The NOVAAR Free Press

35 Years of Flight
1970 to 2005

May – June 2005

TARC 2005

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NAR
Section 205

NOVAAR *Free Press*

May - June 2005

This is the official newsletter of the *Northern Virginia Association of Rocketry* (NOVAAR), Section 205 of the *National Association of Rocketry* (NAR). This newsletter is a benefit of being a member – ***You are a member, aren't you?***

Section Officers

President: ..... John Hochheimer
john.hochheimer@verizon.net

Secretary: ..... Trip Barber
ahbarber@alum.mit.edu

Treasurer: ..... Keith Wancowicz
keith@thaicustomcrafts.com

Senior Advisor: ..... Ken Brown
brown007@bellatlantic.net

Membership and Dues

To maintain the clubs launch equipment, pay for our website, and produce this newsletter we collect dues. Dues are collected annually and are; $5 for members age 13 and younger, $8 for members age 14 to 18 and $10 for everyone else. A membership application can be found at many local hobby shops and on our website.

Meetings

NOVAAR holds meetings on the first and third Tuesday of the month, from 7:00 pm to 8:30 pm, at the King's Park Community Center in Springfield, VA. The most current topics to be discussed and directions to our meeting room can be found on our website.

Build Sessions

Once a month, on the third Sunday of the month from 1:00 pm to 5:00 pm, at the King's Park Community Center, the club gets together to build rockets and share construction techniques. The most current schedule and directions to our meeting room can be found on our website.

Launches

NOVAAR conducts monthly launches at *Great Meadow* which is located in The Plains, VA – approximately 50 minutes south of Washington DC on Route 66. Launches start at 9 am and run until 5 pm (10 am to 4 pm during the winter). The most current schedule and directions to *Great Meadow* can be found on our website.

There is no charge to fly at club launches (*motor sizes A to F*). However, there is a $5 charge to launch high-powered rockets (motor sizes *G to I -- the field is not large enough for bigger motors*). **AND,** you don't have to be a member to fly with us. Though, after you meet us and, realize that we don't bite – *as long as we take our medication* – ***we know you will want to join***.

If weather threatens the launch day, our website will report the status of the launch by 8:00 pm the day before.

Website

The club's website (**www.novaar.org**) is where the most current information about future club activities can be found. The site is maintained by...

Webmaster: ..... Dan Winings
dwinings@adelphia.net

Newsletter

The club's newsletter is published 6 times a year or, as close to that schedule that is humanly possible for the editor to achieve. The newsletter reports on the club's activities and features articles written by club members about their endeavors within the Model Rocketry Hobby. The articles include, *but are not limited to*, topics on sport rocketry, competitive rocketry and high-powered rocketry. Send submissions to ...

Editor: ..... Frank Prekel
fjprekel@aol.com

Calendar

August 2005

SUN	MON	TUE	WED	THU	FRI	SAT
31	1	2 NOVAAR Meeting	3	4 U.S. Coast Guard Established	5	6
7	8	9	10	11	12	13
14	15	16 NOVAAR Meeting	17	18	19	20 NOVAAR Launch
21 Launch Backup	22	23	24	25	26	27
28	29	30	31			

September 2005

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5 Labor Day	6 NOVAAR Meeting	7	8	9	10
11 NOVAAR Launch	12 Patriot Day	13	14	15	16 POW/MIA Day	17
18 NOVAAR Build	19	20 NOVAAR Meeting	21	22 First Day of Fall	23	24
25	26 U.S. Air Force Established	27	28	29	30	

October 2005

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4 NOVAAR Meeting	5	6	7	8
9	10 Columbus Day	11	12	13	14 U.S. Navy Established	15
16 NOVAAR Build	17	18 NOVAAR Meeting	19	20	21	22
23	24	25	26	27	28	29
30 Daylight Savings End	31 Halloween	1 NOVAAR Meeting	2	3	4	5

Editor's Ramblings

Greetings -- I don't know how many people know it but I am an active duty enlisted member of the United States Coast Guard. On May 1st, I was promoted to Master Chief Petty Officer (E9) and reassigned to The Coast Guard's Training Center in Yorktown, Virginia. This assignment makes me responsible for my rating's (specialty's) Training and Education Program.

