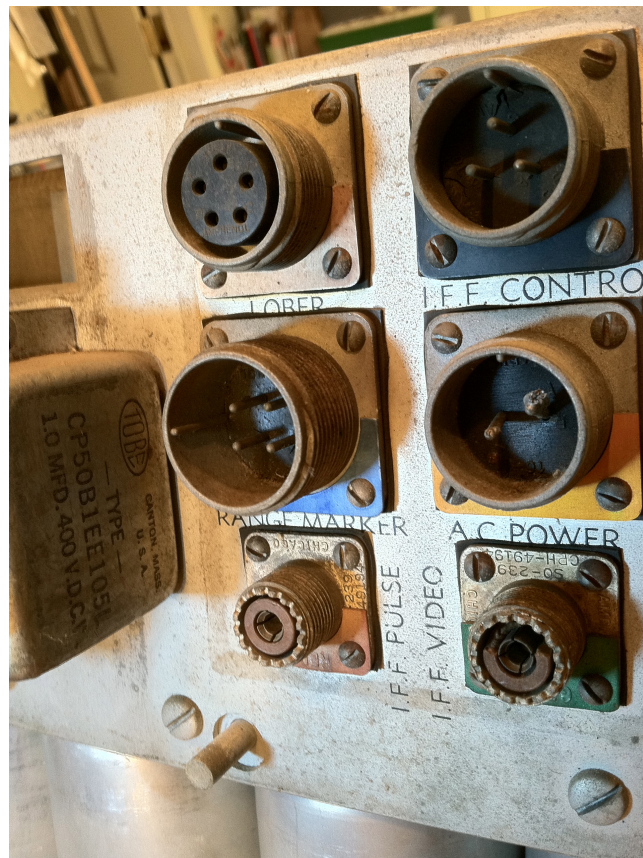


# A New Self-Destruct Device in the Winchell Communications Center

The Comm Center now, just like on Star Trek ®, has a self-destruct device. In World War Two, the Allies wanted to prevent certain radio equipment, especially the “Identification Friend or Foe” (IFF) system, from falling into enemy hands. Had that happened, much lethal confusion would have ensued, as enemy aircraft could pretend to be Allied aircraft, escaping all interception. So, many allied aircraft used a two-button trigger to set off explosives in the IFF system. We now have one:

