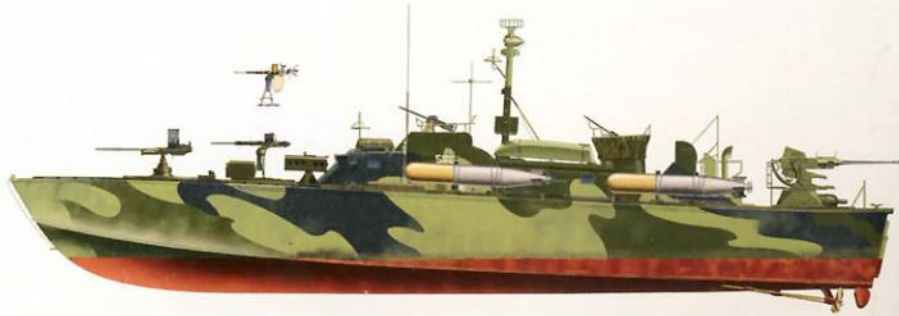


80' ELCO PT boat

photographic reference manual



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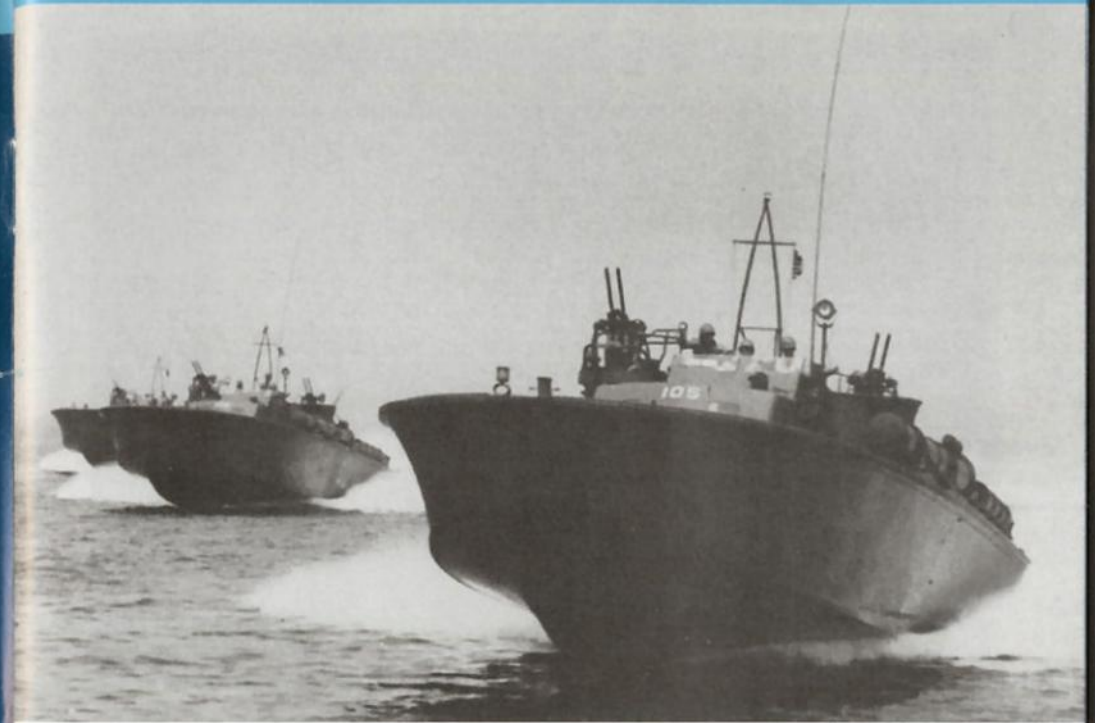
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Italeri S.p.A.
Via Pradazzo, 6/b
I-40012 Calderara di Reno
Bologna
Italy

Ph.: +39 051. 317 5211
Fax: +39 051. 726 459
e-mail: italeri@italeri.com
<http://www.italeri.com>
<http://www.lacasaitaleri.com>





During World War II the U.S.Navy fielded three main types of PT (Patrol Torpedo) boats. These were the Higgins 78 footers, and the ELCO 77 and 80 footers. Each type differed from the others in size, layout, armament and details. The 80' ELCOs were by far the most numerous group, more than 300 being completed in five sub-series by the end of the War.

Italeri has chosen to model PT 596, a late-production 80', as being representative of the final evolution of the PT boats, after the switch to Gunboat roles which took place in the last years of the conflict.

In this booklet, however, we'll have an overview of all the ELCO 80 footers: such a large kit gives ample scope for detailing and conversion.

Also, we're confident that the appearance of the Italeri kit will trigger the release of a number of aftermarket items, which will enable every modeller with a special interest in these boats to build his own fleet!



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This publication is an integral part of Italeri kit 5602, and cannot be sold separately. Information presented in these pages must be intended as an historical and technical overview of the 80' ELCO PT Boats, and doesn't necessarily relate to the versions offered in the Italeri kits.

Special Thanks to the NARA, the US Navy and the PT Boat Museum for their kind assistance.

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The ELCO 80' PT boats were built of wood, and were considered expendable. Construction started with the hull upside down: the bulkheads were of laminated spruce, white oak and mahogany, covered with fir plywood. The keel and chines were bolted to the bulkheads, and planking made of two layers of mahogany boards (laying diagonally in opposite directions) was screwed and nailed on. The hull was then turned, and the mahogany deck and spruce deck houses added. The Packard 4M-2500 was developed specifically for the PT boats: a 2,950cu.in., 12-cylinder supercharged engine, it had a 1,350hp (1,500hp in later versions) output at 2,400rpm, and its high reliability was a major asset to PT operations. Each boat had three of these engines, each driving a three-bladed screw either directly or through a vee-drive. Different PT series had different top speeds, depending on engine power and weight: 41 to 43 knots was the average value. There were three rudders. Early 80' ELCOs had a weight of 51 tons, and carried 3,000 gallons of 100 octane aviation gasoline. As more equipment was added the weight rose, reaching 61 tons in the 1945 production run.



