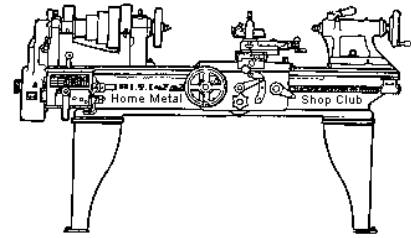




November 2016
Newsletter

Volume 21 - Number 11



<http://www.homemetalshopclub.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>Brian Alley</i>	Vice President <i>Ray Thompson</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Emmett Carstens</i>	Librarian <i>Ray Thompson</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Photographer <i>Jan Rowland</i>	CNC SIG <i>Martin Kennedy</i>	Casting SIG <i>Tom Moore</i>	Novice SIG <i>John Cooper</i>

This newsletter is available as an electronic subscription from the front page of our [website](#). We currently have over 1027 subscribers located all over the world.

About the Upcoming 10 December 2016 Meeting

The next general meeting will be held on 10 December at 12:00 P.M. (Noon) at the [South Houston Library](#) located at 607 Ave. A, South Houston, TX 77587. Norm Berls will give the second part of his presentation on Sketchup -3D Modeling Software Application.

Visit our [website](#) for up-to-the-minute details, date, location maps, and presentation topic for the next meeting.

General Announcements

Members of the HMSC extend their sincere condolences to the family of Dan Harper. Dan passed away suddenly of an aortic aneurysm on 9 October 2016. He was an active member of the club. He made several presentations and wrote technical articles for our newsletter. He also served for several years as club librarian.

[Videos of recent meetings](#) can be viewed on the HMSC website.

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 [Vice-President Ray Thompson](#).

Reminder: Yearly club dues were due at the September meeting. Dues are fifteen dollars (\$15.00) and payable to Treasurer Emmett Carstens. He will accept cash or a check made payable to him.

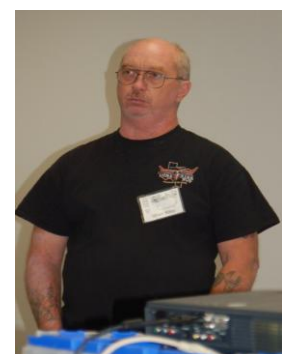
Recap of the 12 November 2016 General Meeting

By Joe Sybille, with photos by Jan Rowland



Twenty one (21) members attended the 12:00 P.M. (Noon) meeting at the Parker Williams Library, 10851 Scarsdale Blvd., Suite 510, Houston, TX 77089. There was one visitor, Daniel Shipman, at the meeting today. There are twenty three (23) members in good standing with the club.

President *Brian Alley* led the meeting (right photo).



Presentation



Member Norm Berls gave the first of a two part presentation on using [SketchUp](#), the 3D drawing software available for free from Trimble Navigation Ltd. One may download the full version for a 30 day trial period. After the trial period, several functions are disabled, and what remains is the free version quite capable of producing a 3D representation of a machine part.

First and foremost, SketchUp is a 3D drawing tool well suited for prototyping. The software is ergonomically imperfect as a drawing design tool. It communicates to the user via different colored lines, and a color blind user would be unable to take advantage of its capabilities. There are many tutorials on YouTube to help one learn the software.

SketchUp was originally designed for use by architects. Since its purchase by Trimble, surveying applications have been added to the software package. Precise input information is required to draw something in SketchUp, and many users may find that drawing with a mouse in SketchUp is cumbersome. As one draws in SketchUp, one is continually assisted by an 'inference engine'. This inference engine tries to anticipate what one is trying to draw and forever guesses the next drawing stroke.

During an initial drawing one would set the units and the view type, perspective or isometric. A colored coordinate axis assists the user with the drawing direction. The red axis serves as a reference for lines oriented left to right. The green axis serves as a reference for lines oriented front to back. Lastly, the blue axis serves as a reference for lines oriented up and down. Using the line tool, Norm demonstrated how one would draw an equilateral cube. In doing so, he described how lines are called edges and the flat faces of the cube are called surfaces. Norm further discussed using the tools select, orbit, zoom, and zoom extents (fit entire drawing to the page). He demonstrated the use of the commands group, explode, hide, unhide, undo, and redo. Many of the commands and functions in SketchUp are similar to other drawing programs.

Organizing a complex project will be the focus of part two of the presentation at the Dec. meeting.

Norm's slide presentation may be [viewed at this link](#).

Show and Tell

John Cooper recommended a free 3D creation and editing tool which supports 3D printers. The product is called 123D and is available from [AutoDesk](#). Also, John gave an update on his progress to resolve a worn shaft bearing surface. The rotating shaft is loose in the housing of a grinder (right photo).





