

# INFRARED WIRELESS CONFERENCE SYSTEMS



**TS-900 SERIES**



**TS-800 SERIES**

## DESCRIPTION

Enhancing conference setups by providing effective and highly efficient communications, TOA offers the TS-800 and TS-900 Series Infrared Wireless Conference Systems.

These new systems are composed of compact and lightweight Chairman/Delegate units, and can be expanded to accommodate up to 96 units (TS-900) and 64 units (TS-800). These systems offer many advantages that include full infrared wireless capability, which eliminates cabling and improves performance over other transmission systems as well as making installation easier. Coverage can be adjusted for a good match.

TOA's exceptional infrared wireless technology provides improved security from eavesdropping as well as prevents annoying crosstalk. In addition, these systems offer the flexibility to easily be configured to meet the conferencing requirements of different rooms and varied participant numbers. Offering exceptional sound quality for amplification as well as clear

recording quality, the systems flexibly accept audio input from a wired microphone or other sound source and are equipped with two different microphone types. The audio input can also be provided from a wired microphone as well as other sound source. For extra convenience in use, the systems may be operated using battery or AC adaptor.

Increased versatility for the user is also provided with additional features such as bilingual conferencing (TS-900) and voting, with the TS-900 having an advanced "threefold choice vote function" for instantaneous voting. The Chairman unit also features a priority speech key for conducting conferences more smoothly and efficiently. There is also a "speech system selection function" to prevent speaker confusion. Some of the other notable new features include a "speaker restriction function" to prevent interruptions (one, two or four persons), an "Auto Mic-Off function" to prevent a mic being inadvertently left on, and the "installation status checkup function" for at-a-glance confirmation.

# INFRARED WIRELESS CONFERENCE

## Installation is now easier than ever before thanks to the infrared works together with clear sound amplification for ideal system

### ● Improved security using infrared communication

Using infrared wireless communication provides more resistance to radio interference and eavesdropping, as well as enabling simultaneous systems use in adjacent conference rooms without annoying crosstalk.

### ● Easier installation

A wireless communication system eliminates connections between conference units. The installation process is simpler and quicker to complete without having to deal with cabling arrangements.

### ● Single coaxial cable connection

The central unit and Infrared Transmitter/Receiver unit connects simply just using a single coaxial cable.

### ● Flexibly adapts to suit conference layout and number of participants

Up to 96 Chairman and Delegate units can be configured per system for TS-900 Series (up to 64 Chairman and Delegate units for TS-800 Series).

Wireless and easy-to-relocate features optimize system use for conferences that could require layout and participant number changes.

### ● Compact and light Chairman/Delegate units

The compact housing integrates microphone, monitor speaker, talk key and speech indicator in an attractive design. When the unit's Talk key is pressed, the Microphone indicator lights up to indicate speech acceptance mode is entered. For easier storage, the microphone is simply removed.

### ● Clear sound amplification and recording

The Chairman/Delegate units include a built-in monitor speaker to allow the speaker to be clearly heard from the seated position. For archiving purposes or for preparing conference minutes, recording equipment can be connected to the Central unit to produce highly intelligible recordings with exceptional clarity.

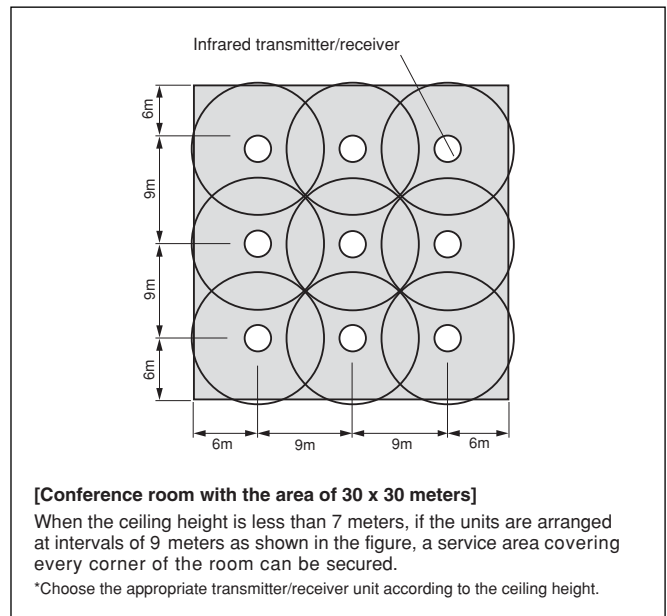
### ● Selectable power supply system

Both Chairman and Delegate units can operate on built-in rechargeable lithium-ion batteries (for approx. 10 hours) or AC power supply.

The battery charger is able to fully charge up to 8 lithium-ion batteries at a time in about 5 hours.

### ● Adjusts to increase coverage area

Up to 16 TS-905 Infrared Transmitter/Receiver units (TS907: Up to 12) can be connected to expand the area of infrared communication coverage using a distributor.



### ● System control using a customized PC or console (customized)

Customized software may be used to control the system from a PC or console to perform tasks such as recording, allowing speech mode as well as other operations.

## ■ Other features

● The Chairman unit features a priority speech key for overriding Delegate units when speaking.

● Input such as audio from a wired microphone or sound source equipment can be output and monitored from the Chairman/Delegate units' speakers.

● Two types of dedicated microphones are available for the Chairman and Delegate units: "standard" (368 mm long) and "long" (518 mm long).

● In addition to mounting on ceilings or walls, the Infrared Transmitter/Receiver unit can also be installed on a microphone stand (thread size: W 5/16).

● Outstanding features that facilitate conference management requirements

# CONFERENCE SYSTEMS FEATURES

system that  
performance.

## Features common to both TS-900 and TS-800 series

- **“Speaker restriction function” prevents interruptions**  
The number of conference units can be preset for the authorized number of speakers at a time. One, two or four persons can be allowed to talk at any one time to prevent the confusion that could result from several participants all speaking at once.
- **“Speech system selection function” sets speech**  
When Talk keys on the conference units are activated exceeding the set number of authorized speakers, microphone ON/OFF operation can be set to any of the following; first-in-first-out, last-in-first-out, or last-in-first-out after 2nd unit (the microphone stays ON for the unit whose Talk key was first pressed).
- **“Auto Mic-Off function” prevents inadvertently leaving the microphone on**  
With this function ON, the microphone will automatically switch itself off after a 30 second period of silence after the Talk key was pressed.
- **“Installation status checkup function” for at-a-glance confirmation of communicable**  
If activated on the Central unit, the microphone indicators on the Chairman/Delegate units light up. The Central unit of the TS-900 series will also indicate the number of units in the system. This allows a system check to confirm infrared communication status for all units prior to use.

