

Radio at the End

by Larry Van Horn

"Look to space and pray."

--James Canan, *War in Space*

At thousands of locations around the world, nuclear missiles sit patiently in their silos. Bathed in the hum of fluorescent lights, the well-trained men that attend them await their orders -- orders of unthinkable consequences. Above ground, it may be Spring Break in sunny Ft. Lauderdale, harvest in Boone, Iowa, or the concert season in Los Angeles, but to these men, *this* is the day that the world ends. Theirs is a high-tension world in which there are no drills. Everyone is on a hair trigger.

This is "a world that's only nominally at peace," explains Admiral James Watkins, former Chief of Naval Operations. "Peace, crisis, conflict," he told Congress in 1984, "in today's world there are [often] no clear demarcations." If this is true for the military, then certainly the average civilian cannot be aware of how close to war we constantly are.

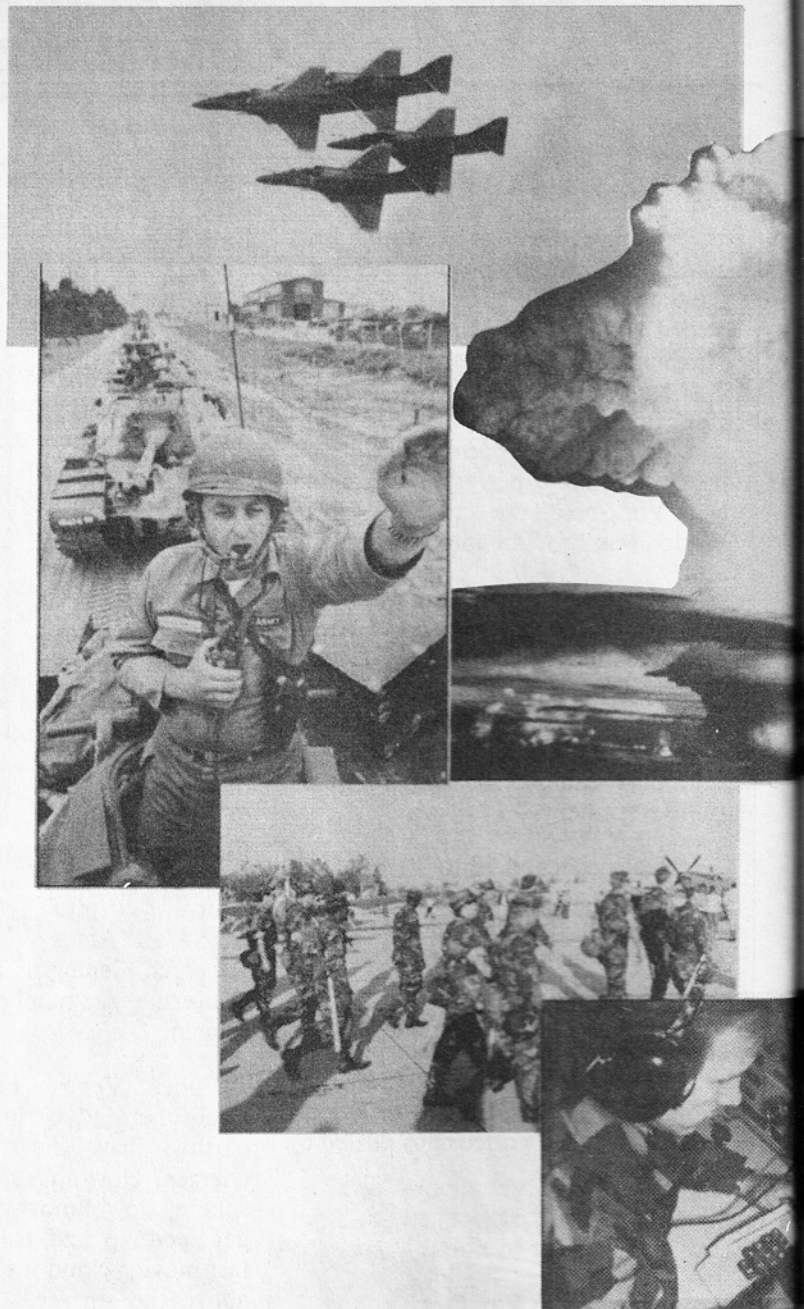
Every day, for example, U.S. military radars and command centers must catalogue some 1,800 flights that enter and leave U.S. air space. Each must be confirmed as civilian, or at least nonhostile. Should there be a difference of 25 minutes or 5 miles between radar contacts and flight plans, a jet interceptor will be scrambled to investigate.

