

## Tutorial I: A Typical Passenger Flight

This tutorial should serve to introduce you to how the FSCaptain Communicator is used on a typical passenger flight. For this tutorial we will be using a device known as the FCDU for Flight Communicator Display Unit. This represents a typical ACARS device in use in modern aircraft, but does not emulate any particular one. The FCDU below looks much like an FMC / FMGS control panel, with alpha-numeric keys, specialized function keys, and context-sensitive *Line Select Keys*.



Line Select Keys are referred to in a unique way. The 6 keys on the left-hand side of the control unit are named LSK1L (LINE SELECT KEY 1 LEFT- the key on top) LSK2L (the key immediately beneath LSK1L) through LSK6L (the key on bottom). Unsurprisingly, the 6 keys on the right-hand side are named LSK1R (LINE SELECT KEY 1 RIGHT) through LSK6R.

(Some FMC / FMGS manufacturers use LSK1 – LSK12 to refer to these 12 keys.)

As of FSCaptain version 1.5 there are two ways to access the FCDU. The easiest is from the desktop (or start menu item) “FCDU ACARS” which will run the device on your desktop outside your flight simulator. But it is often convenient to access the device from within the simulator, so you may choose to install it as a gauge in any airplane with the “ACARS Installer”, also available as a desktop icon or from the FSCaptain Windows start menu.

**What's ACARS?** ACARS is an acronym for "Aircraft Communications Addressing and Reporting System" – a system that uses radio transmissions to send small digital messages to and from aircraft. Think of ACARS as a two-way pager system that keeps aircraft in touch with ATC and with the *aircraft's company's controllers*. (Usually referred to in FSCaptain as, "Company Dispatch.")

Today's example flight will be for a virtual airline who has accepted a charter to take 101 passengers on a flight from Portland Oregon (KPDX) to Reno Nevada (KRNO). FSCaptain's *Acme Air Service* – one of the airlines that comes configured with FSCaptain – will be our operating airline today, and because Acme has a strict operating policy, we will be expected to perform to the best of our abilities. Acme has issued this flight a flight number of 1872, and has been given a gate departure time of 3:35 local time on a Boeing 737-800 instructions to cruise at Flight Level 310.

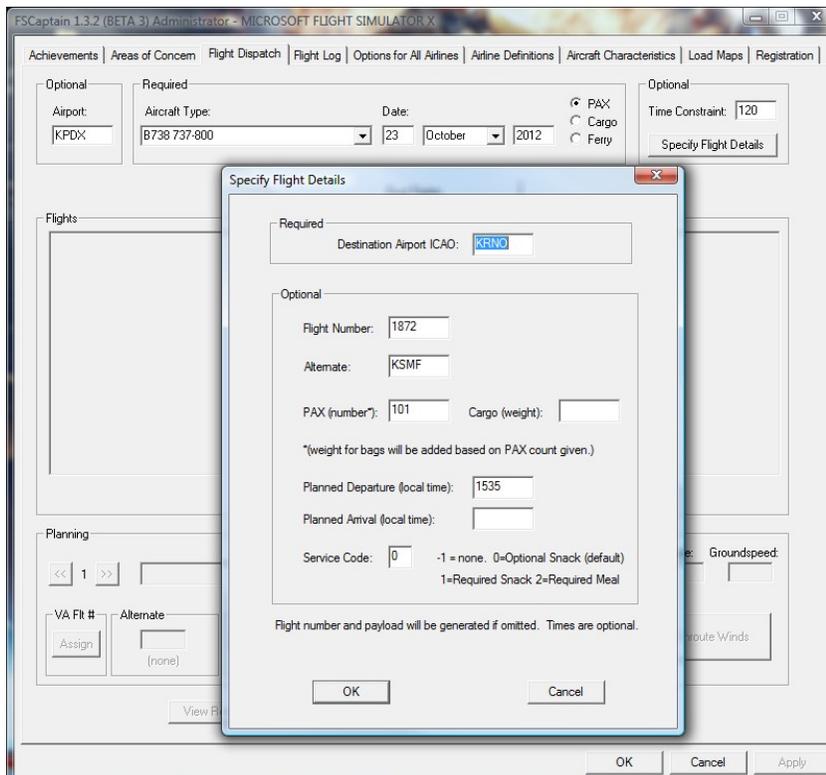
Since Acme Air Service does not have a Flight 1872 in its schedule, we will need to use the FSCaptain Administrator to create the details for this airline flight. We can do so by first running the Administrator and making sure that we are logged in with Acme as our current airline. Next we go to the Flight Dispatch tab and select **KPDX** as our departure airport, and a **B738** as the aircraft type we want to use. This "aircraft type code" is important as it specifies the exact type of aircraft that we can use. We can however chose any paint job of that aircraft type when we launch the flight simulator.

Next we click the **Specify Flight Details** button in the upper right corner of the Administrator. A data entry form appears and we can enter the values for the Destination Airport (**KRNO**), the Flight Number (**1872**), the Alternate Destination airport (**KSMF** – Sacramento International Airport) in case we are prevented from landing at our scheduled Destination, the number of PAX / Passengers (**101**), and the local Departure time (**1535** – which is 24-hour clock value for 3:35 PM).

