



ROBOTICS COMPETITION

INTERNATIONAL REGIONAL COMPETITION PARTICIPANT'S MANUAL

Prepared by the *RoboMaster* Organizing Committee Updated on July, 2019



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1. Competition Summary

i. List of Organizing Committee (with no particular order in names)

Honorary Chairman:	Cai Hegao Academician			
Executive Chairman:	Li Zexiang Professor (Hong Kong University of Science and Technology)			
Vice Chairman:	Xu Chen Vice President (Shenzhen University)			
	Han Shangfeng Deputy Secretary of the Party Committee and Vice			
	President (China University of Petroleum (Beijing))			
	Zheng Qinghua Vice President and Professor (Xi'an Jiaotong University)			
Competition Advisors:	Gao Deli Academician (China University of Petroleum (Beijing))			
	Feng Zuren Professor (Xi'an Jiaotong University)			
	Shang Xuebing Director (Foshan Education Bureau)			
	Shen Shaojie Professor (Hong Kong University of Science and			
	Technology)			
	Pan Jia Professor (University of Hong Kong)			
	Quan Long Professor (Hong Kong University of Science and Technology)			
	Qiu Li Professor (Hong Kong University of Science and Technology)			
	Zhang Lei Professor (Hong Kong Polytechnic University)			
	Shi Ling Professor (Hong Kong University of Science and Technology)			
	Zong Guanghua Professor (Beijing University of Aeronautics and			
	Astronautics)			
	Lu Jilian Professor (Beijing Institute of Technology)			
	Dr. Harald Löwe (Technical University of Braunschweig, Germany)			
	Frank C.Park Professor (Seoul University)			
	G.Chirikjian Professor (Johns Hopkins University)			

ii. Organizational Structure

Main Organisers:The Communist Youth League of ChinaThe All-China Students' FederationShenzhen Municipal People's GovernmentSponsor:SZ DJI Technology Co., Ltd.Organizers:Shenzhen Municipal Science and Technology Innovation CommitteeShenzhen Municipal Committee of the Communist Youth LeagueNanshan District Government, Shenzhen MunicipalitySupporters:The China Youth Development FoundationThe CCYL National Research Center of Colleges and Middle SchoolsShenzhen UniversityShenzhen Second Senior High School



Shenzhen Baoan District Youth Service Center (District Youth Palace) Co-organizers: Ministry of Education Applied Technology University (College) Alliance MLT Advisory Board under the Ministry of Education CLT Advisory Board under the Ministry of Education

2. List of Competing Teams

Serial	School Name	Team Name
1	The Hong Kong University of Science and Technology	ENTERPRIZE
2	Fukuoka Union University	Fukuoka Niwaka
3	Virginia Polytechnic Institute and State University	RoboGrinder
4	Texas A&M University	Texas aimbot
5	Ohio State University	Vindicator
6	University of Washington	AdvancedRobotics
7	University of California, San Diego	Triton Robotics
8	Rose-Hulman Institute of Technology	Rosebotics
9	McMaster University	MacFalcons
10	University of Nottingham Ningbo China	Yong Zao Fang
11	Queen's University	Queen's Knights
12	Purdue University	BoilerBot
13	Sino-British International College, University of Shanghai for Science and Technology	RoboVigor
14	Xi'an Jiaotong-Liverpool University & University of Liverpool	GMaster
15	The University of Hong Kong	HerKules
16	Guangdong-Taiwan Industrial Technology College, Taiwan National Chung Cheng University	Kinetic
17	ZJU-UIUC Institute	Meta

*Names are listed in no particular order. *School names and team names listed in bold indicate seed teams for the International Regional Competition.



3. Competition System and Prizes

i. Competition System

1. Draw Format

The number of participating teams in the 18th RoboMaster 2019 Robotics Competition (hereinafter referred to as 'RM2019') RoboMaster International Regional Competition (hereinafter referred to as 'International Regional Competition') is 17, and the grouping of all participating teams are determined by draw. The 17 participating teams will be divided into 4 groups (A, B, C and D), of which there are 4 teams each in Groups A, B and C, and 5 teams in Group D. The top four participating teams in the RoboMaster 2018 International Regional Competition are seed teams, and are not in the same group.

At the drawing ceremony, the drawing boxes 1, 2 are set.

In the drawing box 1, there are drawing balls corresponding to the three seed teams. The chief referee will draw the teams corresponding to A1, B1 and C1 in order.

In the drawing box 2, there are drawing balls corresponding to the remaining 14 teams. The chief referee will draw the teams corresponding to A2, A3, A4, B2, B3, B4, C2, C3, C4, D1, D2, D3, D4, D5 in order.

2. Competition System

The International Regional Competition consists of Practice Matches, Group Round Robin, 4/8 Knockout Stage, Second Runner-up Match, and Championship Match.

In all stages excluding practice matches, each match has several rounds depending on the Competition System. Each round consists of a three-minute setup period and a seven-minute round. In between the setup period and round, there is a 20-second Referee System initialization period as a bridging.

Practice Matches

Each participating team has an opportunity of Practice Matches with a duration of 40 minutes, including a BO2 match and free commissioning time.



Group Round Robin (BO2)

The participating teams will be divided into 4 groups for Group Round Robin, with each team in the group having equal playing opportunities. The Group Round Robin uses the BO2 system, which is 2 rounds per match. The teams are ranked according to the Group Round Robin ranking principle, and the first and second teams of each group are promoted to 4/8 Knockout Stage.

4/8 Knockout Stage (BO3)

The 4/8 Knockout Stage use the BO3 system, which is 3 rounds per match. Those winning 2 matches will win. The four participating teams who are promoted to Second Runner-up Match and Championship Match will be selected from the top 8 participating teams through the double-lose system.

Second Runner-up Match and Championship Match (BO5)

Second Runner-up Match and Championship Match use the BO5 system, which is 5 rounds per match. Those winning 3 rounds will win. The Champion, First Runner-up and Second Runner-up of the International Regional Competition will be decided by a single-lose system.

Competition System	Competition result	Match points	
	2:0	The party winning two rounds will obtain 3 points	
	1:1	Both parties will obtain 1 point	
	0:2	The party losing two rounds will obtain 0 points	
BO2	1:0	(draw in one round) The party winning one round will obtain 1 point	
	0:1	(draw in one round) The party losing one round will obtain 0 points	
	0:0	(draw in two rounds) Both parties will obtain 0 points	
Competition		Victory Conditions	
System		victory conditions	
BO3		Win two rounds	
BO5		Win three rounds	

3. Victory Conditions

Criteria for Winning an Individual Round:

(1). The round ends immediately when the base of one team is destroyed, giving the opposing team a win.

(2). When the entire seven minutes of a round are up, if the bases of both teams have survived, the team with the highest number of Base HP is the winner.



(3). When the entire seven minutes of a round are up, if the bases of both teams have survived and both bases have the same remaining HP, the team with the higher HP Deduction wins.

