

Growing Your Church Sound



This audio system proposal is driven by a requirement for scalability.

The system must be able to meet the needs of the congregation at all stages in its growth. The goal is to provide a path that can take your congregation from meeting in smaller rented spaces to its very own dedicated worship facility filled with ambitious praise music and production capabilities.

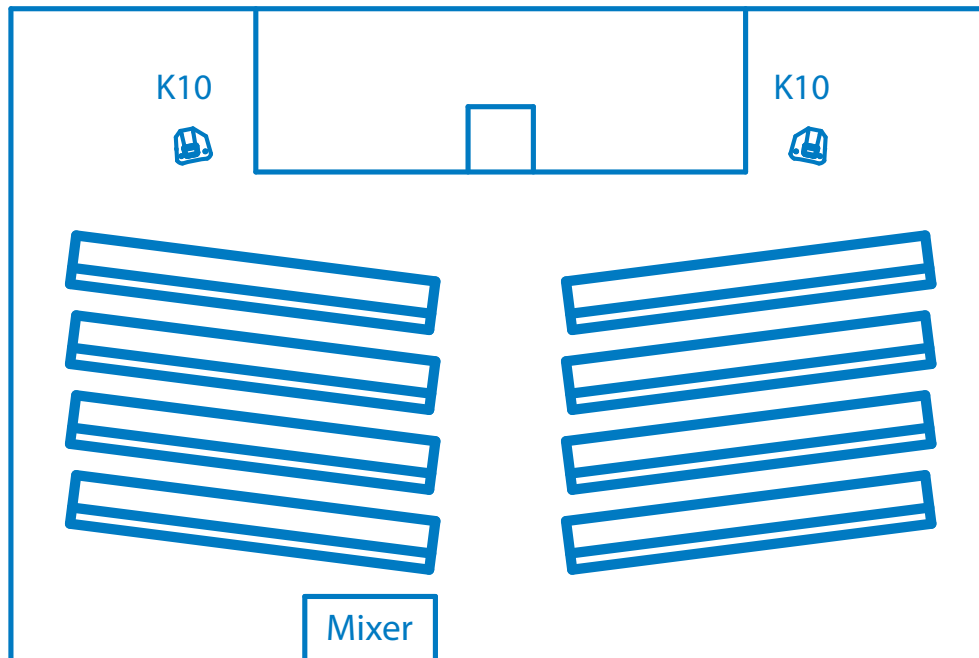
This needs to be accomplished while building on the sound system investments made during each previous stage as you continue to grow. We recommend the use of QSC Audio equipment for all signal processing, amplification and loudspeaker needs at your house of worship.

QSC Audio Products LLC is a leading supplier of professional audio equipment worldwide. Located in Orange County, California – QSC has drawn on more than forty years of real world experience to create the following recommendations:



Stage 1

Up to 250 seats / less than 5,000ft² (approx 465m²)



This basic system is intended to provide sound reinforcement for speech, vocals and acoustic music. It is extremely simple to transport, set up and operate – even for novice volunteers. It will provide the coverage and acoustic output for a small rented space such as a storefront or community hall.

