

Air Bucks

Version 1.01

*Manual
and
Strategy Guide*

Air Bucks Version 1.01 Manual & Strategy Guide

MANUAL

Impressions Software Inc.

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Technical Support Line

If you have any problems installing this software, please call our Technical Support Line at (203) 676-0127, and a member of our Support Staff will assist you. Hours are 9 a.m. to 5:30 p.m. E.S.T., Monday through Friday.

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Changes in Version 1.01

At Impressions, we pride ourselves on our commitment to satisfying the customer. Among the praise and commentary we have received, there have been many requests for different features to be added to Air Bucks. Some people have wanted the interface to be more flexible, making access to important commands more rapid. Some have suggested a beginner's mode, so that players have time to learn the game. Some have asked that we redesign the visual style of the game. And many people have asked for more strategic pointers on how to set prices for a route. We have listened and reacted -- we hope that you like the results -- and that you continue to tell us what you think!

Version 1.01 of Air Bucks is an interim upgrade which refines the interface for the game and adds features and pointers to help first-time players start out. Version 1.2 will add 256-color VGA graphics, a zoom mode and other additional features.

Changes and Additions - Version 1.01

- The **Fast** speed is now 2.5 times faster than it was for version 1.0.
- The **Plane Income** chart is now also available from the Routes and Planes menus, in addition to being included on the toolbar (see below).
- Under Difficulty, the **Easy First Three Years** option gives inexperienced players a chance to learn the game.
- The **Replicate** command under Ticket Price now copies the three prices for the currently selected leg of a route onto all legs of the route.
- A **toolbar** now appears when all menus are cleared from the screen, allowing the player instant access to important commands.
- The algorithms for generating **Income charts** have been corrected.
- Finally, the computer player's A.I. regarding **pricing strategy**, and the **overall economic model** have been further enhanced.

IBM PC - Installation and Loading

(**IMPORTANT:** If received this booklet within your Air Bucks package, then your copy of Air Bucks has already been upgraded to version 1.01. In that case, **please ignore this page.**)

The files on this disk will upgrade the copy of Air Bucks already installed on your hard drive to version 1.01. When the UPGRADE program is run, certain files in Air Bucks' directory will be replaced with new versions of themselves. Then, Air Bucks v1.01 will be ready to run. Upgrading the game does not require additional space on your hard drive.

Hard Drive Installation

First, switch on the computer. If WINDOWS, DOSSHELL or other menu programs appear automatically when you turn on your computer, you should exit them now. In either case, you should now be at the DOS prompt, where you can enter commands. The prompt should look something like either "A:\>" or "C:\>". Insert the Upgrade Disk into a floppy drive, and type

A: <ENTER>

or

B: <ENTER>

-- to access whichever drive the disk is in. Then, type

UPGRADE <source-disk> <dest-path> <ENTER>

-- to run the UPGRADE program. <source-disk> is the name of the drive from which you are running the Upgrade; <dest-path> names the drive and path where Air Bucks is located on your hard drive. **Note:** There must be a space between UPGRADE and the source disk, and between the source disk and the destination path. **Note:** You must use a colon after the drive names for both the source and destination disks.

When the upgrade is completed, Air Bucks will be ready to run from the hard drive as before.

Examples

To run the upgrade program from floppy drive A:, when Air Bucks is installed in the AIRBUCKS directory on the C: hard drive, type

UPGRADE A: C:\AIRBUCKS <ENTER>

To run the upgrade program from floppy drive B:, when Air Bucks has been installed to the GAMES\AB directory on the D: hard drive, type

UPGRADE B: D:\GAMES\AB <ENTER>

Air Bucks -- How the Model Works

The economic model programmed into Air Bucks takes into account a multitude of factors and statistics. The airline executive who believes that he can make a cool million **just** by keeping his prices competitive, may soon find himself up to his ears in bank loans, and paying his meager profits out as stock dividends. The businessman who keeps a firm grip on all facets of his company is the one who could make incredible profits.

