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About this manual

This manual is intended for flight simulation purposes only, and shall not be used for any real world aviation application or reference.

This manual is intentionally written using “gray scale” colored text in many areas, and much of the print is intentionally this medium gray color. This has been done to conserve ink while printing. In some cases “black” type has been used for emphasis. Photographs used in this manual have also been reduced to black and white, and also in contrast in order to conserve ink. Please be sure to double-check your printer’s settings prior to printing in order to achieve the best results. We have tested, and experienced no issues printing this manual on laser printers. If you are experiencing a problem using a laser printer, you should check the printer’s quality settings.

By reading this manual you should become well acquainted with the product, and should be able to obtain the information necessary to “fly” the product within Flight Simulator.

Please take the time to read this manual completely; so that you can become properly acquainted with the product and its operation.

We thank you for having chosen a Reality XP Product and wish you a pleasant and a safe virtual flight with us.

Important information

No part of this document may be reproduced in any form or by any means without the express written consent of Reality XP.

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www.reality-xp.com

Standard Disclaimer

This software is designed **for entertainment only**. Although we have designed the product to resemble and function like the original, it is not designed as a training device. Not all systems have been simulated, and some of those that have been simulated may not be entirely functional.

NOT FOR USE IN REAL FLIGHT OR AIRCRAFT OPERATION.

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Sandel SN3308 overview



The Reality XP SN3308 is a comprehensive full-featured EHSI. Its modern components perfectly replace the equipment of the default Flight Simulator aircraft, or any additional third party aircraft.

With Flight Line Avionics, you will be flying a simulated avionics package capable of providing the same features and benefits as the real avionics. The Reality XP SN3308 package is a faithful reproduction that pilots and simmers can use it as a training tool to familiarize themselves with the workings of the actual equipment. Each button and knob is fully functional and performs identically to its real-world counterpart.

Gauge Capabilities

The SN3308 offers EFIS-like display capabilities with:

- Complete Navaid and Airspace database
- GPS flight plan display
- RMI needles with User-selectable data source.
- BF Goodrich Stormscope (now L3 Communication)
- Integration with any Flight Simulator GPS
- GNS flags display (requires Reality XP GNS v5.1+)
- 4 Map memories and a scratchpad.
- Complete feature set of the real SN3308!
- Latest Reality XP True Display XP v5.1 Graphics that are 100 times faster than GDI+ for gauges!

Documentation

After installation, a new program group is accessible from your Windows Start Menu \ Reality XP. This program group contains the necessary utilities and documentation. Make sure you review all available documentation.

The systems features are simulated in form, fit and function. The SN3308 has been developed as accurately as is possible based on its real-world counterpart. We strongly recommend that you download the “The SN3308 EHSI Pilots Guide” from the Internet:

http://www.sandel.com/ehsi_support_documentation_pilotguide.htm

In addition to the EHSI documentation, we suggest you also download the Stormscope documentation, “WX-500 Pilot’s guide”, from the internet:

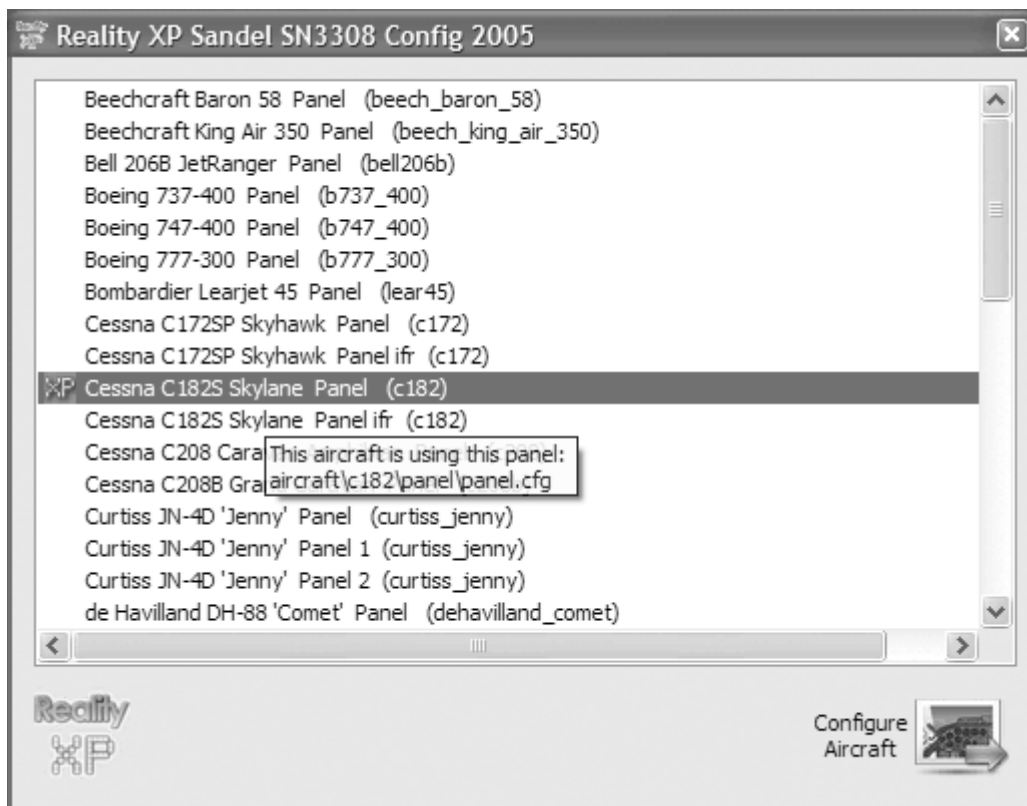
<http://www.as.l-3com.com/products/wx500.asp>

