

AVSIM Commercial Utility Review

Friendly Panels

FP Gauges Pack 1

Friendly Panels 14 Gauges Pack 1



Product Information

Publisher: [Friendly Panels](#)

Description: 14 Miscellaneous instruments for use in FS9.

Download Size:
6.23 MB

Format:
Download

Simulation Type:
FS 2004

Reviewed by: [Brian Fletcher](#) AVSIM Senior Staff Reviewer - October 25, 2006

Introduction

Over the past decade I have slowly increased my bravery when it comes to altering my Flight Sim aircraft. At first I would not even think of repainting, or configuring a panel, let alone altering airfiles or the cfg files. But a few years ago I got a brilliant idea; just make a backup copy before changing anything and don't look back. Nowadays it is rare when I don't make some type of alteration to my default, freeware, and even payware aircraft.

In this review I am going to discuss one of my newest hobbies which involves adding instruments to my panels. To

do this, I am going to be taking advantage of the new Friendly Panels 14 gauges pack 1. This package includes three GPS's, two NAV-COM radios, two autopilots, 2 transponders, three audio panels, an ADF, and a DME, all of which are designed to reflect there real world counterpart as closely as Flight Simulator permits.

This package gives the simmer the opportunity to upgrade from the default FS9 radio and navigation instruments to something more authentic, more legible, and with more features. And just like the gauges included in Flight Sim, you can install any of these into your panel, a sub panel, or into the virtual cockpit. The installation is easy once you get the hang of it, and it only takes 9.99EUR to add one, some, or all of these instruments to any aircraft you want.

But wait a minute, why should I pay for instruments that freeware developers donate to the Avsim file library all the time? That's a tough question. In fact, I really don't have a good answer yet. Therefore, I think we should start adding some of these instruments to a few panels so that we can determine how well they perform before making any decisions. Let's start by installing the package to our Flight Sim files first.

Test System
Compaq Presario SR1232 AMD Athlon 2.2 GHz 2 GB Ram NVIDIA Ge Force FX5500 StarLogic 21" Flat Panel Monitor @ 1024 X 768 CH USB Flight Yoke CH USB Rudder Pedals Saitek X52 Flight Control System FTP 290 Throttle Quadrant Bose 5:1 Surround Sound
Laptop
Toshiba Satellite 1.6 GHz Intel Celeron M 512 MB DDR2 SD Ram Intel Graphics Media Accelerator 900
Flying Time: 44 hours

Installation and Documentation

When you download FP 14 Gauges Pack 1 you will have a zipped folder titled "FP-GPack1" which you will need to unzip to wherever you wish. Inside of this folder is an auto-installer that you will double-click to start the installation. Enter the serial code that you received when you purchased the product and "next" your way through the install...that's it. When the installation is complete you will have two files added to the FS9 "gauges" folder, a new folder titled "Friendly Panels" in the main directory, and three new variations will be added to the default Cessna 172 and Beechcraft Baron 58. These variations are named Rstack 1, Rstack2, and Rstack 3, and each have an array of the FP instruments installed.

In the Friendly Panels folder you will find a manual and a read me file. The manual is somewhat useful, but it does not explain the process of placing the instruments into your panels as in-depth as I would have liked. Instead, it provides a link to an article discussing this issue, which I visited and found to be informative. The rest of the manual covers the proper operation of each instrument, but not in a very clear or inclusive manner.

At this point the gauges are ready to be installed into your panels, but in order to do so you will need to break the seal on you panel configuration file. There are a number of good tutorials related to adding gauges to panels, sub panels and virtual cockpits, but I would recommend downloading the panels SDK from Flight Simulator's home page if you want to learn, understand, and retain all that you could ever need to know when it comes to working with gauges. Here's a link to the [SDK download](#) section for those of you who are interested.

On a personal note, I would like to encourage all simmers to take a look at this page regardless whether or not you have an interest in the product under review today. There are a number of SDK's listed to help you with many different design and implementation aspects of Flight Simulator, some of which I have grown to really enjoy over the past few years. With that said, let's start checking out the instruments.

Bendix KLN 90B and KLN 94 GPS 's

The Bendix KLN94 is an upgraded KLN90B, both of which are panel mounted color display IFR GPS navigator and moving maps that can be used in place of the bulkier GPS systems. Aside from the maps, these smaller GPS systems provide the pilot with seemingly endless information, beginning with airport data, which includes identifier, name, city, state, county, instrument approach availability, radar environment indicator, time relative to UTC, runway length, surface, and lighting, and even the types of fuel available at the airport.

