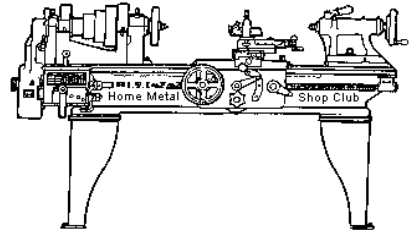




**August 2024**  
Newsletter

Volume 29 - Number 08



<http://www.homemetalsclub.org/>

The Home Metal Shop Club has brought together metal workers from all over the Southeast Texas area since its founding by John Korman in 1996.

Our members' interests include Model Engineering, Casting, Blacksmithing, Gunsmithing, Sheet Metal Fabrication, Robotics, CNC, Welding, Metal Art, and others. Members enjoy getting together and talking about their craft and shops. Shops range from full machine shops to those limited to a bench vise and hacksaw.

If you like to make things, run metal working machines, or just talk about tools, this is your place. Meetings generally consist of **general announcements**, an **extended presentation** with Q&A, a **safety moment**, **show and tell** where attendees share their work and experiences, and **problems and solutions** where attendees can get answers to their questions or describe how they approached a problem. The meeting ends with **free discussion** and a **novice group** activity, where metal working techniques are demonstrated on a small lathe, grinders, and other metal shop equipment.

President <i>Vacant</i>	Vice President <i>Ray Thompson</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Joe Sybille</i>	Librarian <i>Ray Thompson</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Photographer <i>Vacant</i>	CNC SIG <i>Martin Kennedy</i>	Casting SIG <i>Vacant</i>	Novice SIG <i>John Cooper</i>

This newsletter is available as an electronic subscription from the front page of our [website](#). There are over 1027 subscribers located around the world.

## About the Upcoming 14 September 2024 Meeting

The next general meeting will be held 14 September 2024 at 12:00 P.M. (Noon) at TxRxLabs, 6501 Navigation Blvd., Houston, Texas 77011 **AND** on-line at Zoom.us. Log-in credentials are as follows: Meeting ID = 830 2940 6248 Passcode = 425542

## General Announcements

The HMSC has a large library of metal shop related books and videos available for members to check out at each meeting. These books can be quite costly and are not usually available at local public libraries. Access to the library is one of the many benefits of club membership. The club has funds to purchase new books for the library. If you have suggestions, contact the [Librarian Ray Thompson](#).

We need more articles for the monthly newsletter! If you would like to write an article, or would like to discuss writing an article, please contact the [Webmaster Dick Kostelnicek](#). Think about your last project. Was it a success, with perhaps a few 'uh ohs' along the way? If so, others would like to read about it. And, as a reward for providing an article, you'll receive a free year's membership the next renewal cycle!

Ideas for programs at our monthly meeting are always welcomed. If you have an idea for a meeting topic, or if you know someone that could make a presentation, please contact [Secretary Joe Sybille](#).

Members are requested to submit to the club secretary the name, address, telephone number, and website address, if any, of any metal or other material stock supplier with whom the member has had any favorable dealings. A listing of the suppliers will appear on the homepage of the club website. Suppliers will be added from time to time as appropriate.

The club is looking for a member to serve as webmaster. After over ten years of service, our current webmaster would like to pass the webmaster torch to a successor. Also, the club is looking for a volunteer to serve as president.

## Recap of the 10 August 2024 General Meeting

By Joe Sybille

Thirteen participants attended the 12:00 P.M. meeting at TxRxLabs. Ten participants were in person and three participants attended virtually. There were two visitors, Wayne Strickler and Charles McCullough. Vice-President Ray Thompson led the meeting (right photo).



The recent weather related events resulting from the presence of Hurricane Beryl has caused the club to establish a severe weather protocol. Notifications pertaining to club activities occurring within days of, either before or after, a severe weather event will be made to club members via the club's YouTube channel.

## Presentation



John Cooper (left photo) gave a presentation on Army Navy fasteners (AN). The fasteners are used primarily in high stress applications, particularly aircraft assembly. Cooper used to build race cars. AN fasteners are used extensively in race cars.

Unique about AN fasteners is the identifying numbering system. Generally, and with some exceptions, AN bolt nomenclature has this format: ANc(H)-g(A) where c is the bolt diameter in 1/16 " increments; H indicates the bolt head is drilled for safety wire (no H indicates an undrilled head); g is the unthreaded length (grip length) of the bolt shank; A indicates the shank is not drilled for a cotter pin (no A indicates a drilled shank). The specified length is determined by one or two digits. If one digit is given, the length is in increments of eighths. If two digits are given, the first digit indicates the length in whole inches. The second digit indicates increments of eighths, depending on manufacturer.

For example, an AN7-7A fastener is one that has a shank diameter of 7/16", a length of 7/8", and no hole drilled in the shank. See photo at right.

