

A NEW CONCEPT FOR ORGANBUILDING TECHNIQUES

STATEMENT

New XXIth pipe organs need electronic cards, mainly hybrid pipe organs including virtual and real pipes. At present most organbuilding suppliers are delivering closed, turnkey systems, whose all functionalities : stops, registration, magnet controls are definitely predefined. One can't change anything to the system, nor re-used hardware or software tools for new projects.

These turnkey systems are of course very expensive, at about more than 25000 \$ or € for a middle size organ. Moreover, Organbuilders are no longer Organbuilders but now *OrganAssemblers*. I am planning to help changing their situation.¹

My approach is quite different, as I separate completely :

1. The hardware basis, including all hardware cards, component necessary for running the organ.
2. The software configuration which adapts accurately the software to the customer requirements. Which is time (and money) consuming in the case of turnkey systems.

For reaching this goal, I supply all hardware and software tools for doing this. So once the hardware cards are running with a test software tool, software development is much more relax, as the Organbuilder is sure that the hardware is perfectly running.

More, he can now learn, modify, adapt these software tools for fitting each new project. These tools are elementary bricks as classic organbuilding supplier parts. As in the past he could adapt trackers, drawknobs following the customer requirements. For example, tasks such as **transposition, prolongement, octave transposers**, which required in the past lots of wire soldering are now reduced to only some software lines to write and configure to your specific project. Such software tools are easily re-used for future projects. Of course such software configuration demands a minimum of time investment.

If you don't have time to test steps 1 and 2 as above, don't hesitate : choose a turnkey system.

But if you adhere to my technology, software tools I provide are re-used: For example, all functionalities such as : Transposer, stop control, registrations, displays, are supplied as modules the organbuilder can use as he wants.

Moreover, my Chest Designer tool is optimized for design, control and building any chests using « service bureau » machine tools. No personal large CNC machine is necessary in this case². No costly investment, which is often underemployed in many Pipe Organ Factories.

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¹ In the past, Organbuilders were making themselves up to their own screws ! Including of course their own pipes, keyboards, chests, consoles, and so on.

² Even if I recognize, low cost, little CNC machines can be now usefull for small carving and parts building.

ANNEX 1: SOFTWARE FUNCTIONS SUMMARY

PRIMARILY My software controls :

- All the keyboard inputs. Any number, any kind of keyboards : contact or magnetic
- All the magnet outputs. Any size, any number.
- One or 2 touch screen displays
- Drawknobs for stops of registration combination.
- Pistons

SPECIAL FUNCTIONS : for example :

TRANSPOSITION + or - n keys:
transpose(keyboard, n);

PROLONGEMENT 8->16
move8_16(output_register,input_register);

PROLONGEMENT 8->4
move8_4(output_register,input_register);

PROLONGEMENT Specific : for example 4 pipes upper 64 (as the output connectors have only 64 pins) :

move_specific(output_register, input_register, nkey_out, nkey_in, nkeys_to_move);

With :

input_register : any keyboard
output_register : any output board connector
nkey_in : first key number to move in the input_register
nkey_out : first key number to store in the output register
nkeys_to_move : number of keys to be moved on the output register

Double Pedal

TREMULANT for each stop : with frequency control.