Suggested Equipment List

- 2 x QSC K10: 2-way powered loudspeakers
- 2 x tripod speaker stands

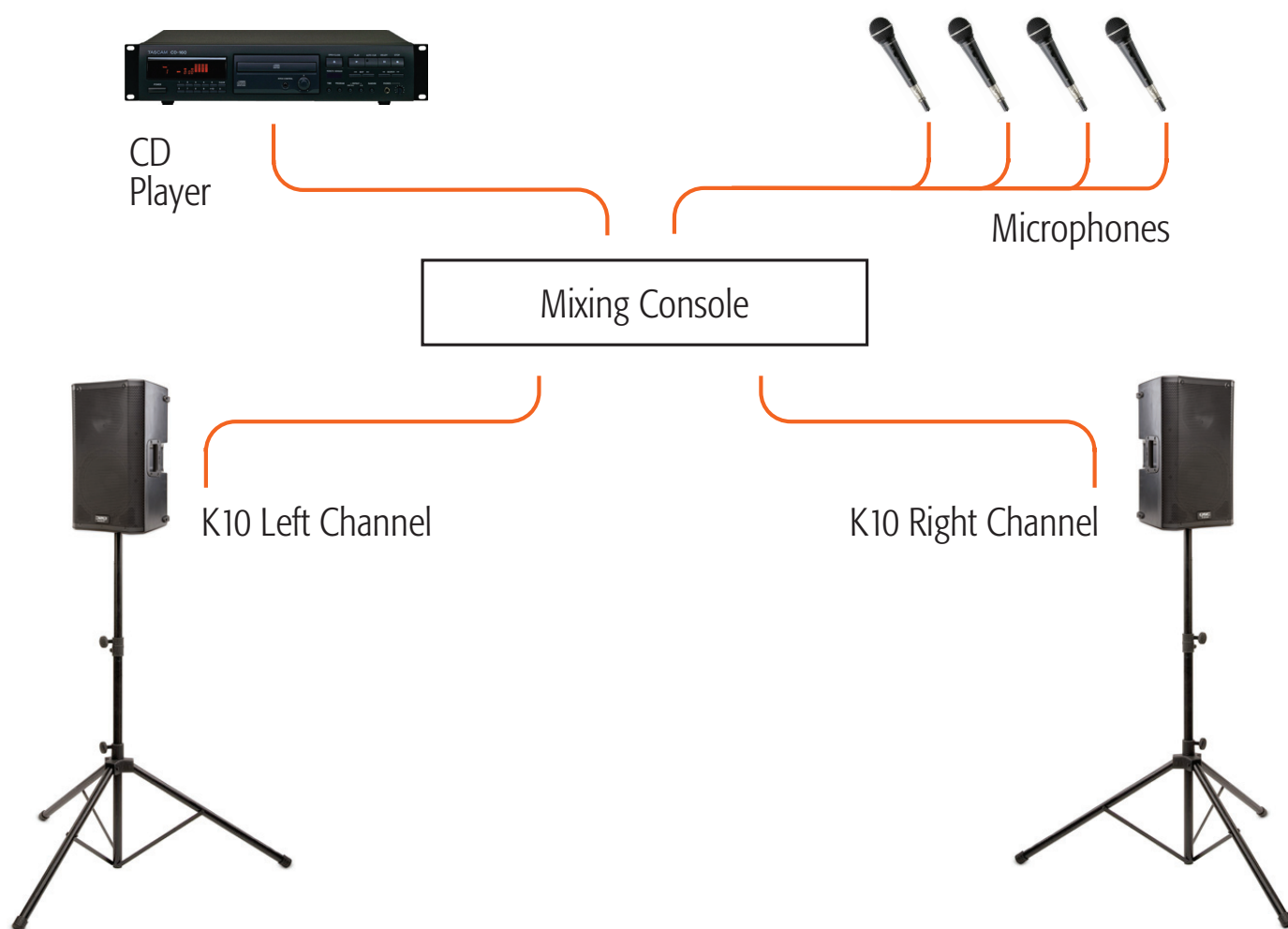
Optional

(in circumstances where the venue is rented each weekend, and portability is a major factor)

- 2 x QSC K10 Totes

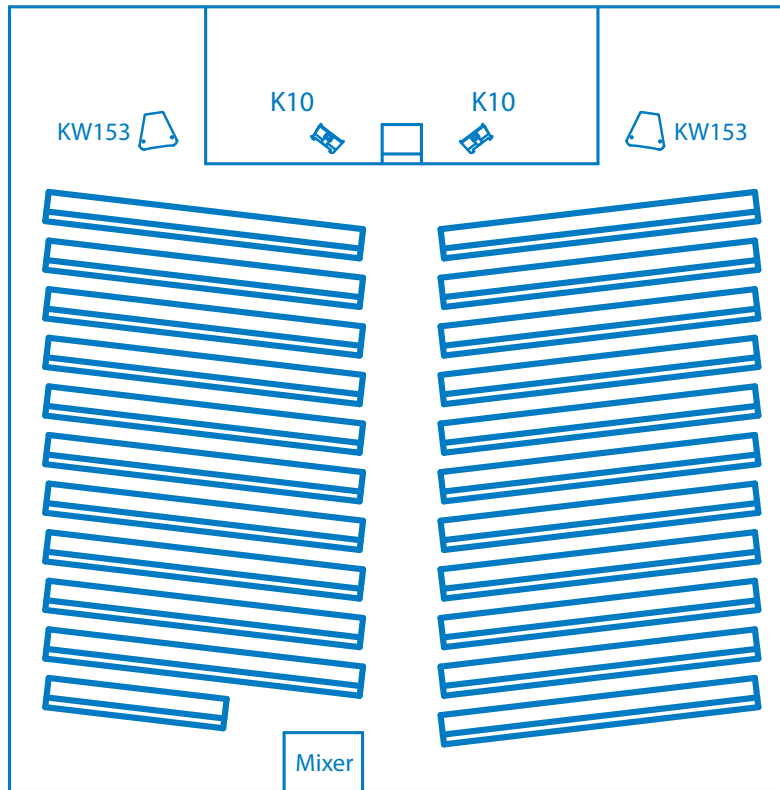
Stage 1

Continued
Up to 250 seats / less than 5,000ft² (approx 465m²)



Stage 2

250-500 seats / 5,000-10,000ft² (approx 930m²)



A growing congregation and the addition of a praise team will create greater demands on the sound system.

The next step is to transition to larger format, preferably 3-way loudspeakers for the main (front of house) sound system. We recommend the KW153 loudspeakers, which are also self-powered. The K10 speakers from the Stage 1 system can now be repurposed as stage monitors for the worship team, or as stage amplification for electronic keyboards.

Providing the stage level of the praise team is kept under control, this system will comfortably provide speech and musical reinforcement for 250-500 worshippers.

Suggested Equipment List

- 2 x QSC K10: 2-way powered loudspeakers (now repurposed as stage monitors)
- Add 2 x QSC KW153: 15" 3-way powered loudspeakers for main (front of house) sound system

