

# Dublin Chapter Newsletter

March 2015

### Inside this Issue:

Francis Corr "reveals all" while lamenting about laminated bowls.



Russian Dolls - Latest Update!

▷ Dublin Chapter 1-day Seminar - Registration Form included.



What to do with Shavings! See "Useful Links."

### Upcoming Events

- Saturday 7th March - Scout Hall Demo - Peter Mulvanney
- Wednesday 11th March - Scout Hall Demo - Tony Nally
- Saturday 4th April - Scout Hall Demo - Seamus Carter
- Wednesday 8th April - Scout Hall Demo - Seamus Carter
- SATURDAY 2nd May - Dublin Chapter 1-day SEMINAR – featuring Liam O’Neill.
- \* Gorey Seminar – 7 March with Binh Pho, Nikos Siragas, Richard Kennedy and Peter Lyons.
- \* Cork Seminar – 18 April with Mick Hanbury and Philip Mahon

### The Laminations of a Bowl Turner.

Francis Corr gave us a glimpse into his laminated world, including preferences for holding pieces on the lathe, the highs and lows of turning laminated bowls, and the ins and outs of epoxy resin.

#### Part 1: Wood Holding.

The first noteworthy thing is that Francis has brought a large amount of hardware with him, including chucks of varying sizes and types. He regards the faceplate, attached to the workpiece with four suitable screws, as the safest workholding device. He is less attracted to faceplate rings as they do not wind on to the lathe spindle itself. Holding between centres is often necessary, especially in spindle turning but involves serious risk in that at neither end is there a permanent independent hold on the workpiece. Also, with laminated blanks, centres can have the effect of prising the laths apart. Screw chucks? "Only good for relatively small faceplate turning". Francis speaks very positively about the O'Donnell jaws which, being conical, give good and relatively safe access to the back of the workpiece. He recommends that one should disassemble a chuck from time to time for two reasons: cleaning (dust can interfere with the centring accuracy

of a scroll chuck). Also, it helps in the correct use of equipment to understand how it works.

#### Part 2: Turning a Laminated Bowl.

Francis is currently engaged in turning twenty laminated bowls for a client. The blanks are supplied in square section which he then rounds on the band saw. Health and safety come into focus at this point; "You cannot be too careful with laminated turning. Glue-holding is of the essence. Temperature can have a devastating effect on glues. Also, white spirit will 'kill' PVA. Always follow the manufacturers' advice regarding the temperature at which glues ought to be stored, their recommended shelf life and the time period stated for the glue to fully cure." He is emphatic on the following point: "If in doubt, sling it!!" He strongly recommends using a compression hold on laminated items. An expansion hold will tend to prise the elements apart!

Francis now mounts a laminated bowl blank of American ash and black walnut, about 250mm (9"-10") dia. x 63mm (2.5"), on a face plate. He quotes his dad concerning the need for safe work practices; 'The trouble with machines is, they don't stop when you

shout at them!' So, he now trues up the face and the outer profile starts to take shape. Despite the earlier caution, he creates a recess for reversing into the chuck. The reason is simple; it's what the client wants, and who is always right? Sanding and finishing of the outside of the bowl can now take place.

#### Hollowing and Sanding.

The piece is reversed and that face trued up. Francis recommends drilling a hole in the centre, to the appropriate depth. This makes hollowing the centre area much easier. One of the problems with laminated turning is that the tool is traversing across woods of differing densities, leading to undesirable undulations. To counteract this, Francis uses a heavy scraper in shear-scrape mode for final cuts. He believes in using "the heaviest suitable tool for the job." Sanding is kept to a minimum out of regard for our lungs. The method is power sanding with discs in the cordless drill.

#### Finishing.

As these bowls are destined for the restaurant trade, the key factor is food safety. Francis uses liquid paraffin which is inert and will not react with glues, or cutting board oil (available in IKEA).

(At this point a well deserved compliment for Tony Hartney's excellent camera work is voiced by Gerry Ryan.)

