenever power is interrupted either by the avionics master switch or by the unit's ON/OFF switch. It should be emphasized that the start/stop function will only operate with power applied to the unit. Always read flight time prior to power shutdown. Flight time or elapsed time are displayed and annunciated alternatively by depressing the FLT/ET button. The flight timer continues to count up until the unit is turned off or stopped with an external switch. The elapsed timer may be reset back to 00 by pressing the SET button. It will then start counting again. (NOTE: pressing the SET/RST button will reset the elapsed timer whether it is being displayed or not.)

3.3.6 Transponder Panel



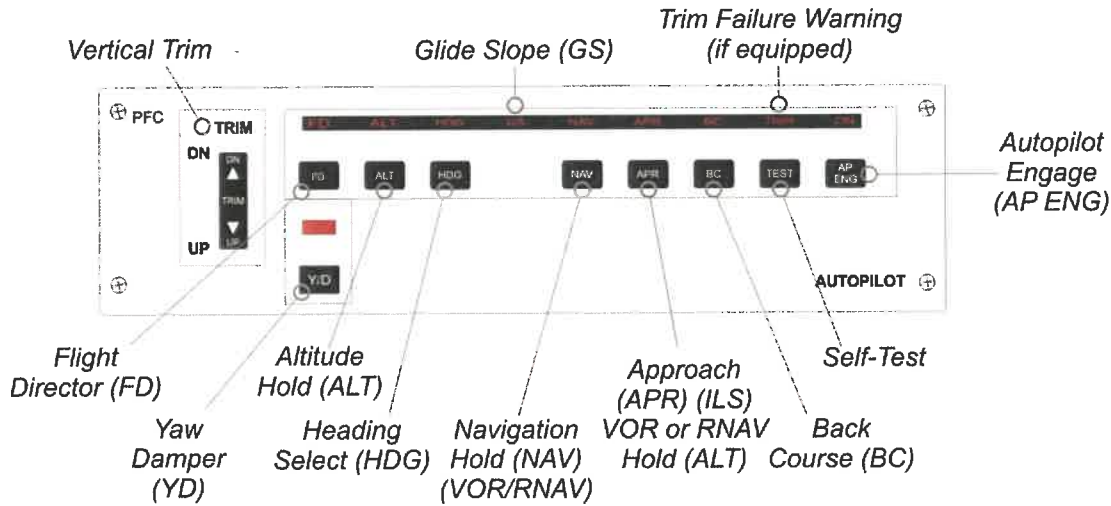
The PFC Transponder Panel looks and functions like the Bendix King's KT76A model.

3.3.6.1 Transponder Panel Operation

Make sure that the Functions Selector knob is turned on and position the function selector to your desired position. Our current selected code and altitude will be shown in the Instructor's station in X-Plane. When pressed, the IDENT button will make the code flash red in the instructor's station and as well as the ident light on the panel.



3.3.7 Autopilot Panel



The PFC Autopilot is similar in design and functionality of a KFC150 in aircraft equipped with flight directors and will function as a KAP150 for aircraft not equipped with flight director.

3.3.7.1 System Self Test

When initially powered (no modes selected) the trim light will be lit as a reminder of the need to perform the system self-test. The test must be performed before the autopilot portion of the system can be used, but need not be performed before using the flight director portion. This test determines, before takeoff, that the system is operating normally. To perform a test - shortly push the test button. The following actions will occur:

- ➔ All annunciator lights, the trim light and autopilot lights will illuminate.
- ➔ The trim light will flash 4 times.
- ➔ The annunciator legends will go blank, an aural tone will beep (approx. six times), and the "AP" light will flash (approx. 12-13 times) and go off.

3.3.7.2 Vertical Trim Button

These two allows you to make small corrections in selected altitude while in altitude hold, or adjust pitch attitude at a rate of approximately 0.9 degrees per second when not in altitude hold.



3.3.7.3 FD Button

The Flight Director is activated by pressing the FD button or the CWS button on the control wheel. When pressed, the V-bar will appear and provide command to maintain wings level and the pitch attitude existing at the time of engagement. If a change in pitch attitude is desired, the control wheel steering (CWS) button on the pilot's control wheel can be used to synchronize the V-bar (in the FD mode with autopilot disengaged) without removing your hand from the control wheel. The vertical trim button above may be used to adjust the selected pitch attitude up or down at .9 degrees per second.

The flight director can also be activated by direct selection of any specific mode, which will activate the command V-bar. Such selection will illuminate both FD and the appropriate annunciator mode. Selection of a mode, which supersedes one already selected, will cause the flight director and/or autopilot to follow the mode most recently selected by the pilot.

3.3.7.4 ALT Button

The altitude hold mode is activated by pressing ALT button. It provides guidance to the pilot (or autopilot) for maintaining the altitude at which this mode was engaged. To operate in the ALT mode:

- Depress the "ALT" button when the aircraft has reached the altitude you wish to maintain.



Note: For smoother operation, press the "ALT" button when the vertical velocity is no more than 500 fpm.

- The V-bar will command the required pitch to maintain the selected altitude. The pilot can maintain this altitude manually by following the V-bar or engage the autopilot and have it satisfy the flight director commands.
- The vertical trim switch may be used to adjust altitude up or down at a maximum rate of 500 fpm without disengaging altitude hold.



Note: The ALT mode is canceled by automatic glideslope capture or by depressing the "ALT" button.

- When the vertical trim switch is released, the flight director V-bar will begin to command pitch changes to maintain the new altitude.



3.3.7.5 HDG Button

The heading select mode is activated by pressing the HDG button. It provides guidance to the pilot or autopilot for maintaining the heading selected. To operate in heading select mode:

- Move the heading "bug" to the desired heading using the HDG on the RIC.
- Depress the HDG button to engage the heading select mode. The V-bar on the FCI will command a bank towards the selected heading, in the direction of the shortest turn. If the autopilot is engaged, it will turn the aircraft to intercept and fly the heading.
- The V-bar will continue to command the bank necessary to maintain the selected heading. If you move the heading "bug" again while heading select mode is engaged, the V-bar will immediately command a turn to the new heading. If the autopilot is engaged, it will immediately turn the aircraft in the direction of the new heading.
- The HDG mode is canceled when NAV or APR coupling occurs, or when the HDG or FD mode button is pushed again, to "off," the autopilot will intercept and fly a selected heading. Select a desired heading on navigation instrument then select HDG mode. The V-bar will command the necessary bank to turn to and maintain the selected heading.

3.3.7.6 NAV Button

The Navigation mode is activated by pressing the NAV Button. It provides guidance to the pilot (or autopilot) in intercepting and tracking VOR and RNAV courses.

The V-bar will command the bank necessary to turn to and maintain a VOR or RNAV course selected by the pilot on Nav 1 only. The V-bar will command the bank and pitch necessary to capture and track localizer and glideslope for ILS approaches, or to capture and track the appropriate course for VOR or RNAV. The V-bar will command the bank necessary to capture and track a reverse localizer course.



Note: You should consider using HDG select mode just prior to VOR station passage. If the autopilot is engaged in NAV mode, it may cause erratic maneuvers while following a rapidly changing course deviation needle as the aircraft flies in the cone of confusion.



3.3.7.7 APR Button

The Approach mode is activated by pressing the APR Button. It provides guidance to the pilot (or autopilot) in intercepting and tracking ILS (both localizer and glideslope), and VOR and RNAV courses.

To operate in the APR mode:

- Tune the frequency for the selected ILS, VOR or RNAV approach.
- Set the course pointer to the final approach course (ILS front course even when flying a back course approach).
- Set the heading bug to the desired intercept angle and activate the HDG mode.
- Depress the "APR" button. This arms the automatic capture function. (The "APR" light will flash to signify the approach mode is armed.)
- The V-bar will command the required bank to maintain the selected heading until the capture point is reached. Then the V-bar will command a turn to intercept the course. If the autopilot is engaged, it will turn to satisfy the commands.
- As the V-bar commands the turn to intercept the selected course, the heading mode will be canceled and the APR mode will go from arm to engage. (HDG light will go out and APR light will go from flashing to steady.)
- The V-bar will continue to command the required bank to maintain course and the autopilot (if engaged) will satisfy those commands.
- Once localizer course capture has occurred on an ILS, the glideslope mode is armed. Automatic capture occurs as the aircraft approaches the glideslope from below.
- When the intercept occurs, "GS is illuminated on the annunciator panel. The V-bar commands the pitch necessary to maintain the glideslope. If the autopilot is engaged, it will satisfy these commands. If the altitude hold (ALT) mode had been engaged prior to GS capture, it will disengage at capture and the "ALT light will go out.



3.3.7.8 BC Button

The back course mode is activated by pressing the BC button. It provides guidance to the pilot (or autopilot) in intercepting and tracking a reverse course LOC. To operate in the back course mode:

- Tune the frequency for the selected
- Be certain to set in the ILS Front Course even though you will be flying a reciprocal heading on an ILS Back Course Approach. For example, the back course might have a front course of 090 degrees which you will set in the as you fly a back course heading 270 degrees to runway 27
- Set the heading bug to the desired intercept angle and activate the HDG mode.
- Select the back course mode by either depressing the "APR" button and then the "BC button or by merely depressing the BC button by itself. (BC will light and the 'APR' light will flash to signify approach mode is armed.)
- The V-Bar will command the required bank to maintain the selected heading until the capture point in reached, and then it will command a turn to intercept the course. The "HDG" light will go off and the "APR" light will illuminate steadily as the BC mode goes from arm to engage. If the autopilot is engaged, it will turn to satisfy the commands.
- The V-bar will continue to command the required bank to maintain course and the autopilot (if engaged) will satisfy those commands.



Note: The glideslope is locked out during a back course approach.

3.3.7.9 Test Button

See 2.1.2.7.1 Self System Test



3.3.7.10 AP ENG Button



Note: The autopilot cannot be engaged until the flight director is engaged.



Caution: Prior to autopilot engagement, the pilot should make sure the V-bar commands are satisfied. This will prevent any rapid changes in the aircraft's attitude when the autopilot is engaged.

The AP ENG button will engage or disengage the autopilot. Once engaged, the autopilot will attempt to satisfy the V-bar commands generated by the selected flight director modes. The autopilot provides stabilization and automatic elevator trim as well as response to all selected flight director commands.

3.3.7.11 Y/D

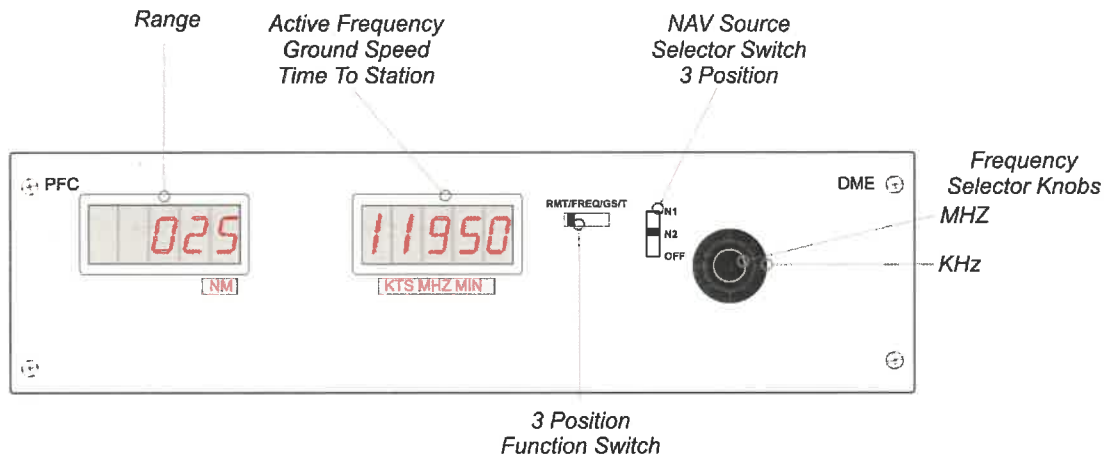
Yaw Damper is engaged by depressing the Y/D button on the autopilot. The associated LED located above the Y/D button will light up when the yaw damper is engaged.



