



1500R Sport

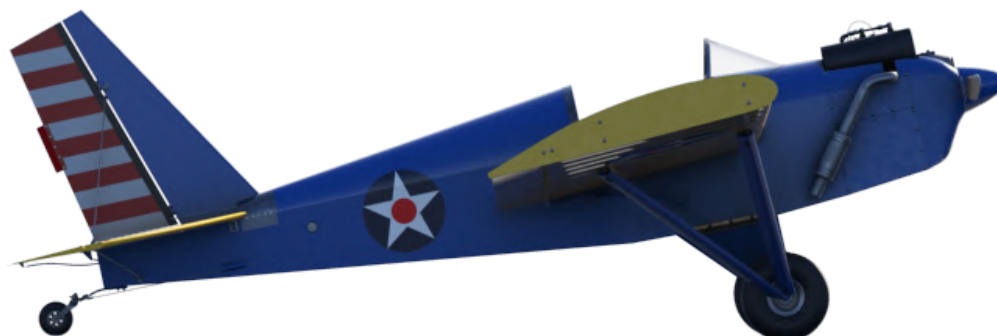
MSFS 2020 | v1.1.0

MSFS 2024 | v1.1.0

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The 1500R



Emerald Scenery Design's 1500R Sport is based on the Mini-Max 1500R Sport.

The Mini-Max series, designed by Wayne Ison, began in the 1980s, with the original prototype first flying in 1984. Ison's goal was a low cost, easy to build kit offering maximum fun, using simple wood truss construction and fabric covering.

Early models like the 1100R met FAA Part 103 ultralight regulations with lighter engines (e.g., 28 hp Rotax 277). The 1500R Sport builds directly on this rugged airframe, adding refined aesthetics, streamlined cowling, and spinner - plus a more powerful 40 hp 2-stroke engine. This increases performance and payload but places its empty weight just over the ultralight limit (by about 15 lbs), classifying it as an US Experimental - Amateur-Built aircraft.

Real world production has continued through companies like TEAM Incorporated, Ison Aircraft, JDT Mini-MAX, and now [Mini-Max USA](#).

Thousands of Mini-Max variants have been completed worldwide, praised for quick build times, forgiving handling, and exceptional short-field capability. Emerald Scenery Design's 1500R Sport recreates the real aircraft's lightweight agility, open-cockpit thrill, and pure flying enjoyment for virtual pilots.

For simulation use only.

Specs

Takeoff Roll	< 100 ft (30.5 m)
Landing Roll	~ 200 ft (61 m)
Climb Rate	~ 1000 fpm
Service Ceiling	12000 ft
Cruise Speed	55-65 mph
Stall Speed	28-31 mph
Vne	100 mph
Empty Weight	269 lbs
Gross Weight	560 lbs
Load Factors	+4.4 / -1.8 g
Powerplant	Rotax 447 (40 hp)

⚠ Warning: All Aerobatic Maneuvers, including spins are prohibited!

⚠ Warning: The Rotax 447, by its design, is subject to sudden stoppage. This is not intentionally simulated in MSFS.

⚠ Warning: DAYLIGHT VFR Operations Only!

⚠ Warning: Never fly the aircraft at locations, air-speeds, altitudes, or other circumstances where a successful no-power landing cannot be made.

Installation

How you install the 1500R depends on where it was purchased from.

⚠ Warning: Only use the 2020 version of the aircraft in MSFS 2020 and the 2024 version of the aircraft in MSFS 2024. Installing/activating the wrong version will result in the aircraft not working as expected and is not supported.

Emerald Scenery Design

If purchased directly from our store, a manual installation to your Community folder is required.

After checkout, and while still logged in, visit your account's [downloads page](#) and download the appropriate version of the aircraft for the simulator you are using.

Extract the .zip archive and copy the **esd-1500r-sport** folder (which will contain both a layout & manifest.json) into your MSFS 2020 or MSFS 2024 Community folder.

Note: Some archive tools may create a child folder of the same name. Always check for this, as the aircraft will not show if nested.

For more information on how to find your Community addons folder, [see this article by FSElite](#).

The aircraft should then show the next time you start the sim.

For simulation use only.

