



# The Old Southendian Organ Society (OSOS)



## SWELL STRINGS - ORGAN WORK UPDATE

**1. Pipework** Our Gamba is from the Shenfield organ, of which CC to Tenor E consists of narrow-scale open wood pipes (surprisingly stringy), continuing upwards into a spotted metal, roller-bearded treble. The Voix Celeste was sold to me by Peter Hammond: I believe he extracted it from the Ware organ before we moved in and removed the other ranks (incidentally, these included the best Open Diapason and Principal I've ever come across - pity they're not needed at SHSB but too good to waste, so they're stored in my attic!) The Celeste is a gem, delicate but with a delightful bite to it too. Both these ranks have had a preliminary regulating/voicing and are ready to instal on their chests as the latter become available. (The Gamba chests are now all ready)

**2. Wind Chests** You can't buy these off the shelf - they have to be made or adapted; for the Gamba bass I've used its own original direct-electric chest from Shenfield (18 notes), adding six more matching magnets and pallets to make it up to 2 octaves. I've then constructed two smaller chests to complete the compass up to the topmost A. For these I utilised some excellent hardwood panels from the Eastwood organ, to which I've fitted new-style Light Pattern pallet magnets from Kimber-Allen. For the 46-note Celeste I'm using the body of a Shenfield Dulciana chest but have designed a new top panel, again from first-class Eastwood timber, to which similar K-A magnets will be fitted in a couple of months' time.

**3. Pipe Racks** Again, these have to be made to specification and need to hold the pipes securely and (ideally) absolutely vertically too. I'll admit to being rather pleased with how the Gamba treble ones have turned out: when you look inside many organs you'll see some pipes leaning at odd angles (there are a few in the SHSB original) - but these have been given a bit of fanatical perfectionism and each pipe stands up at precisely 90 degrees in both planes!

**3. Key Contacts** Fitting these to the Swell is easy compared with those on the Great - the latter, with their cables, needed to be shoehorned into the tiniest of spaces (that's why I had to install 10-way relays to provide the required number of Great circuits, there only being room for one contact wire per key). With the Swell, you merely have to remove the music desk for direct access to the backs of the keys, with oodles of space all round. However, it's no doddle because the keys are much shorter than the Great ones and their pivots only allow the key-ends to rise by about 3 millimetres, calling for extreme precision in setting the gaps between contact wires and their wipers. To make it even harder, the keys aren't particularly



*Top two Gamba chests with pipe racks and pipes*

straight or level, they don't rise and fall by the same amount and not all of them go up quite vertically - which has made it necessary to position each contact and wiper exactly right to suit its own key rather than just installing an



*Magnets attached to the topboard, inside top Gamba wind chest*

equally-spaced row. However, I've managed to get the measurements sorted (working at mostly at home due to organ access problems) and jumped for joy this afternoon on fitting the contact rail for the first time and finding that everything aligned perfectly! As we now have the funds, I've utilised brand new solid silver 6-way contacts, copper/silver wipers, and I've fashioned the contact rail from the best hardwood, stainless steel and brass that I could get hold of. So it's going to look quite pretty in there! I've designed the whole thing so that the Swell contact assembly, on its extended cable, will lift out easily when access to the Great keys/ contacts is required.

**4. Wiring and Switches** I'm just about to commence soldering 162 wires to the contact terminals. This is micro-work, as the terminals to be soldered are only a millimetre apart.....so that'll need to be done con delicatissimo!....after which the wires issuing from them will be stitched into a multi-core cable going through the left-hand side of the console to the Gamba/Celeste switchbox, which is being fitted in a convenient spot between the switchgear for the Trumpet/Trombone and that for the Wald Flute. Again, the switches and their wiring will be 100% accessible, appearing directly in front of you upon removing the LH casework panel. I'm determined that the new bits being added will all be within easy reach when standing comfortably and with plenty of elbow room - no more crawling into inaccessible places and lying on your back in stygian gloom trying to reach (or even see) what you need to get at! The worst case of the latter must have been the Shenfield organ, of which switchgear was buried so deep inside that getting at it for adjustment would have entailed dismantling almost the entire instrument! It should be a real pleasure, in the future, to be able to work on the contacts and wires with everything right there within arm's reach, and in good light too. Once I've wired and soldered everything up, a multi-core cable will lead from the switchbox across to the String chest terminals, in the auxiliary swell box on the new west platform.



*Close up of magnets, cabling, and bus bar inside Gamba wind chest*

**5. Auxiliary Swell Box** All the panels for this, including the shutter assembly, are stored in the chamber but putting it all together will have to wait until everything else is in place, so that appropriate clearances can be allowed for the chests, pipes, racks and cables which need to go inside - hence, that won't be done until somewhat later in the year.

**6. Wind Supply** The wind trunking is all ready to fix to the chests once they're in place. One new take-off will need to be made from the main reservoir to blow the Gamba but the Celeste shares its wind supply with the immediately adjacent Sesquialtera, whose wind trunk was deliberately made extra-capacious in anticipation of the string additions.

**7. Console** The new solenoid draw-stops, with their engraved knobs (Contra Gamba 16, Gamba 8, Voix Celeste 8), are now in hand and all ready to instal beneath the existing Swell stops - I've only got to drill three holes for them, connect a few wires to the switches, and we're done and dusted there.

**8. Pistons** I'm preparing 4 more pistons for the Great and 4 for the Swell, having now worked out how to fit them and how electric pistons will be able to change pneumatic stops.....yes folks, it's possible!

So there we are as at 10th March. Some photos of the various components are included above, but if anyone would like to have a closer look at any of the above, I'll be pleased to arrange it.

Gerald Usher  
March 2016