

Lyrik™ Wireless Portable Sound System User Guide

Welcome

You're about to make learning more accessible! With the Lyrik Wireless Portable Sound System, students will hear more and learn more in the classroom, in the gym, on the field, or on a field trip.

Lyrik provides wireless microphones for teacher voice, student voice (optional), Bluetooth connectivity, and auxiliary inputs and outputs for media playback or assisted listening devices.

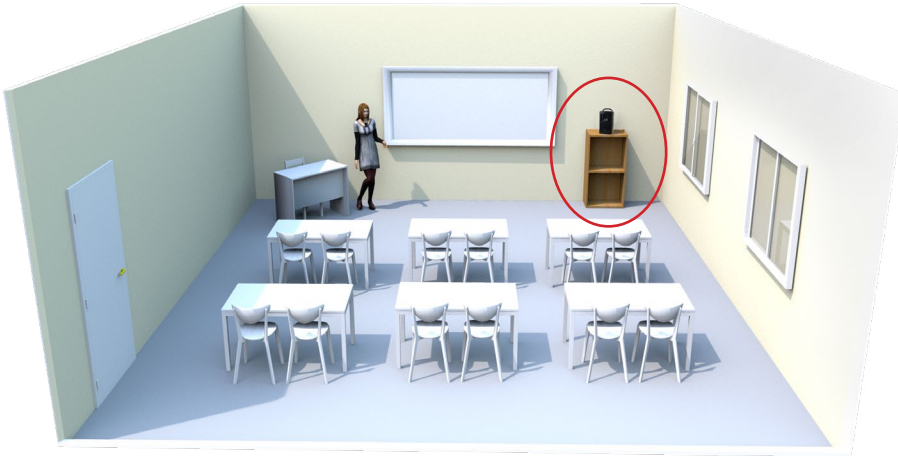
Before you use your Lyrik for the first time be sure to charge the batteries fully. This can take up to 8 hours.

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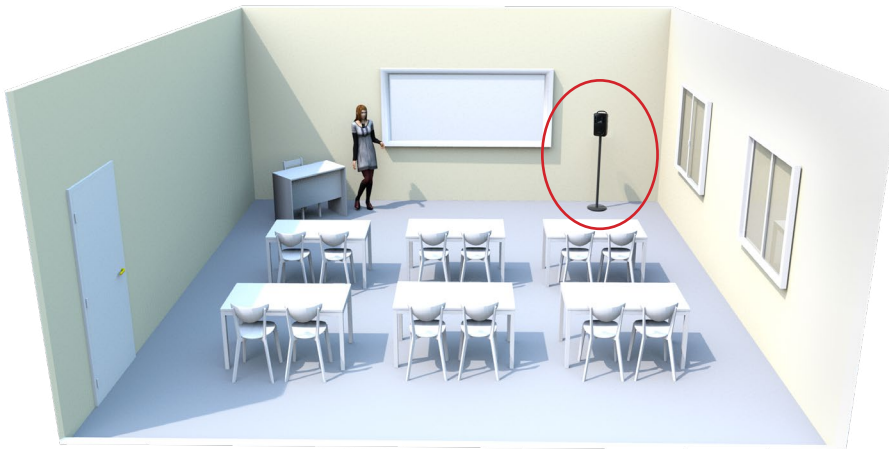
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Placement

When used in a classroom, place the Lyrik on a desk or shelf near the front of the class, but not so close to where the teacher will be speaking as to cause feedback. Ideally the speaker is projecting just above the students heads, ensuring audio coverage across the classroom.



You can also mount the Lyrik to a speaker stand using the standard 5/8" - 27 thread at the bottom of the tower.



If you take the Lyrik outside, remember that it is not waterproof so do not leave it out in the rain or near field sprinklers. The canvas Field Case is highly recommended to keep the Lyrik protected and includes a shoulder strap for even easier carrying.