Previous page: PT 103, the first ELCO 80 footer, pictured during sea trials. Over 300 boats of similar design were built during World War II.

Above: PT 103 approaching a tender for refuelling.

Below: PT 107 underway at the Salomons. She was lost in a non-combat mishap.





Above: PT 130 destroyed 15 Japanese barges in a single day. The action took place on June 26th, 1944 along the coast of Muschu Island in New Guinea.

The equipment, systems and armament of the 80' ELCOs changed continuously, reflecting the different tasks required and the experience gained in actual combat. The four torpedoes (originally Mk.VII or Mk.VIII in tube launchers, later Mk.XIII on roll-off racks) were supplemented by a variety of guns and other weapons. Most common were the 20mm Oerlikon and the 37mm M9 rapid fire gun (originally a field modification using guns removed from Bell P-39 Airacobra fighters) on the bow, Browning 0.5" twins in the hydraulically-powered mid turrets, and a 40mm Bofors on the stern. Later boats (such as PT 596 in the Italeri kit) often featured two eight-tube launchers for 5" rockets, and many other weapons - including mortars - were tested or fielded as the main task of the PTs switched from intercepting and destroying maritime traffic to coastal gunboat operations. The crew of the late boats reached three officers and 14 enlisted men, five more than in early boats which required less gunners for their lighter armament. Altogether, 296 ELCO 80 footers entered U.S.Navy service, serving in most of the 43 commissioned PT Squadrons and operating in all theaters of WWII. Due to their limited range and the need for frequent fuelling, PTs didn't operate



Above: PTs of MTB Squadron 29 at Bastia harbor, Corsica, in late 1944.
Below: PT 149 in glass calm water off New Guinea.





Above: PT 191 refuelling at sea from a tender. Such operations were usually accomplished while underway.

as stand-alone vessels but required the support of a Tender or an island base, where maintenance and repairs were performed.

Although these boats took part in Mediterranean and English Channel operations, most were deployed in the Pacific area, often taking care of enemy-controlled islands left behind in the fast “hopping” by the U.S. forces.

Many other tasks ranging from spy transport to SAR were dictated by the operational needs.

At the end of the war, the medal roster of PT units and crews was impressive to say at least, reflecting the bravery shown by these men in a difficult and unfriendly environment: unfortunately, there was little sense in maintaining the small wooden vessels further, and most were simply stripped and burned.

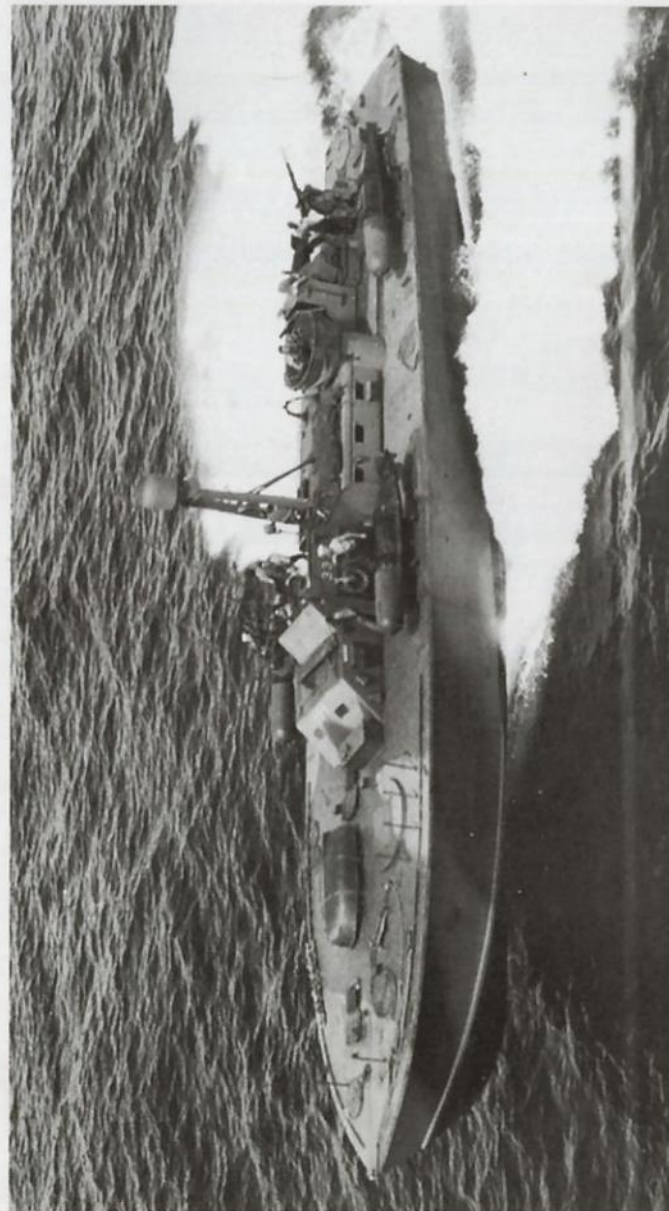
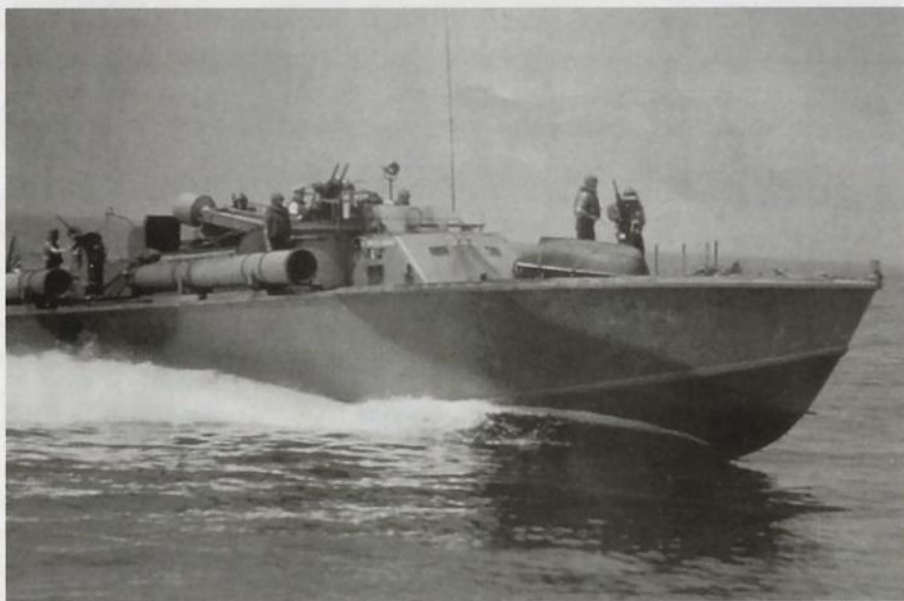
Few survived into the post-war years, and a handful was preserved in museums.



