



THE TEAM WAS METICULOUS, STUDYING PHOTOGRAPHS TO RECREATE EACH DETAIL, ALL OF WHICH LEADS TO A CIVILIZED AND CHARMING AMBIENCE.



A comfortable settee on the upper deck was actually purpose-built to house the air handler for the main salon's air-conditioning

yacht restoration project gets his blood pumping. In his early years, his father kept a boat—which McMillen is now restoring—and the two worked together in residential building and developing before Earl moved on to yacht restoration projects. He was in the business for 10 years when he became one of the founding board members of the International Yacht Restoration School in Newport, Rhode Island.

The fact that *Freedom* was even still afloat can be attributed to the efforts by her previous owner to keep her alive. He fiberglassed the hull, which was a double-edged sword: While it saved the boat, it also basically rotted her from the inside out. Hauling her with a travelift was out of the question. *Freedom* was towed to Savannah, Georgia, where a steel cradle was built over a barge. The barge was moved to a marine railway, lowered into the water, and the boat was brought over to the cradle. The barge was then pumped out, the boat was lifted and sent on her way to the shop in Portsmouth, Rhode Island, where the installed lift plates allowed her to be picked up with the travelift.

A less passionate man than McMillen would have been daunted by the task. The technical challenges and upgrades, the enormous task of rebuilding...it would have been easier to cut her up, save the hardware, and start a new build on a clean shop floor, but then she would have been *Freedom* in name alone, as Todd Jarem (co-project manager



along with Jeff Jacobson) reminded me. It was the largest project McMillen Yachts has completed to date. "While we consider it a restoration, for all intents and purposes, we constructed a 100-plus-foot wooden yacht, which to my knowledge probably has not been done here in this country in over 70 years."

Reconstruction began in 2005. At the height of the project, McMillen employed 25 skilled craftsmen, working approximately 4,000 man-hours per month. In the Newport area, classic yachts are revered; it was an honor to work on the restoration. Before dealing with any of the major structural items on the boat, they laid a new oak keel. The boat was reframed, then strip planked (inner planking), and finally traditionally carvel planked (outer planking). The inner and outer Douglas fir planking was epoxied together, as were the laminated frames, and then it was all through-bolted, using approximately 20,000 silicon bronze machine bolts in the hull. Throughout the process, the team was meticulous, documenting as much as possible and studying original photographs to re-create details.

The gods did shine down on McMillen. They located a man who, thankfully, had a warehouse full of stored pieces salvaged from the 1930 Mathis-built Trumpy *Truant*, which had been cut up in the 1980s in Miami. McMillen bought all of it, including the large portholes in the deckhouse, which—since *Truant* was built in the same era by the same manufacturer—fit perfectly and replaced the missing portholes on *Freedom*. Every restoration project needs a surprise twist.

The challenge with the restoration of these classic beauties is how to tread lightly when introducing the latest technologies and conveniences. With a schedule that included coasting the New England waters in the summer and cruising the waterways of Florida and the Bahamas in the winter, air conditioning was paramount. The base of the system is the industry-standard chiller system, consisting of two Cruisair 96,000btu compressor units located in the engine room that circulate cold (or hot) water in a loop throughout the boat. Air handlers found throughout the boat turn on and off depending on the individually set temperature of each space. It was easy to install the units in the staterooms; the problem came in the main salon and dining area where the overhead deck beams are the structure of the boat itself, which posed a challenge in hiding the fairly large air handlers. The solution for the main salon was to move up. On the upper deck, which formerly was an area used only by crew members, they built a large settee,









part of the newly designed sitting area, to cleverly hide a custom low-profile air handler. In the dining room, the unit was installed in the now-unused smoke stack.

Freedom's traditional displacement hull shape is extremely efficient. It allows for comparatively small engines: two 526hp John Deere PowerTech engines with 44ft-long shafts, to push what is a 104ft, 156-ton boat to her cruising speed of 12 knots. Captain Brad Stahl reports that while cruising the Intracoastal Waterway, Freedom will burn about 17 gallons per hour, and about 22 to 25 gallons

when cruising open waters. The ideal max is about 15 knots. But it's not about speed, it's about comfort.

Some boats from *Freedom*'s era have been fitted with stabilizers to avoid uncomfortable passage in less than ideal weather, as the issue with round bilge displacement hulls is the boat's tendency to roll. The team thus installed a Naiad 360 four-fin stabilizer system. She has two fins per side extending into the water equally spaced down the length of her hull. Four fins allow for the traditional shallow draft to remain while keeping the boat properly stabilized. Of >>

Freedom carries a 17ft
Dyer tender called Eaglet
(above), whose model
was introduced in 1951
and is still in production
today. Earl McMillen and
his wife (bottom, left)
enjoy a sail aboard their
restored beauty.