In economics, demand is a relationship between price and the quantity demanded of a product. In Air Bucks, **demand** is the measure of how many people will buy a ticket to fly on one of your planes. It is measured as a percentage, and is calculated using a wide range of factors described in detail below. One goal in playing Air Bucks is to maximize demand for your planes -- to fill your planes as much as possible, at the highest possible price. This would then maximize the income for that flight. Controlling demand is crucial to earning money -- the amount you earn per flight is the percentage of demand **times** the price per seat **times** the number of seats in the plane.

Unfortunately, some of that money earned must be spent to cover **costs**. In Air Bucks there are two types of costs: flight costs (which are incurred for every flight that you run) and overhead costs (which are charged annually or monthly, and are not directly related to the quantity of flights that your airline flies).

The largest factors used to determine the costs per flight are the distance and the fuel cost at the start of each flight. The resulting cost is then increased for any additional Comfort factors you have selected, and adjusted for the size of airplane flying the route: it costs far more money for a large jet to take off and land than it does for a small turbo-prop plane, so the average cost per mile needs to be adjusted to take that into account. This is the reason why modern airlines use much smaller airplanes for the very short flights.

Other costs per flight (such as maintenance fees, staff and landing fees) are deducted annually: you must be prepared for a large deduction from your bank balance at the end of each year!! Overhead costs (head office, advertising, bank interest and so on) are deducted either annually or monthly.

You should also be aware that Air Bucks will support up to 400 planes -- regardless of who owns them. Your corporation could in theory own and run all 400, or none.

For your information, demand is *not* calculated just by city, as many users have thought; demand for a route (or leg of a route) is calculated every time that an aircraft takes off; all the planes in Air Bucks actually "fly" their routes -- the model *does not* simply work out how many flights the planes could fly each month, and multiply through. This means that the latest possible information is used to calculate demand every single trip. This is also the reason why the computer slows down as the fleet size grows -- it is working much harder!

We have had several technical support users suggesting that the computer players had some sort of advantage: we state categorically that this is not the case. The computer players have no more information than you, and are given no advantages. They do, though, use the information available to them.

Air Bucks -- Your Aim

Your basic goal is to maximize profit, preferably by putting a passenger in every seat and filling the holds with as much cargo as possible, while charging as high a price for both cargo and passengers as you can!

While it is possible to fill every plane, surprisingly, you may well *not* want to do this. You might well need to drop prices so low in order to fill the plane, that you make less money than charging a higher price and having fewer passengers! Or, you may find that you are spending too much money to create this demand, and your revenue from fares is being swallowed whole by excessive costs.

This is really where much of the fun of Air Bucks comes in -- you can decide whether you wish to try a cheaper price with less luxuries strategy, or go for the best in quality, the highest prices -- and fewer passengers. Air Bucks allows for either of those extremes, and also many strategies somewhere in-between, to work well. You are in charge -- what do *you* want to do?

To help you carry out your chosen strategy, Air Bucks allows you to adjust many different factors -- all of which have an effect on both cost and demand. Due to the complexity of Air Bucks' economic model, and the nature of some of the factors, it is not possible to give precise rankings for all of Air Bucks' many options. There really are no set solutions to the game! Besides, if you knew exactly how the game worked, you would lose the fun of trying to perfect your business strategies!

What follows is, therefore, a guideline which describes each factor in more depth -- and which hints at how you might like to use it.

With these tips in hand, we encourage you to continue to experiment with the game. There are several ways to achieve success, using different policies. In fact, there are several different ways to achieve full demand -- so in theory, it is possible to achieve **greater** than 100% -- though, as in real-life, the numbers are adjusted for this, and you will not be able to fill your plane past capacity. You must try to find the most efficient strategy to increase demand, always being careful that your techniques do not cost so much that they deny you a chance at turning a profit.

