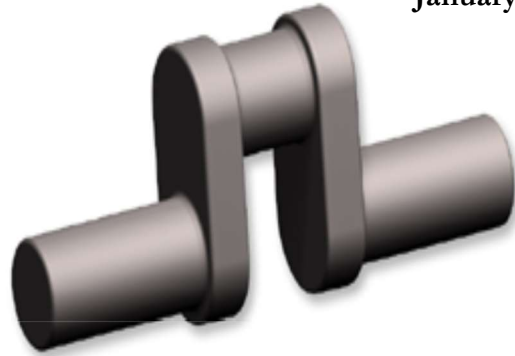


The Crank Calls



President	Paul Denham	pedenham@comcast.net
Secretary	Your name here!	Please consider volunteering
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MEMBERSHIP \$25.00 US
Contact Paul Denham at
pedenham@comcast.net

NEXT MEETING
Saturday, January 15, 2022, at the
Golden Gate Live Steamers clubhouse site in
Tilden Park, Orinda, CA
Gate opens at 9:00 am
Meeting starts at 10:00 am
Meeting will be outside, with masks, so dress accordingly.

Upcoming Events

- Jan 15: BAEM meeting at GGLS
- Feb 19: BAEM meeting at GGLS
- Mar 19: BAEM meeting at GGLS

See below for more details regarding events. Watch Crank Calls, BAEM emails and BAEM web page for updates. BAEM meetings are usually 3rd Saturday of the month except December.

MEETING NOTES

Unfortunately, our December meeting/potluck had to be cancelled, due to a scheduling conflict with our Golden Gate Live Steamers host. Mike and Wes scrounged contents of this issue from members' ongoing projects. Thanks Paul D, Peter L, Mike R, Dwight G, and Jim P.

NEW MEMBERS/VISITORS

BAEM members are reminded that visitors are welcome at our club meetings, and we're always looking for new members.

TREASURER'S REPORT

The 2022 dues of \$25 are now due. Give your check to Paul Denham, or mail to Deirdre Denham at 1937 Merchant St, Crockett, CA 94525. Make checks payable to "BAEM".

CLUB BADGES

If you are a member in need a badge, contact Mike Rehms (mrehms@byvideo.com) who has offered to produce them.

UPCOMING SHOWS/EVENTS:

None in the near future.

FIRST POPS

BAEM member Jim Piazza has constructed a very nice 5 cylinder two-stroke radial engine that utilizes boosted induction. Here's a picture, showing his top-notch machining:



Jim Piazza 5 Cylinder Radial

Jim built his engine using Cox .049 cylinders and pistons. (<https://coxengines.ca/>) These are two-stroke design with glow-plug ignition that have long been used in model aircraft engines.



Cox .049

The Cox cylinders attach to the crankcase via a short 40 tpi thread. Jim used CNC thread milling technique to cut appropriate threads in the crankcase.

Two stroke engines require positive pressure at the cylinder intake port, which is typically

provided by using the crankcase as a pump, with a reed valve or rotary valve or some other means to prevent back pressure upstream. That approach won't work with a radial engine design because the moving pistons offset one another, and don't produce the needed crankcase pressure. The solution is to utilize a vane blower behind the crankcase, which maintains a positive pressure in the crankcase.



Vane Blower

The carb is a stock item, from OS Max 25. Jim also used a 5 cyl. glow driver from electrodynamics.com which, according to Jim, "Made life real easy."

Jim thoughtfully provided a link to a YouTube video of his engine running. Enjoy it here: <https://youtu.be/eJvsISgi2ns>

Nice work Jim! Thanks for sharing.

BITS AND PIECES

Paul Denham is building a couple of ignition kits for BAEM members. Paul has his own surface mount PCBs of the Sage Gedde circuit design (see Model Engine Builder #34 for a complete build article). Kits include PCB, coil, reed sensor and magnet.

Paul is also building a Bob Shores "Little Devil." This engine is a vertical hit and miss that can be air or water cooled.



Paul's Little Devil progress

Paul is also building a Shelf Pet Models Frisco Standard model marine engine. Rumor has it Paul had to enlist Dee's help in ordering the casting kit. The kit arrived minus some bearing castings. Mike Rehmus drew solid models from the plans and 3-D printed a set of patterns. Dwight and Paul were able to cast a set from Zinc-Aluminum alloy ("ZA").



Mike Rehmus 3-D prints of Frisco Standard bearings.



Frisco Standard bearings from Dwight Giles foundry.