Above: PT 328 had a long and distinguished career. She was sent to the Pacific area and attached to MTB Squadron 21, which earned a Presidential citation. She survived the war, only to share the same sad fate of most other PTs. The picture shows Camouflage Scheme 20L to good effect.



Above: PT Like most ELCO 80 footers, PT 330 spent her life in the Pacific.
Below: PT 333 pictured undergoing sea trials off the ELCO shipyards in Bayonne, New Jersey, during the Summer of 1945.



Above: the story of PT 337 clearly illustrates the risks involved in PT operations. On March 7th, 1944 she was entering Hansa Bay, New Guinea, when she took a direct hit by a Japanese shore battery. Her three Packard engines were knocked out, and she burst into flames and sunk. The crew got into life rafts but remained adrift until the morning of the 11th, when five survivors - including her captain, Ens. H.W. Cutter - were rescued by a Consolidated PBV Catalina flying boat. Note the lack of bow armament, the 20mm stern gun, and four Mk.XIII torpedoes on roll-off racks. As WWII progressed, the PTs switched their role from anti-shipping operations to coastal gunboats.



Above: PT 337 again. She belonged to MTB Squadron 24.

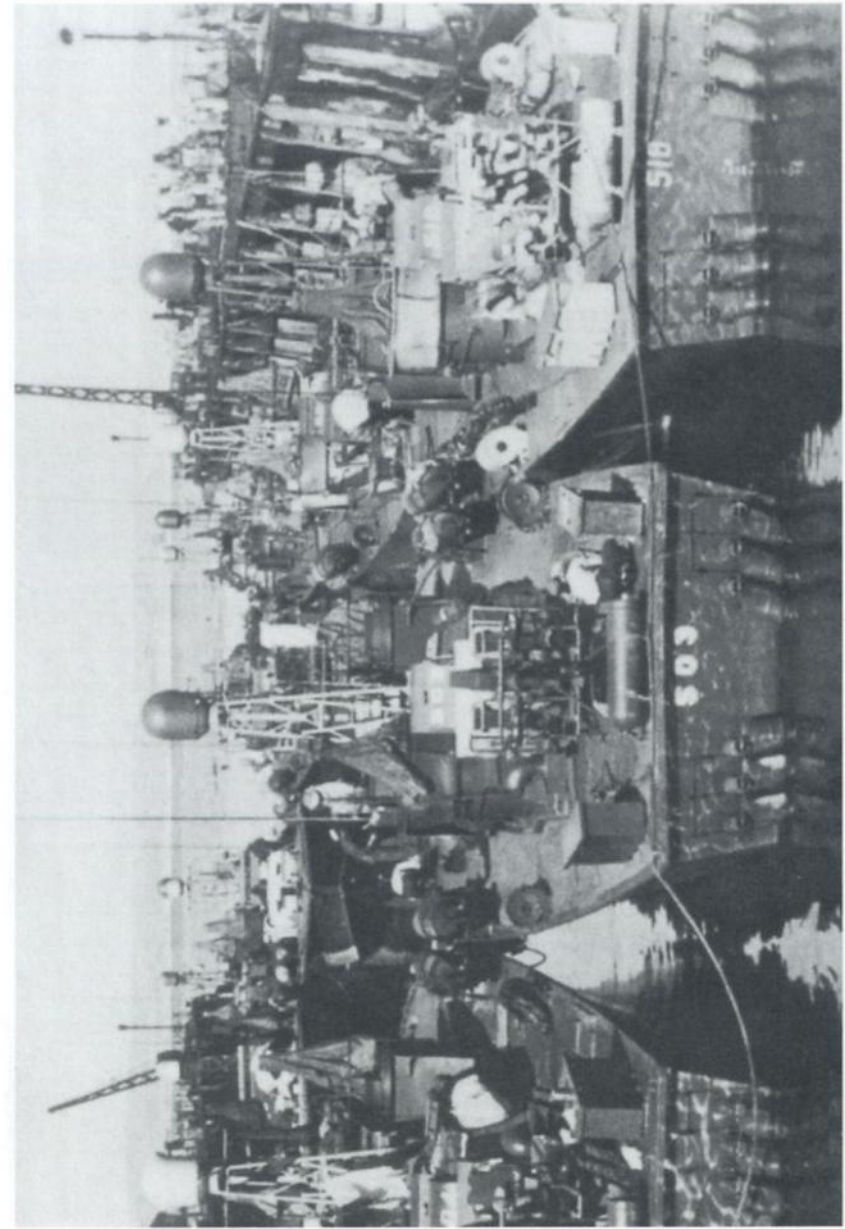
Below: On March 2nd, 1945 General Douglas MacArthur sailed to Corregidor aboard PT 373. Note details of the 20mm gun to the right of the picture.



Above: an unidentified 80 footer in Tulagi harbor during 1942. Note the ELCO tube launchers.



Above: PT 504 operated in support of D-Day landings, and was later transferred to the USSR. **Below:** forecastle armament variations.



Above: taken in Portland, UK shortly before D-Day, these picture shows PTs assigned to the 34th and 35th MTB Squadrons being readied for operations in support of the landings.



