2141 ICON Way, Suite 100, Vacaville, CA 95688 - Tel: 707.564.4000 – www.iconaircraft.com

SERVICE LETTER

SL-021224-B

ID NUMBER & REVISION: SL-021224-B
SUBJECT: Release of Garmin G3X Software 9.33
RELEASE DATE: 30 April 2024
EFFECTIVE DATE: 30 April 2024
SUPERSEDES NOTICE: SL-090723-A, SL-021224-A
AIRCRAFT AFFECTED: **MAKE & MODEL:** ICON A5
SERIAL NUMBERS: 00073, 00139 – 00146, 00148 – 00215
ACTION: Update the Garmin G3X software from currently installed software to Garmin G3X software version 9.33
TIME OF COMPLIANCE: Before the next flight.
REVISION HISTORY:
A Initial Release
B Remove references to 1.0 config file and replace with a note to contact ICON if software is 9.13 or older.
Add step 9 to verify settings against data in Tables 1-3.

LEVEL OF CERTIFICATION REQUIRED (any level checked can perform task):

☒	Pilot/Owner	☒	A & P
☒	LSA Repairman – Inspection	☒	Certified Repair Station
☒	LSA Repairman – Maintenance	☒	Manufacturer

PURPOSE:
To ensure continued compatibility between the ICON A5 on board computer system and the Garmin G3X, ICON Aircraft Engineering performs ground and flight testing on each new Garmin G3X software release. This service letter is intended to communicate that the ground and flight testing has been completed. ICON Aircraft has determined that the Garmin G3X software version 9.33 is compatible with the ICON A5 computer system and authorizes the update and use of the 9.33 software. If there are any questions, please contact an ICON Aircraft Customer Advocate.

ASSEMBLIES AND PARTS:

PART NUMBER	DESCRIPTION	QUANTITY	ALTERNATE	
			PART NUMBER	DESCRIPTION
N/A	Garmin G3X Touch Software 9.33	1		

IF APPLICABLE, SERVICE KITS:

KIT NUMBER	CONTENT PARTS	DESCRIPTION	QUANTITY
N/A			

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SERVICE LETTER

SL-021224-B

INSTRUCTIONS:

NOTE: If software version 9.13 or older is installed, please contact ICON for additional update requirements.

NOTE: The file structure is important in the SD card. There should only be one parent folder titled "Garmin" with no other parent folders.

NOTE: Garmin may, from time to time, release new software versions shortly after the release of the one listed above. In those instances, the software version listed in this service letter will no longer be available on the Garmin download web page. Please refrain from updating the software onto the ICON A5 G3X until the released software from Garmin is validated by ICON Aircraft and a new Service Letter revision is released.

Updating G3X to Garmin Software Version 9.33

1. Download the Garmin software version 9.33 onto an SD card.
    a. The software can be downloaded on the Garmin website here.
    b. Select: GDU 4xx Cockpit Display for your desired operating system.
    c. Select your inserted SD card as the download location for the software.
2. Ensure that aircraft master power is off.
3. Insert the SD card into the SD slot at the bottom of the Garmin G3X Touch display.
    a. See Figure 1.

Figure 1. SD Card Slot and Menu Button

4. Turn on the aircraft master power and hold the Menu button to enter Configuration Mode.
    a. See Figure 1.
5. When "Update Software" windows populates, select "Yes."
    a. See Figure 2.

SERVICE LETTER

SL-021224-B

Figure 2. Update Software Screen (version 9.13 shown)

NOTE: Software 9.13 is shown as an example in Figure 2. When downloaded, the latest version will be shown on the update screen on the G3X.

6. The Garmin G3X will automatically update the software.
    a. DO NOT turn off the aircraft power until the software is fully updated.
        i. The software is fully updated when the message “Software update in progress- Do not remove power” disappears.
        ii. This can be found by selecting “Messages” at bottom of screen.
    b. See Figure 3 and Figure 4.

