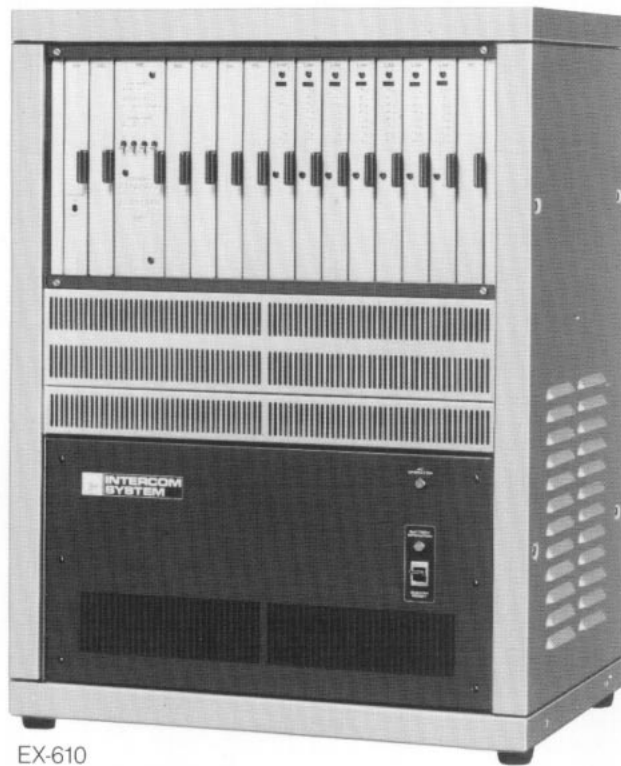


TOA INTERCOM SYSTEM

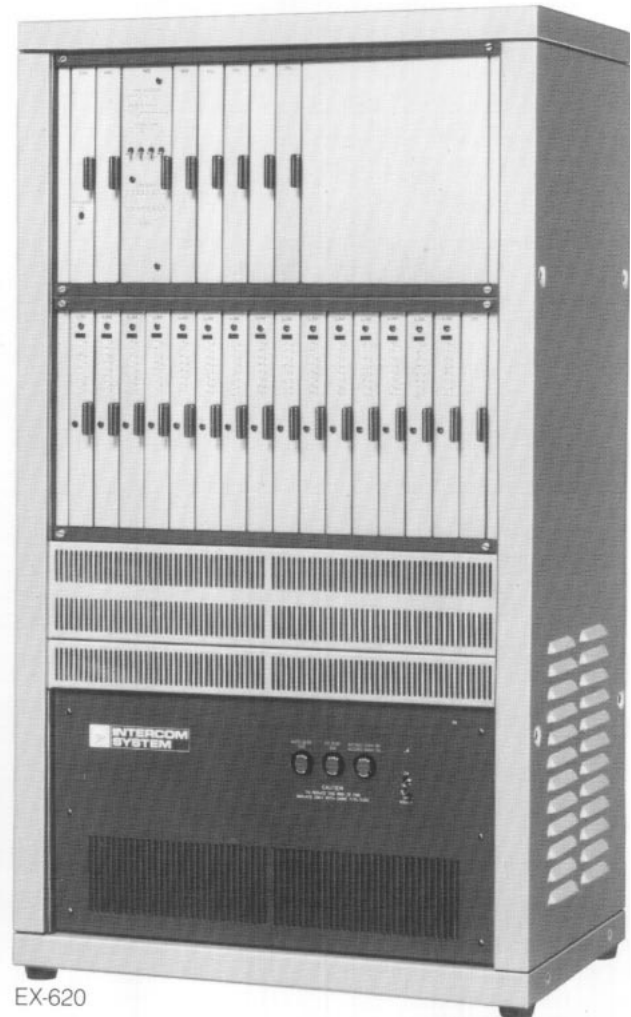
EXES-6000

System Specifications

Exchange EX-610/620 (CP-66 Version)



EX-610



EX-620

General Description

TOA Intercom system EXES-6000 is composed of central exchange EX-610/620 and stations and uses star cabling. EX-610/EX-620 are microcomputer-controlled electronic exchanges used exclusively for internal communications. Hands-free operation and full duplex operation conversation using handsets are both available. Various other functions such as Personal Number Calls, and Conference are also included. Moreover, the system can be connected with many types of external equipments, such as PA Systems, PBX, External phone line and Indication Boards. TOA's EX-610 and EX-620 exchanges have been designed to provide total integrated communications.