Relative Ranking of Factors Affecting Demand

Most Important	Important	Special Circumstances
Ticket Price	Seasonality	First Class Travel
Plane Speed	Age of Your Planes	Cargo
Quality of Sites	Competition	Comfort Level
Strange Pricing	Wages	
	Advertising	
	Reliability	
	Plane Size	
	Size of Route Network	

Descriptions

Ticket Price -- This is the single most important factor. When properly chosen, ticket price has the power to increase demand dramatically; when mismanaged, it can drive **all** customers off your planes. The customers decide what a good price is, based on the cost of the trip. Finding the best ratio of ticket price to cost is a challenge; obviously, many people will fly with you if you charge only \$1.00 per passenger, but you won't be making any profits from them. You must find the right balance between offering good value for the customer, and charging enough to cover costs (plus a profit).

Note: You cannot fill your planes to capacity **just** by charging rock-bottom prices. Even though a good ticket price is crucial to your success, it alone fills less than **half** of each plane. The rest of the passengers on a 100%-full plane are attracted by the many other things you can do to increase demand.

Plane Speed -- As the game progresses, faster and more modern planes enter the market. The speed of a plane in Air Bucks can fill up to a **third** of flight; customers naturally prefer to ride the newest planes, as these usually provide the best in passenger comfort and safety. And more importantly, the fast planes get their passengers to their destinations more quickly. This effect on demand increases as the older planes become older, and the newest models look progressively better when compared to them.

Quality of Sites -- In Air Bucks, all of the things that make one city preferable over another are represented by one statistic: **size**. Size is an important factor in affecting demand; large cities will have more customers living in them, and more reasons for people to want to fly to them. Therefore, a direct flight from large city to large city is the best route to fly, and flights between small cities are the worst.

There is one exception to this -- if a small or medium size site acts as a stepping-stone between large cities on a route, then demand will be higher.

(more)

Again, good prices and choice routes are the major components of a successful air service, but they are not the **only** ones. You won't fill a plane by changing only these two factors.

Strange Pricing -- This may be just a game to you, but to your customers, air travel is very serious business. So, if you start making screwball pricing decisions (like charging less for first class than for cargo), your business will drop severely. Passengers like stability. Silliness has no place in the service industry.

Seasonality -- Demand for your planes does fluctuate over the course of a year, to reflect the changing air travel market from season to season. You might want to adjust your prices, as the shift in demand can affect profitability.

Age of Your Planes -- Here, age does not mean how many years you have owned a particular plane; rather, it means how long that particular **design** of plane has been out on the market. As it ages and is surpassed by the latest models, a particular model of plane will start to look less desirable to the customer. Specifically, demand on that plane type begins to decrease after **ten** years on the market, and will continue to slowly but steadily decrease every year after that. This is different to plane *speed*, which increases the demand for a particular plane design because of its benefits; Plane age decreases the demand for a design because of its detriments.

Competition -- There is a limit to the number of passengers that want to fly any particular route -- and hence, also to the number of planes that can profitably fly on a route. That limit is not defined as a fixed number (it grows over time), but if you too many planes fly a given route, demand will begin to drop. Thus, you will need to seek many routes to fly on, and not just overfly the few you have. Just as in real life, you must use your judgment as to when to fly new routes, and when to add planes to existing routes.

Wages -- If you don't give your staff the wages they deserve, their treatment of customers will diminish, taking the demand for your planes down with it. It is important to always raise wages after strong profits, as your employees use your success as a guide for how much money they deserve. Nowhere is this more noticeable than after a particularly successful year; if you don't reward your staff, expect to see a sharp dip in demand come January. On the other hand, employees can only increase their efficiency so much before increased wages start to have diminishing returns.

Advertising -- Advertising works similarly to Wages, in that too little advertising will decrease demand, but too much advertising might not be worth the expense. Again, some managerial judgment is in order. Be aware, too, that the effectiveness of advertising is linked to the size of your company -- people expect a larger airline to advertise more, so you will need to increase your ad spend as your revenues grow.

Reliability -- If you keep your plane maintenance level low, then your planes will be constantly breaking down, creating the image of a "dangerous" company. As a result, some customers will shy away from your services. The money you save in maintenance fees may not equal the ticket fares lost as a result.

Plane Size (Short Journeys for Large Planes) -- Planes designed to fly extremely long distances become inefficient when faced with relatively short routes. When this occurs, the cost of running that route **doubles**, as compared to when using a more appropriate plane. This does not effect demand, but profitability will plummet.

