

Antonov An-225 MANUAL



Support

How we can support you

We provide two forms of support for the iniBuilds AN-225.

1. Ticket System/Email: Visit <u>inibuilds.com/contact</u> for information on how to contact us through email and submit a support ticket. Our team aims to respond as soon as possible, however please allow up to 48 hours for your ticket to be answered.

2. The iniBuilds Forum: Visit <u>forum.inibuilds.com</u> to gain access our community forum. Here you can interact with both iniBuilds' team members, along with other users of the product to obtain support. Utilizing the iniBuilds Forum may allow for a quicker form of support compared to opening a support ticket.

Important Notes

- In the MSFS Graphics Settings menu, please ensure Shadows Maps are set to 2048 to avoid flickering shadows.
- For the most accurate performance calculations, you should complete your calculation whilst parked at your departure airfield.





Standard Operating Procedures

Preface

FOR SIMULATION USE ONLY - DESIGNED FOR SINGLE-PILOT OPERATIONS

This guide is designed to help provide a straightforward set of instructions to aid in operating the iniBuilds AN-225 Mriya. It has been produced using multiple real-world AN-225 Operator manuals from various dates, with modifications to various procedures to make them more manageable under single-pilot operations as well as in multi-crew scenarios.

PHOTOSENTIVE SEIZURE WARNING

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these "photosensitive epileptic seizures" while playing video games.

Immediately stop playing and consult a doctor if you experience any symptoms.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking, or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

Parents should watch for or ask their children about the above symptoms. Children and teenagers are more likely than adults to experience these seizures.

You may reduce risk of photosensitive epileptic seizures by taking the following precautions:

- Play in a well-lit room.
- Do not play if you are drowsy or fatigued.

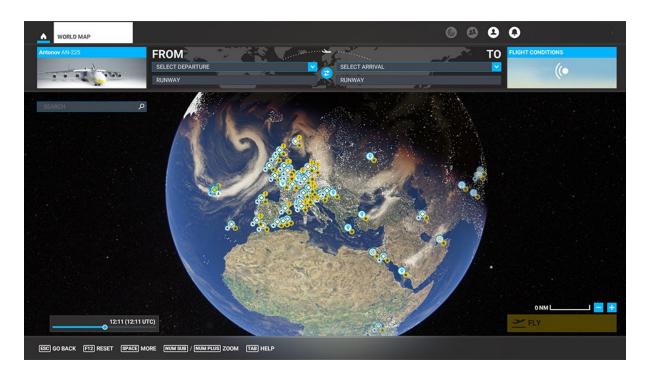
If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before playing video games.





Aircraft Selection and Liveries

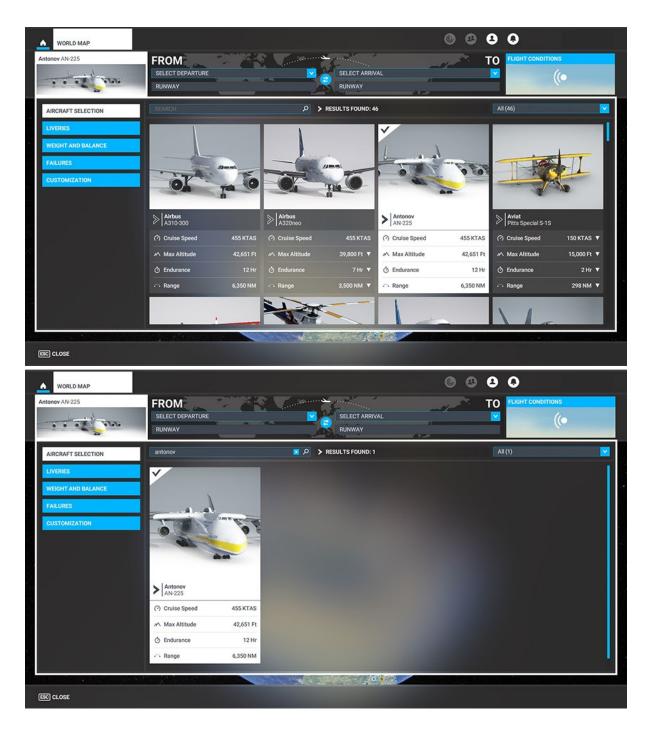
To fly the Antonov AN-225 Mriya you need to select it from the Aircraft Selection menu. Click on World Map from the Main Menu and click the Aircraft selection icon in the top left.



Scroll until you see the Antonov AN-225 or type in the search bar "Antonov" or "AN-225" and the aircraft will show.



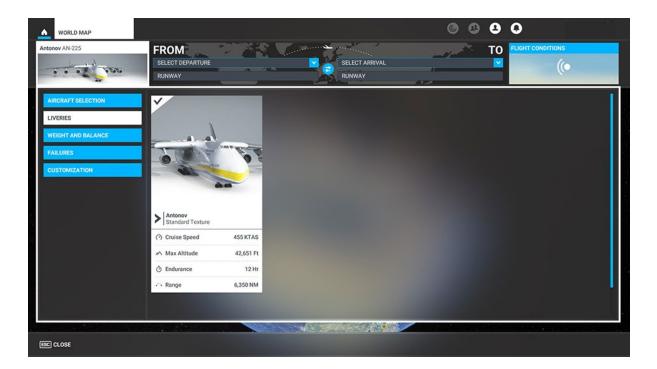




Once you have selected the aircraft you can change the livery selection by clicking LIVERIES.







You will see the default liveries and any extra liveries that you have put into your Community folder.





Cockpit Interaction

Some knobs within the cockpit have interaction where you can push, pull, or scroll them for certain functions.

Depending on what you have set on the PC under General Options - Accessibility, specifically the Cockpit Interaction System, the interaction in the cockpit is different.

