Bulletin 2 - July 2018

2018 FAI World Drone Racing Championships

Shenzhen - People's Republic of China

Thursday 1st to Sunday 4th November 2018

Arrival Wednesday 31th October - Departure Monday 5th November

WDRC website: http://www.faidroneworld2018.aero

Culture, Sports and Tourism
Administration of Shenzhen Municipality

2018 FAI World Drone Racing Championships (WDRC) Bulletin #2 only gives complementary information and so must be considered in addition to Bulletin #1 (February 2018) which may be still uploaded on the WDRC website.

NATIONAL TEAM REGISTRATION

A recapitulation of the Preliminary Entry Forms received is given in *Annex 1*.

The registration of the national team (team manager, competitors, helpers and supporters) must be done on line on the WDRC website (http://www.faidroneworld2018.aero).

A personal code access will be addressed by email to the NAC contact person mentioned by the NAC on the Preliminary Entry Form.

Note: A NAC which have not transmitted a Preliminary Entry Form and which want finally to register a national team, must send an email to registration@faidroneworld2018.aero in order to precise the NAC contact person to whom code address should be addressed with mention of his first and last names, email address and phone number.

The payment of the entry fees will be also done on line using Paypal. In case of difficulty to use Paypal for payment, send an email to registration@faidroneworld2018.aero.

The deadline for registration of the national team and payment of the entry fees is fixed to **31 August 2018**.

Entry fees received after the deadline may be subject to a penalty fee up to 20 % of the total amount of the entry fees to be paid.

Entry fees will not be accepted on arrival except in exceptional circumstances and with the agreement of the organiser.

If a team or a competitor withdraws from the World Drone racing Championships after entry fees have been paid, a refund will be considered only in case of force majeure or exceptional circumstances.

Invitation letters

The delay to get a Chinese visa may be up to 3 - 4 weeks. So, make sure to leave enough time for it and contact the Chinese Embassy / Consulate in your country for more information about documents required in advance for a visa demand.

Invitation letters will be delivered on line on request after complete registration of the concerned persons on the WDRC website.

To deliver such an invitation letter, it will be necessary to have for the concerned participant his passport number and his complete names as precisely mentioned on the passport.

Note: Important to get for the invitation letter the exact first and last names mentioned on the passport considering those names may be slightly different from names registered in the FAI Sporting Licence database which will be used for registration of competitors and team manager.

In case of any problem with invitation letters, contact: Zoey ZHANG

    Email: zhangy002@kaisagroup.com   Phone: +86 18260007251

Accreditation Cards

In order to prepare the Accreditation (badges), it will be required to upload a passport size photograph for the team-manager and every competitor at the on-line registration of the national team.

The photograph should be a portrait photo with a 4:3 aspect ratio, in jpg or jpeg format, of size at least 250KB.

Photographs are not necessary for helpers and supporters Accreditation cards.

National anthem and flag

It will be required to upload the national anthem (.mp3 audio format) at the on-line registration of the national team.

Two national flags (approx. 1 m x 1.5 m) are required by the organiser.

ON-SITE REGISTRATION

On-site registration of the national team by the team manager will be done on the venue on the arrival day (Wednesday October 31), the registration will continue in the morning of Thursday November 1.

The team-manager is requested to bring two national flags (approx. 1 m x 1.5 m) at the registration of its national team. They will be returned to the team manager at the end of the WDRC.

At the end of the registration, the team-manager will receive packages (Accreditation cards, banquet tickets, souvenirs, etc.) for all the registered participants of his national team.

LOCAL TRANSPORTATION

Most of the international flights to Shenzhen Bao'an International Airport (SZX) request a transit in a first chinese airport (Beijing, Shanghai, …). Even if the luggage has been registered at the departure airport with Shenzhen airport as final destination, it is necessary to collect his luggage at the first transit airport in China and so do the immigration process with the luggage. It is then necessary to register again the luggage for the domestic flight to Shenzhen.

