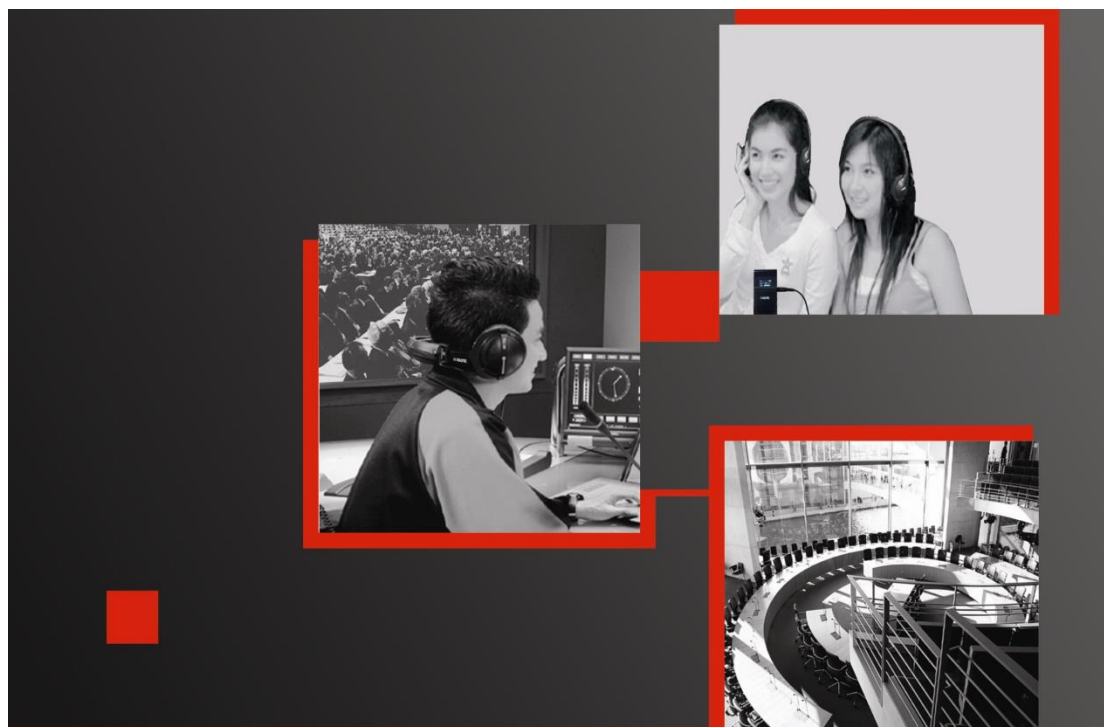# Interpretation & Language Distribution

VZ 6300
USER MANUAL V2.0

KLOTZ systems

Conference System – VZ 6300 - User Manual

May 2010

This is a product information of the interpretation & language distribution system **VZ 6300** by KLOTZ system GmbH.

Number of this document: see footer.

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CONTENTS

PLEASE MAKE SURE TO READ THIS MANUAL CAREFULLY BEFORE TAKING VZ 6300CU CONTROLLER INTO OPERATION

SAFETY INSTRUCTIONS AND READER'S INFORMATION

There is a certain **hierarchy of warnings** in **this manual**. The warnings are printed in **bold letters** and are marked by a warning sign at the margin.

1. WARNING
2. CAUTION
3. NOTE

The term **WARNING** will be used wherever **danger is imminent**. The possible consequences may be death or severe injury (personal injury).

The term **CAUTION** will be used wherever a **dangerous situation is possible**. The possible consequences include death, severe or light injury (personal injury), damage to property (destruction of modules) or environmental hazards (fire damage). In any case, the failure to observe/comply with these instructions will result in the loss of guarantee.

The term **NOTE** will be used for marking **recommendations on the use**. These sections contain additional information, recommendations, hints and tips. Non-compliance with these recommendations may result in damage to property, e.g. to the system or the software.

General Safety Instructions

1. Read all instructions. Read all safety and operating instructions before operating the product.

2. Retain all instructions. Retain all safety and operating instructions for future reference.

3. Heed all warnings. You must adhere to all warnings on the product and those listed in the operating instructions.

4. Follow all instructions. Follow all operating and product usage instructions.

5. Heat. This product must be situated away from any heat sources such as radiators, heat registers, stoves, or other products (including power amplifiers) that produce heat.

6. Ventilation. Slots and openings in the product are provided for ventilation. They ensure reliable operation of the product and keep it from overheating. Do not block or cover these openings during operation. Do not place this product into a rack or studio furniture unless proper ventilation is provided and the manufacturer's recommended installation procedures are followed.