Even though I have moved, it is my intention to continue editing the "*NOVAAR Free Press*". However, because I can no longer attend the meetings, or the build sessions, reporting on items discussed or projects worked on is no longer possible.

Your newsletter needs your help. A volunteer or more are needed to write articles (2-3 paragraphs, each 3-5 sentences long) to document the clubs activities. In addition, we also need someone to take a few pictures to document them.

As for the launch days, I am going to try to attend as many as possible. However, I am always looking for pictures. And, if I am not able to attend the launch, I am really going to need them. I see a lot of cameras on the field but only a few of the images ever get to me.

And, as always I am looking for member articles on rocketry related issues. Over the last year I have been using five broad categories to frame the content of the newsletter; Completion Rocketry, Sport Rocketry, High Powered Rocketry, Advanced Rocketry and General Rocketry.

How about a review of a kit you just finished, a trip you took to a museum, a research project/challenge you just finished, your experience at an competition or sport event you attended, a dissertation on why you are always winning a particular competitive event or, what it took for you get that hybrid rocket to fly.

When you are done just email, mail or pass it to me at a launch. See-ya on the launch field -- *Frank*

☆☆☆

Are you missing something?
How about your NOVAAR Hatpin!!

And, it is available from Frank Prekel -- fjprekel@aol.com.

The NAR pin is available from NARTS (www.nar.org/narts)
The Flag Ribbon is out-of-print and no longer available.

Competition Rocketry

July 30th to August 5th – NARAM-47 at VOA Park, West Chester, OH

From July 30th to August 5th, 2005, NARAM-47 will be conducted at the Voice of America Park in West Chester, OH and is to be hosted by the Queen City Area Rocket Klub (QUARK, NAR section 624 – http://www.naram.org/).

Events to be flown are:

- ¼A Helicopter Duration
- ½A Boost Glider Duration
- A Cluster Altitude
- B Super Roc Altitude
- C Streamer Duration (Multi-round)
- Set Duration
- D Dual Eggloft Duration
- E Dual Eggloft Duration
- Open Spot Landing
- Giant Sport Scale
- Plastic Model Conversion, and
- Research and Development

The Contest Director is Mark Fisher (micronzen@hotmail.com).

☆☆☆

TARC 2005

May 20st -- TARC 2005

There was no club launch in May just the convergence of 100 student teams, 520 high school students, their families, and advisors to fly the finals of the Team America Rocketry Challenge. The setup Friday was greeted by cold rain and wind and Saturday dawned clear and sunny.

TARC 2005


MADI
WEJI
ROCKETRY


RocketContest.org
Parker Aero
tContest.org
ODRICH
RocketContest.org
AAI
GRUMMAN

TARC 2005

Sport Rocketry

Vertical Force Rocketry Releases First Model Rocket Kit

Vertical Force has released its first model rocket – Congratulations Rich!! The rocket is 2-foot ring fin rocket. It is packaged with a Mylar parachute, water slide decals and detailed instructions. And, it hustles off the pad with just a "B" motor. A worth addition anyone's personal fleet.

From the Vertical Force Rocketry's's website …

":**Mythology:** The symbol to the left is the Norse symbol Gar. It is the symbol for Gungnir, or Odin's Spear. In Norse mythology, Gungnir was a magical spear built by a dwarf named Dvalin for Loki. It was obtained by Loki and given to Odin as partial reparation for a misdeed. Gungnir is a ceaseless slayer in battle, never missing it's mark, and always returns to it's owner's hand.