(4) When the entire seven minutes of a round elapses, if the Bases of both teams have survived and both bases have the same remaining HP and HP Deduction, the team with the higher remaining Robot HP wins.

(5). If the above conditions cannot determine the victory, the round is considered a draw. A draw in the Knockout Stage leads to an immediate tie-breaker round until a team wins.

4. Group Round Robin

The following criteria are used to determine rankings in descending order of priority:

1. The team with the higher number of total match points ranks higher.

 If two or more teams have the same total match points, the team with the higher total Net Base HP gained from all qualification matches is ranked higher.

3. If the total Net Base HP are also the same, the team with the higher total HP Deduction gained from all qualification matches is ranked higher.

4. If two or more teams still share the same ranking, the Organizing Committee will arrange playoff matches on a round-robin basis.

The definitions for the previously-described criteria are as follow:

1. HP Deduction: At the end of each round, the situation that one party attacks the opponent's robot or base armor module to cause the loss of HP of the opponent's robot or base. The HP Deduction caused by the Level 2 to 5 Warnings executed by the referee will be counted in the opponent's HP deduction. The HP Deduction caused by the initial firing speed out of limit, the overheating of the barrel, the overpower of the chassis, and the offline of the referee system module are not counted in the HP Deduction.

2. Net Base HP: At the end of each round, the remaining HP of the own base subtracted by the remaining HP of the opponent's base.

3. Total Remaining HP: At the end of each round, the total remaining HP in all own surviving robots.

ii. Award System

1. International Regional Competition Award

Award	Ranking	Quantity	Reward
International	International	1	Championship Trophy



Regional Competition Grand Prize	Regional Competition Champion		International Regional Competition Grand Prize Certificate Cash prize of RMB 30,000 Yuan (before tax)
	International Regional Competition First Runner-up	1	First Runner-up Trophy International Regional Competition Grand Prize Certificate Cash prize of RMB 30,000 Yuan (before tax)
	International Regional Competition Second Runner-up	1	Second Runner-up Trophy International Regional Competition Grand Prize Certificate Cash prize of RMB 30,000 Yuan (before tax)
	International Regional Competition Third Runner-up	1	International Regional Competition Grand Prize Certificate Cash prize of RMB 30,000 Yuan (before tax)
International Regional Competition First Prize	-	0	International Regional Competition First Prize Certificate
International Regional Competition Second Prize	International Regional Competition 5-8th Place	4	International Regional Competition Second Prize Certificate
International Regional Competition Third Prize	International Regional Competition 9- 17th Place	9	International Regional Competition Third Prize Certificate

*According to the established rules, the participating team with the top ranking in the Region Competition and who can entry the Final Tournament can win the first prize. Due to the small number of International Regional Competition participating teams and promotion places, the first prize is not set.

2. Aesthetic Design Award

Participating robot	Quantity	Reward
Infantry	1	Honor certificate Cash prize of RMB 3,000 Yuan (before tax)
Engineer	1	Honor certificate Cash prize of RMB 3,000 Yuan (before tax)



Hero	1	Honor certificate Cash prize of RMB 3,000 Yuan (before tax)	
Aerial 1		Honor certificate Cash prize of RMB 3,000 Yuan (before tax)	
Sentry	1	Honor certificate Cash prize of RMB 3,000 Yuan (before tax)	
		A 2-minute Team Technical Timeout (only valid during International Regional Competition)	

3. Outstanding Contribution Award of the Year

Award	Quantity	Reward		
Outstanding Supervisor	6	Honor certificate		
of the Year	0	Cash prize of RMB 8,000 Yuan (before tax)		
Outstanding Captain of	4	Honor certificate		
the Year	4	Cash prize of RMB 5,000 Yuan (before tax)		
Outstanding Project		Honor certificate		
Manager of the Year	4	Cash prize of RMB 5,000 Yuan (before tax)		
Outstanding PR Manager	4	Honor certificate		
of the Year		Cash prize of RMB 3,000 Yuan (before tax)		
Outstanding Business	4	Honor certificate		
Manager of the Year	4	Cash prize of RMB 3,000 Yuan (before tax)		
Outstanding Advisor of	4	Honor certificate		
the Year	4	Cash prize of RMB 3,000 Yuan (before tax)		
Creativity Award	4	Honor certificate		

*The Annual Outstanding Contribution Award is open to all participating teams that have qualified for RM2019. Please refer to the <u>RM2019 Outstanding Contribution Awards</u> <u>Selection Criteria</u> for the application process.

4. Open Source Award

Award	Quantity	Reward	Notes
Open Source	Multiple	Honor certificate	In the RM2019
Grand Prize	Multiple	RMB 100,000 Yuan (pre-tax)	season (September
Open Source	Multiple	Honor certificate	20, 2018 to August
First Prize	wuitipie	RMB 50,000 Yuan (pre-tax)	31, 2019), the core
Open Source	Multiple	Honor certificate	technologies were
Second Prize	wuitiple	RMB 30,000 Yuan (pre-tax)	publicly shared in



Open Source	Multiple	Honor certificate	the RoboMaster BBS
Second Prize		RMB 10,000 Yuan (pre-tax)	and on the official
Open Source Outstanding Award	Multiple	Honor certificate Class A: RMB 5,000 Yuan (pre- tax) Class B: RMB 3,000 Yuan (pre-tax) Class C: RMB 2,000 Yuan (pre- tax)	website to promote the development of the RoboMaster Robotics Competition and the culture and spirit of engineers



4. Competition process

i. Daily Schedule

	July 27 (Warm-up Competition)				
8:00	8:00 Start morning inspection				
9:00-13:00	Warm-up Competition				
13:00-14:00	Start afternoon inspection				
14:00-18:00	Warm-up Competition				
	July 31 (Check-in Day 1)				
14:30-18:00	Team Check-in				
15:30-20:00	Mock Inspection				
15.50-20.00	Team Photos				
	August 1 (Check-in Day 2)				
9:00-12:30	Team Check-in				
9.00-12.30	Team Photos				
9:00-18:00	Mock Inspection				
18:00-19:00 Captains Meeting					
Augı	August 2 (Practice Matches & Competition Day 1)				
7:30	Start morning inspection				
9:00-12:20	Practice Matches				
12:20-13:20	Break				
11:50	Start afternoon inspection				
13:20-16:00	Practice Matches				
16:00-19:30	Break				
16:15-16:45	Draw Ceremony				
18:00	Start evening inspection				
19:30-22:00	Group Round Robin	BO2			
	August 3 (Competition Day 2)				
7:30	Start morning inspection				
9:00-11:30	Group Round Robin	BO2			
11:30-12:30	Break				
11:00	Start afternoon inspection				
12:30-16:30	Group Round Robin	BO2			