7. Water and moisture. Do not operate this product in the presence of rain, water or condensing moisture. Failures due to moisture entering the enclosure will not be covered under the warranty.

8. Debris. Do not allow any conductive objects of debris to enter through vents. Conductive debris entering the vents is likely to cause failure or performance degradation. Failures due to foreign objects entering the enclosure will not be covered under the warranty.

9. Attachments. Do not use any attachments not recommended by the product manufacturer as they may cause hazards.

10. Power sources. You must operate this product using the type of power source indicated on the marking label and in the installation instructions. If you are not sure of the type of power supplied to your facility, consult your local power company.

11. Voltage select switch. Ensure that the voltage select switch for the power supply of the product is in the correct position for the type of voltage you use in your country (e. g. 115 V AC or 230 V AC).

12. Grounding and polarization. Precautions should be taken so that the grounding or polarization is not defeated.

13. Power cord protection. Power supply cords must be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to the cords at plugs, convenience receptacles, and at the point where they exit from the unit. Do not defeat the earth grounding connection in the AC power cord.

14. Power cord. If you have not been provided with a power cord you're your product or for any AC-powered option intended to be used with your system, you should purchase a power cord that is approved for use in your country. The power cord must be rated for the product and for the voltage/current marked on the product's electrical ratings label defined in the user manual. The voltage/current rating of the power cord should be greater than the voltage/current rating marked on the product.

15. Lightning. For added protection for this product, unplug it from the AC wall outlet during a lightning storm or when it is left unattended and unused for long periods of time. This will prevent damage to the product due to lightning and power line surges.

16. Overloading. Do not overload AC wall outlets, extension cords, or integral convenience outlets as this can result in a fire or electric shock hazard.

17. Object and liquid entry. Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts, which could result in a fire or

electric shock. Never spill liquid of any kind on the product.

18. Mounting accessories. Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury and serious damage to the product. Any mounting of the product must follow manufacturer's installation instructions.

19. Product and cart combination. Move this product with care. Quick stops, excessive force, and uneven surfaces may cause the product and the cart combination to overturn.

20. Servicing. Refer all servicing to qualified servicing personnel.

21. Damage requiring service. Unplug this product from the wall AC outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power supply cord or plug is damaged.

b. If liquid has been spilled or objects have fallen into the product.

c. If the product has been exposed to rain or water.

d. If the product does not operate normally (following operating instructions).

e. If the product has been dropped or damaged in any way.

f. When the product exhibits a distinct change in performance. This indicates a need for service.

22. Replacement parts. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards and will void warranty.

23. Options and upgrades. Use only the options and upgrades recommended by the manufacturer.

24. Safety check. Upon completion of any repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

25. Hot surfaces and electric discharge.
Allow the equipment's internal components (e.g. heat sinks) and hot pluggable system units to cool and/or discharge before touching them in case of any further handling.

26. Cleaning. Do not use liquid or aerosol cleaners. Use only a damp cloth for cleaning.

This product with the CE marking complies with the following standards and directives of the Commission of the European Community:

73/23/EEC Low voltage directive
IEC 950/EN60950 Electrical safety

89/336/EEC EMC directive
EN 55103-1 Electromagnetic interference - emission
EN 55103-2 Electromagnetic susceptibility - immunity

This product is intended for use in the following electromagnetic environments:
- **E1 (residential)**
- **E2 (commercial and light industrial)**
- **E3 (urban outdoors)**
- **E4 (controlled EMC environment, e.g. broadcast studio)**

All KLOTZ products have been developed, produced and tested accurately and according to the above named directives.

NOTE!

Improper handling of HF equipment like radio transceivers and mobiles can cause radio interferences on KLOTZ devices. For working reliability reasons it is strongly recommended not to use radio transceivers and mobiles near the devices!

Warning Symbols on Equipment

The following table contains safety icons that may appear on KLOTZ equipment. Refer to this table for an explanation of the icons and heed the warnings that accompany them.

This symbol, when used alone or in conjunction with any of the following triangle icons, indicates the need to consult the operating instructions provided with the product. **WARNING!** A potential risk exists if the operating instructions are not followed.

This symbol indicates the presence of electric shock hazards. Enclosures marked with these symbols should only be opened by a KLOTZ DIGITAL authorized service provider. **WARNING!** To avoid risk of injury from electric shock, do not open this enclosure.

This symbol indicates the presence of a hot surface or component. Touching this surface could result in bodily injury. **WARNING!** To reduce the risk of injury from a hot component, allow the surface to cool before touching.