If it is set to "Lock", left click the knob and push the mouse for "push" interaction and pull the mouse for "pull" interaction whilst holding the left mouse button down. Some functions also may have middle-mouse button "scroll" or "push" and right-mouse click "set" functions.

If it set to "Legacy" you will see an icon appear either to the left, right, above or below which you use the middle-mouse wheel to scroll if it as a circular arrow and left click to "set" if it an up or down arrow icon.

On the Xbox, press A to interact with the knob and use A to "push", X to "pull" Right Stick to "scroll" and B to finish the interaction.







Electronic Flight Bag (EFB)

There is an Electronic Flight Bag (EFB) located on either side of the cockpit (Captain and First Officer) which is intrinsically linked to the aircraft Flight Management System (FMS). It is also linked to some core simulator functions like requesting ground power, setting default aircraft spawn states, managing cargo hold loads, managing passengers, METAR, moving map, etc. Simply click the Menu buttons on the left to navigate the pages.





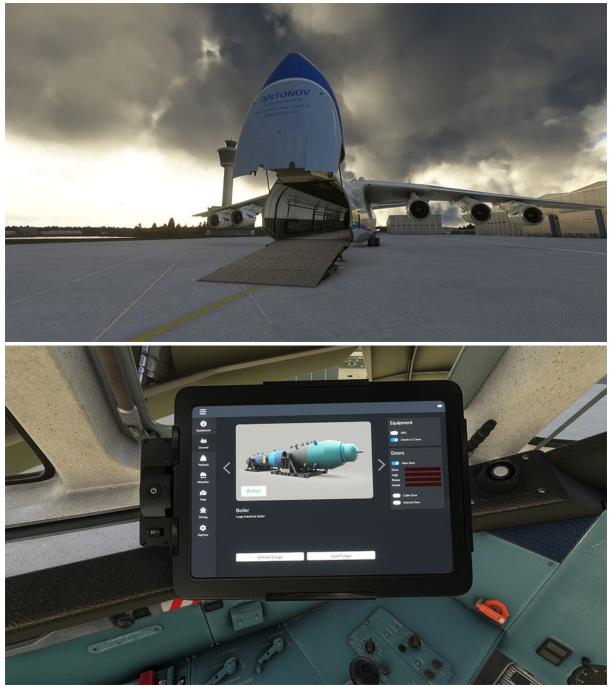


Cargo Load Management

There are several cargo loads that come with the aircraft than can be loaded into the cargo bay, via the EFB.

First we need to ensure the engines are off and should open up the nose to access the cargo hold.

Select the Ground option on the left and click the "Main Door" option on the right side under Doors.



This will open the nose door, lower the ramp and kneel the aircraft ready to load/unload your cargo.





Use the arrows next to the load picture to cycle through the available loads and select either Unload Cargo or Load Cargo.

Note: The cargo selected will also add additional weight to the aircraft and engines need to be off to load/unload cargo.















Now click on Payload on the left side of the EFB where you can see the weight of your cargo, set the number of passengers on-board and apply the weights to the aircraft FMS.



To close the cargo hold, go back to the Ground option on the left and select the Main Door option on the right.





Checklists

Whilst this guide offers comprehensive procedures and checklists, there are handy procedures checklists built within the simulator which can be found from the top-of-screen drop down menu and selecting the Checklist option.



Some items within the in-sim checklist have a drop down for sub functions, simply click the blue down arrow to open them.



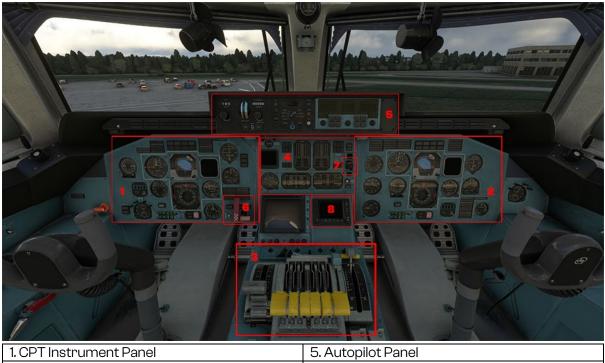
Clicking the blue eye icon to the right of the checklist item will switch your view to the correct panel where the button/switch/dial/gauge is located.

You can use the TICK ITEM option to tick off the item from the checklist as handy reference.

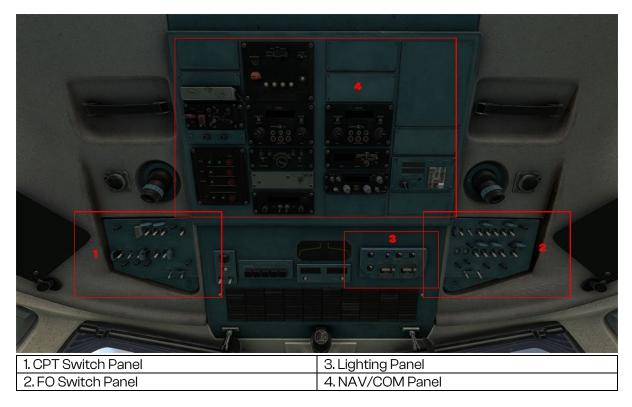




General Cockpit Layout

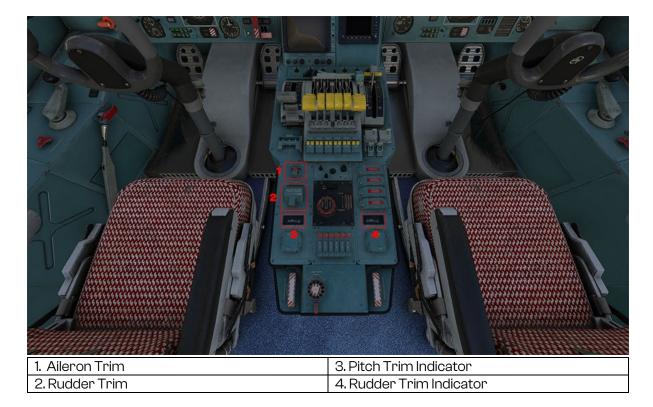


1. CPT Instrument Panel	5. Autopilot Panel
2. FO Instrument Panel	6. Parking Brake
3. Spoiler / Throttles / Flaps	7. Landing Gear
4. Engine Instrument Panel	8. GPS