## TS-900 series-dedicated features

- **“Threefold choice vote function” for instantaneous voting and counting**  
TS-900 series Chairman/Delegate units feature a Vote key for three choices to provide easy balloting by participants. The vote’s result is quickly indicated on the Central unit.
- **“Main/Sub audio function” allows bilingual conferencing**  
The TS-900 series system provides two audio signals (main and sub) as well as the conference unit’s speech voice. Chairman/Delegate units are equipped with a monitor selector to choose the main or sub audio signal.

## TS-900 Central Unit



Top View



Rear View

## TS-800 Central Unit



Top View



Rear View

# TS-900 SERIES

## TS-900 CENTRAL UNIT



### DESCRIPTION

The TS-900 is a Central unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed based on a free layout.

Connecting the TS-900 to the Transmitter/Receiver units permits control of the conference units.

It features control function from a PC (The control software is not attached.), installation confirmation function that confirms the connection status for the Transmitter/Receiver units and installation status for the conference units, and voting function that computes and displays the voting result. Since two speech outputs are provided (Main and Sub channels), it is ideal for use in simultaneous interpreting conference.

With the use of an optional rack mounting bracket, it can be mounted in an EIA Standard equipment rack (4 unit size).

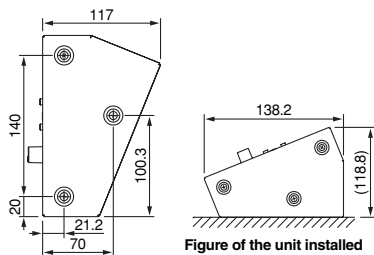
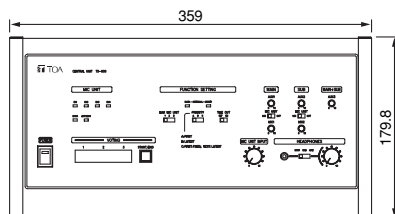
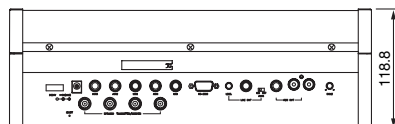


Figure of the unit installed

Unit: mm

### SPECIFICATIONS

<b>Power Source</b>	100 – 240 V AC, 50/60 Hz (supplied from AC adapter (accessory))
<b>Power Consumption</b>	72 W
<b>Input</b>	MIC 1 (Base Language): –60 dB*, 600 Ω, unbalanced, phone jack MIC 2 (Translation Language): –60 dB*, 600 Ω, unbalanced, phone jack AUX 1 (Base Language): –20 dB*, 10 kΩ, unbalanced, phone jack AUX 2 (Translation Language): –20 dB*, 10 kΩ, unbalanced, phone jack AUX 3 (Base and Translation Language): –20 dB*, 10 kΩ, unbalanced, phone jack
<b>Output</b>	LINE: –20 dB*, 10 kΩ, unbalanced, phone jack REC: –20 dB*, 10 kΩ, unbalanced, phone jack, RCA pin jack HEADPHONE: Mini jack
<b>Number of Connectable Chairman/Delegate Units</b>	96 units
<b>Number of Connectable Infrared Transmitter/Receiver Units</b>	4 units (up to 16 units by using four distributors)
<b>Infrared Transmitter/Receiver I/O Terminal</b>	4 BNC jacks
<b>External Control Terminal</b>	D-sub connector (9 P, male)
<b>LED Indicator</b>	Voting result indicators 1 – 3 (7-segment LED, double-digit number), Audio signal receiving indicators 1 – 4 CH, Data signal receiving indicator, External control priority indicator, External control communication indicator, Power indicator, Battery indicator (flashes when a Chairman/Delegate unit's battery nears complete discharge)
<b>Function Switch</b>	Simultaneous speaker No. setting switch: 1/2/4 Mic-off setting switch: TIME OUT ON/OFF Speech priority selector switch: A/B/C (A: First-in-first-out priority, B: Last-in-first-out priority, C: Fixed for the first unit, and last-in-first-out for the subsequent units)
<b>Microphone Mix/Cut Switch (for the Base Language)</b>	MIC/CUT (Mix): Chairman/Delegate units + MIC 1 + AUX 1 + AUX 3 → Base Language (Cut): MIC 1 + AUX 1 + AUX 3 → Base Language
<b>Microphone Mix/Cut Switch (for the Translation Language)</b>	MIC/CUT (Mix): Chairman/Delegate units + MIC 2 + AUX 2 + AUX 3 → Translation Language (Cut): MIC 2 + AUX 2 + AUX 3 → Translation Language
<b>AUX 3 Mixing Select Switch</b>	MIC/CUT (Mix): AUX 3 input is relayed to the line output. (Cut): AUX 3 input is not relayed to the line output.
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Panel: Surface-treated steel plate, gray metallic, paint, semi-gloss
<b>Weight</b>	2.8 kg
<b>Accessory</b>	AC adapter (Cord length: 1.8 m DC cord, and 2 m detachable AC cord)...1
<b>Option</b>	Rack mounting bracket: MB-TS900

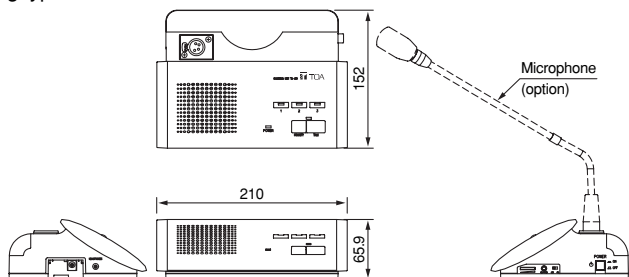
\*0 dB = 1 V

# TS-901 CHAIRMAN UNIT



## DESCRIPTION

The TS-901 is a Chairman unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed. The Chairman unit features a priority speech key which allows it to take precedence over the TS-902 Delegate units (optional) when speaking. It can be operated on either the AD-0910 AC adapter (optional) or the BP-900 lithium-ion battery (optional). It is equipped with a remaining battery indicator. Two types of dedicated microphones are made available for the TS-901 as optional products: the TS-903 standard type and the TS-904 long type.



