

exchange of information and equipment. SAC and TAC had agreed to conduct airborne ECM activities on routine training sorties and simulated combat missions against air defense units in Canada and Alaska. ADC and AAC had agreed to make ECM radar evaluation flights against units in Canada and Alaska. And ADC was to provide airborne ECM facilities for ECCM training of all components in the system.⁴⁴

The primary interest in ECM planning, the regulation continued, had been ground-based jamming that included spot and distributed area jamming (DAJ) techniques. After investigating both fields, it had appeared that the DAJ concept was best for the NORAD mission and a requirement had been submitted. However, advanced bombing systems (such as doppler inertia), costs involved, and the anticipated short life-span of the equipment had forced the planners to consider a revision to the original requirement. The DAJ was now probably to be employed only on a limited basis in defense of certain SAC "hardened" targets.⁴⁵

The JCS were also concerned with the ECM threat. In September 1957, they asked CINCONAD to outline his operational requirements in the ECCM field.⁴⁶ After analyzing available WSEG documents, the NORAD-SAC monthly ECM exercises, and consulting the components as to their needs, CINCINORAD submitted his requirements on 20 January 1958. The list covered five fields needing strengthening. The fields and their priorities are shown below.⁴⁷

PRIORITY	FIELD
I	ECCM Operator Training and Facilities <ul style="list-style-type: none"> a. On-the-Job Training b. ECM Simulator Devices c. ECM Configured Hi-Speed Hi-Altitude Training Aircraft d. POL Funds for ECM Training Aircraft (ADC-SAC)
II	ECCM Improvement for Ground Environment <ul style="list-style-type: none"> a. AOM Radars and Height Finders b. Picket Ships, AEW, Texas Towers c. Primary and Back-up Control Facilities (JCE and Fire Direction Centers)



Every type of aircraft could be identified by visual recognition and many types by sound alone, the letter continued. The early attempts to obtain significant signatures or prints by using distinguishing characteristics of specific types of aircraft were only modestly successful, however. But MELFAR had recently come up with a promising idea for fine-grain structure analysis of sound and radar returns.

The obstacles to progress in the field were two fold: high security classification (started by the Air Technical Intelligence Center which pioneered in the field), and a limited budget. The former problem could be eliminated, General Partridge suggested, by allowing MELFAR to continue the work on a somewhat lower security basis; the latter problem by getting all agencies that would benefit from the development of such a system to contribute funds toward development.⁹

ICBM DEFENSE

CONAD Actions. On 3 April 1956, CONAD attempted to provide unified direction to a missile defense program by assigning responsibility to USAF ADC for providing and operating an ICBM defense system. This was to be a total system. CONAD stated that the system "must include the capability to accomplish all functions incident to detection, identification, interception and destruction of ballistic missiles."¹⁰ On the same date, CONAD informed the executive agency of this assignment, noting that NAVFORCONAD concurred but that ARADCOM did not.¹¹

In an explanation of its action, CONAD told the executive agency that giving unified direction to the over-all program of missile defense was an urgent requirement in the interest of economy of time, funds, and limited resources in research and manufacture. CONAD recommended that development of an ICBM defense be made the sole responsibility of USAF "in view of the over-all Air Force responsibility for the air defense of the United States."¹² CONAD said that in the meantime it had given this assignment to ADC "in the interest of expedience and in logical association with its mission."¹³

As will be discussed below under service roles in ICBM defense, subsequent decisions by higher authority made it necessary for CONAD to rescind this directive. On 27 November 1957, NORAD told the executive agency that "the local assignment of responsibility by this headquarters... has been rescinded."¹⁴