Size of Route Network -- Because customers do not like having to transfer airlines when flying complicated routes, and because they like to stick with one airline where possible, your demand will grow with your route network. This means that the demand for each flight will be higher for an airline with more active routes (if all other factors such as price, age of plane, advertising etc. were the same) than for a smaller airline.

First Class Travel -- Just as in real life, the market for first-class seats is located mainly in the larger cities. Demand for a plane flying to and from large cities will increase if first-class seating is available. On a plane flying only between small or medium cities, first-class will have more empty seats. (The wealthy people in small cities probably have their **own** planes!)

Cargo -- If a plane has cargo space allotted, it will automatically be filled when a city on that route has a cargo job waiting to go. Cargo jobs appear from time to time, and can be monitored using the **Jobs Available** and **Demand Report** commands on the Cargo menu. Cargo availability is variable from site to site; sometimes, cargo space on a plane will go unfilled, and potential passenger profit may be lost. On the other hand, when cargo is there, the money is good and cargo is more forgiving of an older, slower plane. You might prefer to set up a cargo-only plane instead; see the tips in the section on **Route Strategies**.

Comfort Level -- The eight options available from the Comfort command let you charge more for the same distance flown, and thus increase your profits. The eight options have different levels of effect, which are up to you to discover. Note that they also increase the cost of your flights.

Route Strategies

Obviously, where you decide to send your planes is very important to your success; it has a tremendous effect on demand, and can affect your long-term profitability, when competing with three other globe-spanning services. Here are a few general tips that will help in deciding what kind of route network to create. Note that the following information pertains primarily to passenger planes -- routing for cargo and cargo-only planes are covered in the next section.

In general, the name of the game is to create a web of routes connecting cities all around the world.

The temptation after reading the factor descriptions above is to only fly between large cities. However, there are two major reasons not to completely ignore the smaller sites. First, in the first decade or so of game time, some large cities are beyond the reach of your airlines, without the benefit of stopping over en route. Therefore, the small and medium cities in the middle of oceans and large continents are vital for connecting flights between the more profitable locations. As you upgrade your fleet to the latest models, these small locations will lose their significance in your network.

Second, even when you have jumbo-jets connecting the most distant points on the globe, and fly to every large city on the map, there is still more profit to be had. Travel still occurs between these smaller locations, and the money-seeking executive will find that a carefully-run service to and from these locations can add a nice pile of cash to your bank account. Also, shorter routes between less-important cities are a good place to deploy older planes, as they become too outdated for the big business. If those aren't enough reasons to explore this avenue, consider that your opponents will be doing so.

Cargo Strategies

Working the cargo market with passenger planes is largely a hands-off affair. Your planes fly from airport to airport as you have directed, and if there is cargo waiting at an airport, and your ticket price is competitive, your plane will automatically load up and collect the earnings. If there is more cargo waiting than your plane can carry, it will remain there until the plane returns to that part of its route.

In thinking about the cargo market, you should look at the **Demand Report** map under the Cargo menu. Here, sites with high or very high demand for cargo carriers are indicated by the colors black and red, respectively. If you have a route flying through an area or areas with greater demand, you may want to increase the cargo capacity of the planes assigned to it. On the other hand, if none of the cities on a route appear on the Demand Report map, you may want to replace cargo areas on that route's planes with passenger seating. However, always keep in mind that demand for cargo changes throughout the game; if you follow the advice above, you may find yourself refitting or rerouting planes repeatedly to better exploit cargo opportunities.

Another important place to look at is the **Cargo Income** chart under the Finances Menu. There, the two important figures are **capacity** and **volume**. The capacity of a plane measures, both in units and as a percentage, how much cargo it can carry on a flight; volume represents how many units of cargo are generally available on that route. If the volume of cargo produced by a route is sufficiently greater than the capacity of the plane flying on it, that plane will have to complete its route many times to completely ship the cargo. This is an ideal situation, as the plane will then garner a fairly steady cargo income from the route. However, this effect can be diluted if more than one plane flies on the route; and cargo appears at intervals, so there will still be "dry" periods for these planes.