Odin's Spear

Large Ringtail
High Flyer
Mylar Parachute
Waterslide Decals

Length:	~ 23"
Ringspan:	~ 2.5"
Weight:	~ .75oz
Recommended Motors:	A8-5, B6-6, C6-7

Skill Level 2

:Modern Day (2088): The Odin's Spear Tactical Missile is the latest innovation in modern weaponry for space warfare. In addition to being the first medium range missile with warp capabilities, its phasing technology allows it to penetrate a variety of shields. The current configuration of Odin's Spear carries an Anti-Matter (AM) charge. Planned future versions will be capable of supporting a variety of lethal and non-lethal (such as Electro Magnetic Pulse (EMP) charge) payloads."

VERTICAL FORCE ROCKETRY

http://www.vforcerocketry.com/gungnir.htm

☆☆☆

FlisKits Announced as the Officially Endorsed Maker of MicroMaxx Rockets by Quest Aerospace, Quest to Continue Making Motors

From the FlisKit's website …

"Welcome to the world of **Micromaxx®** and the only Micromaxx products endorsed by **Quest Aerospace**, the originators of the Micromaxx product line. If you are new to the Micromaxx line or an established fan of these tiny flying models, we STILL "welcome you to the world of Micromaxx", because even if you have been flying Micromaxx models for years, you have never seen Micromaxx models the likes of what FlisKits will be producing. True builder's kits with the quality, innovation and support that you have come to know and trust from the folks at FlisKits.

FlisKITS
Aim for the sky and try not to miss.™

There have been rumbling; there have been rumors; there have been hints and sneak peeks. It is now time to "spill the beans", as it were!

Independent of Quest Aerospace, FlisKits has been contemplating a small line of Micromaxx based kits or, at the very least, a line of parts for the scratch builder.

Then in early 2005, Quest announced that the Spring '05 rollout of the new Micromaxx line had been put on hold.

QUEST™
Shaping the future of model rocketry

FlisKits became interested in what Quest was up to as this could have an impact on any line FlisKits would announce. Quest became interested in the depth of the FlisKits line and how serious FlisKits was about its support.

This common interest lead to some casual conversations between Bill Stine and Matt Costabile of Quest Aerospace and Jim Flis and Brian McCarthy of FlisKits. As the discussions continued two things became apparent. First, Quest Aerospace wanted to move their R&D budget away from Micromaxx and

Sport Rocketry

toward their Educational and Motor development projects. Second, FlisKits had the unique set of talents and capabilities that would allow for the design and creation of a successful and exciting new line of Micromaxx kits.

As it came to be, Quest has decided to discontinue their efforts with respect to the Micromaxx line of kits (**see the Quest Qblog of 07/18/05**) and to endorse the FlisKits line of Micromaxx kits and products. Quest will still provide their line of Micromaxx motors to the hobby community, however.

With this decision and endorsement, FlisKits has made the decision to expand their initial plans to include 4-5 exciting new

Micromaxx kits and a slew of new and exciting parts and accessories and, further, to accelerate their release schedule to the early Fall time frame.

This series of events, discussions and decisions is a clear example of Quest Aerospace's dedication to their customers in that they would not discontinue this sought after line of kits until they had secured a reliable solution for the many Micromaxx enthusiasts they have nurtured over the years.

Furthermore, this is an example of the dedication of FlisKits, Inc. to the growth and health of model rocketry as well as the importance they place on the Micromaxx modeling community.

Please join us for the unveiling of the FlisKits Micromaxx line of model rocket kits and supplies, to be displayed on this site in the coming weeks."

http://fliskits.com/micromaxx/index.htm

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MicroMaxx Rockets Alive and Well on the "MicroMax" Yahoo Group

If you are interested in the world of MicroMaxx Rockets, you should check-out the Yahoo Group "MicroMaxRockets". Moderated by Art Applegate and driven by the drive and designs of John McCoy Sr. – who has single-handedly created plans for, what appears to be, every rocket made by Estes – is the hub around which the MicroMaxx world is turning.