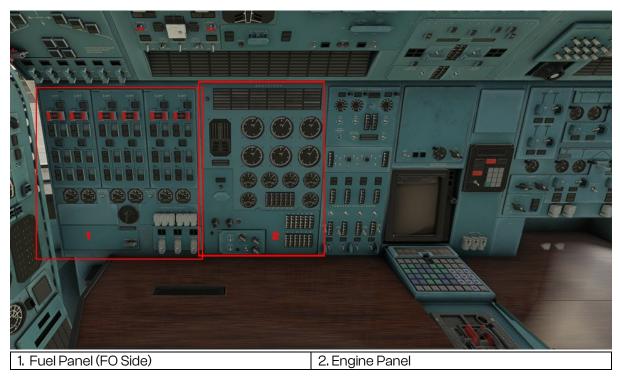


















1. Engine Start Panel (FO Side)

2. Hydraulic Panel







1. COM Engineers Panel (CPT Side)

2. Navigation Panel





First Officer Side - Engineers Stations













Captain Side - Engineers Stations







Limitations

Weight Limits

Airframe Limits

Limitation	KG	Lbs
Maximum Takeoff Weight (MTOW)	640 000	1410 958
Maximum Landing Weight	550 000	1212 542
Maximum Zero Fuel Weight (MZFW)	543 500	1198 212
Operating Empty Weight (OEW / DOW)	285 000	628 317

Under exceptional conditions, an immediate landing is permitted at any weight below MTOW provided the overweight landing procedure is adhered to.

Payload Limits

Limitation	KG	Lbs
Maximum Fuel Quantity	300 000	661 386
Maximum Passenger Weight	3 500	7 716
Maximum Cargo Hold Weight	255 000	562 178
Maximum Total Payload Weight (Cabin + Holds)	258 500	569 894

Speeds & Performance Limits

Maximum Slats/Flaps Speeds (VFE)

Suitable Flight Phase	Slats	Flaps	Max Speed (IAS)
Takeoff	2	2	463 KPH / 250 KTS
Takeoff and Approach	15	15	416 KPH / 225 KTS





Takeoff, Approach and Landing	25	25	398 KPH / 215 KTS
Landing	35	35	370 KPH / 200 KTS

Flight Manoeuvring g-Load Limits

Clean Configuration	+2.5 g	-1 g
Slats Extended Configuration	+2 g	Og

Approach Limits

Maximum ILS	-2.5 degrees	-3.5 degrees for AP ILS
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Wind Speed Limitations

Maximum Tailwind Component (Takeoff and Landing)	18 KPH / 10 KTS
Maximum Demonstrated Crosswind (Dry Runway)	52 KPH / 28 KTS
Computed Crosswind Capability (Dry and Wet Runways)	69 KPH / 37 KTS

Range

INIBUILDS

Range	Empty – 15,400km
	Max Weight Loaded – 4,000km



Operations and Techniques

This Section outlines the procedures and techniques required to operate the AN-225 safely and efficiently through all phases of flight.

Some procedures have been simplified and streamlined for single-pilot operation in a typical multi-crew aircraft.





Simplified Procedures

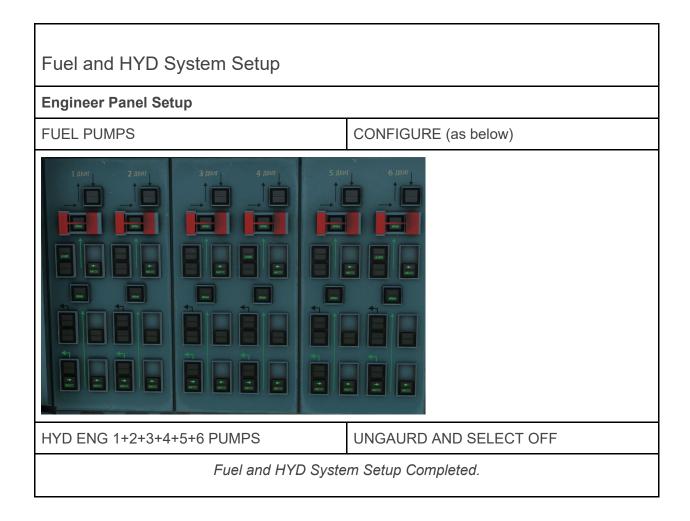
Electrical Power Up	
Electrical Panel	
BAT 1 2 3 4 5	AUTO (up position)
EXT PWR (IF SELECTED)	ON
APU 1+2 START (Drop down)	
APU FUEL HEATER 1	OFF (If was selected on)
APU FIRE LOOP 1	ON
APU MASTER SW	ON
APU START SW	PRESS AND HOLD 1 SEC
FOR APU 2 SAME PROC AS ABOVE	
APU BLEED	ON
APU GEN 1+2	ON
IF EXT PWR ON	OFF
RECTIFIER 1+2+3+4	ON
TRANSFORMER RECTIFIER 1+2+3+4	ON
Navigator Panel	
INSTRUMENT+ NAVI MAST SW	ALL ON
CPT Seat Side Panel Overhead	
HSI BUS	ON
RADIO ALT BUS	ON
ADI BUS	ON
CPT ASI	ON
VSI TCAS BUS	ON