ORBX

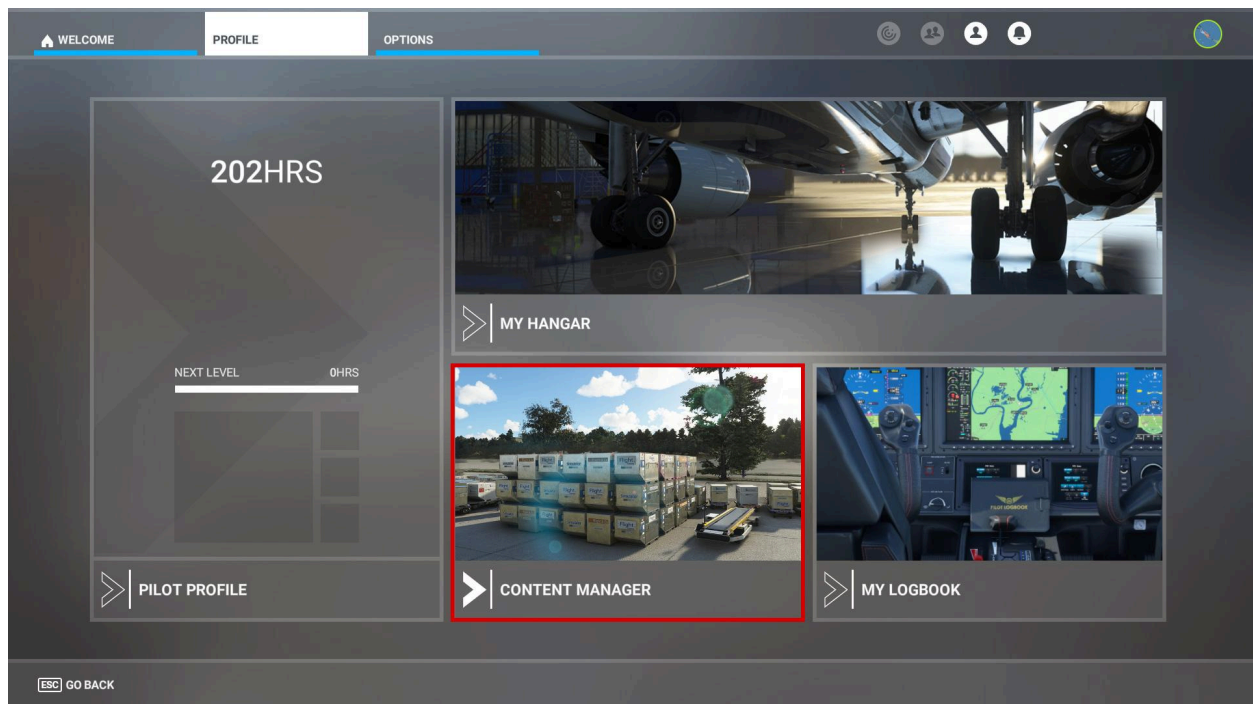
ORBX uses their own software to manage the purchase and installation of addons. More information on ORBX Central [can be found here](#).

A user guide is also provided on this page and can currently be accessed at [this link](#).

Marketplace

The MSFS 2020 & 2024 Marketplace both automate the installation of addons you have purchased through them.

