



EXCEL SIMULATOR NOTES

Excel Simulator Notes

Pitch control is very sensitive. Set pitch and do not chase it; otherwise sim hydraulics going down when you think they're going up etc., resulting in severe PIO. If you're having continued problems, trim manually instead of with electric. Never move more than two pulls/pushes on trim wheel without stopping to see what result it. Use small pitch inputs and learn muscle memory, hold yoke with two fingers instead of whole hand if over-controlling. Work at following command bars but **DO NOT Chase**. Anticipate direction and move pitch symbol to correct point, AND HOLD IT THERE.
Flaps 15° down.... Trim Down (*stab moving*)
Flaps 35° down.....Trim Up

Unusual attitude

Nose high. Add power and roll wings over to about 30° and let aircraft "slice through to horizon." Careful to not go below horizon. Begin roll out maneuver at about 5° above horizon. Remember to roll wings level first and then pull nose up to level. For those who get Mark H., "Don't bunt!" means to not push over nose first in recovery. (Zero G maneuver) Remember, bank, pitch down, and then recover at the right time.

Nose low. Reduce power to idle. Speed brakes should be extended. Roll the wings to a level position while maintaining your present heading ("roll about a point"). Gradually ease into nose up into pull out.

Inverted. Push yoke to get nose "up". Snap roll aircraft by inputting full rudder and aileron in same direction. It's critical to use **FULL RUDDER** to assist the roll. If not, the aircraft will roll out slowly with nose down and create excessive speed that may be unable to recover without enough altitude. Have PNF assist in rolling nose trim up.

Steep Turns

- **I.C.E.Y.** done before starting (Ignition, Computations, Engine Sync Off, Yaw Damper Off)
- Set HSI to Double Cue configuration.
- Speed at 200 knots, approximately 60 % N₁ (65% if temp is hot) and trim set.
- Start on cardinal heading; set CDI in heading indicator to initial heading as reminder of 0/180° degree mark
- Roll smoothly into 45° of bank. Begin minor pitch up at 30° of bank (2/3 degrees up); add minimal back trim only.
- Have PNF add about 2% to N₁ setting; reduce only at rollout. (Note: Do Not touch if doing 180° turns only.)
- Put "dot" at 2°/3° degrees up attitude, which puts the corner of the "horizon L" right on horizon? Will maintain altitude perfectly.
- PNF calls out 30°, 20°, and 10° degrees before rollout heading.

Stalls

- FD will activate in climb on recovery at 300' below altitude.
- Reduce power to approx. 60% at FD activation during the climb
- Follow FD but **DO NOT** go below 5° pitch **until at altitude** or climb will stagnate and it will not reach the last 80 feet
- 55% - 60% will hold 160 KIAS

Clean Stall

Power Idle. Maintain altitude.

- Initiate recovery at stick shaker
- Hold 10° pitch and fly ac out of stall
- Set power to maximum and move both hands to yoke ...count 3...because...
- Watch for nose to push over as engines spool up to full power. You will need to quickly counteract, and then hold pitch at 10°. AC will accelerate quickly and as you climb at V_{app} (go through that quickly) watch for FD activation
- FD activation per above

Departure Stall

Power idle. Maintain altitude. Flaps 15 20° bank

- Set alt alerter 500' above, then deselect FD
- Power to Flight Idle. Maintain altitude by increasing back pressure
- Initiate recovery at stick shaker
- Hold 10° pitch and fly ac out of stall
- Set power to maximum and move both hands to yoke ...count 3...because...
- Watch for nose to push over as engines spool up to full power. You will need to quickly counteract, and then hold pitch at 10°. AC will accelerate quickly and as you climb at V_{app} (go through that quickly) watch for FD activation
- $V_{app} + 10$ flaps up.
- FD activation per above

Landing Stall

Alt Alerter stays the same as you will descend 500' feet and then climb back to original altitude.

Power 45% Flaps 35 Gear down.

- After all is stabilized deselect FD and start descent
- Pitch just below horizon (at 45%) will give 700 – 800 fpm (do not try to hold ref+10) no instructor going to complain about that
- At level off maintain Alt until stall
- Recovery... Set power to maximum and move both hands to yoke ...count 3...because...
- Watch for nose to push over as engines spool up to full power. You will need to quickly counteract, and then hold pitch at 10°.
- Flaps 15. Positive rate gear up. $V_{app} + 10$ flaps up
- FD activation per above
- (Lots of pitch change with flaps up and stab moving...just work the 10° reducing to 5° pitch and wait for altitude to capture)

Circle To Land. (CTL)