According to Mike Rehmus, they used low temperature ZA which is three times as

strong as aluminum and makes excellent bearings while being very easy to machine. Here's a link to technical information re Zinc-Aluminum alloys:

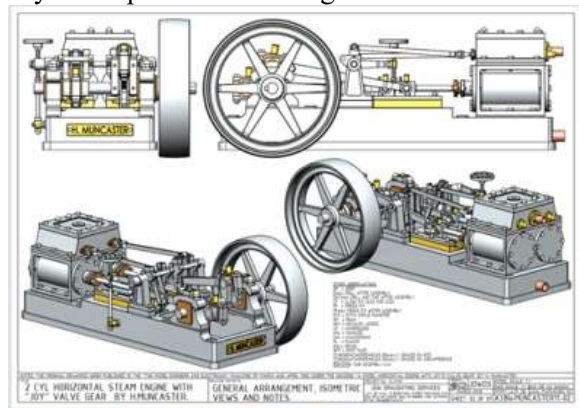
<https://alliedmetalcompany.com/zinc-alloys/>

Peter Lawrence also has an impressive number of interesting projects underway. One is a De Havilland Cirrus aero engine:



Newly finished crankshaft for Peter's De Havilland Cirrus aero engine along with pistons and block.

Another of Peter's newly started (but long contemplated) projects is a model of a Muncaster twin piston horizontal steam engine using the Joy valve gear setup. Peter started with the connecting rods and silver soldered the Joy valve pivot arm bearing assemblies.



Muncaster's #9 plans for a "horizontal twin steam engine with Joy's valve gear"



*Bits and pieces for Peter's Muncaster's #9.
(see <https://www.youtube.com/watch?v=PLUS3Yti-7E>
for a running version)*

The Giles Rehmus model engineering consortium has been developing a vertical version of the GEM1 (GEMini?). Progress to share includes:

-Two prototype engines, one with ball bearings and one with plain bearings.



GEMini Engine Prototypes

-Built up flywheels with hub/spokes silver brazed and the spokes turned to length to fit with a slight clearance in the flywheel rim. See MEB #31 for Dwight's article on built up flywheels, including the welding jig design.



Built up flywheels

RAMBLINGS

Anyone interested in participating in a weekly Zoom meeting to discuss learning to use Alibre Atom 3D? E-me if you'd like to explore the idea: weswag@ix.netcom.com

Working on an interesting project? Got a great BAEM story? Share it with us here. Send us pics and project details, and your hard work will be shared with the entire club.

WANTED

BAEM member Larry Bunch wants to purchase a Logan 11 x 36 Lathe and asks that anyone who knows of one for sale please contact him.

Larry Bunch
209-404-6700
wendyrocky2@gmail.com

FOR SALE

Dick Pretel has a number of model engine connecting rods available for sale. Large rods are 2-1/2 inches center to center; small rods are 1-15/16 inches center to center. Big end bores are 3/8 inches on both. Wrist pins are included (O1 tool steel, hardened to Rockwell

C60, 0.1875" ground to +.0002, -.0000, centers on both ends.) Price is \$12 per rod. Contact Dick via email (rpm11K@att.net) with questions or orders. Drawings at <http://www.damgood.com/product-model.html>



Pretel's rod

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Jerry Franklin has a Taiwan Bridgeport clone for sale. It's a 1980 EXACTO model 942b milling machine with 9x42" table, 220/440 3 phase power. Better than average condition. Located in Milpitas. \$2200. Leave contact info at 408 263 8577 (voicemail) and Jerry will get in touch with you.

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BAEM member George Spain is offering for sale three different professional-level cylinder boring devices. All are used, but in good condition.

VAN NORMAN 777-6 Boring Bar.

Boring bar with stand and tool kit.

Price: \$ 1500

VAN NORMAN 944 Boring Bar.

Boring bar with stand and tools.

Seen elsewhere for \$ 2,200 – 4,800.

Price: \$ 1500

STRONG Boring Bar.

Boring bar, table model, with tools.

Bores 40mm to 70mm.

Seen elsewhere for \$ 1,600 – 2,750.

Price: \$ 1500

For further information, contact George Spain at

Phone: 707-342-2931

Email: geobev11@att.net

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Dwight Giles has some stuff he is offering:

-1.5 hp electric motor. 1750 rpm. 110/220v AC single phase. Heavy! Price: Free!

-Engine Mount Box. Beautiful wooden box for mounting your larger engine. Perfect for a Black Widow V8. 3 available. Price is \$200 donation to club.

Contact Dwight at jig313@aol.com

or phone: 707-648-1481

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Got something you'd like to sell? Your ad is free and will be seen by likely customers.

NEWSLETTER CONTRIBUTIONS

Your contributions to this newsletter are appreciated: workshop reports, tech articles, reviews, historical pieces, whatever. You contribute, we'll figure out how to post it. Send your contributions to either or both of us.

Thanks!

-Mike Byrne at mgbyrne3@comcast.net

-Wes Wagon at weswag@ix.netcom.com

