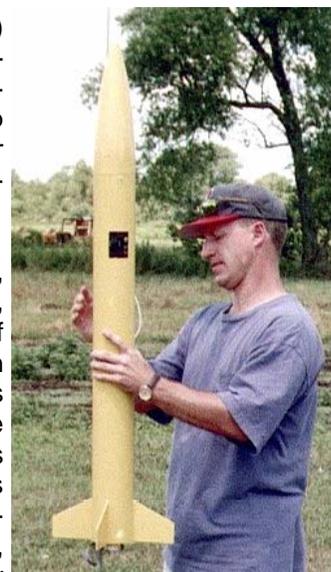


A message from the President, Mark Recktenwald

In 2005, the Mantua Township Missile Agency (MTMA) resumed operations, holding seven launches at the Summit County Fairgrounds (SCFG) from August to December. This would not have been possible without the help of Secretary Bruce Levison (and his son Ben), Treasurer Jim Hartman, Mike Leffler (our point man for FAA waivers), and the support of all of our wives.

We held launches on August 6 and 21, September 10, October 1 and 29, November 27, and December 10, 2005. Thirteen club-member families amassed a total of 155 flights with rockets ranging in power from A to H. On three occasions, we were joined by groups of Cub Scouts or Boy Scouts whose launches are not included in the total above. One of the Scout events was the Boy Scouts of America, Great Trail Council, Annual Camporall. This Camporall was held right at the Summit County Fairgrounds on the weekend of September 30 to October 2, 2005. We were provided ample space for a static display and given the opportunity to conduct a demonstration launch that was enjoyed by the Scouts (many of whom served as LCO) and some of their parents. We have been asked to participate in this year's Camporall (at a site to be determined), with the demonstration launch pending the site dimensions and site-owner approval.



During 2005, our web site was moved to a free hosting service, with access provided to all club officers. The new URL is:

<http://mtma.x3fusion.com>

This host gives us a tremendous amount of storage space and bandwidth, MySQL databases, POP3 e-mail accounts, FrontPage extensions, PHP, Perl, Python, CGI, Webalizer stats, etc. Best of all, we get all of that for free with no ads!

As most of you are aware, we also have a Yahoo group that we use to send out launch and meeting notices via e-mail. If you are not already a member, you can subscribe to the group by entering your e-mail address in the "Subscribe to the MTMA group" box on our web site or sending a blank e-mail to:

MTMA-subscribe@yahoogroups.com

The group can also be used for posting messages related to MTMA or rocketry in general; and sharing pictures, video and data files (RockSim, wRasp, etc.). The URL for the group is:

<http://groups.yahoo.com/group/MTMA/>

Our very own Life Scout, Ben Levison, is currently building a rack launch system for our club as a part of his Eagle Scout requirements. Details on this system can be found elsewhere in this newsletter. This complements our existing collection of three high-power pads and fills the void left by the mysterious disappearance of one-time club member Chuck Straka and his Trigger launch rack.

Special points of interest:

- Message From The Pres.
- New low power GSE
- High Power Pads
- Launch Sites
- Club Officers
- Rules

Inside this issue:

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2006 looks to be an exciting year for the MTMA. The Summit County Agricultural Society has already approved 17 of the 20 requested launch weekends at SCFG. We have applied for an FAA waiver for our launches at SCFG, which should be in place before our first launch in March. At this time, eight launches are scheduled at SCFG, with two launches at the old sod farm in Mantua (Pichan's). The highlights of this schedule are the MTMA 7th Anniversary launch at Pichan's in May, a night launch/camp-out at Pichan's in July, the annual "Turkey Shoot" at SCFG on the Friday after Thanksgiving, and a "Winter Polar Bear Launch" at SCFG in December.

In general, our launches are scheduled for the second Saturday of the month with Sunday as a rain date. Some of the launches are scheduled for other weekends or Sunday only based on the availability of dates at SCFG. See information elsewhere in this newsletter or our web site for dates and locations.

Membership dues and launch fees are still the same as they have been since 2002!

Some other activities that we may add to our calendar include a joint launch or outing with the Tri-City Sky Busters, the Cleveland west-siders' NAR Section, Contest Launches, a High Power Project, a Winter Build Session, a Holiday party, and a Road Trip to National Launch or Hobby Store. Let us know what interests you and keep your eye on the Yahoo Group to participate in discussions regarding these activities.

