



# LC3

## MUSIC LAB

### Installation Guide

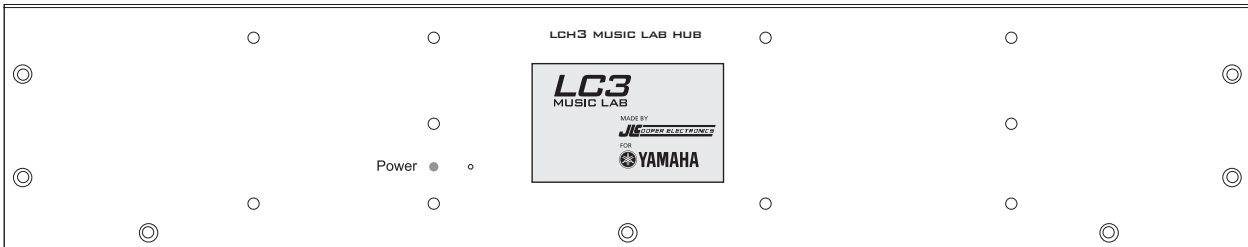
# Yamaha LC3 Installation Guide

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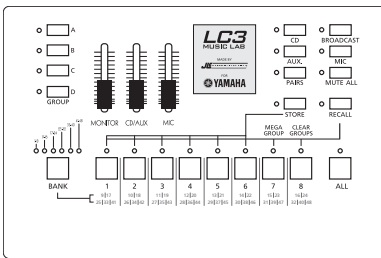
# LC3 Installation

## List of LC3 Controller System Parts

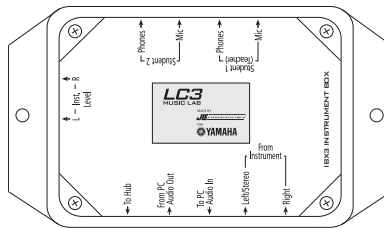
LC3 Class Hub with power adapter (Qty 1)



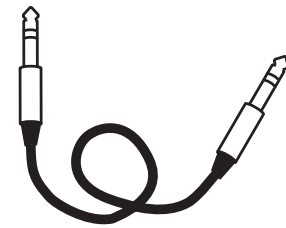
LC3 Controller Unit (Qty 1)



Instrument Box (Qty 9)



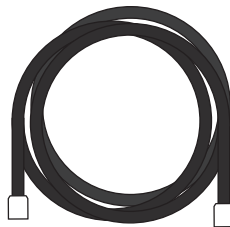
Stereo Instrument Cables (Qty 9)



Stereo Headphones with Microphones (Qty 9)



RJ45 Lab Connector Cable 10 meters (Qty 10)