You can also use the KLN 90B and / or KLN 94 to acquire COM and NAV frequencies for ATIS, clearance, ground control, tower, CTAF, Unicom, Multicom, approach, departure, AWOS, ASOS, AAS, ARTCC/FIR, FSS, class B and C, arrival, CTA, TMA, director, radar, AFIS, ATF, MF, and ILS/LOC. These GPS's also guide the pilot on precision and non-precision approaches, departure procedures (DP's), and Standard Terminal Arrival Routes (STARs). There is also

a feature that allows vector to final approaches.



Continuing with the features, the GPS's have the capability to load selected LOC-type approach frequencies information into NAV Com radios, provide VOR and NDB info, show intersection information for low and high altitudes, approach, and DP/STAR intersections with outer markings, and minimum safe altitudes (MSA). In addition to these features, these units also show Special Use Airspace (SUA), such as class B, class C, CTA, TMA,

prohibited, restricted, warning, alert, caution, danger, and military operations areas (MOA's).

Since I am well aware that there are some simmers out there who may not understand all of these technical terms and abbreviations, let me explain this instrument in a "novice friendly" way. Basically, this GPS is similar to the default Garmin 295 and 500 as many novice simmers use for simple navigation. The primary difference, for those of you who use these instruments solely for this purpose, is the size of the GPS and the LCD screen, which is smaller but more informative than the default GPS.

You will navigate your way around the GPS by selecting groups, each of which contain a series of pages. If, for example, you wanted to review information concerning your current position, you would first select the NAV group, and then go to the NAV 2 page. It may take you a while to learn and remember where every page is, but eventually it will become second nature, just like using the default GPS. If you are not interested in all of the more advanced features, you can just find and enter your destination airport into the GPS and follow the map.

One of the major benefits of these GPS's for the less experienced simmer is that it can be a great tool for learning the more advanced features of any type of GPS. For example, you can use the Course Deviation Indicator (CDI) located on the NAV1 page to navigate, and switch back and forth from the moving map to see how well you're staying on course. Once you become confident with your abilities to follow the CDI you may find that it is more convenient to use that page to follow your route, as it is larger and easier to read without having to resize the GPS.



From my perspective the biggest advantage of the KLN94 and KLN90B is that they are much more suitable for aircraft with less room in the cockpit, such as fighter aircraft. For example, I have used both of these GPS instruments in place of the default GPS in aircraft such as my F-16 and F-18, where the default GPS can inhibit my view of vital gauges or obstruct my vision outside. However, if you have more room to spare, then you might want to try the other GPS in this package, let's go check it out.

Garmin GNS 530 GPS

This instrument will probably look more familiar to those of you who are used to using the default Garmin 500 GPS. In fact, there are only minor cosmetic differences, and they both contain mostly the same features. The biggest, or at least most noticeable difference, is that the GNS 530 is more legible when resized smaller and the map flows more smoothly. Plus the GNS 530 has tuning capabilities for any Com 1 & 2 and NAV 1 & 2 radios, and has selectable nav aids and VOR1 / 2 indicators.

What makes the GNS 530 a good alternative to the Bendix KLN 90B and KLN 94 is that it has a larger screen with the capabilities of displaying more graphic information. Though this GPS also uses groups and pages, once you input

your flight plan, you will not need to navigate through them as much as the other GPS's. This is because so much information can be displayed on the map page, reducing the need to view several pages to acquire the same info you can get on just one.



You will have the opportunity to display the VOR's, NDB's, airports, intersections, and airspaces, and you can also choose to display or hide your route and the VOR1 and VOR 2 indicator needles. And just like the default GPS, you can always see your heading, track, distance to the next waypoint, total distance, Com1 / NAV1, Com2 / NAV2, and a host of other information.

Even if you are not interested in the few added features compared to the default GPS, the readability might be enough reason to replace it with the GNS 530. You can place it in a panel, or use it in a sub panel. Either way, you should not have a problem reading the screen or buttons. And if you put this GPS into a virtual cockpit, you will likely be able to zoom out a little further than you can with the default GPS, while still being able to follow your flight plan.