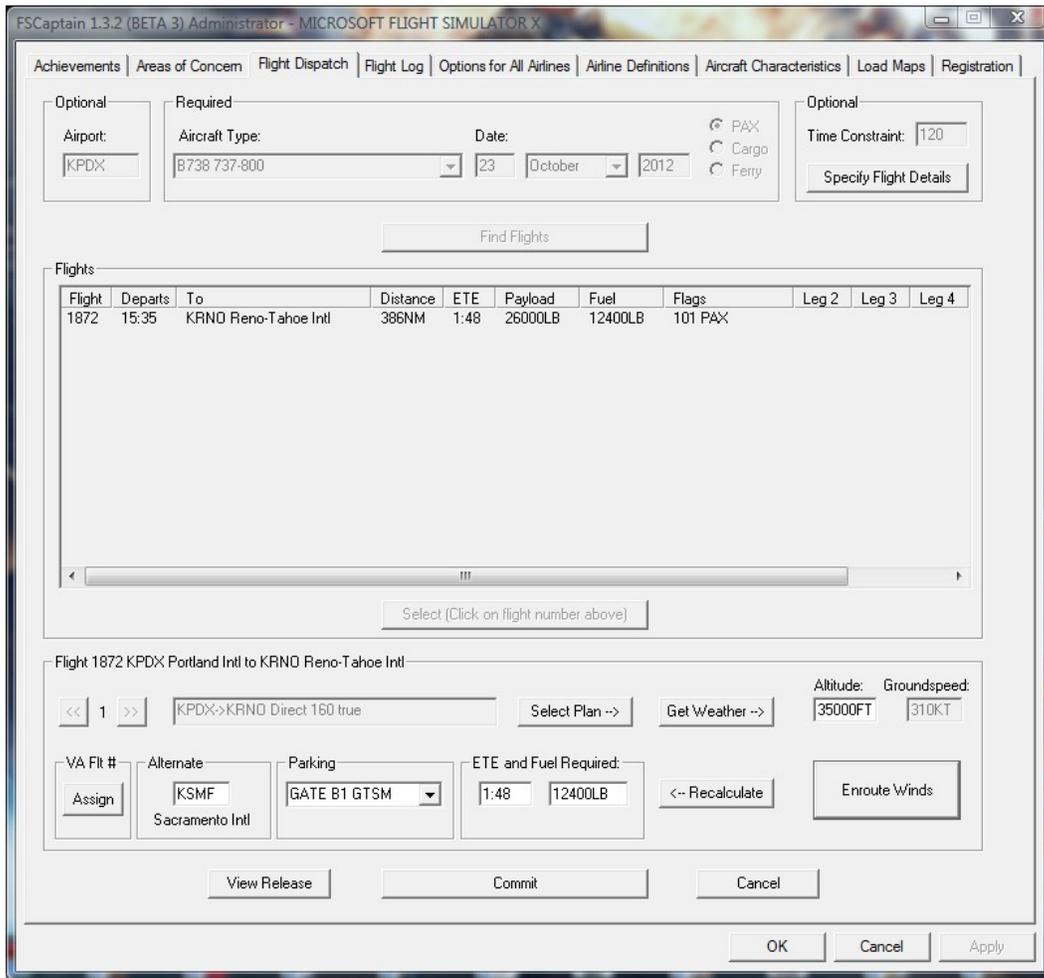
We would like to hand out snacks to our passengers if the flight time we have available will allow us. So we enter a **0** as the Service Code, which means that Snack Service is Optional. If there's a lot of turbulence during the flight and the cabin crew can't travel the aisles, we won't be penalized.

We leave the Arrival Time and Cargo Weight fields empty to allow FSCaptain to calculate them for us. (All the data you can input here is optional except the destination. Anything you leave blank FSCaptain will fill in for you with random but plausible figures.)

We click **OK** and then use the **Find Flights** button to have FSCaptain generate flight details for us. FSCaptain generates a flight for us that will require 12400 pounds of fuel, for an entire payload (passengers and cargo) of 26000 pounds. The ETE for this flight is 1 hour and 48 minutes.