Please take the time to read all manuals completely; so that you can become properly acquainted with the product and its operation.

Getting Started

The SN3308 is a Flight Simulator compatible gauge and can be configured in any Flight Simulator aircraft panel. The software package includes an easy to use configuration program to assist with integration and configuration: SN3308 Config.

When first started, SN3308 Config detects and prompts you with all available aircraft and panels with the “select an aircraft” panel. Flight Simulator has an open architecture that permits several aircraft to share the same panel, and the selected aircraft can use different panel configurations. Not all available aircraft and panels configurations are listed in the “select an aircraft”: SN3308 Config lists only the unique combinations of both aircraft and panels.



Refer to the additional SN3308 Service Manual (located in your Windows Start Menu \ Reality XP program group), for additional panel configuration options and tutorials.

Configuration File

SN3308 Config provides a graphical user interface to most of the settings provided for the SN3308XP. The default settings are listed in several files located in:

```
[fs9]\RealityXP\Common\Settings\
```

For each customized aircraft and/or panel, a copy of the configuration files (.INI) will be added to your aircraft or aircraft\Panel folder.

The SN3308 gauges look for an ini file, first in the panel folder, then in the aircraft folder and lastly use the settings from the Reality XP Common Settings folder.

Refer to the additional SN3308 Service Manual (located in your Windows Start Menu \ Reality XP program group), Section RXPSANDEL.ini for additional details and options.

General features

All of the Reality XP gauges and controls utilize a relatively unique implementation of click spots. They work as follows:

1. As your mouse cursor passes over a click spot on the panel it will cause it to turn from an arrow cursor into a “hand” cursor. There are no + or - click spots: the hand cursor will be empty.
2. Whenever a single click spot is used, and depending upon its function a left click will accomplish the same task as a right click. In other cases, a left click will accomplish one task, while a right click will accomplish another.
3. In some cases the click spot will not function as stated above, but instead will feature separate functions for the left and right clicks. Example: For a toggle switch with 3 positions, a left click will move the switch in one direction, while a right click will move it in the opposite direction.
4. Certain click spots will work with left and right clicks, and the mouse wheel, if your mouse is so equipped. This type of click spot is used on gauges that require adjustment, such as the knobs, etc. In this case the left click turns the item “left” and a right click turns it “right”. Forward / back scrolling on your mouse wheel will also do the same.

Tool Tips

By turning on FS “Tool Tips” you will see descriptions of these clicks spots when your mouse cursor is placed over them.

Operation with Flight Simulator

This section covers detailed information about how to access the enhanced features the gauge offers when running with Flight Simulator. The regular functions of the Sandel SN3308 unit are described in the “The SN3308 EHSI Pilots Guide” downloadable from the Sandel website.

Special Click spots



1 - Popup: The click spot toggles the popup window. The Left and Right mouse buttons operate two different popup ident's configured in the RXPSANDEL.INI file. SN3308 Config automatically configures the click spot for proper operation.

2- Navigation Device selection: The click spot cycles the available navigation devices when clicked with the right mouse button. Its operation is similar to the Device Select Switch Gauge or the Navigation Device selection in the Options menu

NB: The functions referenced above depend on settings in the ini file. These settings are described in the SN3308 Service Manual and the SN3308 Config Application.

Knobs and mouse interface

A unique mouse handling system controls the simulated Sandel knobs:

- Knob rotation**
- Left mouse button: turns the knob counter clockwise
 - Right mouse button: turns the knob clockwise
 - Mouse wheel: turns the knob in both directions

Navigation data and Flight Simulator

The SN3308 is designed to connect to a single GPS1 source. When using a panel with multiple GPS sources like a Reality XP GNS or Apollo, a special click spot permits changing the GPS source and connect another one to the SN3308.