Unclassified



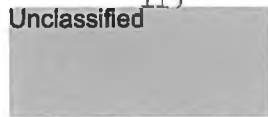
A P P E N D I X II

RCAF ADC ACW STATIONS

Data as of 31 December 1957

SITE	LOCATION	UNIT	RADAR	FUNCTION	SECTOR
C-1	Mont Apica	12 ACW Sq	CPS-6B EW Kit CPS-6B	GCI	1 ADCC
C-2	Lac St. Denis	1 ADCC		ADCC	
C-2	Lac St. Denis	11 ACW Sq	CPS-6B CPS-6B	GCI	1 ADCC
C-3	Foymount	32 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	3 ADCC
C-4	Edgar	3 ADCC		ADCC	
C-4	Edgar	31 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	3 ADCC
C-5	St Margarets	2 ADCC		ADCC	
C-5	St Margarets	21 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	2 ADCC
C-6	St Sylvestre	13 ACW Sq	CPS-6B EW Kit CPS-6B FPS-502 TPS-502	GCI	1 ADCC
C-7	Parent	14 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	3 ADCC
C-8	Senneterre	34 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	3 ADCC
C-9	Falconbridge	33 ACW Sq	FPS-3 FPS-6 TPS-501	GCI	3 ADCC
C-10*	Ramore	912 ACW Sq	FPS-3 TPS-502 FPS-502	EW	3 ADCC

Unclassified



Unclassified



Unclassified

SITE	LOCATION	UNIT	RADAR	FUNCTION	SECTOR
C-11	Beaver Bank	22 ACW Sq	CPS-6B EW Kit CPS-6B FPS-502 TPS-502	GCI	2 ADCC
C-14*	Pagwa	913 ACW Sq	FPS-3 TPS-502 FPS-502	EW	37 Air Div.
C-15*	Armstrong	914 ACW Sq	FPS-3 TPS-502 FPS-502	EW	37 Air Div.
C-16*	Sioux Lookout	915 ACW Sq	FPS-3 TPS-502 FPS-502	EW	31 Air Div.
C-17*	Beausejour	916 ACW Sq	FPS-3 TPS-502 FPS-502	EW	31 Air Div.
C-18	Holberg	53 ACW Sq	FPS-3 TPS-502	GCI	5 Air Div.
C-19*	Puntzi Mt.	917 ACW Sq	FPS-3 TPS-502 FPS-502	EW	5 Air Div.
C-20*	Baldy Hughes	918 ACW Sq	FPS-3 TPS-502 FPS-502	EW	5 Air Div.
C-21*	Saskatoon Mt.	919 ACW Sq	FPS-3 TPS-502 FPS-502	EW	5 Air Div.
C-33	Moisie	211 ACW Sq	FPS-3 TPS-502 FPS-502	EW	2 ADCC
C-34	Sydney	221 ACW Sq	FPS-3 TPS-502 FPS-502	EW	2 ADCC
C-35	Comox	51 ACW Sq	CPS-5D (Interim) TPS-502 FPS-502	GCI	5 Air Div

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SITE	LOCATION	UNIT	RADAR	FUNCTION	SECTOR
C-36**	Tofino	52 ACW Sq	CPS-5D(Interim) CPS-502 TPS-502	EW	5 Air Div.
	Vancouver	5 AD COC		ADCC	
-	St. Hubert	COC		COC	

* USAF Manned
** Tofino started phasing out of the Canadian System in October; in December the station had been completely closed out.

SOURCE: RCAF ADC Air Defence Command Data and Program Book, 1 Oct 1957;
USAF ADC, ACW Status Report (2-AF-V20), 31 December 1957.

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APPENDIX IV

RCAF ADC FIGHTER - INTERCEPTOR SQUADRONS
As of 1 October 1957

Air Div/ADCC	Sqdn	Location	Type Acft*	Aircraft		Crews	
				*Estab	Asgd	Estab	Asgd
1 ADCC	416	St. Hubert	CF100	2	2	27	27
			MK 3D				
	425	St. Hubert	CF100	2	2	27	24
			MK 3D				
413	Bagotville	CF100	2	2	27	27	
		MK 3D					
432	Bagotville	CF100	2	2	27	25	
		MK 3D					
3 ADCC	410	Uplands	CF100	2	2	27	25
			MK 3D				
	428	Uplands	CF100	2	2	27	26
			MK 3D				
414	North Bay	CF100	2	2	27	26	
		MK 3D					
433	North Bay	CF100	2	2	27	25	
		MK 3D					
5th Air Div	409	Comox	CF100	2	2	27	26

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