YAHOO! GROUPS

http://groups.yahoo.com/group/MicroMaxRockets/

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A Correction to "Building the Super Behemoth"

Last issue's article on building Mark Blicharz's "Super Behemoth" contained two errors inserted by my Word Processor. Mark pointed them out in an email shortly after the last issue was made available.

The rocket requires 4 BT-80 body tubes and a PNC-80B nose cone. Not the BT-60 and PNC-60B parts as written. The corrected parts list is as follows.

- 4 **BT-80 body tubes** (one cut at 14' long - the rest stay at 14 1/4 long.)
- 1 **PNC-80B nose cone**
- 3 BT-50 body tubes cut at 8" long and glued together.
- 2 centering rings for the motor tubes (made out of 1/16' thick cardboard stock – see pattern)
- 4 1/8" thick balsa wood fins (see pattern) (the fins are made out of 2 pieces of balsa wood glued together)(use a sheet of wax paper underneath fins when gluing them together)
- 1 bottle of Weldbond glue to put it together and use Elmers glue as sanding sealer for the fins.
- 1 piece of elastic cord for the shock cord 30' long (cord can be bought at any fabric store)
- 1 parachute (Estes 24" chute)
- 3 BT-80 tube couplers (1" wide each)
- 1 launch lug (3/16' x 53/8' long)

☆☆☆

General Rocketry

"Reality TV Rocketry" on the SciFi Channel

From the SciFi Channel website …

Notably and, probably very wisely, neither he NAR or Tripolli have yet to be mentioned during the episodes or in the opening or closing credits.

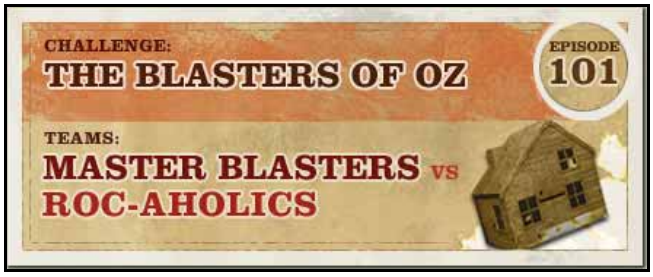
"Master Blasters" is a reality-type TV show currently airing Wednesdays on the SciFi Channel. These shows features two teams competing head-to-head to complete the weekly challenge … flying a doll house, launching a Cooper Mini through a set of goal posts, firing 15 foot lawn darts at a target 1,000 feet away and a missile launching dune buggy at a brick wall.

"Does your hobby require an FAA "launch window"? Imagination literally takes flight with *Master Blasters,* the new daredevil stepchild of the reality genre.

"A high-octane ride into the wild blue yonder, *Master Blasters* pits teams of amateur rocket scientists against each other in a race to design, build and launch some very bizarre things into the stratosphere. From rocket-bolstered La-Z-Boys to fuel-injected Mini Coopers, "one small step for man" becomes one giant leap for mad science! A healthy dose of teamwork, competition and creativity — mixed with jet fuel and a few end-runs around the laws of physics — make this television's most explosive weekly series.

"Produced by First Television, *Master Blasters* is a competition like no other in television history. Our home team, the Master Blasters, have issued a challenge to rocket builders everywhere: "We can out-design, out-build, and out-perform any other team in the world."

"The *Master Blasters* are led by the father-and-son team of Dan and Terry Stroud, who manage a crew of brilliant (and sometimes wacky) men and women. Each week a team of challengers from every conceivable walk of life will travel to the Master Blasters' home base in Dallas, looking to flex their rocketry skills and prove that they can outdo the *Master Blasters*."