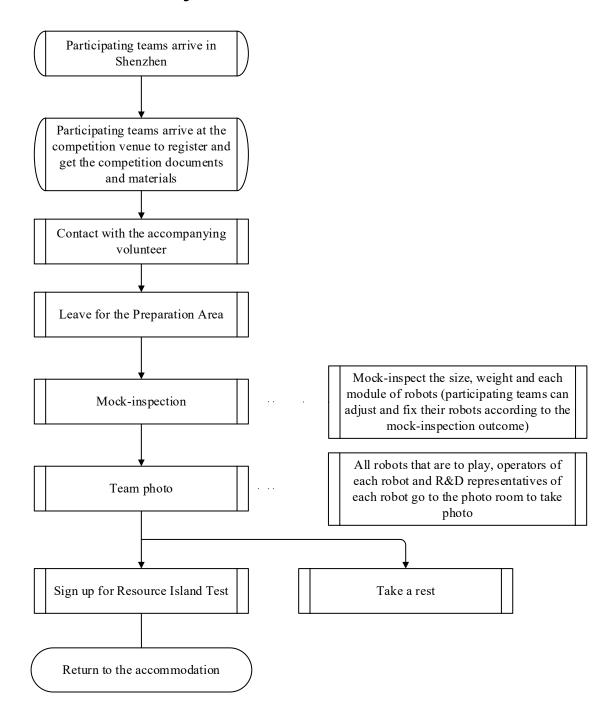


16:30-17:30	Break	Break			
16:00	Start evening inspection				
17:30-21:00	Group Round Robin	BO2			
	August 4 (Competition Day 3)				
7:30	Start morning inspection				
9:00-10:30	Group Round Robin	BO2			
10:30-11:40	4/8 Knockout Stage	BO3			
11:40-13:00	Break				
11:30	Start afternoon inspection				
13:00-14:10	4/8 Knockout Stage	BO3			
14:10-16:05	Break				
14:25	Start afternoon inspection				
16:05-17:15	First round of the loser group	BO3			
17:15-18:25	First round of the winner group •Top Four Match	BO3			
18:25-20:20	Break				
18:50	Start evening inspection				
20:20-21:30	Second round of the loser group •Top Four Match	BO3			
August 5 (Competition Day 4)					
7:30	Start morning inspection				
9:00-9:50	Second Runner-up Match	BO5			
9:50-10:40	Championship Match	BO5			
10:40-11:00	Award Ceremony				
Actual times may dif					

*Actual times may differ.

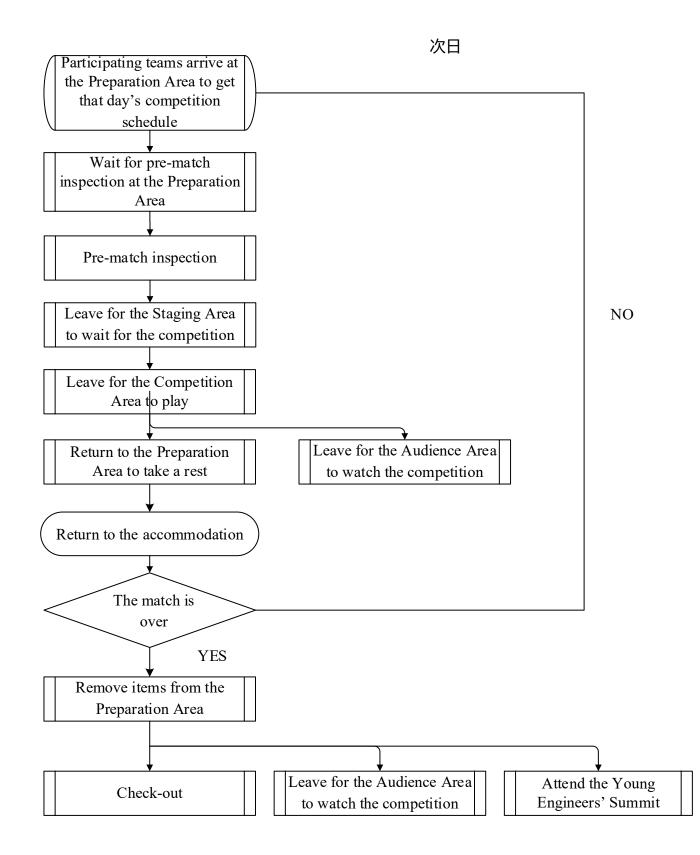


ii. Check-in Day Flow Chart



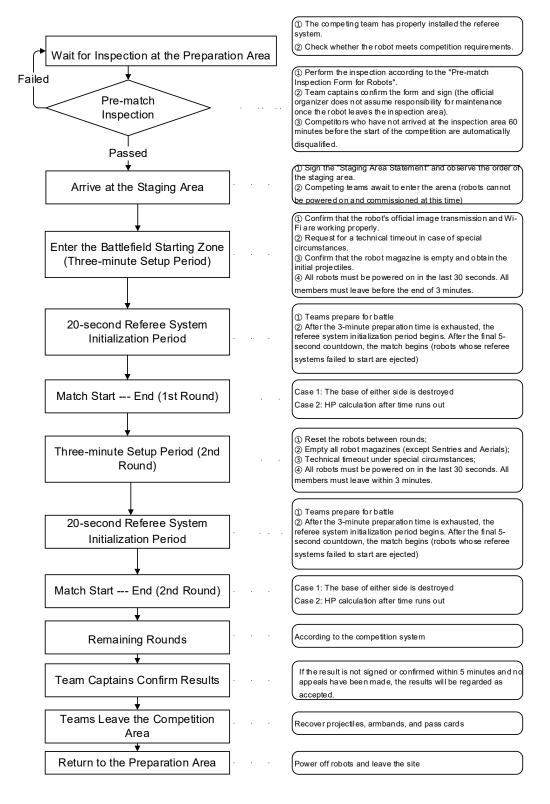


iii. Competition Day Flow Chart





iv. Single Match Flow Chart





v. Warm-up Competition Order and Schedule

July 27, 2019

Match No.	Red team	Blue team	Time
	Morning inspe	ction	Beginning
1	The Hong Kong University of Science and Technology	The University of Hong Kong	09:00- 10:00
2	University of Washington	Virginia Polytechnic Institute and State University	10:00- 11:00
3	Dongguan Institute of Technology Guangdong- Taiwan Industrial Technology College &Taiwan National Chung Cheng University		11:00- 12:00
4	Queen's University	McMaster University	12:00- 13:00
	Break		13:00- 14:00
	Afternoon Inspe	ection	Beginning at 13:00
6	University of California, San Diego	Purdue University	14:00- 15:00
7	University of Nottingham Ningbo China	Rose-Hulman Institute of Technology	14:00- 14:40
8	Ohio State University	Xi'an Jiaotong-Liverpool University & University of Liverpool	14:40- 15:20
9	Sino-British International College, University of Shanghai for Science and Technology	Zhejiang University, Illinois University Urbana Champaign Institute	15:20- 16:00



vi. Practice Matches and Schedule

August 2, 2019

Match No.	Red team	Blue team	Time	
	Morning inspect	ion	Beginning at 07:30	
1	First checked-in team	Second checked-in team	09:00-09:40	
2	Third checked-in team	Fourth checked-in team	09:40-10:20	
3	Fifth checked-in team	Sixth checked-in team	10:20-11:00	
4	Seventh checked-in team	Eighth checked-in team	11:00-11:40	
5	Ninth checked-in team	Tenth checked-in team	11:40-12:20	
	Break			
	Afternoon Inspec	tion	Beginning at 11:50	
6	Eleventh checked-in team	Twelfth checked-in team	13:20-14:00	
7	Thirteenth checked-in	Fourteenth checked-in	14:00-14:40	
8	Fifteenth checked-in team	Sixteenth checked-in	14:40-15:20	
9	Seventeenth checked-in		15:20-16:00	
	Draw Ceremon	у	16:15-16:45	

