

Avionics Shop. FAC: 2171

CATCODE:

217712 OPR:

AF/A4L

OCR: WR-ALC/752 CBSG

Updated 10 Apr 2023

1.1. **Description.** This shop accommodates organizational and intermediate level maintenance activities for the following aircraft equipment and accessories: Airborne communications, cameras, bombing systems, and tactical support element/communications security (TSEC/COMSEC) equipment, and C4ISR (Command, Control, Communication, and Computers) equipment. TSEC/COMSEC equipment includes equipment for secure voice, identification friend or foe (IFF), selective identification feature (SIF), data link pods, etc.

1.2. **Requirements Determination.** Obtain additional information from the MAJCOM and AF/A4L.

1.3. Scope Determination.

1.3.1. Major items that require shop and storage space are storage racks for serviceable equipment and equipment waiting for maintenance or parts; coding devices; technical data and code books; pod lifting devices, cradles; and storage racks.

1.3.2. For Pod Storage Requirements see Table 1.2, Note 2.

1.4. **Dimensions.** See Table 1.1.

1.5. **Design Considerations.** Ensure shops have intrusion detection and alarm systems. Ensure avionics pod shops comply with local, state, and federal requirements in respect to air emissions, as required by AFI 32-7040. Locate facilities to comply with explosives safety standards. Some storage space provides physical security and corrosion protection for delicate electronic equipment. Combine maintenance and storage facilities so that they can share the secure storage area if possible. Ensure shop design complies with facility design instructions to minimize radiation exposure as outlined in paragraph 3.2. of AFI 48-148, *Ionizing Radiation Protection*.

Table 1.1. Space Requirements for Avionics Shops^{1, 2, 3.}

Mission	Gross Area	
	m ²	ft ²
Air Refueling Wing	641	6,900
Bomb Wing	2,137	23,000
Airlift Wing (C-17)5	1,765	19,000
Airlift Wing (C-5)	2,787	30,000
Airlift Wing (C-5, C-17)5	3,252	35,000
Airlift Wing (C-130)	929	10,000
FIS	1,175	12,650
Fighter Wing	1,579	17,000

UPT Wing	929	10,000
Mobility Wing	See MAJCOM	
Composite Wing	See MAJCOM	
Special Operations Squadron	See Note 4	
Combat Search and Rescue Unit	See Note 4	
NOTES:		
1. This includes offensive avionics system test equipment and electronic countermeasure (ECM) equipment.		
2. Communications and navigation require additional secure storage. Navigation requires 9.3 m ² (100 ft ²). Communications without data link pods require 9.3 m ² (100 ft ²). ECM pod secure storage requirements are 177 m ² (1,905 ft ²) for 1 to 12 pods and 254 m ² (2,734 ft ²) for 13 to 24 pods.		
3. Authorized post-attach command and control systems (PACCS) function requires an additional 372 m ² (4,000 ft ²).		
4. Space is determined by individual analysis and validated by the appropriate MAJCOM.		
5. Based on previous calculations for C-141 avionics shop. Refine space requirement by individual analysis.		

Table 1.2. Space Requirements for Pod Shops.

Function	Number of Sets of Pod Support Equipment ^{1,2}							
	1		2		3		4	
	Gross Area							
	m ²	ft ²	m ²	ft ²	m ²	ft ²	m ²	ft ²
Maintenance	181	1,950	323	3,480	465	5,010	608	6,540
Storage	368	3,961	736	7,922	1,104	11,883	1,472	15,844
Total Gross Area	549	5,911	1,059	11,402	1,569	16,893	2,080	22,384
NOTES:								
1. Each set of pod support equipment maintains 25 electronic countermeasure (ECM) pods.								
2. For additional pod storage space for Centralized Repair Facilities see Table 1.3. Note 2.								

Table 1.3. Space Requirements for Vehicle Maintenance Support Core.

Total Assigned Vehicles	Gross Area	
	m ²	ft ²
0 to 250	465	5,000
251 to 500	557	6,000
501 to 700	650	7,000
701 to 900	743	8,000
901 to 1,100	790	8,500
1,101 to 1,200	836	9,000
1,201 to 1,300	883	9,500