Note: With the autopilot engaged using the CWS Control Wheel Steering button (mounted on the control wheel) allows you to maneuver the aircraft in pitch and roll without disengaging the autopilot. After the CWS button is released, the autopilot resumes control of the aircraft.



3.3.8 Distance Measuring Equipment (DME) Panel



DME is still one of the most capable and useful tools in the IFR-equipped aircraft. It provides essential distance, ground speed, and time enroute information that you need to navigate the airspace system. It also gives pilot lower minimums on most approaches, including many that are published specifically for VOR-DME-equipped aircraft.

3.3.8.1 Three Position Function Switch

The 3-position function switch determines both the information displayed and the channeling source. There are three modes, the Remote (RMT), Frequency (FREQ) and Groundspeed/Time-to-Station (GS/T)

3.3.8.1.1 Frequency (FREQ) mode

The unit is channeled internally with its own two concentric frequency selection knobs. Turning the small knob will change the MHz (megahertz) display and the outer, larger knob changes the larger digits KHz (kilohertz). While in this mode the unit will display distance and the selected frequency.

3.3.8.1.2 Groundspeed/Time-to-Station (GS/T) mode

The unit will hold the internally selected frequency and will display distance, groundspeed and time-to-station. Rotating the frequency selector will have no effect on the display, because the DME is in "Frequency Hold." This frequency hold feature in the GS/T mode prevents accidental rechanneling of the DME when the frequency is not displayed.



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3.3.8.1.3 Remote (RMT) mode

In this mode, the DME can be channeled to Nav 1 or Nav 2 by using the source switch. To channel to Nav 1, set the switch to N1 and to N2 for Nav2. The unit will display distance groundspeed and time to station. The frequency will not be displayed.



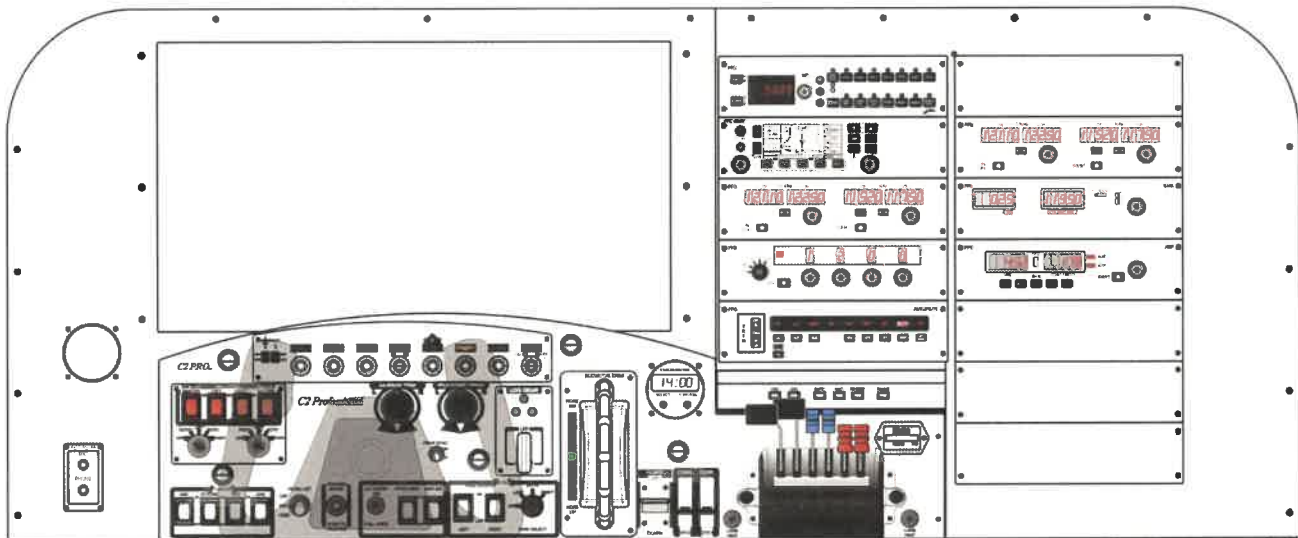
3.4 Cirrus Rudder Pedals



The Cirrus Rudder Pedals is equipped with rudder axis and left and right toe brakes. USB connection is required.

3.5 ProPanel Enclosure

The ProPanel enclosure is shaped similar to a dash of an aircraft and provides an aircraft like professional enclosure. This gives the CRX more of an aircraft panel look and protects the internals of the components as well as conceals the cables for a cleaner appearance.





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3.6 X-Plane 9.xx

X-Plane Professional 9.xx is utilized in our systems as the software platform. It also provides all the instructor's controls such as failures, weather, airport and other important tools for training. The instructors' station is further discussed in detail in section 6.

3.7 USB HID Plugin

The PFCUSBHID plugin is the software makes USB devices manufactured by Precision Flight Controls, Inc work with X-Plane 9.xx. This file is located in the Resources/Plugins folder of X-Plane.



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Section 4

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4.1 Introduction

This Configuration of Optional Items section contains steps on how to configure all interchangeable, optional and other peripheral items of the CAT III / CAT III ProPanel.

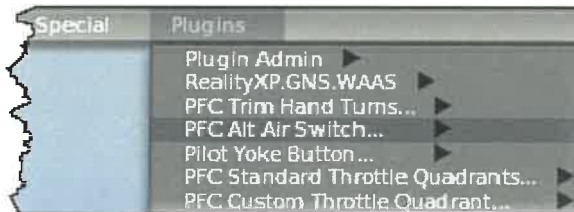
4.2 C2Pro Items

4.2.1 Trim Hand Turns

The Elevator Trim number of hand turns from full nose down to full up can be set to different values. This effectively changes the sensitivity of the elevator trim.

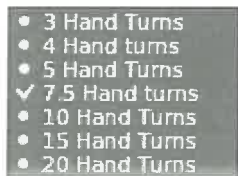
To change the setting:

1. If system has multiple computers, make sure that Master PC is selected.
2. With X-Plane running, close the instructor's station by clicking x on upper left hand side.
3. Bring up the menu by moving your mouse to the top of the screen.
4. From the menu choose plugins.



5. From plugins choose PFC Trim Hand Turns.
6. Choose the number of turn you prefer by clicking on it. A check mark will indicate the option selected.

Once an option has been clicked the box will disappear.



7. To go back to the map, move your mouse to the top of the screen and Location, then local map.

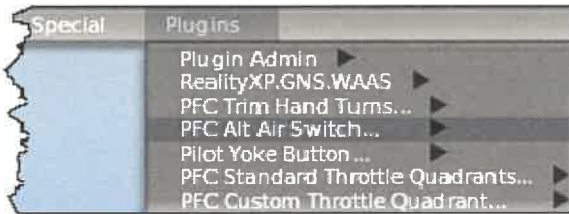


4.2.2 Alternate Air

The Alternate Air switch has a default function of Alternate Static Source. The other option is for the Alternate Engine Air

To change the setting:

8. If system has multiple computers, make sure that Master PC is selected.
9. With X-plane running, close the instructor's station by clicking x on upper left hand side.
10. Bring up the menu by moving your mouse to the top of the screen.
11. From the menu choose plugins.



12. From plugins choose PFC Alt Air Switch
13. Choose from Alternate Static Source or Alternate Engine Air. A check mark will indicate the option selected. Once an option has been clicked the box will disappear.



14. To go back to the map, move your mouse to the top of the screen and Location, then local map.



4.2.3 Power Quadrant

There are 2 main styles of quadrant that can be used with the CAT III / CAT III ProPanel, the standard throttle quadrant and Vernier. There are twenty-one in total.

4.2.3.1 Switching the non Vernier quadrant

1. Pull all the levers back.
2. Remove the thumbscrew on each side.
3. Align new quadrant to push rods.
4. Reinstall thumbscrews.

4.2.3.2 Switch to Vernier Quadrant

1. Install a twin non-vernier quadrant.
2. Remove the four (4) screws around the panel.
3. Carefully pull the assembly out.
4. Disconnect the RJ-45 Cable.
5. Connect the RJ-45 cable to the Vernier unit.
6. Carefully insert and then align the screw holes.
7. Secure the unit with the screws.
8. Store the non vernier unit in a safe place.



4.2.3.3 Changing the Standard Throttle Quadrant setting

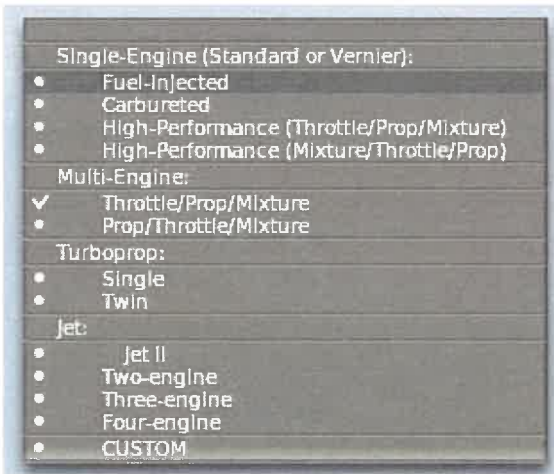
After changing the quadrant, you will need to change the Standard Quadrant Setting to assure that your quadrant will operate properly. The Multi-Engine: Throttle/Prop/Mixture is set by default from the factory.

To change the setting:

1. If system has multiple computers, make sure that Master PC is selected.
2. With X-plane running, close the instructor's station by clicking x on upper left hand side.
3. Bring up the menu by moving your mouse to the top of the screen.
4. From the menu choose plugins.



5. From plugins choose PFC Standard Throttle Quadrants
6. All the different options are as pictured below. A check mark will indicate the option selected. Once an option has been clicked the box will disappear.



7. To go back to the map, move your mouse to the top of the screen and Location, then local map.



4.2.4 Control Yoke Switches and Buttons

4.2.4.1 Assign the Autopilot disconnect to Push To Talk (PTT)

1. If system has multiple computers, make sure that Master PC is selected.
2. With X-plane running, close the instructor's station by clicking x on upper left hand side.
3. Bring up the menu by moving your mouse to the top of the screen.
4. From the menu choose plugins.



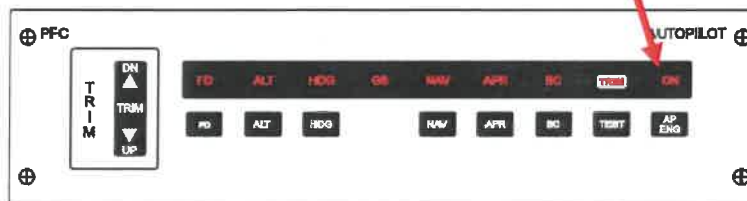
5. From plugins choose Pilot Yoke Button
6. Choose from Autopilot Disconnect or Push to talk. A check mark will indicate the option selection.