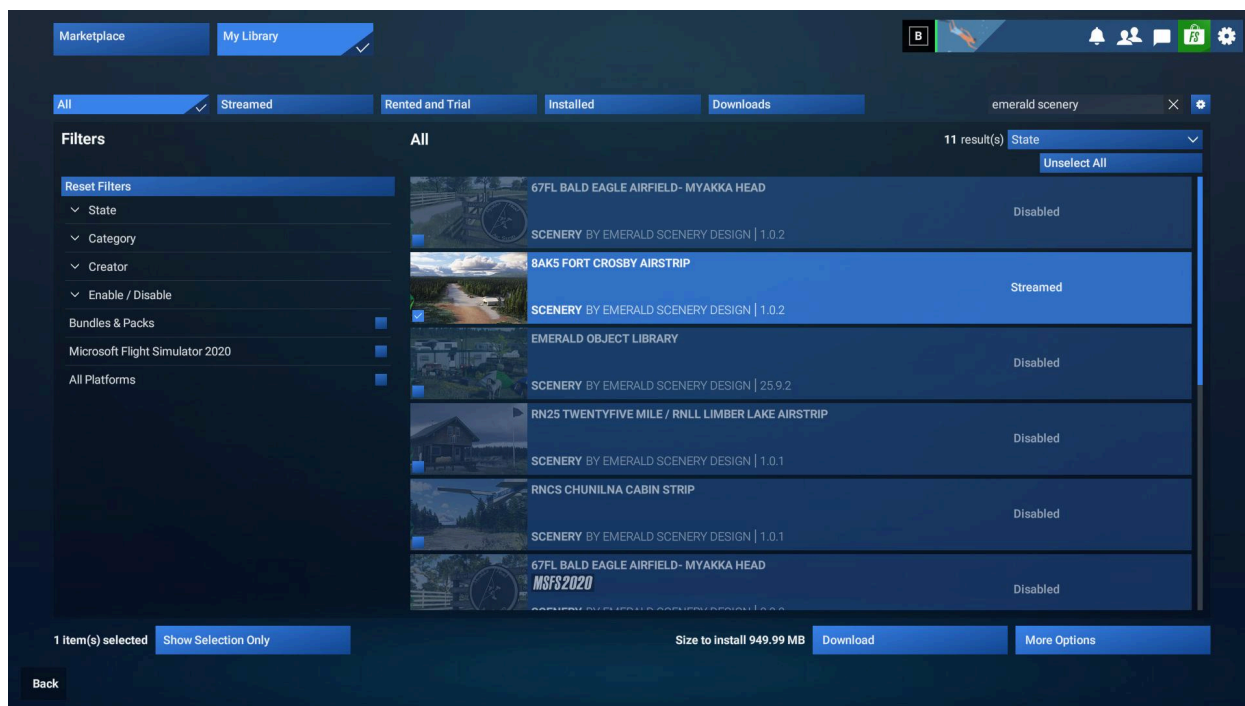
For the **2020 Marketplace**, upon checkout you will have an option to Purchase and Install, or you can choose to install at a later date through your Profile Content Manager:



For simulation use only.

For the **2024 Marketplace**, upon checkout, your addon should activate automatically and begin streaming to your sim. You should also **check that the 2024 version of the aircraft is being used**, as both the 2020 and 2024 versions of the aircraft will appear in *Marketplace > My Library*.

While you're at it, you can also choose to locally install the aircraft if you wish.



Warning: For purchases made on both the 2020 and 2024 **Marketplace**, always restart Microsoft Flight Simulator before trying to use your addon. Sometimes an addon will not mount or stream correctly until this has been done.

For simulation use only.

