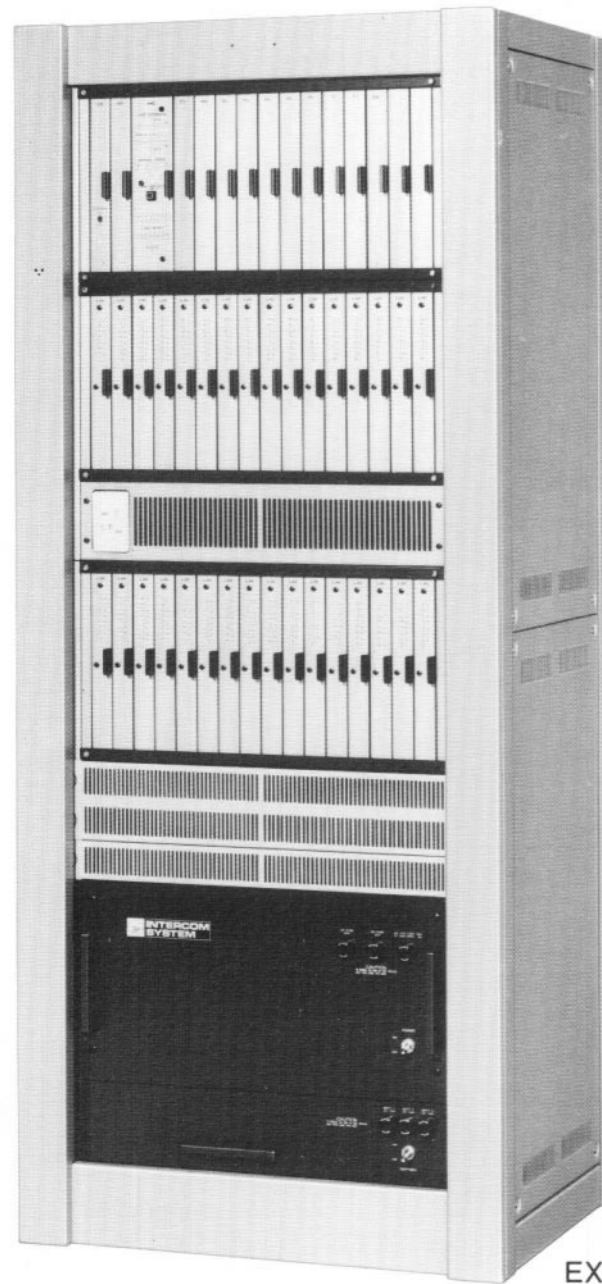


2-WIRE INTERCOM SYSTEM

EXES-6000

System Specifications
Exchange EX-630



EX-630

EXES-6000

General Description

TOA Intercom system EXES-6000 is composed of central exchange and stations and uses star cabling. The EX-630 is a microcomputer-controlled electronic exchange used exclusively for internal communications.

Hands-free operation and full duplex conversation made 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 and Indication Boards.

TOA Intercom system EXES-6000 has 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 256 stations and 16 links.
6. Tie-lined systems of up to 768 stations connecting 2 or 3 exchanges.
7. Various functions to insure smooth internal communications.
8. Paging through the built-in station speakers and/or external PA speakers.
9. Control of General Pocket Pager, Indicator Boards, VTR, ITV and Door Lock with Data Transmitter (s) (DT-E11, DT-E11G, DT-E60) and Receiver (s) (DR-B61).
10. Control of mobile radio-telephone with PI-62 and mobile radio-telephone interface.
11. 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.