7. To go back to the map, move your mouse to the top of the screen and Location, then local map.



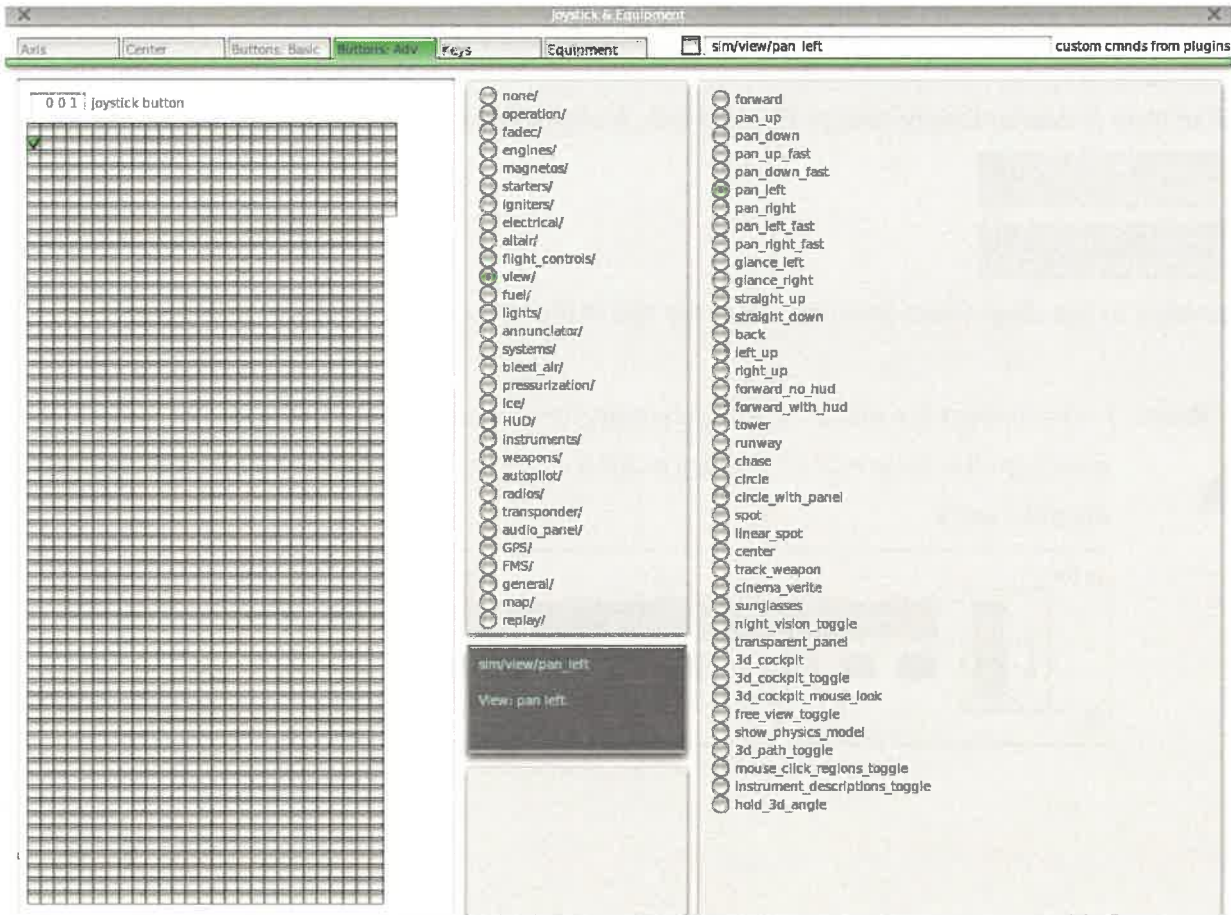
Note: To disconnect the autopilot after changing the functionality of the autopilot disconnect button on the yoke to PTT you will press the AP ENG button on the autopilot panel in the avionics stack.





4.2.4.2 Assign the yoke right rocker switch

1. If system has multiple computers, make sure that Master PC is selected.
2. With X-plane running, close the instructor's station by clicking x on upper left hand side.
3. Move your mouse to the top of the screen to show the menu bar.
4. From the menu bar, choose Settings.
5. From the settings menu choose Joystick, Keys & Equipment.
6. Go to the Buttons: ADV tab.
7. Press the top rocker switch and you will notice a number on the top left corner of the window. In the example this number is 001 this may be a different number than what you will see.
8. From the selections on the right choose View and the choose Pan Left.

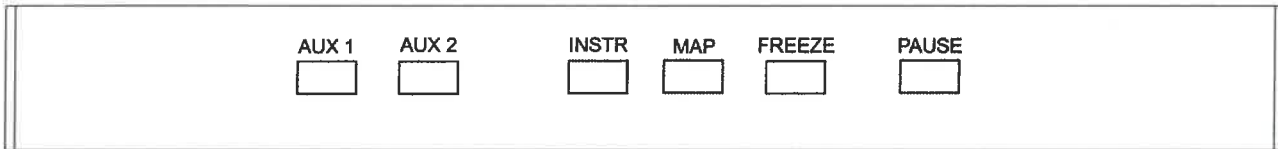


9. Repeat steps above for the bottom rocker.
10. Once complete click on x on the upper left hand side to return to the instructor's station.



4.3 Avionics items

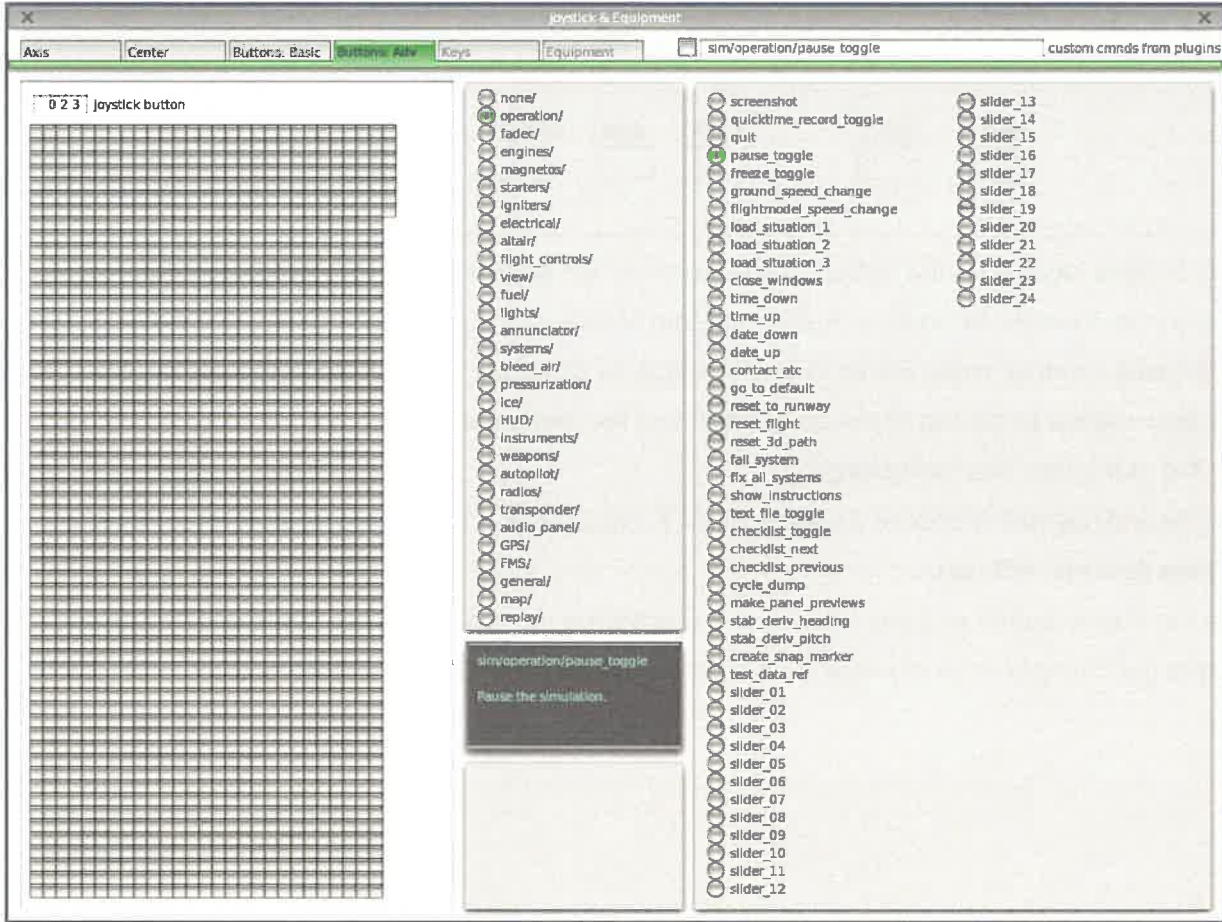
4.3.1 The Auxiliary buttons



1. These buttons located on the bottom of the avionics can be reassigned. To reassign them
2. If system has multiple computers, make sure that Master PC is selected.
3. With X-plane running, close the instructor's station by clicking x on upper left hand side.
4. Move your mouse to the top of the screen to show the menu bar.
5. From the menu bar, choose Settings.
6. From the settings menu choose Joystick, Keys & Equipment.
7. Go to the Buttons: ADV tab.
8. Press the Pause button and you will notice a number on the top left corner of the window. In this example that number is 23 this may be a different number than what you will see.



9. From the selections on the right choose Operation and then choose Pause Toggle.



10. The current assignments for the buttons are as follows:

Button Label	Function Location
Aux 1:	Button: ADV → Instruments → Thermo Units Toggle
Aux 2:	Button: ADV → Operation → Fix All Systems
Instr:	Button: ADV → Map → Show Low Enroute
Map:	Button: ADV → Map → Show High Enroute
Freeze:	Button: ADV → Operation → Freeze Toggle
Pause:	Button: ADV → Operation → Pause Toggle



Section 6

Instructor's Operating Station

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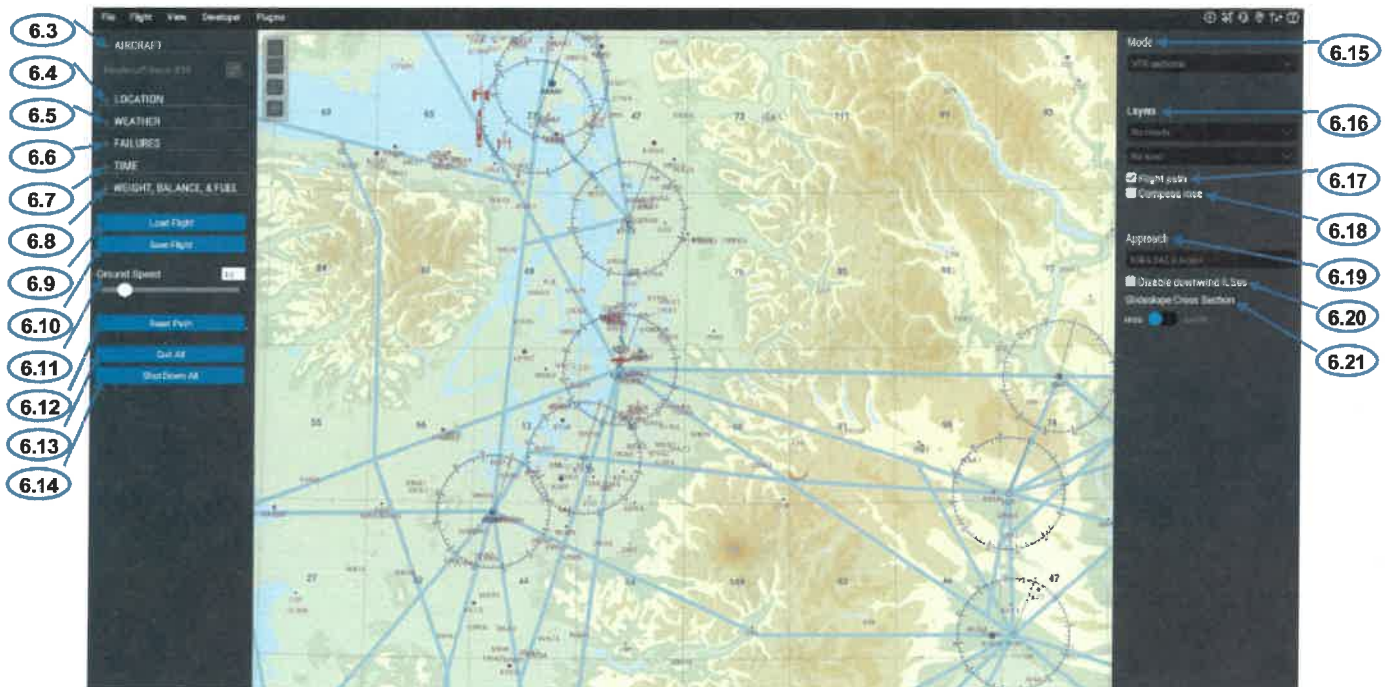


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6.1 Instructor's Operating Station Sections





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6.2 Introduction

The Instructor's Operating Station (IOS) is the command center of the training device. From here, you will be able to setup the aircraft initial position, replay the flight and induce aircraft failures, change weather parameters and many more functions. You will probably spend more time using this page than any other.