SERVICE LETTER

SL-021224-B

Figure 3. Messages

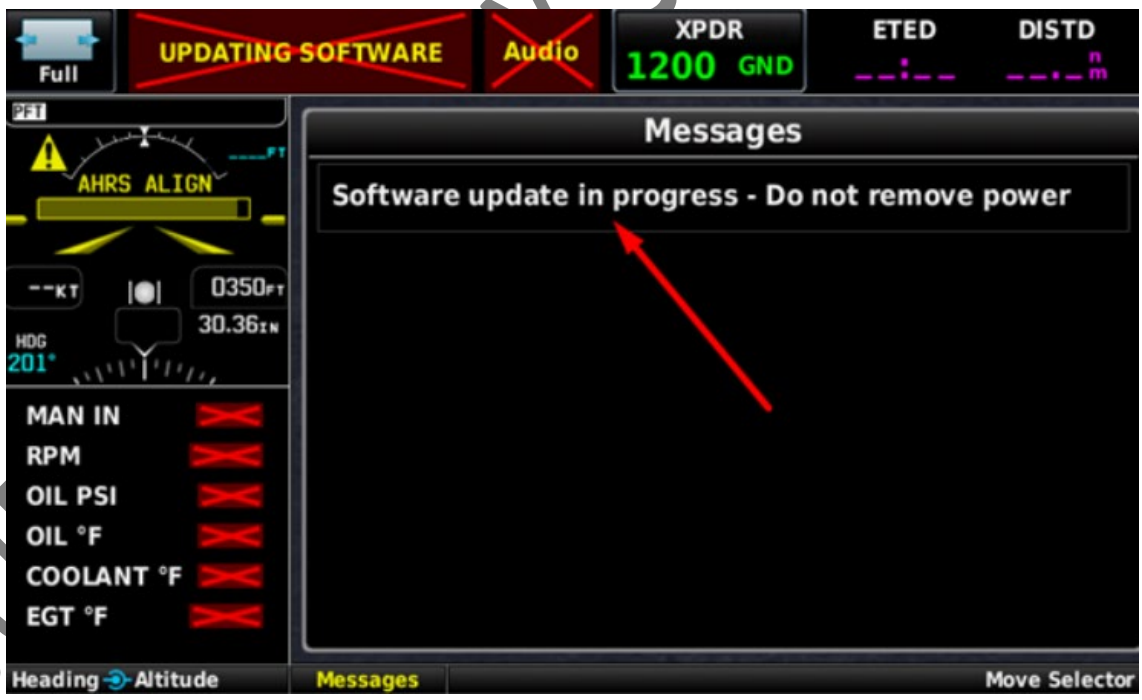

Figure 4. Update Message

7. The update may last up to 20 minutes.
    a. It is advised to place the aircraft on an appropriate external power supply during the update process.

8. Once the software is fully updated, reboot the G3X by,
    a. Simultaneously holding the NRST, MENU, and BACK buttons.
9. The software update may have restored default settings. Review each of the settings in Table 1 at the end of this document. Verify each item, updating any incorrect settings as needed.
10. Press the BACK button on the G3X Touch display to return to the Configuration Mode page.
11. Select "Save & Reboot."
12. A prompt will appear; Select "Yes."
    a. See Figure 5.

Figure 5. Reboot Display Page

13. The system will reboot.
    a. Wait for the G3X system to return to the home page.
    b. While rebooting, look at the bottom of the screen and ensure "Software Version 9.33" is displayed.
        i. This will occur quickly and only display for a few seconds.
14. Turn off aircraft master power and remove the SD card from the G3X Touch display.

Table 1. Configuration Settings

System Options		
System Type	Non-Certified	
Advanced User Setup	Enabled	
LRU (AUTOPILOT ONLY)		
ADAHRS 1	Enabled	
AOA	Disabled	
ADAHRS 2	Disabled	
Engine Interface	Use EIS1	
Garmin Autopilot Servos	Pitch + Roll	
Yaw Damper	Disabled	
Roll Trim Servo	Disabled	
Pitch Trim Servo	Disabled	