*Actual times may differ.



vii. Competition Order and Schedule

1. August 2, 2019 (Group Stage)

Match No.	Red team	Blue team	Time
	Afternoon Inspe	ction	Beginning at 18:00
	Group	Round Robin (BO2)	
1	A1	A4	19:30-20:00
2	B1	B4	20:00-20:30
3	C4	C1	20:30-21:00
4	D4	D1	21:00-21:30
5	D3	D5	21:30-22:00

*Actual times may differ.

2. August 3, 2019 (Group Stage)

Match No.	Red team	Blue team	Time
	Morning inspec	ction	Beginning at 07:30
	Group	Round Robin (BO2)	
6	A2	A3	09:00-09:30
7	B2	B3	09:30-10:00
8	C3	C2	10:00-10:30
9	D3	D2	10:30-11:00
10	D5	D1	11:00-11:30
	Break		11:30-12:30
	Afternoon Inspe	ection	Beginning at 11:00
11	A3	A1	12:30-13:00
12	B3	B1	13:00-13:30
13	C1	C3	13:30-14:00
14	D1	D3	14:00-14:30
15	A2	A4	14:30-15:00
16	B2	B4	15:00-15:30
17	C4	C2	15:30-16:00



18	D4	D2	16:00-16:30
	Break		16:30-17:30
	Afternoon Inspe	ection	Beginning at 16:00
19	A1	A2	17:30-18:00
20	B1	B2	18:00-18:30
21	C2	C1	18:30-19:00
22	D2	D1	19:00-19:30
23	D4	D5	19:30-20:00
24	A4	A3	20:00-20:30
25	B4	B3	20:30-21:00

*Actual times may differ.

3. August 4, 2019 (Group Stage & Knockout Stage)

Matc h No.	Red team	Blue team	Winner	Loser	Time
		Morning ins	pection		Beginning at 07:30
		Grou	p Round Robin (B	802)	
26	C3	C4			09:00-09:30
27	D3	D5			09:30-10:00
28	D5	D2			10:00-10:30
		4/8 K	nockout Stage (B	SO 3)	
29	A-1	B-2	Winner 1	Loser 1	10:30-11:05
30	A-2	B-1	Winner 2	Loser 2	11:05-11:40
		Break	٢		11:40-13:00
		Afternoon In	spection		Beginning at 11:30
		4/8 K	nockout Stage (B	603)	
31	D-1	C-2	Winner 3	Loser 3	13:00-13:35
32	D-2	C-1	Winner 4	Loser 4	13:35-14:10
		Break	۲.		14:10-16:05
Afternoon Inspection				Beginning at 14:25	
	First round of the loser group				
33	Loser 1	Loser 3	Winner I	Knockout	16:05-16:40
34	Loser 2	Loser 4	Winner II	Knockout	16:40-17:15



	First round of the winner group •Top Four Match				
35	Winner 1	Winner 3	Winner A (Top Four)	Loser A	17:15-17:50
36	Winner 2	Winner 4	Winner B (Top Four)	Loser B	17:50-18:25
		Breal	k		18:25-20:20
	Evening Inspection				
	Sec	cond round of	the loser group •	Top Four Match	
37	37 Loser A Winner II Winner a (Top Four) Knockout				
38	Winner I	Loser B	Winner b (Top Four)	Knockout	20:55-21:30

*Actual times may differ.

4. August 5, 2019 (Knockout Stage)

Matc h No.	Red team	Blue team	Winner	Loser	Time
		Morning ins	pection		Beginning at 07:30
		Second	Runner-up Match	n (BO5)	
39	Winner a	Winner b	Second Runner-up	Third Runner- up	09:00-09:50
		Cham	pionship Match (BO5)	
40	Winner A	Winner B	Champion	First Runner- up	09:50-10:40
	Award Ceremony				10:40-11:00



5. Venue information

i. Competition Location

Location	Address
Warm-up Competition Venue	Nanshan District, Shenzhen Shenzhen University Yuanping Gymnasium
Competition Area	Baoan District, Shenzhen Baoan Sports Center Gymnasium
Preparation Area	Baoan District, Shenzhen Baoan Central Youth Palace
Accommodation Area	Nanshan District, Shenzhen Shenzhen Second Senior High School
RoboMaster 2019 Young Engineer Summit	To be determined

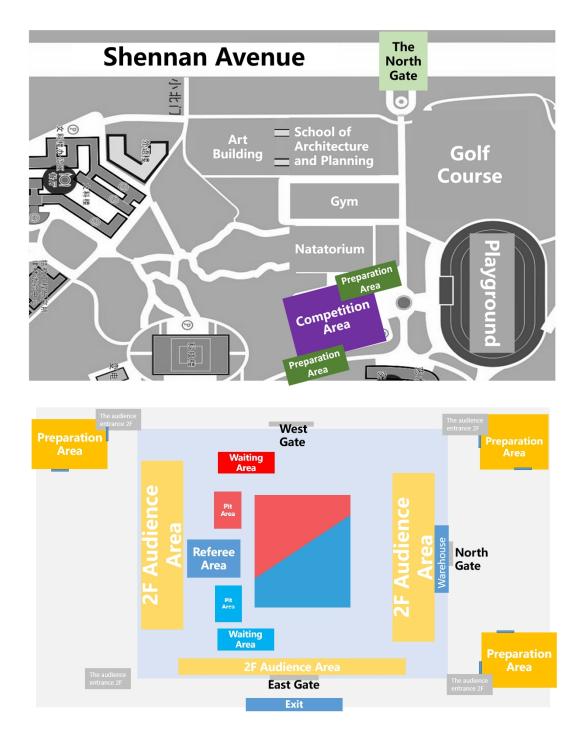
*Detailed arrangements for the accommodation area, please pay attention to the follow-up notice of the Organizing Committee and the 'RM2019 Participating Team Check-in Instructions'.

*The Organizing Committee will arrange the shuttle bus from the accommodation area to the preparation area, and the preparation area to the competition area, and the schedule of the shuttle bus will be updated later.



