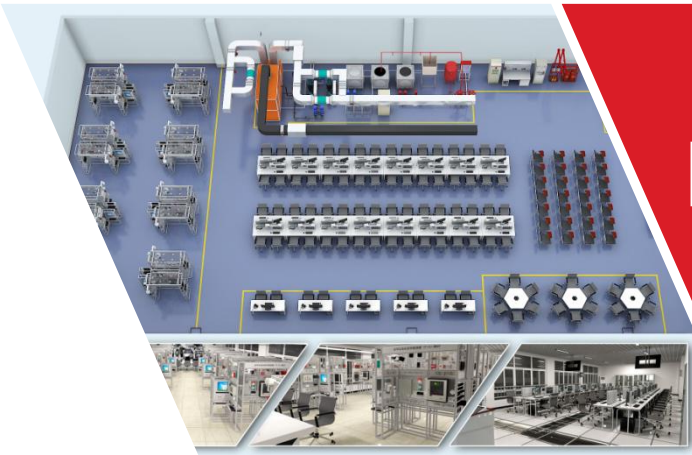




MALURI EQUIPMENT (M) SDN. BHD.



Rail Transit Series



Rail Transit Series Solutions



MALURI EQUIPMENT (M) SDN. BHD.

Training objectives:

Train **high-skilled personnel engaged in equipment management** and **maintenance of rail transit operation facilities**, including stationmaster, station attendant, passenger watchman, ticket attendant, train dispatcher, electromechanical maintenance worker, signalman, passenger train conductor ,etc..

To enable the trainees of rail transit service specialty to understand and master **the principles and basic operation of BAS environmental control system, station electromechanical equipment, AFC ticketing system and PIS passenger information system for rail transit operation**, including **train, subway and high-speed railway**.

Make the professional trainees of **vehicle, station management and electromechanics** understand and master the whole composition of the electromechanical equipment of urban rail transit station, master the principle knowledge and maintenance skills of the electromechanical equipment of rail transit vehicle and station.



Rail Transit Training Room



MALURI EQUIPMENT (M) SDN. BHD.

Major supporting courses:

- Introduction to Rail Transit
- Communication and Signal System of Rail Transit
- Vehicle structure of rail transit
- Traction Power Supply for Rail Transit
- Mechanical and Electrical Equipment of Rail Transit Station
- Operation Management of Rail Transit
- Public Works of Rail Transit



Station Environmental Control System Training Equipment



MALURI EQUIPMENT (M) SDN. BHD.



Environmental Control Computer Room



chilling unit

The environmental control system of urban rail transit station includes **ventilation in public area, ventilation in equipment management room, ventilation in station tunnel and ventilation in section tunnel**. It adjusts the regional environment to meet the normal operation of stations and trains.

Station

AFC Training Equipment for Ticket Selling and Checking

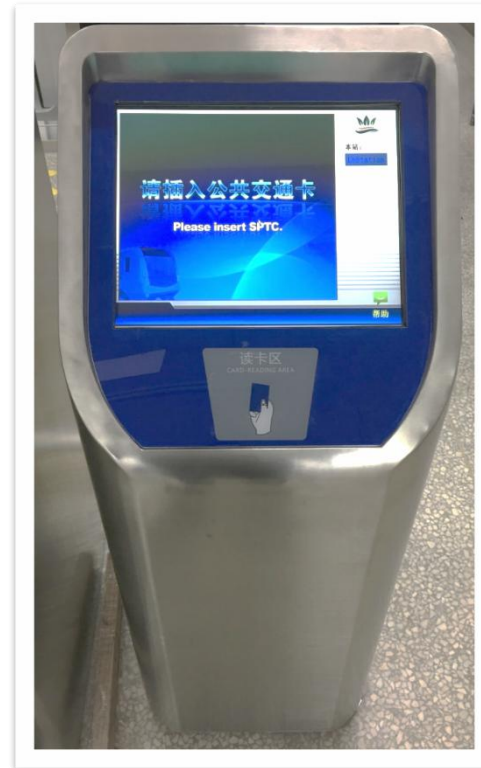


MALURI EQUIPMENT (M) SDN. BHD.



Automatic Ticket Machine (TVM)

The ticket vending machine is installed in the non-payment area of the station. Mainly by the main control unit, touch screen, passenger display, banknote receipt module, coin receipt and change module, ticket card, power module and machine shell components.



Self-service query machine (Ticket Checking Machine)

Simulate and query ticket information, including the amount of one-way ticket, the balance of the stored value card, the status of the card, the type of ticket card, the validity period, the transaction history of the card, etc.



Booking Office Machine (BOM)

It is operated by Metro staff and sells all kinds of tickets. At the same time, it has the functions of supplementing tickets, adding value to public transport cards, checking tickets and printing tickets.