Features

1. Compact, light in weight and reliable, made possible by the use of totally electronic components.
2. Modular construction for easy expansion and maintenance.
3. Hands-free conversation without the use of handsets.
4. Full duplex conversation when at least one party uses the handset.
5. Maximum capacity of 128 stations and 16 links.
(When paging is employed, the maximum station capacity is 120.)
6. The TI-62 Tie-lined systems of up to 360 stations connecting 2 or 3 exchanges.
(When paging is employed, the maximum station capacity is 336.)
7. The TI-600 and extension unit creates a large system consisting of thousands of stations.
8. Capabilities of connecting to PBX and telephone lines.
9. Various functions to insure smooth internal communications.
10. Paging through the built-in station speakers and/or external PA speakers.
11. Control of General Pocket pager, Indicator boards, VTR, ITV and Door Lock with Data Transmitter (s) (DT-E11) and Receiver (s) (DR-B61).
12. Control of mobile radio-telephone with PI-62 and mobile radio-telephone interface.
13. Other Functions such as Station Numbering Schedule, Restriction of Calling and Master/Sub Relationships by using the Programming Station (No. 200).
In other words, specifications can be changed without changing wiring.

System Composition

The system is composed of three basic blocks:
(1) Exchange EX-610/620 (2) Terminal Cabinet and Connecting Cables and (3) Stations.

1. EX-616, EX620 (Exchange)

- | | |
|--|--------|
| a. Central Processing Unit | CP-66 |
| b. Output Control Unit | OC-62 |
| c. Highway Control Unit | HC-64 |
| d. Signal Generating & Distributing Unit | SG-62 |
| e. Duplex Link Unit | DL-62A |

- | | | |
|----------------------------|---|--|
| | 4 Links/Unit | |
| | 4 Units (max.)/EX-620 without CL unit | |
| | 3 Units (max.)/EX-610 without CL unit | |
| | CL-62A may be inserted instead of DL-62A | |
| f. Conference Link Unit | | CL-62A |
| | 1 Conference Link and 2 Duplex Links/Unit | |
| | DL-62A may be inserted instead of CL-62A | |
| g. Line Modem Unit | | LM-62B, LM-65 |
| | 8 Lines/Unit | |
| | 8 Units (max.)/EX-610 without PI and TI unit | |
| | 16 Units (max.)/EX-620 without PI and TI unit | |
| h. Paging Interface Unit | | PI-62* |
| | All-call + 7 Zones/Unit or 8 Zones/Unit | |
| | 2 Units (max.)/EX-610/620 without TI unit | |
| | 1 Unit (max.)/EX-610/620 with TI unit | |
| i. Tie-Line Interface Unit | | TI-62* |
| | 8 Tie-Line Links/Unit | |
| j. SM-600 Interface Unit | | SI-62* |
| k. Blank Panel | | BK-62 |
| l. Exchange Cabinet Rack | | CR-610 (for EX-610)
CR-620 (for EX-620)
FR-610A (for EX-610)
FR-620A (for EX-620)
DS-610 (for EX-610)
DS-620 (for EX-620) |
| m. Exchange Frame | | |
| n. Power Supply Unit | | |

Note: Units marked * are optional units.