Membership dues and launch fees are still the same as they have been since 2002. Membership dues are \$5.00 per family per year. Range Fees are \$1.00 per member-family per launch for low power (up to F) and \$2.00 per member-family per launch for medium and high power (G and above). For non-member-families, Range Fees are \$3.00 per family per launch for low power (up to F) and \$5.00 per family per launch for medium and high power (G and above). Funds collected from dues and fees are used for the annual renewal of our Section Charter with the National Association of Rocketry (NAR), liability insurance for our launch sites, purchasing safety and ground support equipment, purchasing first aid supplies, etc. Any member may request to see a complete accounting of club funds by contacting Treasurer Jim Hartman, or any officer.

If you would like to see future newsletters from the MTMA, please let us know; but you have to be willing to help out with future articles and pictures.

The Launch Sites



Summit County Fairgrounds (SCFG):

The Summit County Fairgrounds are located on the northeast quadrant of the intersection of State Route 91 (North Avenue) and East Howe Road in Tallmadge, Ohio. Our launch range is set up to the north of the soccer fields and paved access road off of S.R. 91 in a grass parking area (used as parking only during the fair). This occasionally-mowed grass field is approximately 25 acres in size, with over 100 acres of former farmland to the north.





Pichan's (Mantua Sod Farm):

The Pichan launch site is located in Mantua Township, Portage County, Ohio, at 11919 Mantua Center Road, about one-half mile north of State Route 82. Our launch range is set up to the west of the property owner's garage/barn on the west side of Mantua Center Road, on an old sod farm. Including the neighboring land to the north and south, the "clear" recovery area is about 1525 feet by 1600 feet. The area to the south (separated by a deep drainage ditch) is covered with thistles and other thorny plants, and has come to be known as the "Field of Thorns"[tm].



The Officers

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Our New Ground Support Equipment

Ben Levison's Eagle Scout Project

For a bit more than a few hundred dollars and about 200 man hours of time Ben Levison, his friends, me (Ben's father) and Boy Scout Troop 504 in Solon, Ohio have built and 8 pad Multi-rod Launch Pad and controller for the MTMA. The Boy Scout Eagle project entails having Ben lead a group of Boy Scouts and others to complete a community service project of his choice. The eagle scout comes up with the plan and leads the Scouts and other volunteers to raise or secure the funding to support the project, and then carry it out. The multi-pad launcher was approved as a community project because the MTMA is a non-profit organization, with membership open to the general public, that undertakes educational activities with TARC, air shows, and organizations such as 4H clubs, Boy Scouts, and the Civil Air Patrol. To raise funds for materials Ben held a Rocket raffle and a 50:50 raffle at several launches last year. The MTMA itself chipped in about \$30.00 to buy stainless steel launch rods for the pads. Ben's eagle scout advisor from troop 504, Stan Beil, donated some spare PVC pipe and fittings; I donated a rocket to for the rocketry raffle and my time in helping design and build the controller and pad electronics.



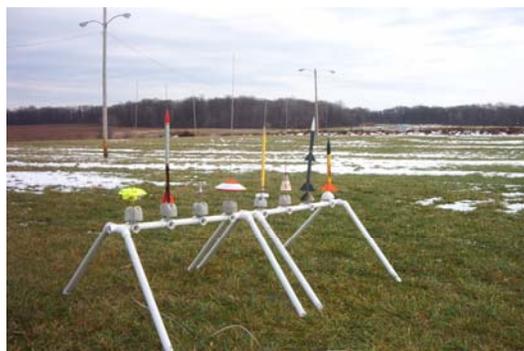
Ben Levison Raffle off Rockets to provide financial support his ground support project.

Ben designed the structure for this new launch pad based on a pad that we used to borrow from one of our past MTMA members. I helped Ben design an inexpensive relay launch controller to use with the pad. Ben went with me to NARAM in Cincinnati last year and we looked at different launch pad designs and control systems; this is also where Ben got donations of Rocketry products from various vendors to support the project. Ben would like to acknowledge Fliskits, Semroc, ARG, and Cowboy Rocketry for their generous donations. Ben learned that there were basically two schools of thought when it comes to launch pad designs; those who want only rack type launch pads and those who want individual launch pads separated by some distance from each other. The two camps seemed evenly distributed so Ben decided upon a hybrid pad type. The 8-pad launcher he and the scouts built can be separated into two 4-pad banks about 15 feet apart. This way the rack launcher people still have a rack of pads and the individual pad group (who pointed out this advantage) can set up rockets on one rack while the other group of four rockets is being launched on the other rack.



Pad Controller

As for pad safety Ben discussed and researched relay systems for several months. One of the things he found was that relays can get welded or frozen closed during operation, so his pad design in addition to a continuity check has a relay failure indicator test circuit built right into it. Other important design issues were portability and reliability. The launch pad system had to assemble and break apart quickly and easily and fit into a standard car trunk. His pad design features legs that twist on or off and a backbone that separates into two 49-inch long sections that will fit into



The 8-Pad Structure was used at our Turkey Shoot launch held on 11-27-05



The completed Launch pad and Relay Controller.



