



Drawbars and Harmonics

1 : A Quiz

You will need to be seated one day at the organ for this. On the Upper Manual you're going to use just the Middle C key. This is also called C3. An octave above Middle C is called C4 and an octave below is called C2. A Perfect Fifth above Middle C is therefore called G3. On the Lower Manual is where you are going to "play the quiz". The only sounds will be in UM1 and LM1, in each case being "Organ Drawbars 1". Ensure all other sounds in UM and LM are switched off.

Firstly, pull out fully the 8' Lower Manual Drawbar. This is the only drawbar on the Lower Manual you are going to use.

Now we're ready to start. The basic idea is that you are going to work through all the Upper Manual Drawbars one at a time, each time playing Middle C. On the Lower Drawbar you will be seeking which key when played (with the 8' drawbar) will give the same pitch of sound as the Middle C key you've just played on the Upper Manual. Clear as mud?

Let's make a start. *Give answers like C5, or G4 etc.*

Q1. Upper Manual : pull **16'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q1.

Q2. Upper Manual : push 16' drawbar fully in, pull **8'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q2.

Q3. Upper Manual : push 8' drawbar fully in, pull **4'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q3.

Q4. Upper Manual : push 4' drawbar fully in, pull **2'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q4.

Q5. Upper Manual : push 2' drawbar fully in, pull **1'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q5

There is a method in my madness which may now begin to become apparent.

Q6. Upper Manual : push 1' drawbar fully in, pull **2²/₃'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q6.

Q7. Upper Manual : push 2²/₃' drawbar fully in, pull **1³/₅'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q7.

Q8. Upper Manual : push 1³/₅' drawbar fully in, pull **1¹/₃'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q8.

Q9. Upper Manual : push 1¹/₃' drawbar fully in, pull **5¹/₃'** drawbar fully out. Play Middle C. Now find which key on the Lower Manual produces the same pitch. That is the answer to Q9.

Answers will be given next month and we'll proceed on from there to investigate their significance.