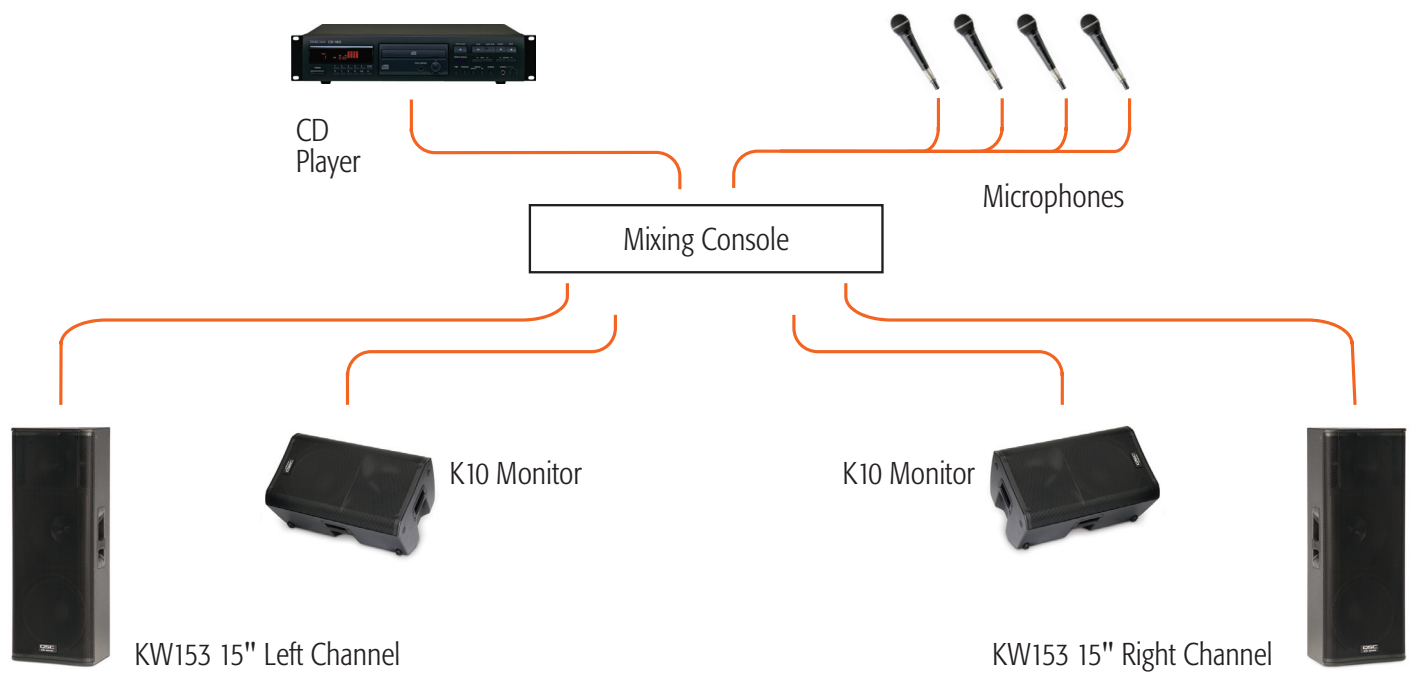
Optional

(in circumstances where the venue is rented each weekend, and portability is a major factor)

- 2 x QSC K10 Totes
- 2 x QSC KW153 Covers

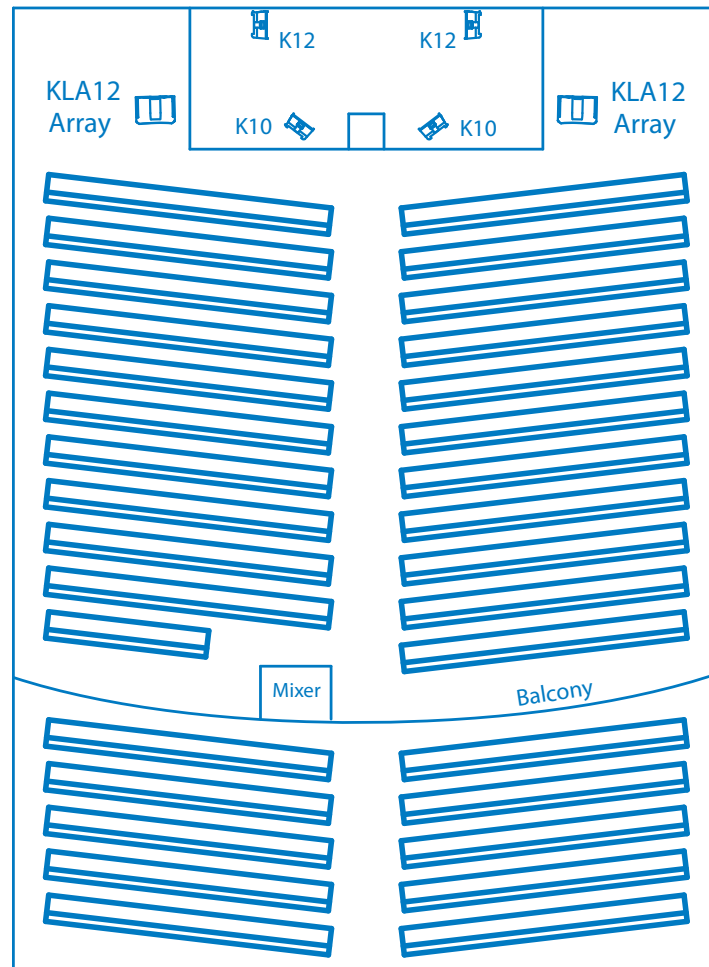
Stage 2

Continued
250-500 seats / 5,000-10,000ft² (approx 930m²)



Stage 3

500-1000 seats / 10,000-20,000ft² (approx 1860m²)



This is the sweet spot for many contemporary churches, and represents a very typical mid-size church auditorium. The larger cubic volume of the acoustic space combined with the high impact demands of the growing praise team and multimedia content will certainly warrant the addition of subwoofers. Additionally, the desire for improved front-to-back coverage becomes even more critical as the louder system levels can result in complaints of “too-loud” in the front rows and “too quiet” way down the back.