Dirty level requires 62% (65 – 67 if hot) +/- at $V_{ref}+20$

Cat C min Max 30 bank 1000fpm $V_{ref}+20$ until

- Can slow to $V_{ref}+10$ once maneuvering “completed” which is defined as bank less than 10° and in position for normal descent to landing.
- All Wx will be set 2 miles. Normally will breakout just before min reached. (1.7nm = Cat C)
- PIC to call out slowing to Ref
- PNF to call out Ref + speed during the downwind constantly.
- Technique. Set hdg bug to downwind heading during final. When starting CTL just select hdg on AutoPilot Mode selector.
- On base ready to descend from MDA push and hold elec. trim short burst.(Help to prevent ballooning up) (suggest making this part an instrument turn vs. visual)
- 50% and pitch on horizon will get 800’ – 1000’ fpm
- Start decent and turn early from what appears to be "normal". PNF doing constant callouts ...speed / sink / bank. (easier to correct too shallow of turn vs. overshoot)
- PNF reset missed approach altitude and heading bug to runway bearing

MEM Rwy 27 (typically get Loc 27 CTL 18R)

At breakout turn 30° until over the 2 FedEx buildings on the NE corner of airport.

Start your descent to Rwy 18R abeam approach lights for Rwy 18L

ICT Rwy 01R (typically get GPS 14 CTL 01R)

Downwind after seeing approach lights for 01L just disappear on your left count **only 2 and then turn** 90° to base leg. Will put you just at end of app lights of 01L. Then just abeam 01L approach lights start decent for 01R

GPS approaches

- Be sure to check RAIM
- If Approach Plate calls for..(in briefing strip) DME/DME N/A.... then do this...

Deselect DME / DME on FMZ (NAV / Pos Sensor (4L) / DME?? / DEL key / select any DME and the words “Deselected” show next to all DME’s... go to page 2 and DEL again. To deselect the deselect push DEL key and same procedure.

- Must have APP light **2NM** before FAF (Caution: Can get APP light more than 2NM. May confuse one where FAF is)
- Think APP and Flaps (35)
- Do not select ‘Missed Approach’ on FMS before reaching MAP (deselects sensitivity from .2 to 1.0)
- Use GA Button, HDG Button (FMS will bring up MAP procedure)
- Push NAV Button, FD will fly MAP procedure
- Caution: Some GPS approaches have a step down altitude and waypoint, however waypoint may not be displayed on MFD and the step down profile doesn’t resemble typical look

GPS Holding

- Select Runway / Approach / Transition / Transition page will come up
- If you want a hold at the IAF you must select the IAF “as a transition” otherwise FMZ will not put a hold in.
- Once FMZ fly’s to the hold point it will be a “one turn” only and then begin the approach.
- If more turns are desired can select...Resume Hold...bottom left...but it will hold indefinitely until it is then told to “Exit Hold”...bottom left

Aborts

- Just PRESS both brakes HARD and acft will stop straight!!!!

V₁ Cuts

- Delay rotation a bit when Vr called....will give you more control as acft comes off ground.
- Use full rudder
- Pitch to command bars (watch for over rotation, easy to do!! And control that heading)
- Have PNF FLC V₂
- Have PNF identify which engine (confirms you using correct rudder opposite failed engine)
- Take your time with checklists
- Have PNF dial in rudder trim if desired

