

# Classical Pipe organ MIDI-CI profile

## Profile ID

Byte 1	Standard defined profile
Byte 2	Pipe organ profile number MSB
Byte 3	Pipe organ profile number LSB
Byte 4	Profile Version
Byte 5	Profile level

## Bitmap format

Byte	Bits		
Byte 1	D0	Division mapping 0 = Pedal, 1 = Great, 2 = Swell, 3 = Choir/Positive, 4 = Solo, 5 = String, 6 = antiphonal and 7 is user defined	Tells which division of a Pipe organ that this profile covers
	D1		
	D2		
	D3		
	D4		
	D5		
	D6		
	D8		

## Required Channel messages

### Note on/off

If the divisional mapping is 0, the device will sound all notes from C2 (36)-G4(67)

If not, the device will sound all notes from C2 (36)-C7 (96)

Velocity will be ignored or always set to 64

### Registered Channel numbers

### Midi 1 mapping

For all the following flags, a 1 will turn that stop on and a 0 will turn it off.

Symbols used:

< maps one bit higher if stop not present

> maps one bit lower if stop not present

<2 maps the number displayed bits higher if stop not present

>2 maps the number displayed bits lower if stop not present

\* maps to lowest bit of the same family and pitch if stop not present

\*\* maps to an appropriate bit of the same pitch if stop and all other stops of the same family are not present

\*\*\* or more asterisks; refer to footnote

Registered Parametric number MSB	Registered Parametric Number LSB	Data (14 bits)
(undefined)	0x0	LSB: Bit 0 (64' rank) Bit 1 (32' Principal 1) Bit 2 (32' Principal 2)* Bit 3 (32' Flute)** Bit 4 (32' String)** Bit 5 (21 2/3' Principal) Bit 6 (21 2/3' Flute)** MSB: Bit 7 (16' Wood Principal) Bit 8 (16' Metal Principal)* Bit 9 (16' Flute 1)* Bit 10 (16' Flute 2)** Bit 11 (16' String)** Bit 12 (10 2/3 Principal) Bit 13 (10 2/3 Flute) **
(undefined)	0x01	LSB: Bit 0 (8' Major Principal)< Bit 1 (8' Principal 1 (mellow)) Bit 2 (8' Principal 2 (mid))* Bit 3 (8' Principal 3 (bright))* Bit 4 (8' Gemshorn)>3 Bit 5 (8' Open/Harmonic Flute) Bit 6 (8' Stopped flute/gedackt) MSB: Bit 7 (8' Quintaden)*** Bit 8 (8' Flute dulcet) Bit 9 (8' Flute celeste) Bit 10 (8' Gamba) Bit 11 (8' String)

		Bit 12 (8' String celeste) Bit 13 (8' String unda maris)
<p>&lt; maps to next bit if no Major Principal 8 on organ          &gt;3 maps 3 bits lower if no Gemshorn 8 on organ          *** Quintaden can map to flutes of 8 and 2 2/3 if there is no quintaden present</p>		
(undefined)	0x02	LSB: Bit 0 (5 1/3' Principal) Bit 1 (5 1/3' Flute)** Bit 2 (4' Principal 1 (mellow)) Bit 3 (4' Principal 2 (mid-bright)) Bit 4 (4' Gemshorn)>2 Bit 5 (4' Sptiz flute) Bit 6 (4' Clear/Traverse flute) MSB: Bit 7 (4' Koppel flute) Bit 8 (4' String) Bit 9 (4' String celeste) Bit 10 (3 1/5 Stop) Bit 11 (2 2/3' Principal) Bit 12 (2 2/3' Flute)** Bit 13 (2' Principal 1)
(undefined)	0x03	LSB: Bit 0 (2' Principal 2)* Bit 1 (2' Gemshorn)>2 Bit 2 (2' Piccolo)** Bit 3 (2' Wald flute)* Bit 4 (2' String) Bit 5 (2' String celeste) Bit 6 (1 3/5' Principal) MSB: Bit 7 (1 3/5' Flute)** Bit 8 (1 1/3' Principal) Bit 9 (1 1/3' Flute)** Bit 10 (1 1/7 Stop) Bit 11 (1' Principal) Bit 12 (1' Flute)** Bit 13 (8/9 Stop)
(undefined)	0x04	LSB: Bit 0 (Low Mixture II-X) for 16' Bit 1 (Mid Mixture II-X) for 8' Bit 2 (High Mixture/Cymbal /Scharf II-V) Bit 3 (Cornet III-V)*** Bit 4 (Sesquialtera II)**** Bit 5 (Mixture with thirds II-X)***** Bit 6 (String Mixture II-X)

		MSB: Bit 7 (64' Reed) Bit 8 (32' Bombarde) Bit 9 (32' Trombone/Posaune)* Bit 10 (32' Fagott)* Bit 11 (16' Tuba) Bit 12 (16' Bombarde) Bit 13(16' Double trumpet)*
*** Cornet bit will map to appropriate 5 ranks (8, 4, 2 2/3, 2 and 1 3/5) if no cornet mixture stop. **** Sesquialtera bit will map to appropriate 2 ranks (2 2/3 and 1 3/5) if no Sesquialtera stop present. A 2 rank cornet will also map to this bit. ***** Any mixture that has thirds and is not a 2 rank sesquialtera will map here		
(undefined)	0x05	LSB Bit 0 (16' Trombone/Posaune)* Bit 1 (16' Fagott)* Bit 2 (16' Rankette/Dulzian)** Bit 3 (8' Royal/Festive trumpet) Bit 4 (8' Tuba)* Bit 5 (8' Trumpet/Trompette) Bit 6 (8' Cornopeon)* MSB: Bit 7 (8' Fagott) Bit 8 (8' Horn) Bit 9 (8' Hauboiss/Oboe) Bit 10 (8' Cor Anglais/English horn) Bit 11 (8' Krumhorne/Cromorne /Cremona)< Bit 12 (8' Clarinet)> Bit 13 (8' Regal)>2
(undefined)	0x06	LSB: Bit 0 (8' Vox Humana) Bit 1 (4' Tuba) Bit 2 (4' Clarion) Bit 3 (4' Schalmei)* Bit 4 (Tremulant) Bit 5 (Zimblestern) Bit 6 (16' coupler) Bit 7 (8' unison off) MSB: Bit 8 (4' coupler) Bits 9-13 are reserved)