Station Gate system training equipment

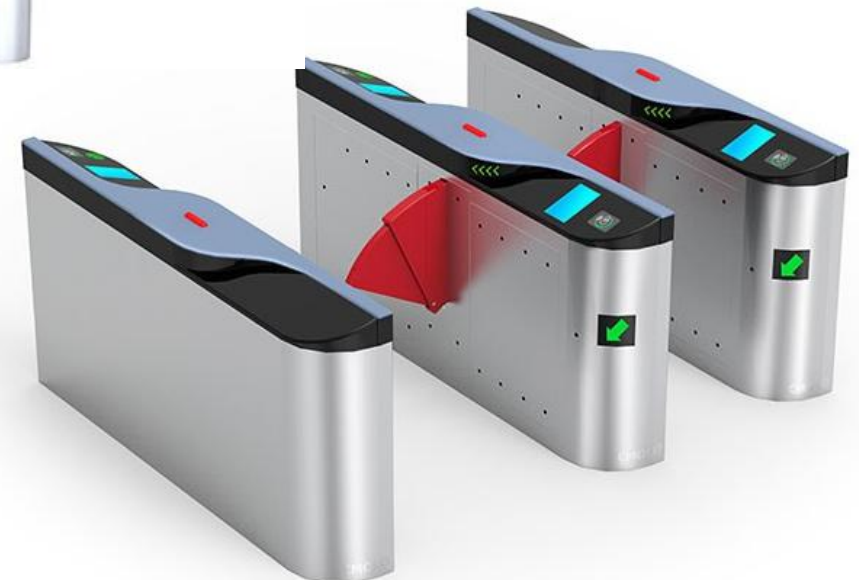


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All the equipment of the training system mainly includes **the gates of metro, ordinary railway and high-speed railway, Station gates and other ticket gates, ticket gates, etc.**

Rail Transit Gate Training System Coverage **Ticket-selling passageway, ticket-checking passageway, VIP hall passageway, staff passageway, peripheral protection** and other different passageway.

The scenario can simulate the different situations of carrying large luggage, baby carriage, wheelchair and so on, so that the learners can choose the gate type that meets the requirements of different scenarios.



Station Shield Door System Training Equipment



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Full height Shield Door



Semi-high Shield Door

The shield door system consists of **semi-high shield door, full-high shield door and virtual-real integrated training device** (shield door of rail transit station).

All equipments of the training system are designed with mature technology and excellent performance, fully considering its reliability, maintainability and scalability. The software has the functions of fault diagnosis and online modification.

Station AFC 3D Training Software



MALURI EQUIPMENT (M) SDN. BHD.

CubeLabs 3D simulation software

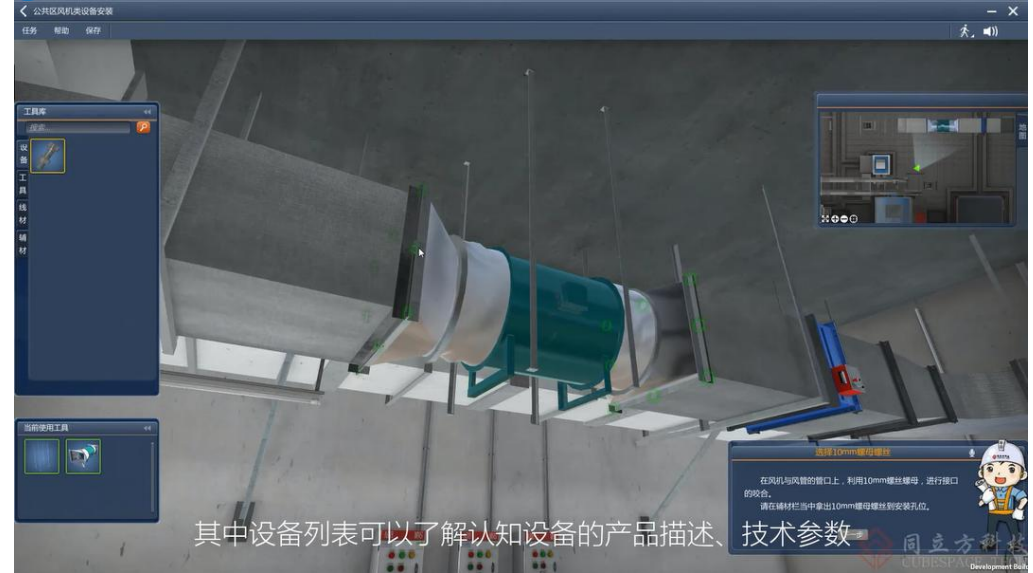
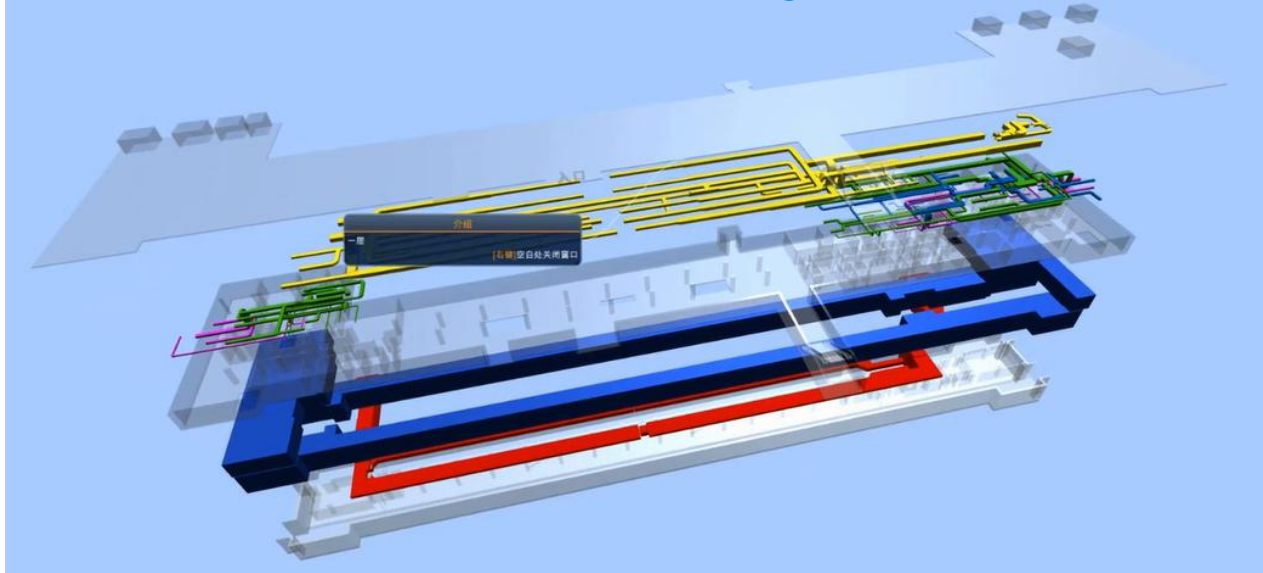