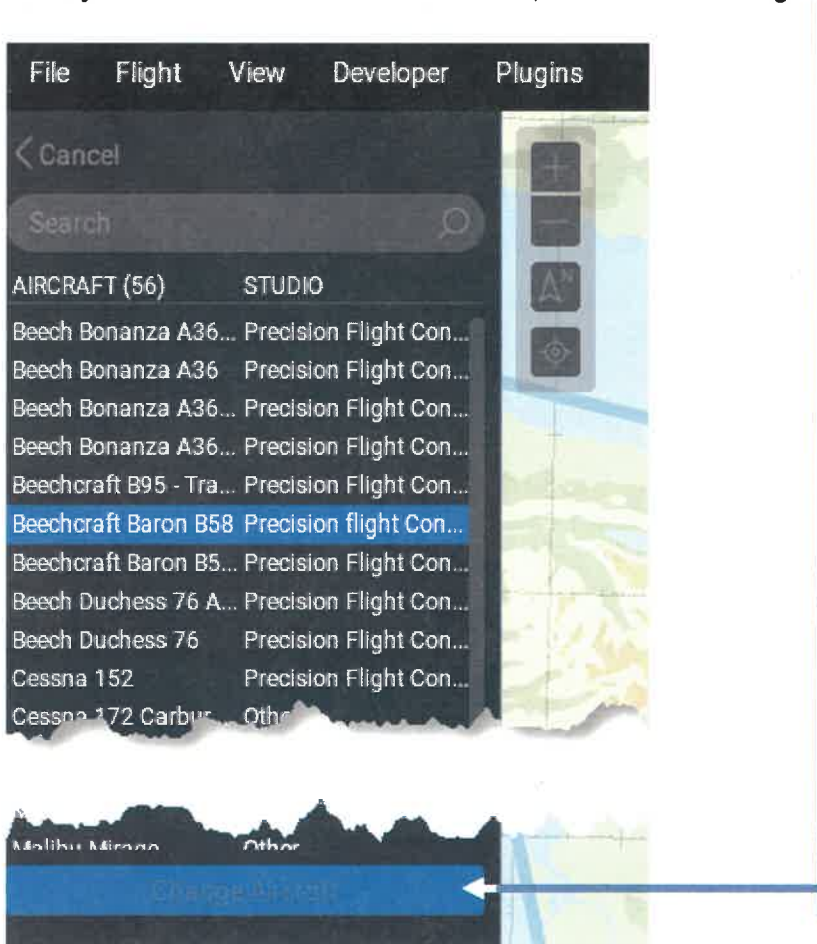
In 6.1 it shows a screen shot of the X-Plane 11 Instructor's Station (IOS). The IOS is divided to 19 main instructor functions available. These functions are:

- Aircraft
- Location
- Weather
- Failures
- Time
- Weight, Balance & Fuel
- Load Flight
- Save Flight
- Ground Speed
- Reset Path
- Quit All
- Shut Down All
- Mode
- Layers
- Flight Path
- Compass Rose
- Approach
- Disable Downwind ILSes
- Glideslope Cross Section


6.3 Aircraft

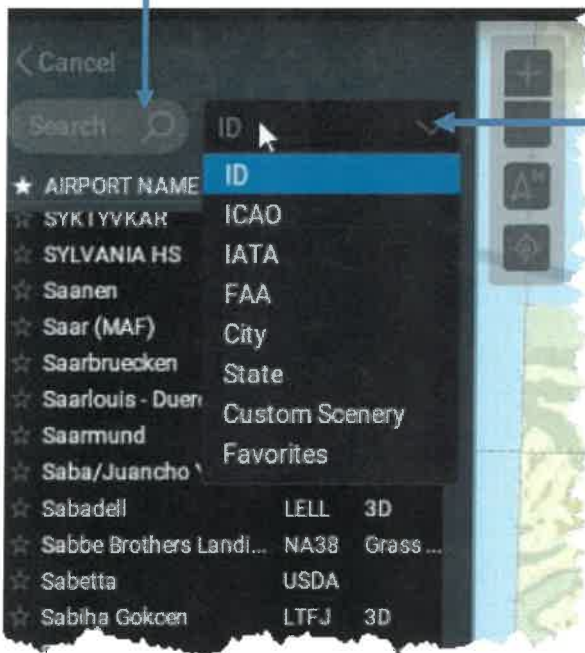
The Aircraft menu will allow you to see and change your current aircraft. Click on the + it will show your current aircraft. Click on the  and on the "Search" box, type the out the name of aircraft you wish to use. Every time you select an aircraft verify that the "Studio" is Precision Flight Controls, Inc.

Once you have selected the aircraft model, click on the "Change Aircraft" button.



6.4 Location

The Location menu will allow you to see and change your current location. Click on the + you will see your airport or the one you took off from. Click on the  and on you will see the "Search" box and collapsed drop down menu.



Use the drop-down menu to select the type of search you wish to perform. On the sample below we searched by ID and searched for KMHR. X-Plane will list the available Ramp or Runway available for that airport based on the position of "Starts" slider.

6.4.1 Starts Slider

The Starts slider will allow you to select between Ramp and Runway for the list to be shown.

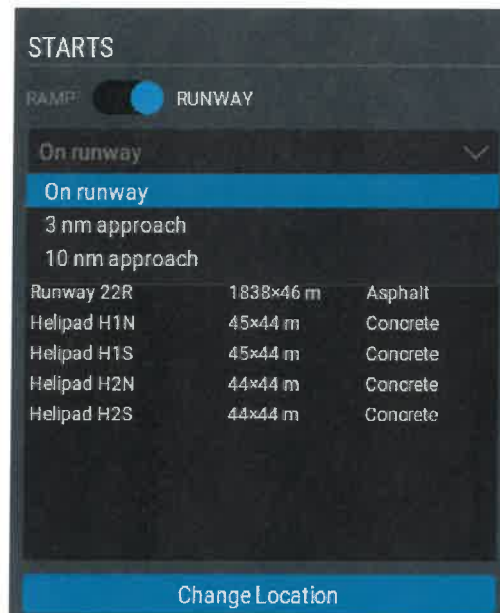
6.4.1.1 Start on Ramp

Click the slider to Ramp and then select a ramp by clicking on it. Click on Change Location to move the aircraft your desired ramp. The menu will close after the aircraft has been moved.





6.4.1.2 Start on Runway

Click on slide to Runway and then click on a runway. If preferred to put the aircraft on a 3- or 10-mile approach, click on the drop menu and select 3nm Approach or 10nm Approach. Click on Change Location to move the aircraft your desired location. The menu will close after the aircraft has been moved.



6.5 Weather

The Weather menu will allow you to see and change your current weather. Click on the + you will see the Current weather. Click on the  and on you will see the list of different weather-related features you can change. After changing an option or many options, you must click on the  button on the bottom of the page to apply the new weather.

6.5.1 Quick Set

Quick Set allows you to select preset conditions. Click on the + to show the menu and click on the drop menu and select from the list. After selecting one of the preset conditions, click on Change Weather button.



These conditions are:

- None / CAVOK – Ceiling and Visibility OK. Typically referred to as CAVU. This option has no wind or cloud layers with visibility set to 25 statute miles (sm).
- VFR - sets the weather to good visual flight rule conditions—clear, sunny skies with no wind and visibility at 7sm
- Marginal VFR - sets the weather marginal VFR flying conditions, with about five miles of visibility and a 1,500-foot ceiling
- Non-Precision Approach - sets the weather for a non-precision approach, with a 3-mile visibility and a 400-foot ceiling
- IFR CAT I - sets the weather up for a Category-I ILS approach, with RVR of about 2700 feet and 200-foot ceiling

- IFR CAT II - sets the weather up for a Category-II ILS approach, with RVR of about 1100 feet and 100-foot ceiling
- IFR CAT III - sets the weather up for a Category-III ILS approach, with RVR of about 560 feet and 50-foot ceiling
- Stormy – sets weather for heavy precipitation, cloud and storm with about 200-foot ceiling.

6.5.2 Atmospheric Conditions

The Atmospheric Conditions will allow you to configure the different parts of the atmosphere. Click on the + to show the options for visibility, precipitation, storminess, temperature, barometric pressure. After selecting the changes, click on Change Weather button to apply the new settings.

6.5.2.1 Visibility

The Visibility section will allow you to change the visibility.

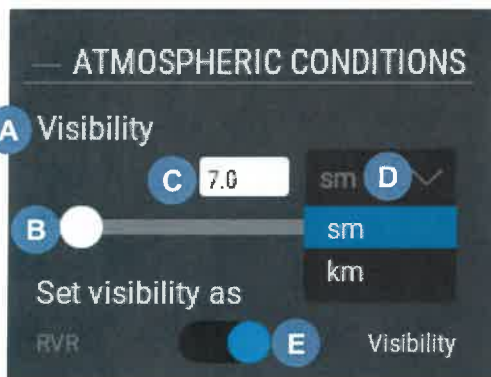


Figure 1

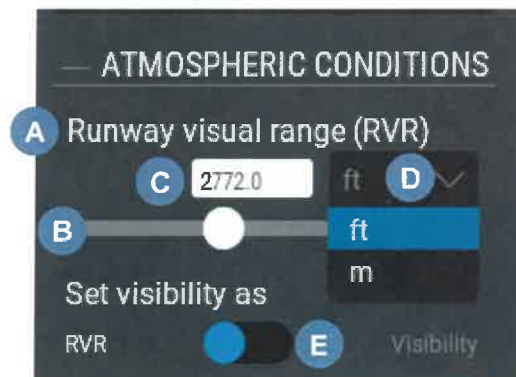


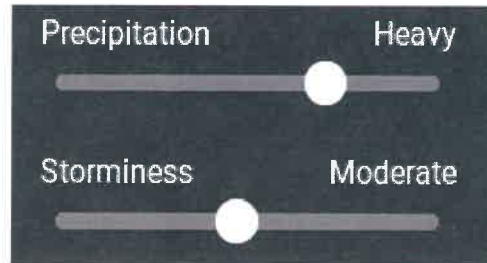
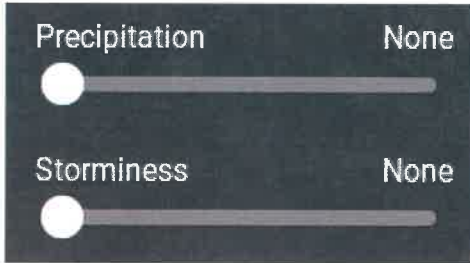
Figure 2

The visibility section as shown in Figure 1 and Figure 2 have the following functions:

A. Current Visibility Setting	Shows the current setting of “Set Visibility As” toggle slider. This will change from Visibility to Runway.
B. Visibility Distance Adjustment	Slider is used to adjust the visibility.
C. Visibility Setting Readout	Read out for the current visibility setting.
D. Unit Selector	In visibility mode, you can change the unit from Statute Miles (sm) to Kilometers (km). In RVR mode the units are Feet (ft) or Meters (m).
E. Set Visibility As Toggle	Allows toggling between RVR or Visibility.

6.5.2.2 Precipitation

The Precipitation slider allows adjustment to the amount of precipitation from None, Light, Moderate, Heavy and Severe. After setting the slider in the preferred position, click on Change Weather to apply the new setting.



6.5.2.3 Storminess

The Storminess slider allows adjustment to the amount of storm cells from None, Mild, Moderate, Heavy and Severe. Moving this slider will also move the precipitation to the same level. You can set the storminess lower than precipitation but not higher. After setting the slider in the preferred position, click on Change Weather to apply the new setting.

6.5.2.4 Temperature at Nearest Airport

The Temperature at Nearest Airport slider allows adjustment to the temperature the range is from -10°F to 125°F (-23.3°C to 51.7°C). You can also click on the box to type in the temperature. You can set temperature with one decimal number after the whole number. Temperature range when typing is -459.7°F to 18,032.0°F (-273.1°C to 10,000.0°C). After setting the slider or typing in the temperature click on Change Weather to apply the new setting.



