

Supplement to the article “Messiaen Plays Messiaen” by Timothy Tikker, in *The American Organist*, November 2008 (vol. 42, no. 11), pp. 58-62, per endnote no. 22.

**The mixture compositions of the Cavaillé-Coll grand orgue  
at l'Église de la Sainte Trinité, Paris, France:**

The Grand Orgue Plein-Jeu was originally III-VI. Its composition remains unknown at present. However, the most typical composition for such a stop as made by Cavaillé-Coll at that time was as follows:

C		$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,	
c <sup>o</sup>		$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,
c <sup>'</sup>	$5^{1/3}$ ,	$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,
c <sup>''</sup>	$8'$	$5^{1/3}$ ,	$4'$	$2^{2/3}$ ,	$2'$
					$1^{1/3}$ ,

Examples may be found in the Positifs of the organs at Sainte-Clotilde<sup>1</sup> (1859) and Saint-Sulpice<sup>2</sup> (1862), both in Paris.

However, Cavaillé-Coll also used the following composition (as at Notre-Dame de Saint-Dizier<sup>3</sup>, 1862):

C		$2'$	$1^{1/3}$ ,	$1'$	
c <sup>o</sup>		$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,	$1'$
c <sup>'</sup>	$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,	$1'$
c <sup>''</sup>	$5^{1/3}$ ,	$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,
					$1'$

Based on careful listenings to Messiaen's 1956 recordings (especially to passages in *Livre d'Orgue* where the Plein Jeu is used in 4'-based registrations: the song of the grive musicienne in “Chants d'Oiseaux,” and the Pédale line in “Pièce en Trio II”), the composition of the new Plein Jeu III-V that Pleyel installed in 1934 appears to have been:

C		$2'$	$1^{1/3}$ ,	$1'$	
c <sup>'</sup>		$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,	$1'$
c <sup>''</sup>	$5^{1/3}$ ,	$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,
					$1'$

This Plein Jeu was recomposed to V in 1966 by Beuchet-Debierre<sup>4</sup>:

C		$2'$	$1^{1/3}$ ,	$1'$	$2^{2/3}$ ,	$1^{1/2}$ ,
f# <sup>o</sup>	$4'$	$2^{2/3}$ ,	$2'$	$1^{1/3}$ ,	$1'$	
f# <sup>'</sup>	$8'$	$5^{1/3}$ ,	$4'$	$2^{2/3}$ ,	$2'$	

Note the octave breaks. This is the exact composition of a Fourniture V according to Dom Bédos<sup>5</sup>, except that the breaks are on F#s, instead of Fs. The 2' rank is on a separate slider, to allow it to be drawn as the 2' Doublette.

The Cymbale IV added in 1966 was composed as follows<sup>6</sup>:

C				$\frac{1}{2}'$	$\frac{1}{3}'$	$\frac{1}{4}'$	$\frac{1}{6}'$
c <sup>°</sup>				$\frac{2}{3}'$	$\frac{1}{2}'$	$\frac{1}{3}'$	$\frac{1}{4}'$
f# <sup>°</sup>			1'	$\frac{2}{3}'$	$\frac{1}{2}'$	$\frac{1}{3}'$	
c'			$1\frac{1}{3}'$	1'	$\frac{2}{3}'$	$\frac{1}{2}'$	
f#'		2'	$1\frac{1}{3}'$	1'	$\frac{2}{3}'$		
c''		$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$	1'		
f#''	4'	$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$			
c'''	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'			

The break-structure is essentially Dom Bédos' scheme for a Cymbale IV <sup>7</sup>, except for having breaks on F#s instead of Fs. However, the pitch-level is higher than that of Bédos, with a ceiling just below  $\frac{1}{12}'$  G for most all the compass (Dom Bédos' ceiling is just below  $\frac{1}{8}'$  C).