This symbol indicates the presence of a laser beam. **WARNING!** Failure to observe this warning could result in bodily injury, fire or damage to the equipment.

This symbol indicates an electrostatic sensitive device that is susceptible to ESD discharge. **CAUTION!** Failure to observe this warning could result in damage of the device/component.
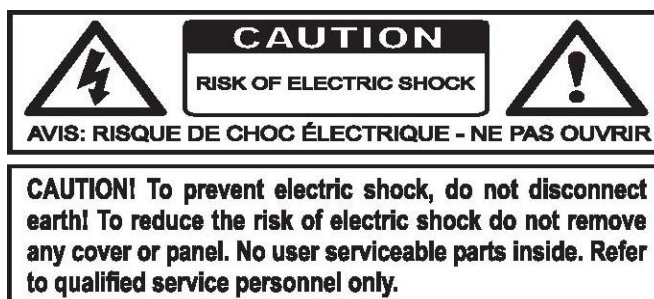
This symbol indicates the need to turn off the main plug of the equipment before open the enclosure. **WARNING!** To avoid risk from electric shock, the equipment must be disconnected from mains.

This symbol defines the terminal for protective conductor (protective earth) only!

This symbol indicates the presence of mechanical parts that can result in pinching, crushing or other bodily injury. **WARNING!** To avoid risk of bodily injury keep away from moving parts.

CAUTION
RISK OF ELECTRIC SHOCK

AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR

CAUTION! To prevent electric shock, do not disconnect earth! To reduce the risk of electric shock do not remove any cover or panel. No user serviceable parts inside. Refer to qualified service personnel only.

1. Precautions - VZ 6300CU Infrared Transmitter Central Controller

1.1. General Handling of Cards

In order to prevent injuries to persons and damage to the system consider the following directions:

◆ The assembly, disassembly and handling of control surface components must be carried out exclusively by qualified personnel.

◆ Service and repair must only be carried out by authorized service personnel. These directions are part of the warranty agreement.

CAUTION!

Turn off the VZ 6300CU Controller immediately under the following conditions:

◆ The power cord is damaged of frayed

◆ Liquid spills on or into the equipment

◆ Someone drops the control surface or damages the casing

CAUTION!

Do not:

◆ Push any foreign objects into the VZ 6300CU connectors

◆ Clean the VZ 6300CU before it is disconnected from the power supply system

◆ Eat or drink while operating the VZ 6300CU to avoid that crumbs or liquid enter the control surface cabinet

Take care of the following precautions:

◆ Avoid exposing the VZ 6300CU Controller to extreme changes in temperature or humidity. If it is unavoidable, allow your VZ 6300CU Controller to adjust to room temperature before use

◆ Avoid using the VZ 6300CU Controller for extended periods in direct sunlight

◆ Do not use the VZ 6300CU Controller in humid or dusty environments

◆ If the temperature of the VZ 6300CU Controller suddenly rises or falls (for example, when you move it from a cold place to a warm one), water vapour condenses inside the control surface. Turning on the VZ 6300CU Controller under this condition can damage the internal components. Before turning on the VZ 6300CU Controller, wait until the units internal temperature acclimatizes to the new environment and the inside of the control surface is dry again

◆ Maintain storage temperature between -20°℃ and 70°℃

◆ Keep the storage area free from vibration

◆ Keep the VZ 6300CU Controller and its components away from organic solvents or corrosive gases

◆ Avoid leaving the VZ 6300CU Controller and its components in direct sunlight or near heat sources

If there are heat sinks inside or outside the VZ 6300CU Controller, they can reach a temperature of more than 60°℃, which might cause a fire on the device.

Each VZ 6300CU Controller must be properly grounded according to your local specifications and regulations

Electrostatic sensitive devices

Boards with electrostatic sensitive devices (ESD) are mostly marked with this symbol.

CAUTION!

If you handle boards assembled with electrostatic sensitive devices you must necessarily consider the following points:

◆ Always discharge yourself before you start working (e.g. by touching a grounded object)

◆ Make sure that the equipment and tools are free of static charges

◆ Pull out the power plug before you insert or remove boards containing electrostatic sensitive devices

◆ Always hold boards with ESDs by their edges

◆ Never touch pins or conductors on boards assembled with electrostatic sensitive devices

◆ Store and transport boards/components only in electrostatic protective wrapping

1.2. Ventilation System

For maximum efficiency of the VZ 6300CU Central Controller and its power supply's ventilation system a properly balanced airflow must be provided.

CAUTION!

To prevent the unit from being exposed to an over temperature condition, do not block air intakes or exhausts.