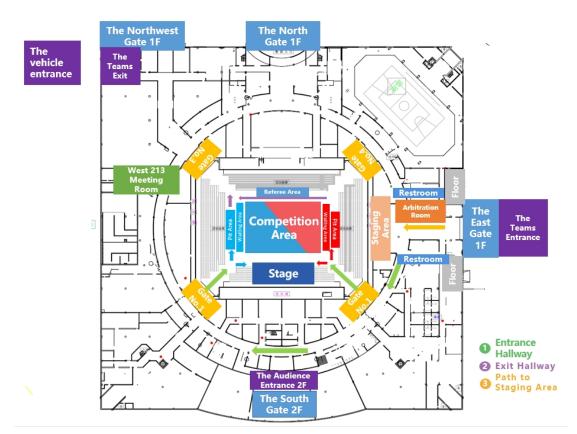
ii. Site Maps

1. Warm-up Competition Layout Maps





2. Competition Area Layout Maps



*Preparation Area Layout Maps will be updated in the 'RM2019 RoboMaster International Regional Competition Participation Manual V2.0'



iii. Main Transportation Routes

1. Main Transportation Routes to Warm-up Competition Venue

(1) From Shenzhen Baoan International Airport to Shenzhen University

- Taxi: About 45 minutes, about 60 Yuan.
- Public Transportation: About 1 hour.

Route 1: Airport Subway Station-Take Line 11 (Futian direction)-Qianhaiwan Subway Station-Take Line 1 (Luohu direction)- Shenzhen University Subway Station Exit A2 -Walk 990 m;

Route 2: Airport Subway Station-Take Line 11 (Futian direction)-Nanshan Subway Station Exit E2-Walk 423 m-China Southern Airlines Bus Stop-Take Bus 369 /79/204 -Shenzhen University North Gate 2 Bus Stop-Walk 518 m.

(2) From Shenzhen Station (Luohu Railway Station) to Shenzhen University

- Taxi: About 40 minutes, about 75 Yuan.
- Public Transportation: About 1 hour.
 Route 1: Luohu Subway Station-Take Line 1 (Airway East direction)-Shenzhen University Subway Station Exit A2-Walk 990 m;
 Route 2: Railway Station Bus Stop-Take Bus 101 (Zoo direction)-Shenzhen University North Gate 2 Bus Stop-Walk 640 m.

(3) From Shenzhen West Railway Station to Shenzhen University

- Taxi: About 16 minutes, about 20 Yuan.
- Public Transportation: About 45 minutes.

Route: Nantou West Railway Station Bus Stop-Take Bus 36 (Zoo direction)-Shenzhen University North Gate 2 Bus Stop-Walk 640 m;

(4) From Shenzhen North Railway Station to Shenzhen University

- Taxi: About 34 minutes, about 60 Yuan.
- Public Transportation: About 1 hour.

Route 1: Shenzhen North Railway Station Subway Station-Take Line 4 (Futian Port direction)-Convention and Exhibition Center Subway Station-Take Line 1- Shenzhen University Subway Station Exit A2 -Walk 990 m;

Route 2: Walk 425 m-Shenzhen North Bus Station Bus Stop-Take Bus 81 (Qianhai Hanghai Road direction)-Shenzhen University North Gate 2 Bus Stop -Walk 640 m.

(5) From Shenzhen East Railway Station to Shenzhen University

• Taxi: About 50 minutes, about 120 Yuan.



• Public Transportation: About 1 hour and 30 minutes.

Route 1: Walk 333 m-Longgang District Second People's Hospital Bus Stop-Take Bus M194 (Xixiang Zhongwu Village direction)-Shenzhen University North Gate 1 Bus Stop-Walk 650 m;

Route 2: Buji Subway Station-Take Line 3 (Yitian direction)-Laojie Subway Station-Take Line 1 (Airway East direction)- Shenzhen University Subway Station Exit A2 -Walk 990 m.

(6) From Futian Station to Shenzhen University

- Taxi: About 50 minutes, about 90 Yuan.
- Public Transportation: About 40 minutes.

Route 1: Futian Subway Station Bus Stop -Take Bus 395 /M413 (Jiuwei Village direction)-Shenzhen University North Gate 1 Bus Stop -Walk 650m;
Route 2: Futian Subway Station-Take Line 11 (Bitou direction)-Chegongmiao Subway Station-Take Line 1 (Airway East direction)- Shenzhen University Subway Station Exit A2 -Walk 990 m.

2. Main Transportation Routes to Accommodation Area

(1) From Shenzhen Baoan International Airport to Shenzhen Second Senior High School

- Taxi: About 45 minutes, about 70 Yuan.
- Public Transportation: About 1 hour and 30 minutes.

Route 1: Walk 1.4 km-Airport New Terminal Bus Stop-Take Bus M528 (Shenzhen Bay Port direction)-Heliport Bus Stop-Take Bus 74/122 (Minzhi direction)-Second Senior High School Bus Stop;

Route 2: Airport Subway Station-Take Line 11 (Futian direction)-Nanshan Subway Station Exit E2 -Walk 431 m-China Southern AirLines Bus Stop-Take Bus 74 (Minzhi direction)- Second Senior High School Bus Stop;

Route 3: Airport Subway Station-Take Line 11 (Futian direction)- Qianhaiwan Subway Station-Take Line 5 (Huangbeiling direction)-Liuxiandong Subway Station Exit C-Walk 204 m-Shenzhen Vocational College West Dormitory Area Bus Stop-Take Bus 37 (Sea World direction)- Second Senior High School Bus Stop.

(2) From Shenzhen Station (Luohu Railway Station) to Shenzhen Second Senior High School

- Taxi: About 50 minutes, about 90 Yuan.
- Public Transportation: About 1 hour and 30 minutes.

Route 1: Luohu Subway Station-Take Line 1 (Airway East direction)- Shenzhen



University Subway Station Exit C -Take M539 Road (TCL International E City direction)- Second Senior High School Bus Stop;

Route 2: Walk 257 m- Railway Station 337 Terminal Bus Stop-Take Bus 337 (Sea Pastoral direction)-China Southern AirLines Bus Stop-Take Bus 74 (Minzhi direction)-Second Senior High School Bus Stop.

(3) From Shenzhen West Railway Station to Shenzhen Second Senior High School

- Taxi: About 20 minutes, about 40 Yuan.
- Public Transportation: About 1 hour.

Route 1: Walk 668 m-Qianhai Garden Bus Stop-Take Bus M176 (Shenzhen University Xili Dormitory Building direction)-Second Senior High School Bus Stop; Route 2: Nantou West Railway Station Bus Stop-Take Bus 36 (Zoo Terminal direction)-Nanshan District Committee Bus Stop-Take Bus 74 (Minzhi direction)-Second Senior High School Bus Stop.

(4) From Shenzhen North Railway Station to Shenzhen Second Senior High School

- Taxi: About 25 minutes, about 50 Yuan.
- Public Transportation: About 45 minutes.