Above: built to kill, PTs often found themselves in life-saving operations carrying to safety men from sunken ships and downed planes, regardless of their nationality. This boat was lost off Leyte in October, 1944.

Below: PT 558 served with MTB Squadron 29 in the Mediterranean.

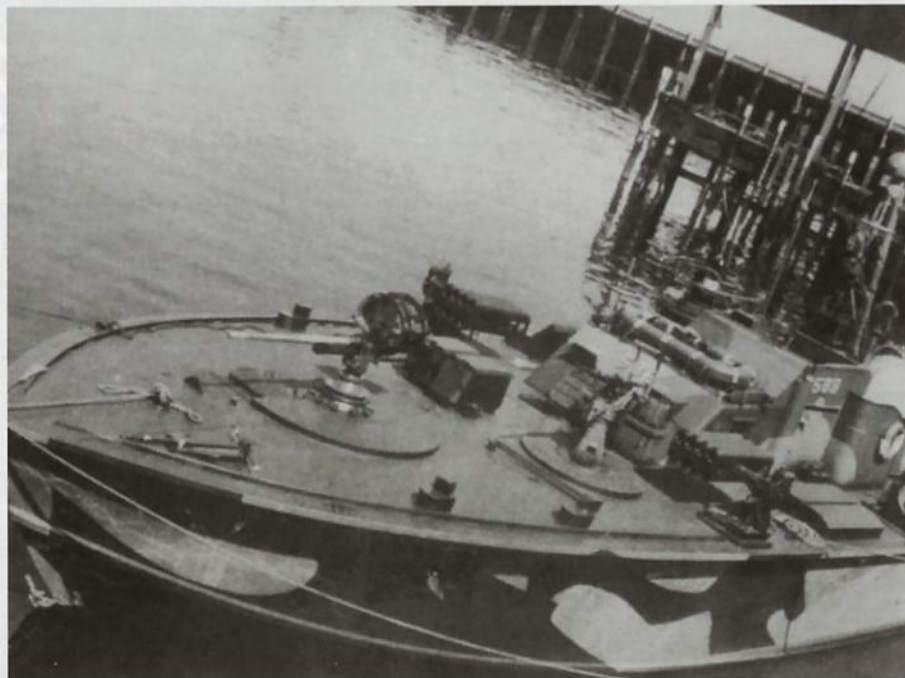


Above: PTs often carried native scouts during operations in the Pacific islands. Note the smoke generator on the stern.



Above: a close relative to PT 596 kitted by Italeri, PT 579 was assigned to MTB Squadron 39 during the closing months of WWII.

Below: PT 588 shows the final configuration of ELCO boats armament, including the eight-tube Mk.50 rocket launchers, here in folded position.



Above: PT 620 just before being turned to the South Korean Navy after WWII.

Below: PT 596 is the subject of the Italeri kit.





Previous page, and above: bow and stern views of PT 596 with the rocket launchers deployed and all deck details clearly visible. She represents the final configuration of WWII ELCO PT boats.



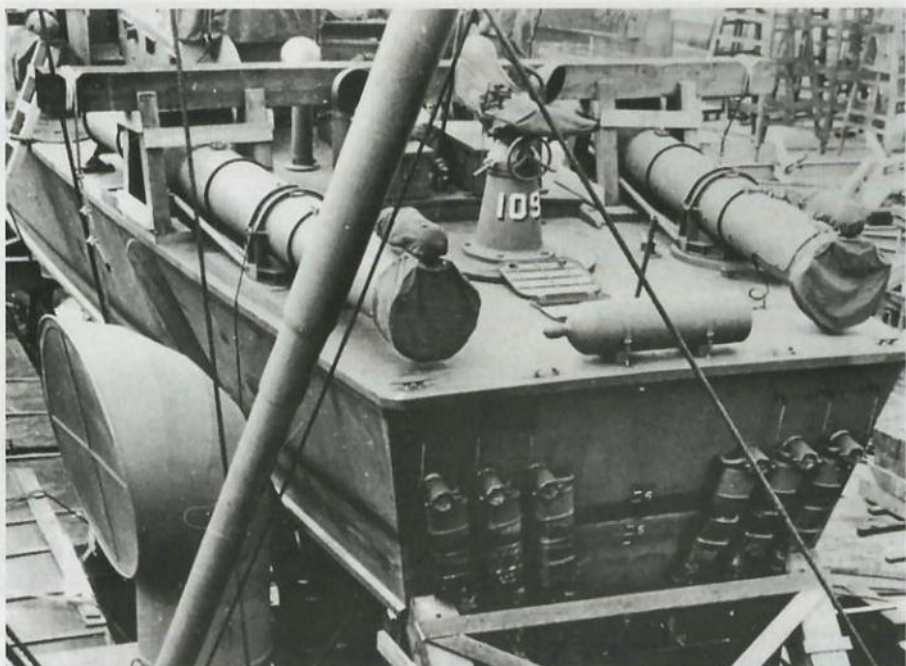
Built in 1945 and assigned to MTB Squadron 42, PT 617 was soon sold on the civilian market. Rescued in 1979 by PT Boats, Inc., she has been beautifully restored to WWII configuration and put on display at the PT Boat Museum in Battleship Cove, Fall River, Massachusetts.