Part 3: Using Epoxy Resins. Epoxy resins are toxic so be very careful! The product Francis uses is called West System Resin 105 which



is accompanied by hardeners 205/6/7. He is still at the experimental stage with all of this, which indeed typifies his whole approach to turning which is to constantly try new things. His aim here is 'to create a bowl with a window in it'. He uses some small plastic bowls bought in IKEA as moulds. These he lines with Vaseline as a release medium before filling them up with resin, submerging some wood-pieces including a larger piece with a spigot on for mounting. Once the resin is cured - which could take a week! - he removes the plastic bowl and - voila! He has a bowl shaped piece of hard resin ready to be hollowed as he wishes. Francis does a small amount of hollowing on the piece in hand till that other hand - on the clock - says it is time to bring proceedings to a close.

Well, our demonstrator certainly poses a challenge to the struggling notes-taker, but then that's only because he is so full of information and ideas. Thanks, Francis, for a varied and challenging demonstration.

Pacelli O'Rourke

## Demonstrators 2015

### Saturday

March - Peter Mulvanney	September - John Doran
April - Seamus Carter	October - Pat Walsh
May (our seminar) tbc.	November - Bob Finley
June - Michael Fay	December - Joe O'Neill .
July - Noel Fay	
August - David Sweeney	

### Wednesday

March - Tony Lally	September - Charlie Ryan
April - Seamus Carter	October - Bob Finley
May - Pat Walsh	November - Malcolm Hill
June - Willie Edwards	December - Joe O'Neill
July - Michael Jordan	
August - Cecil Barron	



**Made-to-measure Tools and Jigs.** During last month's demo, Francis Corr mentioned that an associate of his that made made tools and jigs. Paul Cary (Metalworker) 086 8800842.



**Russian Dolls – Update.** The dolls for the Temple Street Hospital are progressing well. They will be on show at the March 7th Chapter Meeting. Make sure to take a look.

There were four teams involved in making the dolls: -

- 1 John Doran's team - Jennie Lynch, Sean McMurragh, Willie Reville.
- 2 Stephen Coffey's team - Peter Mulvanney, Johnny Wigham.
- 3 Cecil Barron's team - John Sheeran, Jack O'Rourke
- 4 Joe O'Neill's team - Michael Fay, Seamus McKeefre, Paul Murtagh.

The wood was donated by The Carpentry Store Naas

Strahan Timber, Woodworkers & Hobbies Mount Tallant Ave., Clara Joinery Kimmage.

Thanks also to Paul Murtagh, Vinny Whelan, John Doran, Stephen Coffey for collecting the wood from the suppliers.

Joe O'Neill took care of the looking for the wood and co-ordinating the project.



**Useful Links - Interesting and useful items related to wood.**



What to do with those Shavings! Ever wonder whether you should use your shavings in the garden? If you are a turner and a gardener, then this might give you some ideas, care of Tony Hartney, who was wandering the WWW recently.

While checking out the subject of getting rid of woodturning shavings he came across the following information. Follow the links.

Discussion thread - <https://groups.google.com/forum/#!topic/rec.crafts.woodturning/Zd8rPdGHqIA>

A paper on the dangers of the Black Walnut. <http://ohioline.osu.edu/hyg-fact/1000/1148.html>



**Competitions 2015**

MAR - Salad Bowl

APR - Gavel and Base

MAY - Open

JUN - Table Lamp

JUL - Box with Lid

AUG - Pen

SEP - Segmented/Laminated

OCT - Clock

NOV - No Competition

DEC - Toy

**February Competition Entrants**





## February Competition Winners



Martin Boyle - Beg.



Johnathan Wigham - Exp.



Seamus McKeefry - Adv.



Michael Fay - Art.

**In January Graham Brislane** gave us an interesting demo of a making a digital thermometer. As promised, Graham has provided a description of the circuitry used in his thermometer (for those who understand it!), as follows:

Capacitor C1 is included to smooth out any ripple in the power supply, or sudden current changes in the circuit itself.

The LM35 sensor produces an output of 10mV / oC (millivolts per degrees centigrade) which over the range 0 to +100oC gives an output of 0-1V. This output is fed into the input, pin 5 of the LM3914 dot / bar display driver.