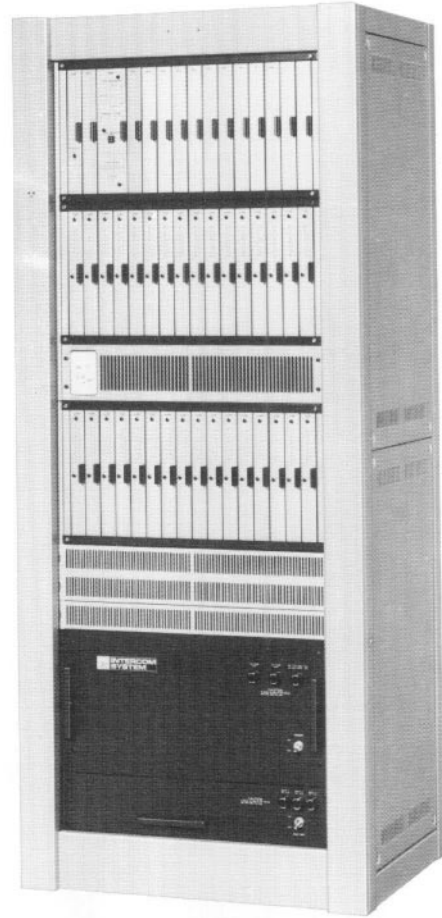
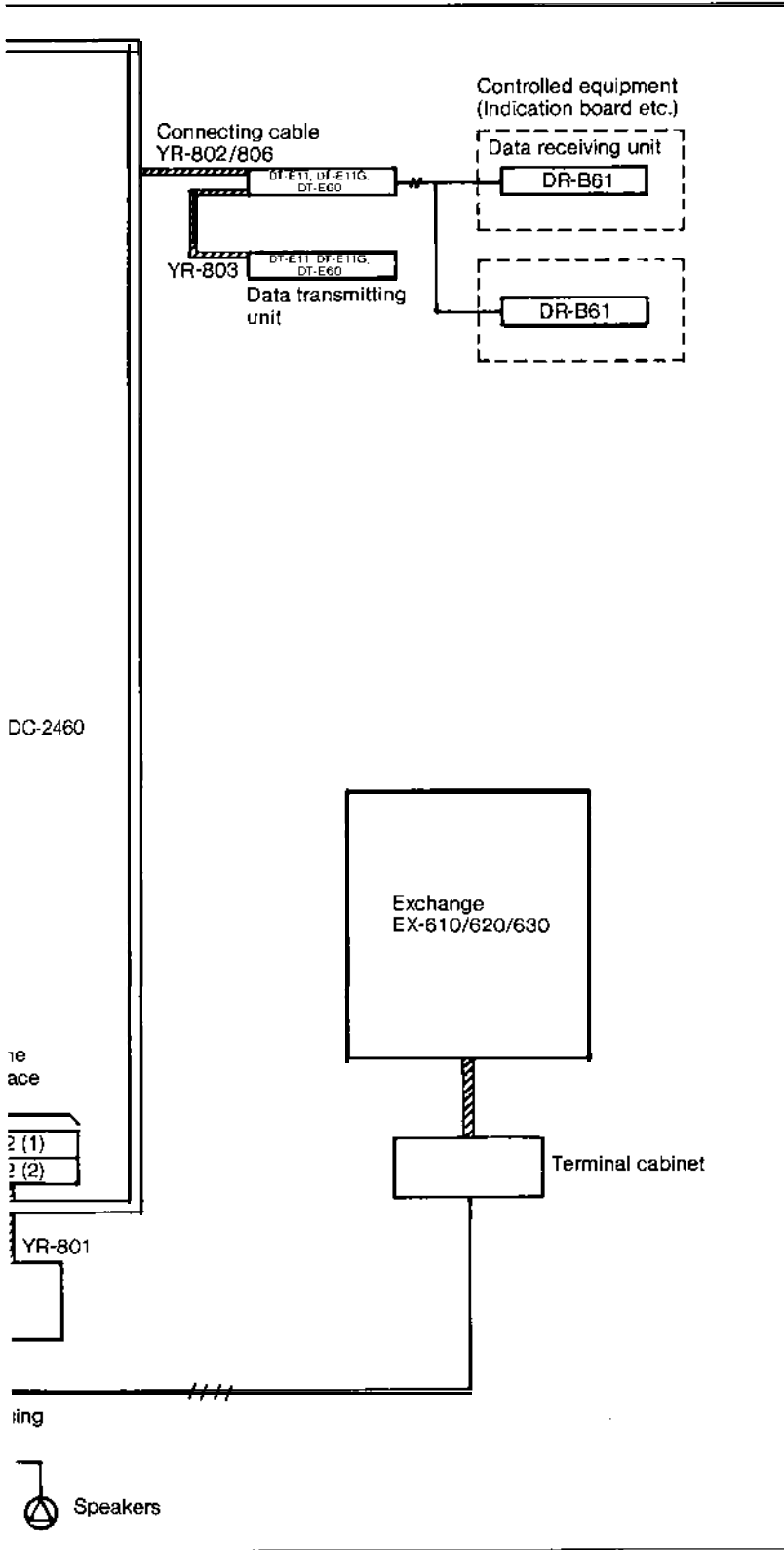
System Composition

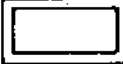
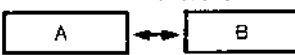
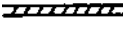
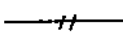
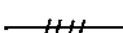
The system is composed of three basic blocks:

(1) Exchange EX-630 (2) Terminal Cabinet and Connecting Cables and (3) Stations.

