



DESIGNING A MOBILE CFB

by F/L T. G. Coughlin

Plans for the Tattoo train sound like a mixture of a Mississippi showboat and D Day minus one

For many people, a train is merely a device which can take them from one place to another. But next year, for some 700 servicemen, a train will be a self-contained and mobile city where they will live, work and rest as they criss-cross Canada with the Canadian Armed Forces contribution to Centennial: The Tattoo.

The train, actually two trains, the red (CPR) and the blue (CNR), posed a host of formidable problems in logistics and administration. For one thing, they will be the longest passenger trains ever assembled in Canada. And, most important of all, they will have to be home, workshop and community centre for several hundred personnel for a six-week period.

To find answers to the maze of interlocking problems posed by the Tattoo trains, members of the Armed Forces and railway personnel began consultations two years ago. Tentative plans for the length of the train were drawn up, but since the producer of the Tattoo, Major I. S. Fraser, was attending Staff College in India at the time, final decision on the length of the train had to wait his return to Canada. In the meantime, Captain

E. A. McLellan, the transportation officer on the CFHQ Centennial Staff, had a multitude of complicated questions to occupy his time.

The first major item to be dealt with was how to weave together CN and CP regular schedules with the Tattoo trains' schedules so that neither civilian nor military traffic would be interfered with. It was easy to state the requirement but difficult to achieve the aim. But when centennial year begins and the red and blue trains start to roll, there will be some 10,000 miles of clear track in front of them. Another perplexing problem is caused by the extreme length of the train. Twenty coaches plus six flat cars create a difficult parking problem, particularly when the military asked that the train be divided into several sections to form a compact unit at each stop. In fact this arrangement will not be possible at all times and in some communities such as Sydney, N.S. and North Bay, Ontario, where parallel tracks are in short supply, the trains will have to be strung out as one long unit.

There were other parking area problems to be considered. One was the ques-

tion of noise. Since personnel on the train will be performing at night they will require a quiet spot where they can sleep during the daytime. But, unfortunately, railway yards are notorious for their noise. Between shunting engines and the crash of coupling cars, the area is usually bedlam and hardly conducive to sleep. However, the train will have to be serviced at each stop and if parked some distance out of town to get peace and tranquility, it would be far removed from servicing facilities. As a result of these differing requirements every community along the Tattoo route had to be visited by a combined railway/military team to find locations which were acceptable compromises between servicing requirements and the need for restful silence.

The fact that the Tattoo trains will be parked for comparatively long periods also introduced unique complications. Normally, when a train stops, its batteries provide all necessary light, heat and power but this arrangement would not begin to satisfy the Tattoo trains' requirements. So special arrangements had to be made. The CNR's answer to this problem will be a special generator car in the

centre of the train to re-charge the train's batteries, while the CPR will achieve the same results by using a number of small portable generators set up beside each of the coaches and dining cars.

One major modification to the Tattoo train would have provided onboard shower facilities but studies showed that this proposal was impractical. Nevertheless, the requirement existed. Fortunately the army has considerable experience in providing mobile showers during field exercises so it was decided to use the army's time-tested system.

One element which could not be adjusted to suit anyone's convenience was the matter of time. Time will be critical. To present the tattoo in as many communities as possible the minimum amount of time is allowed to unload the train, prepare the show, give the performance, dismantle the scenery, reload the train and, literally, make tracks to the next community. But, if extra time cannot be had, then arrangements can be made to put the available time to the best use. For instance, in the original concept of the Tattoo train it was planned to use baggage cars to haul the tons of equipment,

then it was realized that piggyback trucks mounted on flat cars would greatly speed up the loading and unloading process. Consequently, the train will be carrying six forty-foot trailers with a total carrying capacity of 150,000 pounds.

To ensure that the trucks will be unloaded in the fastest possible time, the flat cars will be attached to either the front or rear of the trains so they can be quickly detached from the passenger coaches and brought to unloading ramps. And, in fact, as the tattoo train curves through the railway yards at Halifax on its way to the terminal, the flat-cars will be dropped off on the run as they pass the arena where the evening performance will be held. Not only that, but every item in the trucks are colour-coded for ease of assembly. Furthermore, to facilitate packing, the location of each item in each trailer will be pre-planned and will remain the same throughout the tour. If practice makes perfect, then the trucks will be loaded and unloaded perfectly because many practice drills are scheduled before the trucks have to be loaded for the first real journey.

Since the Tattoo train will be, in effect, a Canadian Forces Base on wheels, arrangements had to be made for various un-railway-like facilities. An orderly room will be provided so that such popular administrative functions as pay parades can be carried out. Orderly officer, orderly sergeant and duty roster will also be in evidence. Small medical inspection rooms will be on board the trains as well as medical officers to handle minor medical problems. If a major medical problem should arise, the names and telephone numbers of doctors and dentists in each community along the way are available. And, of course, the train is linked to the passing world by telegraph so that help could be summoned and on hand when the train reached the next stop.