SERVICE LETTER

SL-021224-B

Electrical Control System	Disabled	
Radio AGL Sensor	Disabled	This will need to be enabled if a GHA-15 is installed.
LRU (NO AUTOPILOT)		
ADAHRS 1	Enabled	
AOA	Disabled	
ADAHRS 2	Disabled	
Engine Interface	Use EIS1	
Garmin Autopilot Servos	Disabled	
Analog Autopilot Interface	Disabled	
Electrical Control System	Disabled	
ADAHRS		
Unit Orientation	Tubes Forward/Connectors Up	
Magnetometer		
Magnetometer Orientation	Connector Port	
Autopilot (AUTOPILOT ONLY)		
General Tab		
Control Wheel Steering	Enabled	
Engage AP Via CWS Steering	Enabled	
Autopilot Engage Limits	Disabled	
Flight Control System Monitors	DISABLED	
Roll Tab		
Roll Servo Max Torque	35%	
Roll Servo Gain	1.25	
Roll Servo Direction	Reverse	
Roll Servo Clutch Monitor	Enabled	
Pitch Tab		
Pitch Servo Max Torque	35%	
Pitch Servo Gain	1.0	
Pitch Servo Direction	Reverse	
Pitch Servo Clutch Monitor	Enabled	
Min Airspeed Limit	55KT	
Max Airspeed Limit	100KT	
Vertical Speed Gain	1.5	
Vertical Accel Gain	1.5	
Airspeed Gain	1.5	

SERVICE LETTER

SL-021224-B

Flight Director (AUTOPILOT ONLY)		
Indicator Type	Single Cue	
Altitude Controls	Normal	
ALT Mode User Select Action	Normal	
ALT Mode User Up/Down Action	Normal	
TO/GA Takeoff Pitch	+5°	
TO/GA Go-Around Pitch	+5°	
Maximum Bank Angle	30°	
ESP (AUTOPILOT ONLY)		
Roll Attitude Limiting	Disabled	
Trim (AUTOPILOT ONLY)		
Roll Trim Tab		
Roll Trim Motor Control	Disabled	
Pitch Trim Tab		
Pitch Trim Motor Control	Enabled	
Pitch Trim Motor Direction	Normal	
Pitch Trim Motor Voltage	12V	
Pitch Trim Airspeed Threshold	Fastest: 40Kt, Slowest: 120Kt	
Pitch Trim Speed	Fastest: 100%, Slowest: 25%	
Pitch Trim Airspeed Source	Indicated Airspeed	
Pitch Trim Max Run Time	No Limit	
Pitch Trim Movement	Select TEST on the Pitch Trim tab. Use the arrows on the touch screen to move the pitch trim actuator up and down. Verify trim indicators follows as the actuator moves.	
Aircraft		
Aircraft Tab		
Aircraft Identified	Same as Aircraft Registration	
Aircraft Type	Fixed Wing	
Fuel Type	Avgas	
Map Symbol	Sport Plane	
Flight Planning Fuel Flow	5	
Flight Planning Cruise Speed	90kt	
Take Off Safe Altitude	NONE	
Reference Speeds Tab		
VNE (Indicated)	120kt	
VNE (True)	120kt	

SERVICE LETTER

SL-021224-B

VNO	95kts	
VS0 (With Flaps)	39kt	
VS1 (No Flaps)	45kt	
VFE	75kt	
VA	76kt	
MMO	-.--	
VX	55kt	
VY	58kt	
VMC	---	
VYSE	---	
VG	60kts	
Sink Rate at VG	600fpm	
Glide Ratio @ VG	Auto-Populates	
VR	50kts	
Custom Speed 1, 2, 3, 4	---	
PFD G Meter Tab		
Gauge G Max	+4	
Gauge G Min	-2	
Auto Display	Enabled	
Color Lines	Disabled	
Positive G Red Line	+4.0	
Positive G Yellow Line	+3.0	
Negative G Yellow Line	-1.0	
Negative G Red Line	-2.0	
Weight & Balance		
Empty CG Arm	***See "WEIGHT AND BALANCE SETTINGS" below***	
Empty Weight		
Units		
Distance	Nautical	
Ground Speed	Nautical	
Airspeed	Nautical	
Direction Display	Numeric Degrees	
Air Temperature	Fahrenheit	
Engine Temperature	Fahrenheit	
Altitude	Feet	
Vertical Speed	Feet/Minute	
Baro Pressure	Inches (Hg)	
Fluid Pressure	PSI	
Fluid Volume	Gallons (US)	
Fuel Flow	Gallons (US)	