Shenzhen is close to Hong Kong airport (HKG) which is very often easier to reach compared to Shenzhen airport. When you arrive in Hongkong Airport, convenient public transportation from Hong Kong airport to Shenzhen Airport and Shenzhen Huanggang Checkpoint are available.

Shuttle buses will be organized:

- Wednesday 31 October from Shenzhen Bao'an International Airport and Huanggang Checkpoint to the four hotels proposed by the organiser (The Coli Hotel, Harbour View Hotel, Vienna International Hotel and Aloft Dynamic Town).

    Note: For earlier arrival in Shenzhen, participants should organise their own transport to hotels.

- Every day from the hotels to the venue (Universiade Center Stadium) and to go back to the hotels.
- Monday November 5 from hotels to Shenzhen Bao'an International Airport and Huanggang Checkpoint

See **Annex 2** for shuttle buses timetable for Wednesday 31 October.

Local transportation contact person: Xin WANG

      Email: wangx03@kaisagroup.com   Phone: + 86 18665918581

RULES

A release of the World Drone Racing Championships rules document has been done considering feedback of the 2018 China Drone Racing Open (WDRC Test Match) hold in Shenzhen 11 to 13 May.

Identification mark

Each model shall carry the national identification mark (3 letters from the IOC list of countries) followed by the FAI Sporting Licence ID number. The letters and numbers must be at least 6 mm high and appear at least once on each model.

Analog video system

According to the rules, three analog 5.8 GHz video transmitters (VTX) are authorised for piloting:

- TBS (Team BlackSheep) Unify Race
- ImmersionRC Tramp
- Furious Stealth Race

TBS Unify Race VTX (with antenna) may be supplied by the organiser. Request must be done at the registration of the national team on the WDRC website.

The devices will be given to the team manager at the registration of his national team on the arrival day. The deposit for each video transmitter supplied is 300 CNY and must be paid in cash. It will be returned to the team manager on restitution of the transmitter at the end of the competition.

Digital video unit

In addition, the model must be equipped with a digital video unit to satisfy Internet live streaming and TV broadcasting video quality requirements.

Information about the digital video unit is given in **Annex 3**.

Note: In that situation, PAL encoding format is no more required for the on-board camera connected to the analog video system which is used for piloting the model.

One complete on-board unit will be sent to every competitor beginning September subject the competitor is registered with his/her entry fee paid. This will permit the competitor to prepare the installation of the units on the models and to do flight test prior to the WDRC.

Radio Control equipment

In order to avoid interference with the digital video unit, competitors are highly recommended to use TBS Crossfire modules (868 MHz and 915 MHz) or any other 900 MHz modules.

There will be risk to loss control of the drone with 2.4 GHz radio control equipment after tests in real condition.

Note: 433 MHz modules are forbidden to use.

Timing system

The official timing system is based on technology RSSI (ImmersionRC LapRF 8-Way Event Race Timing System) which does not require on-board transmitters.

The organiser will also use an Infrared system as backup system which requires an on-board transmitter. The on-board transmitters will be supplied by the organizer. The deposit for each transmitter supplied is 150 CNY and must be paid in cash. It will be returned to the team manager on restitution of the transmitter at the end of the competition.

See **Annex 4** for information about the on-board transmitter. Support for installation and test will also be provided by the organiser on the venue.

LED light device

LED light devices including the controller may be supplied by the organiser. Request must be done at the registration of the national team on the WDRC website.

The LOC will provide sufficient LED light units.

The devices will be given to the team manager at the registration of his national team on the arrival day. An amount of 100 CNY will be requested for each LED light device supplied which must be paid in cash. This amount is non-refundable and no return of the LEDs and controllers is needed.

See **Annex 5** for information about the LED light device supplied by the organiser.

TRACK DESIGN

The track design will be published on the WDRC website around beginning September 2018.

CONTEST ORGANISATION

Practice flights

For each national team, an official practice session will be organised on the racing circuit after the model processing has been done for the concerned national team.

Practice flights on the racing circuit on the main stadium, such as on the sub-stadium will not be possible after beginning of the competition. Safety test of models will be possible in a dedicated place but will be subject of authorisation of the Contest Director (or Contest Director FAI Assistant).