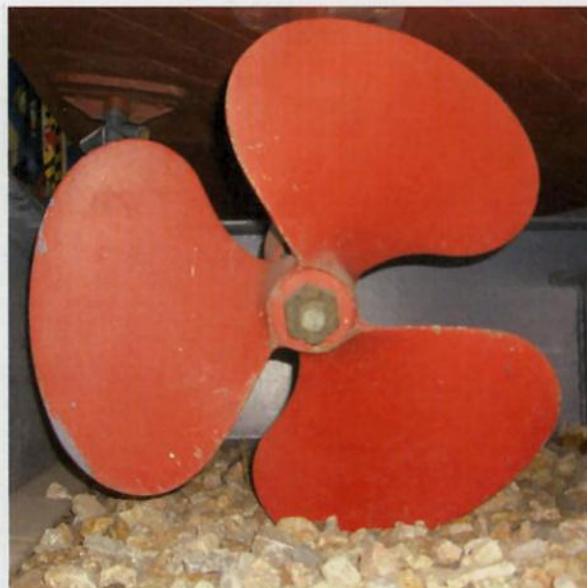
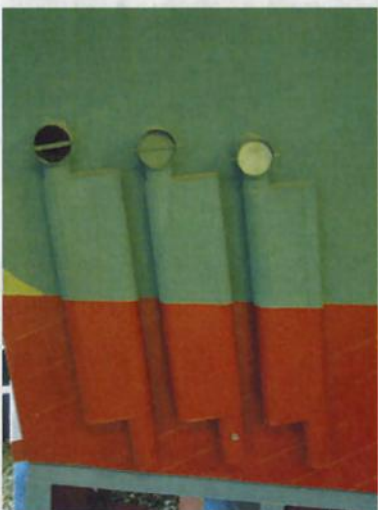
Above: the mahogany planking can be clearly seen now, though it was nearly invisible when the boat was new.

Right: PT decks always had a very crowded look. The clothesline in the foreground is definitely non-standard!

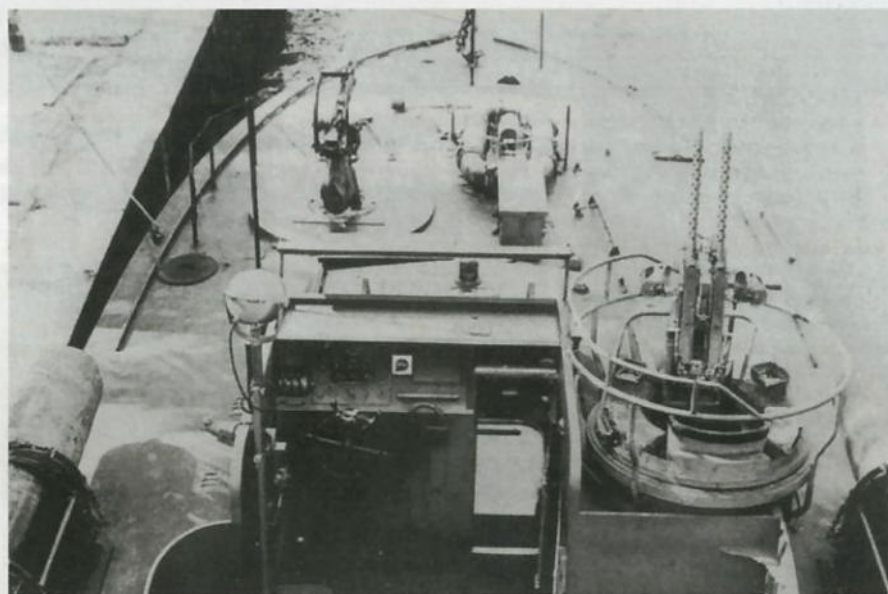




Above: the stern of Lt. Kennedy's PT 109.
Left: butterfly valves routed the exhaust either directly out or through the muffers.
Below: port screw shaft.



Left: all PTs had three screws, with individual rudders located directly aft.
Below: the bridge, forward 0.5" turret and foredeck on PT 522.





Above: note the early rocket rails on PT 131, and the life vests hanging on the deck house.

Left: the anchor was usually stowed on the port foredeck.

Below: foredeck handrail (starboard).



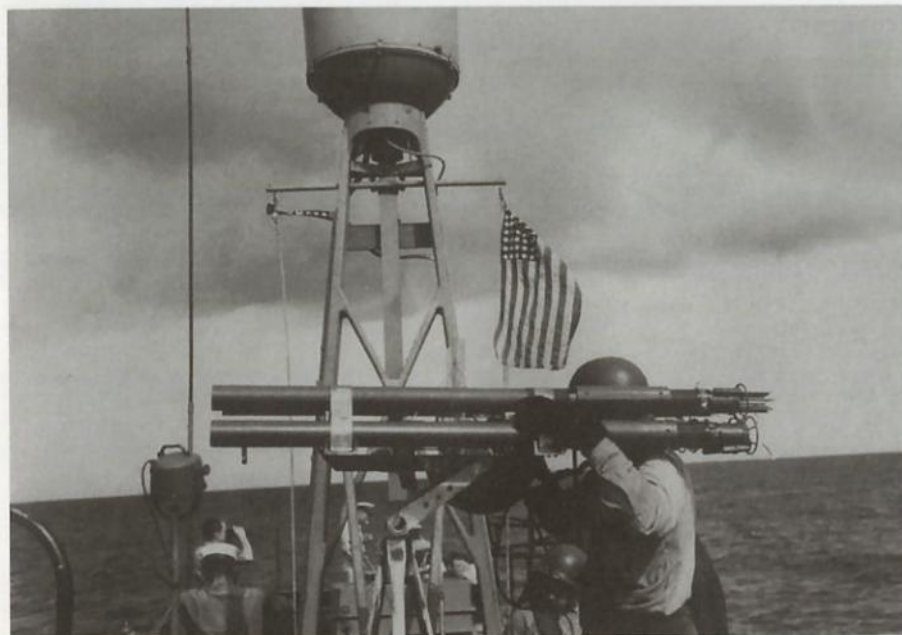
Above, and below: the deckhouse of PT 617 at the PT Boat Museum.

Right: kill markings on PT 134.





