EXPERIMENTAL, PROTOTYPE AND RESEARCH AIRCRAFT/RADIO CONTROLLED MODELS FOR X-PLANE FLIGHT SIMULATOR

## PROFESSIONAL R/C SIMULATION

#### WIN/MAC/LINUX RC SIMULATION

Practice your R/C skills in Laminar Research X-Plane Flightsim

X-Plane 10 Global is the world's most comprehensive and powerful flight simulator for personal computers. It offers the most realistic flight model available.

X-Plane is not a game, but an engineering tool that can be used to predict the flying qualities of fixed- and rotary-wing aircraft with incredible accuracy.

READ MORE ABOUT LAMINAR RESEARCH X-PLANE FLIGHT SIMULATOR



X-PLANE FLIGHT SIMULATOR IS NOT A DESIGNATED R/C MODEL AIRPLANES FLIGHT SIMULATOR. YET, IT IS THE MOST ADVANCED SIMULATION IN THE MARKET, AND IT IS A PROFESSIONAL ENGINEERING TOOL FOR AIRCRAFT DESIGN.

IF YOU ARE USING ANOTHER R/C FLIGHT SIMULATOR AND NOT FAMILIAR WITH THE X-PLANE SOFTWARE, YOU WILL NOTICE THAT THERE ARE SOME "NEW" GREAT FEATURES TO USE, AND SOME "OLD" FEATURES THAT NEEDS TO GET USED TO SINCE THEIR OPERATION IS A LITTLE BIT DIFFERENT

THERE ARE SOME OPTIONS SETTINGS THAT YOU WILL HAVE TO ADJUST AND UNDERSTAND BEFORE USING X-PLANE AS A R/C SIMULATOR. TAKE A FEW MINUTES AND READ THIS DOCUMENT.

# **STEP ONE:**

(OPTIONAL)

IN THE MAIN SCREEN, OPEN THE "Operations & Warnings" WINDOW AND SET THE "Flight model per frame" VALUE TO "2"



# WHAT IT DOES? FLIGHT MODEL PER FRAME:

WHEN FLYING A SMALL AND FAST AIRCRAFT IN X-PLANE, YOU MIGHT NOTICE A "FUNKY" AND JITTERING MOTION OF THE AIRCRAFT. WHEN SETTING THE NUMBER TO "2", THE SIMULATION CALCULATION RATE WILL PREVENT THIS UNWANTED MOTION. YOU CAN SET IT TO A HIGHER VALUE IF NEEDED.

# REMEMBER TO SET IT BACK TO "1" WHEN FLYING FULL SCALE AND "REGULAR" AIRCRAFTS (NOT R/C)

IN THE SAME WINDOW ("Operations & Warnings"), CHECK ALSO "START EACH FLIGHT WITH ENGINES RUNNING" AND CONSIDER CHECKING THE "RESET ON HARD CRASH". IT IS THE LOWEST BOX IN THE WINDOW. (IN THE SCREENSHOT ABOVE IT IS NOT CHECKED)

# WHAT IT DOES?

#### START EACH FLIGHT WITH ENGINES RUNNING:

R/C MODELS DOES NOT EQUIPPED WITH COMPLICATED ELECTRICAL, HYDRAULIC, FUEL SYSTEMS AND COCKPIT SUCH AS FULL SCALE MODELS. SELECTING THE OPTION OF STARTING EACH FLIGHT WITH ENGINES RUNNING WILL FORCE ALL THE MODEL SYSTEMS TO WORK WITHOUT THE REQUIEREMENT TO SWITCH THEM ON FROM A COCKPIT.

### **RESET ON HARD CRASH:**

AFTER CRASHING INTO THE GROUND, YOU WILL HAVE TO OPEN MANUALLY A NEW AIRCRAFT. IF YOU WILL CHECK THE "RESET ON HARD CRASH" BOX, THE SIMULATION WILL AUTOMATICALLY LOAD THE AIRCRAFT AGAIN. CHECK IT OUT TO DECIDE WHAT IS BEST FOR YOU.