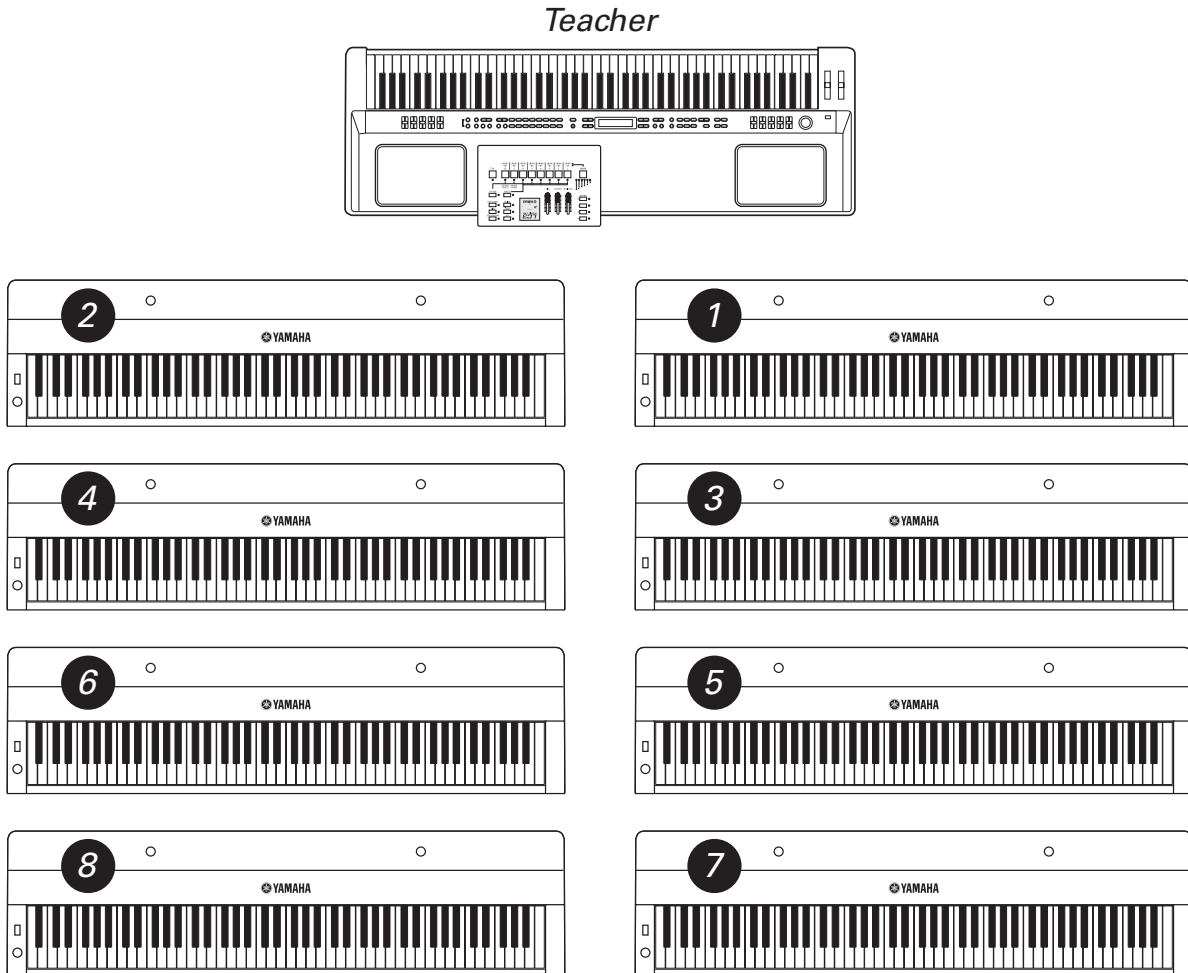
Velcro strip pairs for Instrument Boxes (Qty 9)



*Note: If installing more than the eight station base system, follow the steps outlined in the LC3 Expansion Kit Installation Guide packaged with the expansion.*