FREEDOM



Wooden blinds were favored over traditional heavy drapery of the 1920s, while cabinetry cleverly hides modern conveniences such as the 40in flatscreen television







METICULOUS ATTENTION TO PERIOD DETAIL IS EVIDENT THROUGHOUT, NOTABLY IN THE TRUE-TO-PERIOD PILOTHOUSE.

particular note, these units have zero-speed/at-anchor capabilities. Even when on a mooring, the four fins are actively moving in rapid fashion.

Though Freedom was originally built with a large single center rudder, it clearly had an issue with maneuverability because two additional smaller rudders had been added outboard of center, just aft of the props. This convoluted setup was removed and replaced with two large rudders mounted aft of the props, which is the more traditional way. With a modified shaft line and reworked struts to allow for the larger props, she handles very well in tightquarter maneuvering. In addition, Freedom has a variablespeed Wesmar 60hp hydraulically driven thruster that works off of the same central hydraulic system that powers the stabilizers and windlass, with controls at the helm and on the docking wingstations.

Two 65kW John Deere generators provide ship power when underway, as well as the necessary hydraulic power for the stabilizers, bow thruster, and windlass. The windlass is

original, having been completely restored and converted to hydraulic power from electric.

McMillen made very conscientious decisions with regards to the interior. For example, if installing the last known copy of something, such as a piece of deck hardware, he insisted that a copy cast be made first. But nowhere was he as meticulous as in the pilothouse. Viewing photos of Freedom's pilothouse dating from 1926 compared to images today, it would be difficult to discern any differences. The original engine controls and cable actuated for throttle and shift were retrofitted/rebuilt with electronic interiors to keep the period look. Along with period tachometers and the compass binnacle, that is all that is displayed; just as in 1926. The navigational gear is a Furuno Nav Net 3D system, which handles chart plotting and radar. The typical Icom VHF units and safety items such as EPIRB are present, but not banks of monitors; as the goal was to be functional and aesthetically pleasing.

On the back wall of the pilothouse to port, a sliding



panel matching the interior mahogany paneling covers all the modern engine panels/starts, generator monitors, and stabilizer control touchscreen. The same holds true on the starboard side, where a panel conceals the floor-to-ceiling electrical panel, tank monitors, lighting controls, and so on. They also chose a non-traditional method to handle the contraction and expansion of the rail and stiles panels. Typically, the rail and stiles were joined, and a center panel floated between them. However, aboard *Freedom*, the team chose instead to epoxy these pieces to a high-grade ½in marine plywood, Acquatech; this should extend the life of the varnish and lower maintenance costs.

The most obvious departure from the original layout of Freedom is the division of the main salon. McMillen felt a more user-friendly version would be to split the space in two using French doors, which, from a historical viewpoint, does have a precedent in the Mathis-Trumpys that followed in 1929. Adjoining cabinets hide the flatscreen television, a 40in Samsung HD LCD (KVH satellite system with DirectTV), and modern conveniences, while dividing the main salon from the dining salon. Smaller 22in TVs are provided in guest and crew spaces, however, only three units are installed; the intent being to encourage

guests to savor the lifestyle of a bygone era. The sound system is a custom unit of multiple brands, including Polk Audio, Bose, and Yamaha, with a number of playing options that can provide music throughout. Of important note, these are not permanent alterations; the French doors and cabinetry, including the well-received addition of a writing desk, can all be removed and reverted back to the 1926 floorplan.

Initially, the team planned to have the boat U.S. Coast Guard certified and inspected. However, the Coast Guard was considering Freedom a new build as so much had been rebuilt. To meet all the requirements presented by the Coast Guard would have compromised Freedom's original design, so they backed off. However, in the process they redesigned the stairs, previously narrow and steep, into a wider and more elongated stairway, which was a welcome improvement, allowing for a noticeably more graceful descent into the cabins. The panel designs were taken from the original, and the design slightly elongated. Also addressed in the process of considering Coast Guard certification were the bulkheads. Freedom has five watertight bulkheads, dividing the hull into six sealed sections. By design, any one section could be breached and the boat would still float—a >>





McMillen Yachts initiated its factional ownership program in 1995, whereby the yachts

FRACTIONAL OWNERSHIP PROGRAM

in its fleet are held in a limited liability company and a syndicate of equity partners are allowed to buy in. McMillen, the managing member, looks after the maintenance of the yacht, balances the schedule, and hires the crew, etc. A minimum five-percent share gives each partner access to the yacht for a minimum of eight days per year at the partner rate, which is approximately 50 percent of the "regular" charter rate, plus operating expenses of provisioning, fuel dockage, and crew gratuity. The yachts are available year round as they migrate seasonally along the entire East Coast of the

The first boat bought and syndicated was a 60ft motor yacht built by the New York Yacht, Launch & Engine Company in 1913 and restored in a joint effort by McMillen Yachts and Narragansett Shipwrights of Newport. Though McMillen Yachts began with an eclectic group of boats that the company felt were important yachts and worthy of restoration, it became clear over time the big Mathis-Trumpys were exceptional in their design and configuration for comfortable cruising. "These projects would be daunting for any one individual, but by putting a group of partners together who really want to take part in the preservation and restoration of these great works of art and to be able to use them is a win-win for everyone," says McMillen.