SERVICE LETTER

SL-021224-B

Fuel Calculator	Gallons (US)	
Fuel Economy	nm/USgal	
Weight	Pounds (lbs)	
Power	Horsepower (HP)	
Display		
Screen Shot	ENABLED	
ALL PARAMETERS	User Selected	
Backlight		
Input Selection Tab		
Current Input	Manual	100%
Default Input	Manual	
Auto Control Tab		
Button Brightness Offset	+50%	
Light Sensor Brightness	Min: 3%	Max: 100%
Light Sensor Time Constant	1.0	
Lighting Bus Type	14V Bus	
Lighting Bus Min	Input: 0.3v	Brightness 0%
Lighting Bus Max	Input: 2.0v	Brightness 100%
Lighting Bus Time Constant	0.2	
Lighting Bus Off Threshold	Input: 0.3v	Hysteresis: 0.15v
Sound		
Audio Source	Auto	
Alert Output	Mono & Stereo	
Master Alert Volume	100%	
Terrain Alert	Enabled	
Traffic Alert	Enabled	
Traffic N/A Alert	Enabled	
Miscompare Alert	Enabled	
VNE Alert	Enabled	
AFCS Attention Tones	Enabled	
Altitude Alert	ENABLED	Volume = 100%
Message Tone	100%	Volume = 100%
Minimums Alert	Enabled	Volume = AUTO
VNAV Alert	Enabled	Volume = AUTO
RS-232		
PFD Tab		
RS-232 Port 1	None	
RS-232 Port 2	Connext 57600 baud	
RS-232 Port 3	Normal Output Rate, NMEA Out (9600 baud)	

SERVICE LETTER

SL-021224-B

RS-232 Port 4	None (57600 Baud [if the aircraft has the GDL-51 installed. When the GDL-51 is installed, this automatically updates.])	(Connext 57600 Baud [if the aircraft has the GDL-51 installed. When the GDL-51 is installed, this automatically updates.])
RS-232 Port 5	None	
MFD Tab		**(If Available)**
RS-232 Port 1	Garmin Data Transfer	
RS-232 Port 2	None	
RS-232 Port 3	None	
RS-232 Port 4	None	
RS-232 Port 5	None	
ARINC 429		
429 Output 1	None	
429 Output 2	None	
429 Input 1	None	
429 Input 2	None	
429 Input 3	None	
429 Input 4	None	
PFD		
Pitch Offset	User Selected	
Roll Display	Ground Pointer	
Vertical Speed Indicator Range	+/- 2000 ft/min	
HSI Orientation	User Selected	
Baro Setting Reminder	Enabled	
Miscompare Monitoring	ADAHRS + SFD	
Auto Declutter	Enabled	
GPS		
PFD	No GPS Antenna Connected	
MFD	No GPS Antenna Connected	
Navigation		
VNAV Deviation Scale	+/- 1000ft	
Smart Glide	Enabled	
Smart Glide Setting Tab		
Runway Surface	ANY	
Minimum Runway Length	500 feet	
Circling Direction	AUTO	
DME		

SERVICE LETTER

SL-021224-B

DME Device	None	
Audio Panel		
Audio Panel Type	None	
COM Radio		
COM 1 Tab		
Connection	Network Radio LRU 1 (GTR 20)	
Active Frequency	122.85	
COM Volume	75%	
Emergency Volume	70%	
Transmit Sidetone	5	
Microphone Gain	5	
RF Squelch	0	
MON Mode On Swap	Preserve MON	
Discrete Input 1	None	
Discrete Input 2	None	
Internal Intercom	Enabled	
COM Mutes Intercom	Disabled	
COM 3D Audio	Enabled	
Intercom 3D Audio	Enabled	
Pilot 3D Position	Pilot On Left	
Cockpit Noise Lvel	High Noise	
Audio Out Gain	100	
AUX 1 Input Volume	50%	
AUX 1 Input Squelch	30%	
AUX 1 Mutes Music	Disabled	
AUX 2 Input Volume	65%	
Aux 2 Input Squelch	30%	
Aux 2 Mutes Music	Disabled	
COM 2 Tab		
Connection	None	
Nav Radio		
NAV Radio Sources	None	
Transponder		
Remote Transponder Tab		
Transponder Type	GTX 45R	
Configuration Tab		
Mode S Address Type	US Tail #	
Aircraft Registration	Same as Aircraft Registration	
Aircraft Type	Fixed Wing	
Aircraft Weight	1510 lb (for MTOW 1510 lb aircraft)	