Features

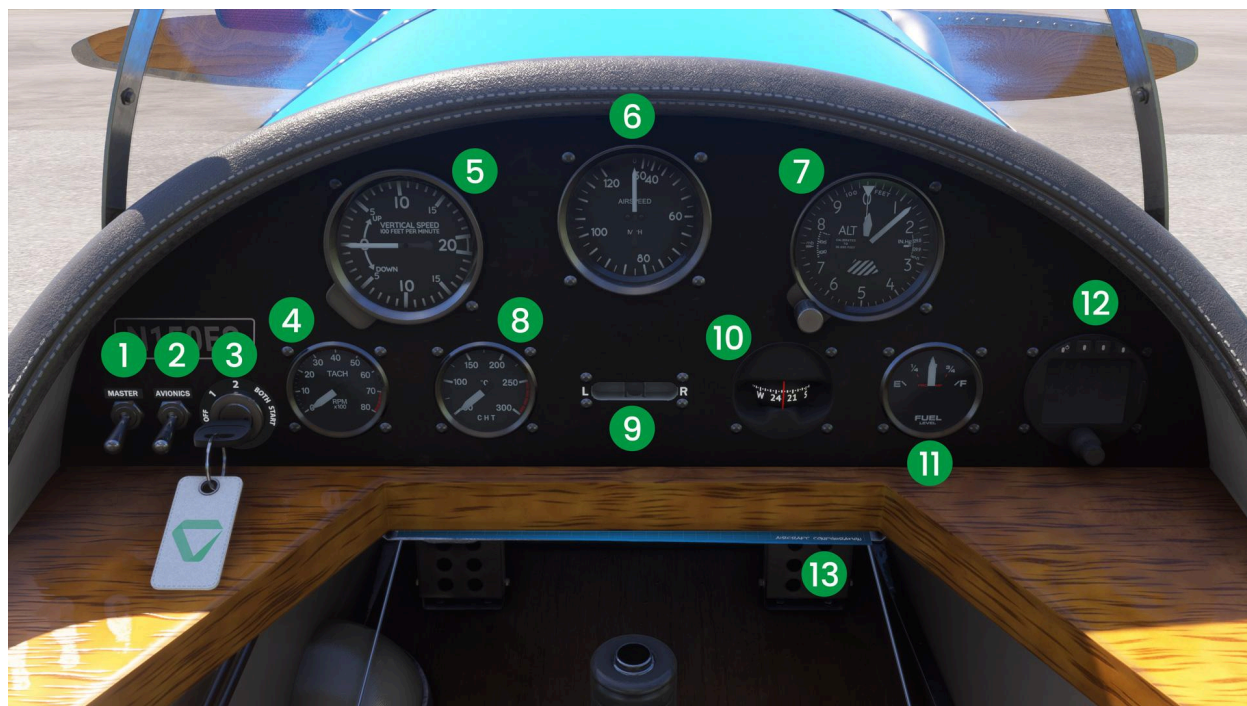
The I500R is not designed to be a "study-level" aircraft, but that doesn't mean that it's hollow either. Our goal from the beginning was to create something fun and well rounded. Something that you can pull out of your hangar on a weekend and have a flight with some friends, while also having enough for those who prefer more systems depth.

These more noteworthy features include:

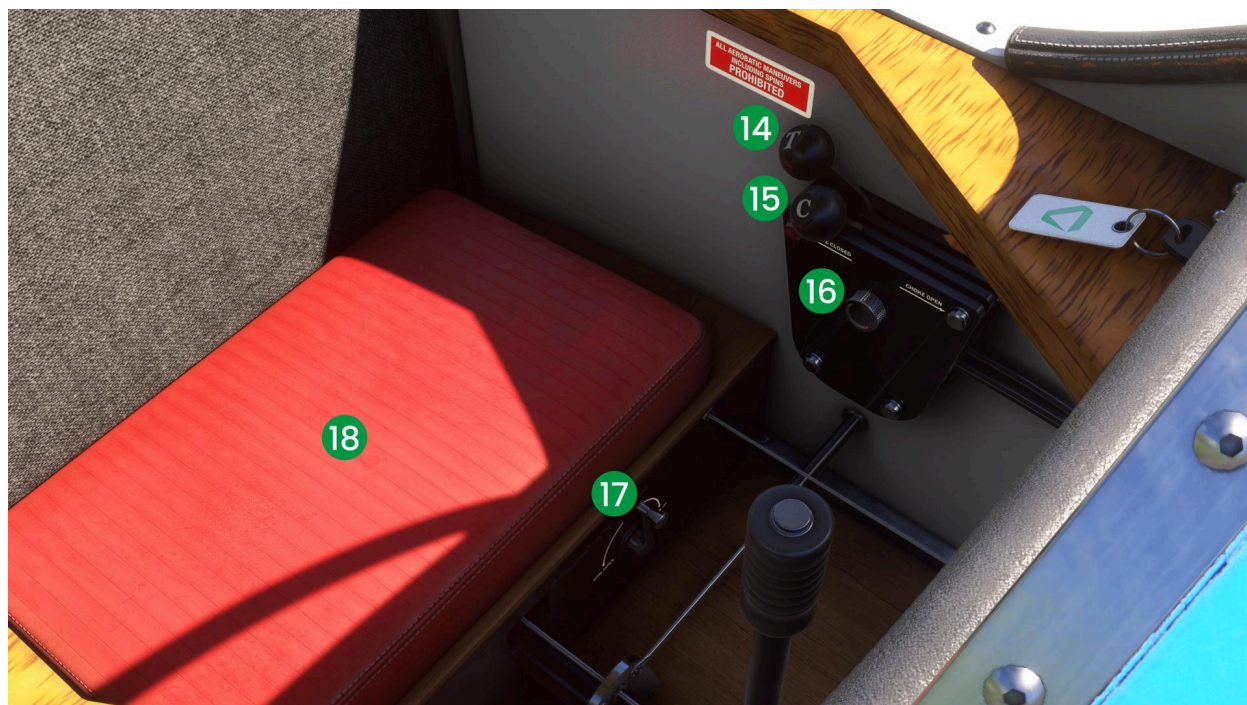
- A breakable prop, resulting in engine damage (Reset with Slew Mode)
- 2-stroke choke simulation, including flooding (Optional + Persistent)
- A togglable prop spinner (Persistent)
- Tinted glass (Optional + Persistent)
- Togglable Chocks
- Togglable Pitot Cover (Will affect airspeed if left on)
- Multiplayer Smoke
- Headphone Simulation
- Dynamic Vibration Simulation for gauges and various parts (Tunable Intensity + Persistent)
- Custom Wwise Sounds
- VR Motion Control Support for Stick, Switches, & Levers.

