Public Bicycle System

The Public Bicycle System includes three parts, <u>Station Facility</u>, <u>the Management Center</u> and <u>the Monitoring System.</u>

I. A Brief Introduction of Station Facility

The station facility of Public Bicycle System includes bicycle, docking station (short of docks), and terminal station (short of terminals). JDC Company designs and produces the station facility.

A Brief Introduction of **Bicycle**

JDC Company designs and produces the bicycle with 304SUS material. Main parts are aluminium alloy. According to international standard, the complete bicycle size is 1750mm ×650mm ×1000mm (length×width ×height). The painting UV paint，it can make sure the bicycle does not fade in the open air. Every bicycle can be recognized, reacting distance within 0-3cm, by RFID technology.

1) FRAME

a. Material：aluminium alloy (option : iron)

b. size：26"*440mm，thickness:4.5mm

2）SHAFT DRIVE (option: chain)

Shaft drive is a new patent. It matches with gear of bottom bracket and front teeth by joint rod，which connecting with rear gear to drive. The shell adopts oil lubrication and the high intensity sealing measure to keep the 5 years guarantee period.

Advantages of shaft drive:

* Avoid chain drop

* Avoid cleaning the chain frequently

* Avoid changing the chain frequently

* Durability

* Easy to maintain

* Comfortable to ride

* More environmentally friendly

3) HANDLEBAR AND BASKET

Handlebar and basket are integrated together so that they can be used conveniently.

* Material: 304 SUS

* The tube thickness: ≥1.2mm

* Reflector

4) BELL

* Anti-theft

5) SECONG LOCK

* Steel rope

* high density shell，high intensity lock cylinder. The lock can not be pulled out when it open. The design meets needs of users parking temporary.

6) RIM

* Material: aluminium alloy

* Two layers rim can bear strong pressure strength

* Anti-theft design

* Anti-theft

7) SPOKE

* Material: 304 SUS

8) SADDLE

* adjust the height; anti-theft; water-proof

* Seat post: aluminium alloy

9) TIRES

* High quality rubber

* Anti-stab tire, inner tube

* Reflector

10) KICKSTAND

* Material: 304 SUS

11) BREAK

* Front and rear Roller

* Shimano

13) CRANK

* Nice quality

14) MUDGUARD

* PP, durability

A Brief Introduction of **Docking Station**

1) Designation

Double-column double lock

2) Material

Casing: 304SUS (option: iron), thickness ≥1.5mm, automotive paint;

Technology: automotive paint

Display: clear, water-proof

Complete: waterproof, dust-proof, corrosion prevention.

5 years guarantee period not to fade

3) Property Parameter

a. Voltage :12V

b. Temperature: -25℃～+85℃

c. Humidity :10％－ 98％

d. Dust-proof: 0—3.0mg / m2h。

e. Ventilation hole: Below 50CMwater, the docking station still can work.

f. Wipe card time: shorter than 600Ms。

g. Docking station can be compatible with bicycle very well.

h. Wipe car distance ≦ 2.5CM。

i. simple to install

4) Function

- Wipe car to rent a bicycle; return a a bicycle without wipe a card; It still can work when power off.
- Voice guide: make sure users whether to rent or return bicycle successfully or not.

  The voice can be adjusted automatically in different time: higher in the day and lower at night.
- Processor:ARM9，CAN communication interface.
- Store database and information for three months. It still can work when power off.
- Industrial grade LED display：it is clear to see the display in the sun and at night.

- Operate in remote center when the extreme weather coming
- Inquire information
- Energy saving: reduce the power loss when it is not used.

A Brief Introduction of **Terminal Station**

1) Designation

Multi-functional intergrated design

2) Material

a. Main part: 304 SUS (option: iron)， casing thickness ≥1.5mm；

b. display: clear, water-proof

Complete: waterproof, dust-proof, corrosion prevention.

5 years guarantee period not to fade

3) Property Parameter

a. Voltage: 24V

b. Temperature: -25℃～+85℃

c. Humidity: 10％－ 98％

d. Dust-proof: 0—3.0mg／m2h。

e. Ventilation hole

f. The terminal station can be compatible with bicycle and docking station very well

g. simple to install

4) Function

- Instructions: how to operate the facility, such as how to rent or return a bicycle

  It still can work when power off.

- Inquire: inquire information of rental time, rental fees, nearby station

- Hot line Service: call the staff when it facility breakdown

- Breakdown clearing: reminder the facility using condition, checks norm or usable facility numbers.

- Map : inquire the nearby supermarket, WC, hospital, park, coffee bar

- Store: store database and information of bicycle, dock and user card

II. The Management Center

The management center is divided into two parts, the customer service site (which is distributed in every region of the city) and the self-rental site.

Based on research in the field of public bicycle system and the exploration of long term and lasting technological solution, JDC has developed its own public bicycle system, which can meet the needs of the different users and offers a detailed operating model for operating enterprise.

Function

The management center is the main component of the public bicycle system. It is based on the B/S software structure and is characterized by easy deployment, operation and maintenance. The management center includes the following branches system: the data management (rent a bicycle and return a bicycle), the facility (include bicycle, docking station and terminal station) management, billing or charge management, user card information management, operating parameters for maintenance, repair and change, payment and settlement management, monitoring the station facility, as well as inquiry management. It is mainly for staffs of

operating enterprise to operate.

The customer service management mainly provides service of system transmission and consultation. It includes the following branches system: card management (user card registering and input information, modification of password, cancelation of cards, change card, charge for card users), usage condition (facility is usable or not, to rent a bicycle and return a bicycle, use time), loss reporting, breakdown of facility reporting and complaint handling. It also provides inquiry service, for example, user can inquire the charge of rental a bicycle. It can add other service to the system according to buyer.

The self-rental site is composed of three main parts, which are the bicycle, docking station and terminal station or parking station. Rental sites rely on the terminal station and docking station to transmit data and information. Communication between the customer service, WEB service via the internet, the internet service management center, rental site and the management center is achieved through a dedication communication network. In addition, the management center also allows users access via the internet WEB in order to realize their individual requirements.

III. The Monitoring System

The Monitoring System includes cameras on every station and screens in service center. The cameras collect information and transmit to

management center though 3G Router and network.

The staffs can view and trace the stations at anytime.