# **STEP TWO:**

# FLIGHT MODEL REALISM:

IN THE MAIN SCREEN, OPEN THE "Setting / joystick, keys equipment" WINDOW. SELECT THE "Center" LABEL AND SET THE THREE BARS ON THE RIGHT TO "0%" ("Full left to most realism")

MOVE THE NULLZONE BAR (THE BAR AT THE LOWER SECTION OF THE WINDOW) TO ABOUT 10%

EXAMPLE HIGHLIGHTED IN THE SCREENSHOT BELOW:



### WHAT IT DOES?

## **REALISM BARS TO "0%":**

THIS ELIMINATES COMPENSATIONS THAT MADE BY THE SIMULATION TO MAKE THE FLYING TASK MORE EASY. IT WILL BE MORE DIFFICULT TO CONTROL AN AIRCRAFT WHEN IT SETS TO "0%", BUT THE MODEL WILL RESPONSE MORE REALISTICALLY.

THIS IS VERY IMPORTANT WHEN FLYING VSKYLABS R/C ADVANCED MODELS.

SET IT BACK TO YOUR PERSONAL SETTINGS DEFAULT WHEN FLYING FULL-SCALE AIRCRAFT OR IF YOU WANT AN "EASY-RIDE" IN THE SKY

# **STEP THREE:**

# **CONTROLLER**

FAST THUMBS RESPONSE AND COORDINATION IS REQUIERED FOR CONTROLLING A R/C MODEL. IT IS HIGHLY RECOMMENDED TO USE A REAL TRANSMITTER CONTROLLER CONFIGURATION. A REGULAR JOYSTICK WILL NOT LET YOU FLY THE MODEL INTUITIVELY AND NATURALLY.

USB CONTROLLERS LIKE THE ONE BELOW WORKS GREAT, AND THE PRICE IS 10 TO 20 USD ON EBAY.



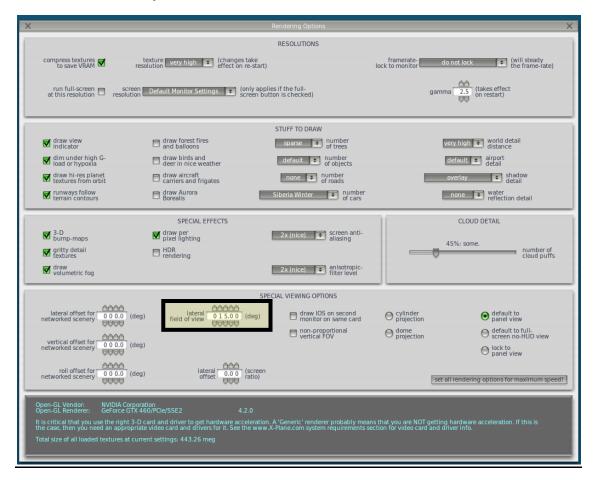


# **STEP FOUR:**

# **VIEW SETTINGS:**

### **FIELD OF VIEW SETTING:**

IN THE MAIN SCREEN, OPEN THE "Settings" WINDOW and select "Rendering options". YOU WILL SEE THE WINDOW BELOW:



SET THE "Lateral field of view" (highlighted box) TO A DESIRED VALUE.

IT IS RECOMMENDED TO SET UP THIS VIEW TO VALUES BETWEEN 15 TO 45

DEGREES.

### WHAT IT DOES?

### **SETTING LATERAL FIELD OF VIEW:**

THIS WILL SET UP YOUR FIELD OF VIEW. HIGHER VALUE WILL LET YOU "COVER" WIDER FIELD OF VIEW, BUT OBJECTS THAT ARE LOCATED IN THE CENTER OF YOUR VISUAL FIELD OF VIEW WILL LOOK SMALLER. THIS MIGHT BE DIFFICULT TO ORIENT YOUR MODEL AS IT WILL GET SMALLER.

SETTING LOWER VALUES WILL LET YOU "COVER" ONLY A RELATIVELY NARROW FIELD OF VIEW, BUT OBJCTS WILL BE BIGGER. TRY AND SET IT IN DIFFERENT VALUES AND DECIDE WHAT IS BEST FOR YOU.