Engine failures FAF inbound

- Don’t get wrapped up in checklist items
- Just fly it to runway

Eng. failures on Go Around / Missed Approaches

PIC does 3 things

- Pwr max.
- Push Go Around Button
- Select HDG or NAV

PNF does 3 things

- Select 15° flaps
- Calls Positive Rate, Gear Up
- FLC V₂

Note: flows from lower to higher on pedestal

No Flap Landing

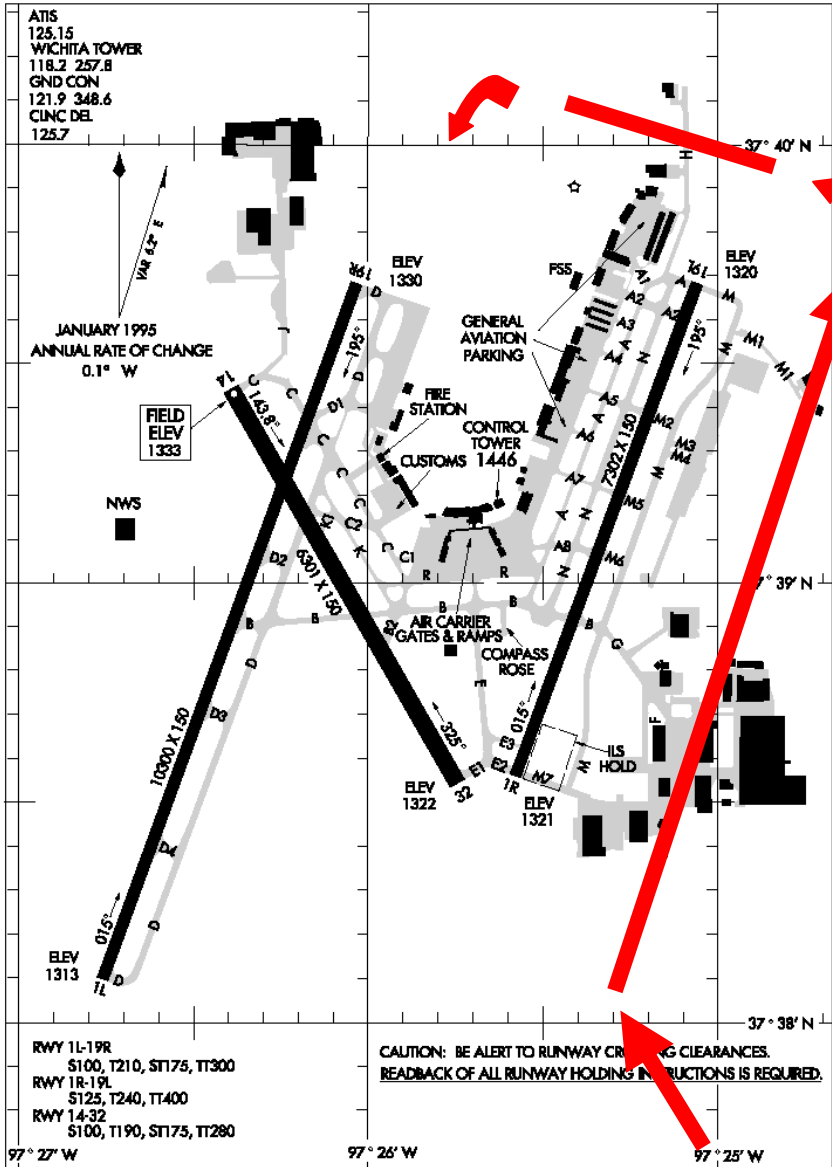
- Scenario is typically downwind.
- Stab moves ...flaps don’t. HYD PRESS caution on trying to move flaps
- Recommend **DO NOT** go to HYD PRESS checklist. It will tell you to pull HYD CB. (opens hyd control valve and you will have no other hyd operated things such as gear, speed breaks, and on landing...TR’s.)
- Leaving HYD PRESS light on is allowed in the airport environment and not a bust item.
- Recommend brief and clarify intentions as such

Setting V_{spds} for No Flap

- For the sim and only sim...you can take original V_{ref} +15 = new V_{ref} (flaps unknown)
- This will be higher than original V_{app} and it disappears. Set V_{app} to original V_{ref} +30 = min maneuver speed for turns etc. (SOP’s)
- Fly final at V_{ref} + 10 as always. Note that this is MAX speed. For No Flap Landing
- Use the 300 feet /NM rule for glide path judgment

MISC.

- Always set MAP altitude in Alt Sel
- Always expect full MAP Procedure. If Radar vectors it's a bonus.
- YD must be off to center rudder / inclinometer
- During Emer Descents it will take a lot more pitch down than you think to get V_{MO} / M_{MO} (see notes below for checklist item under Emergency Descents)
- FSI cannot deploy TR above V_1 (no accurate data) so don't sweat that one during check rides....however you may get it for abort



KICT RNAV (GPS) 32 Circle 19R

Notes:

- DME/DME RNP 0.3 N/A
 (You need to de-select the DME in the FMS Setup)
- Straight-in Minimums N/A at Night
- When abeam the departure end of RWY 19L, count approx. 8-10 secs. (depending on winds) before turning Left Base. Make your base turn 90° to 100°

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
 READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

WICHITA, KANSAS

AL-987 (FAA)