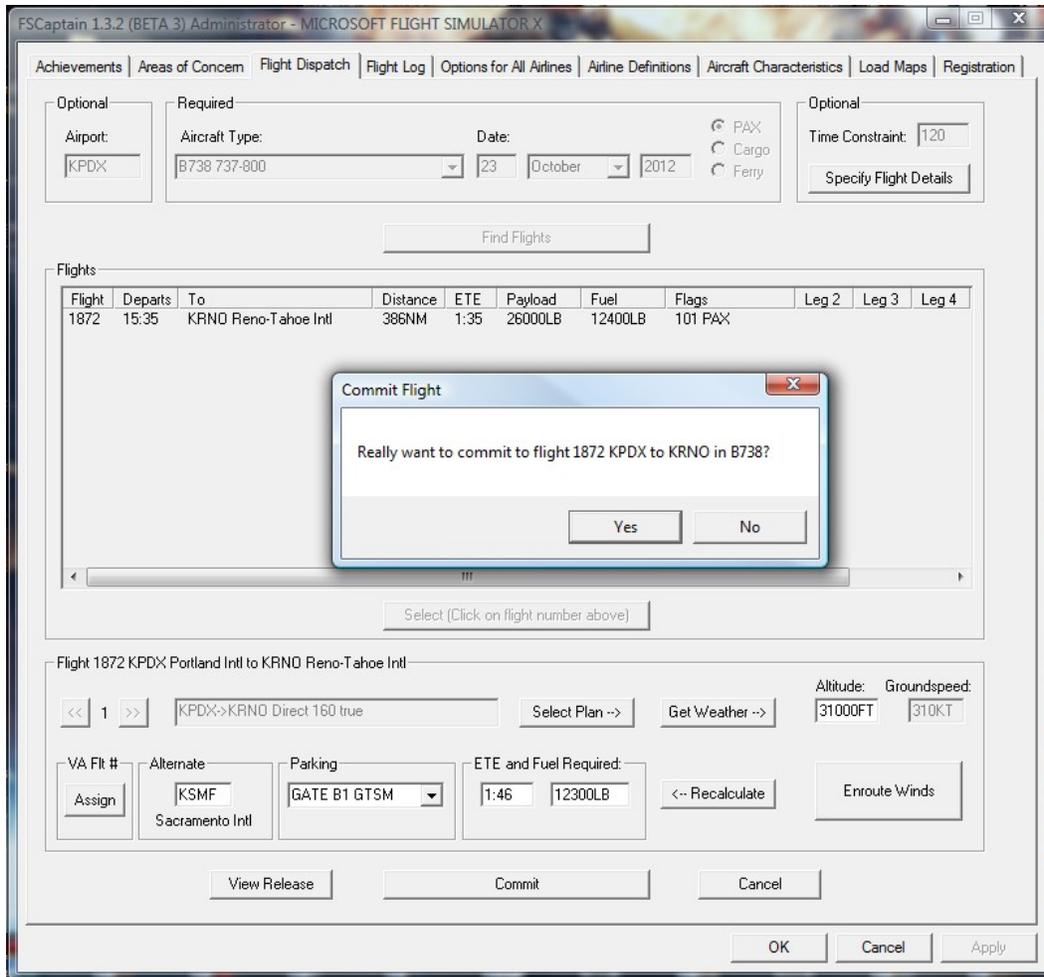


We click on the flight number and click the **Select** button.



Now while those look like good numbers, we see in the lower section of the display (the Flight Details) that these calculations occur with a cruise altitude of 35000 feet, which is the default cruise level for our Boeing 737-800. (This value is taken from the Aircraft Characteristics values.) However our virtual airline has given us clearance for a cruise altitude of 31000 feet, so we need to change this.

We click in the **Altitude** field and change the value to 31000 and then press the **Recalculate** button. Our **ETE and Fuel Required** numbers have now changed to 1 hour 46 minutes and 12300 pounds of fuel. Everything looks better now, so we click the **Commit** button as we're making a direct flight and don't want to spend time in route planning. (Sometimes it's just fun to fly.) The Administrator then asks if we're sure that we want to commit ourselves to this flight, and we click **Yes**.



This is now considered to be a scheduled departure chartered passenger flight – a one-time flight with a specific time to depart the gate. Charter flights differ from repeatable scheduled flights only in that charter flights are one-time flights, no matter if they do or do not have strict departure and arrival times. Scheduled flights are flights that can be flown on a regular schedule (daily, several days per week, or even once each week). Some advanced scheduled flights might consist of multiple flight legs – from A to B to C. Other than that, nearly everything is the same. *A flight is a flight.*

Cargo flights are simpler to manage than passenger flights because on cargo flights, you will not have a cabin crew to interact with. (Although sometimes you will have riders traveling along with you on a cargo flight for which you will be responsible.) We'll take a look at a cargo flight in Tutorial II.

The operation of the Communicator device is not dependent at all on the type of aircraft being flown. What is said here about the operation of the device and communications with the dispatcher's office will apply to all airplanes, from the smallest piston to the largest jet.

To start our flight, we'll be picking the correct time of day in the flight simulator. We already know from our VA schedule that flight 1872 from KPDX to KRNO is scheduled to depart at 3:30 PM local time, so we'll enter the cockpit about 30 minutes prior to the scheduled departure by setting the simulation time to 15:05 local time.

The first step is to power on the device. Today on the 737-800 we'll use the *FSCaptain* menu from our flight simulator to toggle the Communicator window on and off with (it uses a shortcut of control-shift-6). If we have installed our Communicator to a panel window that would allow us to use a SHIFT-1 to SHIFT-9 keypress, we could use that too. Once we have the Communicator FCDU onscreen we then click on the PWR button. (That's the white knob on the right side and in the middle of the gauge.)

We then see a screen like this:



If this screen does not appear on power-up of the device, an error message screen will appear instead, indicating that the Communicator system devices are not configured properly, or are malfunctioning.

The important data here are the software revision number (you should always keep up-to-date with the latest revision of the Communicator software), and the Interface options detected (in this sample *FSX FSUIPC*). The Interface options will present which flight simulator that you're running under, and if any special interface software is detected. The presently supported versions are FS9, FSX and Prepare3D Version 2, and the interface options you may see could be SimConnect or FSUIPC. Certain options may not be available if you have FS9 without FSUIPC, such as online weather requests.