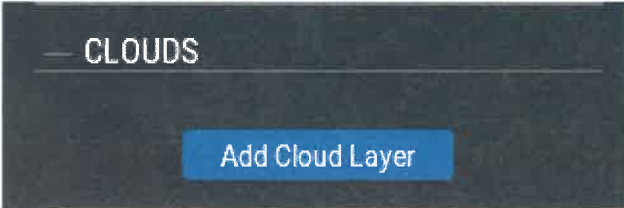
6.5.2.5 Barometric Pressure at Sea Level

The Barometric Pressure at Sea Level slider allows adjustment of the barometric pressure setting. The slider range is from 29.00 to 32.00 Inches of mercury (inHg) or 982 to 1084 Hectopascal (hPa). You can click on the box to type in the barometric pressure setting you wish to use. The range when typing is 0.00 to 7500.00 inHg or hPa.

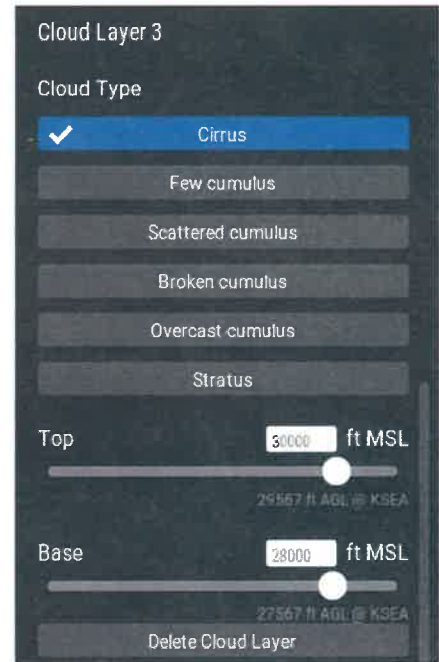
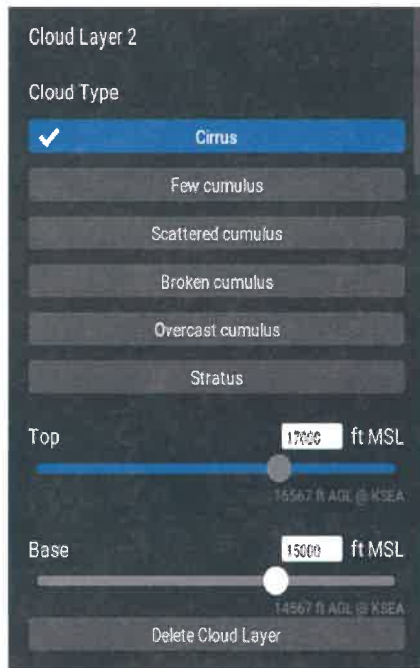
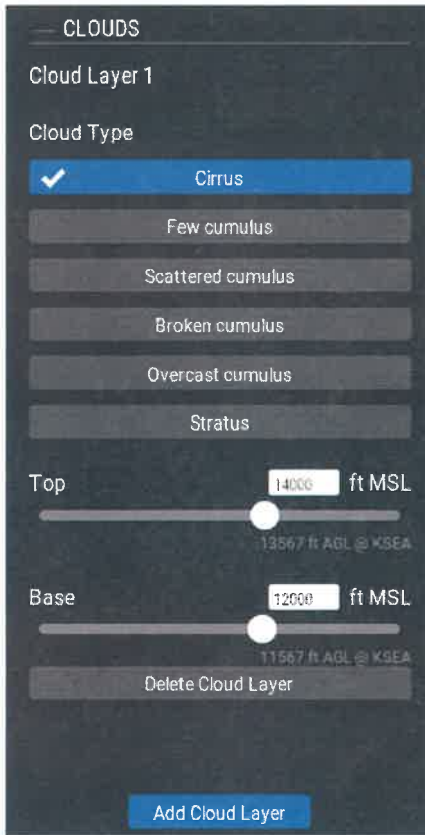


6.5.3 Clouds

The Clouds will allow you to set up to 3 different cloud layers. Click on the + to show the menu, if currently there are no clouds you will see the Add Cloud Layer button.



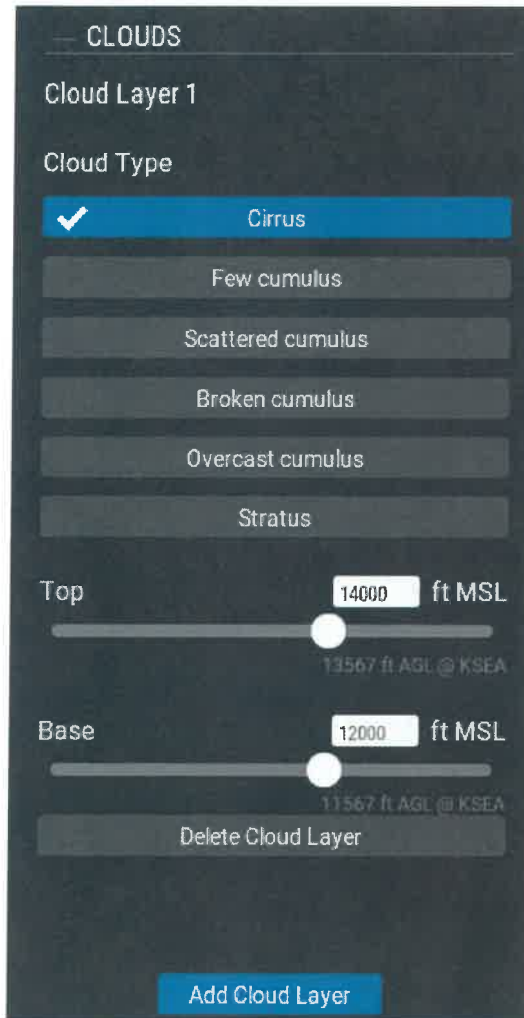
If there are cloud layer existing, it will be listed first and the Add Cloud Layer button will be at the bottom. The add cloud layer button will not be shown if there are 3 cloud layers. The delete cloud layer will remove the cloud layer.



Cloud Layer 1 is closest to the ground and Cloud Layer 3 is the highest. Each cloud layer has a minimum separation limit of 2,000 feet.

6.5.3.1 Cloud Type

Each cloud layer can be set to different Cloud Type. The different cloud types are Cirrus, Few Cumulus, Scattered Cumulus, Broken Cumulus, Overcast Cumulus and Stratus. The check mark indicates the cloud selected.



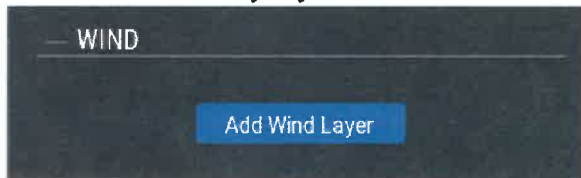
Each cloud type has the same minimum thickness of 2000 ft. The maximum thickness for Scattered Cumulus, Broken Cumulus, Overcast Cumulus and Stratus is 40,000 feet. For Cirrus and Few Cumulus maximum thickness is 2,000 feet.

Setting the top or base altitude using the slider or by typing in the white box. If the top and base you set exceeds the minimum or maximum thickness it will automatically adjust to be at the minimum or maximum.

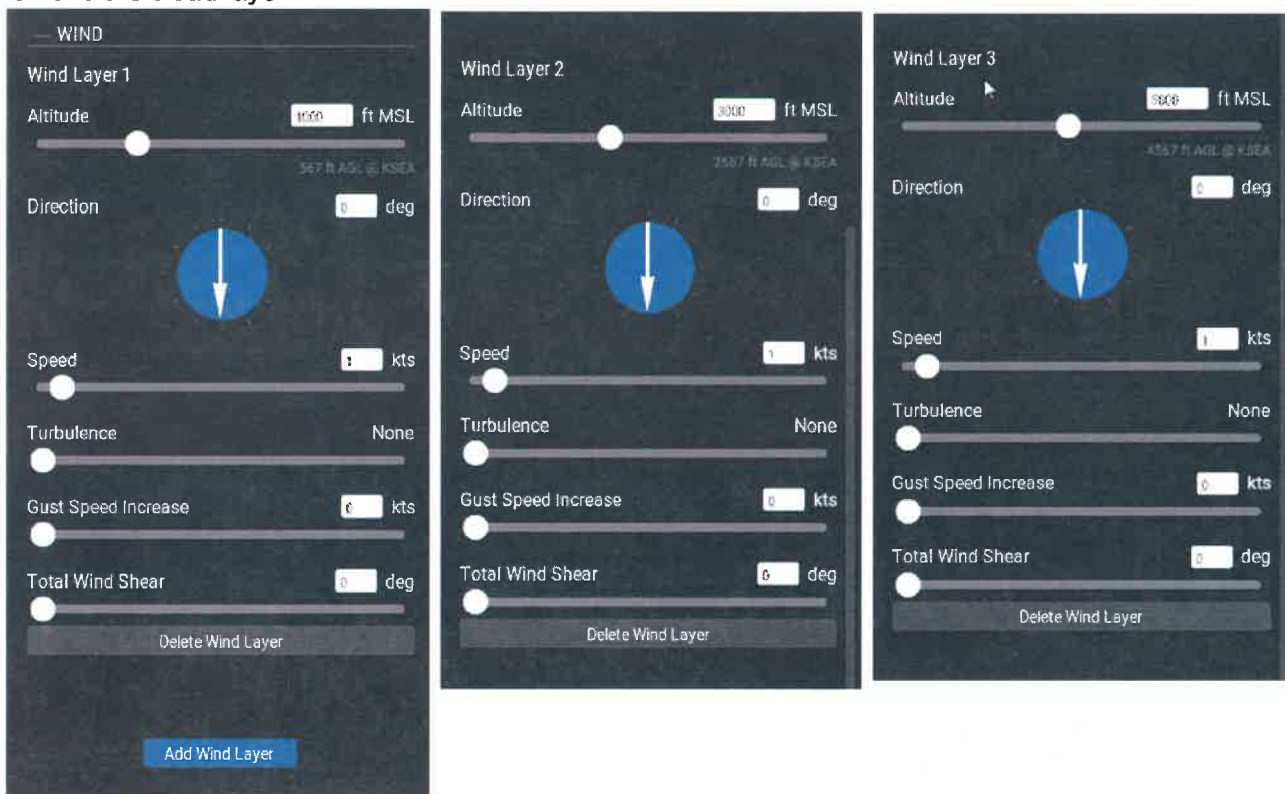
Remember to click on the Change Weather button to apply the clouds you set.

6.5.4 Wind

The Wind will allow you to set up to 3 different wind layers. Click on the + to show the menu, if currently there are no wind layer you will see the Add Wind Layer button.



If there are wind layer existing, it will be listed first and the Add Cloud Layer button will be at the bottom. The add cloud layer button will not be shown if there are 3 cloud layers. Clicking the delete cloud layer will remove the cloud layer.

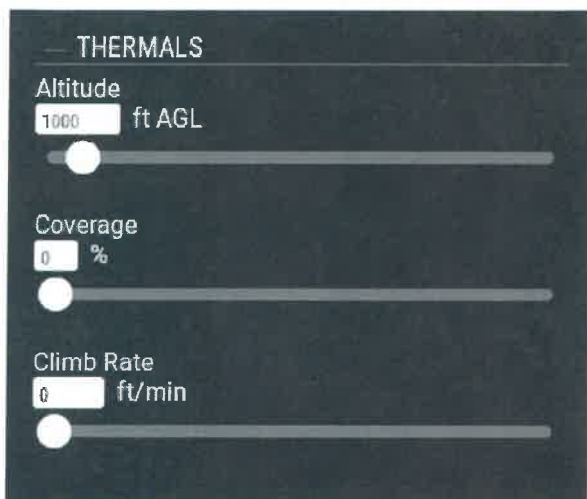


6.5.4.1 Wind Adjustments

Each wind layer can be set to different altitude, wind direction, wind speed, turbulence level, gust speed increase, and total wind shear by using the slide or typing in the white box. Remember to click on the Change Weather button to apply the wind you set.

