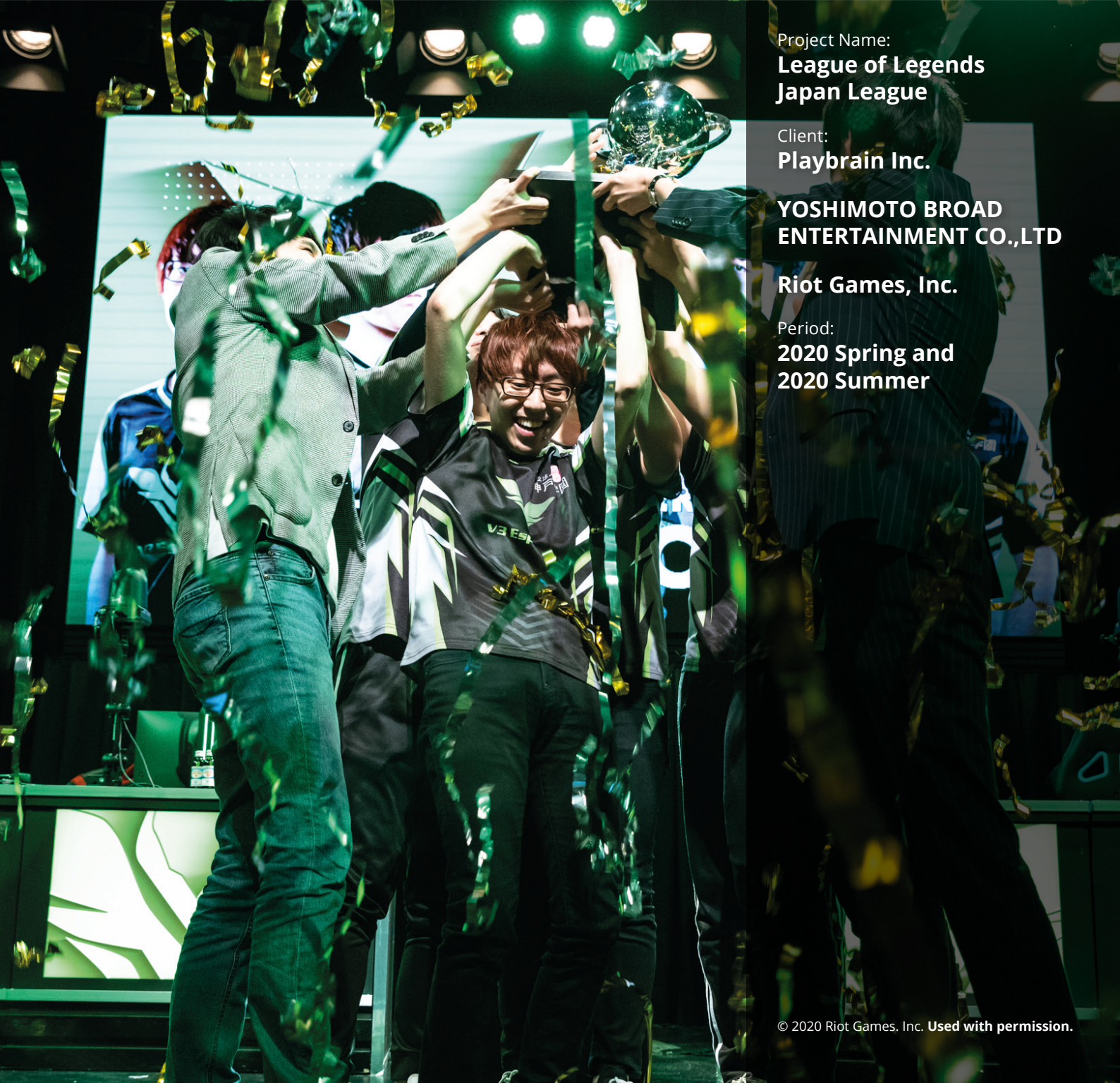


CASE STUDY



Project Name:
**League of Legends
Japan League**

Client:
Playbrain Inc.

**YOSHIMOTO BROAD
ENTERTAINMENT CO.,LTD**

Riot Games, Inc.