These front-to-back coverage issues can often be solved with the addition of a flown line array, however the vast majority of line array systems are very costly and typically reserved for mega-churches. However the QSC KLA12 is a Fixed Arcuate line array, and being self-powered & self-processed, it truly offers many churches their first real entry into line array technology. Coupled with the flown KLA181 subwoofers, these elegant arrays can solve many of the coverage issues found in most mid-size church auditoriums, while improving gain-before-feedback, and providing that desirable high impact sound reproduction. It is worth mentioning that the KLA series are also available in white!

Stage 3

Continued

500-1000 seats / 10,000-20,000ft² (approx 1860m²)

Transport accessories are listed as optional in the Stage 3 equipment list, for circumstances where the venue is rented each weekend, and factors such as fast setup, pack-down and portability are critical. All the equipment from the Stage 2 system would be re-purposed, increasing the return-on-investment. This system would handle speech and moderate to high-level music in most facilities up to 1000 seats.

Once again the existing K10's would serve as floor monitors, and the KW153 loudspeakers would be re-purposed for the student church, multi-purpose hall or weekday outreach activities.

Suggested Equipment List

(main auditorium)

- 2 x QSC K10: 2-way powered loudspeakers (repurposed as stage monitors)
- Add 2 x more QSC K10: 2-way powered loudspeakers (for stage monitors)
- Add 6 x QSC KLA12 Line Array loudspeakers
- Add 4 x QSC KLA181 Flown Subwoofers

Suggested Equipment List

(student church)

- 2 x QSC KW153: 15" 3-way powered loudspeakers (repurposed as front-of-house for secondary room)

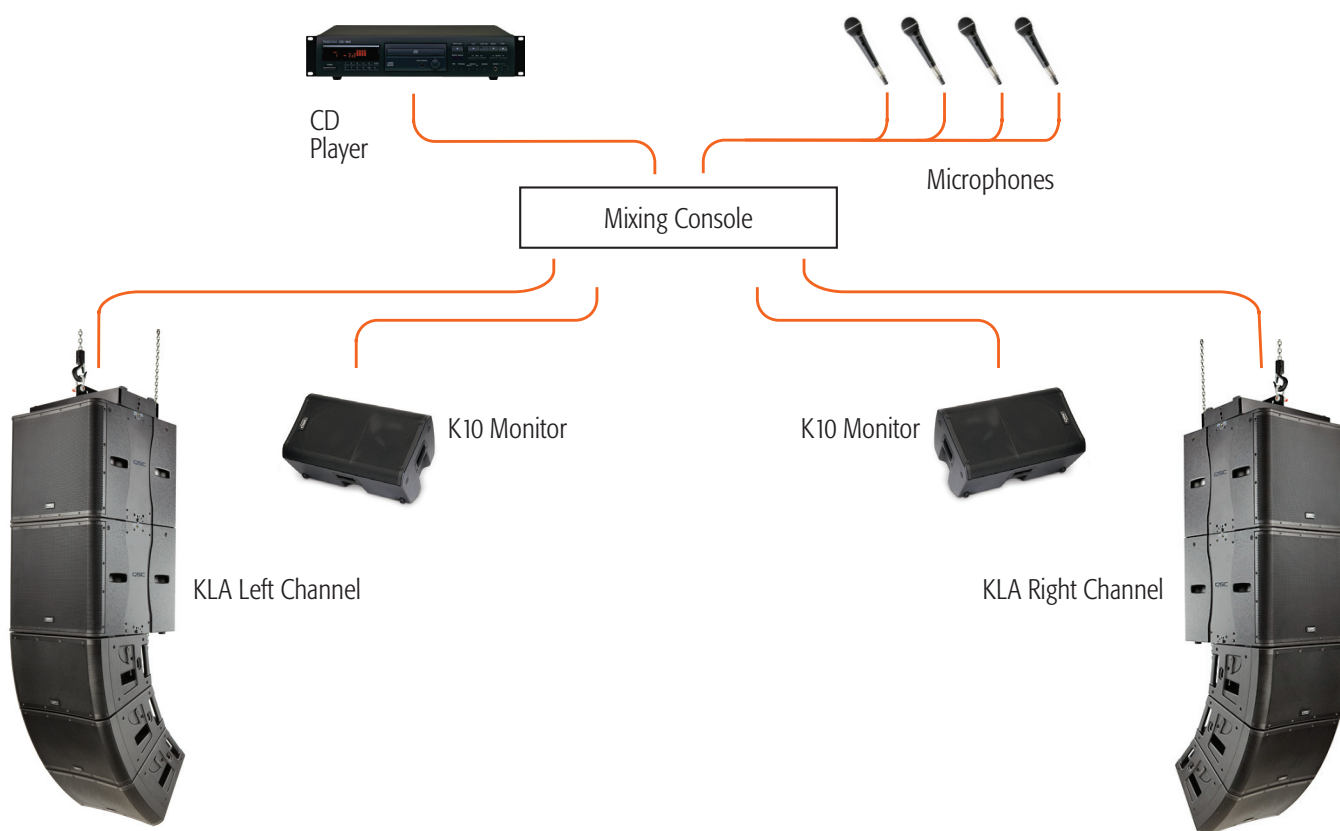
Optional

(in circumstances where the venue is rented each weekend, and portability is a major factor)

- 2 x QSC KLA-AF Array Frames
- 6 x QSC KLA12 Totes
- 4 x QSC KLA181 Covers
- 2 x QSC AF12 Tote
- 2 x QSC KW153 Totes
- 4 x QSC K10 Totes