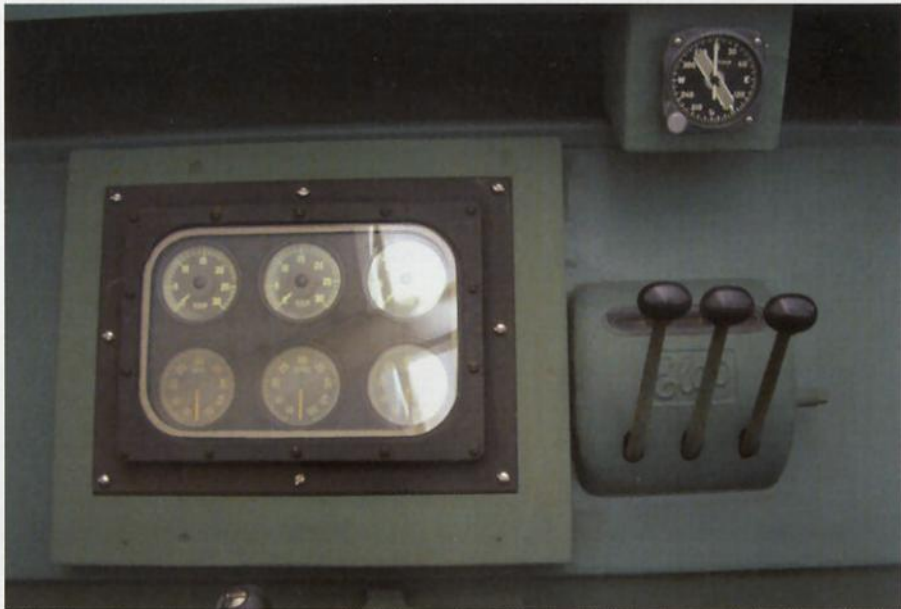
This page: more deck house details. The picture below shows two Japanese POWs after being rescued from the water.



Above, and left: the most common type of radar mast.

Below: aerial mount to the left of the wheel-house.



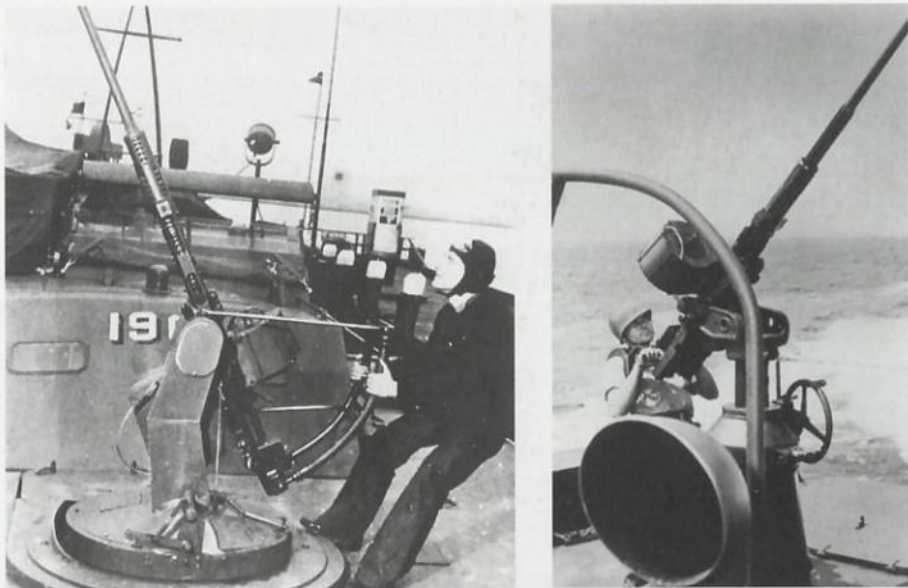


Above: engine controls on the bridge.
Left: searchlight.
Below: steering wheel.

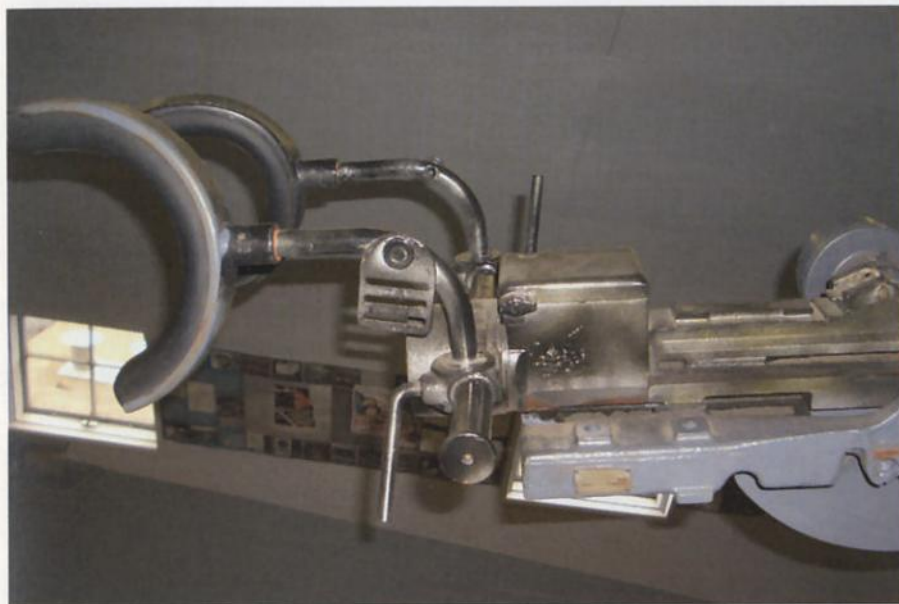
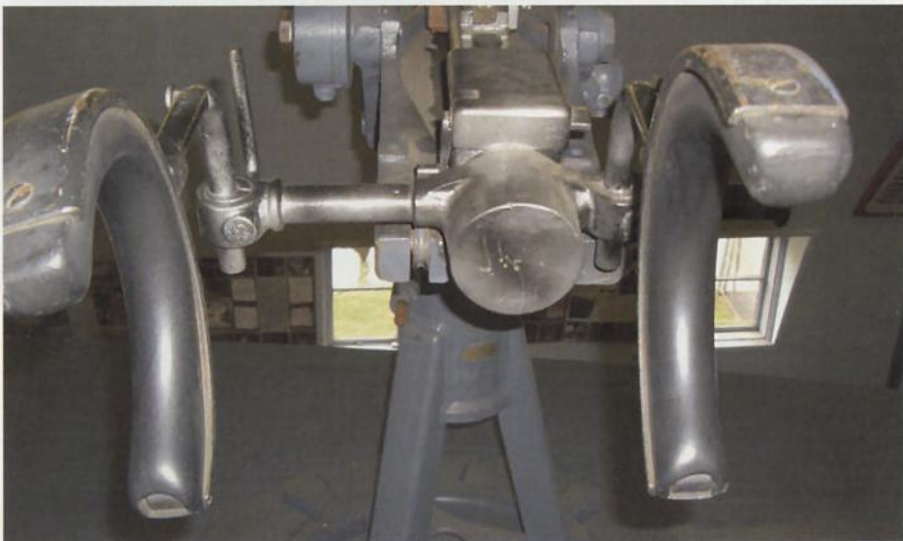


This page: the fore 37mm gun on a Mk.1 mount. This is just an approximate replica, nevertheless gives a general idea of the layout of this weapon.