2. VZ 6300 Interpertation & Language Distribution System

Introduction

VZ 6300 system is ideal for use in business and government conferences, international conventions and other multilingual applications, offering simultaneous interpretation and wireless audio distribution for up to 11+1 different languages plus the floor language using state-of-the-art infrared transmission technology. It complies with the IEC industry standards, operating in the higher frequency band to avoid lighting interference.
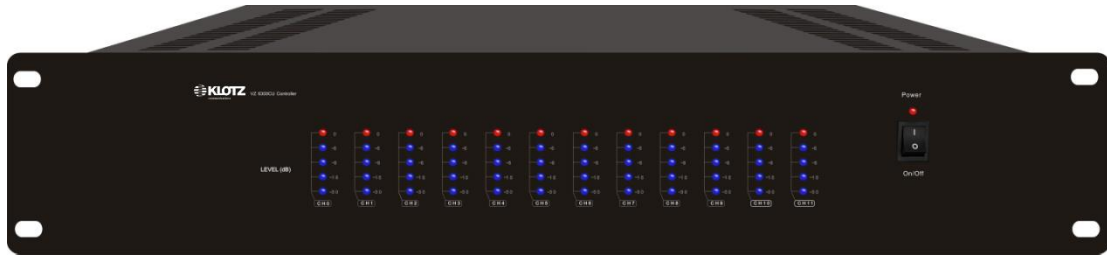
2.1. Applications

The VZ 6300 system is one of the latest and advanced wireless language distribution systems. By using the state-of-the-art technologies and numerous groundbreaking developments the VZ 6300 system can be used everywhere where flexibility and, above all, operational safety play an important role.

Therefore the VZ 6300 system fulfils the most important criteria which are expected from a modern conference system.

Typical locations are:

- School & Campus
- Hotel
- Conference Room
- Congress Center
- Expo Centre
- Enterprise
- Government office
- Convention Center
- Stadium
- Department Store
- BGM Downtown + Beach

… and many more!

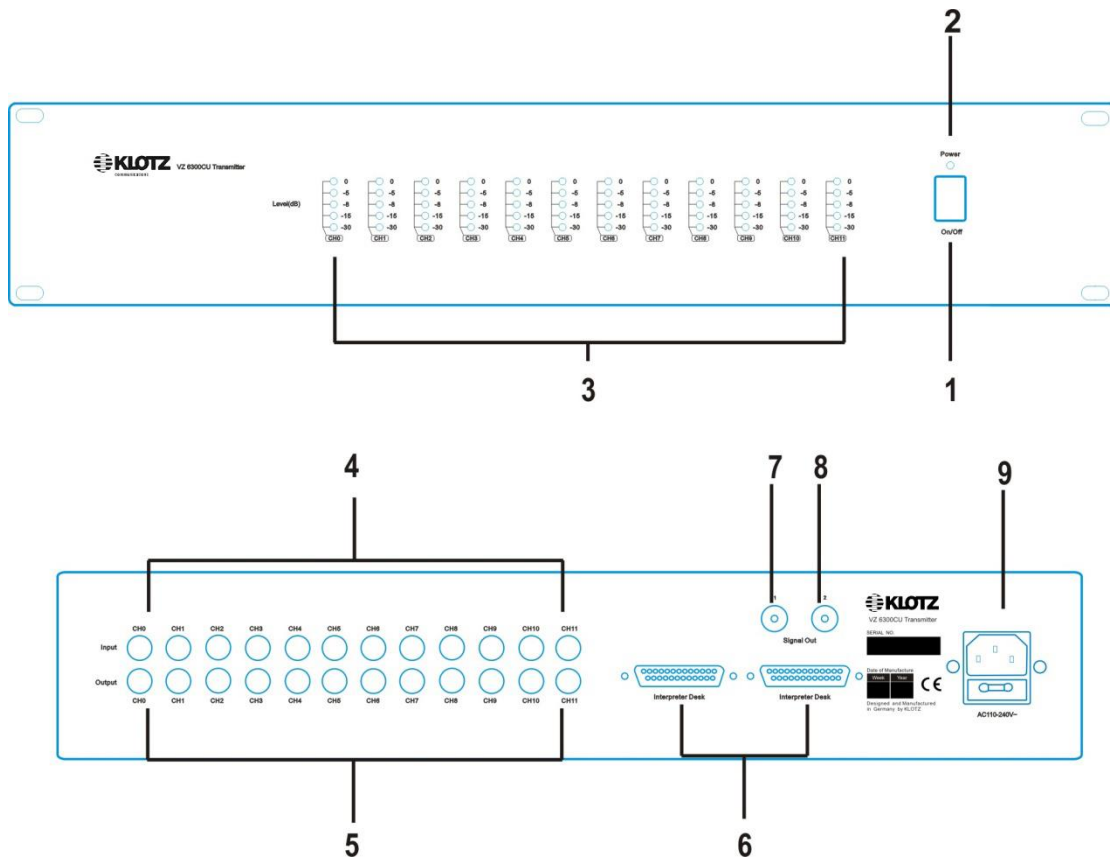# 3. VZ 6300CU Infrared Transmitter Central Controller