2. Terminal Cabinet and Connecting Cables

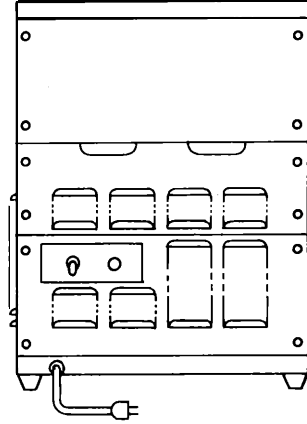
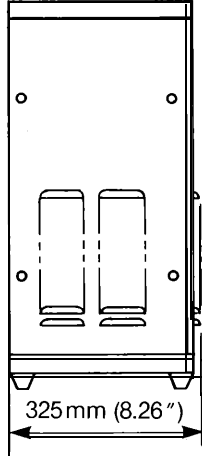
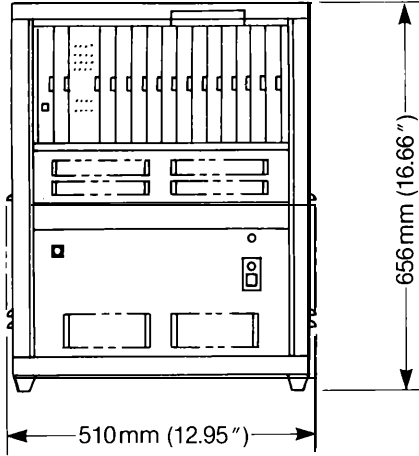
- | | | |
|---|--|--------|
| a. Terminal Cabinet | | BX-620 |
| | For 128 2-wire stations, 16 zones PA paging and 8 Tie-line Links | |
| b. Terminal Cabinet | | BX-610 |
| | For 64 2-wire stations, 16 zones PA paging and 8 Tie-line Links | |
| c. Junction Cable | | YR-810 |
| | For 2-wire stations | |
| d. Junction Cable | | YR-801 |
| | For PI-62 and/or TI-62 | |
| e. Terminal Block with connecting cable | | BOX-08 |
| | For stations, PI-62 and TI-62 | |

3. stations

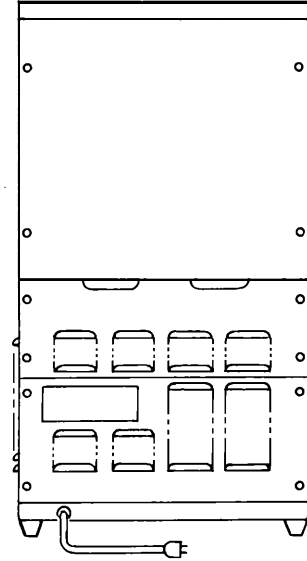
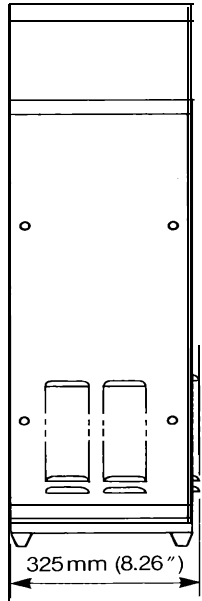
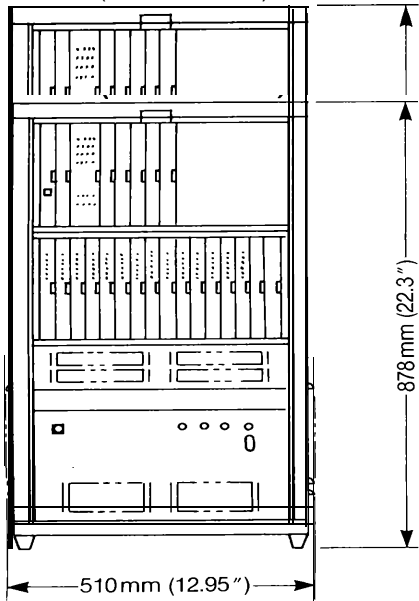
- | | | |
|-------------|--|---|
| a. TL-600M | | Desk/Surface-mounted Handset Operated Master Station |
| b. TL-600S | | Desk/Surface-mounted Handset Operated Sub-Station |
| c. TL-610M | | Desk-Top Type Handset Operated Master Station |
| d. TL-620M | | Surface-Mounted Handset Operated Master Station |
| e. HF-660M | | Desk/Surface-mounted Handsfree/Handset Master Station |
| f. AK-024 | | Auto-Dialer Key Unit |
| g. HF-200M | | Desk/Surface-mounted Handsfree/handset Master Station |
| h. HF-200MB | | Desk/Surface-mounted Handsfree/handset Master Station |
| i. HF-210M | | Desk/Surface-mounted Handsfree Master Station |
| j. HF-210MB | | Desk/Surface-mounted Handsfree Master Station |
| k. HF-640S | | Door Station |