This high pitch-ceiling proved to be problematic. On Messiaen's recording of the *Méditations sur le Mystère de la Sainte Trinité*, one can clearly hear the Cymbale's higher pitches protruding in large ensembles, especially in the upper half of the bass octave.

Messiaen's organ technician Olivier Glandaz eventually remedied this by silencing the Cymbale's top two ranks for C-b', then just the highest rank for c''-b'', with the following result<sup>8</sup>:

C				$\frac{1}{2}'$	$\frac{1}{3}'$
c <sup>°</sup>				$\frac{2}{3}'$	$\frac{1}{2}'$
f# <sup>°</sup>			1'	$\frac{2}{3}'$	
c'			$1\frac{1}{3}'$	1'	
f#'		2'	$1\frac{1}{3}'$		
c''		$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$	
f#''	4'	$2\frac{2}{3}'$	2'		
c'''	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'	

This lowers the pitch-ceiling by an octave (to just under  $\frac{1}{6}'$  G, which is also the ceiling of the Plein Jeu V) for the first three octaves of the compass. For the treble octave, the ceiling rises to  $\frac{1}{8}'$  C, the Dom Bédos limit. When combined with the Plein Jeu, the Cymbale now has the effect of maintaining the same overall pitch ceiling as the Plein Jeu, while effectively smoothing-out the latter's octave breaks – as can be seen below:

C		2'	$1\frac{1}{3}'$	1'	$\frac{2}{3}'$	$\frac{1}{2}'$
c <sup>°</sup>					$\frac{1}{2}'$	$\frac{1}{3}'$
f# <sup>°</sup>				4'	$2\frac{2}{3}'$	2'
					$1\frac{1}{3}'$	1'
						$1\frac{2}{3}'$

c'	4'	$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$	1'
				$1\frac{1}{3}'$	1'
f#'	8'	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'
				2'	$1\frac{1}{3}'$
c''	8'	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'
				$2\frac{2}{3}'$	$1\frac{1}{3}'$
f#''	8'	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'
				4'	$2\frac{2}{3}'$
c'''	8'	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'
		$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'

The Grand Orgue Cornet V is an original Cavaillé-Coll stop:

c'	8'	4'	$2\frac{2}{3}'$	2'	$1\frac{3}{5}'$
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This Cornet is mounted; the 8' rank is stopped and chimneyed. That this Cornet starts at c' is not at all surprising (that being standard French practice for centuries). What *is* surprising is that in “Subtilité des Corps glorieux” Messiaen writes down to g#° for this stop! When he recorded this piece at La Trinité, Messiaen played these lower notes on the Positif Cornet (see below).

The Positif Fourniture IV was added in 1966<sup>9</sup>:

C		2'	$1\frac{1}{3}'$	1'	$\frac{2}{3}'$
f°		$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$	1'
f°	4'	$2\frac{2}{3}'$	2'	$1\frac{1}{3}'$	
f''	$5\frac{1}{3}'$	4'	$2\frac{2}{3}'$	2'	

This is the only manual chorus mixture in the organ with consistently ascending pitch, all the others being more repetitious in nature. Still, its pitch-ceiling is not particularly high, rising to just below  $\frac{1}{8}'$  in the treble octave.

The Positif Cornet harmonique II-V is also an original Cavaillé-Coll stop:

C	$2\frac{2}{3}'$	2'
c°	$2\frac{2}{3}'$	2' $1\frac{3}{5}'$
f°	8' 4'	$2\frac{2}{3}'$ 2' $1\frac{3}{5}'$