3.1. Features

- High operation security, prevents external interferences

- Suitable for different conference halls

- Automatic level control function (ALC)

- No disturbance under daylight lamps or cell phone signals

- Easy installation and operation saves time and money

- Implement with most advanced technology

- Elegant configuration in accordance to ergonomics

- Up to 12 interpreter voice's for record

- Available for 19-inch frame mounting

- With 12 input audio channels and up to 12 audio output channels

- Each central controller supports 2 daisy chains

- Each daisy chain can connect up to 6 interpreter sets

- The unlimited amount of receiver units allows more people to take part in the conference

NOTE!

Although not obligatory it's recommended to set up to 11 interpreter sets in one system, so 1 audio output channel can be used as floor source.

3.2. Infrared Transmitter Central Controller

1) **POWER SWITCH**

2) **POWER INDICATOR:**
   After the power switch is turned on, the IR transmitter is activated and the power indicator will light.

3) **LEVEL INDICATOR:**
   Audio level indication for all channels

4) **AUDIO INPUT CHANNEL CH0~CH11:**
   The original audio can come from wired microphone or wired interpretation audio input equipment.

5) **AUDIO OUTPUT CHANNEL CH0~CH11:**

6) **INTERPRETER'S DESKS:**
   Main unit can connect up to 2*6 interpretation sets with daisy-chain connection.

7) **SIGNAL OUT 1 (TO IR Radiator)**

8) **SIGNAL OUT 2 ((TO IR Radiator)**
   Use BNC cable to connect from "SIGNAL OUT' port of main unit to "INPUT" port of IR Radiator, and connect the next IR Radiator from "SIGNAL OUT" of previous one to "SIGNAL INPUT" port of next one by BNC cable.

9) **AC POWER INPUT：110VAC~220VAC，±5%**

3.3. Specification of VZ 6300CU

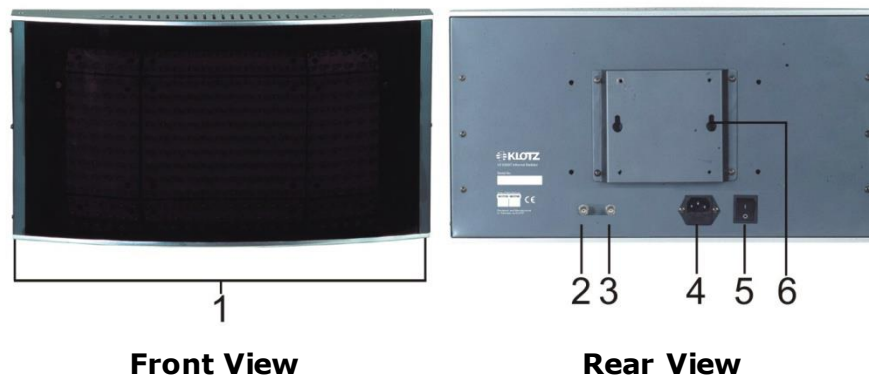|	Items	Parameter
Audio Channel	Modulation method	FM，digital PLL
	Frequency response	100Hz~14kHz
	Carrier frequency band	1.7MHz~4.0MHz
	Frequency stability	10ppm
	RF output level	700mV
	RF output impedance	50Ohm
	Max. input level	2V
	Input impedance	18kOhm
	AGC range	30dB
	S/N Ratio	＞75dB
	T.H.D.	＜0.5%, @ 1kHz
System	Power supply	110V~240V AC
	Power consumption	40W
	Operation Temperature	5℃ ~ 45℃
	Storage Temperature	-20℃ ~ 70℃

4. VZ 6320IT Infrared Radiator

4.1. VZ 6320IT Infrared Radiator Features

- Radiates & distributes up to 12 channels of audio signal
- Auto switched on/off by carrier signals from transmitter unit
- Auto gain control to ensure max. efficiency
- Convection cooled for noiseless, reliable operation
- Mounted on ceiling, wall, floor stand or optional tripod
- Easily daisy-chained together to expand coverage
- Half radiator angle: ±22°

4.2. Infrared Radiator Components

Front View   **Rear View**

1) Power indicator

2) Signal output BNC jack: connection to the next IR radiator input port

3) Signal input BNC jack: connect to the "SIGNAL OUT" port of main unit or previous IR radiator output port.