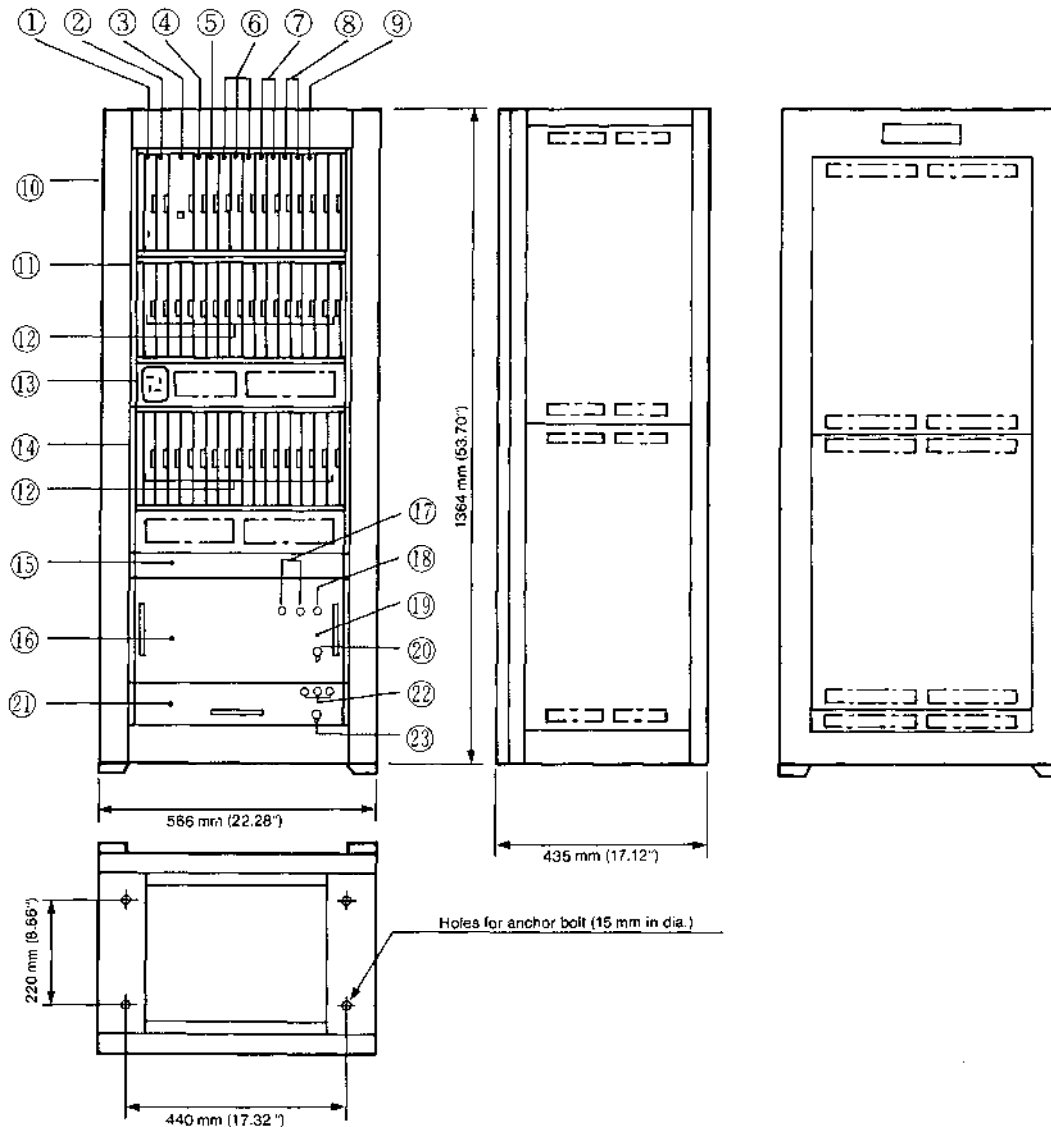
- | | |
|--|--------|
| 1. EX-630 (Exchange) | |
| a. Central Processing Unit | CP-64 |
| b. Output Control Unit | OC-62 |
| c. Highway Control Unit | HC-64 |
| d. Signal Generating & Distributing Unit | SG-62 |
| e. Duplex Link Unit | DL-62A |