This Cornet is mounted from tenor C; the 8' rank is stopped, but not chimneyed. The designation “harmonique” refers only to this Cornet’s progressive composition; it has no double-length pipes. Sources disagree concerning on which note the 8' and 4' ranks enter. The appendix to the score of *Méditations sur le Mystère de la Sainte Trinité* indicates that these pitches enter at f°. Winter’s article, however, gives c'. The Trinité organ technician Olivier Glandaz says g<sup>10</sup>. The lowest-ranging passage ever written by Messiaen for this stop in an exposed context is found in the “Sortie” from *Messe de la Pentecôte*, pp. 23-26. This passage calls for the Positif stops to be played via the pedal

coupler: the Cornet, reinforced by the 4' Prestant, 4' Flûte, "mixtures" (i.e. Nazard, Doublette, Tierce) and 1' Piccolo, but no stops below 4' pitch (with no Pédale stops drawn). Thus the 8' rank of the Cornet is the only 8' pitch to be heard in this registration. The passage ranges from e' down to f#°. Careful listening to the composer's 1956 recording reveals that there is indeed 8' tone audible throughout this part, including f#°. Therefore, it appears that Messiaen was correct in noting that this stop introduces its 8' and 4' ranks at f°. In his appendix to the *Méditations*, Messiaen says that the Positif Cornet is softer than that of the Grand Orgue, yet calls it the organ's true solo Cornet.

The Récit Cymbale III was added in 1934, and is called for extensively in Messiaen's registrations. It has a strict Dom Bédos composition (and thus a 1/8' pitch-ceiling for the first four octaves of compass)<sup>11</sup>:

C				1/2'	1/3'	1/4'
c°			2/3'	1/2'	1/3'	
f°		1'	2/3'	1/2'		
c'		1 1/3'	1'	2/3'		
f'	2'	1 1/3'	1'			
c''	2 2/3'	2'	1 1/3'			
f''	4'	2 2/3'	2'			

The Pédale Plein Jeu IV added in 1966 seems to have held little interest for Messiaen. It is hardly ever called for in his post-1966 scores. In "l'apparition du Christ ressuscité à Marie-Madeleine" from *Livre du Saint Sacrement*, this stop is specified for a brief passage beginning at the bottom of p. 75. Otherwise, it isn't even mentioned for full-organ registrations. Its composition is as follows<sup>12</sup>:

C	2 2/3'	2'	1 1/3'	1'
c°	4'	2 2/3'	2'	1 1/3'
c'	5 1/3'	4'	2 2/3'	2'

<sup>1</sup> Ton Van Eck, "L'orgue de Sainte-Clotilde et l'art de la registration chez César Franck," *Cahiers et Mémoires de l'Orgue*, no. 44, 1990-II, p. 86 (article: pp. 81-90).

<sup>2</sup> Jesse Eschbach, "Some Details of Voicing Techniques At St-Sulpice, Paris," *The Organ Yearbook*, vol. 9, 1978, p. 34

<sup>3</sup> Laurent Plet, "L'Orgue Aristide Cavaillé-Coll de l'église Notre-Dame de Saint-Dizier," *La Flûte Harmonique*, no. 66/67/68, 1993, p. 70.

<sup>4</sup> See the Rudolf Walter article cited in endnote 10 of my main article.

<sup>5</sup> Dom Bédos de Celles, *L'Art du Facteur d'Orgues*, 1766/78; facsimile available in *Méthodes et Traités: Orgue*, vol. 3-4, see sections 174, 175 (facsimile vol. 3, p. 42; vol. 4, pp. 29-31).

<sup>6</sup> Rudolf Walter, op. cit.

<sup>7</sup> Ibid., section 175, vol. 3, p. 42; vol. 4, pp. 29-31.

<sup>8</sup> Letter to the author from Olivier Glandaz, 24 October 1994.

<sup>9</sup> Rudolf Walter, op. cit.

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<sup>10</sup> letter to the author, 24 October 1994.

<sup>11</sup> Rudolf Walter, op. cit.

<sup>12</sup> Ibid.

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Correction to main article, endnote 10: Raugel's omission of the Grand Orgue's 4' Flûte gave this division only *thirteen* stops (not fifteen) – i.e. the Grand Orgue manual originally had fourteen stops, and the organ had 46 stops in total, not 45.