6.5.5 Thermals

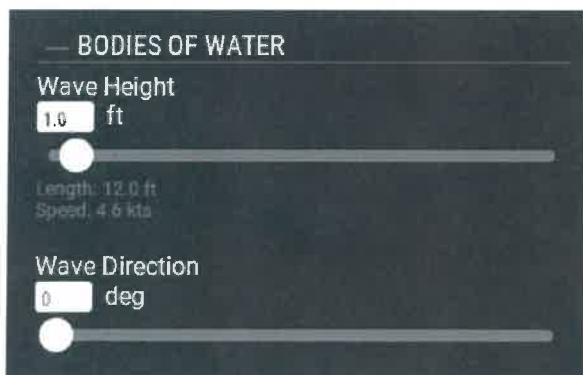
The Thermals section controls are mainly used when flying gliders. In addition to thermals, X-Plane also runs air up and down the terrain as wind blows into mountains, simulating the effects that real glider pilots have to keep in mind and try to take advantage.



Each adjustment can be made by using the slider or typing in the white box.

6.5.6 Bodies of Water

The Bodies of Water section allows the setting of wave height and wave direction for bodies of water.




Each adjustment can be made by using the slider or typing in the white box.

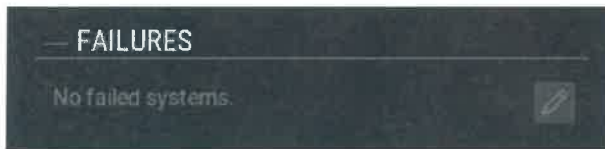
6.5.7 Runway Conditions

The Runway Conditions section controls the condition of the runway. If temperature is at 32.1°F or higher the selectable condition is Dry, Damp and Wet. Temperatures at 32.0°F or lower, the selectable conditions are Dry, Some Ice and Icy. Click on drop menu to select the condition preferred.



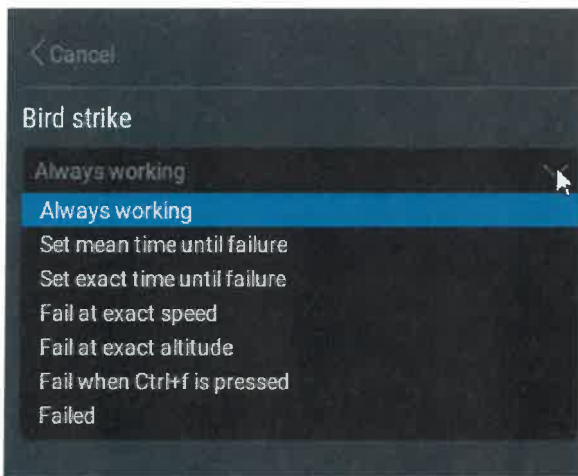
6.6 Failures

The Failures menu will allow you to see and change current failure modes. Click on the + you will see the current failure list. Click on the  and on you will see the list of different category list that you can fail. After changing an option or many options, you must click on the **Apply Changes** button on the bottom of the page to apply the failures.



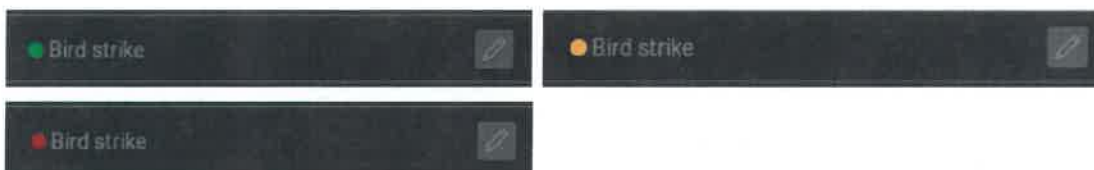
6.6.1 Failure Modes

Every failure option has six failure modes. A selecting a mode, you must click on Confirm to accept the selection.



6.6.1.1 Item Status

After setting a failure, a colored dot will indicate the actual status of item to be failed. A green dot (●) indicates always working, amber dot (●) indicates the failure is armed to fail, red dot (●) indicates failure is failed.





6.6.2 Failure Categories

There are eight failure categories list below. Items listed next to the category are a small sample of items that can be failed.

6.6.2.1 World

Includes failures for VASI / PAPI lights, Runway Lights, Bird Strike and Microburst.

6.6.2.2 Systems

Allows failing of systems. Includes sub category of Autopilot, Controls (flight controls), De-Ice, Electrical, Landing Gear and Lights.

6.6.2.3 Instruments

Allows failing of instruments only. Includes sub category of Engine, G1000, G430, Navigation, Primary, Sensors (failure of instrument sensors like Pitot tube blockage, OAT sensor, fuel quantity sensor.)

6.6.2.4 Engines

Allow failing of engine related items. Includes sub category of:

- Accessory – Throttle Governor, FADEC and etc.
- Failure - Engine fire, engine separation, etc.
- Fuel/Air - Engine driven fuel pump, fuel flow fluctuation and etc.
- Prop - Prop governor, engine drive shaft and etc.
- Start - Starter. Magneto, for turbo props hung start, hot start runaway ITT and etc.
- Wings - allows removal of wings and stabilizers.
- Control Surfaces - locking of Control Surface i.e. left aileron hard over, rudder hard over and etc.

6.6.2.5 Multi Rotors

For helicopters.

6.6.2.6 NAVAIDs

Allows failing of navigational aids, i.e. VORs, NDB, ILS and etc. This list automatically changes based on your current position.

6.6.2.7 Set mean time until failure

When set, failure will occur between when you set it and the max number of minutes you put it; i.e. if set to 15 minutes, failure will occur sometime between when failure was set and 15 minutes.

6.6.2.8 Set exact time until

When set, failure will occur at minute set.

6.6.2.9 Fail at exact speed

When set, failure will occur when indicated airspeed is at speed set.

6.6.2.10 Fail at exact altitude

When set, failure will occur when aircraft is at altitude set in AGL.

6.6.2.11 Fail when Ctrl+f is pressed

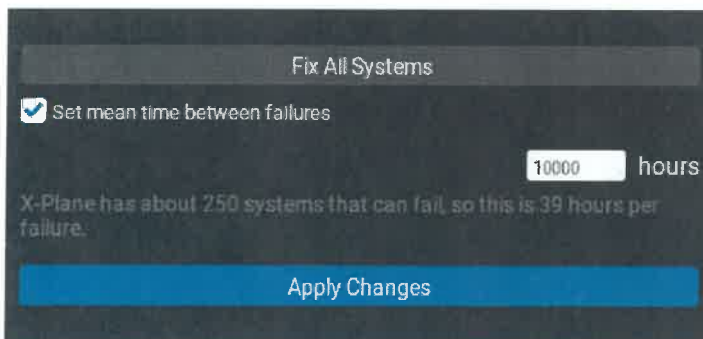
When set, you can activate failure by pressing the CTRL key and f at the same time. Usually used when trying to fail multiple items at the same time.

6.6.2.12 Failed

When selected, failure will occur immediately.

6.6.3 Fix All Systems

Clicking this button resets all systems to operational.

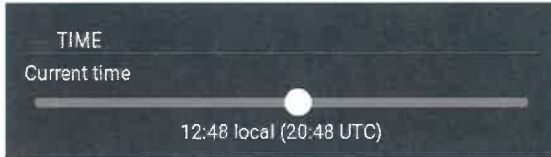


6.6.4 Set mean time between failures

Checking this box will enable random failures within the specified number of hours.

6.7 Time

Moving the Time slider changes the time of day. The local time is based on your current position.

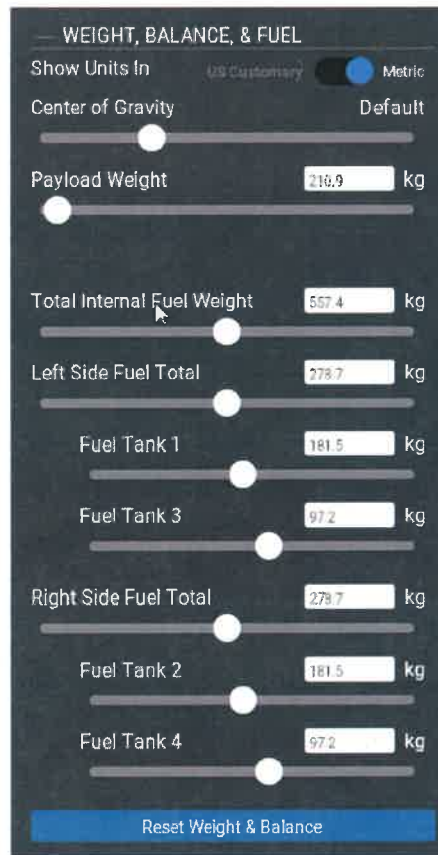
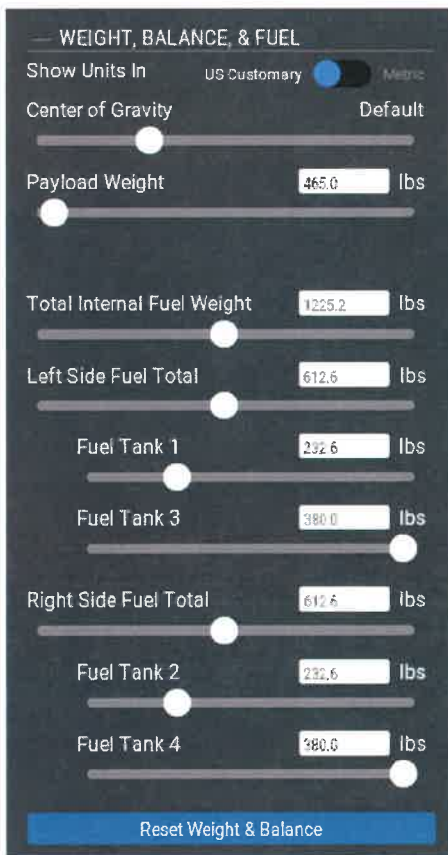


6.8 Weight, Balance & Fuel

The Weight, Balance & Fuel allow changing of the Center of Gravity (CG), Payload Weight, and Fuel.



NOTE: Changes to Weight, Balance and Fuel occurs instantly.



Picture above shows different units of weight from US Customary in pounds (lbs) to kilogram (kg) for metric.

6.8.1 Center of Gravity

The Center of Gravity (CG) slider adjusts the position of position of the CG of the aircraft.



The Default position is CG in the neutral position. Sliding to the left moves the CG fore and to the right moves the CG aft.

6.8.2 Payload Weight

The Payload Weight slider adjusts the weight of payload.



6.8.3 Total Internal Fuel Weight

The Total Internal Fuel Weight slider adjusts fuel weight to all tanks.



6.8.3.1 Left Side Total

The Left Side Total slider adjusts fuel weight to left tank/s.

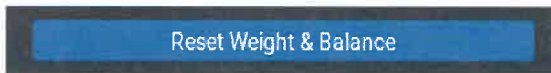


6.8.3.2 Right Side Total

The Right-Side Total slider adjusts fuel weight to right tank/s.



6.8.4 Reset Weight & Balance

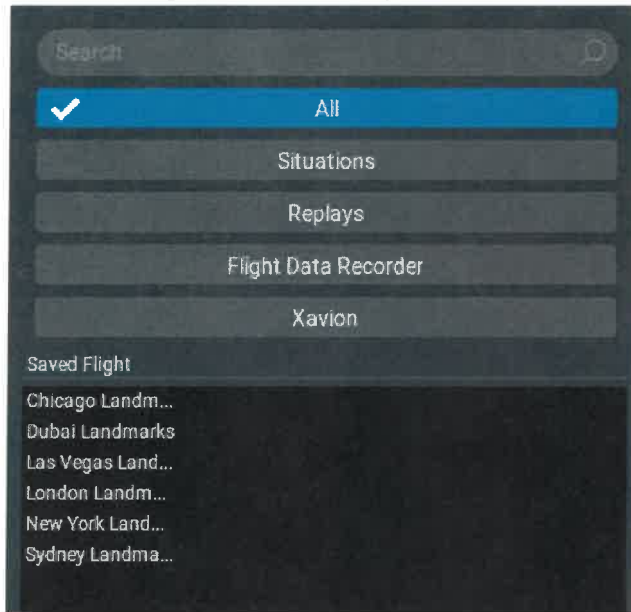


The Reset Weight & Balance button resets the following:

- Total Fuel to 50 percent.
- Center of Gravity to neutral.
- Payload Weight to about 5 percent of max weight.