Pad Detail

most car trunks. All the connecting cables can be detached for easy storage and the controller box and batteries are small and lightweight. Each section of the launch pad is powered by a 10 Amp hour, 12-volt, rechargeable gel cell. The pads electronics units are built into 2" PVC cross fittings that operate independently with their own low voltage relay. The modular design allows one or more of the pad electronics assemblies to be repaired while the others are still in use. The launch pad structure, which was assembled first, has proven its utility since it already had been used at some of our launches last year. Come to one of our launches this season and take a look at and fly from our new multi-pad launch system. My congratulations to Ben for completing this exciting and complex Eagle Scout project.

The High Power Ground Support Equipment

In addition to a folding metal high power pad that we have had for a long time, Martin Dorociak president of NAR section 535, the Tri City Sky Busters (TCSB), recently presented me with two folding high power pads he reconditioned for our section. He said the pads were given to him by Les Kramer the former president of TCSB and had been sitting in his garage for several years just rusting away. Les told me that some one gave the pads to him and said the pads belonged to the MTMA. Martin repaired the pads and then sand-blasted and repainted them for us. These are heavy (about 20 lbs) all metal pads that can accommodate up to 3/4 inch diameter rods. Our club doesn't have controllers for these pads yet. Perhaps the next Boy Scout looking for and Eagle Scout project will help us out like Ben did.



Restored High Power pads

The Rules!



As a chartered Section of the National Association of Rocketry (NAR), all launch activities are conducted in accordance with the Model Rocket Safety Code and the High Power Rocket Safety Code.

Our role as an NAR section is to provide you as part of the local group of model rocketeers with a safe and convenient means to conduct model rocket launches. Along these lines we have secured dates for model rocket launches at various approved sites throughout the area. As your NAR section officers we file all the appropriate paper work with the appropriate local authorities (FAA waivers, NoTAM's, etc.) to inform them of our launch activities prior to a given launch. The section also carries an additional insurance covering launches at the Summit County Fairgrounds.

We anticipate receiving a waiver from the Federal Aviation Administration (FAA) of sections 101.23 (b) and 101.23(c) of Federal Aviation Regulations Part 101 (FAR 101) for all launches at SCFG in 2006. In conjunction with this waiver, the maximum ceiling imposed by MTMA for all Large Model Rockets (LMR) (as defined by FAR 101.22) and High Power Rockets (HPR) is 1,800 feet AGL at this site.

The RSO and/or LCO will consult the "Waiver Table" from Rocketry Online's Info-Central (<http://www.info-central.org/index.cgi?regulation>) for all proposed LMR and HPR flights. If the predicted maximum altitude of any rocket/motor combination exceeds 1,500 feet in the table, a flight simulation prepared using either RockSim or wRASP or ALTMARK with an initial Cd of 0.35 will be required. A higher Cd will only be accepted if previously verified by altimeter-equipped flights.

We also now have ground support equipment designed according to the latest NAR safety standards that we bring to each launch. We ask that you respect the decisions of the Range Safety Officer (RSO) and the Launch Control Officer (LCO) at each launch regarding the ability to attempt any given flight. Rockets and alcohol don't mix so please keep your alcoholic beverages for activities after the launch. Smokers we ask that you please be mindful of the conditions during our mid summer launches when the fields are especially dry, our fire fighting equipment will only extinguish a very small brush fire. We do not wish to lose a launch site because of careless smoking habits. Due to the nature of this hobby, smoking is prohibited at the launch pad(s), check in and prep table(s).

Web Site:
<http://mtma.x3fusion.com>

NAR Section #606, MTMA



BRUCE S. LEVISON, SECRETARY
MANTUA TOWNSHIP MISSILE AGENCY
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MTMA's 2006 Launch Calendar

Information about upcoming launches may be found on the Launches page of our web site at:
<http://mtma.x3fusion.com/launches.htm>.

Scheduled launch dates are:

Saturday, March 11 at SCFG
Saturday, April 8 at SCFG
Saturday, May 13, 7th Anniversary Launch at Pichan's
Saturday, June 3 at SCFG
Saturday & Sunday, July 1 & 2, Night Launch at Pichan's
Sunday, August 13 at SCFG
Sunday, September 10 at SCFG
Saturday, October 14 at SCFG
Friday, November 24, Turkey Shoot at SCFG
Saturday, December 9, Winter Polar Bear Launch at SCFG

Our 2007 Section Meeting and Election of Officers will be held on Saturday, January 13, 2007, at the Twinsburg Public Library.