One great thing about this GPS is that if you are used to using the default Garmin 500, than the learning curve should not be a problem. They both function very similar to each other with the exception that the GNS 530 has a few extra buttons, and of course, the added features. But sometimes I like to sit back and let the autopilot do the work, and it just so happens that there are a couple of those in this package as well, so let's go check them out.

Bendix KAP140 and KFC225 Autopilots

Both of the autopilots in this package are very similar to each other, with only minor functional and cosmetic differences between the two. They are both very user-friendly, easy to learn, and are suitable in appearance for a wide range of aircraft. And like the rest of the instruments in this package, these autopilots are much more legible with a crisp, clean quartz display.

When first activated, the autopilot will automatically apply the wing leveler and maintain the current vertical speed if the flight director is not already engaged. What makes this feature nice is that you can release the yoke or joystick while you are setting up the autopilot without the aircraft going into a nose dive or climbing out of control. Or if you prefer, you can set up most of the features in the autopilot before takeoff, saving you the hassle of having to do so once in flight.



The heading (HDG) hold, when engaged, will follow the heading as controlled by the heading bug on the HSI. You can continue to alter the heading of the aircraft with the HSI or use the rotary knob in the autopilot. When deactivated, the autopilot will revert back to the ROL mode, which will level the wings and maintain the current heading.

The navigation modes allow you to follow a flight plan with automatic beam capture and tracking of the VOR's (NAV mode), and you can also use it to track the localizer of an ILS approach (APR), or back course approach (REV). There is a variety of options regarding the navigations modes; therefore, I would highly recommend studying the manual before attempting to use this feature if you are not familiar with advanced NAV features.

The altitude hold (ALT) can be used to maintain the current altitude of the aircraft and to increase or decrease the altitude in increments of 100 feet by use of the rotary knob. This also goes for the vertical speed / pitch hold which is

used in conjunction with the altitude hold to sustain a given rate of climb or descent.

One feature that I have found interesting is the Barometric Pressure Mode, which will temporarily display the current barometric pressure as IN HG or MB. I have found this feature especially useful when used in combination with my Wx500 weather radar. And this display, along with all of the other pages in the KAP 140 and KFC 225, is very clear and readable from a reasonable distance.



These autopilots interact seamlessly with other navigation equipment and, with the exception of an airspeed hold, allow for an easy and effective way to go hands free. Perhaps one of the most useful features, in my opinion, is that unlike many autopilots I have used in Flight Sim, the KAP140 and KFC225 are cosmetically fitting for just about any aircraft. My verdict; well done yet again FP.

Bendix KX 165A NAV1-Com1 and NAV2-Com2

The Bendix KX165A is included twice in this package, one of which is used for current and standby NAV 1 and Com 1 information, and the other which is for NAV 2 and Com 2 info. These NAV-Com radios are not only useful for typical ATC and ground communications, but also include features for displaying waypoint and course tracking and deviation information.



The radio is divided into two sections and controlled by 4 knobs and four buttons. The left side of the radio displays the current and standby Com frequency, while the right side displays the current and standby NAV frequency. Also included, are pages that display a timer which includes a countdown audio alert and information regarding the waypoint ID's, and distance, bearing, and ETA to the next waypoint.

The KX165A is turned on, off, and to standby mode by use of the small rotary knob on the bottom left of the unit. The two larger knobs are used to adjust the COM and NAV frequencies and other functions in different modes. There are two standby buttons, one for the COM and one for the NAV, which are used to call up the current and standby frequency.

Using the mode selector you can access the course deviation indicator, flight plan information, timers, and more. While viewing these other pages, the COM and NAV frequencies will remain active. Both of the NAV-COM radios in this package are the same with the only difference being that one is used for NAV1-COM1 and the other for NAV2-COM2.



Just like the autopilots, the NAV-COM radios can be resized as necessary without interfering with the legibility of the display screen. This allows you to add the radios to a panel where you have some spare space, or they can be included with a radio stack in a panel or sub panel. Both of the NAV-COM

radios interact well with any audio panel and are what I would describe as very user-friendly.

Bendix KT70 and KT76C Transponders



The FP 14 Gauges pack includes two transponders which are similar to each other, with one requiring a little more pilot input than the other. The KT70 is comprised of 5 knobs and two buttons that allows you to adjust the squawk code a pinch easier than with the KT76C, which uses one knob and 11 buttons. Aside from the functionality, the only major difference between the two is that the KT70 permits ground interrogation response whereas the KT76C does

not.