FO Seat Side Panel Overhead		
HSI BUS	ON	
RADIO ALT BUS	ON	
ADI BUS	ON	
VSI TCAS BUS	ON	
FO ASI	ON	
NAV 1 RADIO BUS	ON	
NAV 2 RADIO BUS	ON	
COM RADIO BUS	ON	
AIR DATA COMPUTER 1, 2, 3	ON	
Lights Panel		
NAV LIGHTS	SELECT ON	
Electrical Power Up Completed		









Payload and EFB Setup		
Electronic Flight Bag (EFB)		
GROUND TAB SELECT	OPEN MAIN CARGO DOOR	
GROUND TAB	SELECT PAYLOAD OPTION	
PAYLOAD TAB	CONFIGURE PAYLOAD	
	SET PASSENGER (If needed)	
GROUND TAB	SELECT FUEL IN SIM MENU	
ONCE completed remove:		
GPU (if APU not started START APU)		
FUEL TRUCK		
CLOSE MAIN CARGO DOOR and other DOORS		
Payload and EFB Setup Completed.		



Navigation Radios AP and Computer Setup

Garmin Setup

LOADROUTE via the inside planning menu or set manual. No changes here specific for the AN225 will be programmed like any GNS530 unit.

Nav Aid Setup

To be completed when you have all the NAV radios working. But will setting up both the navigator panels and the pilot overhead panel to have NAV aids needed for display but working on the assumption the users wants to follow the NAV path in the Garmin.

AP Setup

Please see the AFS section towards the end of this Manual.

Navigation Radios AP and Computer Setup Completed.





ENG Start Procedure		
CPT Seat		
When clear for start:		
BEACON LIGHT	ON	
Engineer Panel		
STARTING PANEL	SELECT OPEN	
ENG START MODE SWITCHES	SET ALL TO RICH (upper position)	
MIXTURE RATIO SWITCHES	UNGUARD AND SELECT ALL ON	
MIXTURE RATIO SWITCHES	GUARD ALL BUT STARTING ENG	
DURING START	DO THE SAME DURING AUTO START	
HYD CTR PUMPS	SELECT ON	
CHECK GREEN BAR	ONCE SEEN	
HYD CTR PUMPS	SELECT OFF	
SELECT FADEC SWITCHES	SELECT ALL ON	
FUEL HEAT SWITCH	SET UP (Upper position)	
AUTO START BUTTON	PRESS	
START BUTTON	PRESS AND HOLD FOR 3 SECONDS	
AUTO START	ENGS WILL AUTO START SEQ 162534	
AFTER EACH ENG START	SELECT HYD PUMP FOR STARTED ENG ON	
STARTING PANEL	SELECT CLOSED	
If Man ENG Start		
STARTING PANEL	SELECT OPEN	
LOWER FUEL SWITCHES	SET ALL TO RICH (upper position)	
FUEL CUTOFF SWITCHES	UNGUARD AND SELECT ALL ON	
FUEL CUTOFF SWITCHES	GUARD ALL BUT STARTING ENG	
HYD CTR PUMPS	SELECT ON	





CHECK GREEN BAR	ONCE SEEN
HYD CTR PUMPS	SELECT OFF
SELECT FADEC SWITCHES	SELECT ALL ON
FUEL HEAT SWITCH	SET UP (Upper position)
SELECT ENG TO START	PRESS ENGS YOU WANT TO START
START BUTTON	PRESS AND HOLD FOR 3 SECONDS
ONCE ENG STARTED	DE SELECT ENG
AFTER EACH ENG START	SELECT HYD PUMP FOR STARTED ENG ON
SELECT ENG TO START	REPEAT FOR ALL ENGs
STARTING PANEL	SELECT CLOSED
ELEC PANEL	
ENG GENS 1-4	SELECT ON
ENG Start Procedure Completed.	





After Start Procedure		
Engineer Panel		
APU 1 +2 SHUTDOWN	PRESS STOP BUTTON 1+2	
ONCE APU SHUTDOWN	APU FIRE LOOP 1+2 SELECT OFF	
APU MASTER SW 1+2	SELECT OFF	
APU BLEED	OFF	
CPT Seat		
SET FLAPS	SELECT FLAPS 2	
SET GRD SPOILERS	ARM (top position)	
SET REV THR SELECT	SET REV THR SELECT TO UP POS	
FLIGHT CONTROL CHECK	CHECK ROLL AND PITCH FREE AND CLEAR	
AILERON RUDDER TRIM	CHECK NEUTRAL	
NOSE WHEEL STEERING	BOTH SWITCHES ON	
Lights Panel		
TAXI LIGHTS	SELECT ON	
LOGO LIGHTS	SELECT ON	
After Start Procedure Completed		



Line Up and ENG Run Up Procedure		
When entering the runway		
Lights Panel		
STROBE LIGHTS	SET 100% (up position)	
CPT Seat		
After lined up with the runway		
PARKING BRAKE	ARM (top position)	
ENG 1-6	SET 70% N1	
THR LVR LOCK	SET ON	
WARM UP	WAIT TIME 2 MINUTES	
WHEN 1 MIN LEFT ON TIMER	SET FLAPS FULL (35 degs)	
WHEN TIMER COMPLETE		
CPT Seat Overhead		
DME DISPLAY BUS	ON	
WINDOW HEAT	ON	
FO Seat Overhead		
DME DISPLAY BUS	ON	
WINDOW HEAT	ON	
Lights Panel		
FUSELAGE AND WING LIGHTS	SET ON	
Line Up and ENG Run Up Procedure Completed.		





