

**The following is a list of regulations and demonstrated compliance for the NextGen panel modification.
It is the responsibility of the installer to verify compliance. Updated 3-16-22**

Key Aspect of Regulation, From a Human Factors Perspective	14 CFR Regulations	Method of Compliance
(In some cases, wording may be paraphrased for clarity. Consult regulations for exact wording.)		
Each control must operate with the ease, smoothness, and positiveness appropriate to its function.	23.671(a), 25.671(a), 27.671(a), 29.671(a)	Use of McFarlane PMA'd controls for engine and similar, but custom length, controls for cabin climate.
Controls must be located (part 23 only: arranged, and identified) to provide for convenience in operation.	23.671(b), 23.777(a), 25.777(a), 27.777(a), 29.777(a)	Controls are located in a similar location as previously with the same as or wider spacing between.
Controls must be located (part 23 only: arranged, and identified) to prevent the possibility of confusion and subsequent inadvertent operation (part 29 only: from either pilot seat).	23.671(b), 29.771(b), 23.777(a), 25.777(a), 27.777(a), 29.777(a)	All controls are clearly labeled and engine controls maintain the standard textural differences.
The pilot compartment must allow the pilot to perform his duties without unreasonable concentration or fatigue.	23.771(a), 25.771(a), 27.771(a), 29.771(a)	The NextGen panel organizes and presents all available commands to the pilot in an as good as or better way than the original panel structure- as adapted for PFD's, can enable.
The aircraft must be controllable with equal safety from either pilot seat.	25.771(c), 27.771(b), 29.771(b)	Optional dual flight controls remain with engine controls remaining in the center of the panel.
Vibration and noise characteristics of cockpit equipment may not interfere with safe operation of the aircraft.	25.771(e), 27.771(c), 29.771(c)	No change- but opportunity is provided during installation to integrate improved sound deadening.
Controls must be identified (except where the function is obvious).	23.777(a)	All controls are identified.
Controls must be located and arranged, with respect to the pilot seat, to provide full and unrestricted movement of each control without interference.	23.777(b), 25.777(c), 27.777(b), 29.777(b)	Controls are located in a similar location as previously with the same as or wider spacing between.
A control must be of a kind and design appropriate to its intended function.	23.1301(a), 25.1301(a)(1), 27.1301(a), 29.1301(a)	All controls are of a kind and design appropriate to its intended function.
Controls must function properly when installed.	23.1301(d), 25.1301(a)(4), 27.1301(d), 29.1301(d)	All controls function properly. Any slight control re-location had a negligible affect on its position and no affect on its proper operation.
For alerting lights, installed in the cockpit, the color red must be used for warnings and the color amber for cautions.	23.1322, 27.1322, 29.1322	Alerting lights installed: Red for Alternator warning, Red for Starter Engaged, amber for CO detected. None remain on during normal operation.
Use of the colors red, amber, and yellow on the flightdeck for functions other than flightcrew alerting must be limited and must not adversely affect flightcrew alerting.	25.1322(e)(1), (f)	No additional uses of these colors.
Instrument lights must make each instrument and control easily readable and discernable.	23.1381(a)	A dimmable red/ white glare shield light strip casts light over the panel, avionics, and its placards.
Instrument lights must make each instrument, switch, and other device, easily readable.	25.1381(a)(1), 27.1381(a), 29.1381(a)	A dimmable red/ white glare shield light strip casts light over the panel, avionics, and its placards.
Instrument lights must be installed so that no objectionable reflections are visible to the pilot.	25.1381(a)(2)(ii), 27.1381(b)2, 29.1381(b)2	A custom glare shield has been fabricated to hide the LED's from direct viewing by the pilot.
The minimum flightcrew must be able to access and easily operate controls required for safe operation.	23.1523, 25.1523, 27.1523, 29.1523	Both the pilot and copilot can operate all the controls in the aircraft required for safe operation.
A cockpit control must be plainly marked as to its function and method of operation.	23.1555(a), 25.1555(a), 27.1555(a), 29.1555(a)	All controls are plainly marked as to its function and method of operation.