Qualification stage

Qualifying stage will be organised with 3 qualifying rounds. Qualifying rounds will be run with 6 (six) or 4 (four) pilots per group depending the total number of competitors.

Elimination stage

Elimination stage will begin with 1/16th final round (16 groups) which means 64 competitors selected from the qualification stage. All elimination rounds will be run with 4 (four) pilots per group.

Classification stage (Individual classification from positions 9 to the end)

The "second chance" sequence will be applied to permit competitors eliminated in 1/16th final round, or 1/8th final round, or quarter final round to continue to fly and get possibility to improve their final placing from 9th to 64th places. A competitor is definitively eliminated after being eliminated in a classification stage (See WDRC rules for more information). All "sequence chance" rounds will be run with 4 (four) pilots per group.

All competitors not selected for the 1/16th final round after the qualification stage will be entitled to participate to 3 (three) additional rounds to determine their final placing from 65th place. Additional rounds will be run with 4 (four) or 6 (six) pilots per group depending the number of concerned competitors.

Finals

According to the rules, a final and a small final will be organised for the overall individual classification.

In addition, will be also organised:

- A final at the end of the classification stage in order to determine final placing in the overall individual classification for 9th to 12th places.
- A Junior final subject junior competitors from at least four nations participate to the WDRC.
- A Women final subject female competitors from at least four nations participate to the WDRC.

All finals will be run with 4 (four) pilots per group.

SCHEDULE

The competition schedule may be subject to changes.

Some rounds will be organised on night.

Wednesday October 31

    Arrival and registration

    Judges and other key officials briefing

Thursday November 1

    Model processing

    Official practice

    Team managers' meeting

    Qualifying round 1

Friday November 2

    Qualifying rounds 2 & 3

    Opening ceremony

Saturday November 3

    Additional rounds sequence

    1/16th final round & classification stage round 1

Sunday November 4

    End of elimination & classification stages

    Finals

    Prize-giving and closing ceremony

    Closing banquet

Monday November 5 - Departure

ORGANISER AWARDS

Prizes money (cash) will be awarded by the organiser according to the following table ($ US Dollar, Net).

Place	Team	Overall	Junior	Woman
1	24,000	24,000	8,000	8,000
2	20,000	20,000	6,000	6,000
3	16,000	16,000	4,000	4,000
4	12,000	12,000	2,000	2,000
5	6,000	6,000		
6	5,000	5,000		
7	4,000	4,000		
8	3,000	3,000		
Total		**220,000**		

AVIATION CARNIVAL

An Aviation Carnival will be organised during the World Drone Racing Championships with a Drone Industry Exhibition and support events, which may include aviation products and drone racing products Expo, Airsports gaming zone, amateur competitions and other activities.

OTHER TOPICS

Exchange rate

Yuan (CNY) = 0,14 euro or $0,15 USD

Credit cards such as Visa may be used in China but not Mastercard.

Batteries

Batteries may be supplied by the organiser on request.

The national teams and the individual competitors may also send their batteries to the dedicated address which will be precise on request.

Note: However, it is the NAC responsibility to make sure that the batteries will be delivered to the dedicated address, and to bear all costs of the postage and custom duties that may occur.

Every request concerning batteries must be done by sending an email to enquiry_dronewch@asfc.org.cn.

Communication restrictions in People's Republic of China

Gmail, Facebook, Youtube, Instagram and some other websites are generally unavailable for service in China.

There are some restrictions in China. Gmail, Facebook, Youtube, Instagram and some other websites are unavailable for service in China.

The best way to recover his internet browsing in a secured way is to get a VPV service such as for example ExpressVPN or NordVPN. This service may be used at the same moment with the same email address on different devices (smartphone, digital tablet, laptop). Subscription for such a service is about 10 $ for a month and the service may be stopped at any time.

The LOC will provide VPN services on site.

WhatsApp Messenger is not active in China. It is recommended to use WeChat which is the equivalent Chinese Messenger application.