Dimensional Diagram

EX-610 (CP-66 Version)



EX-620 (CP-66 Version)



- I. HF-650M
Industrial-use Handsfree Master Station

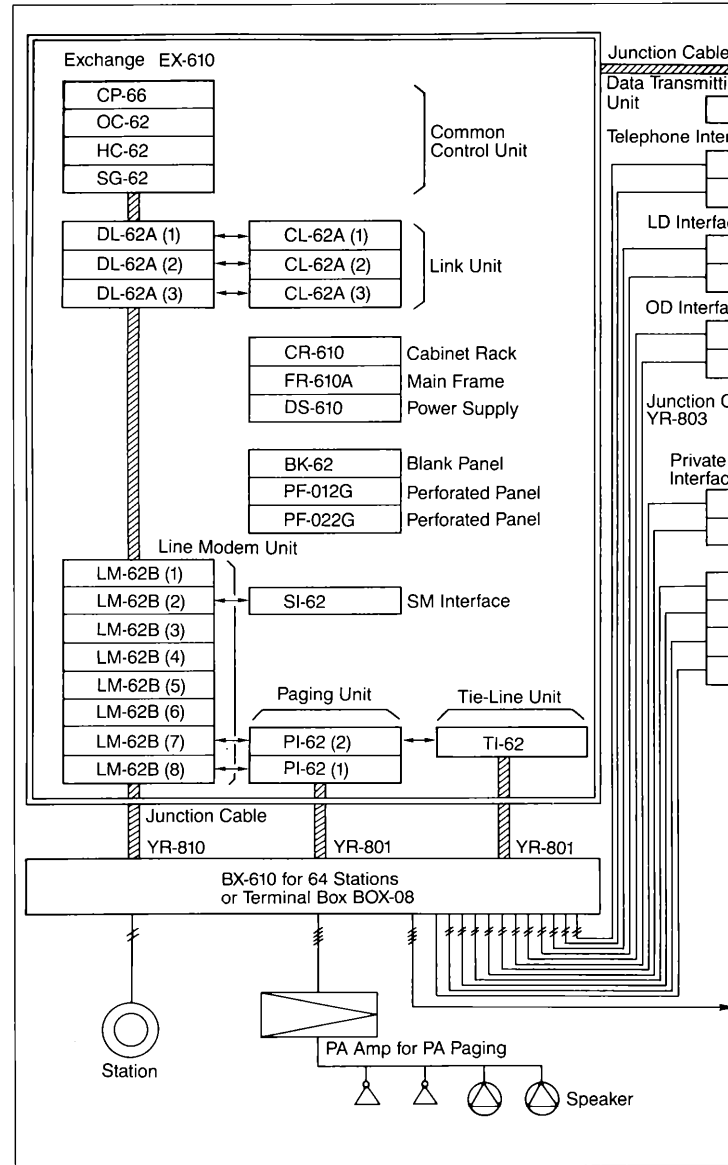
4. Associated Equipment

- a. YC-601
Surface-mounted Station Jack
- b. YC-603
Flush-mounted Station Jack
- c. YC230M
Flush-mounting Master Station Kit for HF-200M/HF-200MB
- d. YC230S
Flush-mounting Sub-Station Kit for HF-200M/HF-200MB
- e. YC240M
Flush-mounting Master Station Kit for HF-210M/HF-210MB
- f. YC240S
Flush-mounting Sub-Station Kit for HF-210M/HF-210MB
- g. YC-231
Flush-mounted Type Back Box for YC-230M/YC-230S
- g. YC-241
Flush-mounted Type Back Box for YC-240M/YC-240S
- h. YC-200
Substation Panel for HF-200M/HF-210M
- h. YC200B
Substation Panel for HF-200MB/HF-210MB
- i. YS-13
Surface-mounted Type Back Box for HF-640S & CU-62
- j. PAM-05
5W-Booster Amplifier for HF-650M
- k. DS-100
DC Power Supply Unit for PAM-05/HF-650M & CU-62
- l. YC-024