4) AC power input: 110/220VAC±5%

5) Power on/off switch

6) Fixable orifice

4.3. Parameter of Infrared Rediator

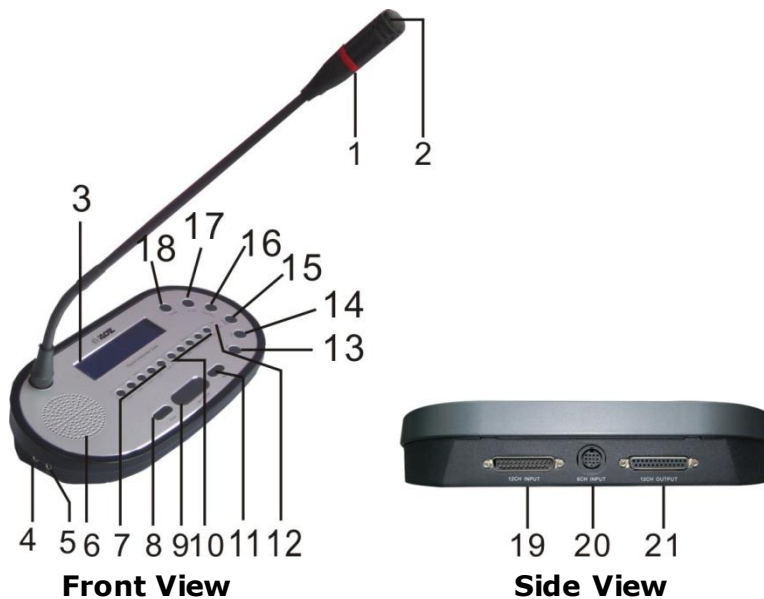|	Items	Parameter
Audio channel	Carrier frequency band	1.7MHz~4MHz
	Max. IR output power	25W
	Output level control	Low/High (50%/100%)
	Angle of half intensity	±22°
	RF output impedance	50Ω
	RF input voltage	100mV~2000mV
	Max. coverage range	30m
	Gain control mode	AGC
Infrared Radiator	Power supply	110V/ 220V AC
	Consumption Rating	55W, 8W for standby
	Operation Temperature	5℃ ~ 45℃
	Storage Temperature	-20℃ ~ 70℃
	Dimensions	211mm*450mm*82mm
	Net Weight	3.4kg

5. VZ 631xIS Interpretation Set

5.1. Interpretation Set Features

- Supports headset earphone for monitoring

- Easy to operate, just with a single press

- IR Transmitter unit can connect up to 11 interpreter units

- Volume adjustable and feedback prevention included

- RELAY function allows one interpreter channel be used as source channel for other interpreters

- SLOW key – if delegates speak too fast it give requests for slower speaking

- Automatic numbering on system units

- MUTE button for fast output mute during interpreter's cough

- 12CH simultaneous interpretation, including floor channel

- Interpreter set supports 13 pin and 25 pin connection

NOTE!

Although not obligatory it's recommended to set up to 11 interpreter sets in one system, so 1 audio output channel can be used for floor source.

5.2. Interpretation Set Components

Front View   **Side View**

1) Microphone red indicator to show MIC state

2) Unidirectional electret MIC

3) Microphone LCD, can display input and output channel

4) Headphone 3.5mm output jack to headset

5) MIC 3.5mm input jack to connect the microphone of headset

6) Monitoring loudspeaker

7) Microphone input channel selector (fast access keys of channel 0~4)

8) SLOW key: if delegates speak too fast it requests for slower speaking.

9) Microphone on/off button

10) Microphone output channel selector (fast access key of channel 1~5)

11) Mute button: for fast output mute during interpreter's cough

12) Channel busy/mute indicator

13) Volume -: decrease the input volume

14) Volume +: increase the input volume

15) Output channel –: decrease the channel no.

16) Output channel +: increase the channel no.

17) Input channel –: decrease the channel no.

18) Input channel +: increase the channel no.

19) Input DB25 connector: first unit connects to central unit and the next unit connects to output interface of previous unit

20) 13P connector, used for connection in 13P interpretation system

21) Output DB25 connector: connect the next interpreter unit

6. VZ 633xIR Infrared Receiver

6.1. VZ 633xIR Infrared Receiver Features

- Pocket size wireless handheld unit
- Accommodates up to 8 or 12 different languages
- Power on/off switch and volume control
- Powered by rechargeable batteries which supply receiver up to 30 hours
- Volume, channel, signal and battery power level displayed on LCD
- Easy configuration and installation, no limitation on quantity and position of receivers in conference hall
- Available with battery cover lock to avoid unwished drop of battery
- Auto-save of configuration when receiver is switched off
- Built-in limiter ensures best audio quality
- Optimized design ensures a tight and save battery insertion

WARNING!