You still have to be careful to set competitive prices for cargo; in fact, cargo uses the **same** formulas (for the most part) as in calculating demand for passengers, replacing one person with one crate of cargo. Additionally, if you set "silly" prices for cargo (like making it more expensive than economy seating), the world will notice and avoid your service. And if a plane fills less than **one quarter** of its seats, it is ineligible to pick up cargo.

Cargo-only Planes

One of the options mentioned in the Air Bucks manual is the creation of cargo-only planes. These planes have no passenger seating, having replaced it with storage space. Flying cargo is a fine purpose for those older planes that are incapable of turning a profit as a passenger carrier. Turning out cargo planes may be the preferred alternative to selling old planes of the fleet. However, the chartered cargo business requires a lot of attention and changing of routes to be successful, so too many of them may make the business unmanageable.

The creation of a cargo-only plane is simple. Simply **refit** a plane, replacing all seats with cargo space. Then, use the **Jobs Available** command to find a particular location with cargo waiting. Then, **make** a chartered route, solely for this plane, and make its final destination the location you chose. Keep in mind that if that location is too far away from the last city the plane flew to, then the plane's range will make it unable to complete the journey, and your route must include a stopover or two. Making the route **chartered** means that the plane will sit at its destination, once it arrives.

In some cases, the plane's capacity will be less than the volume of cargo available at the site. In that case, you may want to make the plane's route a scheduled one for a while, preferably between the site and another with cargo to pick up. That way, all of the cargo will eventually be picked up. To look for such cases, look to the **Jobs Available** and **Cargo Income** commands.

For game purposes, picking up cargo is all that is needed to complete the job and collect the income. Then, you can seek out new locations with cargo jobs available, and reroute your plane to them to pick up some extra cash. You may also use the **Demand Report** or **Jobs Available** commands to decide on stopover points that may prove to be profitable in and of themselves.

Questions and Answers in Air Bucks

Q: I have assigned a plane to a route, and I get urgent messages saying that the plane needs a new one. What's wrong with the route I have?

A: The problem is most likely one of two things. Either the route you assigned to the plane contains a leg longer than the maximum distance the plane can fly, OR the plane is currently at a location that is not on the route, and is too far away to reach the first stop on the route.

In the first case, you must change the route to make all distances shorter than the range of the plane, or you must replace the plane with one with greater range. In the second case, you must make a chartered route to reach that first stop, using short hops across your network of routes.

Q: Why do landing fees explode when I start doing very well?

A: The more money you have, the more the airport owners think you can afford to spend, and thus the more they will charge.

Q: Every time I see my bank balance go up, it seems that the amount earned is different. Is the economic model random?

A: No. Because the computer actually simulates every flight for every day of the entire month, the number of flights between each balance update may vary. Additionally, demand is recalculated for every flight, and as it accounts for slight variations in customer desires with each flight, the demand shifts slightly each time.

Q: Why do I lose large amounts of money from time to time, without warning?

A: Fees and outgoing costs are paid out at the end of each month and year. You will probably find that the sudden downturns come at the end of the month. If you are losing too much money to costs, you may want to change your strategies to include less frills, or perhaps reduce your wages and advertising budgets. If you go bankrupt in this way, you definitely need to rethink your plans.

Appendix: Cost Factors

Cost per flight is calculated as follows:

$$\text{(Mileage/10)} * \text{Fuel Cost}$$

This is then moderated by several factors:

- Comfort Factors (any selected by the user will increase the cost)
- Relative Plane Size (larger planes on short journeys result in more costly flights)
- Note that Maintenance Costs and Landing Fees are both charged annually, and not per flight.

It is not really practical to provide specific equations or tables: the equations are complicated by the fact that some factors only crop up in some circumstances. There is only one table of data -- that for inflation, which is based on historical data.

Let us know what you think of this game!

We have worked hard to provide an up-to-date, improved version of our game; but we know that we can never be perfect. So, if you have things that you would like to see added to list of improvements already planned for Air Bucks 2, write in and let us know!

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