Unit: mm

## SPECIFICATIONS

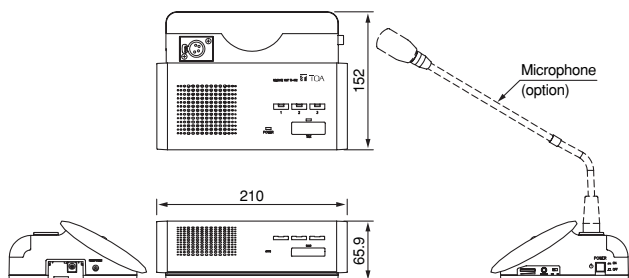
<b>Power Source</b>	7.4 V DC (battery), 9 V DC (AC adapter) (supplied from BP-900 battery (option) or AD-0910 AC adapter (option))
<b>Current Consumption</b>	Max. 270mA
<b>Input</b>	Microphone terminal: Combined type of XLR-4-31 (dedicated for connecting the optional TS-903 or TS-904)
<b>Output</b>	Monitor speaker: 8 Ω, 0.2 W Headphone: Mini jack × 2
<b>LED Indicator</b>	Speech indicator (flasher when the unit is out of communications range), Voting status indicators 1 – 3 (flashes when the unit is out of communications range or when the battery level is low), Power indicator (flashes when the unit is out of communications range or when the battery level is low)
<b>Battery Life</b>	Approx. 10 hours (when the fully-charged BP-900 battery is used with "During Speech" to "Standby" ratio of 1 : 2)
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Top panel: ABS resin, gray metallic, paint, semi-gloss
<b>Dimensions</b>	210 (W) × 65.9 (H) × 152 (D) mm
<b>Weight</b>	640 g
<b>Option</b>	Microphone: TS-903, TS-904 (Select either one.) Lithium-ion battery: BP-900 AC adapter: AD-0910
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Base language channel: 1.95 MHz Translation language channel: 2.25 MHz
<b>Acceptance Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Emission Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Covering Range</b>	7 m (radius)

# TS-902 DELEGATE UNIT



## DESCRIPTION

The TS-902 is a Delegate unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed. It can be operated on either the AD-0910 AC adapter (optional) or the BP-900 lithium-ion battery (optional). It is equipped with a remaining battery indicator. Two types of dedicated microphones are made available for the TS-902 as optional products: the TS-903 standard type and the TS-904 long type.



Unit: mm

## SPECIFICATIONS

<b>Power Source</b>	7.4 V DC (battery), 9 V DC (AC adapter) (supplied from BP-900 battery (option) or AD-0910 AC adapter (option))
<b>Current Consumption</b>	Max. 270mA
<b>Input</b>	Microphone terminal: Combined type of XLR-4-31 (dedicated for connecting the optional TS-903 or TS-904)
<b>Output</b>	Monitor speaker: 8 Ω, 0.2 W Headphone: Mini jack × 2
<b>LED Indicator</b>	Speech indicator (flasher when the unit is out of communications range), Voting status indicators 1 – 3 (flashes when the unit is out of communications range or when the battery level is low), Power indicator (flashes when the unit is out of communications range or when the battery level is low)
<b>Battery Life</b>	Approx. 10 hours (when the fully-charged BP-900 battery is used with "During Speech" to "Standby" ratio of 1 : 2)
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Top panel: ABS resin, gray metallic, paint, semi-gloss
<b>Dimensions</b>	210 (W) × 65.9 (H) × 152 (D) mm
<b>Weight</b>	640 g
<b>Option</b>	Microphone: TS-903, TS-904 (Select either one.) Lithium-ion battery: BP-900 AC adapter: AD-0910
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Base language channel: 1.95 MHz Translation language channel: 2.25 MHz
<b>Acceptance Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Emission Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Covering Range</b>	7 m (radius)

# TS-800 SERIES

## TS-800 CENTRAL UNIT



### DESCRIPTION

The TS-800 is a Central unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed based on a free layout.

Connecting the TS-800 to the Transmitter/Receiver units permits control of the conference units.

It features control function from a PC (The control software is not attached.), and installation confirmation function that confirms the connection status for the Transmitter/Receiver units and installation status for the conference units.

With the use of an optional rack mounting bracket, it can be mounted in an EIA Standard equipment rack (4 unit size).

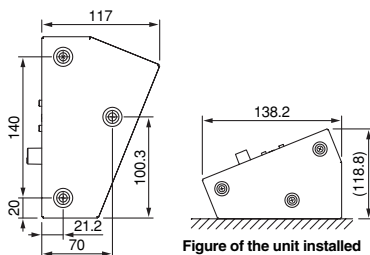
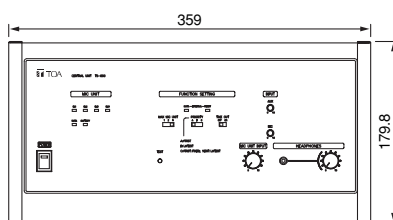
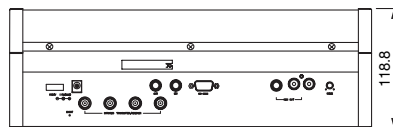


Figure of the unit installed

Unit: mm

### SPECIFICATIONS

<b>Power Source</b>	100 – 240 V AC, 50/60 Hz (supplied from AC adapter (accessory))
<b>Power Consumption</b>	72 W
<b>Input</b>	MIC: -60 dB*, 600 Ω, unbalanced, phone jack AUX: -20 dB*, 10 kΩ, unbalanced, phone jack
<b>Output</b>	REC: -20 dB*, 10 kΩ, unbalanced, phone jack, RCA pin jack HEADPHONE: Mini jack
<b>Number of Connectable Chairman/Delegate Units</b>	64 units
<b>Number of Connectable Infrared Transmitter/Receiver Units</b>	4 units (up to 16 units by using four distributors)
<b>Infrared Transmitter/Receiver I/O Terminal</b>	4 BNC jacks
<b>External Control Terminal</b>	D-sub connector (9 P, male)
<b>LED Indicator</b>	Audio signal receiving indicators 1 – 4 CH, Data signal receiving indicator, External control priority indicator, External control communication indicator, Power indicator, Battery indicator (flashes when a Chairman/Delegate unit's battery nears complete discharge)
<b>Function Switch</b>	Simultaneous speaker No. setting switch: 1/2/4 Mic-off setting switch: TIME OUT ON/OFF Speech priority selector switch: A/B/C (A: First-in-first-out priority, B: Last-in-first-out priority, C: Fixed for the first unit, and last-in-first-out for the subsequent units)
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Panel: Surface-treated steel plate, gray metallic, paint, semi-gloss
<b>Weight</b>	2.7 kg
<b>Accessory</b>	AC adapter (Cord length: 1.8 m DC cord, and 2 m detachable AC cord)...1
<b>Option</b>	Rack mounting bracket: MB-TS900

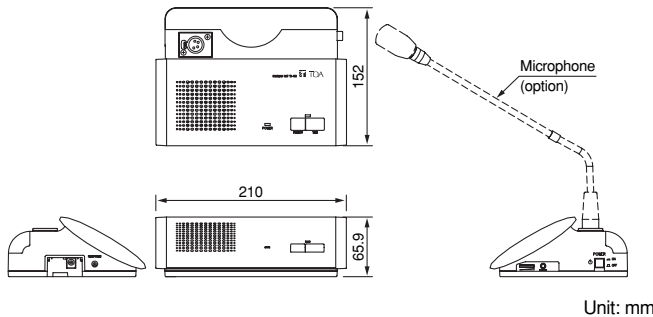
\*0 dB = 1 V

# TS-801 CHAIRMAN UNIT



## DESCRIPTION

The TS-801 is a Chairman unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed. The Chairman unit features a priority speech key which allows it to take precedence over the TS-802 Delegate units (optional) when speaking. It can be operated on either the AD-0910 AC adapter (optional) or the BP-900 lithium-ion battery (optional). It is equipped with a remaining battery indicator. Two types of dedicated microphones are made available for the TS-801 as optional products: the TS-903 standard type and the TS-904 long type.