Take-Off Procedure		
CPT Seat		
BRAKES	RELEASE	
THR LVR	SET TOGA (Full power 120 on left gauge)	
ROTATE	ROTATE AT BUGGED SPEED	
10 METERS (33ft)	GEAR UP	
UPPER GEAR CATCH	OPEN	
GEAR LVR	SELECT UP	
ONCE GEAR UP	GEAR SELECT NEUTRAL	
UPPER GEAR CATCH	CLOSE	
SET REV THR SELECT	SET REV THR SELECT TO DOWN POS	
50 METERS (164ft)		
Lights Panel		
FUSELAGE AND WING LIGHTS	SET OFF	
TAXI LIGHTS	SELECT OFF	
Takeoff Procedure Completed.		





Climb Procedure	
CPT Seat	
PASSING 1000FT AGL	START SLOW ACCELERATION
FLAPS	FULL to 25SPEED 330 KPH (178KTS)25 to 15SPEED 380 KPH (205KTS)15 to 2SPEED 405 KPH (218KTS)2 to 0SPEED 440 (237KTS)
ONCE FLAPS 0	REDUCE POWER 112%
SET AP AND NAV	AS NEEDED
Climb Procedure Completed.	

Cruise Procedure		
Navigator		
WHEN AT CRUISE	TUNE ON ROUTE NAV AIDS	
DURING CRUSE	SELECT APPROPRIATE HSI DISPLAY e.g. VOR 1 VOR 2	
BEFORE DESCENT	CONSIDER TUNING APPROACH NAV AID e.g. ILS, VOR	
Engineers Panel		
WHEN AT CRUSE	EVERY 30 MINS CHECK FUEL ON BOARD	
CPT Seat		
WHEN AT CRUISE	SET CRUISE POWER SETTING	
FOR APPROACH TO BE FLOWN	SET MDA	
HSI MODE SELECTOR	SELECT NEEDED SOURCE	
Cruise Procedure Completed.		





Approach Procedure		
CPT Seat		
SELECT AP CONTROL PANEL	SET MODE TO APPROACH (Setting on the far right)	
POSSIBBLE APPROACH CONFIGURATION	MAX SPEEDS KPH / KTS	
2	463 KPH / 250 KTS	
15	416 KPH / 225 KTS	
25	398 KPH / 215 KTS	
35	370 KPH / 200 KTS	
WHEN 5 MILES BEFORE START OF ILS		
WHEN BELOW 463 KPH / 250 KTS	SELECT FLAPS 2	
WHEN BELOW 416 KPH / 225 KTS	SELECT FLAPS 15	
WHEN FLAPS 15 set	CHECK ENG IDLE SWITCHES TO LOW	
GEAR DOWN PROCEDURE		
LOWER GEAR CATCH	OPEN	
GEAR LVR	SELECT DOWN	
ONCE GEAR DOWN	GEAR SELECT NEUTRAL	
UPPER GEAR CATCH	CLOSE	
WHEN GEAR DOWN	REV BAR SELECT UP	
FUSELAGE AND WING LIGHTS	SET ON	
TAXI LIGHTS	SELECT ON	
WHEN BELOW 398 KPH / 215 KTS	SELECT FLAPS 25	
WHEN BELOW 370 KPH / 200 KTS	SELECT FLAPS 35	
ONCE FLAPS 35	SLOW TO APPROACH SPEED	



APPROACH SPEEDS - WEIGHT (1000s KGs)
550,000	277 KPH / 150 KTS
450,000	259 KPH / 140 KTS
350,000	240 KPH / 130 KTS
250,000	232 KPH / 125 KTS
APPROACH MODE PRESSED	SELECT THE LEFT OF THE BOTTOM 3 PUSHBUTTONS (arm LOC)
ONCE ON THE LOC	SELECT THE RIGHT OF THE BOTTOM 3 PUSHBUTTONS (arm GLIDE)
FOR LANDING AP AND AT MUST BE DISCO	NNECTED
Engineers Panel	
APU HEATERS	SELECT BOTH ON
Approach Proce	dure Completed.





Landing Procedure					
CPT Seat					
AFTER LANDING	REV SELECT AND CHECK ALL GREEN				
BRAKING	MANUAL BRAKING				
GND SPLRS	IF NOT AUTO DEPLOYED SELECT 60 DEGS				
WHEN BELOW 130 KPH	STOW MAX REV				
WHEN STOWED	SET ENG IDLE SWITCHES TO HIGH				
After Landing					
LIGHTS	RETRACT LANDING LIGHTS AND TURN OFF				
WINDOW HEAT	SELECT OFF				
DME BUS	SELECT OFF				
WHEN REV STOWED	LOWER REV BAR				
FLAPS	SET FLAPS/SLATS 0				
Engineers Panel					
APU 1+2	START (Drop down)				
APU FUEL HEATER 1	OFF (If was selected on)				
APU FIRE LOOP 1	ON				
APU MASTER SW	ON				
APU START SW	PRESS AND HOLD 1 SEC				
FOR APU 2 SAME PROC AS ABOVE					
APU GEN 1+2	ON				
Landing Pro	ocedure Completed.				