Route 1: Walk 795 m-Cai Yue Building Bus Stop-Take Bus 74 (Sunshine Science and Innovation direction)-Second Senior High School Bus Stop;
Route 2: Shenzhen North Railway Station Subway Station-Take Line 5 (Qianhaiwan direction)-Liuxiandong Subway Station Exit C-Walk 204 m- Shenzhen Vocational College West Dormitory Area Bus Stop-Take Bus 37 (Sea World direction)-Second

Senior High School Bus Stop.

(5) From Shenzhen East Railway Station to Shenzhen Second Senior High School

- Taxi: About 45 minutes, about 95 Yuan.
- Public Transportation: About 57 minutes.

Route 1: Buji Subway Station-Take Line 5 (Qianhaiwan direction)-Liuxiandong Subway Station Exit C-Walk 204M-Shenzhen Vocational College West Dormitory Bus Stop-Take Bus 37 (Sea World direction)-Second Senior High School Bus Stop; Route 2: Buji Subway Station-Take Line 5 (Qianhaiwan direction)-Xili Subway Station Exit B-Walk 205M-Xili Court 2 Bus Stop-Take Bus 74/M492 (Sunshine Science and Innovation direction)-Second Senior High School Bus Stop.

(6) From Futian Station to Shenzhen University

- Taxi: About 40 minutes, about 60 Yuan.
- Public Transportation: About 1 hour.

Route: Futian Subway Station-Take Line 11 (Bitou direction)-Nanshan Subway



Station Exit E2-Walk 431 m-China Southern Airlines Bus Stop-Take Bus 74 (Minzhi direction)- Second Senior High School Bus Stop;

3. Main Transportation Routes to Preparation Area

(7) From Shenzhen Baoan International Airport to Baoan Central Youth Palace

- Taxi: About 36 minutes, about 48 Yuan.
- Public Transportation: About 1 hour.

Route 1: Airport Subway Station-Take Line 11 (Futian direction)-Baoan Subway Station Exit B -Walk 1km;

Route 2: Airport Subway Station-Take Line 11 (Futian direction)-Qianhaiwan Subway Station-Take Line 5 (Huangbeiling direction)- Baohua Subway Station Exit D -Walk 697 m.

(8) From Shenzhen Station (Luohu Railway Station) to Baoan Central Youth Palace

- Taxi: About 1 hour, about 120 Yuan.
- Public Transportation: About 1 hour.

Route 1: Luohu Subway Station-Take Line 1 (Airway East direction)-Chegongmiao Subway Station-Take Line 11 (Bitou direction)-Baoan Subway Station Exit B- Walk 1 km;

Route 2: Luohu Subway Station-Take Line 1 (Airway East direction)-Qianhaiwan Subway Station-Take Line 5 (Huangbeiling direction)- Baohua Subway Station Exit D -Walk 697 m.

(9) From Shenzhen West Railway Station to Baoan Central Youth Palace

- Taxi: About 13 minutes, about 20 Yuan.
- Public Transportation: About 40 minutes.

Route 1: Walk 1.2KM-Liyumen Subway Station Exit A-Take Line 1 (Airway East direction)-Qianhaiwan Subway Station-Take Line 5 (Huangbeiling direction)-Baohua Subway Station Exit D-Walk 697 m;

Route 2: Walk 910M-Daxin Village Bus Stop-Take Bus M507 (Dachan Bay direction)-Baoan Administration Center Bus Stop- Walk 995 m.

(10) From Shenzhen North Railway Station to Baoan Central Youth Palace

- Taxi: About 43 minutes, about 80 Yuan.
- Public Transportation: About 45 minutes.
 Route: Shenzhen North Railway Station Subway Station-Take Line 5 (Qianhaiwan direction)-Baohua Subway Station Exit D-Walk 697 m.

(11) From Shenzhen East Railway Station to Baoan Central Youth Palace



Taxi: About 50 minutes, about 120 Yuan.
 Public Transportation: About 1 hour.
 Route: Buji Subway Station-Take Line 5 (Qianhaiwan direction)- Baohua Subway
 Station Exit D-Walk 697 m.

(12) From Futian Station to Baoan Central Youth Palace

- Taxi: About 50 minutes, about 90 Yuan.
- Public Transportation: About 40 minutes.

Route 1: Futian Subway Station-Take Line 11 (Bitou direction)-Qianhaiwan Subway Station-Take Line 5 (Huangbeiling direction)-Baohua Subway Station Exit D -Walk 697 m;

Route 2: Futian Subway Station-Take Line 11 (Bitou direction)-Baoan Subway Station Exit B- Walk 1 km.

iv. Accommodation around the Preparation Area

Hotel	Address	Contact	Price per	Distance
Hotel	Address	information	person	Distance
7 Day Hotel	No.89, Fanshen Road, Baoan District	29743988/297439 75	175	2 km
Haiyou Hotel	Floor 5-6, Linzhongyang Building, No.294, Fanshen Road, Baoan District	27862538/278895 93	145	2 km
Gardenia Fashion Hotel	Lianxing Commercial Building, No.139, Fanshen Avenue, Baoan District	88870066/278212 09	175	2 km
Circle Art Hotel	No.1146 Baoan Avenue, Baoan District	33686668/338663 38	170	1.7 km
Orange Fruit Hotel	No.68, 81, Fanshen Road, Baoan District	33216699	197	2 km
7C4 Youth Hostel	Building 18, Happy Coast, No. 20 Luotian Road, Baoan District	13828731153	65	1.5 km
7 Day Hotel	No.68-3, Baomin 1st Road, Baoan District	27787511/277871 88	140	2.6 km



Huayue	Right Rear Side of Baoan		100	
Business	District Fanshen Road Orange	27843388		2 km
Hotel	Fruit Hotel			
Home Inn	No.298-7 Xixiang Avenue,	27901443/230668	160	3.4 km
	Baoan District	33		
Durian	4th Floor, Xingguang Food and	23309338/233099		
Boutique	Entertainment Plaza, Yu'an 1st		180	2 km
Hotel	Road, Baoan District	98		
Fast 8 Chain	No.2086, Xingye Road, Baoan	29698008	120	3.2 km
Hotel	District	29090000	120	J.Z KIII
Livable	No.32, Xidi 1st Lane, Huaqiao	29985669/298823	160	2.4 km
Fashion Hotel	New Village, Baoan District	45	100	2.4 KIII
Valating Hotal	No.66, Haile Road, Area 39,	27753388	160	2.2 km
Yaleting Hotel	Baoan District	21133300	100	2.2 KIII

*You need to dial the area code 0755 before the fixed telephone number.

v. Dining around the Preparation Area

Restaurant	Address	Contact	Price per	Distance
Restaurant	Address	information	person	Distance
Fuxiangyuan	Shop 111, Building 4, Phase	25339166	13	598 m
Restaurant	1, Xilongwan, Haixiu Road,			
	Baoan District			
Changledao	No.17-47 Haixiu Road,	27809955	13	565 m
Optional Fast	Baoan District			
Food				
	Building 2, Longguang	15017948030	15	489 m
Chaozhiwei	Century Building, South			
	Side of Xinghua Road,			
	Baoan District			
Tang's Fried	No.009, Block A,	13859108126	14	522 m
Dumpling	Longguang Century			



