Ultrasonic Parking Guidance System Program

Product Description

Introductions:

The parking Guidance Information System (PGIS) based on the computer and MCU as the core of the intelligent parking lot parking guidance system.

Parking Guidance System mainly uses for guiding, easing traffic and offering real time parking information for motorist. Many cities suffer from lack of parking or have a large amount of traffic in search of a parking space, no matter in Airport, office building, shopping mall, factory or Business Avenue.

In order to make everything simple and convenient, Tectron-one of the best parking guidance information system(PGIS) supplier in China set up a professional team to work complete solution for parking garage management.
Working Principle

>1. Parking Lot Detector (PLD) constantly detects the presence of a vehicle using Ultrasonic wave, if any vehicle is parking on the space, PLD will send command to Parking Lot Indicator (PLI) and the indicator will turn RED, otherwise the indicator will show GREEN color.

>2. Meanwhile the PLD will immediately transmit its status to Region Controller Module (RCM) that collect and forward the information to Section Controller Module (SCM), which will process those data and send to Guidance Controller Module (GCM), at last GCM send relevant command to RCM or Parking Guidance Display Screen (PGD).

>3. To make the parking spaces information updating in time to afford over parking, install vehicle Flow detecting system at the entry lane and exit lane.

>4. Parking Lot Detector, Led Display screen and Vehicle Detector all connect to Distributed 3-level control system. Then the system can run offline independently.

>5. The System Management Software can set the whole system, function of this software as below:
1). Feedback the real time occupancy situation to the control room.

2). Realize such management functions: parking spaces usage statistics, parking spaces number correction, reserve parking spaces and report printing.

Applications:

Mainly for large underground busy parking lots. Like Government building, Super market, Airport, office building, shopping mall, factory or Business Avenue, Railway station and public parking lots.
System Components:

1). Ultrasonic Parking Lot Detector.

Ultrasonic detection unit install right over middle of parking space to monitor presence of vehicle and provides real-time information to PGIS system.

It is mainly used in indoor parking lot parking status detection. (Outdoor parking lot detector and wireless parking lot detector are also available). Tectron have developed many different type to suit for different customer’s requirement.

Parking Lot Detector consists of 2 parts: Detector and Pedestal（Free）.

<table>
<thead>
<tr>
<th>Operation voltage</th>
<th>10-30V, Recommend: 24V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption</td>
<td>0.5W</td>
</tr>
<tr>
<td>Operating principle</td>
<td>Ultrasonic measuring</td>
</tr>
<tr>
<td>Detecting range</td>
<td>50cm-420cm</td>
</tr>
<tr>
<td>Communication mode</td>
<td>RS485</td>
</tr>
<tr>
<td>Dimension</td>
<td>Φ100*50mm</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25 to +65 degree</td>
</tr>
<tr>
<td>Application</td>
<td>Indoor hoisting</td>
</tr>
<tr>
<td>Mounting</td>
<td>Hoisting</td>
</tr>
<tr>
<td>Work demand</td>
<td>Matching with parking lot indicator</td>
</tr>
<tr>
<td>Uplink</td>
<td>Uplink to Region Controller RCM standard series</td>
</tr>
</tbody>
</table>
2). Parking Lot Indicator

High brightness LED indicator with soft light controlled by Ultrasonic sensor to reflect occupancy status of each parking lot by different color illumination. (We also have other type indicator with beautiful appearance for your choice)

Red Color indicates space occupied.

Green Color indicates available

Blue indicates the space is special for disable, VIP and Reservation.

Three-Layer network controller divided into Master Controller, Section Controller and Region Controller in order to improve the stability of system operational.

<table>
<thead>
<tr>
<th>Operating power</th>
<th>0~5V, depend on detector output power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical power consumption</td>
<td>Green light: 3.5V*80mA</td>
</tr>
<tr>
<td></td>
<td>Red light: 5V*73mA</td>
</tr>
<tr>
<td></td>
<td>Blue light: 5V*73mA</td>
</tr>
<tr>
<td>LED quantity</td>
<td>6 red, 6 green, 6 blue</td>
</tr>
<tr>
<td>Outer shell material</td>
<td>ABS</td>
</tr>
<tr>
<td>Dimension</td>
<td>Φ100*50mm</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25~65°C</td>
</tr>
<tr>
<td>Visual angle</td>
<td>180 degree</td>
</tr>
<tr>
<td>Visual range</td>
<td>More than 50m</td>
</tr>
</tbody>
</table>
3). Guidance Controller Module (RCM)

Guidance Controller Module is installed at central control room, using embedded micro computer. It is the first Layer of the Three-layer network in parking guidance system, GCM can accomplish the whole system equipment controlling, data collecting, handing and issuing. Guidance Master Controller can off-line to run independently. It can manage 16pcs Section Controller Module.