Period:
**2020 Spring and
2020 Summer**



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About eSports:

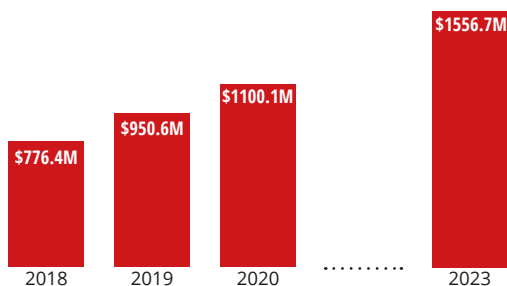
eSports is an abbreviation for “Electronic Sports”. In a broader sense, the term refers to all forms of entertainment, competition, and sports in general that use electronic devices, and refers to sports competition using computer and video games. In the United States, the country has already recognized „eSports” as a „sport” and „professional gamers” as „athletes”.

Industry Snapshot:

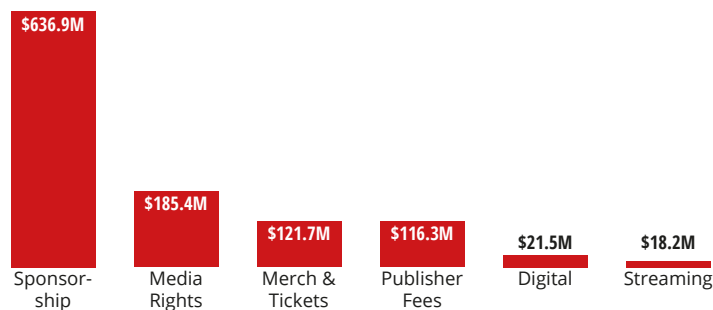
- Global eSports revenues will grow to \$1.1 billion in 2020, a year-on-year growth of +15.7%, up from \$950.6 million in 2019.
- In 2020, \$822.4 million in revenues – or three-quarters of the total market – will come from media rights and sponsorship.
- Globally, the total eSports audience will grow to 495.0 million people in 2020, a year-on-year growth of +11.7%.
- Mobile eSports enjoyed a huge spike in the past year, with emerging markets like Southeast Asia, India, and Brazil at the forefront of this growth.

Reference: Newzoo 2020 Global eSports Market Report

Global eSports Revenue Growth:



Global eSports Revenue Streams:



*Source: Newzoo “Global eSports Market Report 2020 as of July 2020”



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eSports in Japan

It is estimated that there are over 100 million people in the world who compete in eSports. In 2020 it is expected to have an audience of 495 million people, mostly Millennials, which is more than the total population of Japan! Meanwhile, the number of people competing in eSports in Japan is estimated to be 3.9 million and 1.6 million spectators.

Japan, although considered a underdeveloped country for eSports, is now seeing an increase in the amount of professional gamers and leagues.

With mobile gaming being such a dominating force in the industry, though, eSports has had a tough time gaining traction in the region, mostly due to strict anti-gambling laws. To circumnavigate restrictive laws, the Japan eSports Union (JeSU) was established to provide licences for gamers to be listed as pro-players and are looking to change how eSports are viewed in the nation.

The Challenges of eSports production

As a new discipline, eSports brings with it challenges that have never been faced by contemporary broadcast, event or sports companies. They vary depending on the sport being played, which also makes it difficult to have a “one size fits all” solution to an eSports stadium. In fact, different types of eSports games are almost like different sports altogether, as each comes with their own unique set of requirements. An example of this would be the difference between a Sports Simulator and a fantasy game such as League of Legends.

In the Sports Simulator, all players can see the entire field, however the map is initially obscured in League of Legends. Thus, preventing team from seeing stage monitors, displays or similar becomes a key factor in the layout of a stadium or event. Additionally, making sure that players can’t hear suggestions called out from a sympathetic audience or overhear the Shoutcaster’s commentary is also important.

To this end, Riedel has worked with a number of customers to apply the lessons learned in similar environments to eSports. For example, the Formula 1 also has to deal with high noise environments, and combined systems (e.g. the Car Radios) that need to be managed so that competing teams don’t receive information that they shouldn’t. The latency requirements for both video and intercom placed upon Riedel by the Sydney Opera House (less than 3ms in both) apply equally in eSports. The ability to control vast networks – including remote locations – from a central location, as used in major global events, can also be leveraged in eSports.

3.9 mio.
COMPETITORS

1.6 mio.
SPECTATORS

Riedel in eSports

Together with TechSound, Riedel designed and implemented advanced player communications systems for China esports clients based on Riedel's Artist digital matrix intercom system, Performer partyline system, and MAX headsets. Enabling a cost-saving voice-over-IP (VoIP) remote production workflow for esports events across China, the Riedel gear ensures clear communications not only between players, but also between the remote production staff and on-site referees.