Master Blasters TV Schedule

Date	Time	Title
July 27	09:00 pm	The Blasters Of Oz
August 03	08:00 pm	Car Field Goal
August 10	11:00 pm	Killer Lawn Darts
August 17	11:00 pm	Missile Launching Spy Cars
August 24	11:00 pm	Fans Of Fury
August 31	11:00 pm	Alien Recon
September 7	11:00 pm	A Very Master Blasters Christmas
September 14	11:00 pm	Supersonic Paper Airplanes
September 21	11:00 pm	Ballistic Couch Potatoes
September 28	11:00 pm	Best of

http://www.scifi.com/masterblasters/

★★★

General Rocketry

Project Mercury Road Trip

Frank Prekel

This June while trying to find the main gate onto Langley Air Force Base I drove by a little roadside park that had a number of missiles and aircraft. Burt what caught my eye was a Little Joe painted missile red and silver sitting right next to the parking area.

After funding the main gate and learning that the "Personal Property Shipping Office" had no idea where my household goods were nor did they know that they or, I for that matter, was in transit – I wasn't in a happy place.

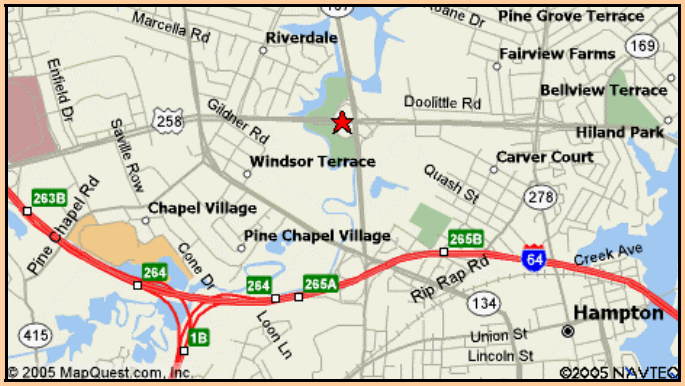
Roadside Little Joe

When I finally got back to the park – *Air Power Park* – it was closed. But, the Little Joe, complete with a Mercury Capsule on top, was sitting right next to the parking area just the side of the fence. I was able to get back to the park that weekend, with my camera.

Air Power Park

413 W. Mercury Boulevard
Hampton, Virginia 23669
(757) 727-1163

Directions: I-64 exit 263B onto Mercury Boulevard. The park is located on the right, before you reach K-Mart.



Hours of Operation: The park is open seven days a week from 9 a.m. - 4:30 p.m. Open year round except Thanksgiving, Christmas, and New Years Day.

Features: Explore aviation history and experience the science and technology of the evolution of flight as it pertains to Hampton Roads at this 15 acre park and museum. Air Power Park features over 50 indoor and outdoor exhibits including real fighter aircraft, missiles and rockets, and a children's playground in a park-like setting. Admission is free.

http://www.hampton.va.us/parks/airpower/

The park has seen better days and while admission is free any thing you can donate will be put to use. The 50 preserved planes and rockets in the yard are the major draw but the little museum tells the history of aviation by the use of some of the best models I have seen in awhile. Every major advance in aviation is represented in miniature.

Outside the building the notable aircraft include a F-4 Phantom II, a F-105D Thuderchief, an A-7 Coursair II, and a F-86E Saber Jet. In addition the Little Joe there is a Nike-Ajax, Nike-Hercules, Juno II, Polaris and Jupiter IRBM.

The plaque for the rocket reads "*To test the launch escape system for the* Mercury *spacecraft, the* Little-Joe *rocket was launched at NASA's Wallops Island Flight Facility on Virginia's Eastern Shore. The Little Joe booster vehicle was built by North American Aviation, while the* Mercury *spacecraft sitting at the top of this booster rocket was a mockup built at nearby Langley Research Center.*

Seven test flights of Little-Joe, *using either mockup or production* Mercury *spacecraft, demonstrated an escape system that could pull the* Mercury *capsule and astronaut safely away from atop a failing Atlas booster in case of an emergency. All* Little-Joe *flights were unmanned. This test vehicle is only one of two remaining and is painted in typical markings for a test fight.*"