## SPECIFICATIONS

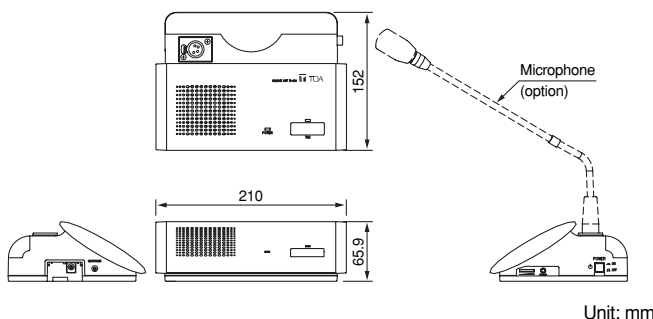
<b>Power Source</b>	7.4 V DC (battery), 9 V DC (AC adapter) (supplied from BP-900 battery (option) or AD-0910 AC adapter (option))
<b>Current Consumption</b>	Max. 270mA
<b>Input</b>	Microphone terminal: Combined type of XLR-4-31 (dedicated for connecting the optional TS-903 or TS-904)
<b>Output</b>	Monitor speaker: 8 Ω, 0.2 W Headphone: Mini jack × 2
<b>LED Indicator</b>	Speech indicator (flasher when the unit is out of communications range), Power indicator (flashes when the unit is out of communications range or when the battery level is low)
<b>Battery Life</b>	Approx. 10 hours (when the fully-charged BP-900 battery is used with "During Speech" to "Standby" ratio of 1 : 2)
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Top panel: ABS resin, gray metallic, paint, semi-matte
<b>Dimensions</b>	210 (W) × 65.9 (H) × 152 (D) mm
<b>Weight</b>	630 g
<b>Option</b>	Microphone: TS-903, TS-904 (Select either one.) Lithium-ion battery: BP-900 AC adapter: AD-0910
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Audio channel: 1.95 MHz
<b>Acceptance Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Emission Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Covering Range</b>	7 m (radius)

# TS-802 DELEGATE UNIT



## DESCRIPTION

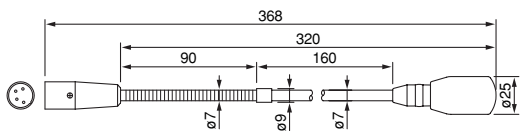
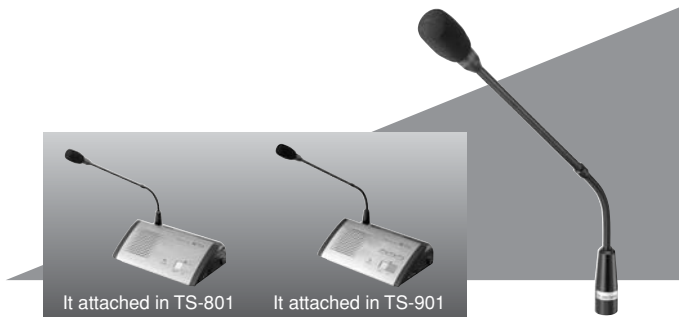
The TS-802 is a Delegate unit of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed. It can be operated on either the AD-0910 AC adapter (optional) or the BP-900 lithium-ion battery (optional). It is equipped with a remaining battery indicator. Two types of dedicated microphones are made available for the TS-802 as optional products: the TS-903 standard type and the TS-904 long type.



## SPECIFICATIONS

<b>Power Source</b>	7.4 V DC (battery), 9 V DC (AC adapter) (supplied from BP-900 battery (option) or AD-0910 AC adapter (option))
<b>Current Consumption</b>	Max. 270mA
<b>Input</b>	Microphone terminal: Combined type of XLR-4-31 (dedicated for connecting the optional TS-903 or TS-904)
<b>Output</b>	Monitor speaker: 8 Ω, 0.2 W Headphone: Mini jack × 2
<b>LED Indicator</b>	Speech indicator (flasher when the unit is out of communications range), Power indicator (flashes when the unit is out of communications range or when the battery level is low)
<b>Battery Life</b>	Approx. 10 hours (when the fully-charged BP-900 battery is used with "During Speech" to "Standby" ratio of 1 : 2)
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Top panel: ABS resin, gray metallic, paint, semi-matte
<b>Dimensions</b>	210 (W) × 65.9 (H) × 152 (D) mm
<b>Weight</b>	630 g
<b>Option</b>	Microphone: TS-903, TS-904 (Select either one.) Lithium-ion battery: BP-900 AC adapter: AD-0910
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Audio channel: 1.95 MHz
<b>Acceptance Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Emission Angle</b>	Vertical: 90°, Horizontal: 120°
<b>Covering Range</b>	7 m (radius)

# TS-903 MICROPHONE



Unit: mm

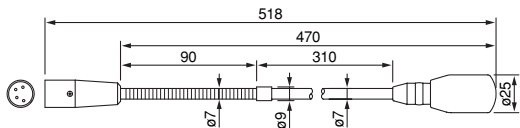
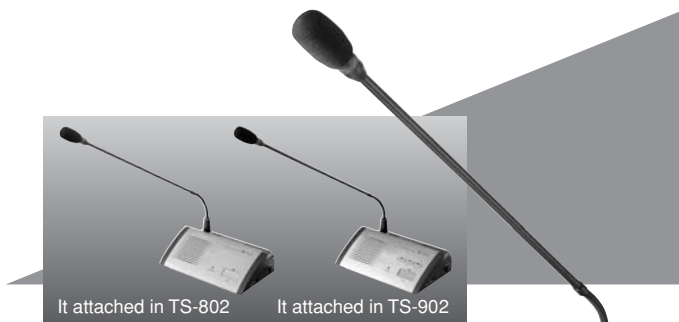
## DESCRIPTION

The TS-903 is a designed microphone for exclusive use with the conference units of the Infrared Conference system. Ring type In-Use lamp located at the microphone head permits displaying the operation status of the conference units.