For a recent international esports event held in northern China, the Riedel solution enabled TechSound team members to seamlessly integrate intercom, wireless, and walkie-talkie systems from different rental vendors and manufacturers into one communications system. TechSound also manages semipermanently installed season systems, connecting stage referees and players across six Chinese cities back to a centralized production studio.

“With the Riedel solution, our producers can sit in Shanghai and call shows in other cities,” said Patrick McGowan, Director at TechSound.

PlayBrain

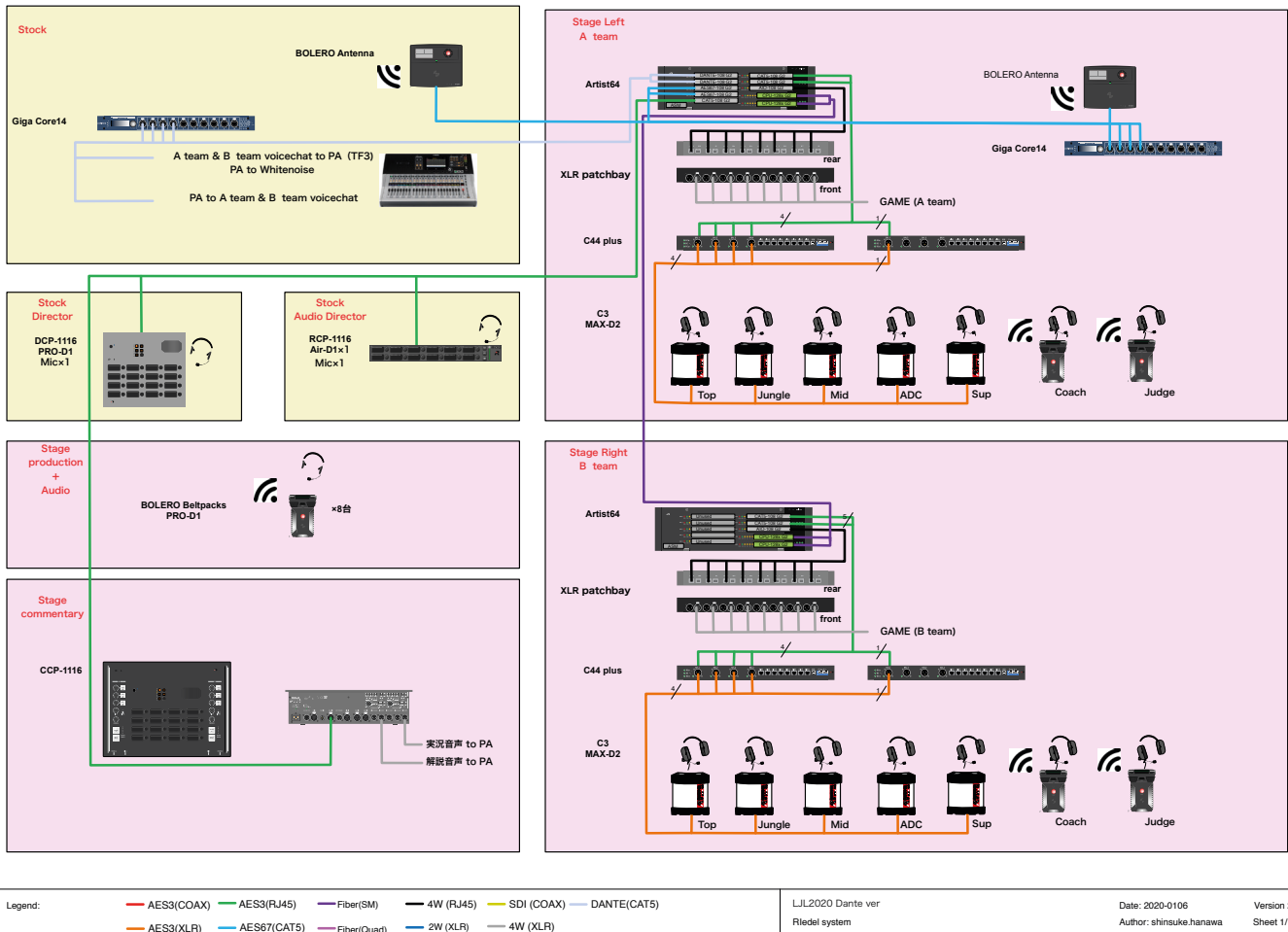
PlayBrain, one of the leading eSports companies in Japan, reached out to Riedel Communications Japan K.K. to provide a solution for creating the communication environment between eSports players during their play in a tournament for League of Legends Japan League (LJL), a professional eSports league in Japan based on the popular MOBA (Multiplayer Online Battle Arena) game “League of Legends” (LoL). LJL is organized by Riot Games Japan, with the production element taken care of by PlayBrain and Yoshimoto Entertainment. Riedel successfully provided intercoms for the LJL 2020 Spring Split and LJL 2020 Summer Split leagues in 2020. Both leagues took place over a two-month period at the Yoshimoto Hall, with a round-robin tournament between all eight teams. Riedel intercoms were used as a communication tool for the players, production and technical staff.