While mostly the same in function, it should be noted that the implementation of chocks and pitot cover is handled differently in MSFS 2024, and are a part of the sim's preflight system. However, along with manually clicking them, these can be toggled on/off with the included Blueprint options. This is a nice quality of life feature made possible in Sim Update 4.

Cockpit Layout



- | | |
|---------------------------------|----------------------------------|
| 1. Master Battery | 8. Cylinder Head Temperature |
| 2. Avionics Switch (For ACD-57) | 9. Turn Coordinator |
| 3. Magnetos/Starter | 10. Magnetic Compass |
| 4. Tachometer (Engine RPM) | 11. Fuel (L+R Tanks Combined) |
| 5. Vertical Speed Indicator | 12. ACD-57 (Radio/Transponder) |
| 6. Airspeed Indicator (In MPH) | 13. Blueprint (Aircraft Options) |
| 7. Altimeter | |



14. Throttle

Should remain in the idle position for start.

15. Choke

If enabled on the Blueprint: Needed when OAT 10°C or below. Set 70–100% and reduce or increase as needed for a stable engine start. Reduce slowly to obtain 2000 RPM on the Tach until fully off. Leaving the Choke on for extended periods of time will result in flooding.

16. Vibrations Intensity

Sets the intensity of vibrations from 0–100%. This setting will persist between flights.

17. Elevator Trim

18. Exit Aircraft (MSFS 2024 Only)

Clicking on the seat will allow you to exit the aircraft to avatar mode.

Blueprint Options



1. Canopy Tint

When checked, tint will be applied to the windshield glass. This setting will persist between flights.

2. Prop Spinner

When checked, the prop spinner/nose cone will be visible. This setting will persist between flights.

3. Wheel Chocks

Chocks will be installed when spawning in parking and can be removed by clicking the check box or by disabling the parking brake. In MSFS 2024, the Chocks can also be removed by physically clicking on them while in Avatar Mode.

4. Pitot Cover (2020) / Toggle Covers (2024)

The Pitot Cover will be installed when spawning in parking and can be removed by clicking the check box. In MSFS 2024, this option removes all covers. They can also be removed by physically clicking on them while in Avatar Mode. Failing to remove the Pitot Cover will prevent the Airspeed Indicator from displaying a speed.

5. Choke Simulation

Disabled by default. This setting will persist between flights. See [Cockpit Layout \(#15\)](#) for more info.

6. Smoke Generator

Enables multiplayer-visible smoke (Keybind: Logo Lights).

7. Headphone Simulation

Reduces intensity of sim audio. **Important:** Do not combine with Headphone Simulation available in the sim settings! Both features are implemented separately and will stack resulting in very low audio.

8. Exit Blueprint Options

Custom Variables

This aircraft uses some custom Lvars that may be controlled or mapped with external software.

Function	Variable	Unit
Choke Lever	L:LeverChoke	0-100%
Vibrations Intensity	L:VibrationSim	0-100%

For simulation use only.

NOTAMs (FAQs)

1. Aircraft doesn't load properly when purchased from Marketplace:

Ensure that you restart the sim after purchasing/installing the aircraft. If issues still persist, uninstall the aircraft (if applicable), and clear your rolling cache before reinstalling.