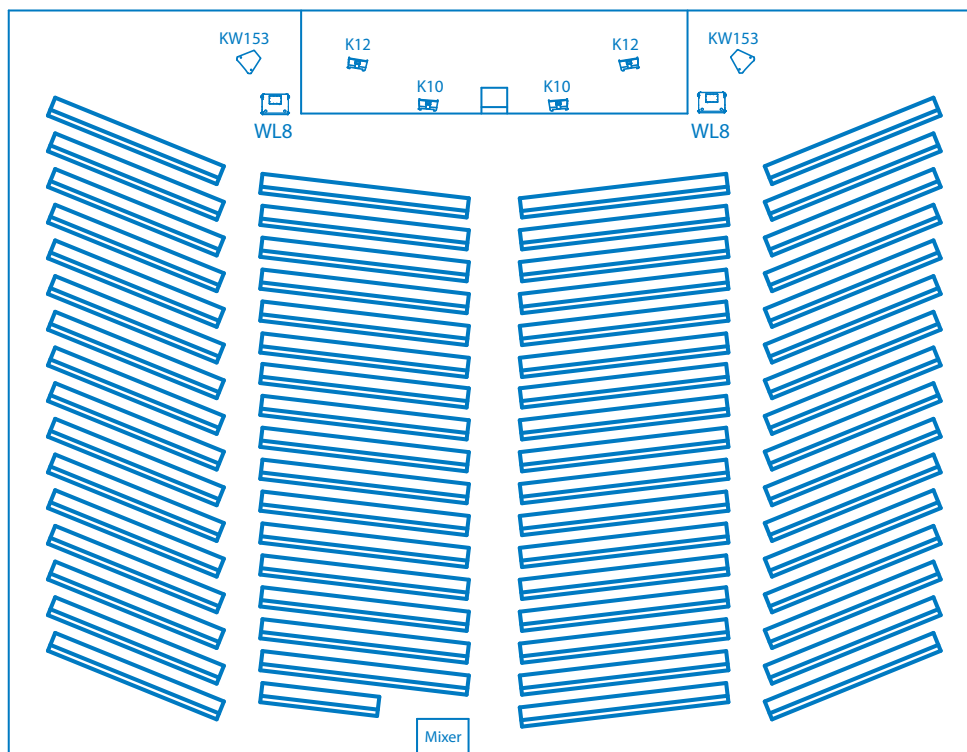
Stage 3

Continued
500-1000 seats / 10,000-20,000ft² (approx 1860m²)



Stage 4

1000-2000 seats / 20,000-40,000ft² (approx. 1860m²)



Many Pentecostal churches can experience rapid growth, and may be forced into temporary facilities such as a school auditorium or community theater. Once again, as the venue size increases, so do the sound system requirements, and now transportability needs to be factored as well. A praise team with a contemporary worship band combined with the additional cubic volume or a larger space will require a line array system and subwoofers. The QSC WideLine-8 is an ideal choice. It's extremely compact minimizing problems associated with transportation and storage. The WL212-sw subwoofers are powerful yet they are also compact and furthermore serve as a solid base for ground-stacking the WideLine-8 line-array system.

Transport accessories are listed as optional in the Stage 4 equipment list, for circumstances where the venue is rented each weekend, and factors such as fast setup, pack-down and portability are critical. All the equipment from the Stage 2&3 system would be re-purposed, continuing to grow the return-on-investment. This system would comfortably handle speech and moderate to high-level music in a larger facility such as a high school auditorium.

The KW153 loudspeakers may be repurposed as either side-fill monitors for the praise team or as out-fill speakers for wide seating planes. Depending on the size of the stage, additional K12 loudspeakers may be required to provide greater low frequency monitoring, especially as the rhythm section (bass & drums) grow further apart. These multi-purposed K12 loudspeakers can also be employed to support traveling ministry activities during the week. Finally the entire KLA system from Stage 3 would ideally be re-deployed into the student church along with 2x K10 for floor monitors.

Stage 4

Continued

1000-2000 seats / 20,000-40,000ft² (approx. 1860m²)

Suggested Equipment List

(main auditorium)

- 2 x QSC K10: 2-way powered loudspeakers (repurposed as stage monitors)
- 2 x QSC KW153: 15" 3-way powered loudspeakers (repurposed as out-fill)
- Add 2 x QSC K12: 2-way powered loudspeakers (for rhythm-section monitors)
- Add 1 x QSC SC28: digital system processor
- Add 8 x QSC WL3082: (WideLine-8) line array loudspeakers
- Add 4 x QSC WL212-sw: (WideLine-8) subwoofers
- Add 4 x QSC PL380: dual channel power amplifiers

Suggested Equipment List

(student church)

- 6 x QSC KLA12 Line Array loudspeakers (repurposed as front-of-house for secondary room)
- 4 x QSC KLA181 Flown Subwoofers (repurposed as front-of-house for secondary room)
- 2 x QSC K10: 2-way powered loudspeakers (repurposed as stage monitors for youth worship band)
- Add 2 x more QSC K10: 2-way powered loudspeakers (floor monitors for youth worship band)