Informarion of the Hotels

● **The Coli Hotel**   Five stars standard   EUR 70 for the room per night

168 Dayun Road, Longgang Center, Longgang District, Shenzhen, 518172, China (1.1 km from venue, 50km from Shenzhen Bao'an International Airport)

For reservations:

Link: http://www.thecolihotelsz.com/welcome.html

Tel: (86 755) 8989 9888 Fax: (86 755) 8989 0999

- **Aloft Dynamic Town** Four stars standard EUR 56 for the room per night

Near Qinglin Road, Longgang Center, Longgang District, Shenzhen, 518172, China (2.5 km from venue, 50.6km from Shenzhen Bao'an International Airport)

For reservations:

Link: https://www.trip.com/hotels/shenzhen-hotel-detail-3785335/aloft-dynamic-town

Tel: (86 755) 3690 6668 Fax: (86 755) 3690 6668

- **Harbour View Hotel** Four stars standard EUR 40 for the room per night

229 Qinglin Road, Longgang Center, Longgang District, Shenzhen, 518172, China (2 km from venue, 50.5km from Shenzhen Bao'an International Airport)

For reservations:

Link: https://www.trip.com/hotels/shenzhen-hotel-detail-486533/harbour-view-hotel/

Tel: (86 755) 3332 2222-8078 Fax: (86 755) 8962 7799

- **Vienna International Hotel** Three stars standard EUR 40 for the room per night

(Shenzhen Longgang Ti'an Digital Park)

West of Qinglin Road, Longgang Center, Longgang District, Shenzhen, 518172, China (2.6 km from venue, 50.1km from Shenzhen Bao'an International Airport)

For reservations:

Link:https://www.trip.com/hotels/shenzhen-hotel-detail-5467682/vienna-international-hotel-shenzhenlonggang-ti-an-digital-park

Tel: (86 755) 8956 6088 Fax: (86 755) 8925 0865

Local Transportations

The LOC reception staff will help pilots to book taxis or give supports for taking public transportations.

ORGANISER CONTACT DETAILS

Contact person: Jie LYU (Jenny)

    Email: enquiry_dronewch@asfc.org.cn

    Mobile phone: +86 13601298508

Correspondence address:

Aero Sports Federation of China (ASFC)

A-14 Tiantandongli Zhongqu -Dongcheng District - Beijing, 100061- People's Republic of China

- <u>Annex 1</u> -
Recapitulation of the Preliminary Entry Forms received

COUNTRY		TEAM MANAGER	COMPETITORS						HELPERS	SUPPORTERS
			Competitor 1	Competitor 2	Competitor 3	Junior	Woman	Wild cards		
AUS	Australia	X	X	X	X	X				
AUT	Austria	X	X	X	X					
BEL	Belgium	X	X	X	X	X				
BRA	Brazil	X	X ?	X ?	X ?	X ?				
BUL	Bulgaria		X	X	X				2	
CAN	Canada	X	X	X	X					
CHN	People's Republic of China	X	X	X	X	X	X	3	5	
DEN	Denmark	X	X	X	X	X			3	2
ESP	Spain		X	X	X	X	X		3	2
FIN	Finland	X	X	X	X					
FRA	France	X	X	X	X	X				
GER	Germany	X	X	X	X	X	X		5	1
HKG	Hong Kong	X								
HUN	Hungary	X	X	X	X	X	X		2	?
INA	Indonesia	X	X	X		X			4	2
ISR	Israel	X	X	X	X	X			2	1
ITA	Italy		X	X	X	X				3
JPN	Japan	X	X	X	X	X	X			3
KOR	Korea	X	X	X	X	X	X		3	3
LAT	Latvia	X	X	X	X					
MAR	Morocco	X (also competitor)	X							
MAS	Malaysia		X	X	X	X	X		3	10
NED	Netherlands	X	X	X	X				1	
NOR	Norway	X	X	X	X					
POL	Poland	X (also competitor)	X	X	X	X	X			
POR	Portugal	X (also competitor)	X	X	X					
RUS	Russia	X	X	X	X	X	X		4	3
SWE	Sweden	X	X	X	X	X	X		5	5
SUI	Switzerland	X	X	X	X	X			1	
THA	Thailand	X (also competitor)	X	X	X	X	X		5	2
TPE	Chinese Taipei									
UKR	Ukraine		X	X	X					
32 countries		**22**	**87**			**20**	**11**	**3**	**48**	**37**
			121 competitors							