2. Smoke is offset from the exhaust:

If the multiplayer smoke effects appear to be offset from the exhaust pipe, ensure that you do not have any add-on aircraft active that overwrite the default smoke.

3. I broke the propeller. How do I fix it?

Enable slew mode to repair the propeller. Default keybinds:
MSFS 2020 (Y) / MSFS 2024 (Shift+Z)

4. I cant start the engine:

Ensure that your Choke is set correctly, or disable the Choke Simulation option in the Blueprint if you do not wish to use this feature. If you still are unable to start the engine, ensure you have fuel loaded.

5. Why is the Airspeed Indicator not working?

Make sure that you have removed the Pitot Cover by clicking on it in Avatar mode or by unchecking it in the Blueprint. The cover can only be removed while on the ground.

6. Career Support?

Career is only supported in MSFS 2024 for Ferry Flight at this time.

7. Do I get a copy of the aircraft for 2020 and 2024?

Yes, on the platform you purchased it on. If you have not been credited a copy on Marketplace, submit a support request [at this link](#).

Checklist

Preflight

Master Battery	Off
Magnetos	Off
Fuel Quantity	Checked
Pitot Cover	Removed

Engine Start

Propeller Area	Clear
Throttle	Idle
Choke	As Required
Master Battery	On
Magnetos	Start
Choke	Reduce Slowly
CHT	Increasing
Tach	2000 RPM

For simulation use only.

Before Taxi

Headphones	On
Tach	2500 RPM
Avionics Master	On
Altimeter	Set
Transponder	Standby
Throttle	Idle
Chocks	Removed

Before Takeoff

Aircraft Heading	Point Into Wind
Tach	6000 RPM
Magnetos	Checked
CHT	190-230°C
Throttle	Idle
Flight Controls	Free and Correct
Transponder	ALT

Normal Takeoff

Throttle	Full 6800 RPM / 5 min max
Rotate	35 MPH
Tach	6500 RPM Max Continuous
Elevator Trim	As Required
CHT	Max 260°C

Cruise

Tach	5200-6500 RPM
CHT	190-230°C

Descent

Altimeter	Set
CHT	190-230°C

Normal Landing

Approach	50 MPH
Touchdown	35 MPH 3-point

Parking

Transponder	Standby
Throttle	Idle
Avionics Master	Off
Magnetos	Off
Master Battery	Off
Chocks	Installed

Support

Having issues? Check out our [support page](#) for additional troubleshooting, Discord link, and a handy contact form where you can talk to a real person.

Useful Links

Our Website

emeraldscenerydesign.com

Discord

discord.gg/uW4tsj8p3k

Facebook

facebook.com/EmeraldSceneryDesign

1500R Paintkit

Both Paintkits are currently the same.

[MSFS 2020](#) or [MSFS 2024](#) or flightsim.to

Credits

A huge thank you to everyone who helped shape this project!

Dev Team

Rotornut44

Project Lead • Coding • Wwise

Mykrode

Modeling • Animation • Textures

Smitty

Flight Model

Support Crew

SaI1800

Early contributions to the flight model & general support.

Lord Frites & Hans Hartmann

Support with Wwise and its interesting quirks.

TwoSeventyInc

Basically my aircraft Wwise tutor & provider of many resources.

GotGravel

Generously allowed me to use his Choke simulation code.

Jonx

Answerer of many questions.

Beta Testers

Aviator207

Av8trFord

Kilo Mike

red_baron17

LBR

Smitty

ChunkyFlyer

Floxtrot

Willy

ShamrockOneFive

EULA

THIS END USER LICENSE AGREEMENT (the "Agreement") dated this 29th day of January, 2026 (the "Execution Date")

BETWEEN:

Emerald Scenery Design (the "Vendor") OF THE FIRST PART and the "Licensee" OF THE SECOND PART

BACKGROUND:

The Vendor wishes to license computer software to the Licensee and the Licensee desires to purchase the software license under the terms and conditions stated below.

IN CONSIDERATION OF the provisions contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the parties agree as follows:

License

1. Under this Agreement the Vendor grants to the Licensee a non-exclusive and non-transferable license (the "License") to use 1500R Sport (the "Software").
2. "Software" includes the executable computer programs and any related printed, electronic and online documentation and any other files that may accompany the product.
3. Title, copyright, intellectual property rights and distribution rights of the Software remain exclusively with the Vendor. Intellectual property rights include the look and feel of the Software. This Agreement constitutes a license for use only and is not in any way a transfer of ownership rights to the Software.