There are three options you could be given on the Communicator display at power-up:

- SELECT AIRPORT
- OFFLINE
- LOGIN

In reverse order, here are what the three choices will do for you:

*LOGIN* will authenticate your Airline Pilot ID and location with your Company Dispatch. If you are in position to make any committed flights, you will have the opportunity to start those flights. If you are in a location that you have not committed to flying from, you may be given a choice of charter flights to make.

*OFFLINE* will not authenticate you, nor give you any flights to make. It will power up the Communicator and allow you to perform limited functions, such as make weather requests, and check items pertaining to your aircraft's information.

*SELECT AIRPORT* will list all ARPs (Airport Reference Points – the “exact location of an airport,” as specified with the host country's aeronautical agency) that are within 5NM of your aircraft's location. This can be helpful in several start-up instances where your parking location is geographically closer to another airport's ARP than the airport you want to start up at. FMC-equipped aircraft

Let's choose *SELECT AIRPORT* by pressing **LSK5L**, and see that we are given these ARPs:



There are three ARPs within range of our aircraft... *KPDX, Portland Intl... 59S, Evergreen...* and *KVUO, Pearson*. You may have different airports visible on your Communicator, depending on the airport sceneries you have installed and the gate or ramp position where your aircraft is starting.

Since we will be flying from KPDX, we should press **LSK1L** assigned to KPDX.

Now we're back at the initial Acme Communicator menu where we should now perform the LOGIN, so our Company Dispatch office will know that we're ready to start our flight. After all, we have over 100 passengers waiting for us!

We press **LSK6R** beside the *LOGIN* prompt. Our Communicator knows who we are and will perform all of the authentication functions necessary to give us access to the Company network.

Everything works, and Company Dispatch has recognized us as being at KPDX and lets us know that we have a flight waiting for us – Flight 1872 to KRNO, which is scheduled to start at 15:35 local time. We have less than 30 minutes to do our preflight checks, load our passengers and cargo, and start our flight!



Let's take a look at what we will be carrying (our flight's manifest) by pressing **LSK6L**:



We have 101 PAX, as we knew, but here we see more detail. We're also carrying 3,282 pounds of baggage, along with some documents, some automobile parts, and a *casket*. Press **LSK6L** to return to the Resume Flight screen where we will then press **LSK6R** to initialize our flight.

This takes us to the Flight Details screen which allows us to review and possibly revise details about our flight. We don't want to think that we're carrying less of a load or that we have more time available than we actually have, do we?



This screen shows us that it's currently October 23, 22:08 Zulu (or 15:08 local time in Portland OR). Our flight is scheduled to depart at 15:35 local time from KPDX and arrive at KRNO, with an alternate of KSMF. So far, that's what we expect.

Our ETE is 1 hour and 46 minutes – check. We're taking 101 PAX as part of a load that totals 26000 pounds, and 12300 pounds of fuel. Check and check. The distance likewise is the same from the Administrator's Flight Details tab.

Now if we look in the upper-right corner of the display, we see the figures 1 / 2. They mean that we're looking at Page 1 of 2 Pages – which constitute the entire display screen.

The **PREV** and **NEXT** buttons on the FCDU are used to display the different pages of a screen, and very important data may not always be on Page 1. On this particular screen the PREV and NEXT buttons can be used to go from Page 1 to Page 2 and back again. Some screens have 3 or more pages, so always check to make sure that you've read each and every page that's available.

Looking at Page 2, we can see the service that our passengers will expect on our flight, the indicated airspeed the flight is calculated with, and the heading to the destination (this heading only account for the straight-line direction to the destination, not for any winding route that we may decide to fly).



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We can also check the weather at our departure and our destination airports from this screen. Let's do that right now....



Locally we see that we have cool surface temperatures and light winds from the southeast. Surface visibility is good out to nearly 50 statute miles, with several layers of clouds... our ceiling is above 5000 feet, so although it's overcast at 7500 feet there's general low-level VFR conditions which should make for an easy takeoff.

However there appears to be some bumpy air in that cloud deck! Moderate Turbulence has been reported by other pilots at 7500 feet, so let's keep that in mind as we plan our climbout.

New from FSCaptain version 1.5.0 is the need to recognize and react to surface icing conditions. Like most airlines, Acme Air has a strict policy for its Captains to ensure no takeoffs occur with any ice or contamination on an aircraft's external surfaces. While the air carries some humidity (a dry bulb temperature of 7C and a wet bulb reading of 6C is 93% relative humidity) there's no indication of precipitation nor fog. And since it's late afternoon and there's a steady breeze, *active frost* should not be a consideration either.

Now let's check the weather at our destination, KRNO by pressing **LSK6L** (*RETURN*) and then back on page 2 of the Flight Details screen, then selecting **LSK6R** for *KRNO WX*:



It looks like excellent conditions at KRNO – calm winds and a visibility of 49 statute miles, with scattered clouds and downright chilly temperatures – which isn't unusual for the High Sierra mountains this time of year. Things can change quickly in the mountains, so let's remember to keep an eye on the weather there as we make progress today.