## SPECIFICATIONS

<b>Type</b>	Electret condenser microphone
<b>Directivity</b>	Unidirectional
<b>Rated Impedance</b>	1.8 kΩ
<b>Rated Sensitivity</b>	-37 dB (1 kHz 0 dB = 1 V/Pa)
<b>LED Indicator</b>	Speech indicator (ring type)
<b>Frequency Response</b>	100 – 13,000 Hz
<b>Output Connector</b>	Combined type of XLR-4-32
<b>Finish</b>	Gooseneck: Stainless steel, black Other: ABS resin, black
<b>Weight</b>	90 g
<b>Applicable Unit (Option)</b>	Chairman/Delegate units: TS-801, TS-802, TS-901, TS-902

# TS-904 MICROPHONE



Unit: mm

## DESCRIPTION

The TS-904 is a designed microphone for exclusive use with the conference units of the Infrared Conference system. Ring type In-Use lamp located at the microphone head permits displaying the operation status of the conference units.

## SPECIFICATIONS

<b>Type</b>	Electret condenser microphone
<b>Directivity</b>	Unidirectional
<b>Rated Impedance</b>	1.8 kΩ
<b>Rated Sensitivity</b>	-37 dB (1 kHz 0 dB = 1 V/Pa)
<b>LED Indicator</b>	Speech indicator (ring type)
<b>Frequency Response</b>	100 – 13,000 Hz
<b>Output Connector</b>	Combined type of XLR-4-32
<b>Finish</b>	Gooseneck: Stainless steel, black Other: ABS resin, black
<b>Weight</b>	105 g
<b>Applicable Unit (Option)</b>	Chairman/Delegate units: TS-801, TS-802, TS-901, TS-902

# TS-905 INFRARED TRANSMITTER/RECEIVER

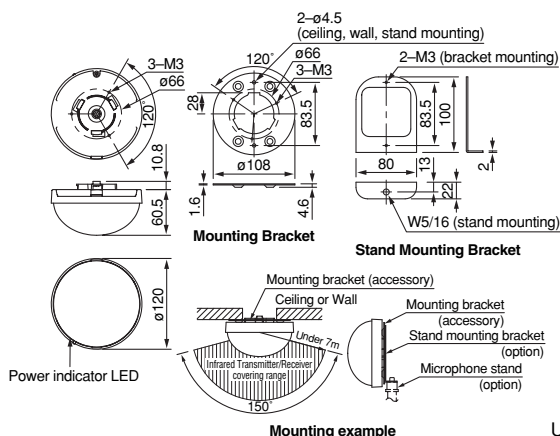


## DESCRIPTION

The TS-905 is an Infrared Transmitter/Receiver of the Infrared Conference system. Since the system is cordless, it can be easily installed and removed. Communications between the TS-905 and conference units are performed by means of infrared signals and the TS-905 permits transmit and receive with the Central unit. It can be mounted not only to the ceiling and wall but on the microphone stand.

## SPECIFICATIONS

<b>Power Source</b>	24 V DC (supplied from the optional TS-900 or TS-800)
<b>Current Consumption</b>	Max. 100 mA
<b>Connection Terminal</b>	BNC jack
<b>LED Indicator</b>	Power
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Dome: PC resin, visible light cut filter Base: ABS resin, black
<b>Dimensions</b>	ø120 × 71.3 (H) mm
<b>Weight</b>	230 g (unit only)
<b>Accessory</b>	Mounting bracket...1, Stand mounting bracket...1
<b>Option</b>	Microphone stand (The mounting thread size must be W 5/16.)
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Base language channel: 1.95MHz Translation language channel: 2.25MHz
<b>Acceptance Angle</b>	Vertical: 150° (75° + 75°), Horizontal: 360°
<b>Emission Angle</b>	Vertical: 150° (75° + 75°), Horizontal: 360°
<b>Covering Range</b>	7 m



Mounting example

Unit: mm

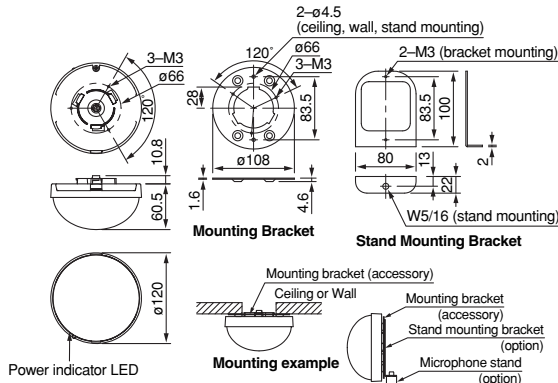


# TS-907 INFRARED TRANSMITTER/RECEIVER

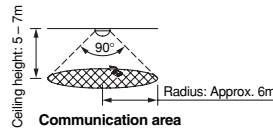


## DESCRIPTION

The TS-907 Infrared Transmitter/Receiver of the Infrared Conference system is designed for high ceiling applications. Since the system is cordless, it can be easily installed and removed. Communications between the TS-907 and conference units are performed by means of infrared signals and the TS-907 permits transmit and receive with the Central unit. It can be mounted not only to the ceiling and wall but on the microphone stand.



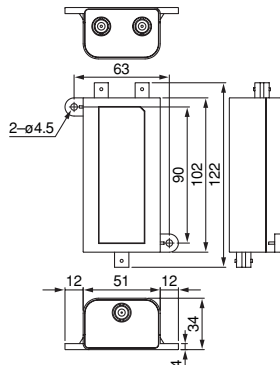
Unit: mm



## SPECIFICATIONS

<b>Power Source</b>	24 V DC (supplied from the optional TS-900 or TS-800)
<b>Current Consumption</b>	Max. 180 mA
<b>Connection Terminal</b>	BNC jack
<b>LED Indicator</b>	Power
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Dome: PC resin, visible light cut filter Base: ABS resin, black
<b>Dimensions</b>	ø120 × 71.3 (H) mm
<b>Weight</b>	230 g (unit only)
<b>Accessory</b>	Mounting bracket...1, Stand mounting bracket...1
<b>Option</b>	Microphone stand (The mounting thread size must be W 5/16 or W 5/8.)
<b>Infrared Emitter/Detector</b>	
<b>Wavelength</b>	870 nm (AM: Brightness modulation)
<b>Modulation Method</b>	Frequency modulation
<b>Carrier Frequency</b>	Transmission: Audio channel 1: 7.35 MHz Audio channel 2: 8.10 MHz Audio channel 3: 8.55 MHz Audio channel 4: 9.15 MHz Control channel: 6.45 MHz Reception: Base language channel: 1.95MHz Translation language channel: 2.25MHz
<b>Acceptance Angle</b>	Vertical: 90° (45° + 45°), Horizontal: 360°
<b>Emission Angle</b>	Vertical: 90° (45° + 45°), Horizontal: 360°
<b>Covering Area</b>	Approx. 6m in radius from the point underneath the unit (Ceiling height: 5 – 7m)