4. The Software may be loaded onto no more than one computer. A single copy may be made for backup purposes only.
5. The rights and obligations of this Agreement are personal rights granted to the Licensee only. The Licensee may not transfer or assign any of the rights or obligations granted under this Agreement to any other person or legal entity. The Licensee may not make available the Software for use by one or more third parties.
6. The Software may not be modified, reverse-engineered, or de-compiled in any manner through current or future available technologies.
7. Failure to comply with any of the terms under the License section will be considered a material breach of this Agreement.

License Fee

8. The purchase price paid by the Licensee will constitute the entire license fee and is the full consideration for this Agreement.

Limitation of Liability

9. The Software is provided by the Vendor and accepted by the Licensee "as is". Liability of the Vendor will be limited to a maximum of the original purchase price of the Software. The Vendor will not be liable for any general, special, incidental or consequential damages including, but not limited to, loss of production, loss of profits, loss of revenue, loss of data, or any other business or economic disadvantage suffered by the Licensee arising out of the use or failure to use the Software.
10. The Vendor makes no warranty expressed or implied regarding the fitness of the Software for a particular purpose or that the Software will be suitable or appropriate for the specific requirements of the Licensee.

11. The Vendor does not warrant that use of the Software will be uninterrupted or error-free. The Licensee accepts that software in general is prone to bugs and flaws within an acceptable level as determined in the industry.

Warrants and Representations

12. The Vendor warrants and represents that it is the copyright holder of the Software. The Vendor warrants and represents that granting the license to use this Software is not in violation of any other agreement, copyright or applicable statute.

Acceptance

13. All terms, conditions and obligations of this Agreement will be deemed to be accepted by the Licensee ("Acceptance") upon execution of this Agreement.

User Support

14. The Licensee will be entitled to one year of on site user support available 24 hours per day 7 days per week, at no additional cost.
15. The Licensee will be entitled to maintenance upgrades and bug fixes, at no additional cost, for a period of one year from the date of Acceptance.

Term

16. The term of this Agreement will begin on Acceptance and is perpetual.

Termination

17. This Agreement will be terminated and the License forfeited where the Licensee has failed to comply with any of the terms of this Agreement or is in breach of this Agreement. On termination of this Agreement for any reason, the Licensee will promptly destroy the Software.

Force Majeure

18. The Vendor will be free of liability to the Licensee where the Vendor is prevented from executing its obligations under this Agreement in whole or in part due to Force Majeure, such as earthquake, typhoon, flood, fire, and war or any other unforeseen and uncontrollable event where the Vendor has taken any and all appropriate action to mitigate such an event.

Governing Law

19. The Parties to this Agreement submit to the jurisdiction of the courts of the State of Florida for the enforcement of this Agreement or any arbitration award or decision arising from this Agreement. This Agreement will be enforced or construed according to the laws of the State of Florida.

Miscellaneous

20. This Agreement can only be modified in writing signed by both the Vendor and the Licensee.

21. This Agreement does not create or imply any relationship in agency or partnership between the Vendor and the Licensee.

22. Headings are inserted for the convenience of the parties only and are not to be considered when interpreting this Agreement. Words in the singular mean and include the plural and vice versa. Words in the

masculine gender include the feminine gender and vice versa. Words in the neuter gender include the masculine gender and the feminine gender and vice versa.

23. If any term, covenant, condition or provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, it is the parties' intent that such provision be reduced in scope by the court only to the extent deemed necessary by that court to render the provision reasonable and enforceable and the remainder of the provisions of this Agreement will in no way be affected, impaired or invalidated as a result.
24. This Agreement contains the entire agreement between the parties. All understandings have been included in this Agreement. Representations which may have been made by any party to this Agreement may in some way be inconsistent with this final written Agreement. All such statements are declared to be of no value in this Agreement. Only the written terms of this Agreement will bind the parties.
25. This Agreement and the terms and conditions contained in this Agreement apply to and are binding upon the Vendor's successors and assigns.