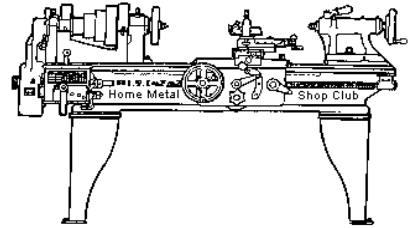




December 2024
Newsletter

Volume 29 - Number 12



<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>Vacant</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Joe Sybille</i>	Librarian <i>Mark Counterman</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Audio/Visual <i>Mark Heidorn</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 11 January 2025 Meeting

The next general meeting will be held 11 January 2025 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 = 835 0019 1840 Passcode = 733400

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 Mark Counterman](#).

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](#).

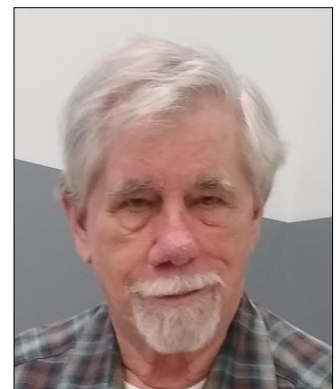
Members are requested to submit to the club secretary the name, address, telephone number, and website address, if any, of any metal or other material stock supplier with whom the member has had any favorable dealings. A listing of the suppliers will appear on the homepage of the club website. Suppliers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

The club is looking for a member to serve as webmaster. After over fifteen 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, vice-president, and casting special interest group leader.

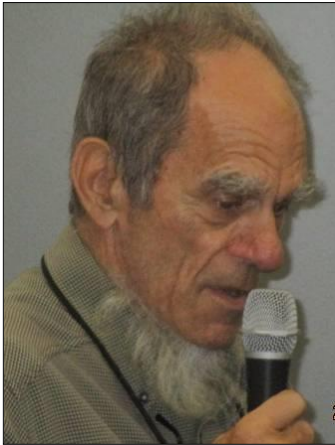
Recap of the 14 December 2024 General Meeting

By Joe Sybille

Ten participants attended the 12:00 P.M. meeting at TxRxLabs. Six participants were in person and four participants attended virtually. John Cooper led the meeting (right photo).



Presentation

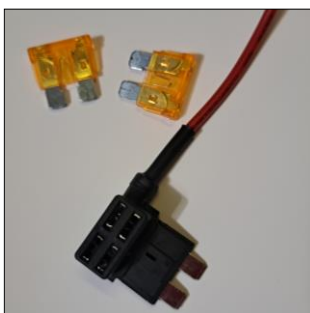


Bill Swann gave a presentation on how he is building a battery storage unit for his 'off the grid' container unit. From two used Nissan Leaf battery packs, Swann is modifying the packs to create one useful unit to send direct current to an inverter charger to produce alternating current power.



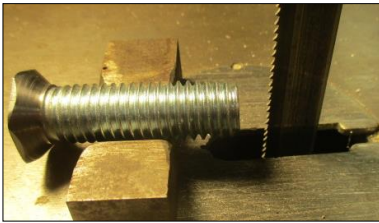
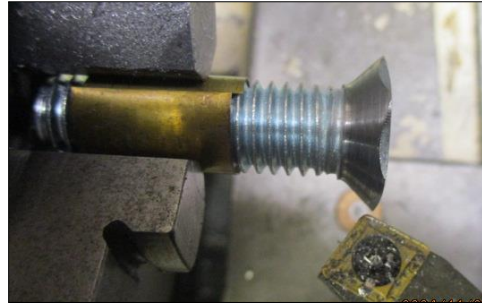
Show and Tell

John Cooper described and showed several items purchased recently at a machinery tool auction. See photos below.



Dick Kostelnicek explained how he added a new circuit to his vehicle and showed the new wiring to do so. See photo at left.

Joe Sybille showed how he fashioned, with the help of fellow club member *Dick Kostelnicek*, a new lamp base. The original plastic base failed and a new metal one took its place. See photos below.



Dean Eicher showed a modified c-clamp used to remove the pin in a small hinge. See photo at left.

Safety Moment

A participant revealed how trying to take a shortcut when drilling holes in thin sheet metal resulted in a nasty cut to the finger.

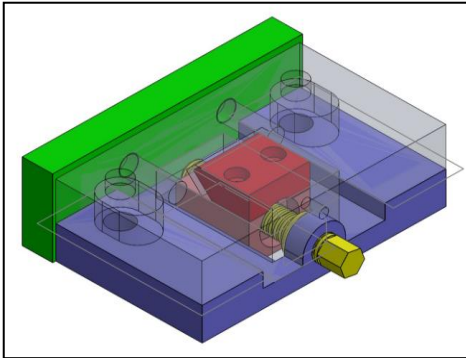
Problems and Solutions

A participant wanted to know a source for plastic coated armored cable. A search for BX cable at any 'big box' store may yield results.

Two Piece Vise

Martin Kennedy

[Click here to view the working drawings of the vice.](#)



1) This vise employs a design that uses a bearing half ball to allow some small rotational movement of the moving jaw. Additionally, the nut and moving jaw contact at a 45 degree angle so that the jaw will be clamped down to the mill table when tightened.

2) Machining this vise is a challenging project, as all parts must fit together closely to produce a tight vise. Additionally, cutting the 45 degree surface inside the moving jaw requires special attention.

3) Dimensions of mill table slots vary by manufacturer. This vise is for a table with slots on 1.80" spacing. Carefully measure your slots. You may need to move the slots or even re-scale the vise to fit your table.

4) Different T-nut and bolt dimensions may be required.

5) The design includes some keys on the bottoms of the fixed and moving jaw vise assemblies. These are optional. They are used to quickly align the jaws when installing. A machinist's square can be used instead.

6) The adjustment screw is an Acme thread left handed screw. These are typically used for vises. However, a conventional right handed screw will work and does not require special taps and cutters.

7) The dimensions of the adjustment screw and the hole in the base plate were selected to allow the screw and nut assembly to be inserted and removed from the base. If you change dimensions around these areas, check to be sure the parts can be put together!

8) The jaws intentionally are larger than the vise body to allow the vise to be flipped around and used in reverse for longer parts. Note that the force against the moving jaw is completely taken by the snap ring in this orientation, and the vise will not be very strong.

9) The vise mounting screws are 1/2" socket head cap screws. There are special cutouts in the moving jaw to provide clearance for the head of the screws.

10) There is a hole for a long set screw above the adjustment screw in the moving jaw. This screw is installed loosely, and prevents the moving jaw from falling off when the vise is not in use.