In a typical year, too, there are hundreds of rockets -- 300 from the Soviet Union alone -- leaving the surface of the planet for destinations unknown. Each time, officers of the North American Air Defense Command (NORAD) must decide whether they're watching a routine satellite launch or the beginning of World War III. Here also, there is no such thing as a drill. Every event is treated as a nuclear attack. The finger twitches momentarily on the trigger and is relaxed, just in time.

During the moments, perhaps even days or weeks, leading up to an event, communications play an important role. In time of an actual attack, radio frequencies from the basement of the spectrum to laser light, in all modes and frequencies, will be used to pass the word: the time has come and it is now.

Radio at the End

Radio hobbyists know a great deal about military communications in peacetime, even periods of high international drama. But no one knows exactly how things will play out during the opening and



closing moments of World War III.

Indeed, a veil of secrecy cloaks even the most routine, day-to-day communications structure of our nuclear forces. Normal communications do, however, remain mostly in the clear. Tactical call signs and coded message traffic are the rule but listeners encounter very little scrambling of routine nuclear force communications.

Strategic Air Command foxtrot broadcasts (technically called "Emergency Action Messages" or EAMs), for example, are commonly heard. These are believed to be the method by which nuclear go-codes are broadcast to SAC and Navy nuclear-capable units. The broadcasts use a phonetic alphabet (see Table One) with the transmissions ranging in size from a half dozen to 70 or 80 characters. No one knows exactly what is contained in these messages but the prevailing school of thought among radio hobbyists is that if you hear a SAC foxtrot broadcast repeated three times within the same transmission, something very serious is going on. And while there's no official verification of this "old wife's tale," experience has shown that this is no myth.



neously carried not only on SAC's HF frequencies but also on Navy Hicom HF, DOD Fleetsatcom and Leasat channels, several low frequency systems and even select UHF military aircraft channels.

Should a major event occur, SAC frequencies often sound like the radio equivalent of rush hour in Manhattan. Aircrews will literally be tripping over each other trying to communicate with ground and airbase command posts. This type of activity has already been heard many times during SAC alerts.

Within a very short period of time, the military's defense readiness condition (DEFCON) will go from 5 to 1. DEFCONs are a uniform system of progressive alert postures for use between the Joint Chiefs of Staff (JCS) and the commanders of unified and specific commands, and for use by the services. They range from DEFCON 5 (peacetime) to DEFCON 1 (war).

Although unconfirmed, it is reported by reliable sources that in the event of a nuclear retaliation, SAC channels will pop up in unexpected areas all over the HF spectrum. Don't be surprised to find them hiding in such areas as the HF marine band or even within the commercial aeronautical channels.

Let It Begin

While the United States is in a position to launch a retaliation with its full might against an aggressor, not one piece of this country's impressive nuclear arsenal can be used without someone to give the order. That is the job of the National Command Authority (NCA) through the JCS. The NCA consists of the President and the Secretary of Defense or their duly deputized alternates or successors.

Since we have to assume that SAC's underground command post will be eliminated by the enemy, we must also assume that Washington, DC, would also be a target. Therefore, the U.S. must have some provision to assure that the NCA would be in a position to direct the retaliatory efforts.

This is the function of the National Emergency Airborne Command Post (NEACP, pronounced "kneecap"). These E-4 aircraft fall under the control of SAC. In addition to military circuits such as AUTOVON, NEACP aircraft can also tie into commercial telephone and radio networks. They can also be used for radio broadcasts to the civilian population.

Communications from the NEACP can also be established with SAC's Airborne Command Post (commonly referred to as "Looking Glass"), ships at sea, submarines, surveillance and fighter aircraft, and with the National Military Command Centers.

One item that NEACP does not contain is equipment to launch missiles. This is not a function of NEACP. While NEACP is designed to authorize the launching of missiles, it is not capable of carrying out the launch. Only SAC's Airborne Command Post have the authority once the NEACP's pass the proper go-codes.