With the KT70, the squawk code can be set by using the four individual knobs located directly below the display screen. The KT76C will require you to use the buttons along the bottom of the transponder to select which digit you want to change and then make the changes accordingly with another button, then move on to the next digit.

Along with the ability to manually program the squawk code, the transponders will also maintain the VFR code which can be recalled by pressing the "VFR" button at any time. The "IDENT" button is used to respond to an ATC request for squawk identification, which will illuminate a reply message ("R") in the display screen for a few moments after the response.

When turning on the transponder you have the option of remaining in standby (SBY) mode, which will not allow the transponder to respond to squawk requests, or you can rotate the knob to the test mode (TST) which will briefly test all of the functions in the transponder. The KT70 includes a ground only (GND) function which will only respond to mode S requests, or you can rotate the knob all the way to "ON", which provides responses to all mode A, C, and S requests.



For those of you that like to set the squawk code manually, I think that you will be very pleased with these transponders; perhaps more so with the KT70. I like the accuracy of the KT76C when compared against the real deal, but for the most part I favor the ease of use with the KT70.

Bendix KR87 ADF

An Automatic Direction Finder, or ADF, is an instrument used to detect signals transmitted by the Non-Directional Beacons (NDB's) in frequencies of 200 to 1799 kHz providing bearing-to-station information. Also including flight timing information, the KR87 is capable of tracking NDB's with precision at altitudes up to FL500 and temperatures of -20 to 55C, and can be amplified by use of the KA44B or comparable antennae unit.

The ADF can be tuned in increments of 1, 10, 100, and 1000 kHz by use of the two selector knobs, and can be used in ADF, antennae (ANT), or Beat Frequency Oscillator (BFO) mode selectable with the "ADF" and "BFO" buttons. The active frequency will be displayed on the left side of the window and, if you so choose, a standby frequency can be kept on the right side of the ADF. This can help you to stay one leg ahead of your flight plan by keeping the upcoming NDB frequency stored for use when you're ready.



The included two-way timer is available to help you with fuel management, or timing a leg, non-precision approach, or holding pattern. It can be used to count up from 0:00 to 59:59 or vice versa down. You can also manage the timer in a number of ways by stopping, holding, resetting, and changing the direction of the counter at any time.

Learning and using this ADF is very simple, even if you do not have a lot of experience with radio equipment. First you will need to turn the ADF on by using the smaller of the rotary knobs. Once the instrument is warmed up, the display will illuminate and you are ready to set the ADF to the NDB frequency. To do this, simply push the large inner and outer rotary knob located in the upper right corner of the instrument to adjust the frequency in intervals.

Once you program a primary and standby frequency, you can switch between them by use of the "FRQ" button. To the left of this button is the BFO and ADF buttons which can be used to choose between the ADF, antennae, or beat frequency oscillator modes. The final two buttons are used to call up the flight timer and to set and reset the counter.

The real KR87 has dimensions of 6.31" wide, 1.38" high, and 11.28" deep, at a weight of only 3.2 lbs. While the depth and weight are irrelevant to Flight Sim, the width and height of the instrument can be mirrored in the sim making it that much more authentic and relatively easy to fit into any panel or sub panel. From my experience with this ADF, I have found that it can be resized considerably smaller without inhibiting the legibility, though making it much larger does distort the display slightly.



Bendix KN62A DME

And now we come to the Bendix KN62A DME, which is perhaps one of the most user-friendly instruments in this package. This instrument is used to display the distance between you and a selected VOR station. It does so by an internal and externally programmed VOR frequency, which allows you to have one VOR station information loaded with another on standby. The DME will display the distance to the VOR station, your ground speed, and the time it will take you to get to that station.

This DME is controlled by just one knob and 2 switches, one of which does nothing more than turn the unit on and off. Once you turn on the DME, you can allow the DME to channel frequencies internally by use of the "FREQ" setting, or you can allow a remote (RMT mode) NAV receiver to channel the frequencies. Because frequencies can be channeled both ways, you can always have a standby frequency which can be called with the switch above the on/off button.



A third mode allows the DME to display the distance to the next VOR, groundspeed, and time-to-station information while automatically activating a frequency hold. This prevents the DME from accidentally re-channeling while you are in the GS/T mode. The remote NAV receiver will not be affected by switching to GS/T mode.