Mercury Capsule Mock-up

Also in the park was another mocked-up Mercury Capsule. This one was not as detailed as the capsule sitting on top of the Little-Joe but its plaque was just as interesting. "*This is a test capsule of America's first manned spacecraft for* Project Mercury. *Engineers had to devise a vehicle that would protect a human being from the temperature extremes, vacuum, the newly discovered radiation of space and high-speed reentry through the atmosphere. The best vehicle for these requirements was a wingless "capsule" designed for a ballistic reentry, with an ablative heat shield that burned off as Mercury returned to Earth.*

General Rocketry

The original seven Mercury *astronauts and NASA's Space Task Group were based at nearby Langley Research Center from 1959 to 1963. The lifting ring at the top of this capsule lie means it was probably used for helicopter recovery training.*"

Another piece of Project Mercury history was sitting on the back of the property a Jupiter IRBM. This missile was the precursor of the Jupiter-C that launched America's first satellite, the Explorer. And was later renamed the Redstone that was used to fly the first two Mercury missions.

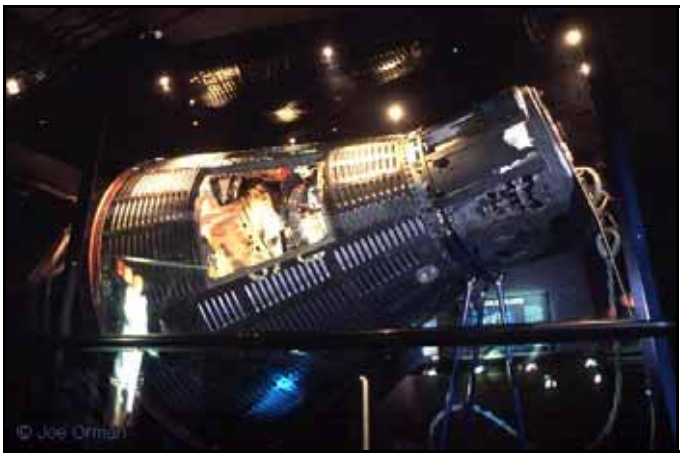
"*The Jupiter was a surface-to-surface intermediate range ballistic missile (IRBM) designed by the Army's Ballistic Missile Agency. It had a limited range of approximately 1,500 miles.*

Built by the Chrysler Corporation and powered by a Rocketdyne liquid-fueled engine developing approximately 150,000 lbs. Of thrust, Jupiter attained a velocity of 10,000 M.P.H. and reached altitudes up to 300 miles. It is 8 feet, 3 inches in diameter and weighs 110,000 lbs. Guidance was provided by a self-contained inertial system which was programmed and set before launching, Modifications allowed the Jupiter to also serve as a space launch vehicle – a Juno II rocket helped place the Pioneer IV spacecraft into solar orbit in 1958."

The museum is small and on the verge of being shabby. But, if you are in the area it us well worth – *no admission but, please leave a donation* – stopping by.

Liberty Bell 7

Across from "*Air Power Park*" was a billboard announcing that, just down the road, at the "*Virginia Air and Space Center*" was a display featuring the Gus Grissom's Mercury Capsule "Liberty Bell 7". So, down the highway I went!



Recovered from the bottom of the ocean's off of Florida's eastern coast in July 1999. "Liberty Bell 7" has been restored and is touring the country. And, for the last several months has been on display at the "Virginia Air and Space Museum".

The capsule looks fantastic, the display makes it very easy to look into the ship. It is surprising how much of the spacecraft remains after being on the bottom of the ocean for 38 years.

In addition to the capsule, there are several supporting exhibits;

Capsule Simulator: Climb into the pilot's seat and use the controls to perform a mission re-entry sequence developed from actual Liberty Bell 7 flight data in this re-creation of a capsule simulator from the Mercury Program era.