Quick Start

The Lyrik™ portable amplification system has an integrated rechargeable battery for use inside and outside the classroom. The lightweight and comfortable teacher microphone provides voice amplification and the tower can be connected to a computer or other auxiliary audio source either directly using cables or wirelessly using Bluetooth®; to play music, audio from video sources or even integrate with video conferencing programs. Use Bluetooth to connect wirelessly. Turn PrioriTeach on to automatically mute the auxiliary audio when speaking.

1 Charge Microphones and Tower

Before getting started, fully charge microphones and tower
(NOTE: This can take up to 8 hours):

Microphones

- Connect power supply to charger.
- Place microphones into charger.
- a. Steady green light indicates a full charge.

Tower

- Connect power supply to tower.
- b. Steady green "FULL" light indicates a full charge.



2 Set Tower controls and turn Tower on

- c. Turn tower on using rocker switch above power connection.
- d. Set **Channel A** to 7. If using a student mic or second mic:
 Set **Channel B** to 7 (otherwise leave off).
 Set **AUX** to 5.
 Set **MASTER** to 2 or whatever is comfortable for the room.
- e. Set **TREBLE** and **BASS** to +4 (2 dots right of center)



3 Set Channels (if required)

There are 96 available channels. The Tower channel and Microphone channel must match (e.g., Teacher Mic set to CH01, Tower CH. A set to CH01). If using a second microphone, it must be on a different channel (e.g., Teacher Mic/Tower CH.A set to CH01, Student Mic/Tower CH. B set to CH02). Do not use the same channels for classrooms within 200ft (61m) of each other. If you experience static or interference on a channel, switch to another channel.

Microphones

- f. Press and hold power button for 0.5 second to power on and 2 seconds to power off.
- g. Press and hold **SET** (or channel control) button for 2 seconds until channel number flashes.
- h. Press – or + button to select channel. Press **SET** button to lock in channel.

Tower

- i. Press and hold the **SET** button for 2 seconds until channel A number flashes. Press **SET** again to set channel B.
- j. Press the ▲ (Up) or ▼ (Down) buttons to select channel. Press **SET** button to lock in channel.

4 Connect AUX AUDIO

- k. For Bluetooth, press **Bluetooth** pairing button and search for "frontrow" followed by 3 digits on your device.
- l. For direct connect, plug a 3.5mm audio cable into the **AUX IN** jack



External Connections

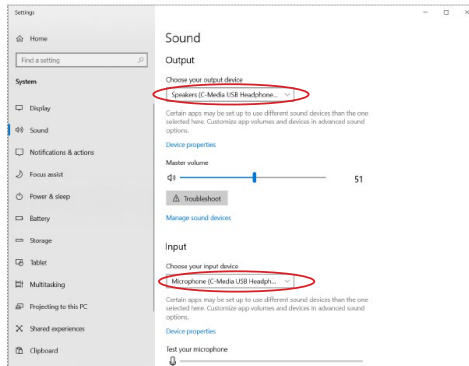
Using the XLR or 1/4" input you can connect a wired microphone.



Use the auxiliary connections to connect Lyrik to the Teacher's computer, enabling audio for video conferencing or lesson capture. The FrontRow Video Conferencing Cable Kit (1000-00217) provides the cables you need.



Make sure to set your Sound input AND output to the appropriate connections in your Settings. When using the FrontRow cable, this will be a USB adapter with a device name of 'C-Media USB Headphone Set' or something similar.



Advanced Features

Push To Talk

The student handheld mic can be configured for either push-to-talk or mute-unmute. To change the setting, open the battery case on the back and use a small tool to slide the switch to either Talk or Push.

Talk - The button at the top of the mic will mute (red) or unmute (green) when pressed. This is the default setting.

Push - The button at the top will flash red. To talk, the speaker must press the button and hold it down while speaking.