Parking Shutdown Procedure	
CPT Seat	
ONCE PARKED	PARKING BRAKE SET
LIGHTS	CHECK ALL OFF EXCEPT NAV AND BEACON
Navigator	
INSTRUMENT+ NAVI MAST SW	ALL OFF
Engineers Panel	
ENG AND WING ANTI ICE	SELECT OFF (if used)
HYD ENG PUMPS 1-6	UNGUARD and select off
FUEL PUMPS	SET (as below)
Elec Panel	Γ
CONFIRM APU GEN	CONFRIM AVAIL (at least one)
ENG GEN SELECT OFF	3,2,4,1
Engineers Panel	
ENG START PANEL	UNGUARD AND SELECT ALL FUEL SWITCHES TO CUTOFF
ENGS WILL SHUTDOWN	





CPT Seat Side Panel Overhead	
ONCE ENGS SHUTDOWN	
HSI BUS	OFF
RADIO ALT BUS	OFF
ADI BUS	OFF
VSI TCAS BUS	OFF
CPT ASI	OFF
FO Seat Side Panel Overhead	
HSI BUS	OFF
RADIO ALT BUS	OFF
ADI BUS	OFF
VSI TCAS BUS	OFF
NAV 1 RADIO BUS	OFF
NAV 2 RADIO BUS	OFF
COM RADIO BUS	OFF
AIR DATA COMPUTER 1, 2, 3	OFF
FO ASI	OFF
WINDOW HEAT	OFF
DME BUS	OFF
Lights Panel	
NAV LIGHTS	SELECT OFF
BEACON	SELECT OFF
ELEC PANEL	
RECTIFIER 1+2+3+4	OFF
TRANSFORMER RECTIFIER 1+2+3+4	OFF
BAT 12345	OFF
Parking Shutdown	Procedure Completed.





AFS Overview

- This section will cover the basic modes of the AN225 how to use them and how to interact with them in-sim.
- Each boxed area will be covered separately with its own given colour.









ALTITUDE	
ON GLIDE SLOPE	APRON
AP NAV ON	
ON CD	
COURSE STABILIZATION	
	WING LEVELER

	СИГНАЛ		46	ABTOROHTER CONTROL COMPLETED NOT ROY FOR TAXLOFF	ONIS POTOBILOCTM CONTICL.COM NOT ROY FOR U			выпуск ФАІ фюза- курылье- вие от т	околение со
nyp 1922				C anter		•		уборка	рупение
BRAKE - FAILURE BRAKE - CHECK PARING BRAKE ON ONTR FRWHEELS - ON SPEED LOW ALS CONTINE - NO IACOUP ALS BANK FAILURE	TRIMM PROCEED - FALLINE DO NOT DISCONNECT FANELS ALS PROCED-DISCONNECTED DO NOT DISCONNECTED ALS BANK - DISCONNECTED ALS BANK - NO BACKLEP C EL-MANUALLY CONTROL	DAMPER PROCEED FAILURE DAMPER PROCEED NO MOUP CONTINUE ALLANCE - FAILURE DAMPER - PAVIEL FAILURE DAMPER - NO BACKUP COURSE PHI - COMPARE 1ENG - REVERS FAILURE	INT GS & SECTION FAILURE INT GS 7 SECTION FAILURE INT GS & SECTION FAILURE INT GS 5 SECTION FAILURE SPOILERS CHECK GAAS - FAILURE 2 EING - REVERS FAILURE	KONG AIS CHECK R ALTIMETERICHECK ICASP - MALFUNCTION PRODUCT 4303 - FAULRE BACKUP ON 3 ENG - REVERS FAILURE	APT - OVERHEAT APT - NEATING NOT ON AIT - FAILURE AIZ - FAILURE AIZ - FAILURE CAT 2 - PROHIBITED 4 ENG - REVERS FAILURE	APS FROCEED - NO BACKUP APS FCU - NO BACKUP APS VERTICAL - OFF APS HORZ - OFF AT - NO BACKUP 2 CRICLE - FAILURE 5 ENG - REVERS FAILURE	CCS - FAILURE RSSN - FAILURE RTM LAMP - FAILURE COLRSE MP - FAILURE RS - L - FAILURE RS - V - FAILURE BS - V - FAILURE	GEARLEVER IN NEUTRAL GEARS EXTEND GEARS EXTEND	TFLAPS INTERNAL - FALLIRE TFLAPS INTERNAL - STOP TFLAPS END - FAILURE TFLAPS END - STOP TFLAPS CHECK LFLAPS - FAILURE LFLAPS - STOP
LS CONTINUE - FAILURE COR DAMPER - FAILURE	C CE - MANUALLY CONTROL C CE + MINIMUM	1 ENG - FALLT 1 ENG - REVERS FAULT	2 ENG - FALLT 2 ENG - REVERS FAULT	3 ENG - FALAT 3 ENG - REVERS FAULT	4 ENG - FAULT 4 ENG - REVERS FAULT	S ENG - FAULT S ENG - REVERS FAULT	6 ENG - FAULT 6 ENG - REVERS FAULT	RESERVE - FUEL STOCK	1





INIBUILDS



5) Day/Night switch. adds lighting to the panel for use at night.

1) **Speed window** unit's **KM/H**. This is the primary way to tell the AP what speed you want to fly. This is true for any engaged mode including landing.

2) **V/S knob**. unit's **M/S**. The tool tip will display in feet per minute for ease of use. This sets the aircrafts vertical speed up or down. Numbers in the blue area are + rates numbers in the brown area are negative rates.

3) **Botm Echelon** units are **meters**. This is the altitude window and is the main way to set your desired altitude much like any other aircraft. In the EFB under settings we have an option or 1s or 100s this allows 1 scroll of the knob to action either 1 meter or 100 meters this allows for much easier setting of high cruise levels.

4) **H3 button**. This button synchronises your current V/S to the knob and also engages the V/S speed mode. Now any movement on the wheel will be reflected on the flight director and will cause a climb or descent. Be warned this knob can be quite sensitive and is not the preferred way to climb or slow down the AN225. Pitch hold is the preferred method and will be covered later in this document.

6) Vy Button. This will synchronises your current altitude and place it in the altitude window and level the aircraft off at that altitude





COURSE II

HORIZ

COURSE I

AP mode selection panel

APM

1) **ER button**. This turns on the AP. It can be considered the AP master switch.

2) **AT button**. This turns on the A/THR system in the AN225. If the aircraft is commanded in level change climb it will command a fixed power setting. If using in level change descent it will command idle thrust. In all other modes it will act as a speed mode and follow the speed in the speed window.