CubeLabs Rail Transit Automatic Ticket Selling and Checking Training System simulates the actual situation of urban rail transit station. It consists of hardware, software, network equipment and terminal equipment. It imports the actual database to simulate all the functions of the actual environment of the station.

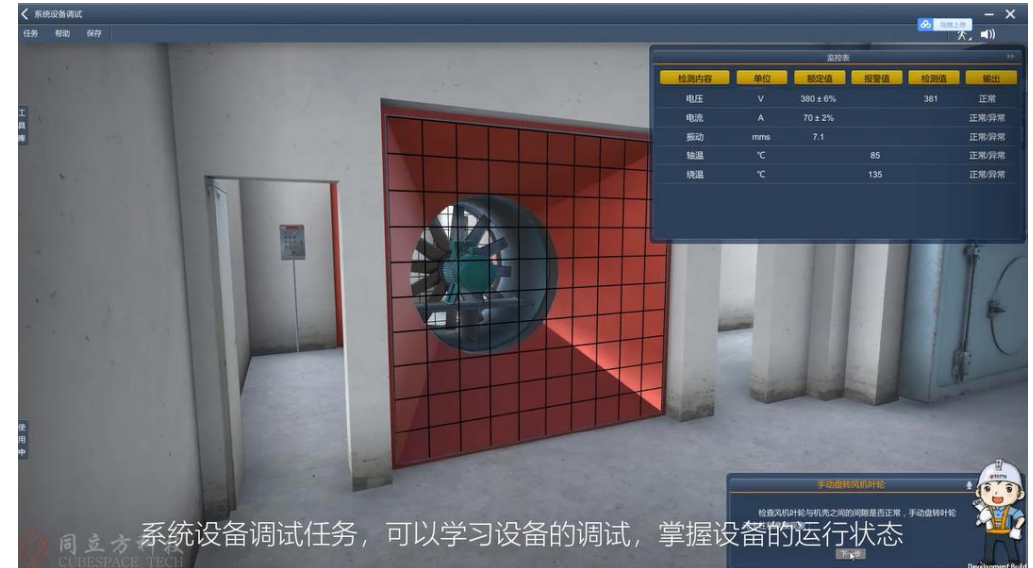
It provides training and teaching for the equipment function and operation management function of the automatic ticket selling and checking system of rail transit.

Station Environmental Control System 3D Training Software

CubeLabs 3D simulation software



The environmental control system of **CubeLabs** urban rail transit station includes ventilation in public area, ventilation in equipment management room, ventilation in station tunnel and ventilation in interval tunnel. Regional environment can be adjusted to meet the normal operation of stations and trains. The virtual simulation training software of environmental control in Tongcun Urban Rail Transit Station helps learners understand the composition, installation, debugging, operation and maintenance of environmental control system equipment by means of teaching guidance.



vehicle Cognitive training equipment

vehicle model



MALURI EQUIPMENT (M) SDN. BHD.



SS3 Electric Locomotive



SS7 Electric Locomotive



CRH locomotive

Through DCC protocol, vehicle model can cooperate with on-board controller to realize speed control, direction control, positioning and other functions, and train operation control software to realize automatic train control.

Vehicle

Cognitive training equipmen

Electrical and Mechanical Station Training

Subway simulation vehicle



MALURI EQUIPMENT (M) SDN. BHD.