Tom Moore showed a spray gas welder torch (photo at left).

Bill Berry exhibited a cubic boron nitride grinding wheel (photo at right).



Gary Toll made a holder for fixing items undergoing welding (photo at left).



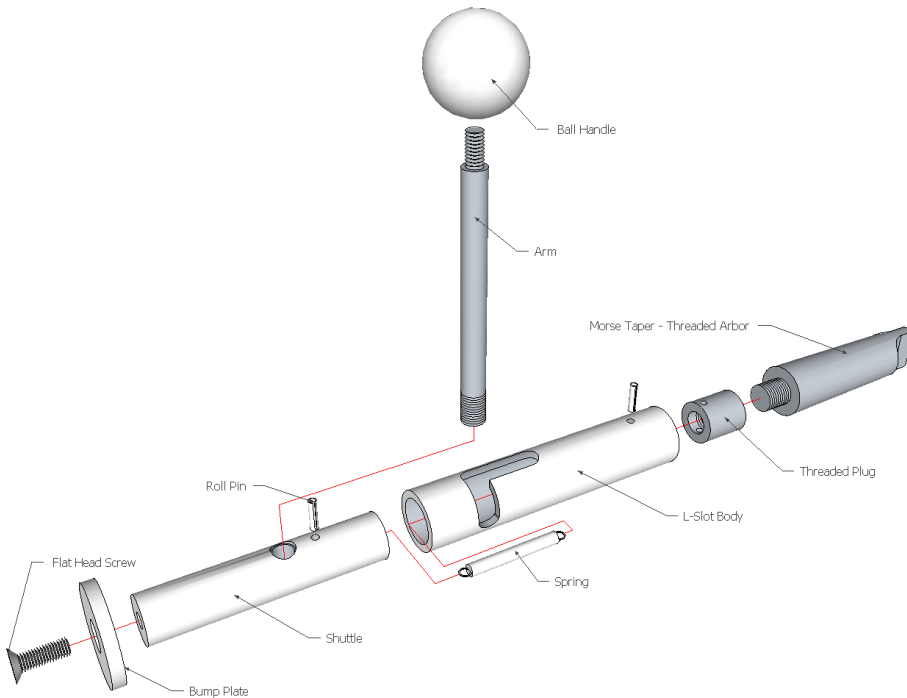
Joe Miller displayed artwork he made using a CNC router (photo at right). He used a Mach3 controller and Vec tric Aspire to generate the G-code for the tool paths.



Problems and Solutions

A visitor sought suggestions on devices that could be added to his trumpet to change the length of the main tuning slide. Several suggestions were offered.

Articles

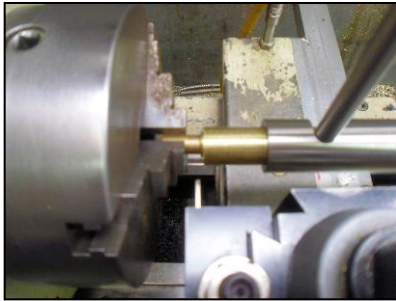


Tailstock Depth Stop

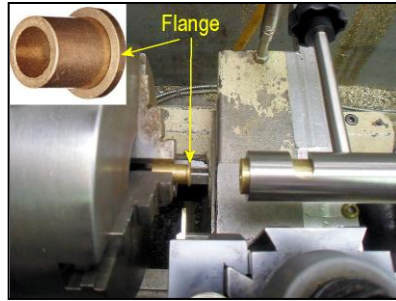
By Dick Kostelnicek

The lathe can be a productive cutoff tool, especially when parts are small and multiple copies can be severed from bar stock that fits through the headstock. A depth stop, mounted in the tail stock, allows you to advance a bar through the chuck for a repeatable amount of exposure prior to cutoff. However, the stop must be moved out of the way, otherwise the part will jam between the cutoff blade and the stop's bump plate as the part is severed.

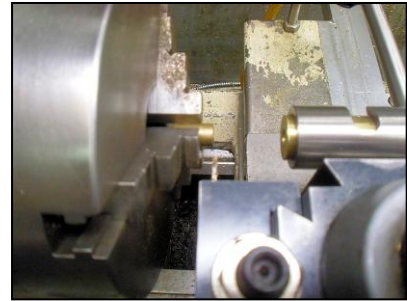
The following photos show the tailstock depth stop used to align and cut off an Olite bearing's flange.



Depth Stop Set



Depth Stop Retracted



Flange Cut Off