# YW-1022 DISTRIBUTOR



Unit: mm

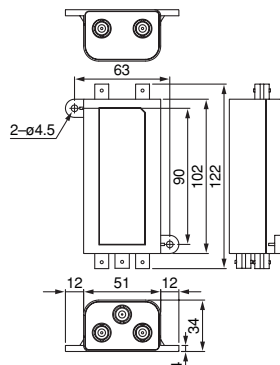
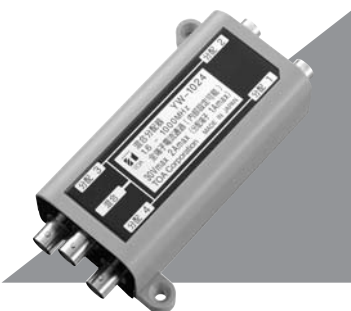
## DESCRIPTION

The YW-1022 is a distributor that can work in the frequency range of 1.6 to 1,000 MHz (except 50 to 70 MHz). Power passing type permits easy power supply.

## SPECIFICATIONS

<b>Frequency Range</b>	1.6 – 1,000 MHz (excluding 50 – 70 MHz)
<b>Distribution Loss</b>	4.5 dB ±3 dB (between the Mixing and each Distribution terminals)
<b>Input/Output Impedance</b>	75 Ω
<b>Coaxial Connector</b>	Mixing terminal: BNC jack, power passing type (under 30 V DC, under 2 A) Distribution 1 and 2 terminals: BNC jack, power passing type (under 30 V DC, under 1 A)
<b>Operating Temperature</b>	-10°C to +50°C
<b>Finish</b>	ABS resin, gray
<b>Dimensions</b>	75 (W) × 122 (H) × 34 (D) mm
<b>Weight</b>	105 g

# YW-1024 DISTRIBUTOR



Unit: mm

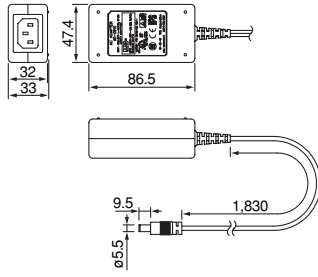
## DESCRIPTION

The YW-1024 is a distributor that can work in the frequency range of 1.6 to 1,000 MHz (except 50 to 70 MHz). Power passing type permits easy power supply.

## SPECIFICATIONS

<b>Frequency Range</b>	1.6 – 1,000 MHz (excluding 50 – 70 MHz)
<b>Distribution Loss</b>	8.5 dB ±3 dB (between the Mixing and each Distribution terminals)
<b>Input/Output Impedance</b>	75 Ω
<b>Coaxial Connector</b>	Mixing terminal: BNC jack, power passing type (under 30 V DC, under 2 A) Distribution 1 – 4 terminals: BNC jack, power passing type (under 30 V DC, under 1 A)
<b>Operating Temperature</b>	-10°C to +50°C
<b>Finish</b>	ABS resin, gray
<b>Dimensions</b>	75 (W) × 122 (H) × 34 (D) mm
<b>Weight</b>	120 g

# AD-0910 AC ADAPTER



Unit: mm

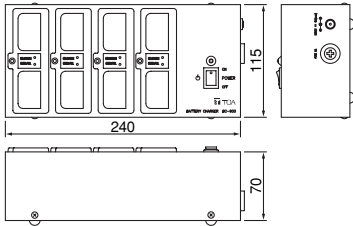
## DESCRIPTION

The AD-0910 is an AC adapter to operate the Chairman units TS-801 and TS-901, and the Delegate units TS-802 and TS-902 on AC.

## SPECIFICATIONS

<b>Power Source</b>	100 – 240 V AC, 50/60 Hz
<b>Output</b>	9 V DC, 1 A
<b>Ripple Voltage</b>	100 mV (p-p)
<b>Power Consumption</b>	400 mA AC, Input 100 V
<b>Cord Length</b>	1.8 m
<b>Plug</b>	RC6705, center "+"
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Case: PC/ABS alloy, black
<b>Weight</b>	190 g
<b>Accessory</b>	AC power cord (2 m)...1

# BC-900 BATTERY CHARGER



Unit: mm

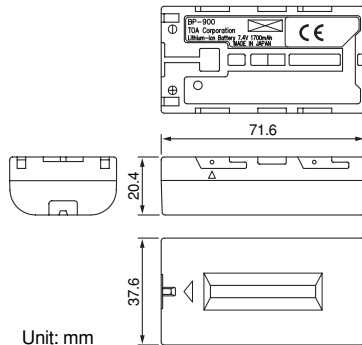
## DESCRIPTION

The BC-900 is a dedicated battery charger for the BP-900 (optional) used in the Chairman Units, and Delegate Units. It permits up to 8 batteries to be simultaneously charged within up to 5 hours.

## SPECIFICATIONS

<b>Power Source</b>	100 – 240 V AC, 50/60 Hz (supplied from AC adapter (accessory))
<b>Current Consumption</b>	Max. 5 A
<b>Charging Time</b>	Approx. 5 hours
<b>Charging Capacity</b>	8 BP-900 batteries (option)
<b>LED Indicator</b>	Charging status (Green: Full charge, Red: On charge), Power indicator
<b>Operating Temperature</b>	0°C to +40°C
<b>Finish</b>	Case: Steel, black, paint Battery receptacles: PPO resin, black
<b>Dimensions</b>	240 (W) × 70 (H) × 115 (D) mm
<b>Weight</b>	Unit: 1.1 kg, AC adapter: 520 g
<b>Accessory</b>	AC adapter (Cord length: 1.5 m DC cord, and 2 m detachable AC cord)...1

# BP-900 LITHIUM-ION BATTERY



Unit: mm

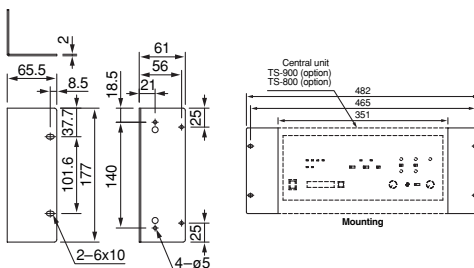
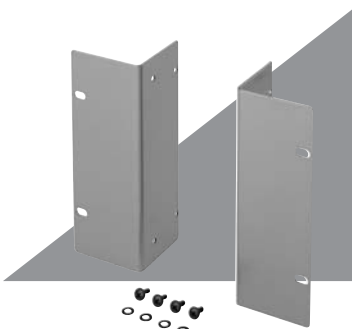
## DESCRIPTION

The BP-900 is a rechargeable lithium-ion battery designed for exclusive use with the conference units TS-801, TS-802, TS-901 and TS-902.