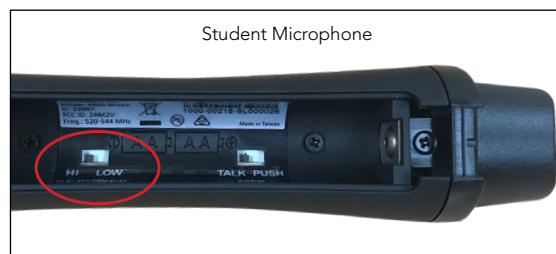
Mic Power

The microphones can be configured for low (about 100ft / 30m) or high (about 164 ft / 50m). Low power is fine for classrooms. If outside on a field and the teacher is distant from the receiver, then you may need to switch to high power.

To switch power levels:

On the Teacher Mic, press and hold both the **SET** and **Power** buttons to power on. Press the **SET** button again to skip first screen "96" and then adjust to Hi or Low using the **+** and **-** buttons. Press **SET** again to confirm the change.

On the Student Mic, open the back cover and remove the batteries. Use a small tool to toggle the switch to Hi or Low as needed. Reinstall the batteries and close the cover.



Channel Scanning

If you're having trouble finding an open channel for one of your mics (e.g., there is interference from external sources or other mics), you can try the SCAN feature.

On the Lyrik tower, on the back where the UHF unit is, press and hold the ▲ and ▼ buttons for 1 second until "SCAN" appears on the display. If an open channel is found, it will stop at that channel. Then simply go to the mic and set it to the same channel to match. (If the tower does not find an open channel it will simply return to the channel where you started).



Group Assignment

By default the microphones are part of the "F1" group. This is the recommended setting. If you have an environment with less than 38 units with devices close together and are experiencing cross-talk, you can try to use the F2 setting, which reduces the number of available channels to 38 and creates more bandwidth between channels. All Lyrik towers would need to be switched to F2 to avoid the chance of overlap.

To change to F2, hold the **SET** button on the tower while turning it on. While F1 is flashing press ▲ to change it to F2, then press **SET** twice to confirm.



Squelch Value

If you are picking up cross-talk or excessive noise, you can increase the squelch value to help reduce the noise. To change the squelch value, press and hold the **SET** button while you turn on the tower. Press **SET** again to skip past "F1". When you see "59" (looks like "SQ") then use the ▲ or ▼ buttons to adjust the value from 0-4. Increasing the squelch value reduces the operating range of the system, so just make sure to test the mic at the distance you will be using it. The default settings is 1.



Display Frequency

To see what frequency is being used for a channel, press the ▲ button on the receiver to see the frequency used by Channel A. Press the ▼ button to see the frequency used by Channel B. For example, if Channel A says 5437, this means 543.7 MHz.



One Mic to Multiple Towers

Since the Lyrik system uses UHF radio, you can set multiple towers to receive on the same channel if you want to transmit from one or two mics to several units simultaneously. For example, you could install 2 Lyriks in a larger room on speaker stands to provide coverage.

This principle does not work in reverse - do not set multiple mics to the same channel in order to use more microphones in one room on a single Lyrik tower. The mics will interfere with each other and sound will be distorted.

Maintenance and Troubleshooting

Storage

If not using the Lyrik over the summer or winter breaks, you may unplug the devices for safety. However, be sure to charge the devices at least every three months, and keep in mind humidity and temperature. The devices should be stored between 32-77°F at <60% humidity.

Battery Replacement

NOTE: Batteries can be recycled at your local Home Depot, Batteries & Bulbs, or search for a local recycling center. DO NOT DISPOSE of batteries in landfill containers!

To replace the Student Mic batteries:

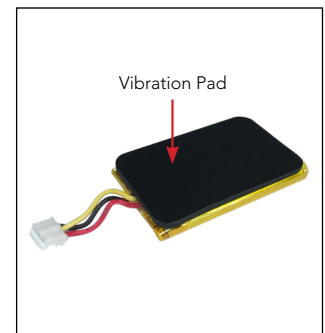
1. Open the battery cover and remove existing batteries.
2. Insert new NiMH 1.2V/1600mAh batteries as shown.
3. Dispose of the old batteries properly.