- | | |
|--|---|
| | 4 Links/Unit |
| 4 Units without CL-62A unit
3 Units with CL-62A unit | |
| f. Conference Link Unit | CL-62A* |
| 1 Conference Link and 2 Duplex Links/Unit | |
| g. Line Modem Unit | LM-62A |
| 8 Lines/Unit
32 Units max. | |
| h. Paging Interface Unit | PI-62* |
| All-call + 7 Zones/Unit or 8 Zones/Unit
4 Units max. without TI-62 unit
2 Units max. with TI-62 unit | |
| i. Tie-Line Interface Unit | TI-62* |
| 8 Tie-Line Links/Unit | |
| j. Blank Panel | BK-62 |
| k. Exchange Cabinet Rack | CR-271 |
| l. Main Frame | FR-630 (for up to 128 stations)
FR-631 (for additional 128 stations) |
| m. Extension Frame | FR-631 (for additional 128 stations)
DS-630 |
| n. Power Supply Unit | DS-630 |
| o. Battery Case for NDC-2460 | BC-630* |
| p. Station Paging Assignment Unit | SA-64 |
| q. Ni-Cd, Battery | NDC-2460* |
| Note: Unit marked * are optional units. | |
| 2. Terminal Cabinet and Connecting Cables | |
| a. Terminal Cabinet | BX-620 |
| For 128 2-wire stations, All-call + 15 Zones (or 16 zones) PA paging and 8 Tie-line Links | |
| b. Terminal Cabinet | BX-610 |
| For 64 2-wire stations, All-call + 15 Zones (or 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 Master Station | |
| b. TL-600S | |
| Desk/Surface-Mounted Substation | |
| c. TL-610M | |
| Desk-Top Type Master Station | |
| d. TL-620M | |
| Surface-Mounted Master Station | |
| e. HF-660M | |
| Desk/Surface-Mounted Master Station | |
| f. AK-024 | |
| Auto-Dialer Key Unit | |
| g. HF-600M | |
| Desk-Top Type Master Station | |
| h. HF-600S | |
| Desk-Top Type Substation | |
| i. HF-610M | |
| Flush-Mounted Master Station | |
| j. HF-610S | |
| Flush-Mounted Substation | |
| k. HF-620M | |



- Note:
- 1)  shows EX-630 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 Toa standard cable
 - 4)  shows one-pair cable
 - 5)  shows two-pair cable
 - 6) It is possible to tie-line between the EX-630 and the other exchanges EX-610/620 which are employing the CP-63.