Pages 32 and 33: the fore 20mm gun. Some early boats mounted this weapon at the stern position, too (above right).

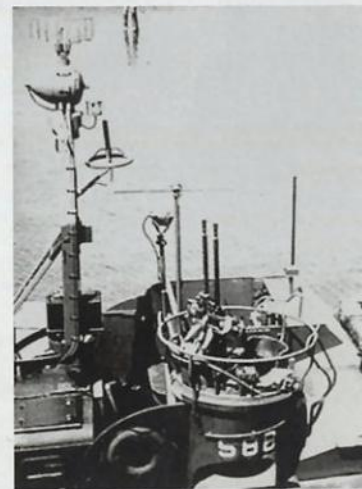




Above, and right: more details of the 20mm gun and mount.
Below: a 20mm drum magazine.

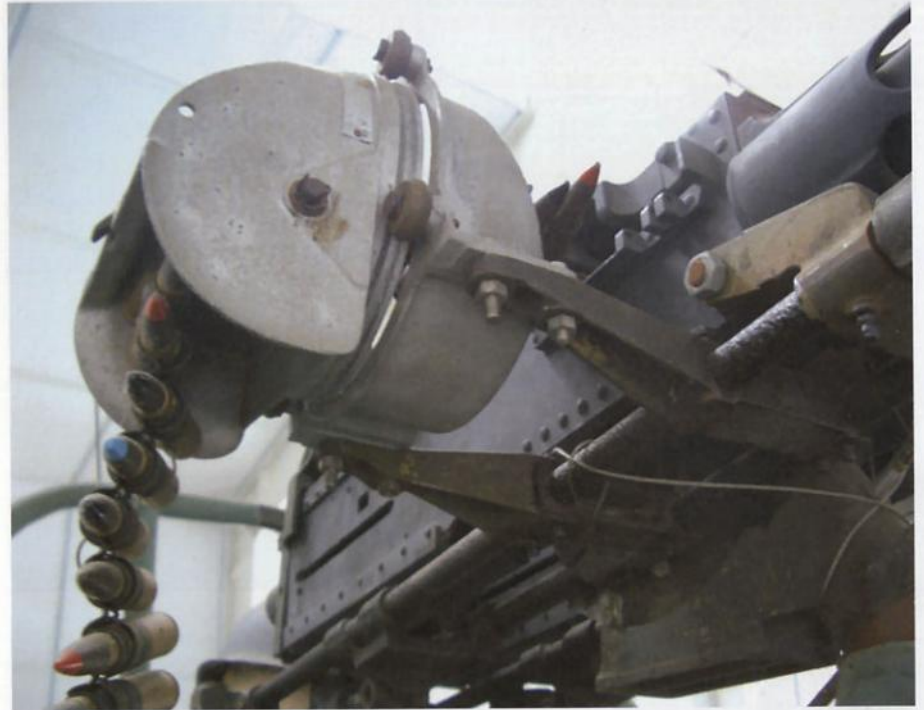


Above, and below: the forward hydraulic turret was offset to starboard.
Right: note the late type radar mast.





Pages 36 and 37: more aspects of the twin 0.5" Brownings.



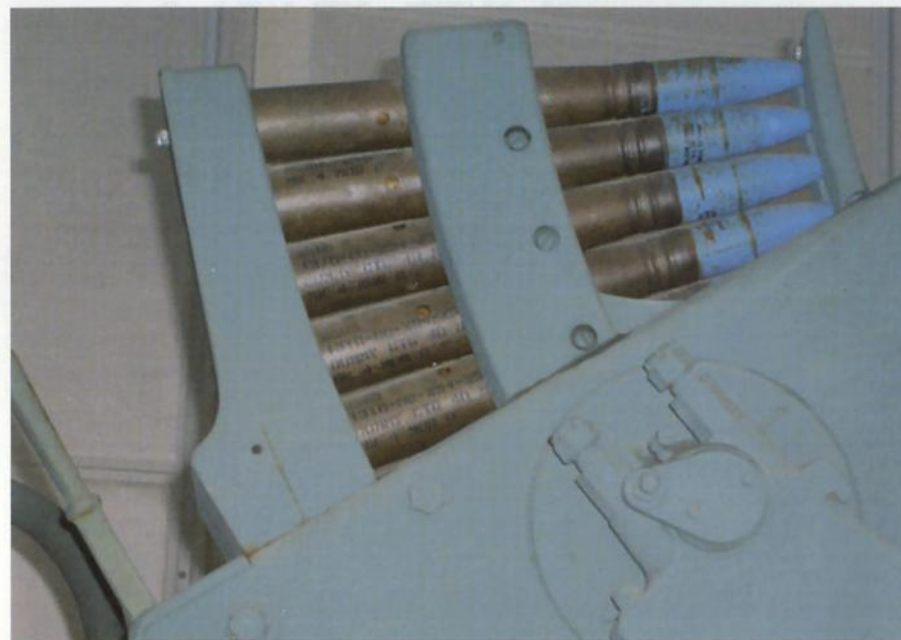


Pages 38 and 39: the heaviest artillery carried by the PT boats was the 40mm Bofors gun. It required a crew of four.