3) **APM button**. This resets the modes on the panel back into the basic modes. This is normal wings level pitch hold.

4) Horiz button. This toggles the wing level command. When pressed the aircraft will roll from its current bank to wings level and will hold this.
5) PC button. This button can be seen as the lateral mode button. The exact function of this button depends on the mode selected above on the rotary mode selector. For example. When set the VOR this button will arm a VOR capture mode, same for VOR2. But when this knob is selected to approach it will arm the LOC etc. Below will be a table showing what modes = what lateral and vertical elements.
6) VRTCL button. This button toggles the vertical element of the selected mode on the rotary mode selector. For example, when in VOR mode pressing this will toggle PITCH HOLD. And when set to approach

this button will toggle the glideslope arm as this is the relevant vertical part of that mode.

VOR2

NAVIG

APPROACH

VRTCL

7) **VEL button**. This button is called the speed stabilisation button but it basically acts like a level change mode. If you have an altitude that is above your current altitude and press this button the speed window will change to your current speed and the aircraft will pitch up to climb at the maximum rate at that give speed. WARNING do not use this like a normal level change mode and increase the set speed in the speed window. This will cause the AN225 to pitch up/down aggressively as this mode simply stabilises the speed you had at the time. If you wish to increase/decrease your speed you would swap to pitch hold set it down/up a few degrees to allow the aircraft to speed up / slow down. Once you are at your desired speed you would then press the VEL button again to stabilise the speed at the new given speed.

8) **MAX button**. Same function as VEL button but aims for a MACH number not at indicated air speed. When you are above MACH .70 they normally then swap to climbing on MACH not indicated air speed.

9) HIGH button. This stabilises your altitude pressing this button will level off the aircraft at the altitude you pressed the button.

HIGH



VOR1		
COURSE I *	APPROACH	
Mada		ote: Middle black guarded catch is the A/THR master switch.
Mode	Lateral PC button function	Vertical VRTCL button function
COURSE 1	Lateral PC button function HDG BUG (HDG selector on pedestal)	Vertical VRTCL button function PITCH HOLD (PITCH selector on pedestal)
	Lateral PC button function	Vertical VRTCL button function
COURSE 1	Lateral PC button function HDG BUG (HDG selector on pedestal)	Vertical VRTCL button function PITCH HOLD (PITCH selector on pedestal)
COURSE 1 COURSE 2	Lateral PC button function HDG BUG (HDG selector on pedestal) HDG BUG (HDG selector on pedestal)	Vertical VRTCL button function PITCH HOLD (PITCH selector on pedestal) PITCH HOLD (PITCH selector on pedestal)
COURSE 1 COURSE 2 VOR 1	Lateral PC button functionHDG BUG (HDG selector on pedestal)HDG BUG (HDG selector on pedestal)CRS SET IN VOR 1 CRS WINDOW	Vertical VRTCL button function PITCH HOLD (PITCH selector on pedestal) PITCH HOLD (PITCH selector on pedestal) PITCH HOLD (PITCH selector on pedestal)

Example for an ILS approach: When you swap the selector sometimes in your new mode the AP might set something you don't expect. For example, you are told to turn to heading 160 degrees and then fly the approach for an ILS runway 19. You will need to be in course 1 or course 2 to allow the aircraft to follow the heading bug seen on the HSI. When you are in either of these modes you will press the PC button for lateral mode and it will start to turn to the set heading. If during the turn you then set the AP rotary mode selector to approach the aircraft will swap to wings level and will roll out so you might not be on the heading you need to intercept. The correct procedure would be wait for the aircraft to roll out on the heading then select approach wings level will come on but this is fine as you are not on the correct heading. Making sure in NAV 1 you have the correct ILS FREQ you can press the PC button this will arm the LOC. You will see this armed mode on the AP light panel. Once you are established on the LOC you can press the VRTCL button and as per the table above this will arm the glideslope and the aircraft will then track this down to landing. No Autoland Is available on the 225 and CAT1 only.

INIBUILDS

AP computer panel



 AP Max pitch limit. Buttons pressed sets a max pitch.
 AP Max bank limit. Button pressed sets a max bank limit.
 Turn 90 button. This button when pressed arms the AP to turn 90 degrees to the left or to the right. When armed it will show green.

4) Turn left button. If you have the turn 90 button armed and you press the turn left button this will arm the AP to turn 90 degrees to the left. To activate this mode you need to be in Course 1 or Course 2 and then press the PC button this will then start the turn. If you don't have the turn 90 button armed then then AP will just turn around in circles until this mode is disarmed 5) Turn right button. Same as turn left button but for right turns.
6) Navigation digital display. This simply displays what you have tuned on NAV 1 NAV 2 ADF 1 ADF 2 but in a digital form.
7) Speed / bank display. This selector displays current true airspeed, ground speed, AP selected speed, Indicated airspeed all in KPH. Bank in degrees and Mach.

8) **Altitude digital display**. Displays Radar altitude, AP selected altitude, Baro altitude displayed in meters.



AP pedestal control panel

Below is the AP pedestal control panel. This is located below the thrust leavers and is used to set basic modes like bank pitch and roll.



1) **AP power bus switch**. This turns on power the AP system. It's not the master switch to connect the AP simply to give it power.

2) **Heading selector control**. Moving this knob sets the heading bug on the HSI. The 225 will not follow the heading unless commanded to do so by the correct mode on the AP panel. Heading only works in course 1 and course 2.

3) **Bank selector control**. This will set a bank target to the AP and once it reaches the bank target it will hold it. You can use this selector in most modes but it will disengage your lateral mode.

4) **Pitch hold degrees**. When the 225 is set to pitch hold this wheel here will set the pitch target for the AP you can also see this reflected on the flight director. Moving the wheel backwards sets + pitch so a climb and moving the wheel forward sets a negative pitch so will descend.