One system, the details of which are highly classified, provides for those who are designated to be aboard NEACP's. This plan calls for the President or his deputy, the Secretary of State and the JCS,

Table 1
English Phonetic Alphabet

A = Alpha	N = November
B = Bravo	O = Oscar
C = Charlie	P = Papa
D = Delta	Q = Quebec
E = Echo	R = Romeo
F = Foxtrot	S = Sierra
G = Golf	T = Tango
H = Hotel	U = Uniform
I = India	V = Victor
J = Juliet	W = Whiskey
K = Kilo	X = X-ray
L = Lima	Y = Yankee
M = Mike	Z = Zulu

When a distress broadcast is made, bombers and missiles can be programmed past their "fail safe" points to conduct a counter-attack on the aggressor. So important are the broadcasts that they are simulta-



Displayed in front of SAC headquarters at Offutt AFB stands a Minuteman missile. The Underground Command Post is located under the trees directly behind the missile (SAC photo)

to be transported to the nearest NEACP in the event of imminent threat. One of the E-4 aircraft is always in the vicinity of the President. They can often be heard in flight when the President is aboard Air Force One.

A good place to check for this kind of activity is on the U.S. Air Force's Mystic Star network. There are over 400 different channels scattered throughout the HF spectrum in this network.

As the attack progresses, one can only assume that the Federal

Emergency Management Agency (FEMA) and Federal Highway Administration (FHWA) channels will become very active. FEMA is the government agency responsible for implementing Presidential Directive 58, signed by Jimmy Carter in June 1980. Entitled "Continuity of Government," it outlines plans to evacuate selected government personnel in event of a nuclear attack in order to ensure continuity and survival of the U.S. government.

FEMA, using the Joint Emergency Evacuation Plan (JEEP), will use helicopters to transfer 258 DOD and FEMA personnel from the Pentagon and downtown Washington DC. These lucky few will be transported to Mount Weather (Berryville, VA), the alternative National Military Command Center (Site R, Ft. Ritchie, MD), NEACP aircraft, Andrews AFB and other classified sites as well.

Simultaneously, Joint Air Transportation Service (JATS) aircraft will transport key Executive branch officials and vital documents to classified sites. One program FEMA has been studying over the last several years was a plan designed to evacuate major U.S. cities during an attack. This program uses the interstate highway system for the evacuation. Thus, FHWA channels can be expected to be active during a nuclear attack.

Finally, as the enemy missiles hit their targets, our bombers should be closing in on our "Fail Safe" points. These geographic points are where the bombers will orbit until the final approval arrives from the NCA to conduct the attack on the attacking enemy.

At this point, Nuclear Winter will have arrived. The enemy's missiles will have done their damage. It must be remembered that the first strike will come from the enemy. None of the systems of the Strategic Air Command or the United States Navy is designed to wage war. Every system is designed, instead, to assure that in case of "an event" the United States would be in a position to retaliate. And the whole point of an assured and credible retaliation plan is *deterrence*.

"We are just the opposite of a first-strike weapon," one SAC officer said. "We wouldn't need an Airborne Command Post if we intended to attack. As a matter of fact, the Soviets have nothing like it."

As General Bennie L. Davis, Commander-in-Chief of SAC puts it, "What deters the Soviets is the knowledge that they could not gain enough by initiating a nuclear exchange to make their resultant losses worthwhile."

So for now, we can hope that General Davis' deterrent keeps the fingers off the trigger and that radio hobbyists never get the chance to monitor the war that should never be fought and cannot be won.

Table Two
Commonly Heard Mystic Star Frequencies

3032	3046	3067	3071	3116
3144	4721	4721	4742	4760
5688	5700	5710	5760	5800
5820	6683	6715	6738	6756
6757	6760	6790	6812	6817
6830	6918	6927	6953	7316
7690	7735	7765	7813	7858
7997	8040	8080	8132	8170
8967	8992	8990	9007	9014
9017	9018	9020	9023	9026
9043	9120	9158	9180	9270
9320	9958	9991	10112	10427
10530	10583	10891	11025	11055
11118	11176	11180	11210	11226
11249	11407	11413	11441	11460
11466	11484	11488	11498	11545
11596	11615	11827	12224	12317
13201	13204	13214	13215	13241
13247	13412	13447	13455	13457
13485	13585	13710	13823	13960
14715	14902	14913	15215	15036
15048	15091	15887	16080	16117
16320	16407	17385	17480	17972
17993	18027	18218	19047	20016
20053	20154	20213	20723	23265
25578	26471			