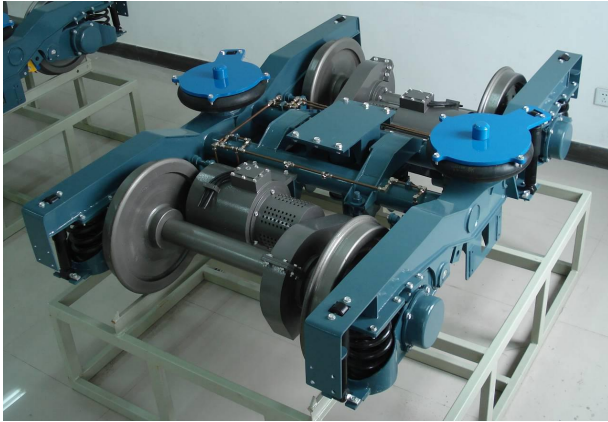


The training vehicle has good appearance and anti-corrosion coating, and its exposed surface is smooth and smooth. The model car has beautiful design, reasonable structure, complete functions and is in harmony with the working environment. The model car meets the requirements of environmental protection and will not pollute the environment and cause any harm to human body.

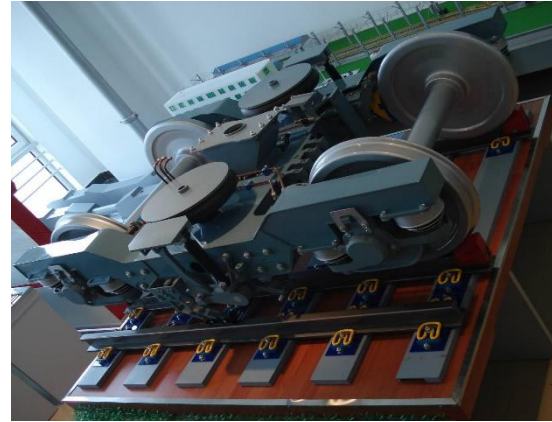
vehicle Electrical and Mechanical Training Equipment



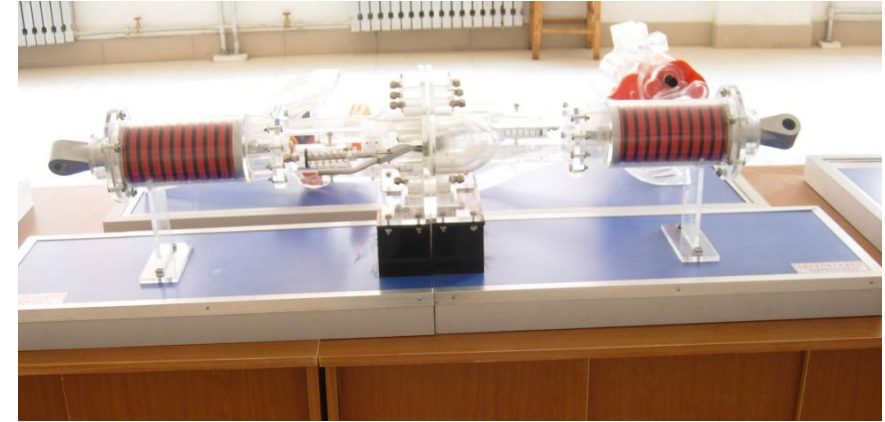
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All-steel bogie model of motor vehicle



Trailer All Steel Bogie Model



Fully automatic coupler model



Pantograph model



Model of Piston Air Compressor

This training is mainly used in the practical teaching of vehicle and station equipment. Through the learning and disassembly of model or object, the name and function of each component can be identified. Through disassembly training, the structure and maintenance knowledge of main components can be mastered.

The main equipments are: **vehicle bogie, pantograph, coupler, wheelset, brake device**, etc.

vehicle

Electrical and Mechanical Training Equipment

CCTV Monitoring System



MALURI EQUIPMENT (M) SDN. BHD.