## Step 1: Positioning of Instruments in Classroom

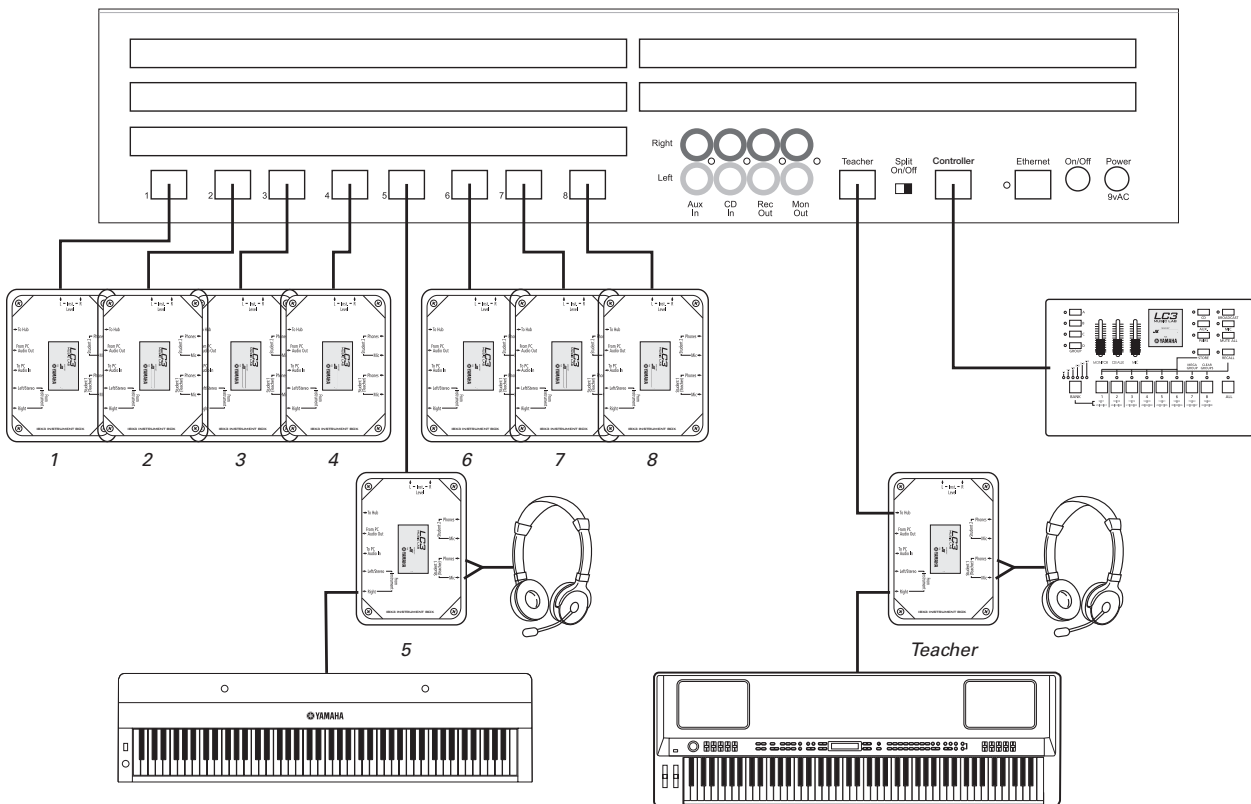
1. With input from the instructor, determine where instruments will be placed. Some teachers want to see student hand positions in keyboard labs. Others want all students facing forward.
2. Determine the numbering system for instruments. The student buttons on the CONTROLLER are labeled 1-8 left-to-right. It might be helpful to arrange students in that order from the teacher's perspective. (See illustration below)
3. Determine where cable and power cords are to be run. If possible, avoid places where students would walk over cables. If cables will run across the floor, determine one spot where the cables from each row of instruments will run. Obtain cord covers (from a hardware store) to cover the cables so students don't trip.
4. Place instruments in position.



*Pictured: one CP300 keyboard with LC3 controller, eight P155 digital pianos*

## Step 2: Standard Installation LC3

1. Determine the position of the Hub in the room. Keep in mind that parts of the LC3 Lab must be connected to the hub so several cables will run to it.
2. Connect the headphone out of all instruments to the FROM INSTRUMENT input on their respective Instrument Boxes using the stereo instrument cables.
3. Plug a headset into the STUDENT 1 jacks on each Instrument Box. Plugs are marked with headphone  and mic  icons. Make sure that the plastic plugs snap firmly and fully into the Instrument Box.
4. Connect each student's Instrument Box to their respective student number jack on the Hub using RJ45 connector cables. If the cable is too long, the excess should be stored near the student station.
5. Connect the teacher's Instrument Box to the TEACHER jack on the Hub using an RJ45 cable.
6. Connect the Controller to the CONTROLLER input on the Hub using an RJ45 cable.
7. Make sure the SPLIT switch on the Hub is set to OFF.
8. Plug in the power supply to the Hub.
9. Turn on the Hub.