Please use only KLOTZ proprietary batteries in IR Receiver, otherwise it may lead to injury of body or damage on device.

6.2. Infrared Receiver Components

1) Power on/off

2) LCD for signal, channel and power level indication

3) IR lens

4) Volume +/ -

5) Channel +/ -

6) Connector for battery recharge

6.3. Parameter of Infrared Distribution System Receiver Unit

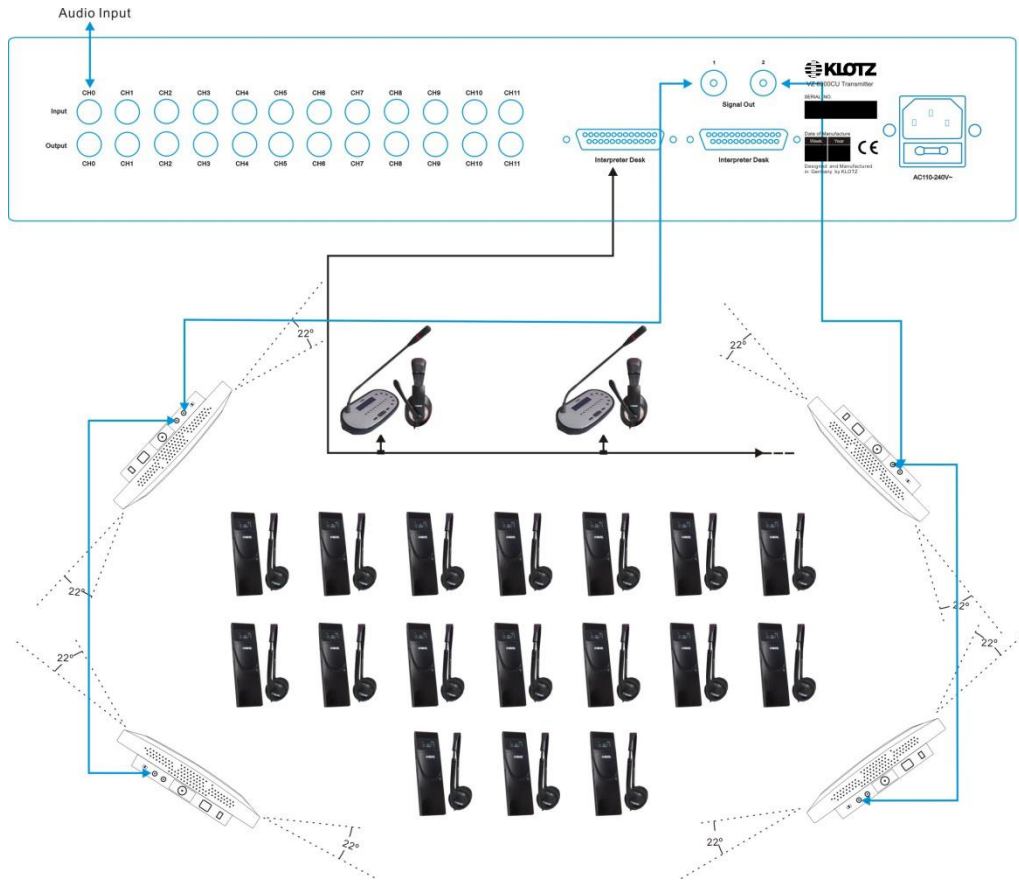| Items	Parameter
Modulation method	FM, digital PLL
Carrier frequency band	1.7MHz~4.0MHz
Frequency response	100Hz~14kHz
Frequency stability	10ppm
T.H.D	<1%, @ 1kHz
Channel separation	> 55dBA
Operating voltage	3.1V~5V
Consumption Rating	60mW