While in the internal or remote frequency mode, the DME will display

the frequency on the right side of the screen and the distance to the VOR on the left. In GS/T mode, the distance is also displayed and is accompanied by the groundspeed of the aircraft and the estimated time of arrival to the channeled VOR.

The KN62A is sized very closely to the ADF and can be easily fitted into most panels to accompany a radio stack, and

can also make a great sub panel of its own. Like the other instruments in this package, the DME can be resized considerably with little or no effect on the legibility of the display, though, as with the ADF, making it much larger than its default sized will distort the display.

KMA24, KMA26, and KA134 Audio Panels

The audio panels are used to tie all of the instruments in the radio stack together by allowing you to select which instrument you want to make audibly active. Although you can use any of these instruments alone or in conjunction with any other, the three audio panels help to organize the stack and make switching between the COM, NAV, ADF, DME, and auxiliary equipment faster and easier.

While these audio panels vary from one another in appearance and available functions, they all operate similar to each other. To select which instrument you want to make audible, you simply need to either depress the button corresponding to the instrument or turn the rotary knob to select the instrument. For example, if I wanted to use my COM 1 frequency, than I just need to press the button labeled "COM 1", and that frequency will become active. Likewise, I could also turn the rotary knob to COM 1 and achieve the same result.



What makes the audio panel so useful for Flight Simulator is that I can preprogram a variety of frequencies using a multitude of instruments and call on them when need be. Let's say, for example, that I am on a flight from Los Angeles to Seattle. Prior to departing KLAX, or at any point in flight, I can program the KSEA ATIS frequency into any of my available COM's and call up that frequency when I need it. Now I can find out the weather in Seattle without having to interrupt other flight deck operations, and more importantly, without having to use the less authentic "~" key.

The same idea applies for any of the frequencies that you will use while in flight. When used in conjunction with the other instruments in this package, I can preset my arrival frequencies before departure and call on them when I am in range of my destination's radio waves. Also included with the KMA24 and KMA26 is a visual marker beacon receiver which will identify outer, middle, and inner markers with blue, amber, and white illuminations.



Unlike the other instruments in this package, consultation of the manual will yield no information regarding these audio panels. However, since these and all of the instruments are modeled so closely to there real world counterpart, you can visit the Bendix / King or Allied Signal website to view the instructional PDF files which relate very well to Flight Simulator.

Conclusion

In the introduction to this review, I posed a very tough question asking why anyone would pay for instruments that have freeware counterparts. After examining this package closely, I have determined that there is indeed a good reason for some, not all, simmers to give this package consideration. While researching each of these instruments, I contacted my local Allied Signal retailer for Bendix / King products and found out that FP has done a remarkable job of making the instruments in this package extremely close in functionality and appearance to the real instruments.

That reason, along with the arguably reasonable price tag, is why I believe that the discriminating simmer will want to give consideration to this package. While there are countless related freeware instruments available, the FP gauges pack 1 offers you the opportunity to increase the realism of Flight Sim by providing instruments that truly mirror their real-world counterparts. Of course, if you are not concerned with authenticity, specifically as it relates to these instruments, then I would recommend saving yourself the 9.99 Euros.

Initially, I was a little confused about the need for multiple instruments of the same type. For example, I did not understand the need for two similar autopilots, two GPS's that closely resemble each other, and three audio panels. However, I now understand that each of these instruments are intended to fit the needs of different aircraft, and after altering some of my panels, I am glad that FP has given us the options to pick which instruments fit our needs best. In short, the minor differences can have a big impact.

My overall reaction to this product is one of complete satisfaction with one, and only one complaint...a lack of detailed instruction. After reading through the manual a number of times, I have concluded that there is simply not enough information related to the proper use of these instruments. In fact, there is no description of the audio panels whatsoever. And while the customer support at Friendly Panels will be more than happy to entertain any questions you may have, I would really like to see an all-inclusive manual to have handy while in flight or for study in my spare time, just like Flight Sim has provided for the Garmin GPS.

My overall impression of this package is one of satisfaction with a desire for only minor improvements, the manual being the most notable. I am very pleased with the authenticity of each instrument, and I like the fact that all of the features of the real instruments are included with the only exception being those not supported by Flight Sim. As for recommending this product, while I can not possibly determine the wants and needs of every simmer, I can say that if you are looking to enhance your communication and navigational equipment, then this package is made just for you.

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