Surface-mounted Bracket for HF-660M
- n. TK-12
Talk Back Unit
- o. CU-62
Call Alert Relay Unit

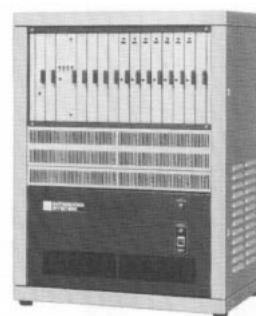
5. Multi-Purpose Data Transmitting/Receiving Unit, External Telephone Line & PBX Interface, and its Connecting Cable

- a. DT-E60
Multi-Purpose Data Transmission Unit
- b. DR-B61
Multi-Purpose Data receiving Unit
- c. CB-600
External Telephone Line Interface
- d. LD-600
2 Wire PBX Interface
- e. OD-600
4 Wire PBX Interface
- f. TI-600
4 Wire Private Line Interface
- g. TI-20A
2 Lines Extension Unit for TI-600
- g. SM-600
Speech Message Unit
- h. YR-802
Connecting Cable between Exchange and External Interface (cable length: 400 mm)
- i. YR-806
Connecting Cable between Exchange and External Interface (cable length: 1000 mm)
- j. YR-803
Connecting Cable for Extension of Interface Unit
- k. YR-807
Connecting Cable for Extension of Interface Unit

Composition of System and Exchange
EXCHANGE EX-610 (CP-66 Version)