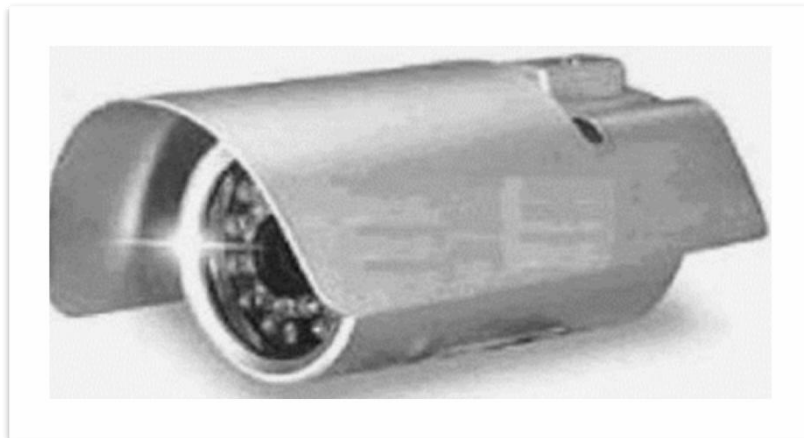
Dome Camera



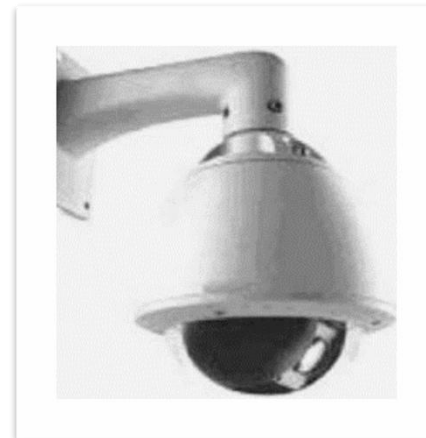
Gun camera



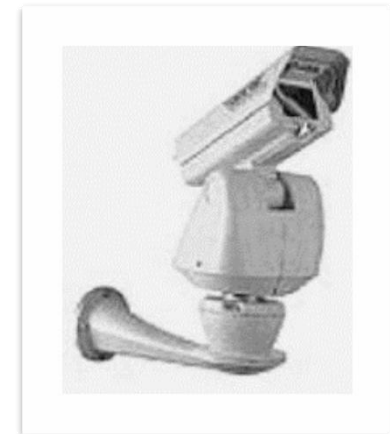
Integrated Camera



Infrared Integrated Camera



Intelligent spherical camera



PTZ Camera

FAS Fire Control Panel

The function requirement of hardware implementation is consistent with the real station. It has **the function of fire zoning**

alarm system, including:

Fire detector

Manual alarm button

Fire telephone

Alarm display

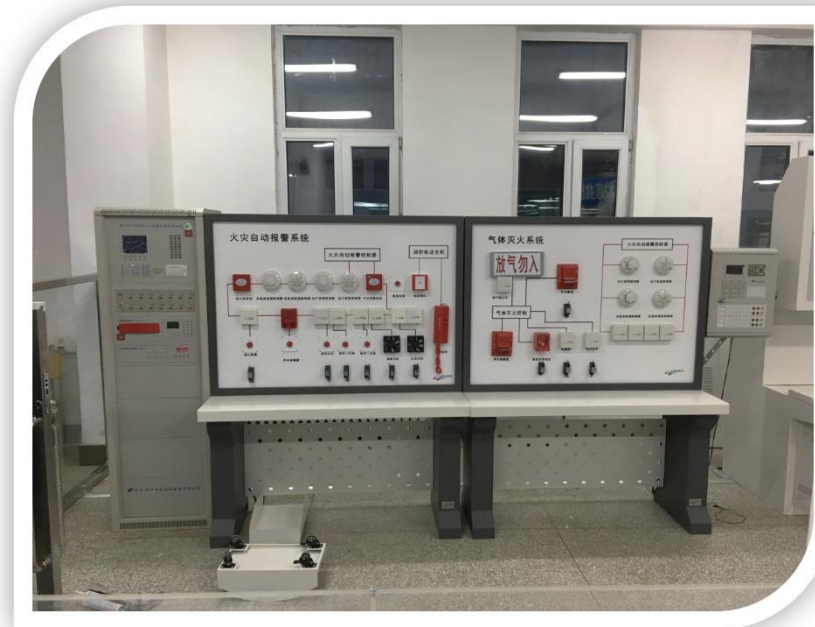
Fire Linkage Disk

Module box

Small UPS for FAS Subsystem

Alarm bell

Fire Broadcasting



Fire Detection and Alarm Device

Including **fire detector**, **manual alarm button**, **fire telephone**, **alarm display screen**, **fire linkage panel**, **module box**, **FAS subsystem with small UPS**, **alarm bell**, **fire broadcasting**.

vehicle

Electrical and Mechanical Training Equipment

Transformer and Distribution Training Equipment



MALURI EQUIPMENT (M) SDN. BHD.



It is mainly used for practical skills training of

trainees and maintenance personnel of

traction power supply specialty.

The practice room is equipped with **circuit**

breaker switching control circuit wiring

operation training tray and **control circuit**

protection wiring operation training tray.

Vehicle Simulated Driving Training Equipment



1:1 Simulated driving console



Subway Simulated Driving Training System



High-speed Railway Simulated Driving Training System

This training module is a simulation training system for trainees. Through the simulation of train operation and operation, the trainees can be trained and assessed.

Support training and assessment contents:

1. The operation methods related to the basic operation of trains. Operational procedures and procedures, including:
Train departure preparation, normal operation of train, automatic return of train, driving skills, familiar route, driving in depot, retreat, pick-up and hang-up of vehicle, etc.
2. Processing methods, procedures and procedures for handling faults and emergencies in train operation, including:
Troubleshooting and handling of accidents, emergencies and abnormal conditions.

The system consists of four parts: **train driving simulator** (including subway and high-speed railway), **teacher console**, **student operating platform** and **student observation area**.