WDRC Pilots Shuttle Bus for Wednesday 31 October

			乘车点 Carriage point	停靠点 Stop point			终点 End
班次 Shifts	车辆编号 BUS Number	跟车人员 Follow-up staff	深圳宝安机场 Shenzhen Bao'an International Airport	中海凯骊酒店 The Coli Hotel	怡景湾酒店 Harbour View Hotel	维也纳国际酒店 （深圳龙岗天安数码城店） Vienna International Hotel (Shenzhen Longgang Ti'an Digital Park)	大运城邦雅乐轩酒店 Aloft Dynamic Town
第一班 The First Shuttle	A01		9:30	11:00	11:15	11:25	11:35
第二班 Second shuttle	A02		11:00	12:30	12:45	12:55	13:05
第三班 Third shuttle	A01		14:00	15:30	15:45	15:55	16:05
第四班 Fourth shuttle	A02		16:00	17:30	17:45	17:55	18:05
第五班 Fifth shuttle	A01		18:30	20:00	20:15	20:25	20:35
第六班 Sixth shuttle	A02		20:30	22:00	22:15	22:25	22:35

无人机世锦赛飞手机场接驳车时刻表(10 月 31 日)
WDRC Pilots Shuttle Bus（Hotel to Venue 31 Oct）

温馨提示：
取完行李后前往商务贵宾楼乘车（Go to the business VIP building for a ride after pick up your luggage）

无人机世锦赛飞手皇岗口岸接驳车时刻表(10 月 31 日)
WDRC Pilots Shuttle Bus (Huanggang checkpoints 31 Oct)

班次 Shifts	车辆编号 BUS Number	跟车人员 Follow-up staff	乘车点 Carriage point	停靠点 Stop point			终点 End
			皇岗口岸 Huanggang checkpoints	中海凯骊酒店 The Coli Hotel	怡景湾酒店 Harbour View Hotel	维也纳国际酒店 (深圳龙岗天安数码城店) Vienna International Hotel (Shenzhen Longgang Ti'an Digital Park)	大运城邦雅乐轩酒店 Aloft Dynamic Town
第一班 The First Shuttle	B01		11:00	12:00	12:15	12:25	12:35
第二班 Second shuttle	B02		14:00	15:00	15:15	15:25	15:35
第三班 Third shuttle	B01		16:00	17:00	17:15	17:25	17:35
第四班 Fourth shuttle	B02		18:00	19:00	19:15	19:25	19:35
第五班 Fifth shuttle	B01		20:00	21:00	21:15	21:25	21:35

温馨提示（Tips）：

1、过关后在皇岗口岸停车场乘车（Go to Huanggang checkpoints car park after customs clearance）

2、香港机场有去皇岗口岸的大巴，运营时间是早上 7 点至凌晨 12 点。票务处在二号客运大楼旅游车总站 C10-C14 柜台，买票后在二号客运大楼旅游车总站等候上车。巴士每 30 分钟 1 班，车程约 50 分钟，票价为 HK$100。（Hongkong airport has a bus to Huanggang checkpoints. The operation time is from 7 a.m. to 12 a.m. The ticket office is at the C10-C14 counter of the coach terminal of the second passenger terminal. After the ticket is bought, it will wait at the coach terminal of the second passenger terminal. The bus takes 30 minutes 1 class, the journey is about 50 minutes, the fare is HK$100. ）

3、乘坐前往香港的航班请提前兑换好港币，或下飞机后在机场外汇兑换处兑换港币（You can exchange Hong Kong Dollars in advance if you travel to Hong Kong, or exchange Hong Kong Dollars at the airport foreign exchange exchange after getting off the plane.）

Information about on-board digital video unit

This digital video unit (Yellow on-board unit with two antennas) has been designed for the WDRC.