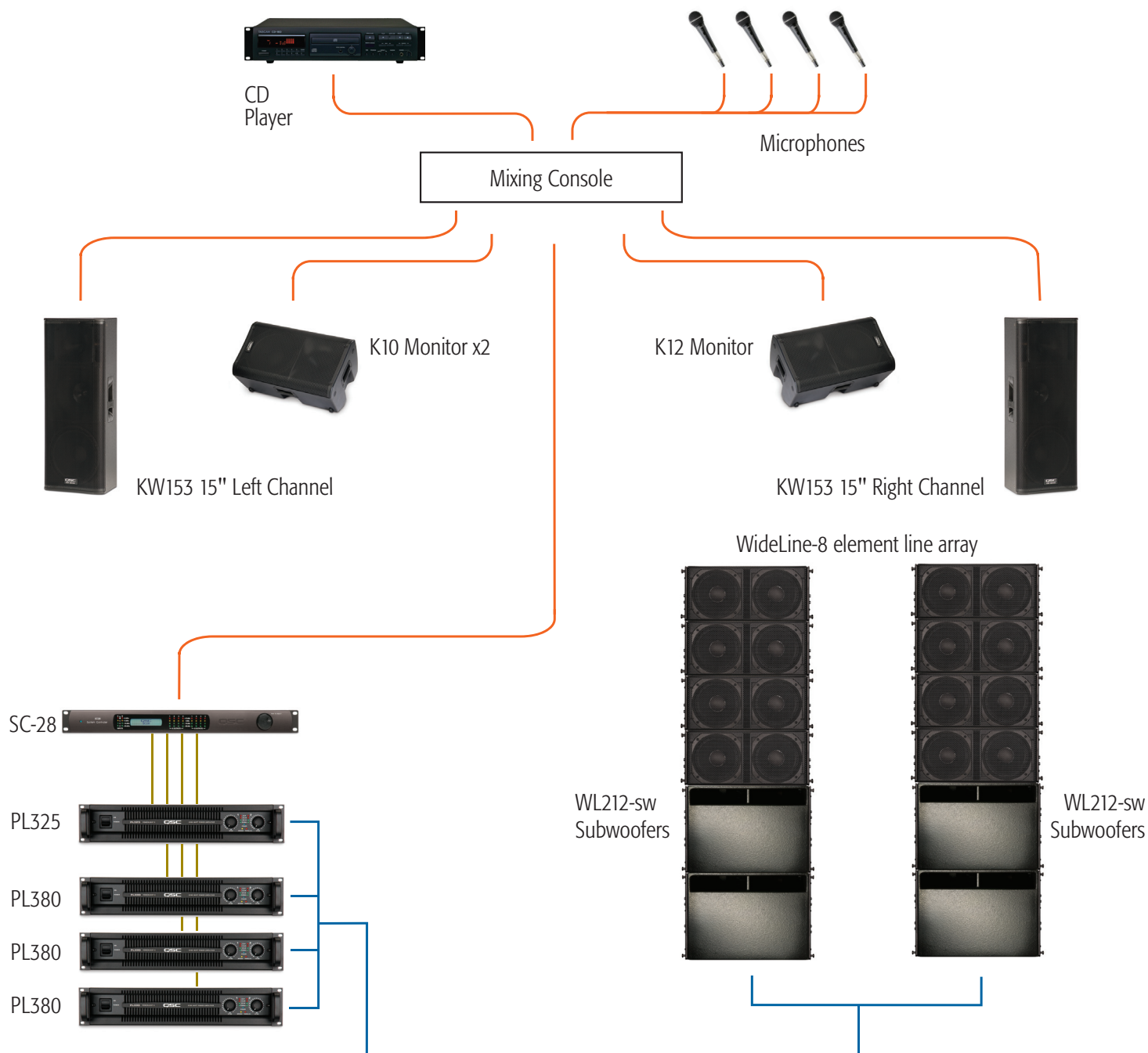
Optional

(in circumstances where the venue is rented each weekend, and portability is a major factor)

- 2 x QSC KLA-AF Array Frame (necessary for portable rig but not required if permanently installed)
- 6 x QSC KLA12 Totes (necessary for portable rig but not required if permanently installed)
- 4 x QSC KLA181 Covers (necessary for portable rig but not required if permanently installed)
- 2 x QSC AF12 Tote (necessary for portable rig but not required if permanently installed)
- 2 x CP3082-4: caster pallet (dolly) for transporting 4 x WL3082 line array boxes - includes padded cover
- 2 x CP212-2: caster pallet (dolly) for transporting 2 x WL212-sw subwoofers- includes soft cover
- 2 x QSC KW153 Totes • 4 x QSC K10 Totes • 2 x QSC K12 Totes