The LM285 is a voltage reference, which produces 2.5V at Point A. Resistor R1 controls the current to the LM285. Resistor R2 and variable resistor VR1 combine to give an adjustable voltage of 0-1.2V approximately, from the 2.5V source. In this case the voltage is adjusted to 0.5V (=50oC), and this is fed into pin 6 of the dot / bar display driver. This is the span / full scale of the range we require.

LM3914 Dot / Bar Display Driver:

Pin 3 is the LM3914 supply pin, which is connected to V+ (9V)

Pin 4 is connected to 0V (=0oC), and this is the zero / bottom end of the scale required.

Pin 2 and Pin 8 are also connected to 0V.

Resistor R3 controls the current for the LED indicators, and is connected between Pin 7 and 0V.

This chip is basically a linear 10 part divider of the range set, and there are 10 outputs, 1 from each of the 1/10th divisions. In this project,

Pin 1	=	output 1	5oC	LED 1
Pin 18	=	output 2	10oC	LED 2
Pin 17	=	output 3	15oC	LED 3
Pin 16	=	output 4	20oC	LED 4
Pin 15	=	output 5	25oC	LED 5
Pin 14	=	output 6	30oC	LED 6

Pins 13 to 10 are outputs 7 to 10 respectively, but are not used in this case, as we only want to display ambient temperatures of 0-30oC (0-0.3V), but could be included if you wanted to indicate 0-50oC.

Pin 9 is left unconnected for a dot display, or 1 LED on at any time, with a slight overlap. i.e. the next LED in the sequence comes on just before the previous one goes off.

If Pin 9 is connected to V+ Pin 3 (9V in this case) the display changes to Bar mode. i.e. if the temperature is at 20oC, LEDs 1, 2, 3 and 4 would all be lit in this example. The main disadvantage of this is that more power is consumed by the circuit and LEDs.

However, I have been working on the power consumption of this circuit. I cannot get it below approximately 21mA (milliamps) when 1 LED is lit, and 30mA when 2 LEDs are lit, so sadly it is not really suitable for long term battery power. Using a 9V PP3 battery, any circuit consuming 10mA or more is not considered good practise. (you'll spend a fortune on batteries).

If anyone is interested I will be looking at 5V, 9V and 12V versions, I can email / publish all details if / as requested, including a stripboard layout schematic, and a more detailed description than given above. Different supply voltages just need a few component values to be changed.

Plenty of us have unused power supplies around the house which can be utilised for this sort of thing. Even power supplies / charger units for defunct mobile phones will run small circuits such as this.

#### Component List:

#### Farnell P/N

R1	3K9Ω	1/4W, 1%	orange, white, black, brown - brown	934-1854
R2	10KΩ	1/4W, 1%	brown, black, black, red - brown	934-1110
R3	1KΩ	1/4W, 5%	brown, black, red – gold	232-9486
		Or better	or	
		1/4W, 1%		232-9885
VR1	10KΩ	23 turn Cermet trimmer pot, or similar		114-1404
C1	100μF	16V, axial leads, Aluminium Electrolytic Capacitor 16V, 10 or 20%, usually 20%		234-6499
IC1	LM35DZ	Temperature sensor		146-9236
IC2	LM285Z2.5	Bandgap voltage reference		966-5447
IC3	LM3914	Bar / Dot display driver		146-8964

#### Accessories:

- 6 x LEDs to suit
- 1 x 18 Pin DIL socket (for LM3914)
- 1 x 9V battery connector or 9V power supply
- 1 x enclosure to suit (if required)
- 1 x power supply plug (if required)
- 1 x power supply socket (if required)
- Stripboard, 0.1"
- Hook up wire, solder, solder pins.







# Dublin Chapter Seminar

## SATURDAY 2ND MAY, 2015

### *REGISTRATION FORM*

**Registration Fee: €60**

**Name:** .....

**Address:** .....

**Chapter:** .....

**Phone:** .....

**Email Address:** .....

**Paid by:** Cash  Cheque