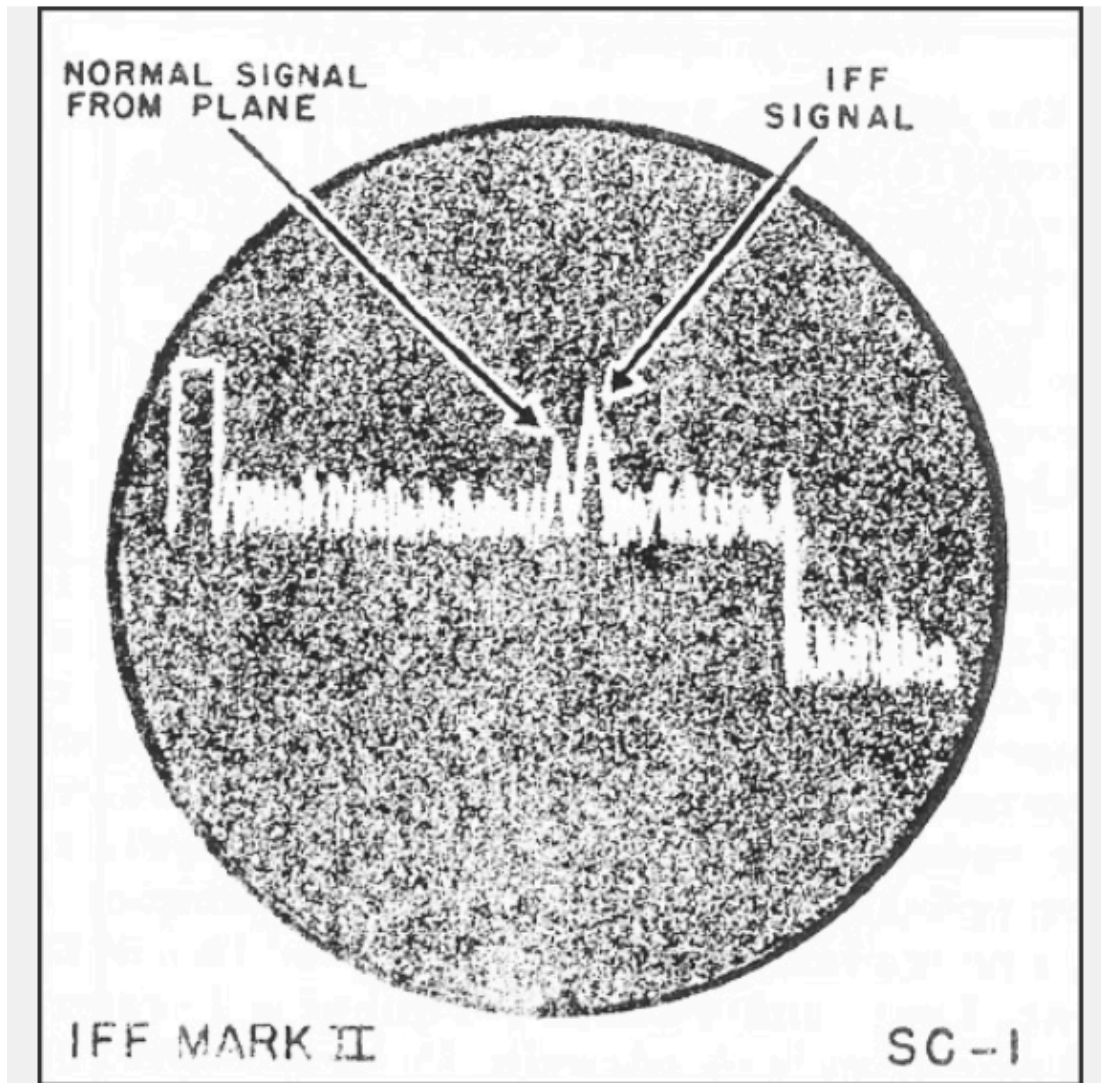


An IFF system looked like this:





The IFF sent out a pulse of data in the VHF range, 150 MHz to 190 MHz +/- . A friendly aircraft sent one back in response.



A current description reads:

“With the successful deployment and ongoing development of radar systems by both allied and axis forces during WWII, combatants were immediately confronted with the difficulty of distinguishing friendly aircraft from hostile ones; by that time, aircraft were flown at high speed and altitude, making visual identification impossible with targets showing up as featureless blips on the radar screen.

“First introduced in 1939, the IFF system quickly evolved into a sophisticated radar interrogation system that transmitted a signal to the aircraft in question which would then, automatically trigger an identifying response. IFF frequencies and technology were highly guarded by both sides so fail-safe self-destruct mechanisms were built into all radio equipment carried by aircraft flying over enemy territory.

“The BC-765 IFF Radio Destruct Switch Box was part of the B-17’s SCR-595 Identification Friend or Foe (IFF) Radio system. Mounted atop the PBY Catalina’s cockpit dash and easily accessible by both pilot and co-pilot, and in the threat of potential capture of the aircraft, it enabled the bomber’s crew to destroy the highly classified IFF System and prevent it falling into enemy hands.

“Just prior to bailing out or a crash landing, the pilot would press both buttons on the bright red switch simultaneously which would detonate explosive charges built into the aircraft’s radio cabinet and destroy the radio. Unfortunately, despite the twin button detonation process and its bright red color, many pilots still managed to accidentally trigger the device when initially turning on the IFF System. The sudden thud of a contained explosion and startled yells of the radio operator were quickly followed by the acrid smell of burning insulation filling the cockpit. Eventually the self-destruct units were fitted with a thin safety wire to prevent its accidental use.”

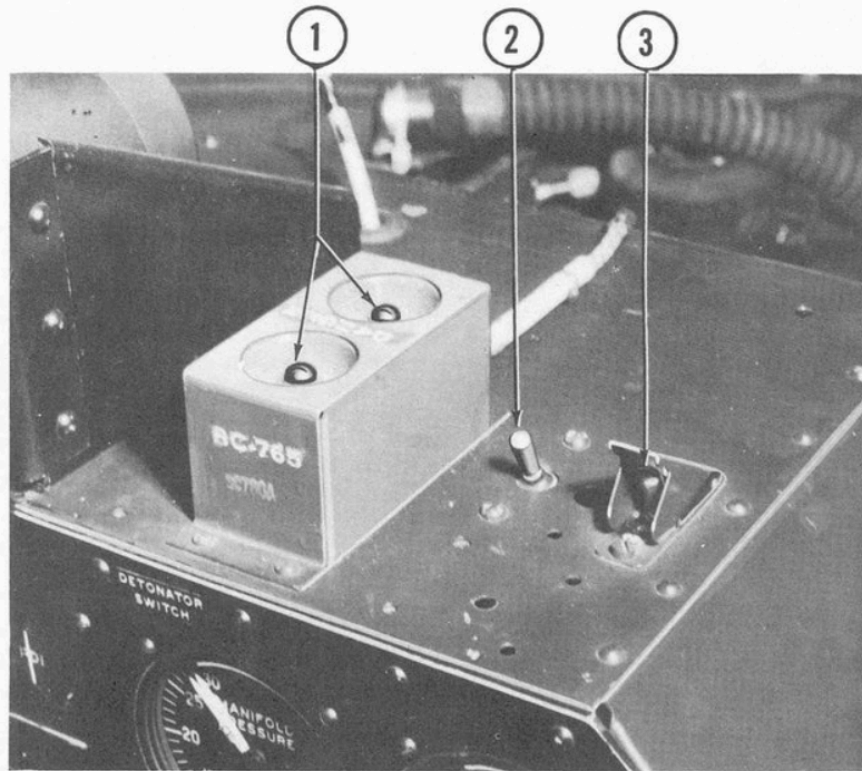
<https://www.recoverycurios.com/pby-catalina-friend-or-foe-iff-bc-765-radio-destruct-switch-box>. (Australia)