Track

Rail Transit Track Training Equipment



MALURI EQUIPMENT (M) SDN. BHD.

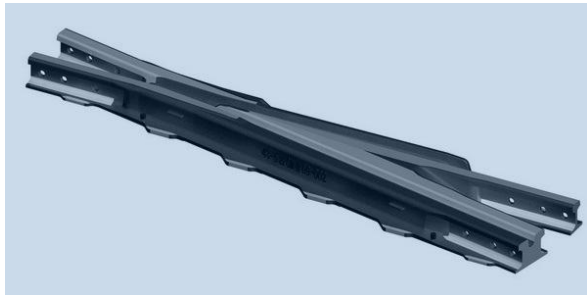


The main contents of the practical training module are as follows:

Rail Transit Facilities, Rail and Connecting Parts, rail fastener, Sleepers and ballast beds , Track Geometry, Switch, Welded Track

Supporting practical training tasks include::

Work inspection, line maintenance, single line operation, work safety and other practical training tasks.



Frog



Scissor Crossover



Single-door Speed-up Turnout



YTT-200 Hydraulic Rail Weld Pusher



YQD Hydraulic hois

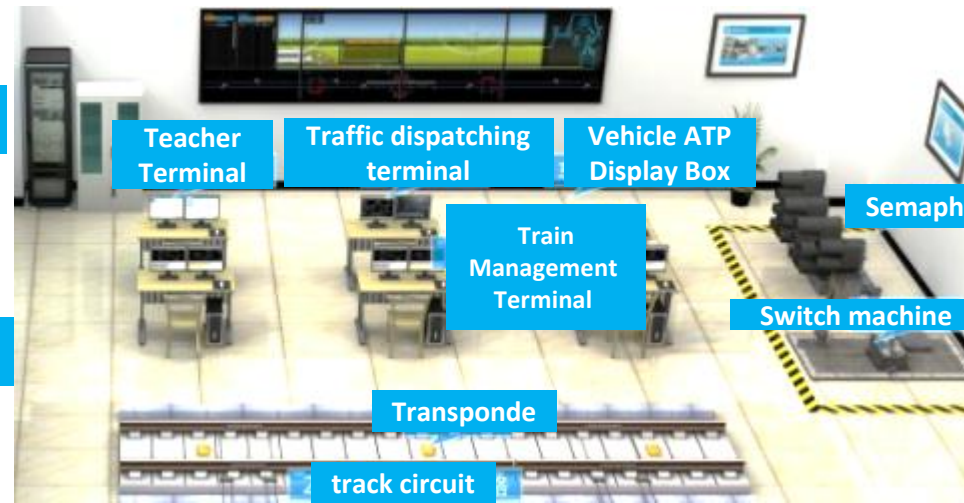
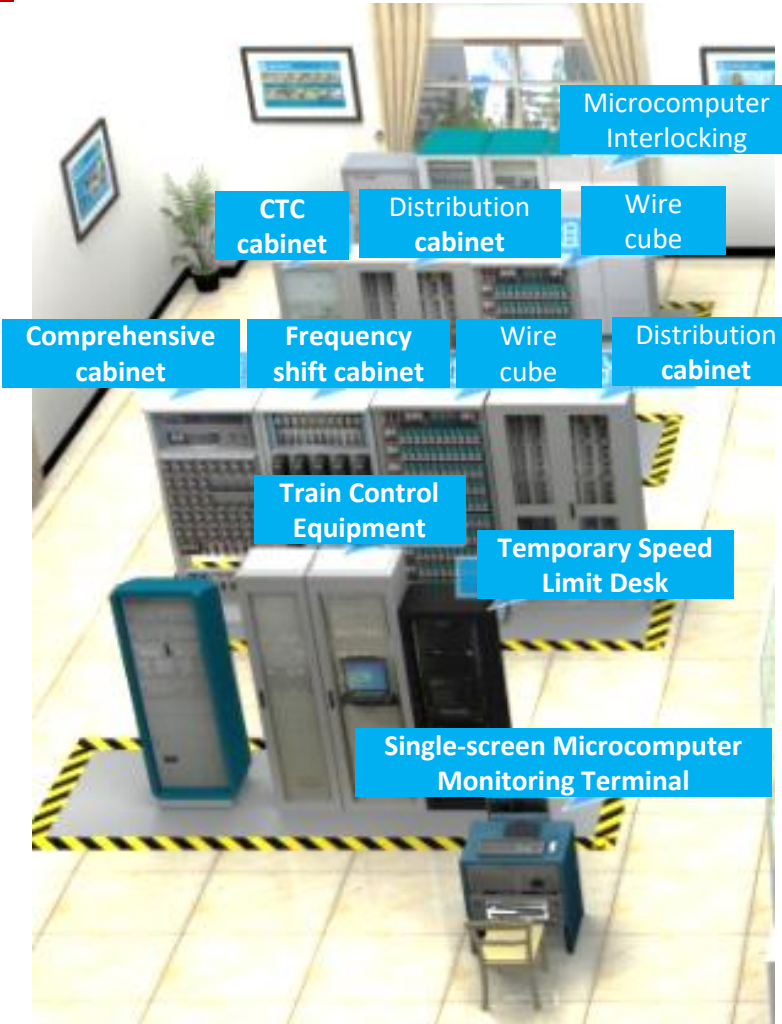