Man Rating the Machines: Choose one of six rocket launches and use a periscope to watch actual launch footage from the Mercury Program. While Mercury astronauts were training for their missions, NASA was testing the hardware. Rockets tested in this era had a 39 percent success rate. The Mercury Program, the first United States manned space program, intended to put a manned spacecraft into the earth's orbit and to investigate a human's ability to survive and work in space.

Capsule Control: Control the pitch, roll and yaw of a Mercury model to orient for re-entry. The Liberty Bell 7 was the first to have controls that enabled the pilot to operate the capsule.

Hunt Club: Use a joystick control to maneuver a small helicopter model and attempt to rescue a miniature version of the Liberty Bell 7 spacecraft. The splashdown recovery team, known as the Hunt Club, would fly their Sikorsky helicopters off an aircraft carrier, locate the spacecraft, lower a steel cable, attach it to the craft and carry it back to the ship. The Liberty Bell 7 is the only spacecraft the Hunt Club couldn't rescue.

Centrifuge: Climb into a two-person pod and experience up to two G forces on this simulator for centrifuge training. A G force is the force felt upon changing direction when traveling at a high rate of speed. In the early days of NASA, astronauts were tested to determine the effects of G forces created by a spinning boom. The astronauts experienced G pressures of eight to 10 during actual flight. One G is equal to your weight, two G's is equal to twice your weight, three G's is equal to three times your weight and so on. Currently, nine G's is about the most a pilot can withstand before losing consciousness.

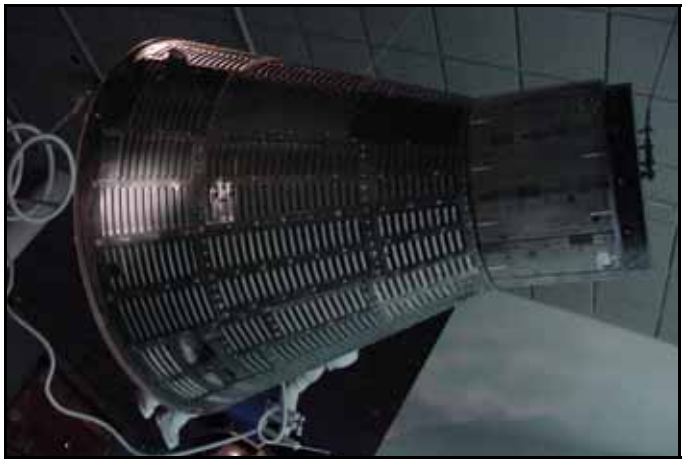
Curt Newport Interview: Query deep-sea search and recovery expert Newport on the quest he began in 1984 for the Liberty Bell 7. Discover why he sought the capsule, the challenges involved and the expertise and technology that enabled him to fulfill his dream.

ROV Pilot: While viewing a model of the Liberty Bell 7 on a monitor, attempt to attach a harness to a clamp via a joystick control. It simulates the task of a remotely operated vehicle (ROV). The ROV has robotic arms and cameras that were used to locate and attach the custom-designed clamps to the spacecraft on the ocean floor. Then, a cable and harness system was attached to the clamps to lift the capsule slowly to the surface.

Locating: Select a sonar image within a grid and then discover the identity of the object. Custom software creates a video image from the rough sonar data. Side-scanning sonar mapped a 3-mile-by-8-mile section of the ocean floor, allowing Newport's team to approximate the location of the Liberty Bell 7.

Mercury Capsule #14

In addition to the "*Liberty Bell 7*" exhibit the Virginia Air and Space Museum also has a Mercury Capsule on display.



The plaque for the spacecraft reads "*One of twenty built by McDonnell Aircraft Corporation, this craft, [Mercury Spacecraft #14], made two pilotless flights from Wallops Island, Virginia. Carried aloft by a Little Joe rocket, the craft was used to test a launch escape system.*"

General Rocketry

The Virginia Air and Space Museum is not very large and frankly the admission is a little steep for what is presented. For me, the Liberty Bell 7 justified the admission.