RNAV (GPS) RWY 32

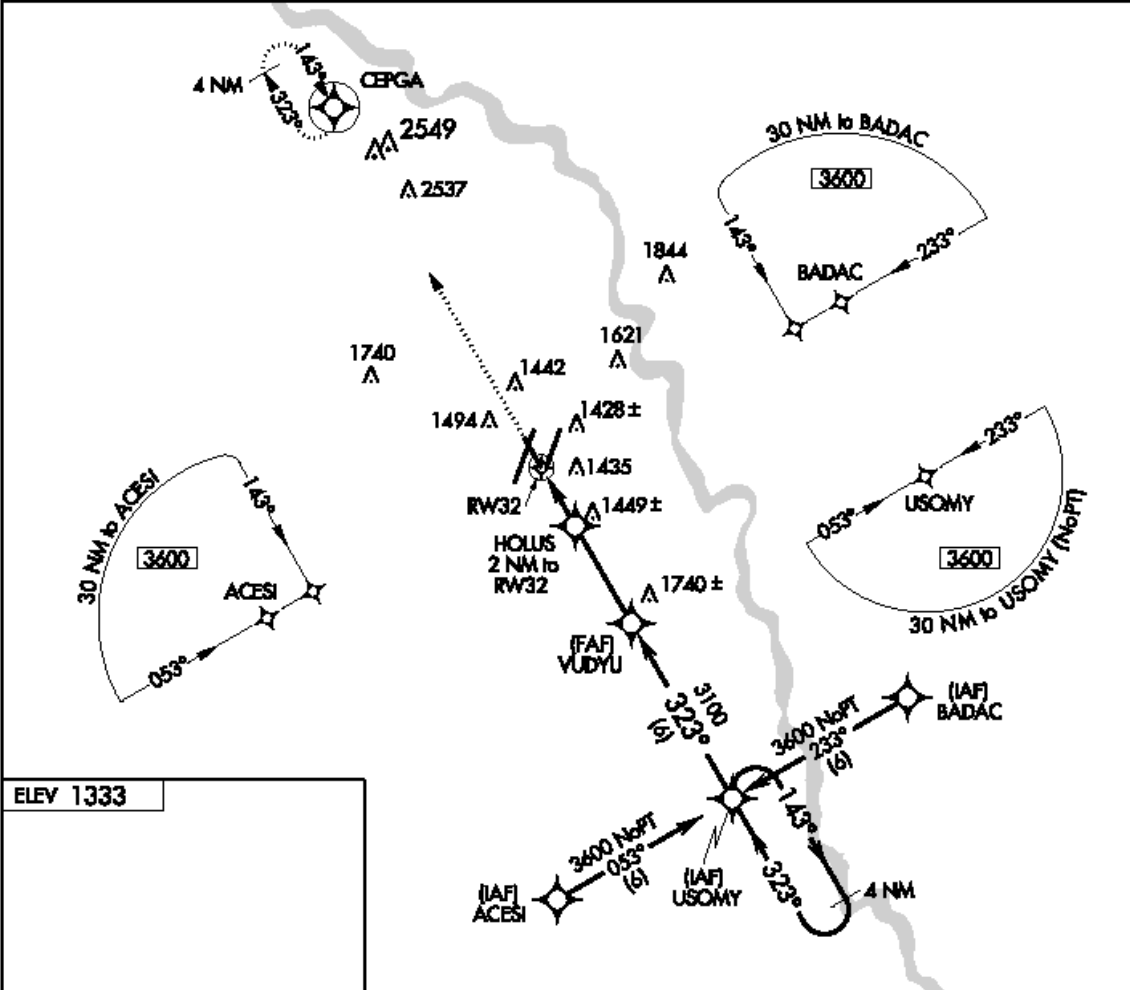
WICHITA MID-CONTINENT (ICT)

APP CRS	Rwy Idg	6301
323°	TDZE	1322
	Apt Elev	1333

△ NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Straight-in minimums NA at night.

MISSED APPROACH: Climb to 3600 direct CEFGA WP and hold.

ATIS	WICHITA APP CON	WICHITA TOWER	GND CON	CLNC DEL
125.15	126.7 353.5	118.2 257.8	121.9 348.6	125.7

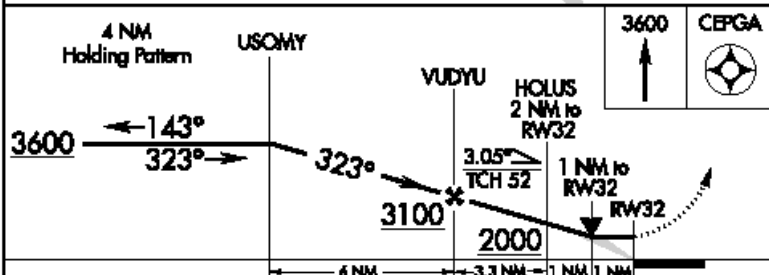


ELEV 1333

TDZE 1322

323° to RW32

HIRL all Rwys
REL Rwy 14, 19L and 32
TDZ/CL Rwy 1L



CATEGORY	A	B	C	D
LNAV MDA	1700-1	378 (400-1)		1700-1¼ 378 (400-1¼)
CIRCLING	1800-1	467 (500-1)	1800-1½ 467 (500-1½)	1900-2 567 (600-2)

WICHITA, KANSAS
Orig 04218

37° 39' N-97° 26' W

WICHITA MID-CONTINENT (ICT)

RNAV (GPS) RWY 32