Appearance and Dimensional Diagram



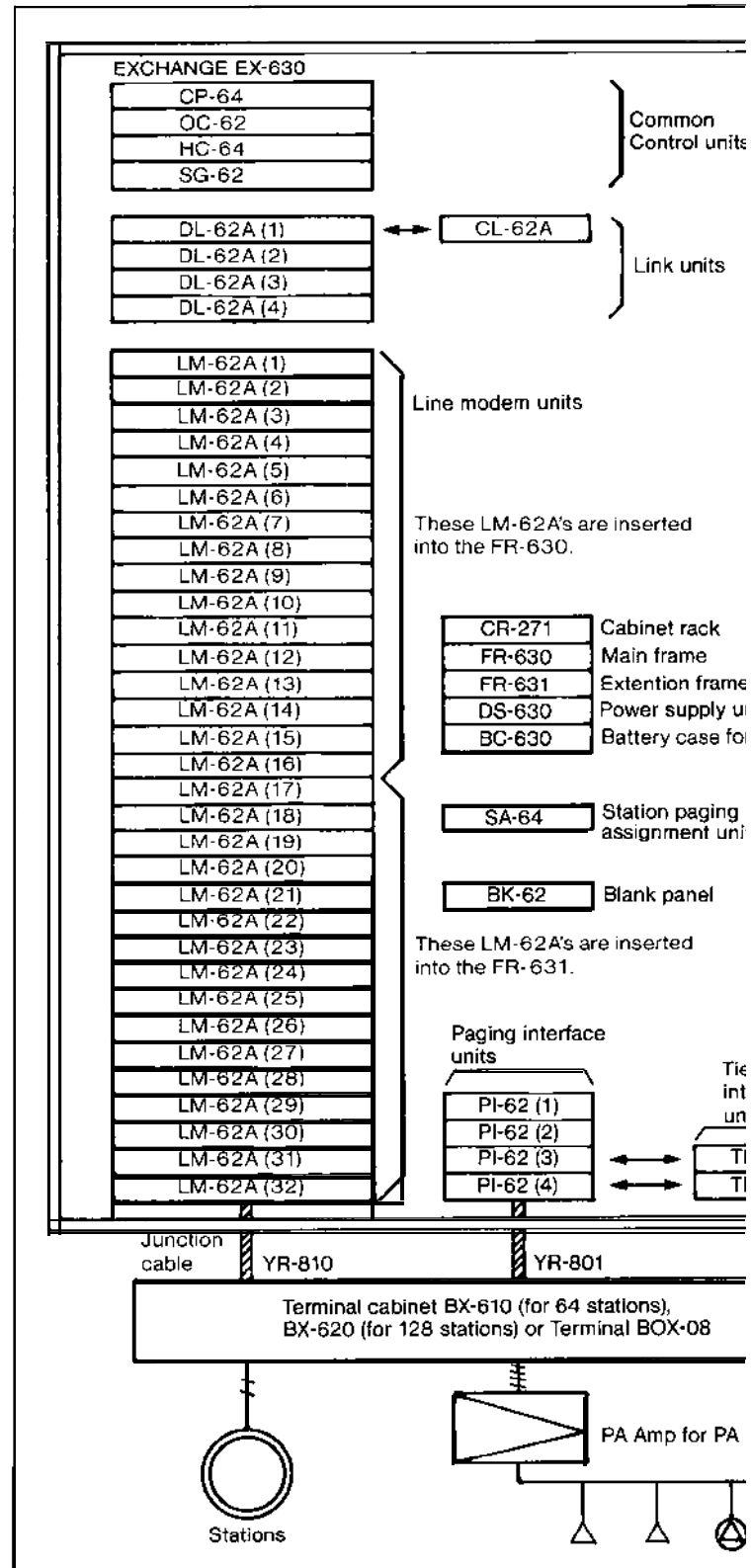
Note: Figure shows an example of the system with Conference, Tie-line, Paging and Data Transmitting functions.

- | | |
|---|--|
| 1 Central Processing Unit CP-64 | 14 Extension Frame FR-631 |
| 2 Output Control Unit OC-62 | 15 Data Transmitting Unit DT (When this unit is not used, mount Perforated Panel PF-012G in this place.) |
| 3 Highway Control Unit HC-64 | 16 Power Supply Unit DS-630 |
| 4 Signal Generating and Distributing Unit SG-62 | 17 DC Fuse 20A x 2 (129-256 stations) |
| 5 Conference Link Unit CL-62A (In this location, DL-62A is also mountable) | 18 AC Fuse 10A (110/120V), 5A (220/240V) |
| 6 Duplex Link Unit DL-62A | 19 Power Indication LED lamp (green for AC operation, red for battery operation) |
| 7 Paging Interface Unit PI-62 (Type 1 in the left position, type 2 in the right position) | 20 Power Switch |
| 8 Tie-line Interface Unit TI-62 (In this location, PI-62's are also mountable. Type 3 in the left position, type 4 in the right position) | 21 Battery Case BC-630 (When this unit is not used, mount the Perforated Panel PF-022G in this place.) |
| 9 Station Paging Assignment Unit SA-64 | 22 Battery Fuse 10A x 3 |
| 10 Cabinet Rack CR-271 | 23 Battery Power Switch |
| 11 Main Frame FR-630 | |
| 12 Line Modem Unit LM-62A | |
| 13 Jack for Programming Station | |

Note: PF-012G and PF-022G are standard accessories of the DS-630.