YFZ-147 Hydraulic sleeper

Track Electrical Signal Training Equipment



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It can meet the needs of students majoring in signaling for the practical course of high-speed railway signalling system. It can carry out the training of high-speed rail signaling system equipment cognitive skills, equipment testing skills, equipment repair skills, fault handling skills and so on. Through the system training, students can truly experience the working environment and operation process in the training center, increase practical experience, improve hands-on operation ability, and troubleshooting and scheduling, Ability check.

This module is composed of **train operation control system (CTCS), dispatching centralized system (CTC), EI32-JD micro-computer interlocking system, frequency shift automatic block (ZPW2000A) system and micro-computer monitoring system.**

Taking the physical equipment as the main body and the analog equipment as the auxiliary design method, the practical operation environment of the high-speed railway signaling system is built.

Operation Management of Rail Transit Integrated Operational Management Equipment

Sand Table Training Room



MALURI EQUIPMENT (M) SDN. BHD.



Subway Sand Table Training

Metro sand table training is designed with CBTC system and metro train as prototype. According to the structure system of "control center-central station-depot-line-train" of urban rail transit system, it has the simulation function of normal mode and backup mode of CBTC system. Trains can operate according to the principle of moving block.



Sand Table Training of High-speed Railway

The sand table training room can simulate the working plan, receiving and dispatching trains, dispatching orders, receiving and Dispatching Trains under abnormal conditions, basically covering the training environment of all aspects of railway transportation operation training, so that trainees can master the whole process of train operation command operation and understand the contents and operations of each link. Technological process.

Operation Management of Rail Transit Integrated Operational Management Equipment

BAS、IBP Comprehensive Training



MALURI EQUIPMENT (M) SDN. BHD.

Mouse Control in
BAS System
Integrated Workbench



Software and hardware settings and achievable functional requirements are consistent with the real station, including: **ATS signal system, AFC monitoring terminal, BAS monitoring terminal, FAS monitoring terminal, PIS monitoring terminal, CCTV video monitoring terminal, broadcast control terminal, communication alarm system, etc.**

IBP Training System



The hardware and software settings of the training system and the realizable functional requirements are consistent with the real station. The training is aimed at the platform room service personnel of the rail transit company, and the comprehensive control personnel are trained to be familiar with the operation process of the station control.

Operation Management of Rail Transit Integrated Operational Management Equipment

Practical Training of Rail Transit Safety Inspection



MALURI EQUIPMENT (M) SDN. BHD.



Handheld Metal Detector

Start-up automatic detection, no need to adjust, large scanning area, can quickly and accurately complete the detection; with ultra-high sensitivity, can detect very small metals.



Baggage security machine

Mainly used for safety inspection of Metro stations, railway stations and other places. It can detect larger baggage packages and suitcases.

Operation Management of Rail Transit Integrated Operational Management Equipment

Over-interlocking control system



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Over-interlocking control system realizes the linkage between practical sand table and physical turnout signal equipment and related rail-side equipment, so that trainees can understand and master the principle knowledge and basic operation of rail transit communication signal system, and improve the ability of fault analysis and treatment.



Operation Management of Rail Transit

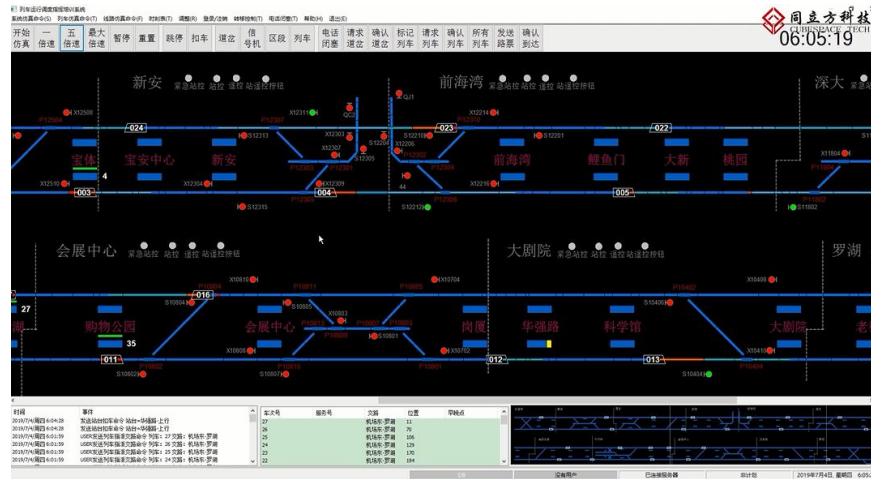
Integrated Operation Management Software

