

Arranging Percussion Parts

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For most small organs, arranging notes in MIDI is a straight forward process. While the character of the tone played will change if slides are used to change voices, it's pretty much "a note is a note," and a MIDI file written for a paper roll for a Raffin 20 note reed organ will play correctly on a Hoffbauer 20, or it can be punched for a Pell 31 and probably a John Smith Busker for that matter.

While we often think of percussion as being found on larger organs, there have been 22 and 36 note organs with a bell and/or drums, and some 50+ note street organs do not have drums. When I added "drums" to Norma's OSI 20-er "Strasseorgel" *Erie Airs* a whole new window on arranging was opened up to me. About the same time I was invited to do some arranging for *Miss B and Friends*, an Australian "robot band" built by COAA overseas member David Holt. Both use only 20 pipes and three "drum notes," but the drum notes are different.



Figure 1. *Erie Airs*, an OSI 20 note organ with added percussion - 20 pipe notes on MIDI Channel 1, tambourine, cymbal & wood-block on Channel 10, and 9 glockenspiel notes on Channel 2.



Figure 2. *Miss B & Friends*, based on a Pell Harmonette - 20 pipe notes with 10 glockenspiel notes duplicating upper melody pipes and 3 drum notes (bass and 2 snare) all on MIDI Channel 1.

For good percussion lines, the arranger needs to understand the construction of the individual organ on which the tune will be played.

- You need to know what percussion sounds the organ has - i.e. snare drum, bass drum, cymbal, wood block, triangle, etc.
- You need to know if these are linked - many have bass drum and cymbal on a single key or hole.
- You need to know if any note "reiterates." For example, does the snare drum play a roll if a note is sustained, or does a drum roll require a series of alternating signals on two note numbers. Let me re-emphasize that knowledge of an *individual* instrument may be needed as it is possible that two instruments using the same roll or book layout may actually have different percussion installed.
- You need to know about "note offset." On band organs there is a lag between the time a drum signal is sent and the time a beat is heard because the beater has to accelerate and move through a distance. With pipe sounds, the reaction is almost instantaneous. The physical response of different percussion notes will almost certainly be different for different notes because of variations in the construction of the beater mechanisms. On Wurlitzer instruments the drum holes on the tracker bar are set ahead of the pipe holes to provide the required lead time. On book organs, the arranger must typically provide the lead for drum beats when marking the book.

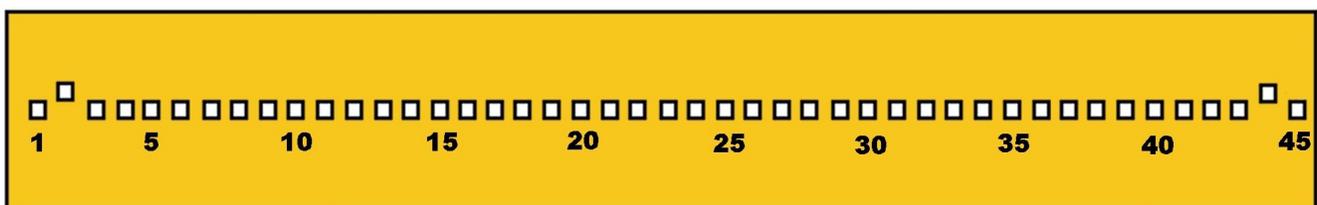


Figure 3. Diagram of a Wurlitzer 125 tracker bar. Holes 2 (snare drum) and 44 (bass drum & cymbal) are offset to give a lead time.

Recently I had an opportunity to look closely at percussion lines in a number of Dutch and German organ books. This happened when someone posted a link to a large number of book scans on the internet. I was surprised by what I consider to be very poor drum parts in the work of arrangers whose melody, counter-melody and accompaniment lines are really superb. Percussion is not a strong part of the "Dutch street organ" sound, and, in fact, a considerable number of European outdoor instrument do not even have drums. Drum beats are typically softer than on American instruments, and playing a street organ MIDI file on a Wurlitzer without "re-arrangement" may not produce a good performance!

Dance organs, of course, feature a lot of varied percussion. Much stronger and better drum lines will be found on arrangements for these instruments.

While the Wurlitzer bam-bam-bam drum lines are often perhaps a bit too dominant for European tastes, they are used with skill, and add an essential part of the character of the arrangements. It is surprisingly easy to adapt the "notes" of most Wurlitzer 125 and 150 rolls which have been scanned to MIDI files to play successfully on 20 note instruments such as my John Smith organ, but without the drums, a lot is lacking.

Unlike what happens in a lot of live band performances, in many good band organ arrangements the percussion starts and stops to provide variety in a tune. It is also rare for a mechanical instrument to use "drum solos," but there are occasions in which a short series of drum beats is *critical* to maintaining continuity. "Tijuana Taxi" is a good example of such a tune.

Editing Percussion in MIDI

As with "musical notes," the use of a MIDI editor such as CakeWalk or PowerTracks speeds up the arranging process for percussion notes in many ways. These include:

- The ability to copy and paste repetitions
- The ability to cut sections to provide variety
- The ability to slide all percussion notes forward or backward for timing purposes, or for that matter, to slide only the bass drum while leaving the others in place
- PowerTracks Pro, and I would guess many other editors, allows the arranger to fill a line with sixty or more MIDI drum lines. (To use "fill track with MIDI drum pattern, the bars played in the note lines must coincide with the bar lines in the MIDI file. If the MIDI file has been generated with a keyboard or by scanning a paper roll, this will generally not be the case.)
- The ability to adjust note lengths. This is not always trivial since a signal must be long enough to allow the beater to hit, but not long enough to allow it to act as a damper. In a MIDI file length must be correct in milli-seconds. Some editors list note lengths in "ticks," but the length of a tick varies with the Tempo setting, and in fact Tempo can change within a song.

Wally Venable is a COAA Board member and an active amateur arranger of both paper rolls and MIDI

files for small organs.