In this case study, we will introduce the products used and show how they enabled reliable communication between players, staff and commentators.

Riedel's Solution

Riedel consulted Mr. Tsunoda from Yoshimoto Broad Entertainment Co., Ltd. who was able to successfully create a communication environment between the players, staff and commentators. The solution worked flawlessly and met all of the client's requirements. The result: one satisfied customer.

For a detailed account of this installation and the products used, please see the system setup and product descriptions below.



Featured Products



ARTIST is a decentralized, scalable digital intercom network that provides reliable communications and audio signal distribution for any audio or intercom application.

An Artist system can be anything from a single Artist frame to a vast, fiber-based and remotely connected network of nodes. Each modular node contains client cards that accept and distribute different types of signals including SMPTE 2110-30/31 (AES67), VoIP, DANTE, AVB, MAD1, AES3 and analogue audio. At the present time, Artist is the only intercom platform that talks all audio standards – and its modular architecture allows for the easy accommodation of future standards.



BOLERO: As an all-new wireless intercom system capable of supporting up to 250 beltacks and 100 antennas in a single deployment, Bolero is a true game-changer. Bolero redefines the wireless intercom category with features such as its ADR (Advanced DECT Receiver) with multi-diversity and anti-reflection technology for greater RF robustness, “Touch&Go” NFC beltack registration, and versatile operation as a wireless beltack, a wireless keypanel, or — in an industry first — a walkie-talkie.

With the addition of the newest Bolero Standalone 2110 (AES67) mode, there are now three network modes available for Bolero systems – each of them dedicated to specific applications.

- Bolero Integrated leverages the powerful Artist infrastructure, including SmartPanels and extensive I/O connectivity.
- Bolero Standalone Link provides plug & play simplicity that is especially suited to smaller installations, portable deployments, or cases when Bolero needs to be interfaced to other systems without the need for an Artist matrix.
- Bolero Standalone 2110 (AES67) enables users to set up a standards-based (SMPTE 2210/AES67) IP network with no Artist required.



The **PERFORMER** series provides high quality digital partylines.

Besides pure partyline applications, it also offers the first fully integrated “digital” solution for combined digital matrix and partyline intercom. The system has been designed specifically for the requirements of stand-alone broadcast, sports and event applications.

Full Product List

Artist-64 ×2
AES67 Card ×2
DANTE Card ×2
CAT5 Card ×4
AIO Card ×2
COAX Card ×1
C44 plus ×4
C3 Beltack ×10

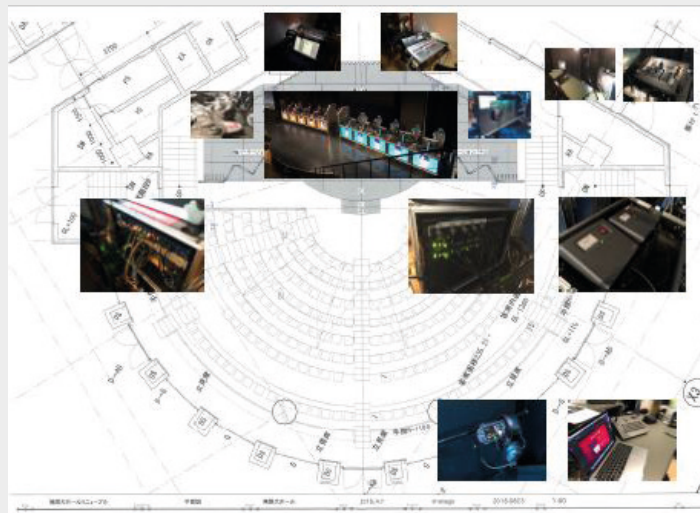
DGP-1116 ×1
CCP-1116 ×1
XLR Patchbay ×2
Bolero antenna ×2
Bolero beltack ×12
MAX E2 headset ×12
PRO-D1 headset ×9

The Main System

The intercom master frame is an Artist-64, with two Artist units linked by optical cable to form two separate racks, one for the A-team and one for the B-team.