Pilots will still continue to pilot their model with the analog video system.

Weight: 88 g   Size: 40 x 50 x 50 mm

The size of the unit is expected to be reduced.

The unit will be easy to attach on the model (See below) and must be powered from the batteries of the model.

- __Annex 4__ -

Information about on-board transmitter for the Infrared timing system

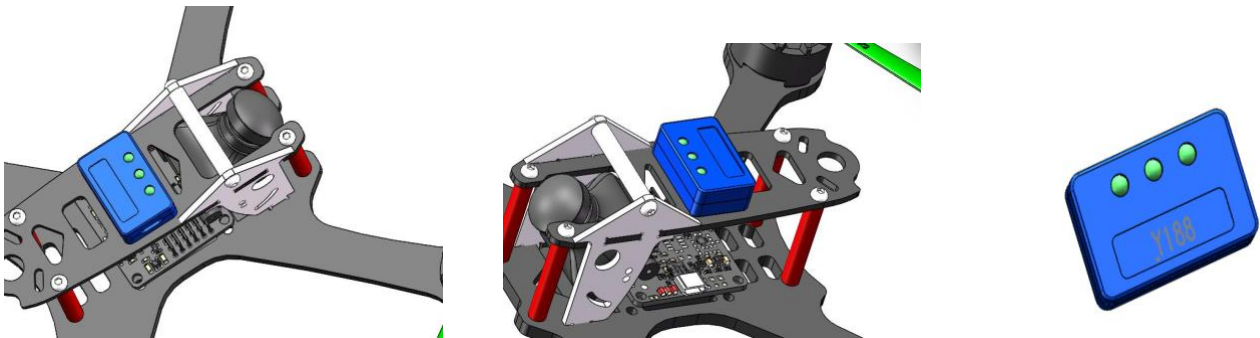A back up timing system based on Infrared technology will be used. An on-board transmitter is necessary.

Characteristics of the on-board transmitter module:

Size: 28×20×10mm

Weight: 9g

A battery is integrated in the device. Charge of the battery may last up to 40 minutes.

Put the module on the top of drone, and make sure top of the module is not covered.

Note: considering it is a backup system, the competitor will not be obliged to install the transmitter on his model. In that situation, the organiser may not be responsible of loss of timekeeping in case of failure of the official timing system. So, it is recommended for all pilots to install this transmitter in order to have a backup in case of a problem with the official system.

Information about LED light device supplied by the organiser

1. LED module

Single module size: 8 mm x 45 mm x 4 mm

Single module weight: 2 g

Single module Lumen: 80 lm

Voltage: 11V to 17V

Current: < 100 mA (10 modules)

Power rating: 7.5 W (10 modules)

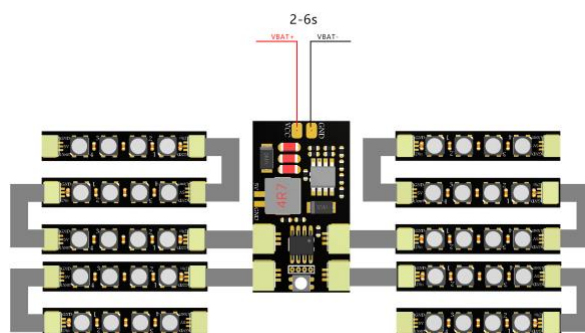Colours: Red / Blue / Yellow / Green / Orange / Pink / Purple. If necessary, it can be extended to 16 colours.

Display Mode: Programmable (Long bright / Flash / Counterchange)

2. Controller

Color: Red,Green,Blue,White,Yellow,Pink,Purple

Connect with the LED units according to the following figure.

To change colour, use WS2812 programmable LED solution by pushing the button to change colour

without additional device to install.

3. **LEDs modules mounting on the model**

Bind 8 LED modules on the upside and downside of arms as it shows as the following figures.