Speaking of winds, what's very important to us right now are the winds aloft, because they will affect the actual ETE on the flight. Let's press **LSK5L** for *WINDS* to see what they are in the Reno area:



The winds page will help you in managing your ETE, which is always critical to the success of your flight as far as the dispatcher and airline management are concerned. When the page first appears, the little carat (the ">" character) is placed on the lowest altitude. You can move it up and down the list by pressing **LSK5L** or **LSK5R** for *BACK* or *FORWARD*.

As the carat moves, you'll notice that the *Speed Adjust* value will change. This reflects the effect that any headwind/tailwind will have on your flight. In our case this time, at nearly 30,000 feet the speed adjust is +30 knots which is a decent tailwind at that altitude and will help us arrive on time. This would be a good altitude to fly. We can press **LSK6R** to accept that speed adjustment and return to the Flight Review page:

We see the ETE for this flight has not changed. If the headwind/tailwind adjustment had been higher, we'd likely see a difference. In the case of a significant difference (or a significant disagreement, after all we are the Captain), we could adjust the ETE by pressing **LSK5L** to *REVISE*.

We've done about everything we need to do with the Communicator at this point, and are now ready to start boarding passengers. There are two possibilities here, a *NORMAL LOAD* and a *MANUAL LOAD*. A Normal Load allows the program to load everything automatically for you. (Or it can *simulate a load* if you prefer to use an external loading program such as those that high-end aircraft developers use.)

A Manual Load means you will take responsibility for the load process by using the FS menus to place the correct quantities of payload and fuel onto the aircraft. Ordinarily, you'd want to do a Normal Load as that's simply easier. (The Normal Load option will not be available to you if you are running FS2004 without the FSUIPC add-on.) Press **LSK6R** to start that process,

You won't be Cleared to Load until the aircraft is configured to start the loading/boarding process. Either Dispatch will allow the loading to begin, as above, or they will present a list of items to correct before the load process can begin. Examples of problems are: gate not ready, door not open, engines running, brakes not set, aircraft not powered up, and so on.



This is the screen that gives us the status of our loading process in real time. We can see here at the start that of the 101 passengers, none have yet entered the airplane. Our fuel has already been loaded, and we have the required 12,300 pounds. That's not unusual. It's always good to have a little extra fuel. However, it's not good from the point of view of the airline management to have too much, which is why the fuel is calculated so carefully. For some airlines, your score will be reduced if you land with too much fuel in your tanks. They don't want to pay for you carrying unnecessary weight.

While the load process proceeds, we the pilots will be loading our flight plan, getting clearances, and doing other pre-flight tasks. It's particularly important to wait until the load has started to load (or create) your flight plan in FS. If you do this, then the FS ATC will address your flight verbally by the correct flight number. As the load progresses, the screen will be constantly updated....



The load proceeds at a realistic pace dependent on how much has to be loaded, not some arbitrary time limit. (Although as Captain we can influence the speed.) Eventually everything will be loaded:



After 15 minutes (which can vary from flight to flight), we can see that all three rows are noted as *Loaded* and the cautionary message *Auto-Load in Progress* has changed to *Door Closing*.



This takes us to the Load Complete screen. If there are no problems from the point of view of the dispatcher's office, at this point we see *CLEARED FOR DEPARTURE*, which is what we want to see. There's a long list of details that have to be right before you can be cleared,

some of which are: doors must be closed, engines shut down, weather conditions at the departure airport above minimums, and much else.

At this point we have two options. We can go ahead and start our departure procedure, or we can use the Communicator to signal the ground crew to manage the pushback sequence. We'll choose to do the pushback with the Communicator for this flight.

Although the screen would let us press **LSK6R** (*COMMIT*) to start flight 1872 to KRNO, if we simply want to taxi forward from a ramp position, it's normal practice to simply start the engines and begin to taxi. The Communicator device will automatically start a flight when the aircraft goes in motion. This saves a few precious seconds, which can be important.

Landing late, even by a few seconds past the allowed window, will result in unhappy passengers (or cargo customers) and a lower score. In your career as an FSCaptain pilot, you will quickly learn how much pressure there is to be on time and to meet schedules, and to always do so safely!

But today we request the pushback by pressing **LSK5R** (*PUSHBACK*) and the pushback control page appears:



By default the pushback is set to 90 feet back (or less if your airplane is a small one) and then a 90 degree turn with our tail towards the right. You can adjust this by using the appropriate Line Select Keys. In our case 90 feet is good enough, but we need to have our tail turn to the left. So we press **LSK3L** until the option *Tail Left* appears. The result is:



Once you have the pushback instruction set up the way you want it, start the pushback itself by pressing **LSK6R** to *START*. Over your headset, you will hear a dialog between your First Office and the ground crew, and you should react to their instructions. The ground crew will first ask for the parking brake to be released and once that is done their pushback will start. You will normally be cleared to start engines at that time.

Once the pushback sequence ends, you will be requested to set the parking brake, at which time the ground crew will disconnect their equipment from the airplane and the Communicator will update Dispatch with your flight information. Your ETE clock has started its countdown. Now every second counts!