Currently, there are 15 partners in Freedom and more than 40 partners altogether who share in the fleet of five yachts. While they currently focus on their own restoration projects and some outside restoration work, in the future, McMillen Yachts will be offering traditional new builds "inspired by the Mathis-built and Trumpy-designed yachts" of the '20s and '30s, but with composite hulls and incorporating optional biodiesel hybrid propulsion and at-rest stabilization. Having gone through the process of restoring the 104ft Freedom, creating patterns for all the original castings, the hardware, and all the original joinery details, McMillen is confident that these new yachts will honor the legacy of their original creators. -GT





Freedom's elliptical fantail stern, designed by Trumpy, is considered a more refined version than the less graceful lines of some earlier Mathis vachts. layout far superior to most boats of her type.

To wrap your mind around the project, Freedom from the deck down is brand new. The deckhouse framing and about 80 percent of the original mahogany paneling were salvaged, as well as a good deal of the original hardware, which has been rechromed and appears new. Amazingly, most of the porcelain in the baths is original, such as the 1920s bathtub. It was the deft hand of Elizabeth McMillen that made this boat come to life, through interior design and décor that respects the period with a modern flair.

The art is in the details—and there are so many details aboard Freedom, such as 14 coats of varnish and counting, that the visual effects of coming upon the boat are simply stunning.

There is a personal story related to the tender aboard Freedom, named Eaglet, which is one of the Dyer 17ft Glamour Girls. The boat model was introduced in 1951 and is still built today. In the late 1940s, John Trumpy once wrote to William J.H. "Bill" Dyer that every Trumpy, whatever the size, should carry a Dyer of one size or another as a tender—and here we are.

The restoration took nearly seven years at a cost of seven million dollars, but in the video of the launching in May 2009, Earl McMillen is grinning from ear to ear. In this economy, it is prudent to be cautious about our investments, but come on, life is short and the stress, well, you know. Think about the joy, the satisfaction, and the camaraderie of working with other restorationists (there is another Mathis-Trumpy, the 1935-built Enticer, waiting in the wings) and as a result, be able to motor off down the waterways, stepping back for a little while to a simpler time. \(\sigma\)

LOA: 104ft (31.69m) LWL: 98ft (29.87m) BEAM: 19ft (5.79m) **DRAFT:** 5ft (1.52m) **DISPLACEMENT:** 114 tons ENGINES: 2 x John Deere PowerTech 3.3 gallons @

PROPELLERS: Rolla 5-blade NiBrAl 36 x 36

526hp

READER'S RESOURCE

McMillen Yachts, Inc. P.O. Box 2295 Beaufort, SC 29901 Tel: (843) 524-8925 Fax: (843) 524-8926 **GENERATORS:** 2 x John Deere 4045TFM w/ Marathon 65kW/1 x Northern Lights 25kW **BOW THRUSTER:** Wesmar V2-16 hydraulic 60hp STABILIZERS: Naiad 360 Roll Stabilizer System w/ at-anchor capability/

4 x 12ft² fins

SEWAGE SYSTEM: Custom black and grey AIR CONDITIONING: 2 x Cruisair 60,000btu chiller units w/ in-cabin air handlers COMMUNICATION/NAVIGATION ELECTRONICS: Furuno Navnet 3D entertainment systems,

Samsung LCD TVs, Custom

stereo w/touchpanel control, TracVision m-Series satellite receiver

OWNER AND GUESTS: 1 x master, 2 x VIP. 2 x twin bed quest cabins (10 guests) CREW: 1 x double captain, 1 x

twin. 2 x twin bunk (max 7 crew)

Girl/18ft Nautica Widebody TENDER-LAUNCHING SYSTEM: Port and starboard classic davits w/AC winches PAINT/GELCOAT: Sterling offwhite hull w/custom Awlgrip colors for detail CONSTRUCTION: Traditional plankon-frame construction/

Double-planked Douglas Fir

TENDERS: 1 x 17ft Dyer Glamour

REFIT PROJECT MANAGER:

Jeff Jacobson

NAVAL ARCHITECTURE:

John Trumpy

REFIT NAVAL ARCHITECTURE:

John Koopman

REFIT EXTERIOR STYLING:

McMillen Yachts, Inc.

REFIT INTERIOR DESIGN:

Elizabeth McMillen Design

BUILDER/YEAR:

Mathis Yacht Building Co., Camden, NJ/1926

REFIT YARD/YEAR:

McMillen Yachts Inc.. Portsmouth, RI/2009