Threads are Unified National Fine (UNF), class 3, close fit. Threads are also rolled into the bolt shank instead of cut into the shank. Tensile strength of AN bolts is about 125,000 psi and shear strength is about 76,000 psi. The bolts are not as brittle as SAE bolts and will bend first rather than breaking suddenly.



## Show and Tell



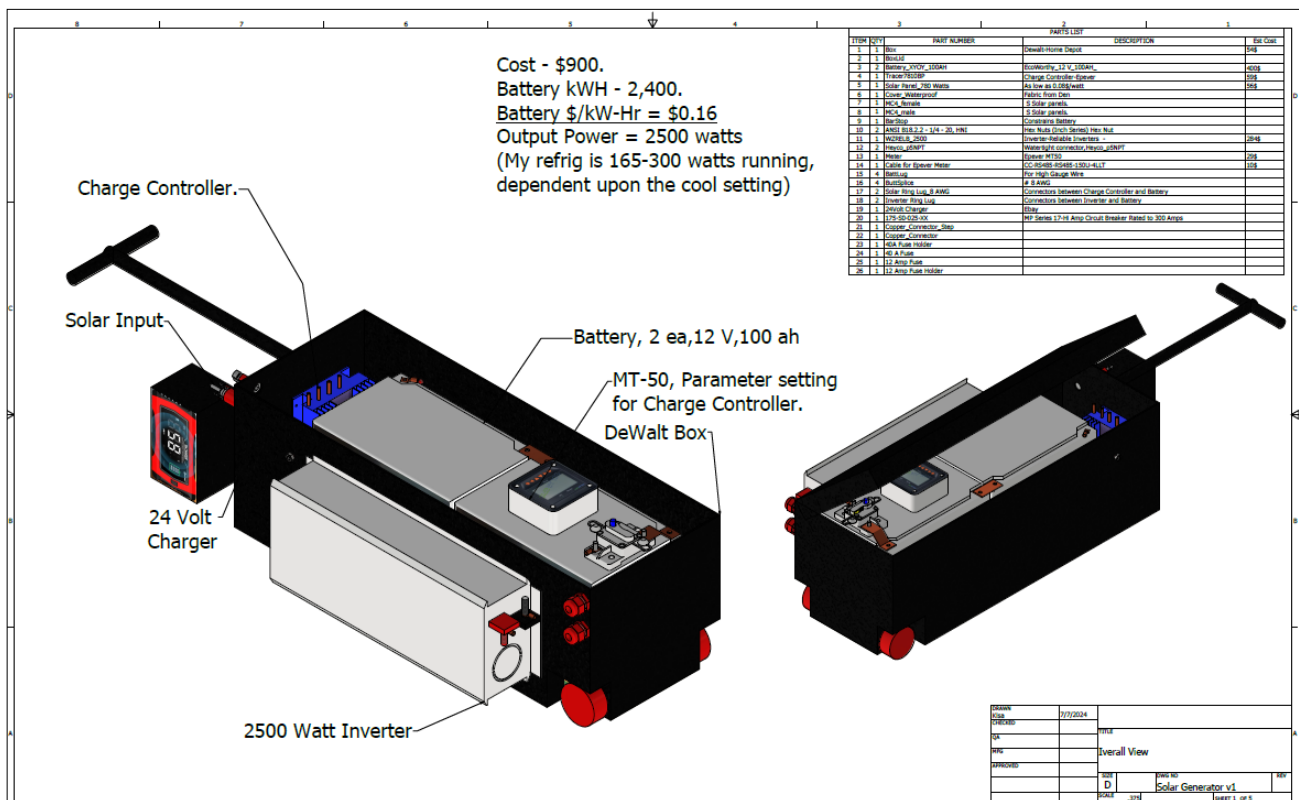
*Dean Eicher* showed a part and described how he made it. Later, he asked the participants for other ways to make the same part. Several different work processes were offered. See photo at left.

Joe Sybille described a project from a magazine article involving the making of a paint can turner.

Mike Winkler showed and described how he repurposed a drill chuck from a discarded cordless drill. After making a handle for the drill chuck, one can use the chuck to hold a bolt, rod, or other item against a belt sander or wire wheel to remove surface rust or other matter. See photo at right.



Bill Swann described a solar powered inverter he designed and built to use during a natural disaster. See picture below.



## Safety Moment

A participant described how he received a metal shard in his finger and wanted to know the best way to remove the metal shard. Several suggestions were offered including to always run a file over newly cut metal to remove all burrs.

## **Problems and Solutions**

A participant requested suggestions on how to resolve an issue with batteries draining in an auto darkening welding helmet. The batteries drained while the helmet was not in use. Several suggestions were offered including storage of the helmet in a completely dark container.

Another participant described a problem experienced while using a portable generator, the tank of which was filled with clean gasoline. Soft particles were observed in the fuel tank of the generator. How the particles got there is a mystery. Suggestions on the source of the particles ranged from decomposition of the plastic fuel tank to debris from the tanks at the petrol station.