## SPECIFICATIONS

<b>Nominal Voltage</b>	7.4 V DC
<b>Nominal Capacity</b>	1700 mAh
<b>Operating Temperature</b>	0°C to +40°C
<b>Dimensions</b>	71.6 (W) × 20.4 (H) × 37.6 (D) mm
<b>Weight</b>	95 g
<b>Accessory</b>	Terminal protection cover (pre-installed at the factory)...1

# MB-TS900 RACK MOUNTING BRACKET



Unit: mm

## DESCRIPTION

The MB-TS900 Rack Mounting Bracket is designed for exclusive use with the Central units TS-800 and TS-900 of the TOA Infrared Conference Systems.

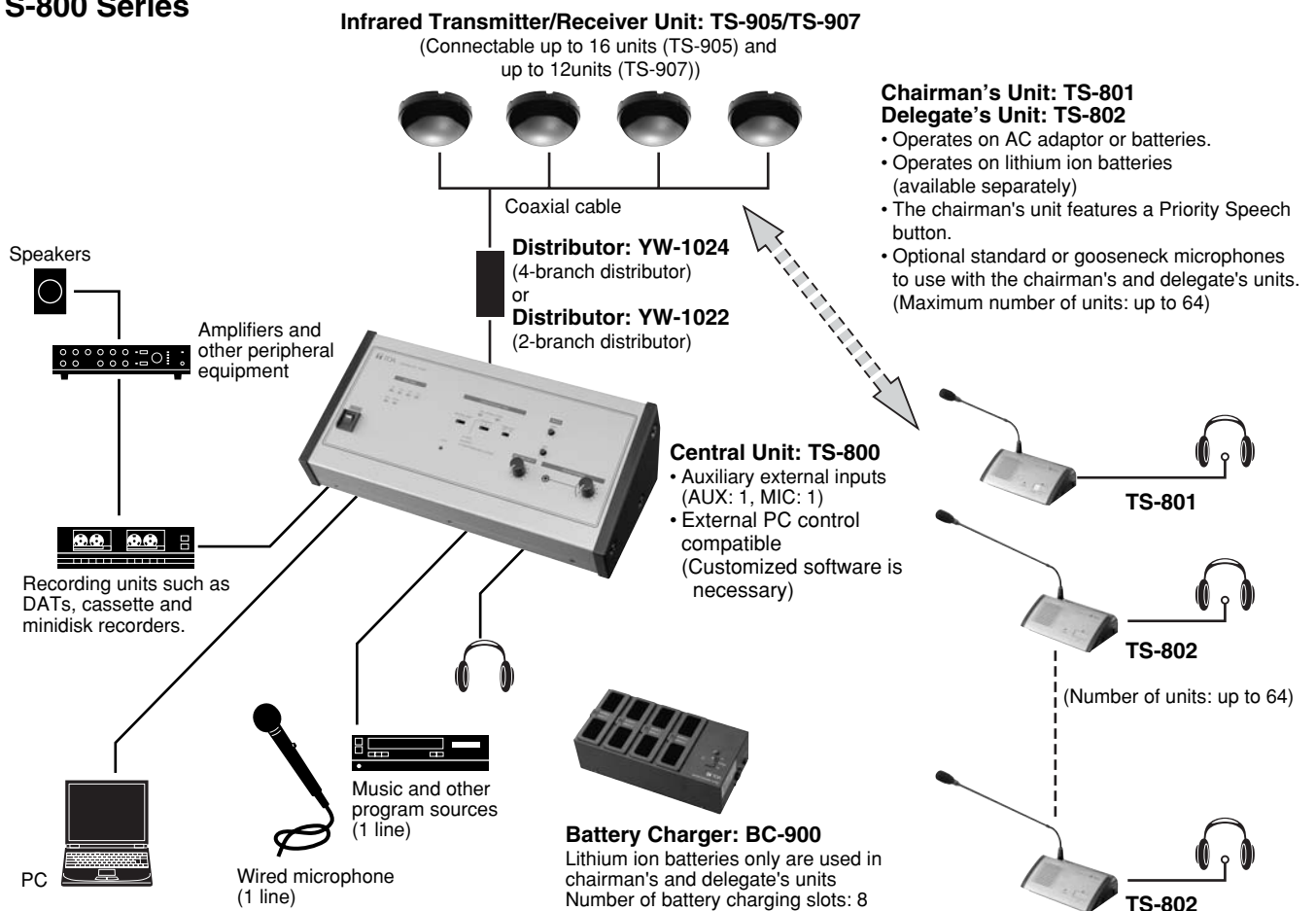
The MB-TS900 is a 4-units size that can be mounted in an EIA Standard equipment rack.

## SPECIFICATIONS

<b>Finish</b>	Surface-treated steel plate, gray metallic, paint, semi-gloss
<b>Dimensions</b>	65.5 (W) × 177 (H) × 61 (D) mm
<b>Weight</b>	680 g
<b>Accessory</b>	Rack mounting screw...4, Rack mounting washer...4