SERVICE LETTER

SL-021224-B

	OR 1570 lb (for MTOW 1570 lb aircraft)	
Flight ID Mode	Use Aircraft Registration	
Aircraft Max Speed	120kt	
Aircraft Length	24ft	
Aircraft Width	34ft	
GPS Antenna Offset	1ft	
Position Integrity	IFR GPS 1e-7	
ADSB Transmit	Enabled	
Enhance Surveillance	Enabled	
VFR Code	1200	
HSDB Devices	None Selected	
RS-232 Port 2	ADS-B+ GPS Format 1	
RS-232 Port 3	Connext Format 1	
RS-232 Port 4	Connext Format 1	
Data Link		
Mode S Address	Same as Aircraft Registration	
Data Log		
SD Card Logging	Enabled	
Maximum SD Card Log Files	100	
Internal Data Log	Copy To SD Card	
Engine & Airframe		
GEA 24 Inputs Tab		
Cylinder Head Temp	-	
Exhaust Gas Temp	Rotax FADEC (4-cylinder)	
Oil Temp	Rotax FADEC	
Oil Pressure	Rotax FADEC	
Manifold Pressure	Rotax FADEC	
Fuel Pressure	-	
RPM 1	Rotax FADEC	
RPM 2	-	
Fuel 1	-	
Fuel 2	-	
Pos 1/ GP 1	-	
Pos 2/ GP 2	-	
Pos 3/ GP 3/ Fuel 3	-	
Pos 4/ GP 4/ Fuel 4	-	
Pos 5/ GP 5/ Misc Press	-	
Pos 6/ GP 6/ Misc Temp 1	Coolant (Rotax FADEC)	
Pos 7/ GP 7/ Misc Temp 2	-	

SERVICE LETTER

SL-021224-B

Volts 1	EIS Power Input 1 Volts	
Volts 2	-	
Shunt 1	-	
Shunt 2	-	
Fuel Flow	-	
Fuel Return	-	
GEA 24 Discrete Tab		
Discrete 1	-	
Discrete 2	-	
Discrete 3	-	
Discrete 4	-	
RPM 2	-	
GP 1	-	
GP 2	-	
GP 3	-	
GP 4	-	
GP 5	-	
GP 6	Coolant (Rotax FADEC)	
GP 7	-	
Settings Tab		
Engine Power	FADEC	
Total Time	Record Mode: Disabled	
Annunciators	Disabled	

Weight and Balance Settings:

Under "Weight and Balance" > "Envelope – Weight vs CG" > "Edit Envelope" > "Envelope Data", verify the settings in Table 2 (for MTOW 1510 lb aircraft) or Table 3 (for MTOW 1570 lb aircraft).

Table 2 - Table for CG/Weight Plot Point Data, MTOW 1510 lb

PLOT POINT	CG	WEIGHT
1ST	153.00	1510.0
2nd	156.30	1510.0
3rd	158.60	1395.0
4th	159.10	1275.0
5th	159.20	1185.0
6th	153.00	1485.0

Table 3 - Table for CG/Weight Plot Point Data, MTOW 1570 lb

PLOT POINT	CG	WEIGHT
1ST	153.00	1570.0
2nd	155.10	1570.0
3rd	158.60	1395.0
4th	159.10	1275.0
5th	159.20	1185.0
6th	153.00	1485.0

Logbook Entry:

"I hereby certify that the Garmin G3X has been updated to software version 9.33 and the ICON 1.0 configuration file is confirmed to be installed in accordance with SL-021224-B (Release of Garmin G3X Software 9.33) and all referenced documents. Potentially unclear procedures have been clarified with ICON Aircraft. (ref. FAA Exemption 10829C)"

For aircraft registered outside the U.S., omit "(ref. FAA Exemption 10829C)"

If you have questions, comments, or concerns about this Service Letter and/or if you are no longer owner/operator of this aircraft, please forward this information to the present owner/operator and notify ICON Aircraft at:

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Please include the aircraft registration number, serial number, your name, and if known the contact information of the new owner/operator.