The self-destruct for the IFF system appeared in PBY amphibian floatplanes, B-17 and B-29 bombers, and other aircraft.

Certain cautions were appropriate for this explosive system:

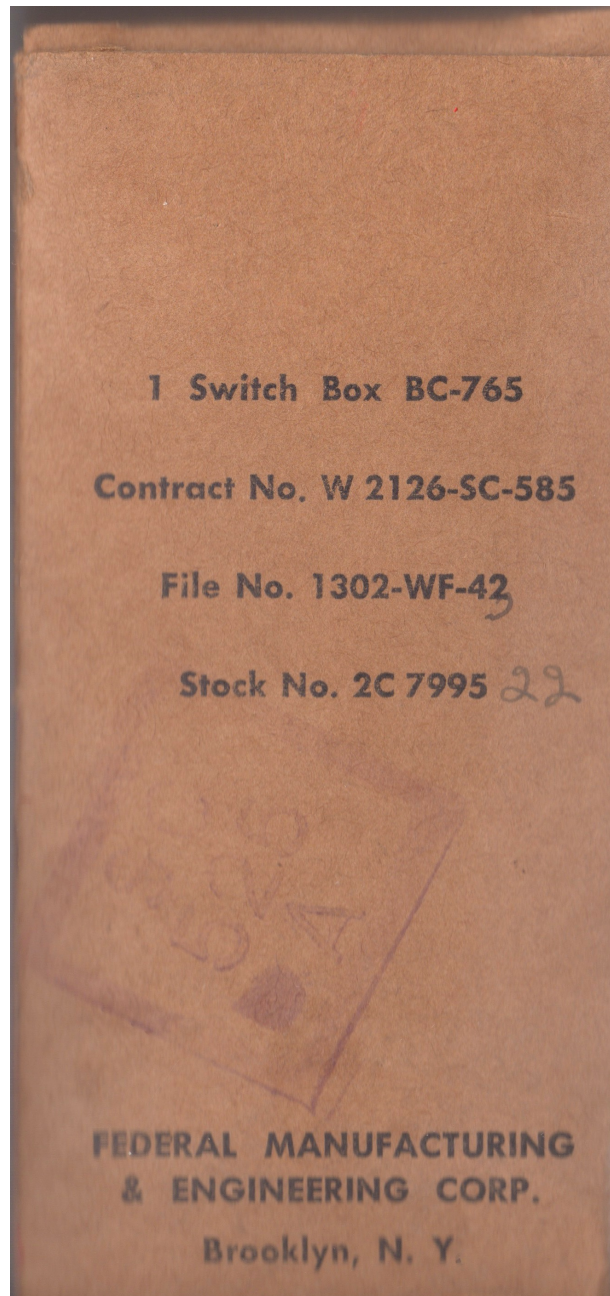
### *c. Switchbox BC-765*

Switchbox BC-765 is located in the cockpit within easy reach of the pilot or co-pilot. It has a set of two push-buttons connected in series and is wired in parallel with the inertia switch at Plug PL-190. When the two push-buttons of Switchbox BC-765 are depressed simultaneously or when the inertia switch is operated, the destructor circuit is closed and voltage appears across Plug PL-177, the "D" destructor plug. Once set to operate, Switchbox BC-706-A, the inertia switch, will be tripped by a shock of sufficient force in the horizontal plane of the airplane. This closes the destructor circuit and sets off the destructor unit. Take care that the inertia switch is not accidentally struck. This might trip the switch and fire the destructor unit, unless Plug PL-177 (Navy and British "D" plug) is removed from the destructor unit.



1. IFF Destructor Switches    2. IFF Power Switch    3. IFF Emergency Switch

Figure 73—IFF Control Switches Above Pilot's Instrument Panel



Our BC-765 self-destruct switch is New-Old-Stock, and was made in Brooklyn, New York City.

We look forward to operating it!

(18 I '23 de K6VK)##