NORAD (North American
Aerospace Defense Command)
HF Frequencies

5297 9023 9795
11441 14894 20855

**Table Three
More Frequencies for the End**

Frequency	Channel Designator	Usage
11113	Floating Designators	Airborne Command Post Intercommunication
11122	Floating Designators	
11131	Alpha Mike	
11140	Alpha Sierra	
11149	Floating Designator	
11158	Echo	Airborne Command Post Intercommunication
11167	Victor	Primary Air-to-ground Channel/AF Refuel
11176	Floating Designator	
11185	Foxtrot (See note 1)	Airborne Command Post Intercommunication
11194	Foxtrot (See note 1)	Airborne Command Post Intercommunication
11203	Floating Designator	
11212	Two Letter Designator	Changes Every Three Months
11221	Floating Designator	
11230	No Designator Known	Airborne Command Post Intercommunication
11239	Floating Designator	
11248	Foxtrot Quebec	
11257	Bravo Quebec	Airborne Command Post Intercommunication
11266	Bravo Uniform	Airborne Command Post Intercommunication
11275	Foxtrot Xray	
11284	Floating Designators	Also Alpha Two in PACAF
11293	Quebec	Primary Air-to-ground Channel, Pri Night
11302	Golf	
11311	No Designator Known	Note: Popular Number Station Channel!!
11320	Oscar	
11329	Kilo+ (See note 2)	Airborne Command Post Intercommunication
11338	No Known Designators	
11347	Yankee/Xray	Channel uses both designators-alternates
11356	Foxtrot Charlie	
11365	Alpha Papa	Airborne Command Post Intercommunication
11374	No Known Designators	SAC/NORAD Intercommunications/AWACS A/C
11383	Romeo	Primary Air-to-ground Channel
11392	Papa	Airborne Command Post Intercommunication
11401	Floating Designators	
11410	Floating Designators	Possible NORAD/SAC Intercommunication
11419	OSCAR (PACAF Designator)	
11428	No Known Designator	Possible PACAF Channel
11437	Alpha Twenty-one	
11446	No Designator Known	Airborne Command Post Intercommunication
11455	Bravo	
11464	Alpha One	Primary Air-to-ground Channel, Pri Day
11473	Yankee Quebec	Data Channel
11482	Lima	Training Frequency-Practice Messages
11491	Alpha Zulu	
11500	Called <FAX>	SAC Special Operations Channel
11509	Bravo Whiskey	Airborne Command Post Intercommunication
11518	Sierra	Primary Air-to-ground Channel

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13547	Floating Designator	
13907	Alpha Charlie	
14716	Sierra Echo	
14744	Alpha Tango	
14775	Floating Designators	Also Mike in PACAF
14955	Charlie	
15035	Charlie Quebec	Canadian Forces Channel (shared)
15041	Mike	Primary Air-to-ground Channel
15091	Bravo Xray	Tac-to-SAC Intercommunication?
15544	No Known Designators	Possible AC Point-to-Point Channel
15962	India	
17617	Bravo Hotel	
17975	Tango	Primary Air-to-ground Channel
#18005	Tango (PACAF Designator)	
18046	Juliett	
18594	Zulu One	
20631	Whiskey	Primary Air-to-ground Channel
#20737	No Known Designator	Possible PACAF Channel
#20740	Lima (PACAF Designator)	
20846	Charlie Alpha	SAC-to-CAP Intercommunication
20890	Delta	
21815	Foxtrot Sierra	Possible Floating Designators on this Freq
23337	Uniform	
23419	No Known Designator	Possible SAC-NORAD Intercommunications
27870	Delta Quebec	

* Indicates a Mystic Star Network Channel
Indicates a PACAF Channel

- Note 1: Foxtrot designator rotates between these two channels. When not designated Foxtrot, the frequency uses two letter channel that end with the letters 'A/B/C or S'.
- Note 2: Frequency uses a two letter designator beginning with Kilo + one other letter that rotates periodically.
- Note 3: Other previous designators noted on this channel include: November Alpha and India Alpha.