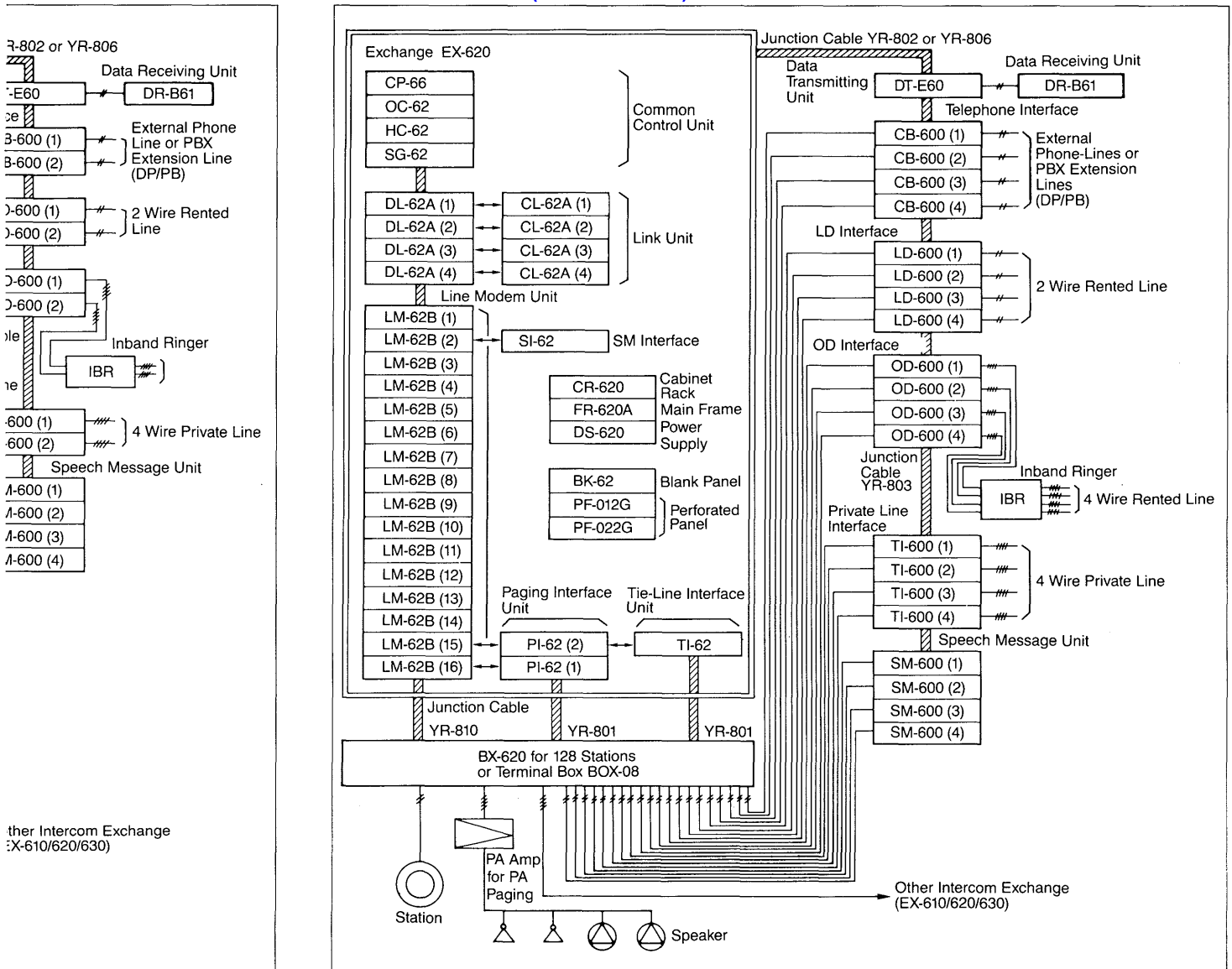


- Note:
- 1) shows EX-610. Required number of stations (s) are changeable according to stations, links and optional functions.
 - 2) shows either A or B.
 - 3) shows Toa standard cable.
 - 4) shows one-pair cable.
 - 5) shows two-pair cable.
 - 6) LM-65 with BGM function may be inserted instead of LM-62B.



Exchange EX-610 (CP-66 Version)

EXCHANGE EX-620 (CP-66 Version)



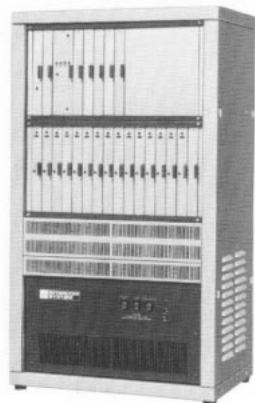
Other Intercom Exchange
EX-610/620/630

Other Intercom Exchange
(EX-610/620/630)

Number of Plug-in units
the number of
stations

Is adaptable

of LM-62B



Exchange EX-620 (CP-66 Version)

Note:

- 1) shows EX 620 Required numbers of Plug-in unit (s) are changeable according to the number of stations, links and optional functions
- 2) shows either A or B is adaptable
- 3) shows To a standard cable
- 4) shows one-pair cable
- 5) shows two pair cable
- 6) LM-65 with BGM function may be inserted instead of LM-62B