6.9 Load Flight

The Load Flight button allows you to load a Situation, Replay, Flight Data Recorder and Xavion.



- All lists all items available.
- Situations list all situation files available.
- Replays list all replay files available.
- Flight Data Recorder lists all flight data recorder files available.
- Xavion lists all Xavion files available.

After selecting the file you wish to load, click on Load Selected Flight.

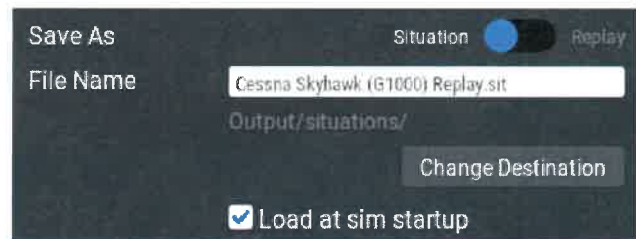
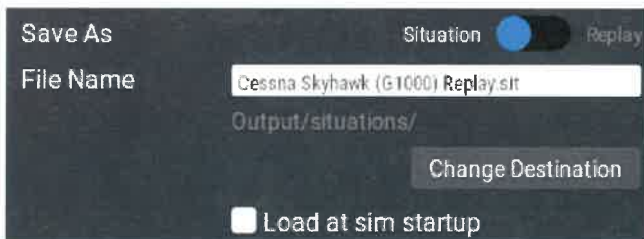


6.10 Save Flight

Save Flight allows saving of Situation or Replay.

6.10.1 Save a Situation

Saving a situation allows you to create a starting point of your flight. Saving a situation includes the current weather, frequencies and failures.



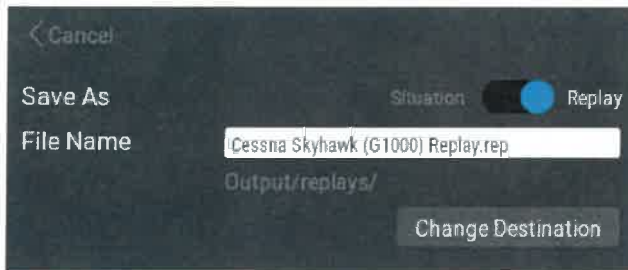
To create a situation file:

1. Select your aircraft.
2. Position your aircraft.
3. Set your altitude, airspeed and heading.
4. Click on Save Flight.
5. Slide the selector to Situation.
6. Put in the file name. It is a good practice to include a descriptive title as to the situation you are saving.
7. If desired, click on the Load at Sim startup. When enabled, anytime you start the sim, this situation file will be loaded.
8. Click on Save Flight button.



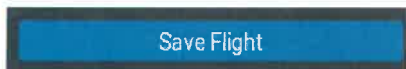
6.10.2 Save a Replay

Saving a replay allows you to create a record of the current flight. You can save a replay anytime during an active flight by initiating the Save Flight menu.



To save a reply:

1. Anytime during a flight, click on the Save Flight button.
2. Slide the selector to Replay.
3. Put in the file name. It is a good practice to include a descriptive title to what the replay is.
4. Click on Save Flight button.



6.11 Ground Speed

The Ground Speed slider allows the changing of ground speed of the aircraft.



6.12 Reset Path

Clicking Reset Path clears the red path that follows the aircraft.



6.13 Quit All

Click on Quit All to exit software but not shutdown computers.



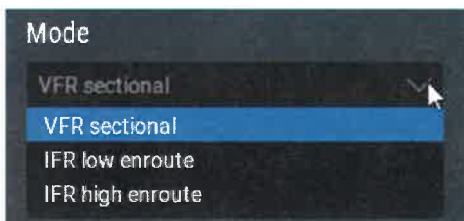
6.14 Shut Down All

Click on the Shutdown All button to exit software **AND** not shutdown all computers for your device.



6.15 Mode

The Mode drop menu allows selection of the different map mode available for the instructor's station.



VFR Sectional mode shows a reduced version of a VFR Sectional Map.

IFR Low Enroute shows Low Altitude Airways. Use this mode to see the ILS feather on the map.

IFR High Enroute shows High Altitude Airways.



NOTE: ILS Feather which represents the lateral deviation of the aircraft on the map only shows in the IFR Low Enroute Mode.

6.16 Layers

There are two drop menus under the Layers. The first is the drop menu is to overlay clouds or precipitation location on the map. The other drop menu will over lay wind information on the map.

6.16.1 Overlay Clouds

This drop menu allows the choice of showing the clouds, precipitation or both overlaid on the map. The cloud and precipitation shown here is based on the weather configured on the Weather menu.



No Clouds when selected no cloud will be shown on the map.

Clouds (Satellite IR) when selected will show infrared representation of the clouds.

Clouds & Precipitation (IR & NEXRAD) when selected will show infrared representation of the clouds and NEXRAD colored representation of precipitation.

Precipitation when selected will show NEXRAD colored representation of precipitation only.

6.16.2 Overlay Wind

This drop menu allows the choice of showing the wind.



6.17 Flight Path

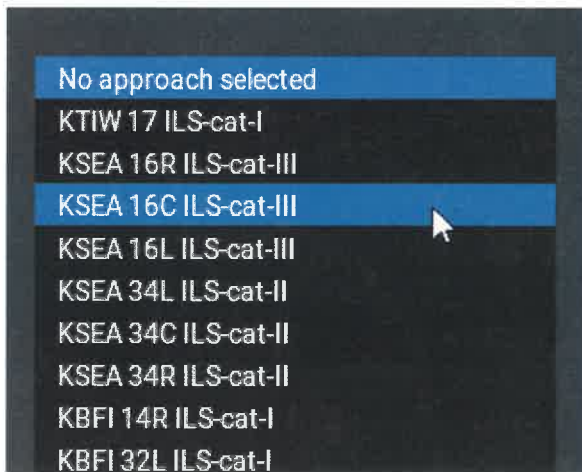
Clicking on this checkbox will show or hide the path drawn of where the aircraft has been.

6.18 Compass Rose

Clicking on this checkbox will show or hide the compass rose around the aircraft.

6.19 Approach

This works in conjunction with the Glideslope Cross Section. This drop menu allows selection of the approach you would like see on the Glideslope cross section. If none is selected, no information will be the Glideslope Cross Section. On the picture below, it shows a short list of the approaches available based on the current location of the aircraft. The list will automatically change based on the location of the aircraft.



6.20 Disable Downwind ILSes

Clicking on this checkbox will disable the downwind ILSes. Downwind direction is based on the wind direction setting only on the Wind Layer 1 in the weather page. This option does not need any wind speed or another setting in the Wind Layer 1, what fails is only determined by the wind direction. Failed ILS using this feature will be hidden from the map.



On Figure 3 below note the wind direction and speed, this is highlighted in red square. Also note that the checkbox for Disable downwind ILSes is not checked. Both ILS feather for KTCM is showing.

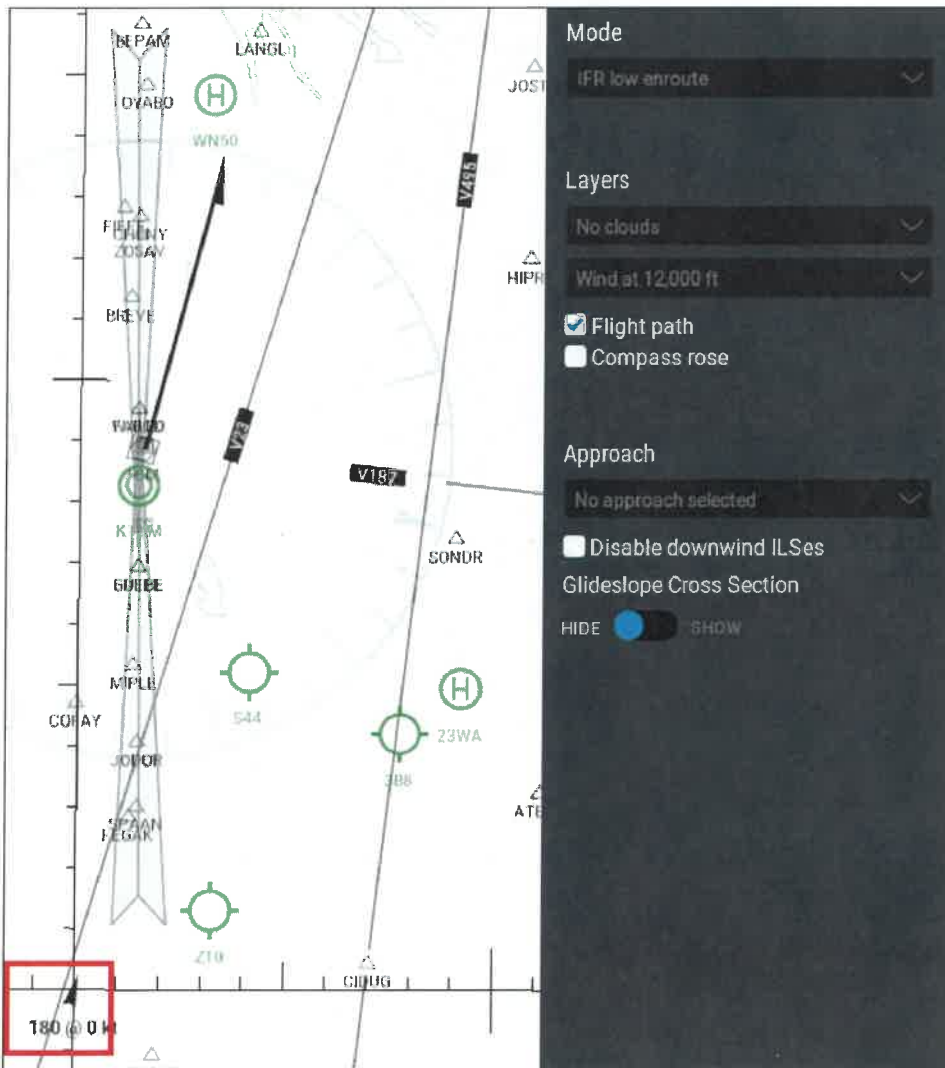
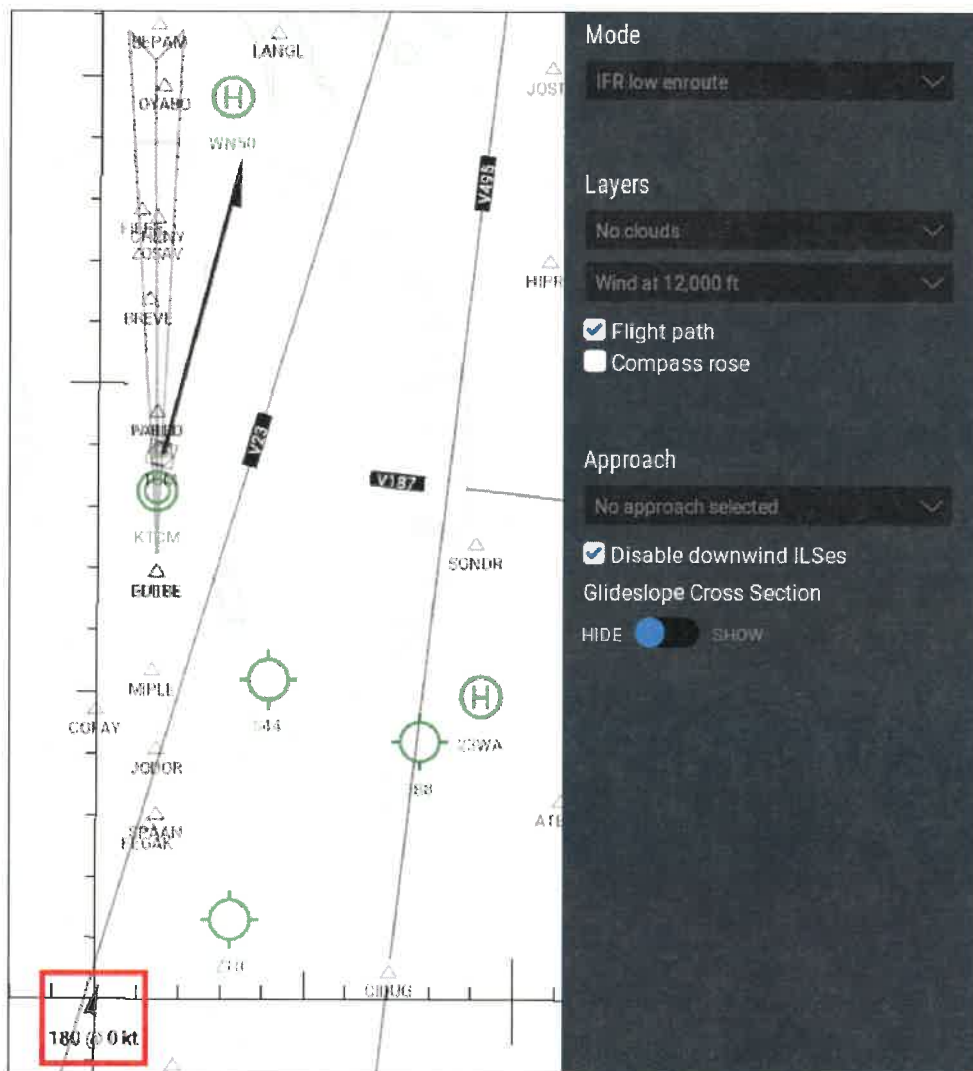