VSKYLABS RECOMMENDS LOW VALUES FOR R/C FLYING.

#### **CAMERA SETTING:**

CORRECT POINT-OF-VIEW (POV) IS VERY IMPORTANT.
SINCE X-PLANE IS NOT A DESIGNATED R/C MODEL FLIGHT SIMULATOR, THE DEFAULT VIEW AFTER LOADING AN AIRPLANE IS THE COCKPIT/FORWARD VIEW.

THERE ARE VARIOUS VIEW SETTINGS IN X-PLANE. SOME OF THEM ARE EXTERNAL. WHEN FLYING A R/C MODEL, IT IS NEEDED TO SET THE POV INTO A FIXED, GROUND POSITION VIEW. THERE ARE THREE COMMON VIEWS FOR THIS NEED:

#### **TOWER VIEW:**

IN MOST AIRPORTS IN X-PLANE THIS VIEW IS SET UP FOR THE TOWER. USUALLY IT WILL NOT BE SUITABLE FOR R/C FLYING SINCE THE TOWER IS LOCATED FAR FROM THE RUNWAY AND IT IS HIGH ABOVE THE GROUND.

BUT...IN VSKYLABS ADVANCED R/C SIMULATION PACKAGES THERE ARE RUNWAY PACKAGES THAT ARE ADJUSTED FOR R/C OPERATIONS. THE "TOWER" IS LOCATED NEAR THE RUNWAY AT THE CORRECT SPOT, AND THE HEIGHT OF THE VIEW IS AT HUMAN HEIGHT.

### **SELECTING TOWER VIEW:**

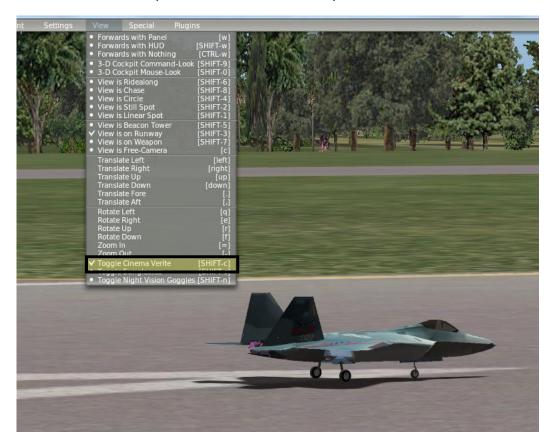
SELECT "SHIFT" + "5" (X-PLANE V10) SELECT "T" (X-PLANE V9)

EXAMPLE OF TOWER VIEW IN VSKYLABS R/C RUNWAY PACKAGE:



#### **OTHER GROUND FIXED VIEWS:**

# YOU CAN SELECT OTHER GROUND AND AIRBORNE CAMERA VIEW VIA THE "VIEW" WINDOW, FROM THE MAIN SCREEN, OR FROM THE KEYBOARD:



\* COOL FEATURE: SELECT THE "Toggle Cinema Verite" OPTION FOR REALISTIC CAMERA MOVEMENTS (HIGHLIGHTED BOX ABOVE)

### **RUNWAY VIEW**

AFTER LOADING THE AIRCRAFT, HIT THE **"SHIFT"** AND **"3"** KEYS TOGETHER FOR FIXED RUNWAY EXTERNAL VIEW.

YOU CAN HIT THE "SHIFT" AND "2" KEYS FOR FIXED SPOT VIEW.

NOW, USE THE ARROW KEYS TO MOVE A LITTLE LEFT OR RIGHT. CHOOSE YOUR STANDING ASPECT BY USING THE ARROWS.

IN X-PLANE 10 YOU CAN "WALK" TO OR FROM YOUR MODEL BY USING ">" AND "<" KEYS.

USE THE "+" KEY TO ZOOM A LITTLE BIT, ONCE, BEFORE YOU START FLYING.
X-PLANE DOES NOT HAVE "AUTO ZOOM" FUNCTION (YET...),
SO, YOU WILL HAVE TO MANAGE YOUR ZOOM MANUALLY, SOMETIMES INFLIGHT.