	Building, Haizhu Road, Baoan District			
Haojiawei Yellow Pheasant Chicken Rice	No.23-28 Haixiu Road, Baoan District	13428712875	20	488 m
Xinwanfu Laobeifang Noodle and Dumpling King	106, Building 4, Xilongwan Garden (N23 District), Baoan District	23018566	40	566 m
Saliya Italian Restaurant	2F, Hongfa Building, No.1004, Chuangye 1st Road, Baoan District	29083112	37	1.1 km
No.10 Steak	No.4-102-103, Xilongwan Garden, Jia'an Road, Baoan District	23289898	215	945 m
Jinhui Steak House	No.254-1 Jian'an 1st Road, Baoan District	27751297	63	2.9 km
Supreme Pizza	Shop 1136, No.18 Haixiu Road, Baoan District	29367032	19	798 m

*You need to dial the area code 0755 before the fixed telephone number.

vi. Dining around the Accommodation Area

Restaurant	Address	Contact	Price per	Distance
		information	person	
Leshang Concept Restaurant	Room 2A, Building E4, TCL International E City, Nanshan District	86720613	48	956 m
Duoziwei City Fast Food	No.10-25 Jiuzhang Road, Nanshan District	26968696	10	1.5 km
Liyuan Garden in Garden Wild	Nanshan District Liuxian Mansion Crossing	13802575058	50	2.2 km



Reservoir Fish				
ZuiWeng Pavilion	No.14, Floor G, Building A, Yuanwei Street, Kexing Science Park, Nanshan District	13859108126	14	522 m
Taipei Steak	Floor B1, Wankeli Dongli Commercial District, Yuncheng, Nanshan District	26929291	73	952 m
Bahe Lihai's	No.18-20, Floor L1, C Green Corridor, Wankeli, Yuncheng, Nanshan District	82536164	65	488 m
Tongren Four Seasons Coconut Chicken	2nd Floor, Wanke Dongli, Nanshan District	86728814	88	660 m
Wooden House Barbecue	No.20, Floor L1, D-Green Gallery Dongli, Wanke Yuncheng, Nanshan District	86717234	73	977 m



6. Tips

i. Travel

- 1. The average Jul-Aug temperature in Shenzhen is about 30°C, which is high. All team members should take precautions to protect themselves from the sun and heat;
- Prepare a certain amount of RMB in advance (recommended not less than RMB5,000), to be convenient for calling taxis, catering, shopping, etc.; you can exchange at a local bank in advance or directly exchange at the airport ATM or Exchange;
- 3. Because each participating team needs to carry a large number of robot-related components and tools, if the robot is to be carried with you, be sure to confirm with the airline that operates the flight before departure:
 - ① Baggage weight and size limits
 - ② Restrictions on carrying and shipping special items (e.g., batteries, cylinders)
 - Lists of prohibited items;

If you choose to ship your baggage in advance, it is suggested as follows:

- ① Choose a cost-effective international logistics company such as Fedex
- ② On the mailing information, check the 'splitted shipped baggage', try not to mention the robot as possible. You can check toys, electronic products, aluminum materials, etc.;
- ③ The total declaration price is as low as possible, and the recommended total price does not exceed RMB8,000;
- ④ When packing, the weight of the single item should not exceed 35kg (70 lbs), and the same kind of items should be put into one box as much as possible, such as aluminum materials, motors, 3D printed parts;
- (5) When packing, please attach an invitation letter and a personal item description sheet (try to mention that you are a student, and these items are for participation in competitions for professional topics, etc.)
- 6 Be sure to pack items carefully and make an inventory list to help keep track of all items during the trip.
- 4. Obtain your passport and visa in advance and make round-trip travel arrangements.
- 5. It is recommended that each participating team purchase direct flights to Shenzhen to facilitate the transportation of personnel and items, and reduce unnecessary troubles for entry and exit the customs; in case of flying to Hong Kong airport, you can choose Shenzhen Bay Port or Shekou Cruise Center to pass the customs;
- 6. Zip the tickets to and from Shenzhen for up to 6 team members and send to



freyman.song@dji.com for reimbursement.

ii. Communication

- 1. Enable you phone for communication on China's domestic mobile network in advance, and give your contact information to your teammates and the staff of the Organizing Committee so they can contact you if necessary;
- Keep a telephone directory of your teammates and the staff of the Organizing Committee for emergency. Organizing Committee Staff Contact Information: Song Fan (freyman.song) +8615012475269. Team Volunteers: Contact details are pending.
- 3. Write down the location information of the venue in Chinese and present it if necessary.

iii. Customs

There are two methods for overseas competitors and their competition items to enter China. Both method involve taking precautions. In order to guarantee a smooth competition and the successful customs clearance of competition-related items of foreign teams, each foreign team is required to read the following information carefully and prepare for customs clearance, to avoid unnecessary trouble and loss.

- 1. Teams must pack their own competition-related items and ship them as checked luggage.
 - ① Go through the declaration channel when entering customs. Cooperate with customs staff to fill out the relevant information for declaration. Taxes may be generated at the time of declaration, and each team must bear the taxes (It is recommended to contact your own logistics company in advance to see if it can handle the declaration). It is recommended to consult and handle the ATA Carnet. This will ensure you have an easy entry and exit and no taxes and fees will be assessed at the time of declaration.

② Go through the green channel when entering customs. It is recommended that the robot be disassembled to be put into the trunk and entered with other carry-on baggage; if it is checked by the customs, please cooperate actively and re-submit the declaration process.

Regardless whether you go through the declaration channel at Customs, have your invitation letter issued by the RoboMaster Organizing Committee (RMOC) available for review. You can present it to the Customs officer directly or contact Organizing Committee staff for assistance.

2. Pack your own competition items and ship them to Shenzhen in advance. It is recommended that each participating team mail items at least 3 weeks in advance; the shipping costs, customs duties and possible customs clearance fees will be borne by the team; if due to the force majeure factors in the mailing process, the items cannot be arrived on time and in good quality, each team is required to bear the consequences.



Using the first entry method and applying for the ATA Carnet is recommended. Postage costs are cheaper and there is a reduced risk of items being seized by customs. View <u>the relevant guidelines</u> for individual ATA Carnet in each country.

iv. Other Notes

- 1. Bring any required health medications or special foods for emergency.
- Pay attention to the safety of both yourself and your property during the competition in Shenzhen. Pay special attention to the safety of important items such as money, personal identification cards, and passports.
- 3. You may carry cameras and other devices to record video during the competition.
- 4. The time of Warm-up Competition is July 27th and is for team testing only and is not included in the results.