After this screen clears, you are presented with the main display screen for all flight operations – the Flight Menu page. Another very important page that's frequently monitored is the Progress Page which is accessed by pressing the PRGS key on the FCDU. Here's our Progress Screen as we are cleared to taxi:



In addition to the Zulu Date and Time, we are reminded that this is flight 1872 to KRNO, the current Distance remaining to our destination, our onboard Fuel, the relative degree of turbulence that our passengers are experiencing, and the remaining ETE in block time. The *ETE* value will be green for normal en-route flight time, will switch to white when we are within our arrival time window, and will turn red if we are officially late.

Airplanes are primarily designed to function in the air, but they do have to be able to move on the ground, albeit ungracefully. Airliner engine output is tremendous, airliner weights are massive, and airliner hydraulic braking systems can become fairly complex.

Simple inertial physics makes taxiing difficult under the best of circumstances. But when airport surfaces are not clean and dry (a state generally known as “contaminated by precipitation”) extra care has to be taken so you’re able to slow your aircraft as necessary.

Your Company Dispatch office monitors all airports, including airport ground operations. If Dispatch detects any weather-related problems that you need to be aware of, they will get that information to you in the form of an ACARS Message.

But you can be pro-active and send inquiry or requests to Dispatch. From your Communications screen, select **LSK3L (REQUEST)** and you’ll get a dynamic Request screen.

As we’re preparing to taxi on our tutorial flight, here’s how our Request screen appears:



In the left column you can see option to Request the status of the runways at KPDX. If we select **LSK3L (REQ STATUS Runways at KPDX)**, we see that our request has been sent and that we’re awaiting a reply:



Within a



few

moments, our Dispatch returns with unsurprising news – the local runways are dry and no adverse braking issues are expected:



Before you take off, there's only one more action that's needed to be performed on the Communicator, and only on passenger flights (but not cargo flights, even those with ride-along passengers). It's critical to much of your flight's success to signal the flight attendants when you are cleared for takeoff. This action prompts the attendants to check that all passengers and baggage and galley items are secured and prepared.

Failure to do this will not only cost you points when it's time to have your flight scored, but the passengers will likely be not disposed to think highly of your performance and not complement your behavior to Operations and your management.

There are three ways to signal the flight attendants: one is go to the Communications screen via the **COMM** key, and then to select **LSK4R** for *T/O ALERT*:



Another, easier way is to toggle the aircraft's "No Smoking" sign off then on again – you can do this from a panel, your virtual cockpit, an external command utility, or a hardwired switch. Another option for airplanes that do not have a recognizable "No Smoking" switch at all is to use the FSCaptain Interface menu to toggle the sign on and off.

As we prepare for taxi – and throughout the taxi process - the flight attendants will be busy doing their required safety briefings for the passengers. After they are done, it's professional practice to welcome the passengers on board and give them useful

information if necessary. This is done by accessing the Communications screen, and then the Announcements menu by selecting **LSK5L**. Doing that at this point, we will see:



Items shown in green are selectable, items in gray aren't currently valid and can't be selected.

If you press **LSK2L** (*WELCOME*) on this screen you will be instructing your loyal First Officer to do a welcome announcement. If you see that there are many airplanes awaiting takeoff ahead of your flight, or if you know we'll be otherwise delayed, you can also use **LSK3L** (*T/O DELAY*) to have the FO to tell the passengers about that.

Other than these options we wouldn't need to access the Communicator until we are at cruise altitude.

It's usually not necessary to press any buttons on the Communicator while you are climbing to cruise altitude, as you will be concentrating on climbout and conducting a sterile cockpit. If however you do choose to view your flight progress using the **PRGS** key,

what you see *might alarm you*. Let's take a look at our Progress screen as we climb through 8000 ft :



Here we see some data items *highlighted in white* which draws our eye to them. We see that the Maximum Range of our aircraft is 119 NM but we have 378 NM to go in our trip! And we see that our estimated time enroute (the *Time* value) is 2 hours and 1 minute but our block ETE (the *ETE* value) has now ticked down to only 1 hour 36 minutes!

Do not be alarmed... at this early stage of flight we are moving quite slowly and burning lots of fuel to accelerate and climb. This causes these calculations to appear off of what they would normally be. The time and fuel estimates are only useful when we level off in cruise, as we'll see.

Once at cruise level several things need to be done. The first order of business occurs on the Communication screen (by now you should know to get here via the **COMM** key):



It's normal procedure on Acme flights (and for many other airlines as well) to send a position report to Dispatch, letting them know we have reached our cruise altitude. This is called the "TOC Report" for Top of Climb. Some airlines require that you send in accurate position reports at the Top of Climb, Top of Descent, and every 30 minutes while in cruise.

Some airlines are not configured to require this action but it's always good practice to do this as it helps to keep your mind in the cockpit and to keep your workflows consistent.

If *TOP OF CLIMB* is active (green) on this screen, select **LSK2L**.

The second thing you can do is to give the First Officer control of the seat belt sign if you've held control of it to this point. This way you don't have to worry about turning it on and off based on turbulence or lack thereof.