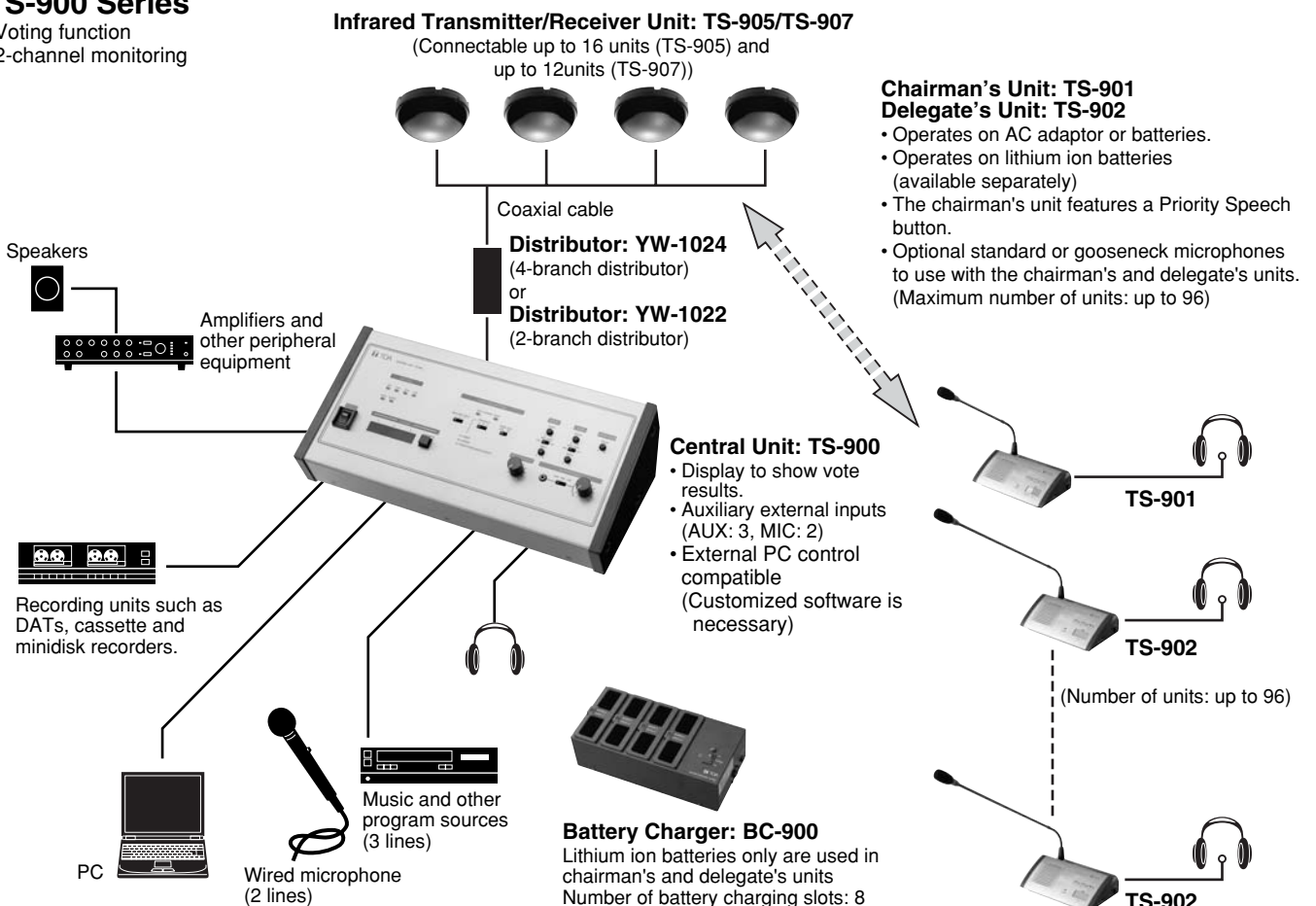
# SET EXAMPLES

## TS-800 Series



## TS-900 Series

- Voting function
- 2-channel monitoring



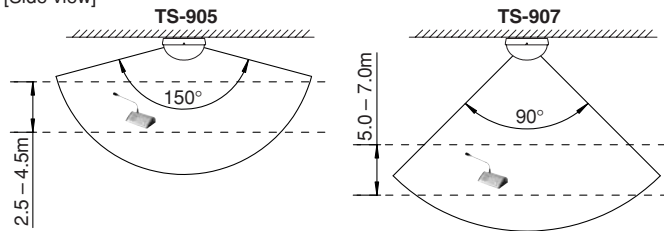
# INSTALLATION NOTES AND PRECAUTIONS

## Care should be taken to ensure the Chairman/Delegate Units are within the optimal coverage area of the Infrared Transmitter/Receiver unit.

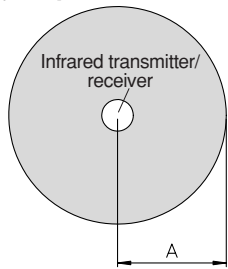
The Infrared Transmitter/Receiver unit must not be installed behind a user or any other obstacle, as infrared signals will be unable to reach it. The Infrared Transmitter/Receiver units must be installed to ensure that two or more units will always be in straight sightlines from the Chairman/Delegate units.

If only one Infrared Transmitter/Receiver unit is used for communication, reception may be interrupted if the infrared signals are blocked, either by an individual or obstacle. A minimum of two Infrared Transmitter/Receiver units is required for an installation to enable the Chairman/Delegate to always be able to communicate with them.

[Side view]



[Top view]

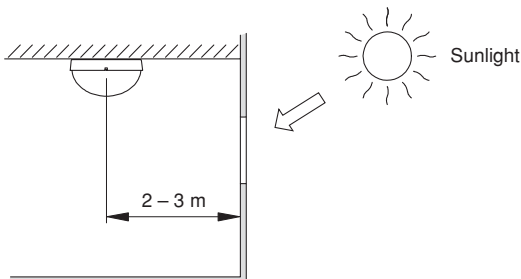


[Optimal Coverage Areas]

Model No.	Ceiling height	Radius of coverage area (A)
TS-905	2.5m	Approx. 7.0m
	3.0m	
	3.5m	Approx. 6.5m
	4.0m	
TS-907	4.5m	Approx. 6.0m
	5.0m	
	5.5m	
	6.0m	
	7.0m	

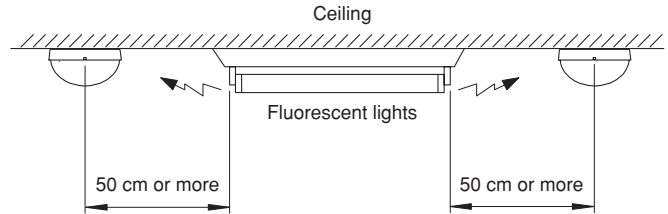
## Protect from direct sunlight

Take measures to ensure the Infrared Transmitter/Receiver units are a minimum of 2-3 meters from the nearest window to prevent the units from being exposed to direct sunlight. If used close to windows make sure that curtains or blinds are available.

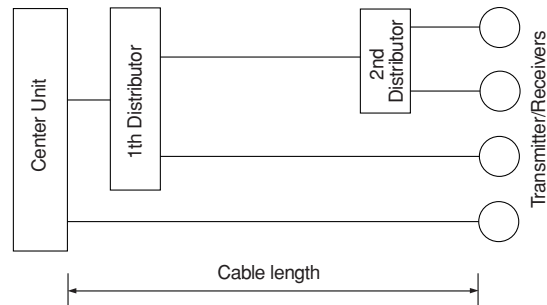


## Units need to be positioned a minimum of 50 cm away from fluorescent light sources.

Units must not be in the vicinity of other infrared light sources. These include various lighting equipment, LCD projectors, overhead projectors, Incandescent lamps, mercury arc lamps, plasma displays, remote controllers, infrared microphones, and other infrared wireless equipment such as infrared LANs and dimmers.



## To ensure signal reception levels stay the same, the cables connecting Infrared Transmitter/Receiver and Central units should have identical lengths.



\*Even when a distributor is included in the connection wiring, the lengths must stay the same.

\*It is recommended that no more than 2 distributors be used in series.