- Desk/Surface-Mounted Master Station
- l. HF-620S Desk/Surface-Mounted Substation
- m. HF-630M Flush-Mounted Master Station
- n. HF-630S Flush-Mounted Substation
- o. HF-631M Flush-Mounted Master Station
- p. HF-631S Flush-Mounted Substation
- q. HF-640S Door Station
- r. HF-650M Surface-Mounted Master Station
- 4. Associated Equipment
 - a. YC-601 Surface-Mounted Station Jack
 - b. YC-603 Flush-Mounted Station Jack
 - c. YC-100 Wall mounting bracket for HF-620M/S
 - d. YC-510A Flush-Mounted type Back Box for HF-610M/S
 - e. YC-120 Flush-Mounted type Back Box for HF-630M/S & HF-631M/S
 - f. YC-121 Surface-Mounted type Back Box for HF-630M/S & HF-631 M/S
 - g. YC-150 Flush-Mounted type Back Box for HF-640S & CU-62
 - h. YC-150E Flush-Mounted type Back Box for HF-640S & CU-62
 - i. YS-13 Surface-Mounted type Back Box for HF-640S & CU-62
 - j. PAM-05 Booster Amplifier (5W) 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
 - m. TK-12 Talk Back Unit
 - n. CU-62 Call Alert Relay Unit
- 5. Multi-Purpose Data Transmitting/Receiving Unit and its Connecting Cable
 - a. DT-E11, DT-E11G, DT-E60 Multi-Purpose Data Transmitting Unit
 - b. DR-B61 Multi-Purpose Data Receiving Unit
 - c. YR-802 Connecting Cable between Exchange and DT (cable length: 400 mm)
 - d. YR-806 Connecting Cable between Exchange and DT (cable length: 1000 mm)
 - e. YR-803 Connecting Cable between DT and DT

Composition of System and Exchange



Specifications

Type Control Calling Type	PAM Time Sharing System Stored Program Control System Signal Tone Calling or Voice calling Hands-free Calling (one calling tone) or Confidential calling (Continuous calling tone)	Maximum Output Signal Level	+ 30 dBm
Speech Method	Hands-free conversation and or Handset conversation	Input and Output	Base Band; 200 Hz ~ 5 kHz
Dialing Code	Amplitude Modulated Pulse Number Code	Transmission Band	FM Carrier Band; 15 kHz ~ 35 kHz
Line Capacity	256 (Expandable in 8-line steps)	Noise Level	- 40 dBm or less
Link Capacity	16 links without Conference 14 links +1 Conference link with Conference (Expandable in 4-link steps)	Crosstalk	- 60 dB or less (1.5 kHz)
Number Scheduling	No. 200 ~ No. 455 (Standard) Note: refer to "Function Specifications for CP-64" for non-standard Number Scheduling	Speech Gain	+ 30 dB \pm 3 dB (1kHz)
Personal Number Scheduling	No. 1000 ~ 1999	Subscriber Insulation Resistance	3 Megohms or more
Service Signal Tones	8 tones: Calling Tone, Busy Tone, Dial Tone, Priority Tone, Privacy Tone, Holding Tone/Confirmation Tone, Zone Paging Pre-Announcement Tone and All-Call Paging Pre-Announcement Tone	Battery for data storage (equipped on CP Unit)	Ni-Cd Button Battery GB50-3FA1
Wiring	Non-polar two wire system Loop Resistance: 300ohms 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)	*Type	3.6V
Voice Transmission System	Base Band Signal Transmission (From Exchange to Station) Frequency Division Multiplex Transmission by FM Signal (From Station to Exchange)	*Voltage	50 mAh
Minimum Input Signal Level	-27 dBm	*Capacity	approx. 8 days (perfectly discharged)
		*Period of Battery Charge	approx. 1 month (25°C/77°F)
		*Data Holding Period	approx. 8 days (40°C/104°F)
		*Expected Life	approx. 5 years (25°C/77°F)
		Power Source	AC Mains (110, 120, 220, 240V)
		(DS-630)	\pm 10% 50/60 Hz
		Rated Power	24VDC
		Consumption	410 W (No link occupied)
		Battery for AC power-off operation (Option)	1kW (max.)
		*Type	Battery for AC power-off operation (Option)
		*Voltage	Sealed type Ni-Cd battery NDC-2460
		*Capacity	24V
		*Charge System	6Ah
		*Power-off Operation Time	Trickle Charging, approx. 1/80CA (20°C/68°F)
		Ambient Temperature Range	Approx. 1.5 hrs. (3 X NDC-2460 necessary per system)
		Dimensions	0° ~ 40°C (32° ~ 104°F)
		Weight	566(W) X 1364(H) X 435(D) mm (22.28" X 53.70" X 17.12")
		Color	109 kg (240.30 lbs.) without battery
			Cabinet: Light Beige. Leather Tone
			Panel: Metallic Gold
			Power Supply Unit: Dark Brown

Specifications are subject to change without notice.

Refer to "Function Specifications for CP-64" for functions and system composition.



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