If you see *CAPT BELTS* active, then selecting **LSK5R** will return seat belt sign control to you. If you see *F/O BELTS* active, then selecting **LSK5R** will turn control over to your First Officer.

On a normal passenger flight, you should not have to give orders to the cabin crew to handle cabin service – they will know when to start, pause, and stop. However, you do have the capability to start their service early or to prohibit them from doing cabin service if you feel that's necessary.

**Tip:** Sometimes an airline will offer Required Snack or Required Meal service on a flight where the cruise time might not allow a full service to be offered to all passengers. If you feel you might be in a flight where this is the case, then you might want to start service as soon as possible to ensure that all passengers are served. (If a service is interrupted or cancelled, there is a chance that some passengers will become upset and lodge complaints after landing.)

**Tip:** Similarly, if you have fulfilled your requirement to provide service and you feel that you will reach Top of Descent before a subsequent service would complete,

then you might want to consider prohibiting the flight attendants to begin another service.

Select **LSK2R** (*START SVC*) or **LSK3R** (*PROHIBIT SVC*) as needed.

Now that we're comfortably at cruise, let's take a few moments to address another important Communicator screen – the Flight Menu screen:



This screen is accessed normally by pressing the **INIT / RST** key on the FCDU's keypad. The Flight Menu gives you a good overview of general items (time, flight number, ETE, and whether you're on-time or not) along with the phase of flight that you're currently in.

Relevant (and dynamic) options are accessible from this menu – before takeoff, or while in flight, you can quickly revise your ETE if you see that conditions could result in your early or late arrival. You can also declare an in-flight emergency, announce to Dispatch that you need to divert to your designated alternate airport, or even cancel your flight should that be the best option at your disposal. (Let's hope not, cancelling a flight is an event that's not looked upon with favor in any Company's Operations area!)

As you cruise, a primary concern is always arriving on time and with a safe fuel level. To help manage these concerns, we will often monitor the Flight Progress screen.



There are two important pairs numbers to compare against one another. The first pair is the “Block ETE” value versus the “Estimated Time Remaining” value for the flight.

Block ETE (*ETE* on the display) is the official remaining time that the Dispatcher expects you to arrive at your destination, and the Estimated Time Remaining (*Time* on the display) is calculated based on the distance remaining and current ground speed. The *D* that you can see after the hours/minutes above indicates this value is calculated using a "direct to the airport" method. That's how we're flying, so it should be a pretty valid calculation. Had we entered an MSFS flightplan in the Administrator, we would have the option to calculate Estimated Time Remaining using a Planned route.

In the example above, the remaining *ETE* is 1 hour 19 minutes, and the Communicator software estimates we'll be pulling up to the gate in 1 hour 08 minutes. This is optimal timing – we want a few minutes of cushion here, but not too much, and we never want to see *Time* exceeding *ETE* – which means we'll be arriving late. (This is true in cruise flight. During the climb phase, *Time* will often exceed *ETE* because climb speed is slow and the estimate is based on current ground speed.)

The other important pair is the current range (*Range*) versus distance remaining (*Rem*). We want our range to exceed the distance remaining by a nice cushion. Otherwise, we'll have an insufficient fuel situation. Again, don't be alarmed if *Range* seems low during climb – we are consuming fuel at an abnormally high rate while climbing.

Any information item on this page that needs your attention will be highlighted, in white for caution, and in red if it represents a potentially dangerous situation.



Other important data items are: Gross Weight (*Gross*) which is the weight of the airplane, cargo, passengers, and fuel, and will be highlighted in white if it's greater than the maximum landing weight. (Doing so won't necessarily damage your aircraft, but it will have to undergo strict maintenance protocols after you turn over the keys. Doing so very often won't make Operations happy.)

*Turb* represents the level of turbulence as experienced by the passengers – *None*, *Light*, *Medium*, or *HEAVY*. Any level above *Light* may indicate you or your First Office should to turn on the seat belt sign. You may also want your First Office to make a cabin announcement to calm any frayed nerves. (Go to the Announcement screen from the Communications screen.) Doing so will help their attitude towards you and the flight, which will potentially help your score.

Certain flags will display when you are transporting any special kind of cargo – whether the number of passengers for a passenger flight, or one of several special flags for a cargo flight such as *priority*, *live cargo*, or *fragile*. In addition, during cabin service on passenger flights the status of the service will display here. In the example above, you still have 101 PAX onboard (congratulations on not losing anybody!) and Snack Service is underway, with 50 of 101 packs of healthy munchies and beverages have been passed out.

Cruise flight should continue normally, unless we have a mechanical problem (which is a rare but possible event on nearly any FSCaptain flight.)

As noted earlier, every 30 minutes or so while in cruise you should remember to send a POS report to Dispatch from the Communications screen.

As you fly, Dispatch will monitor your flight and the weather conditions ahead of you and at your destination. Acme company policy requires that we have our approach to the destination approved before we begin it. This usually happens automatically when you receive a message from the Dispatch office, like this:

Here the Dispatcher tells us our approach into KRNO is approved, wind is calm, and that we should expect to taxi at Gate B1. We'll press **LSK6L** (*RETURN*) to return to where we were. A message from Dispatch will not interrupt any screen we are displaying, but the *MSG* indicator on the right side of the FCDU will illuminate, prompting us to press the *MSG*s key to view the Message Queue.