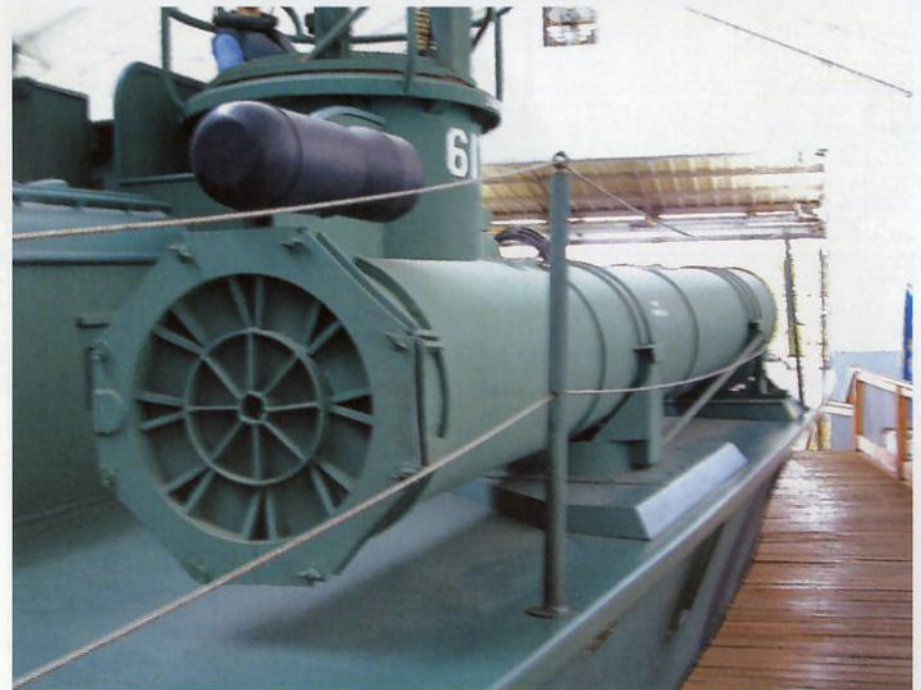
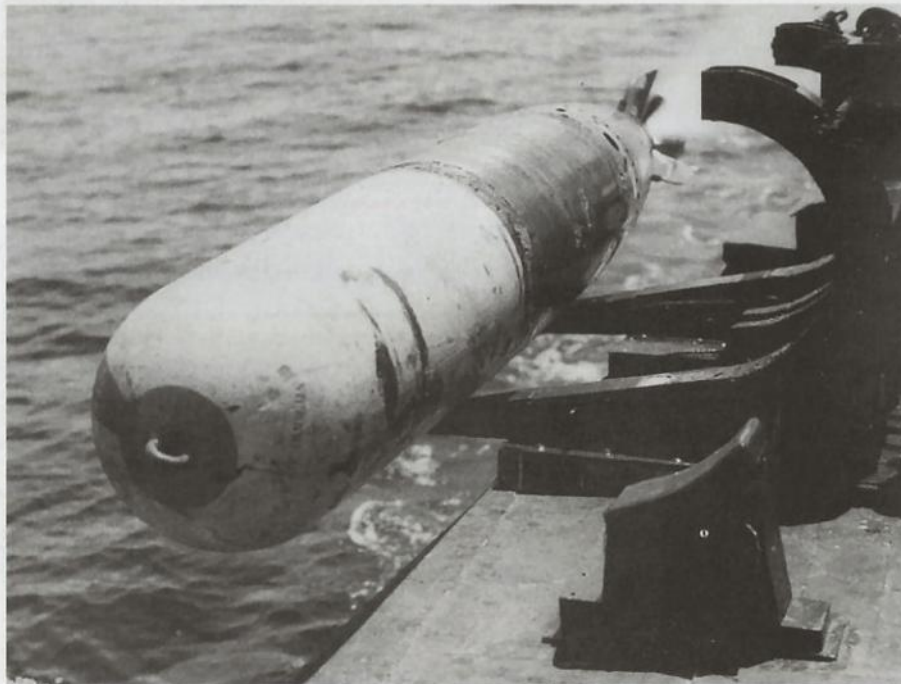


Pages 40 and 41: more aspects of the Bofors gun and its 5-round clips.





Above: the Bofors gunsight.
Left, and below: Later PTs mounted Mk.XIII torpedoes on simple roll-off racks.



Above: early tube-type torpedo launcher.
Left: Mk.XIII torpedo fins and screws.
Below: smoke generator on the stern.

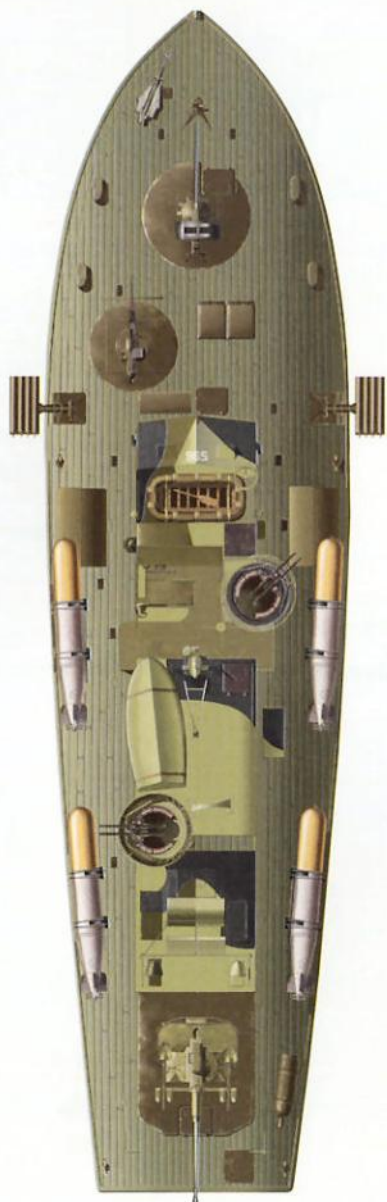




ELCO 80' PT Boat (PT-596) - Port view.



ELCO 80' PT Boat (PT-596) - Starboard view.



ELCO 80' PT Boat (PT-596) - Top view.



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