Data Collector serves as a bridge commenting center processor to Ultrasonic sensors and LED Display. It picks up sensor information and transfers to center processor and also helps to transfer a vailability information from center processor to LED Display.

4). Section Controller Module (SCM)

Section Controller Module is used to collect data of Region Controller and forward the data to Master Controller. SCM is the second layer of the Three-Layer network in the Parking Guidance Information System (PGIS). It can manage 8pcs Region Controller Module.
5). Region Controller Module(RCM)

Region Controller Module is the third layer of the Three-Layer network in the Parking Guidance Information System (PGIS), which play an important role in ensuring the system’s security, reliability and efficiency. RCM downlink Parking Lot Detector, Display screen, Guidance Arrow, etc. Max 64pcs. Cycle detect the status of detectors and transmit related information to SCM.

6). Entry Parking Guidance Display Screen( Customer can customized it)

The Parking Guidance Display Screen placed at the main entry of Parking Space to show the drivers the available lots of each floor. And will guide the driver parking timely. By this way, avoid traffic congestion at the parking lot entry and increase turn over rate of parking space. Generally, vertical parking guidance display screen installed at out door. It adopts outdoor highlighting, can also see clearly in the sun.

Entry Parking Guidance Display Screen ‘s cabinet is waterproof and antirust.
### Power supply
- AC220V±10% /1A

### Communication port
- RS485

### Power consumption
- Each layer is about 20W

### Operating temperature
- -20°C — 65°C

### LED dot matrix
- 16*32, P10 green dot matrix

### Communication Rate
- 9600bps

### Single row display area
- 320*160*15mm LED with light box

### Dimension
- 1700*500*150mm (Max 4 layers display, if larger, the shell needs to be customized)

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7). **Hoist Parking Guidance Display Screen.**

Hoisting Parking Guidance Display Screen Placed at indoor main channel’s intersection or corners can give the driver ocular guidance prompt and rapid distribution vehicles, avoid straying occupied parking space and congestion. Make the use of parking resource maximum efficiency.

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### Power supply
- AC220V ± 10%

### Communication port
- RS485

### Power consumption
- About 20W

### Operating temperature
- -25~65 degree

### Working humidity
- 10~90%

### LED dot matrix
- 16*32, green dot matrix

### Display area
- 320*160*15mm

### Dimension
- 320*160*15mm for each display with light box
8). Management Software

Multi-language graphical application developed based on SQL database software with intuitive UI. Simplified operation & Complete functions.

Our Services

1. OEM Brand, Logo, Label available;

2. 1 Year Standard Warranty, excellent after-sales service;

3. 24h*7d at your service to give you best support;

4. Detailed installation manual and wiring diagram to make everything be easy;

5. If you need, we can arrange our engineer to your place to give you guide and support.
Company Information

Guangzhou Tectron Intelligent Science and Technology Co., Ltd., established in 1999, who integrate in researching, self-development, production in parking management system. We only one professional manufacturer producing integrate those above Parking Equipments in Mainland China. And has taken a leading position in the business of mainland China, as well as expanded to Singapore, Thailand, United Arab Emirates, Brazil, Bulgaria Vietnam, The Philipines ect. Guangzhou Tectron have involved in this field for more than 10 years and have rich experience and mature technology, ensuring our products with excellent quality!

Our services and products include: Parking Guidance System, Parking Pay System and Reverse Car-Searching System, parking assist system, parking sensor, car park system, ultrasonic detector, LED light or indicator, card reader for access control system, park terminal, LED or LCD signage display, guidance display.

Guangzhou Tectron  backed by strong research and development, to attentive service support, believe in the concept of people-centered, uphold God rewards the diligent work style, we have been hard work. Parking management systems and smart card applications in the ascendant, the development of broad prospects for continued rapid development to meet the market demand, we look forward to working with you to progress together.

With our belief of "Sincerity is the essence of enterprise; High quality is the way of existence", we will keep on endeavoring to make the most cost-effective intelligent parking system products in China. We warmly welcome customers or agents all over the world to join us to construct an intelligent, safe, convenient and harmonious society.