

additional avionics installations done after delivery of the G1000 C172? Definitely not.

How about avionics shops? Most avionics shops do great work in repairing and installing avionics but probably do not have full knowledge of what is installed and probably will not know the ICAO codes.

Avionics Manufacturers know what products they sell but would not know how the avionics are installed and configured. For example, an extended squitter transponder would not imply that the aircraft is ADS-B Out compliant without additional information.

Some Suggestions

For all new production aircraft, the aircraft OEM should put the Equipment Codes in the POH just like they do for weight & balance information. This should be a mandatory requirement for all POHs going forward.

For aircraft that are not ADS-B Out compliant but will be in the next few months, the avionics shops should identify the relevant codes during the installation of the ADS-B equipment. The codes then should be entered in the POH and in the logbook sign off. This means that avionics shops need to become familiar with the ICAO codes, as well as the overall avionics installation in each aircraft. The POH is preferred



Perhaps aircraft should have a panel placard with the Equipment Codes to remove the guess work.

COM / NAV Equipment	Xponder	ADS-B Equipment	Item 10	Item 18
VHF COMM / VOR / ILS / WAAS GPS	Mode S ES	ADS-B Out & In 1090 MHz	SBGRY/EB2	PBN/B2C2D2 SUR/260B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode S ES	ADS-B Out & In 1090 MHz	SBGZ/EB2	NAV/SBAS SUR/260B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode S ES	ADS-B Out & In 1090 MHz w/ non-nav WAAS GPS	S/EB2	SUR/260B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode S ES	ADS-B Out & In 1090 MHz w/ non-nav WAAS GPS	SBG/EB2	SUR/260B CODE/XXXXXX
VHF COMM / VOR / ILS / WAAS GPS	Mode S ES	ADS-B Out 1090 MHz	SBGRY/EB1	PBN/B2C2D2 SUR/260B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode S ES	ADS-B Out 1090 MHz	SBGZ/EB1	NAV/SBAS SUR/260B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode S ES	ADS-B Out 1090 MHz w/ non-nav WAAS GPS	S/EB1	SUR/260B CODE/XXXXXX
COM / NAV Equipment	Xponder	ADS-B Equipment	Item 10	Item 18
VHF COMM / VOR / ILS / GPS	Mode S	ADS-B Out UAT	SG/SU1	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode S	ADS-B Out UAT	SGR/SU1	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode C	ADS-B Out UAT	SBGRY/CU1	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode C	ADS-B Out UAT	SBGZ/CU1	NAV/SBAS SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / WAAS GPS	Mode S	ADS-B Out UAT	SGR/SU1	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode S	ADS-B Out UAT	SBGZ/SU1	NAV/SBAS SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode C	ADS-B Out UAT w/ non-nav WAAS GPS	S/CU1	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode S	ADS-B Out UAT w/ non-nav WAAS GPS	S/SU1	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode C	ADS-B Out UAT w/ non-nav WAAS GPS	SG/CU1	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode C	ADS-B Out UAT w/ non-nav WAAS GPS	SGR/CU1	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
COM / NAV Equipment	Xponder	ADS-B Equipment	Item 10	Item 18
VHF COMM / VOR / ILS / WAAS GPS	Mode C	ADS-B Out & In UAT	SBGRY/CU2	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode C	ADS-B Out & In UAT	SBGZ/CU2	NAV/SBAS SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / WAAS GPS	Mode S	ADS-B Out & In UAT	SGR/SU2	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode S	ADS-B Out & In UAT	SBGZ/SU2	NAV/SBAS SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode C	ADS-B Out & In UAT w/ non-nav WAAS GPS	S/CU2	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS	Mode S	ADS-B Out & In UAT w/ non-nav WAAS GPS	S/SU2	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode C	ADS-B Out & In UAT w/ non-nav WAAS GPS	SG/CU2	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode C	ADS-B Out & In UAT w/ non-nav WAAS GPS	SGR/CU2	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
VHF COMM / VOR / ILS / GPS	Mode S	ADS-B Out & In UAT w/ non-nav WAAS GPS	SG/SU2	SUR/282B CODE/XXXXXX
VHF COMM / VOR / ILS / GPS	Mode S	ADS-B Out & In UAT w/ non-nav WAAS GPS	SGR/SU2	PBN/B2C2D2 SUR/282B CODE/XXXXXX (1)
COM / NAV Equipment	Xponder	ADS-B Equipment	Item 10	Item 18
VHF COMM / VOR	Mode C	None	O/V/C	Blank
VHF COMM / VOR / ILS	Mode C	None	S/C	Blank
VHF COMM / VOR / ILS	Mode S	None	S/S	Blank
VHF COMM / VOR / ILS / GPS	Mode C	None	SG/C	Blank
VHF COMM / VOR / ILS / GPS	Mode C	None	SGR/C	PBN/B2C2D2 (1)
VHF COMM / VOR / ILS / GPS	Mode S	None	SG/S	Blank
VHF COMM / VOR / ILS / GPS	Mode S	None	SGR/S	PBN/B2C2D2 (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode C	None	SBGRY/C	PBN/B2C2D2 (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode C	None	SBGZ/C	NAV/SBAS
VHF COMM / VOR / ILS / WAAS GPS	Mode S	None	SGR/S	PBN/B2C2D2 (1)
VHF COMM / VOR / ILS / WAAS GPS	Mode S	None	SBGZ/S	NAV/SBAS

(1) If PBN approved in Airplane Flight Manual Supplement (Avionics)

Typical Equipment Code Combinations for GA—Note: CODE/XXXXXX is the Mode S six character ICAO hexadecimal code of an aircraft's tail number. It can be found at www.faa.gov aircraft registration information by typing in the N number search. SUR/282B and SUR/260B refer to standards for UAT and Mode S ES—perhaps a bit redundant.

since most airplanes do not carry aircraft logbooks. In general, when an avionics shop does an avionics installation, it should review the codes and amend them as necessary. This should be similar to what a maintenance shop does during an annual inspection to review compliance with ADs and Service Bulletins.

All other aircraft, presumably the majority, would fall in this third category. Possible avenues: aircraft owners, aircraft operators (like flight schools), or avionics shops that are familiar with all the installed avionics. This is where it gets tricky, especially for rentals if pilots are left to their own resources to figure out the codes. This also implies that pilots are familiar with the codes and have

full knowledge of the installed avionics capabilities.

Perhaps the Aircraft Electronics Association (AEA) should take a lead role in providing information on the codes to avionics shops and A&Ps.

The bottom line is that pilots, aircraft operators, aircraft OEMs, avionics OEMs and avionics shops all need to become familiar with the ICAO equipment codes and document them as appropriate, preferably in the POH.

Reference: AIM 5-1-9 (International Flight Plan Form)

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