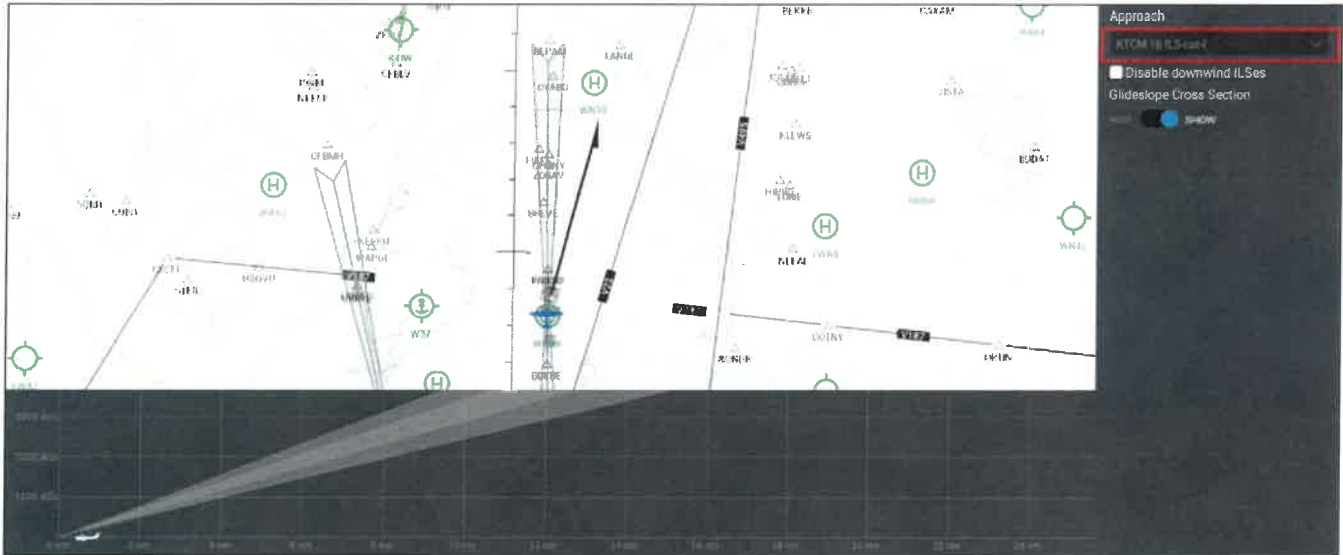
Figure 3

On Figure 4 below note the wind direction and speed, this is highlighted in red square. Also note that the checkbox for Disable downwind ILSes is checked. The ILS feather for KTCM 16L is the one showing.

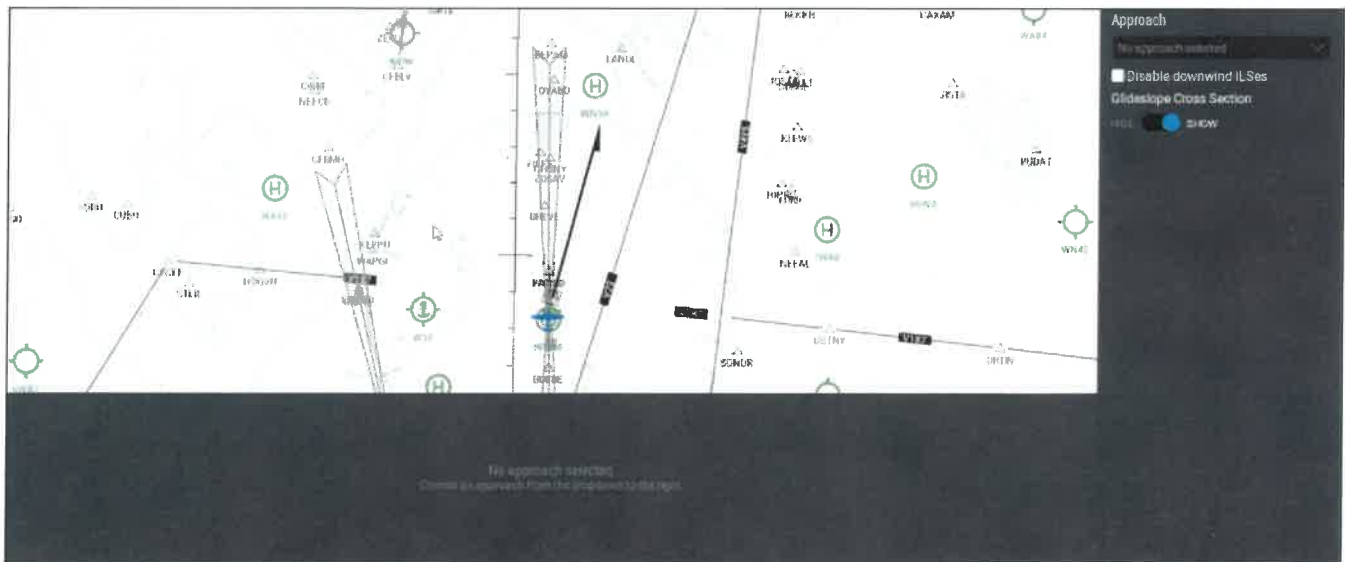


6.21 Glideslope Cross Section

The Glideslope Cross Section toggles to show or hide the glideslope cross section based on the selected approach on the approach drop menu. On the sample below, KTCM 16 ILS-cat-1 is selected and is the cross section is shown.



The picture below shows no selected approach and no cross section is displayed



6.22 Click to Get Information

Different items in the map when clicked will show an information box. The information shown is different based on what you have selected.

6.22.1 Aircraft

Clicking on an aircraft shows the current heading, altitude, speed and pitch of the aircraft. Each information can be change through the information box. This change occurs instantly.



6.22.2 Airport

Clicking on an airport shows an information box with two selection. The Move tab shows all the available runway on the airport selected. Click on the runway number will move the aircraft to it. X-Plane will confirm if you wish to end your current flight. To proceed with the move, you will need to click on Start New Flight. The Final Approach button will move the aircraft to the final approach of the runway next to the button you selected. You must click on Start New Flight to proceed to move the aircraft.

The Details tab shows airport information that includes, Communications, Conditions and your aircraft Relative Location from the airport selected.

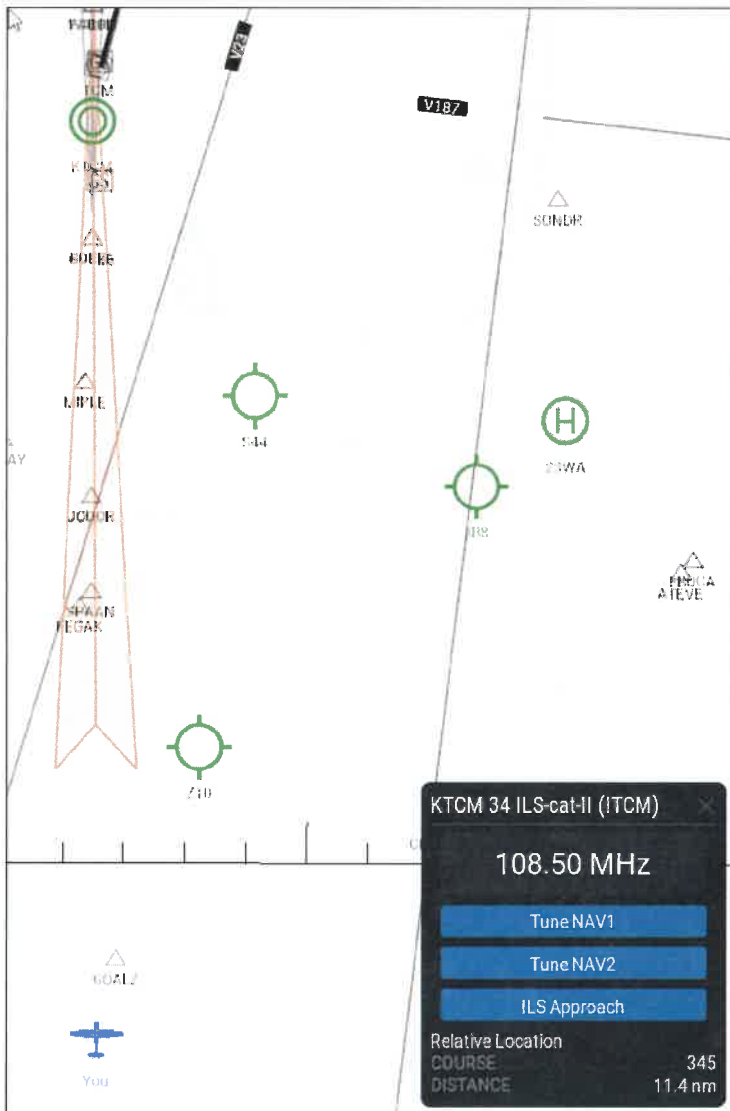
6.22.3 VOR

Clicking on VOR will show the frequency of the VOR. An option to tune the frequency to NAV1 or NAV2 by clicking on the Tune Nav1 or Tune Nav 2 button is available. The information box shows your aircraft Relative Location from the VOR selected.



6.22.4 ILS

Clicking on ILS will show the frequency of the ILS. An option to tune the frequency to NAV1 or NAV2 by clicking on the Tune Nav1 or Tune Nav 2 button. A third option is moving the aircraft to the approach for the ILS selected. ILS feather will turn orange to distinguish the selected ILS. The information box shows your aircraft Relative Location from the ILS selected.



6.22.5 NDB

Clicking on NDB will show the frequency of the ILS. An option to tune the frequency to ADF 1. Though there is an option for ADF2 PFC systems only support one ADF receiver. The ADF is highlighted in red here for better visibility, in X-Plane it will turn to yellow when selected. The information box shows your aircraft Relative Location from the NDB selected.



6.22.6 Fix / Waypoint

Clicking on Fix or Waypoint will show your aircraft Relative Location from the selected item.





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