7. VZ 6350CT Battery Charger
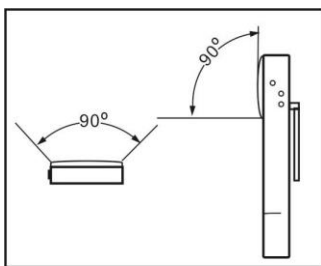

7.1. VZ 6350CT Battery Charger Features

- High efficiency switch mode charger
- Input Voltage: AC110V/220V, 50Hz~60Hz, preset in factory
- Charges 34 pieces of IR receivers at once
- Charging needs 2~3 hours
- Dimension: 455mm×320mm×340mm
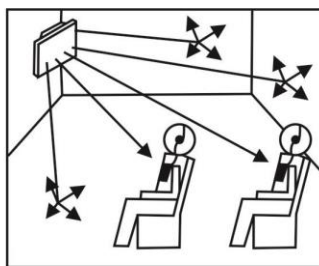
8. System Installation Guide
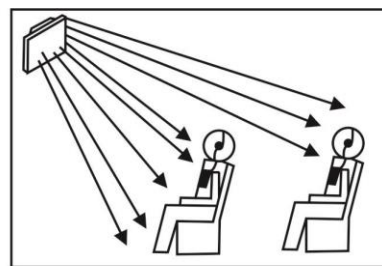
8.1. System Connection Diagram

8.2. IR Receiver Installation

(Fig.1)   **(Fig.2)**   **(Fig.3)**

The Direction and Sensitivity of IR Receiver

Infrared rays are a kind of directional and invisible light; the best sensitivity of the IR receiver is reached when the receiver faces the IR radiator. The receiving angle of the IR receiver is horizontally and vertically ±45º (Fig.1).

The infrared emission signal transmits the signal to the IR receiver directly or reflected (Fig.2) this should be considered while installing the IR radiator. The best reception is

reached when the IR receiver receives the signal directly, but reflection can also improve the reception. The front-seat audience will block the signal to the back rows. It is recommended to install the IR transmitter high enough providing a sufficient signal to the back rows.

8.3. System Cabling

<u>Bus cabling</u>

Use DB25 cable connect Interpreter desk interface with interpreter set. Each interpreter set connects daisy-chained.

<u>Cabling between conference central unit and infrared transmitter central controller</u>

Connect conference central unit audio output to input CH0 of transmitter central controller with audio cable (Connection needs RCA cable).

<u>Cabling between infrared transmitter central controller and other audio devices</u>

Connect other audio devices to input CH0~11 on transmitter central controller via audio cable (Connection needs RCA cable).

<u>Cabling between infrared transmitter central controller and radiator</u>

(1) Connect SIGNAL IN interface on radiator to SIGNAL OUT interface on infrared transmitter central controller via coaxial cable. If there is more than one radiator used in the system connect next radiator to previous radiator via its SIGNAL OUT interface. All connections need BNC cables.

(2) Turn on interpreter set, central controller and other audio devices and check if radiator receives a stable signal after setting an output channel.

NOTE!

For more cabling details, please ask your KLOTZ contacts for assistance.

9. Troubleshooting

9.1. Device Has No Power

(1) Central Control Unit:

    Check if power cables are connected properly.

    Check if power switch is in on-position.

    Check if power fuse is broken.

(2) Infrared Receiver:

    Check if battery is connected properly.

    Check if the spring holding the battery is corroded.

    Check if battery is has power.

Note!

Although not obligatory it's recommended to keep the battery separated from receiver if not in use.

(3) Interpreter Set

    Check if DB25 cable is connected properly

(4) Radiator

    Check if power cable is connected properly

    Check if power switch is pushed in on-position

9.2. Weak Signal

Try to adjust direction of IR Radiator or IR Receiver or add several IR Radiators to achieve a better signal.

9.3. No Signal

Check if input or output cable is connected properly.

Check if DB25 cable between IR transmitter central controller and interpreter sets is connected properly.

Check if DB25 cable between interpreter sets is connected properly.

Check if microphone or earphone of interpreter sets is faulty.

Check if earphone of IR Receiver is faulty.

Check if cables between IR transmitter central unit and IR radiators or cables between IR radiators are connected properly.

9.4. Interpreter Set Assign Output Channel Failed

Check if this channel has been assigned already.

10. System Components Description Order No.

Model No.	Description	Products No.
VZ 6300CU	Central Controller for Interpretation & Language Distribution System	11 630 6300
VZ 6310IS	Interpreter Set, 12CH	11 630 6310
VZ 6311IS	Interpreter Set, 8CH	11 630 6311
VZ 6320IT	Infrared Radiator	11 630 6320
VZ 6330IR	Infrared Receiver, 12CH	11 630 6330
VZ 6331IR	Infrared Receiver, 8CH	11 630 6331
VZ 6351BP	Chargeable battery of Infrared Receiver	11 630 6351
VZ 6350CT	Battery Charger for Receiver	11 630 6350
VZ 6312HP	Headphone set with Mic.	11 630 6312
VZ 6321BK	Mounting bracket of Infrared Radiator	11 630 6321