Canadian military personnel who are veterans of the Second World War will see no similarity whatsoever between the Tattoo trains of 1967 and the wartime troop trains. Right from the beginning it was decided that the best performances would be given by satisfied performers so all efforts were made to make the Tattoo trains as comfortable and convenient as possible. For instance, one coach is being renovated and turned into a canteen with all the customary facilities plus space for card tables, reading areas etc. But, according to the old saying, "an

army travels on its stomach", so considerable time was given to the matter of food as the biggest single factor affecting morale.

As everyone who has ever eaten in a dining car well knows, the railways have a reputation for fine food. However, the Tattoo trains will create an unusual catering requirement. Dietitians from CFHQ met with their railroad counterparts to work out some answers to the novel problems. The results of those meetings, which produced a number of "firsts" for dining car offerings, will probably be beneficial to the travelling public as well as the Tattoo personnel.



It was agreed by dining car staffs and dietitians that there is a considerable difference between railway passengers, who might be spending a maximum of five days on a train and the servicemen who will be spending six weeks on rails. The railways can meet their culinary requirements with several set menus but on the Tattoo trains the servicemen travellers will have a different menu each day for two weeks before the menu is repeated. There are other differences as well. One of the railroads customary desserts is tapioca pudding a dessert, which experience has shown, is unpopular with the troops. Alternative railways desserts such as crackers, cheese and fruit are not desserts at all in the opinion of Canadian servicemen who regard these items as merely side table supplements.

Some desirable dishes, however, will have to be forsaken such as a roast dinner with baked potatoes. Because of the small size of dining car ovens, it is not possible to cook roasts and baked potatoes at the same time but either item can be had at different meals. On the other hand, the military dietitians solved what the railroaders felt was an unsolvable problem namely, how to cook french-fried potatoes. The railways do not, as a rule, serve french fried potatoes because the swaying dining car would spill grease and start a serious fire. The answer, supplied by the military, was to use frozen french fried potatoes and heat them. The end result will be french fries without causing a fire hazard. The railroad food specialists made a valuable contribution to the matter of menus when, speaking from experience, they pointed out that veal and movement just don't mix. The steady swaying of the train following a meal of veal sometimes produces a temporary but uncomfortable sickness — an undesirable situation for personnel about to put on a performance. And so it went, item by item, the military and civilian experts went over the menu which produced a cuisine which, may well be reflected in dining cars across Canada for years to come.

When all the myriad of details are finally taken care of, still nothing will be left to chance. An advance party of military personnel will arrive at each community several days ahead of the Tattoo train to ensure that all is ready. Confirmation will be received that the civilian bus companies are ready to meet the train and transport the troops to the arena; laundry and dry cleaning facilities, previously arranged for, will be alerted; and press, radio and television people will be given the names of Tattoo members that come from the community being visited.

Many people, both military and civilian, have worked long and hard to ensure that the Canadian Armed Forces Tattoo will be a success. Beginning on 8 April 1967 as two trains, one heading east, the other heading west, pull out of the railway junction at Trenton, Ont., millions of Canadians will see how well their work has been done. What these audiences will see will be two hours and 10 minutes of spectacular and unprecedented pageantry bringing to life all the colour and drama of Canada's extremely colourful and highly dramatic 300 years of history.

SENTINEL



Hunting the Phantoms of the Sea

Story by Master Sergeant R. B. Johnson, USAF

Photos by Cpl. James Cockrane, RCAF

In a darkened room, entombed in a solid granite mountain in Colorado, military men are vitally concerned with the activity taking place on and beneath the waters of two oceans, thousands of miles away.

These Canadian and U.S. men who serve at the North American Air Defense Command's underground nerve center use the eyes and ears of the Canadian Forces' integrated Maritime Command to search the waters off both coasts of the continent in a never-ending surveillance for any aggressor that could threaten the mutual security of both countries and their populations.

The submarine, scourge of the shipping lanes in two World Wars, has emerged in the age of the ballistic missile as a weapon of air attack. Industrial or population centers have replaced the maritime fleets as their number one targets.

There also is the problem of fishing trawlers that operate off the coastline of North America.

The exact locations of these submarines and trawlers fill in the over-all defense picture that is put together every minute at the headquarters of the international command that is NORAD.

The Ballistic Missile Early Warning

System, Distant Early Warning Line and the supersonic jet fighter-interceptors guard against the potential threat of bombers and surface-launched missiles from the polar north.

Keeping an airborne eye on submarines and trawlers, in their thousands of miles of manoeuvring area, is the job of airmen who fly the two oceans in squadrons of Maritime Command.

A real veteran of over-water operations is No. 407 Maritime Squadron. Operating out of the Canadian Forces Base at Comox on Vancouver Island, the unit is now celebrating its 25th year of front-