MINNEAPOLIS ARTCC - PILOT HELP AIDS FOR CONTROLLERS **Aircraft Equipment Suffixes**

NO DME No transponder Transponder with no Mode C	<u>Suffix</u> /F	A single FMS with en route, terminal, and approach capability that meets
No transponder Transponder with no Mode C	/F	
·		the equipment requirements of /E, (a) through (d), above. (U.S. and U.S. territories only unless otherwise authorized.)
Transponder with Mode C	/G	Global Positioning System (GPS)/Global Navigation Satellite System (GNSS) equipped aircraft with en route and terminal capability
DME No transponder	/R	Required Navigational Performance (Denotes capability to operate in RNP designated airspace and routes)
Transponder with no Mode C	W	Reduced Vertical Separation Minima (RVSM)
Transponder with Mode C TACAN ONLY	/Q	Required Navigation Performance (RNP) and Reduced Vertical Separation Minima (RVSM) (Indicate approval for application of RNP and RVSM
No transponder		separation standards.) It should be noted that /Q is for automation purposes only and will not be filed by system users. FAA processors will convert the combination of /R+/W to =/Q.
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Transponder with Mode C		Combination of /R+/W to -/Q.
AREA NAVIGATION (RNAV)		
LORAN, VOR/DME, or INS with no transponder		
LORAN, VOR/DME, or INS, transponder with no Mode C		
LORAN, VOR/DME, or INS, transponder with Mode C		
ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.)		
Flight Management System (FMS) with en route, terminal, and approach capability. Equipment requirements are: (a) Dual FMS which meets the specifications of AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes; AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. NAS and Alaska; AC 20-130A, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors; or equivalent criteria as approved by Flight Standards. (b) A flight director and autopilot control system capable of following the lateral and vertical FMS flight path. (c) At least dual inertial reference units (IRU's).		
	Transponder with Mode C TACAN ONLY No transponder Transponder with no Mode C Transponder with Mode C AREA NAVIGATION (RNAV) LORAN, VOR/DME, or INS with no transponder LORAN, VOR/DME, or INS, transponder with no Mode C LORAN, VOR/DME, or INS, transponder with Mode C ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.) Flight Management System (FMS) with en route, terminal, and approach capability. Equipment requirements are: (a) Dual FMS which meets the specifications of AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes; AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. NAS and Alaska; AC 20-130A, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors; or equivalent criteria as approved by Flight Standards. (b) A flight director and autopilot control system capable of following the lateral and vertical FMS flight path. (c) At least dual inertial reference units (IRU's).	Transponder with Mode C TACAN ONLY No transponder Transponder with no Mode C Transponder with Mode C AREA NAVIGATION (RNAV) LORAN, VOR/DME, or INS with no transponder LORAN, VOR/DME, or INS, transponder with no Mode C LORAN, VOR/DME, or INS, transponder with Mode C ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.) Flight Management System (FMS) with en route, terminal, and approach capability. Equipment requirements are: (a) Dual FMS which meets the specifications of AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes; AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. NAS and Alaska; AC 20-130A, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors; or equivalent criteria as approved by Flight Standards. (b) A flight director and autopilot control system capable of following the lateral and vertical FMS flight path.

FMS flight plan. (e) An electronic map.

(d) A database containing the waypoints and speed/altitude constraints for the route and/or procedure to be flown that is automatically loaded into the

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