Other than the spacecraft, the exhibit of note is a ride aboard a *B-24 Liberator* on a bombing run over Germany during WW2. Looking over the shoulder of the flight crew, the simulator creaks, vibrates and the deck plates move and the cabin shakes as chaff explodes around the bomber, pretty realistic.

Project Mercury Mission Patches

Many museum gift shops and other places which cater to space enthusiasts carry "official" patches for each U.S. Manned space mission. These make nice souvenirs, but they are revisionist history.

MR-3 Freedom 7,
Alan Sheppard

MR-4 Liberty Bell 7,
Gus GrIssom

MA-6 Friendship 7,
John Glenn

MA-7 Aurora 7,
Scott Carpenter

MA-8 Sigma 7,
Wally Schirra

MA-9 Faith 7,
Gordon Cooper

None of the Mercury astronauts wore any of these patches during their flights. The first American astronauts to actually wear mission patches on their pressure suits were Gordon Cooper and Pete Conrad on the Gemini 5 mission.

Although some of the patches carry designs based on the insignia carried by the spacecraft, none of these are accurate as to shape and/or color.

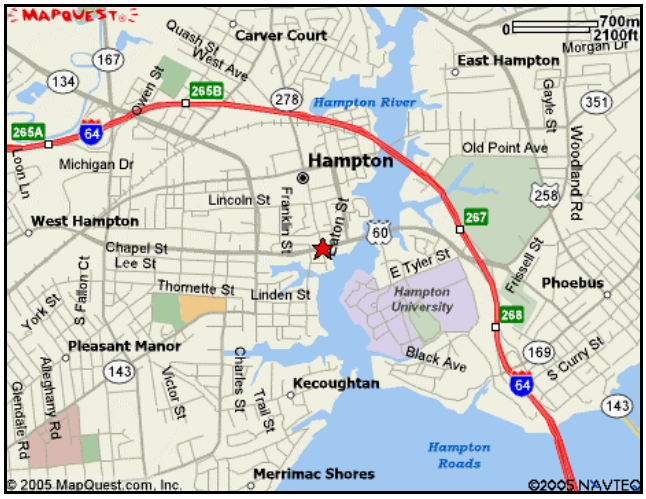
The patches themselves seem to have been designed as an afterthought by an enterprising vendor. But they do make a nice souvenir.

☆☆☆

Virginia Air and Space Center

600 Settlers Landing Rd
Hampton, VA 23669
757.727.0900

Directions: From Interstate 64E, take exit 267 to Settlers Landing Road. Take a right and proceed over the bridge; the Center will be on your left just past the Radisson Hotel; a free parking garage will be one block further on your right.



Hours of Operation: The Virginia Air & Space Center is open every day except Thanksgiving Day and Christmas Day. The Riverside 3D IMAX® Theater at the Virginia Air & Space Center is open every day with a limited evening schedule on Thanksgiving and Christmas.

Summer Season (May 26, 2005 to September 4, 2005)	Winter Season (September 5, 2005 to May 24, 2006)
Monday - Wednesday 10:00 a.m. to 5:00 p.m.	**Monday - Saturday:** 10:00 a.m. to 5:00 p.m.
Thursday - Sunday 10:00 a.m. to 7:00 p.m.	**Sunday:** Noon to 5:00 p.m.
Also open evenings for special programs and IMAX ® films.	

Admission: There is an admission fee. Fees are broken in member and non-member groupings and further divided by age. The non-member cost is below, the website has other package deals and the information on becoming a member of the museum.

NON-MEMBERS	ADULT	CHILDREN (3-11)	SENIORS (65+)/ Military/NASA/ Riverside Employees
Exhibits Only	$ 8.75	$ 6.75	$ 7.75
Regular Feature IMAX Only (45 min)	$ 7.75	$ 6.50	$ 6.75

http://www.vasc.org/

NASA Mercury Website: http://www-pao.ksc.nasa.gov/kscpao/history/mercury/mercury.htm

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