Flight Simulator is originally designed to work with a single GPS source. When a Reality XP GPS is loaded, the Flight Simulator Options menu displays an additional “Navigation Device” selection. The entries in the menu are as follows:

1. **FS or Reality XP GPS:** selects the active GPS data source. In addition to selecting the navigation information source for the gauges to display, this selects the device driving the Autopilot (GPS Steering).
2. **Simple VOR Compatibility:** some VOR gauges require this option to be checked to display the information from the Reality XP GPS source, and some advanced EHSI/EFIS gauges require this option to be unchecked to display the correct VOR information.

When the SN3308 starts it automatically deselects “Simple VOR Compatibility” for proper operation with the GPS.

Avionics Database

The SN3308 comes equipped with a complete Nav aids and Airspace database. Due to Flight Simulator limitations, the following differences exist between the real SN3308 and the simulated version:

- The simulated version does not differentiate airports between CIVIL/MIL/PRIV.
- The simulated version does not differentiate Intersections between SID and STAR.
- The simulated version does not differentiate NDB between OM/L PWR/H PWR

Flight Simulator Weather and Stormscope

The SN3308 is closely integrated to the Flight Simulator Weather engine simulation. For best results, it is recommended that you understand the following features and limitations:

Stormscope Range: the SN3308 detection range capability is directly affected by the Flight Simulator “cloud draw distance” setting. The greater the Flight Simulator range, the better the detection in the large scales.

Stormscope Detection: the SN3308 detection level is directly affected by the number of 3D clouds simulated and displayed. For best results, it is recommended to set the following parameters in Flight Simulator Option/Display/Weather settings:

- Cloud Draw Distance: from 40 to 80nm
- 3D cloud percentage: 100%
- Cloud detail: detailed clouds
- Cloud coverage density: a minimum of Medium



When 3D cloud percentage setting is *100%*, it forces Flight Simulator to exclusively use 3D shaped volumetric clouds. This greatly enhances the capability of the SN3308 to detect water in the distance.

Set “detailed clouds” to a minimum setting of *medium* as this forces Flight Simulator to display the cloud shapes closer to the actual weather condition it is trying to simulate. This greatly enhances the experience.

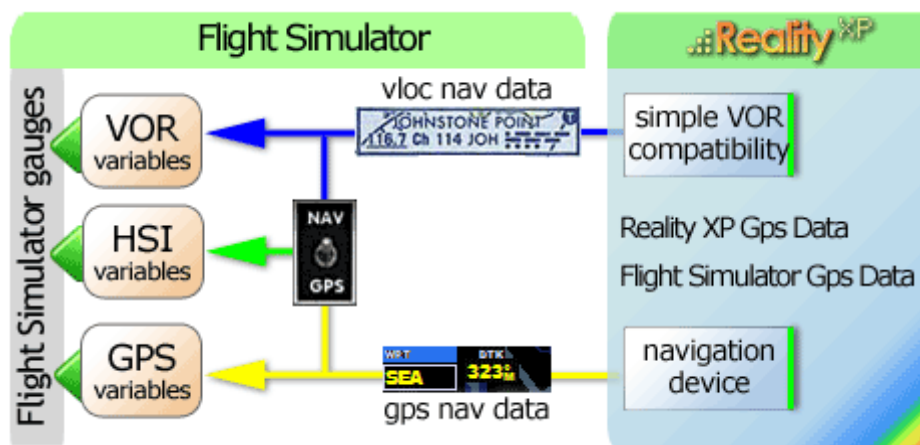
Note that the factor affecting the performance the most is the Cloud Draw Distance, which exponentially affects the number of displayed clouds. The other settings do not affect the number of displayed clouds. They only affect the complexity of their displayed shape.

Reality XP technology

Gauges made with the Flight Simulator SDK (Software Development Kit) can only access three basic sources of information:

1. VOR: related to VLOC type of information such as signal strength, CDI deviation.
2. HSI: to display both VLOC and GPS information. The type of information is selected with the typical FS Nav/Gps switch.
3. GPS: to display GPS only information, like desired track, cross track etc...

The Reality XP technology enhances the basic capabilities to offer realistic options to the virtual pilot. The following diagram shows the basic Flight Simulator structure, and the enhancements introduced with the Reality XP solution:



Product Support

You should read this manual, and the others included with this product from cover to cover before asking for support or help with this product. We have found that over 95% of all product support questions can be answered by reading the manual.

You can visit the Reality XP General Forum for general customer service issues at:

<http://www.reality-xp.com/community/users.htm>

While anyone may read this support forum, you will need to register in order to post a question or reply with an answer. Support at this forum may be provided by any one of the following individuals:

1. Members of the Development / Publishing Team.
2. Members of the product's beta testing team.
3. Knowledgeable users of the product who know the correct answer.

If you still require help: Product support is available through our online help system. Please visit <http://www.reality-xp.com> for additional support information.

Thank you.