Specifications

Type Control	PAM Time Sharing System Stored Program Control System	Minimum Input Signal Level	- 17dBm
Calling Type	Signal Tone Calling or Voice calling Hands-free Calling (one calling tone) or Confidential Calling (Continuous calling tone)	Maximum Output Signal Level	+ 30dBm
Speech Method	Hands-free conversation and or Handset conversation	Input and Output Transmission Band	Base Band; 200 Hz ~ 5 kHz FM Carrier. Band; 15kHz ~ 35kHz
Dialing Code	Amplitude Modulated Pulse Number Code	Noise Level	-40dBm or less
Line Capacity	128 (64) without Paging function 120 (56) All-Call paging + 7 zones paging/without paging, Tie-line connection 112 (48) All-Call paging + 15 zones paging/All-Call paging + 7 zones paging, Tie-line connection (); EX-610 (Expandable in 8-line steps)	Crosstalk	-70dB or less (1.5 kHz)
Speech Link Capacity	16 (12) links without Conference Link availability decreases in 2 link-unit per conference Expandable in 4 line units (); EX-610	Speech Gain	+30dB ±3dB (1kHz)
Conference Link Capacity	4 (3) (); EX-610	Subscriber Insulation Resistance	3 Megohms or more
Number Scheduling	No. 200 ~ No. 999 (Standard) Note: Refer to "Function Specifications for CP-66" for non-standard Number Scheduling.	Battery for data storage (equipped on CP Unit)	
Personal Number Scheduling	No. 1000 ~ No. 1999	*Type	Ni-Cd Button Battery GB50-3FAI
Service Signal Tones	8 tones: Calling Tone, Busy Tone, Dial Tone, Priority Tone, Privacy Tone, Holding Tone/Confirmation Tone, Zone Paging Pre-Announce Tone and All-Call Paging Pre-Announce Tone	*Voltage	3.6V
Wiring	Non-polar two wire system Loop Resistance: 300 ohms or less Impedance: 600 ohms, balanced Cable length: max. 1.0 km (0.4 mm dia) max. 2.5 km (0.65 mm dia) max. 3.5 km (0.9 mm dia)	*Capacity	50mAh
Voice Transmission System	Base Band Signal Transmission (From Exchange to Station) Frequency Division Multiplex Transmission by FM Signal (From Station to Exchange)	*Period of Battery Charge	approx. 8 days (perfectly discharged)
		*Data Holding Period	approx. 1 month (25°C/77°F) approx. 8 days (40°C/104°F) approx. 4 years (25°C/77°F)
		*Expected Life	approx. 4 years (25°C/77°F)
		Power Source (DS-610/620)	AC Mains (110, 120, 220, 240V) ± 10% 50/60Hz 24VDC
		Rated Power Consumption	EX-610 130W (No link occupied) 300W (Max.) EX-620 210W (No link occupied) 500W (Max.)
		Battery for AC power-off operation (Option)	
		*Type	Sealed type Ni-Cd battery NDC-2435
		*Voltage	24V
		*Capacity	3500mAh
		*Charge System	Trickle Charging, approx. 1140CA (20°C/68°F)
		*Power-off Operation Time	EX-610: Approx. 2 hrs. (2 x NDC-2435 necessary per system) EX-620: Approx. 1.5 hrs. (3 x NDC-2435 necessary per system)
		Ambient Temperature Range	0° ~ 40°C (32°F ~ 104°F)
		Dimensions	EX-620: 510(W) x 878(H) x 325(D)mm (20.08" x 34.57" x 12.80") EX-610: 510(W) x 656(H) x 325(D)mm (20.08" x 25.83" x 12.80")
		Weight	EX-620: 57kg (125.63 lbs.) without battery EX-610: 45kg (99.2 lbs.) without battery

Specifications are subject to change without notice.

Refer to "Function Specifications for CP-66" for functions and system composition.



TOA Corporation

Printed in Japan (305H)
833-63-1111-0A