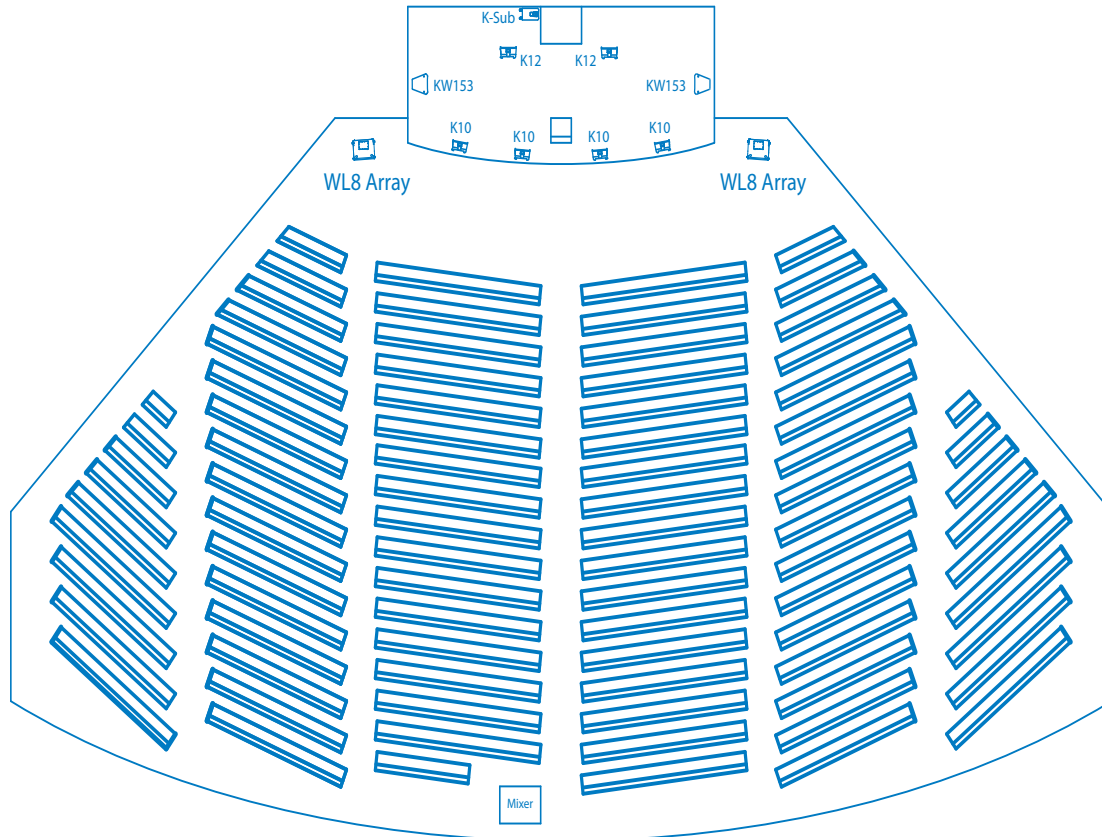
Stage 4

Continued
1000-2000 seats / 20,000-40,000ft² (approx. 1860m²)



Stage 5

over 2000 seats / greater than 40,000ft² (approx. 3715m²)



At this point, we assume the congregation is moving into a purpose-built facility and the entire Stage 4 system can move in with them. Here's where the scalability of the WideLine-8 system becomes apparent. Up to eight extra WL3082 line array loudspeakers can be added without the need to purchase any additional amplifiers.

Depending on the nature of the production scale of the musical program, and the total cubic volume of the acoustic space, additional subwoofers may be needed. Every four additional subwoofers would require one additional amplifier. It is also assumed that the system would be flown so suspension hardware has been added to the equipment list.

This is a VERY capable small concert sound system that can deliver excellent speech with high gain-before-feedback and moderate to high-level music reinforcement in a typical mid-to-large contemporary worship facility.

Your facility may also require distributed audio systems in hallways, cry rooms and green rooms. QSC offers a variety of processors, amplifiers and speakers for these applications. Your local QSC authorized dealer employs skilled staff capable of designing and installing these ancillary sub-systems.

Stage 5

Continued
over 2000 seats / greater than 40,000ft² (approx. 3715m²)

Suggested Equipment List (main auditorium)

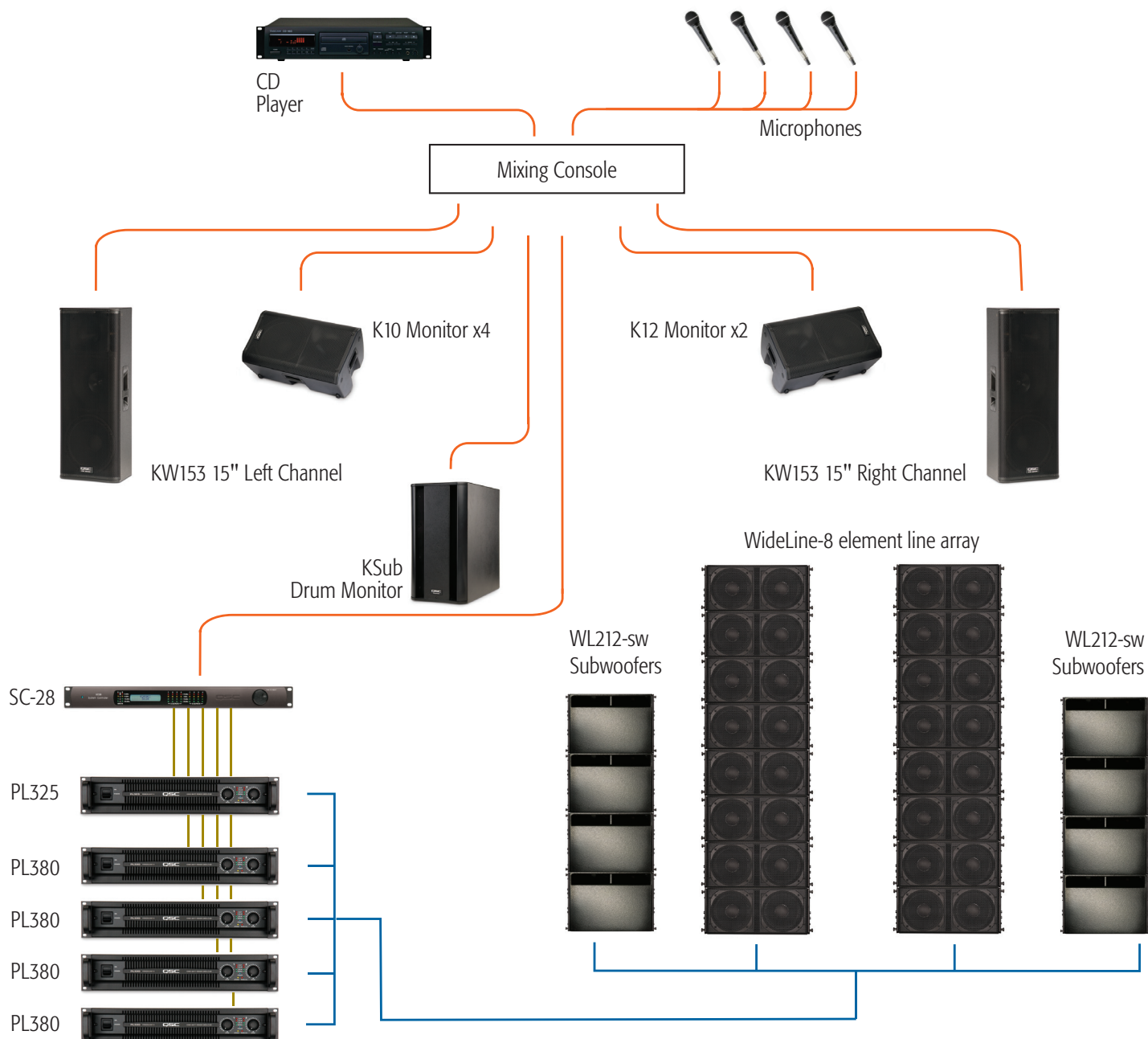
- 4 x QSC K10: 2-way powered loudspeakers (repurposed as stage monitors)
- 2 x QSC K12: 2-way powered loudspeakers (for rhythm-section monitors)
- 2 x QSC KW153: 15" 3-way powered loudspeakers (repurposed as out-fill)
- 1 x QSC SC28: digital system processor
- 8 x QSC WL3082: (WideLine-8) line array loudspeakers
- 4 x QSC WL212-sw: (WideLine-8) subwoofers
- 4 x QSC PL380: dual channel power amplifiers
- Add 8 x more QSC WL3082: (WideLine-8) line array loudspeakers
- Add 4 x more QSC WL212-sw (or ground-stack GP212-sw) subwoofers
- Add 1 x more QSC PL380 for subwoofers
- Add 1 x QSC KSub: as needed for drum monitor subwoofer
- Add 2 x QSC AF3082-L: large array frame, supports up to 12 x WideLine-8 boxes & 4 x Subwoofers