Electronic Sand Table Traffic Dispatching Simulation Software System

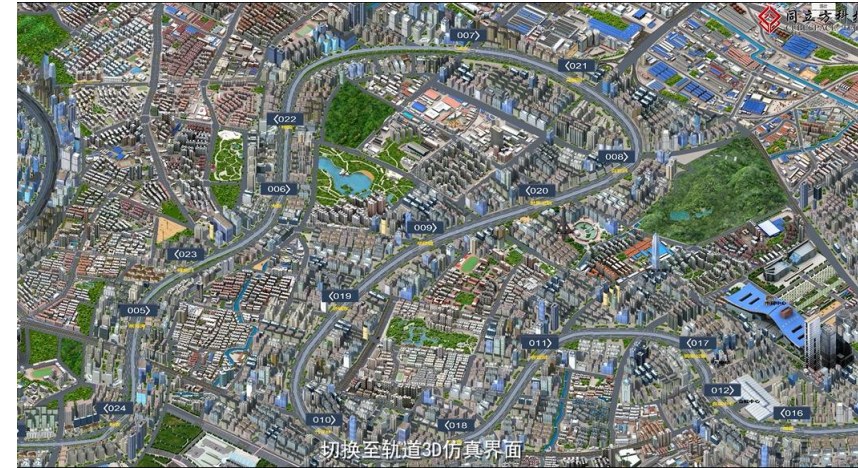


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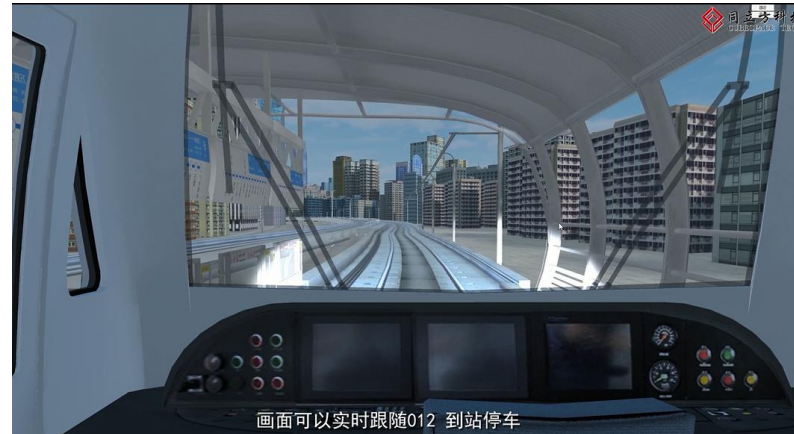
CubeLabs 3D simulation software



CubeLabs Operation Control Platform of Urban Rail Transit



3D simulation interface for track operation control



CubeLabs urban rail control platform software can complete the task of electronic sand table dispatching.

The software interface can observe the track of each platform and train, train ID number, countdown time (departure time).The view can be switched to the track 3D simulation interface, which corresponds to the position, train, number and control interface.

It can provide multiple speed choices. It can also specify the train to switch the driving perspective of 3D view, and execute dispatching instructions such as car arrest and running.

Operation Management of Rail Transit Integrated Operational Management Software

Train Dispatching Center Training Room



MALURI EQUIPMENT (M) SDN. BHD.



Train Dispatching Center Training Room

The training module is used to train the train operator's ability to **receive and dispatch trains**. Through computer technology, virtual simulation technology, robot technology, environmental sound technology, network information transmission technology and other technical means, from the operation level close to **the actual train operation, train reception and departure, simulation based on real-time field data, real-time display of train operation.**

Comprehensive Exhibition of Training Room High-speed Railway.



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Comprehensive Exhibition of Training Room subway



MALURI EQUIPMENT (M) SDN. BHD.



Comprehensive Exhibition of Training Room train



MALURI EQUIPMENT (M) SDN. BHD.



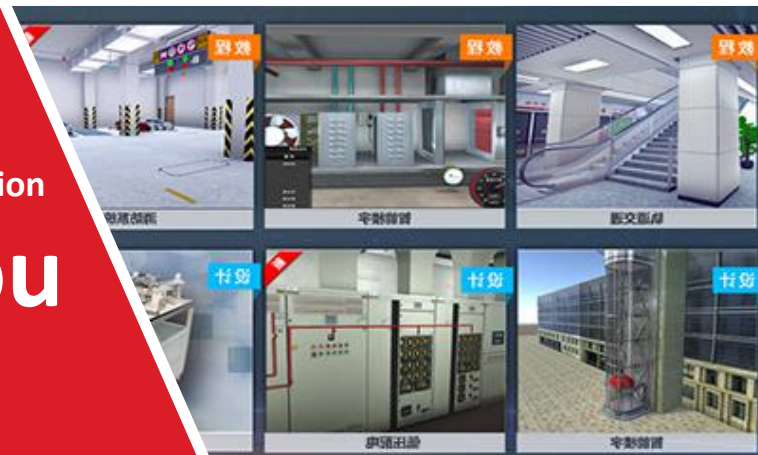


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Looking forward to cooperation

Thank you



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