To replace the Teacher Mic battery:

1. Remove the belt clip using a small tool to gently pry off one side of the clip.
2. Remove all 4 screws with a Philips head screwdriver.
3. Unplug and remove the Lithium battery.
4. Install the new Lithium battery with the vibration pad facing down onto the circuit board.
5. Re-install the cover and belt clip, then charge the battery.
6. Dispose of the old battery properly.

NOTE: An EVA pad is glued on back of battery by default.



To replace the Lyrik tower battery:

1. Turn off and unplug the unit.
2. Remove the 4 screws for the back panel using a Philips head screwdriver.
3. Pull the battery out, and disconnect the jack.
4. Connect the new battery, re-insert into the unit, and close the back panel.
5. Charge the battery.
6. Dispose of the old battery properly.



Troubleshooting

Bluetooth

Your phone will most likely not automatically reconnect to Lyrik over Bluetooth when you go home and return the next day. You can easily reconnect by going to your Bluetooth settings on the phone and selecting "frontrow A03" (your device number may be different) to Connect. If the blue LED on the Lyrik is flashing, you can pair or connect. If not, simply press the Bluetooth button on the back to initiate pairing/connect mode.

PrioriTeach

Note that the PoriTeach feature sensitivity is dependent on the level of the Channel A/B receiver. This is set to level 7 by default as a good balance for triggering voice priority. However, if you find it is too sensitive you can turn down the volume on Channel A or B (you may want to turn up the master volume to compensate). Conversely, if it is not sensitive enough, turn up the volume on the Channel A or B.

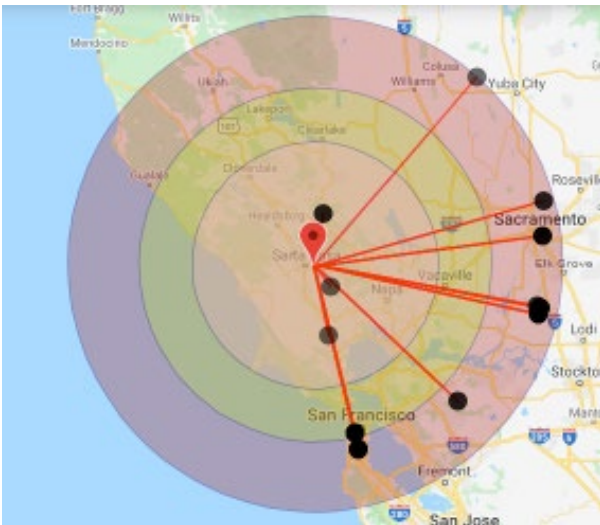
Local UHF TV

If you are receiving interference from local UHF TV stations, you can find out what frequencies to avoid by searching for towers near your local area code.

The UHF channels 22-26 have overlapping frequencies with the Lyrik.

Channel-22	518-524
Channel-23	524-530
Channel-24	530-536
Channel-25	536-542
Channel-26	542-548

To find out if there are any of the channels in your area, you can search using sites [Antennas Direct](#).



Appendix

Default Settings

For best results, start with the following volume levels and adjust as needed.

Master Volume: 2	Bass: +4
Channel: 7	Teacher Mic (on device): 2 (Medium)
Channel B (if used): 7	Computer/phone output: Med-High
AUX: 5	Computer input: Low-Med
Treble: +4	