AP mode lights

This is located on the captain side by the parking brake and will show the modes of the AP. This is the closest thing to an FMA on the 225.



1) Altitude light. When the aircraft is in an alt hold mode, you will see the light come on here.

2) **On glide slope**. Comes on when the aircraft has captured onto the glide.

3) **AP NAV ON**. The AP is following the NAV track coming from the GPS.

4) On CD.

5) **Course stabilization**. This shows that the selected course is inside what the AP sees as the capture limit. This will show when established on the radial for a VOR when captured onto the LOC and when on the correct nav track for that leg.

6) Wing lever. This light comes on when the wing level button is pressed or is active. Holding the aircraft wings at 0 degrees.





AP and speed warning lights

These lights show warnings related to the AP. These are located above the AP mode lights.



- 1) Critical mode. This light comes on when the aircraft is stalling.
- 2) High speed. Shows you are over speeding the aircraft this considers the current flap and slat configuration.
- 3) **TRN light**. Shows that you have a higher rate to terrain. Mainly checked when on the approach.





Main overhead annunciator light panel

This is the main way of seeing what systems are working on the AN225.

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BRAKE - FAILURE	TRIMM PROCEED - FAILURE	DAMPER PROCEED FAILURE	INT GS 8 SECTION FAILURE	ICING	APT - OVERHEAT	APS PROCEED - NO BACKUP	CCS - FAILURE	GEAR LEVER IN NEUTRAL	TFLAPS INTERNAL - FAILUF
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BRAKE - CHECK	DO NOT DISCONNECT PANELS	DAMPER PROCEED NO BACKUP	INT GS 7 SECTION FAILURE	AIS CHECK	APT - HEATING NOT ON	APS FCU - NO BACKUP	RSSN - FAILURE	GEARS EXTEND	
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BRAKE - CHECK PARKING BRAKE ON CNTR FR WHEELS - ON	DO NOT DISCONNECT PANELS ALS PROCEED - DISCONNECTED DO NOT DISCONNECT PANELS	DAMPER PROCEED NO BACKUP CONTINUE BALANCE - FAILURE DAMPER - PANEL FAILURE	INT GS 7 SECTION FAILURE INT GS 6 SECTION FAILURE INT GS 5 SECTION FAILURE	AIS CHECK R ALTIMETER CHECK ICASP - MALFUNCTION	APT - HEATING NOT ON A 1 - FAILURE A 2 - FAILURE	APS FCU - NO BACKUP APS VERTICAL - OFF APS HORIZ - OFF	RSSN - FAILURE ATM LAMP - FAILURE COURSE MP - FAILURE	GEARS EXTEND	TFLAPS INTERNAL - STO TFLAPS END - FAILURE TFLAPS END - STOP
BRAKE - CHECK PARKING BRAKE ON CNTR FR WHEELS - ON SPEED LOW	DO NOT DISCONNECT PANELS ALS PROCEED - DISCONNECTED DO NOT DISCONNECT PANELS ALS BANK - DISCONNECTED	DAMPER PROCEED NO BACKUP CONTINUE BALANCE - FAILURE DAMPER - PANEL FAILURE DAMPER - NO BACKUP	INT GS 7 SECTION FAILURE INT GS 6 SECTION FAILURE INT GS 5 SECTION FAILURE SPOILERS CHECK	AIS CHECK R ALTIMETER CHECK ICASP - MALFUNCTION PRODUCT 6202 - FAILURE	APT - HEATING NOT ON Al1 - FAILURE Al2 - FAILURE Al3 - FAILURE	APS FCU - NO BACKUP APS VERTICAL - OFF APS HORIZ - OFF AT - NO BACKUP	RSSN - FAILURE ATM LAMP - FAILURE COURSE MP - FAILURE RS - L - FAILURE	GEARS EXTEND	TFLAPS INTERNAL - STO TFLAPS END - FAILURE TFLAPS END -STOP TFLAPS CHECK
BRAKE - CHECK PARKING BRAKE ON CNTR FR WHEELS - ON SPEED LOW ALS CONTINUE - NO BACKUP	DO NOT DISCONNECT PANELS ALS PROCEED - DISCONNECTED DO NOT DISCONNECT PANELS ALS BANK - DISCONNECTED ALS BANK - NO BACKUP	DAMPER PROCEED NO BACKUP CONTINUE BALANCE - FAILURE DAMPER - PANEL FAILURE DAMPER - NO BACKUP COURSE PNI - COMPARE 1 ENG - REVERS FAILURE	INT GS 7 SECTION FAILURE INT GS 6 SECTION FAILURE INT GS 5 SECTION FAILURE SPOILERS CHECK GAAS - FAILURE	AIS CHECK R ALTIMETER CHECK ICASP - MALFUNCTION PRODUCT 6202 - FAILURE BACKUP ON	APT - HEATING NOT ON AI1 - FAILURE AI2 - FAILURE AI3 - FAILURE CAT 2 - PROHIBITED	APS FCU - NO BACKUP APS VERTICAL - OFF APS HORIZ - OFF AT - NO BACKUP 2 CIRCLE - FAILURE	RSSN - FAILURE ATM LAMP - FAILURE COURSE MP - FAILURE RS - L - FAILURE RS - V - FAILURE	GEARS EXTEND	TFLAPS INTERNAL - STO TFLAPS END - FAILURE TFLAPS END - STOP TFLAPS CHECK LFLAPS - FAILURE

- 1) ANN lights. These are mostly self-explanatory when ready for takeoff you should not see any lights on here.
- 2) **Ready for takeoff ready for landing buttons**. These are takeoff and landing config test. After pressing these buttons it can take a moment for the test to pass or fail.