Once we begin our descent based on ATC instructions, we'll call up the Communications screen and provide Dispatch with a TOD (Top of Descent) Report.



It's often helpful to encourage passenger goodwill to let them know that you'll be landing soon or if you feel that you'll be delayed in landing.

The Announcements screen can be used to have your First Office let your PAX know if you're being delayed on approach (**LSK3R**), if being held by ATC (**LSK4R**), or when you feel that you're about 10 minutes away from touchdown (**LSK5R**).



Otherwise, as with the climbout, the descent should be conducted without having to access the Communicator often – you will concentrate on flying the airplane and obeying ATC instructions. This example shows our Flight Progress page at the Initial Approach Point for ILS 16R – 15NM from touchdown, with 17 estimated minutes before we dock compared against 22 minutes of Block ETE remaining:



Besides any passenger notification that you feel you can safely make, the only interaction that is required will be to notify the cabin crew when you are cleared for landing. Like the notification for cleared for takeoff, this can be done by toggling the “No Smoking” sign on FSX aircraft or an aircraft with an FS9 FSCaptain approved “No Smoking” sign, or by selecting **LSK4R** (*LDG ALERT*) from the Communications screen.

You will land the airplane normally, and taxi to the gate. Some airlines – including Acme – will require that you park at a position that’s been assigned to you, and which means that you will have to navigate on the ground to find your location. You can use real world or simulator charts, or any number of utilities that can provide taxi or parking guidance, or you can access the Communicator’s Flight Menu (**INIT / RST key**) which will list the currently assigned parking location as well as its compass bearing and distance from your location.

**Tip:** Because airports are dynamic locations, and their operations are out of the control of any Company’s Dispatch or Operations office, it could occur that another aircraft may be using the spot that you’ve been assigned. Once Dispatch is made aware of such an event, they’ll send you a Message via your Communicator advising you of your new assigned parking. So it would be a good thing for you to keep your Communicator visible as you find your way to closing your flight.

Here we see that we're set to arrive at KRNO Gate B1, which is on a bearing of 325 and is only 751 meters away. That's not very far and we have a few minutes to get there – and we won't have to break any speeding laws in the process!



Do note that our date has changed – it's now just after midnight October 24<sup>th</sup> on the Prime Meridian (UTC or Zulu time), but it's early evening in Reno.

Once you arrive at your parking spot, you will end your flight by setting the parking brake and shutting down all engines. This is how the Flight Menu changes to reflect this process for our tutorial flight:



The messages in white below the *Taxi to Gate* display are prompts to help remind us. If you are not on the Flight Menu page you won't see them, but you still need to set the brake and stop the engines for the Communicator device to register your official arrival.

Once your arrival registers with the dispatcher's office you will see the Arrival page:



We can see that we arrived 8 minutes early, which is well within our on-time arrival window for this flight. Since this is a passenger flight, we will turn off the seat belt sign and press the LSK6R (PROCEED) key to start the unloading process. This will result in advancing us to the Flight Complete page:



We're happy to see our score is 102 for this flight which is an excellent score! Once the door opens (this should be done by your cabin crew automatically) the passengers will start unloading. We can, in the meantime, send the First Officer to say goodbye at the door.



After the passengers have disembarked (taking only 5 minutes versus the 15 it took them to load up!), we are given the options to display the Flight Statistics and the Flight Record screens to see how the score was computed. Let's click **LSK6L** (*DETAILS*) to start with the Record and the Score:



The Flight Record screen gives us an overview of the flight. Pressing **LSK6R** (*JUSTIFY*), we can see the Score Audit screen:

We were on-time without having to revise our ETE in flight, which got us 5 points. We correctly reported our position throughout the flight to earn us another 2. Enough passengers thought highly of our smooth flying skills to award us another 5 points! Our team conducted ourselves in a professional manner well enough to score 5 more points.

We **LSK6L** (*RETURN*) back to the to the Flight Complete screen, and then select **LSK5L** the (*STATS*) to see some interesting statistics from the flight:



Our ground speed was 282 knots, somewhat slower than the standard ground speed for this aircraft. The lack of a headwind helped us keep our ETE. Our landing speed was an ok 247 FPM – if we had landed less than 200 FPM it's possible we could have scored an

additional 5 points for a Smooth Landing (which won't happen every time – not all passengers reward you for a smooth landing, feel lucky when you get it.)

The minimum and maximum G numbers are very good and probably why we got a “smooth flight” rating from passengers.

We burned 10,275 pounds of fuel total, at a rate of 6,240 pounds per hour. That's more fuel burned than could have been on a more economical flight. Acme (and some other airlines) can be strict about burning too much fuel. We may get a message from Operations if we consistently over burn on our flights.

The fault code was zero, which means no mechanical faults were detected on this flight.

Now that we're basking in the glow of an excellent flight, we can return to the Dispatch Online page where we can select another flight, or shut down the cockpit if this is the last flight of the day.

Thanks for flying Acme!