The Artist is equipped with an AES67 card for the wireless intercom Bolero, a CAT5 card for the wired beltack C3, an AIO card to capture analog audio, and a DANTE card for audio communication with the venue audio staff.

In each rack there are two C44 plus master stations for C3 wired beltacks for players and an XLR patchbay for analog audio.



* Diagram of Main System

Communication for...



...the players

There were three types of audio in the players' headsets.

The first was the sound of the players communicating with each other, the second was the sound of the game the players were playing, and the third was the white noise, which eliminates ambient noise.

Firstly, players could communicate with each other, not only with players on the same team, but also with coaches and referees. Furthermore, with this system, the sound of each player, coach and referee was sent to the venue sound system, and the sound adjusted by a separate mixer was sent back to each individual's headset.

Next, the game sound was taken out of the computer and imported into the Artist system in analog audio. Each player received his own game sound, so the number of lines were 10.

Finally, there was white noise. We used a DANTE line from the venue sound system to get it into the Artist system. Normally, loud white noise is played to block out the surrounding sound, but our MAX headsets are sound insulating and the white noise is played at a lower than normal level.

The Artist system mixed three different sounds and eliminated the need for in-ear headphones and supported the player's playing environment.



...the staff

We used Bolero wireless intercoms between the production and technical staff.

We had 12 wireless intercom units, each with a different key assignment depending on the section they are in charge of. We had two wireless intercom antennas to cover the entire venue.



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... and the commentators

Our intercoms were also used for the commentary of the actual situation.

This was the CCP-1116, a commentary panel with external input and output terminals. It has 16 keys as an intercom, and by using two channels, two commentators could use one panel at the same time.

It was also possible to extract audio directly from the XLR jacks.

How the keys were assigned on the System:

Basically, if this is your first time using multi-channel intercom, it's best to use as few channels as possible to avoid operation interference. Here is an overview of how the key's are were assigned for LJJL.

Products	Name	Key1	Function	Key2	Function	Key3	Function
Bolero	A Team coach	A Team	conference				
	A Team Judge	A Team	conference	audio	conference	PD all	conference
	B Team Coach	B Team	conference				
	B Team judge	B Team	conference	audio	conference	PD all	conference
	PD 1	PD all	conference				
	PD 2	PD all	conference				
	PD 3	PD all	conference				
	PD 4	PD all	conference				
	AudioAssistant 1	audio	conference				
	AudioAssistant 2	audio	conference				
	Audio director1	audio	conference				
	Audio director2	audio	conference				

Products	Name	Key1	Function	Key2	Function	Key3	Function	Key4	Function
CCP-1116	commentary	Director	call to port					Director	call to port
DCP-1116	Director	PD all	conference	commentary B	call to port	commentary A	call to port	commentary all	conference

Products	Name	always	Function
C3	A Team Top	A Team	conference
		A Top Game In Whitenoise	call to port call to port
	A Team jungle	A Team	conference
		A jungle Game In Whitenoise	call to port call to port
	A Team Mid	A Team	conference
		A Mid Game In Whitenoise	call to port call to port
	A Team ADC	A Team	conference
		A ADC Game In Whitenoise	call to port call to port
	A Team Sup	A Team	conference
		A Sup Game In Whitenoise	call to port call to port
	B Team Top	B Team	conference
		B Top Game In Whitenoise	call to port call to port
	B Team jungle	B Team	conference
		B jungle Game In Whitenoise	call to port call to port
	B Team Mid	B Team	conference
		B Mid Game In Whitenoise	call to port call to port
	B Team ADC	B Team	conference
		B ADC Game In Whitenoise	call to port call to port
	B Team Sup	B Team	conference
		B Sup Game In Whitenoise	call to port call to port



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Our Next Mission

The player's request was to have fixed volume for communication within the team and to have individual volume control for the game sound of each individual player (Stereo) and white noise.