## Midi 2 mapping

For more efficient midi 2 mapping, it would be appropriate to have the stops mapped to 32-bit flag sets than 2 7-bit values due to how MIDI 2 implements registered parameter messages.

Registered Parametric number MSB	Registered Parametric Number LSB	Data (32 bits)
(undefined)	0x0	Bit 0 (64' rank) Bit 1 (32' Principal 1) Bit 2 (32' Principal 2)* Bit 3 (32' Flute)** Bit 4 (32' String)** Bit 5 (21 2/3' Principal) Bit 6 (21 2/3' Flute)** Bit 7 (16' Wood Principal) Bit 8 (16' Metal Principal)* Bit 9 (16' Flute 1)* Bit 10 (16' Flute 2)** Bit 11 (16' String)** Bit 12 (10 2/3 Principal) Bit 13 (10 2/3 Flute) ** Bit 14 (8' Major Principal)< Bit 15 (8' Principal 1 (mellow)) Bit 16 (8' Principal 2 (mid))* Bit 17 (8' Principal 3 (bright))* Bit 18 (8' Gemshorn)>3 Bit 19 (8' Open/Harmonic Flute) Bit 20 (8' Stopped flute/gedackt) Bit 21 (8' Quintaden)*** Bit 22 (8' Flute dulcet) Bit 23 (8' Flute celeste) Bit 24 (8' Gamba) Bit 25 (8' String) Bit 26 (8' String celeste) Bit 27 (8' String unda maris) Bit 28 (5 1/3' Principal) Bit 29 (5 1/3' Flute)** Bit 30 (4' Principal 1 (mellow)) Bit 31 (4' Principal 2 (mid-bright))
< maps to next bit if no Major Principal 8 on organ >3 maps 3 bits lower if no Gemshorn 8 on organ *** Quintaden can map to flutes of 8 and 2 2/3 if there is no quintaden present		
(undefined)	0x01	Bit 0 (4' Gemshorn)>2

		Bit 1 (4' Sptiz flute) Bit 2 (4' Clear/Traverse flute) Bit 3 (4' Koppel flute) Bit 4 (4' String) Bit 5 (4' String celeste) Bit 6 (3 1/5 Stop) Bit 7 (2 2/3' Principal) Bit 8 (2 2/3' Flute)** Bit 9 (2' Principal 1) Bit 10 (2' Principal 2)* Bit 11 (2' Gemshorn)>2 Bit 12 (2' Piccolo)** Bit 13 (2' Wald flute)* Bit 14 (2' String) Bit 15 (2' String celeste) Bit 16 (1 3/5' Principal) Bit 17 (1 3/5' Flute)** Bit 18 (1 1/3' Principal) Bit 19 (1 1/3' Flute)** Bit 20 (1 1/7 Stop) Bit 21 (1' Principal) Bit 22 (1' Flute)** Bit 23 (8/9 Stop) Bit 24 (Low Mixture II-X) for 16' Bit 25 (Mid Mixture II-X) for 8' Bit 26 (High Mixture/Cymbal /Scharf II-V) Bit 27 (Cornet III-V)*** Bit 28 (Sesquialtera II)**** Bit 29 (Mixture with thirds II-X)***** Bit 30 (String Mixture II-X) Bit 31 (64' Reed)
*** Cornet bit will map to appropriate 5 ranks (8, 4, 2 2/3, 2 and 1 3/5) if no cornet mixture stop. **** Sesquialtera bit will map to appropriate 2 ranks (2 2/3 and 1 3/5) if no Sesquialtera stop present. A 2 rank cornet will also map to this bit. ***** Any mixture that has thirds and is not a 2 rank sesquialtera will map here		
(undefined)	0x02	Bit 0 (32' Bombarde) Bit 1 (32' Trombone/Posaune)* Bit 2 (32' Fagott)* Bit 3 (16' Tuba) Bit 4 (16' Bombarde) Bit 5 (16' Double trumpet)* Bit 6 (16' Trombone/Posaune)* Bit 7 (16' Fagott)* Bit 8 (16' Rankette/Dulzian)**

		Bit 9 (8' Royal/Festive trumpet) Bit 10 (8' Tuba)* Bit 11 (8' Trumpet/Trompette) Bit 12 (8' Cornopeon)* Bit 13 (8' Fagott) Bit 14 (8' Horn) Bit 15 (8' Haubois/Oboe) Bit 16 (8' Cor Anglais/English horn) Bit 17 (8' Krumhorne/Cromorne /Cremona)< Bit 18 (8' Clarinet)> Bit 19 (8' Regal)>2 Bit 20 (8' Vox Humana) Bit 21 (4' Tuba) Bit 22 (4' Clarion) Bit 23 (4' Schalmei)* Bit 24 (Tremulant) Bit 25 (Zimblestern) Bit 26 (16' coupler) Bit 27 (8' unison off) MSB: Bit 28 (4' coupler) Bits 29-31 are reserved)
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