Technical Specs

Lyrik Tower

Battery	Lithium-Ion 14.4 V, 5.2Ah
Ambient Temperature	-10°C ~ 50°C / -14°F ~ 122°F
Frequency Response	70Hz – 17kHz
Operating Range Max	30m – 70m / 98ft – 229ft
Output Power	60W (max) / 40W (RMS)
Speaker/Amplifier	5" Neodymium driver + 1" Tweeter / Class D
Carrier Frequency	520 – 544MHz
Receiver	Duo - Two channels for up to 2 mics
Recharge Time	~12 hours
Battery Runtime	7-8 hours
Power	AC charging power supply adapter for full-time operation
AUX In/Out	3.5mm (Line level)
MIC In	1/4" mono or XLR (Mic level -60 dBv)
Bluetooth® Version	3.0
Weight	3.7kg / 8.2lbs
Size (wxdxh)	170 x 201 x 341 mm / 6.9 x 7.9 x 13.4 in
Power Requirements	100–240VAC, 20VDC, 3.25A switching power supply
Battery Life Indicator	4 LED status
Threaded speaker stand mounting hole	5/8" - 27tpi

Teacher Microphone

Battery	Lithium Ion 3.7V 1300mAh
Ambient Temperature	-10°C ~ 50°C / -14°F ~ 122°F
Frequency Response	70Hz – 15kHz
Operating Range Max	Hi: >50m/164ft Low: >30m/98ft
RF Power	Hi: <10dBm Low: 3 +/- 2dBm
Carrier Frequency	520 – 544 MHz
Recharge time	4 – 6 hours
Battery runtime	16 – 20 hours typical
Weight	81g / 2.86oz
Size (wxhxd)	52 x 88 x 32 mm / 2.0 x 3.5 x 1.3 in
MIC / AUX IN	3.5mm, mono or stereo

Student Microphone

Battery	1.2V Ni-MH 1600 mAh
Ambient Temperature	-10°C ~ 50°C / -14°F ~ 122°F
Frequency Response	70Hz – 13kHz
Operating Range Max	Hi: >50m/164ft Low: >30m/98ft
RF Power	Hi: <10dBm Low: <3dBm
Carrier Frequency	520 – 544 MHz
Recharge time	4 – 6 hours
Battery runtime	12 – 15 hours typical
Weight	140g / 4.9oz (including battery)
Size (dia x h)	37 x 200mm / 1.5 x 7.9 in

Drop-in Microphone Charger

AC switching adaptor power	Input 100 ~ 240 VAC, Output 5VDC 1A
Charging current	120mA
Charging time (Ni-MH)	6 ~ 8 hours
Size (wxhxd)	120 x 52 x 120 mm / 4.7 x 2.0 x 4.7 in
Weight	255g/9.0oz

Frequency Map

These are the frequencies used by their associated channels (F1 mode).

520-544 MHz

1	520.1	17	542.4	33	538.3	49	526.7	65	524.8	81	522.4
2	543.9	18	523.9	34	536.2	50	534.3	66	536.5	82	542.6
3	532.1	19	537.6	35	543.7	51	540.8	67	523.2	83	526.9
4	525.1	20	530.6	36	529.9	52	520.5	68	534.9	84	535.6
5	537.9	21	542.1	37	524.4	53	535.3	69	527.3	85	540.3
6	522.8	22	523.0	38	538.1	54	529.1	70	541.4	86	531.8
7	535.1	23	532.5	39	521.3	55	539.6	71	524.1	87	540.1
8	527.5	24	528.9	40	533.5	56	530.4	72	533.9	88	525.6
9	541.6	25	541.0	41	521.0	57	543.1	73	529.6	89	538.7
10	521.5	26	520.7	42	531.2	58	522.0	74	540.6	90	530.1
11	533.3	27	531.0	43	522.6	59	532.3	75	526.2	91	527.1
12	523.5	28	525.4	44	537.0	60	528.4	76	534.3	92	531.5
13	536.8	29	542.9	45	525.8	61	537.3	77	523.7	93	533.0
14	526.0	30	522.2	46	541.8	62	521.7	78	534.1	94	527.7
15	539.4	31	534.6	47	528.7	63	543.5	79	528.2	95	539.8
16	529.4	32	524.6	48	539.1	64	530.8	80	535.8	96	533.7

Learn more at www.gofrontrow.com