Suggested Equipment List (student church)

- 6 x QSC KLA12 Line Array loudspeakers (repurposed as front-of-house for secondary room)
- 4 x QSC KLA181 Flown Subwoofers (repurposed as front-of-house for secondary room)
- 2 x QSC K10: 2-way powered loudspeakers (floor monitors for youth worship band)
- Add 2 x more QSC K10: 2-way powered loudspeakers (floor monitors for youth worship band)

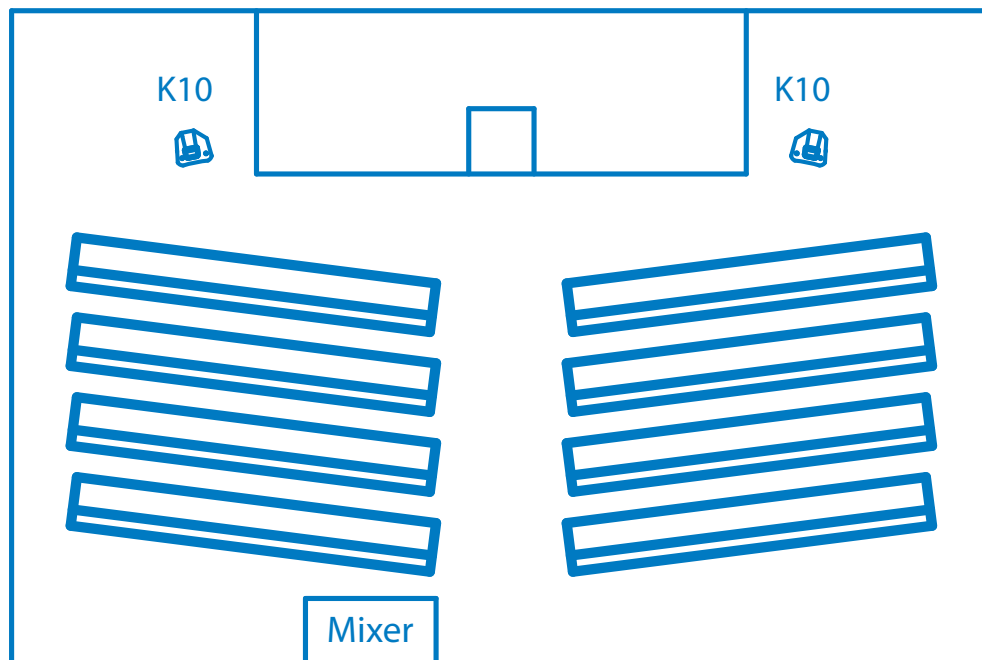
Stage 5

Continued
over 2000 seats / greater than 40,000ft² (approx. 3715m²)



Stage 6

Plant new Satellite church



The goal of any contemporary church is to grow the congregation to such a size that satellite sites need to be established. With recent “multi-site” practices such as live sermon streaming or pre-recorded sermon playback, satellite planting can be more easily accomplished since there is no longer the urgency to recruit additional pastoral staff. Satellite planting is where your wise purchasing and diligent stewardship can bring you full-circle with your sound equipment.

Suggested Equipment List

- 2 x QSC K10: 2-way powered loudspeakers (repurposed or new)

Optional

(in circumstances where the venue is rented each weekend, and portability is a major factor)

- 2 x QSC K10 Totes

Stage 6

Continued
Plant new Satellite church