For LJJL, Riedel used monaural game sounds in the players' headsets. With the 2-channel C3, if you take in three sources, the volume of the sound you want to fix will also change when you adjust the volume by hand. There was another idea of using stereo with the C3 SE, but since we couldn't meet the players' requests to adjust all the audio individually, we used mono for this time.

For this important part of the communication between the players, the production and technical companies request to have a wired intercom. At the moment, Riedel does not have all the equipment to meet all of these demands. This is the next mission for Riedel to find a solution for.

History of Riedel Communications & PlayBrain

PlayBrain is an eSports convention management, distribution production and distribution technology, web construction, consulting, temporary staffing, and other related services Company established in 2016. Riedel's first trial with PlayBrain was held in October 2019 for LJJL's 10th anniversary event and the next was the official league for the 2020 LJJL (spring & summer).





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LJL 2020 Spring Split

Team: DetonatioN FocusMe

Team: Sengoku Gaming

Team: V3 Esports

Team: Crest Gaming Act

Team: AXIZ

Team: Rascal Jester

Team: Burning Core

Team: Fukuoka SoftBank HAWKS gaming

LJL 2020 Summer Split

Team: DetonatioN FocusMe

Team: Sengoku Gaming

Team: V3 Esports

Team: AXIZ

Team: Rascal Jester

Team: Burning Core

Team: Fukuoka SoftBank HAWKS gaming

Facts about eSports in Japan

Esports Terminology:

LOL: League of Legends

LJL: League of Legends Japan League

MOBA: A sub-genre of the multiplayer online battle arena (RTS), which is also known as „Dota 2“ and „League of Legends“. MOBA is a game in which players are divided into two teams and work together with their allies to destroy the enemy team’s base.

FPS: First Person Shooter Game

It is a type of shooting game in which the player can move through the game world and space from his or her own perspective (first-person shooter) and fight with weapons or bare hands.

TPS: A third-person shooter (TPS) is a computer game in which the player can move through the game from the perspective of a third party who follows the character and fights with weapons or bare hands games.

RTS: Real-time strategy, in which players plan and fight enemies in real time while reacting to the time progressing in real time.



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Major Japanese Esports Organizations:

Japan e-Sports Union (JeSU)

The Japan e-Sports Association, the e-sports promotion organization, and the Japan e-Sports Federation were combined into one organization. Many of its members are related to game manufacturers.

Japan e-Sports League Association (JeSA)

The „professional baseball“ Z-League of e-sports is held.

Japan esports promotion association (JEF)

General Foundation. It is neutral and has no game-maker personnel among its members because it puts players first. The vice-chairman is the CEO of a company involved in overseas tournament management and e-sports business.

Nippon Professional Baseball Organization (NPB)

Overseas Japan's professional baseball; entered eSports in 2018. Hosted eBASEBALL Power Pro League and NPB eSports Series Splatoon 2.

Yoshimoto Kogyo Co.

Is an entertainment production promoter, and TV program production company of the Yoshimoto Kogyo Group. Entered eSports in 2018 and launched YOSHIMOTO Gaming. Manage professional teams but also hold events and competitions.

CyberZ, Inc.

A subsidiary of CyberAgent. Operates play video sharing service ‚OPENREC‘ and large-scale e-sports tournament ‚RAGE‘.

Cygames, Inc.

A subsidiary of CyberAgent. Develops mobile and home video games. Held the „Shadowverse World Grand Prix“ with over 100 million yen in prize money for „Shadowverse“, an authentic smartphone card battle.

National High School e-Sports Federation (JHSEF)

The Mainichi Newspapers and Third Wave, the co-hosts of the National High School e-Sports Championship, established a basic agreement with the North American Educational e-Sports Federation (NASEF) to collaborate on activities. Basic agreement with the North American Educational e-Sports Federation (NASEF) to collaborate on activities.

NTTe-Sports

NTT East, NTT West, NTT AD, NTT Urban Solutions, SKY PerfecTV JSAT and Taito jointly established NTTe-Sports, a new company in the field of e-sports[154], to build and operate e-sports-related facilities, support human resources training and provide video content, etc. Includes information about the company, its products and services, as well as a list of its products and services. Co-hosted the arcade e-sports tournament „Toushi Matsuri 2020 -World Championship of ARCADE-“.

Japan Student Esports Association and Gameic.

One of the largest associations in the Japanese student esports market. Major overseas esports companies participate as sponsors.

e-Sports Queen League (eQ League)

An e-sports women's league project by female entertainers and celebrities.