7. Participation Statement

i. Safety Instructions for Participation

All RoboMaster 2019 team members must fully understand that safety is the most important issue in the continued development of the RoboMaster robot competition. In order to protect the rights and interest of all team members and the event organizers, and according to relevant laws and regulations, all team members who sign up for RM2019 will be deemed as acknowledging and abiding by the following safety terms:

1. All team members who register to take part in the RoboMaster 2019 Robotics Competition state that they are fully capable of civil conduct and can independently manufacture and operate robots. Prior to manufacturing robots, all team members will use materials provided by SZ DJI Technology Co., Ltd., carefully read registration guide, competition rules, and other important documents containing rules and regulations related to the competition.

2. During the competition, all team members should make sure that their actions including the manufacturing, testing, and use of robots will not cause any injury or damage to his or her teammates, members of the opposing teams, referees, competition staff, audience, equipment, or the competition area.

3. The team must ensure that the structural design of its robots will not hinder the safety inspection in the pre-match inspection, and agree to fully cooperate with the pre-match inspection carried out by the RoboMaster event organizer.

4. The team must guarantee that no fuel-driven engines, explosives, high pressure gas as the working gas, or any dangerous materials are used.

5. Throughout the R&D stage, preparation stage as well as the competition stage, all team members must pay full attention to potential safety issues, and the team' s supervisors must be responsible for instructing and supervising the team on safety issues.

6. The team must guarantee the safety of all the robots. This includes ensuring the "projectile" launchers installed on the robots are safe, and that the projectiles launchers will not cause any harm (either directly or indirectly) to any operator, referee, staff, or audience member.



7. The team should take sufficient and necessary safety measures during the R&D, training and competition stages regarding potential accidents. The measures may include preventing control systems from losing control; urging the team members to envision the steps before operation to avoid mistakes or collisions between team members and between team members and robots; forbidding isolated training to ensure there will always be team members to respond to emergencies; wearing goggles and helmets; conducting appropriate locking and adding an emergency stop switch in the robot system during commissioning.

8. The team will be held responsible for all accidents and losses that occur as a result from robots breaking down, autonomous airborne robots losing control, and any other unexpected circumstances.

9. The materials bought from or provided by SZ DJI Technology Co., Ltd., the event organizer, such as batteries and the referee system, must be used in accordance with the instructions. SZ DJI Technology Co., Ltd. will not be held responsible for any injuries that arise from improper use of these materials. The team will be held responsible for any injuries caused to its own members or any third party, as well as for property losses arising from manufacturing and operating the robots.

10. All participants must remain in strict compliance with the applicable laws and regulations of the country or region. All participants must also pledge that their robots will only be used for RoboMaster events and competitions and that their robots will not be illegally modified or used for any illicit purpose(s).



ii. Preparation Area Statement

To maintain the order in the preparation area during the RoboMaster 2019 competition, all competing team members must observe the following regulations at the preparation area:

1. The preparation area will be divided into exclusive rest areas for each participating team. All participating teams are required to conduct activities in designated areas. They are not allowed to occupy public passages without permission, and may not enter the unofficial designated areas to practise without permission, and may not interfere with other participating teams' preparation for the competition;

2. In the preparation area, cylinders, batteries, etc. that do not comply with the rules are not allowed, and dangerous actions such as launching projectiles are not allowed either;

3. The total electricity consumption in the preparation area is relatively large. In order to regulate the electricity consumption behavior, each participating team must go to the designated maintenance area for operation when using the high-power appliances and tools at risk, to prevent accidents;

4. It is strictly forbidden to set up a wireless network and use any radio to communicate between team members in the preparation area without permission;

5. There are many function-specific areas in the venue and a lot of personnel, so each participating team must wear their entry badges when entering and leaving the venue. It is strictly forbidden for the members of participating teams to enter the activity area of non-participating team members through the non-participating team member entrance;

6. When teams are heading for the inspection area, the staging area and competition area, or returning to the preparation area, each team must strictly follow the route plan from the Organizing Committee to avoid delaying the competition or causing confusion;

7. Each participating team shall not damage the public facilities in the competition venue. In case of damage to the venue facilities, all losses will be borne by the participating team;

8. After the preparation area is closed, each participating team can store items in the rest area, but the Organizing Committee will not be responsible for property safety. Each participating team is required to keep valuables on their own;



9. During the competition, each participating team must be responsible for the personal safety of the participating team. The Organizing Committee will not be responsible for the personal danger or property loss caused by the participating team's own reasons.

10. In case of violation of the above regulations, the Organizing Committee have the right to disqualify the violating team if the circumstances are serious.

iii. Staging Area Statement

To maintain the order in the staging area during the RoboMaster 2019 competition, all competing team members must observe the following regulations at the staging area:

1. Before arriving at the staging area, you should confirm that the team has brought all necessary items (such as data cables, etc.) and robots for the competition and that the ID numbers of the robots are correct. Ensure that all robots in the staging area have undergone the pre-match inspection and have "Pass Cards" placed on them. The team that disrupts the normal commencement of the competition will bear full responsibilities;

2. Each team can allow up to 13 team members (including the captain and operators) to enter the staging area. If there is a supervisor present, one supervisor can enter the staging area. If the team is found to have the behavior of pretending the instructor, the referee will issue a verbal warning, and the extra member must leave the Staging Area and Competition Area. If verbal warning(s) is invalid, the offending party will receive a forfeiture for the match. The actual situation is determined by the Chief Referee;

3. All participating teams must abide by the order and safety regulations of the staging area and cooperate with the staffs of the RM2019 Organizing Committee. Teams are not allowed to power up the robots at the staging area. Violating teams will be issued a warning by the staging area staff on the first power up. If the three verbal warnings are invalid, the offending party will receive a forfeiture for the match. The actual situation is determined by the staff in the staging area and the chief referee;

4.If robots require maintenance after entering the staging area, the team must first inform the staging area staff. Only when the "Pass Card" is removed by the staging area staff and the



originally signed Staging Area Statement becomes invalid can the team take their robots back for maintenance. When the maintenance is finished, the team must bring their robots back to the Inspection Area for another pre-match inspection before reentering the staging area, and their team captain must sign another Staging Area Statement. If a delay results in the failure to sign the Staging Area Statement on time, the robot cannot enter the stage and the team is held responsible;

5. Teams must arrive at the staging area 15 minutes before the match. 10 minutes before the start of the competition, after confirming that the materials and the participating robots are ready, team captains must sign the Staging Area Statement to confirm that the competition can commence normally. Any team without a signed Staging Area Statement 10 minutes before the start of a match will lose their right to compete and be assessed as loss. The actual situation is determined by the staff in the staging area and the chief referee.



E-mail: robomaster@dji.com Forum: bbs.robomaster.com Website: www.robomaster.com

Tel: +86 (0)755 36383255 (GTC+8, 10:00AM-7:00PM, Monday to Friday)

Address: Room 202, Floor 2, Integrated Circuit Design & Application Industrial Park, No. 1089, Chaguang Road, Xili County, Nanshan District, Shenzhen City, Guangdong Province, China