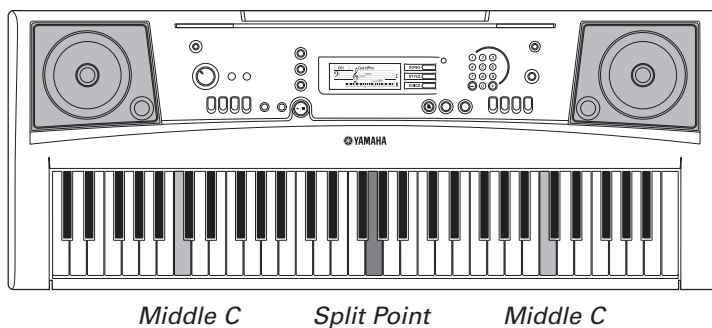


## Split Mode

If you would like to have two students at each instrument working independently of each other, all that is required is setting your instrument properly and adding additional Yamaha CM500 headset microphones to your system. Each student instrument must have the following settings made for SPLIT MODE to work properly:

1. Split Keyboard into two voices (sometimes called LEFT voice).
2. Octave shift both the RIGHT and LEFT voices. This allows each student to have their own “Middle C” on their part of the keyboard.
3. Pan the RIGHT and LEFT voices to “hard right” and “hard left” respectively. This isolates each student so they don’t hear each other (unless controlled by the teacher).
4. Switch any REVERB effect off. This ensures, for example, that Student 1 won’t hear an echo of Student 2 in their headphones.

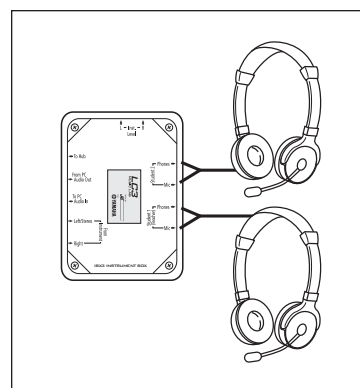
As you can see, there are many settings to perform on each student instrument each time they’re powered up. The LC3 settings only need to be set once. If your instruments have a memory or recall function (sometimes called Registrations), it’s a good idea to store these settings to get your classes ready as quickly as possible.



If your instruments (like the Yamaha PSR-E313 above) meet these requirements, then follow the next three steps to start working in SPLIT MODE.

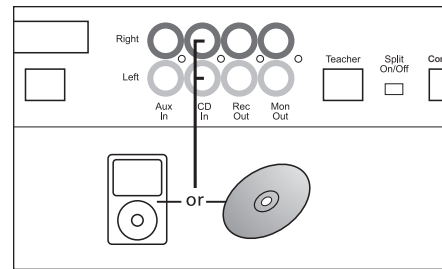
## LC3 SETTINGS

1. Plug the first headset into the STUDENT 1 jacks on Instrument Box. Plugs are marked with headphone and microphone icons.
2. Plug in optional second headsets to the STUDENT 2 jacks on each Instrument Box.
3. Move the SPLIT switch on Hub to the ON position.

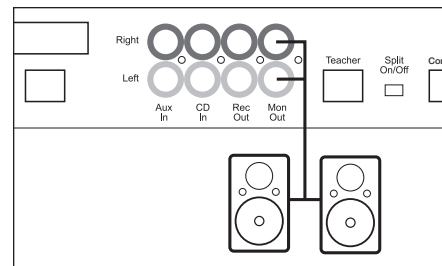


## Other Optional Items

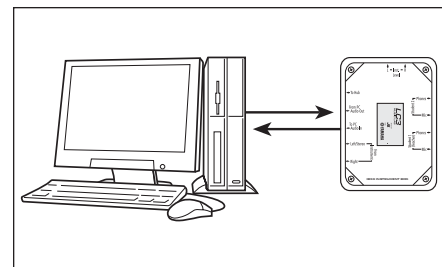
1. **CD or MP3 player.** Use an external music player if you would like students to play along with a recording.
2. **External Powered Speakers.** If it's necessary that the lab be heard in the room without headphones, external powered speakers can be added.
3. **Student Computers.** If your lab involves computers for recording audio from or playing audio to the students, use 1/8" stereo audio cables to get sound in and out of each Instrument Box. If a student computer also uses 1/8" connectors for audio, the required cable is available at Radio Shack (part #42-2387).



*Option 1: Music playback devices*



*Option 2: Monitor speakers*



*Option 3: Student computer*



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