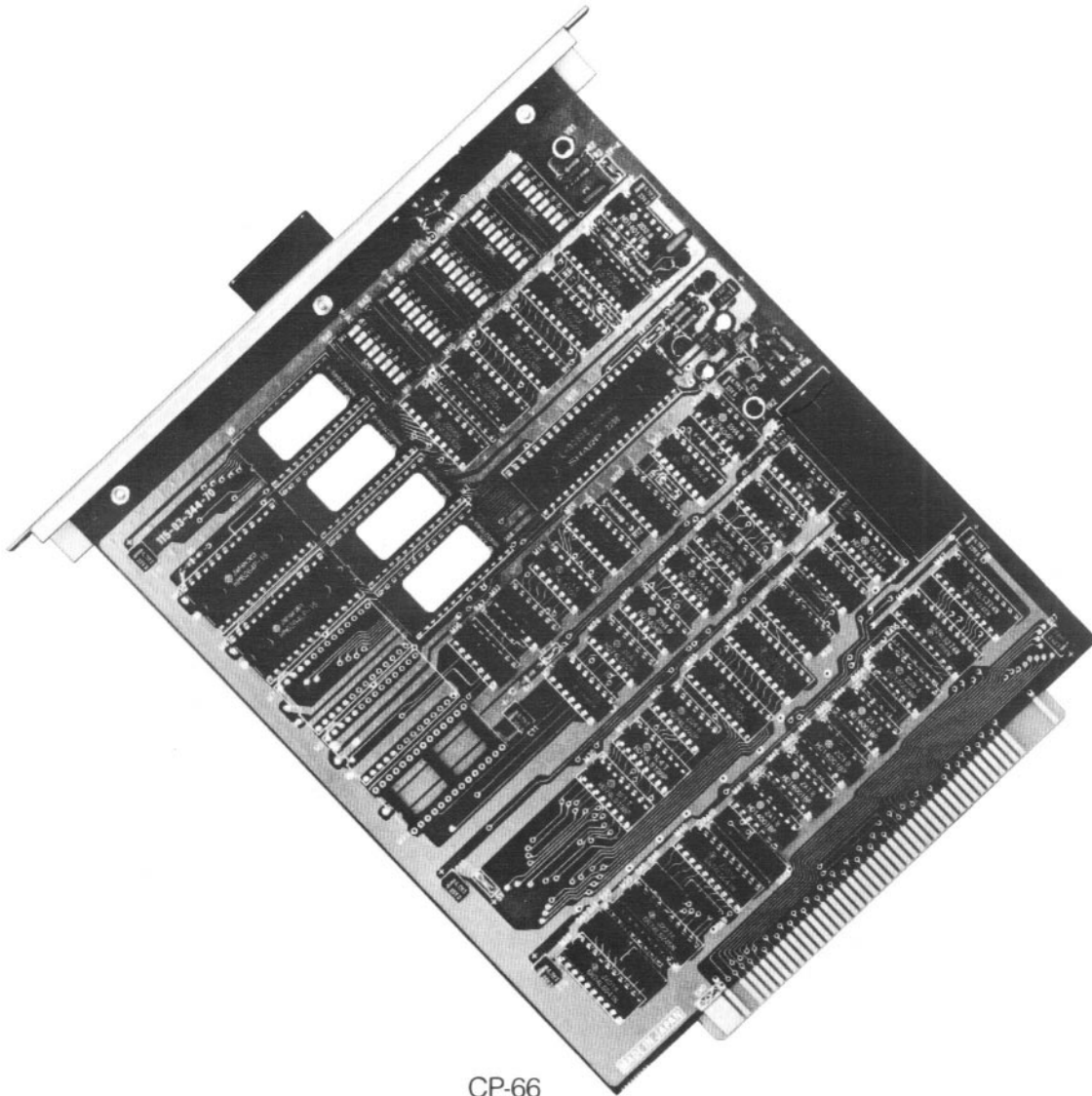


TOA INTERCOM SYSTEM

EXES-6000

Function Specifications

Central Processing CP-66



CP-66

EXES-6000

General Description

The program memory of the Microcomputerized Central Processing Units determines for the most part the system composition and functions. With the CP-66, EXES-6000 (one exchange system: Maximum line capacity is 256) can provide not only a very wide range of functions but also the capabilities of connecting to telephone lines and PBX. Its combined use with the tie-line unit TI-62 increases the maximum line capacity of the total system up to 768.

Combined use of the TI-600 and extension unit creates a large system consisting of thousands of intercom stations.

This not only permits conversations to be held between stations connected to different exchange but also increases the number of stations which one exchange cannot cover.

Features

- In addition to the standard functions, many user-selectable functions which may be selected according to user needs are provided.

- By changing over Dip switch on the CP unit, tie-line function is available.

Note: Performances of some functions are restricted in the tie-lined system.

General Equipment Specifications

- Applicable Exchanges
EX-610, EX-620, EX-630
- Line Capacity
 - One exchange system
256 lines
 - Tie-lined system (TI-62)
Expandable to
512 lines (EX-630 X 2)
768 lines (EX-630 X 3)

*By using of the TI-600 and extension unit creates a large system consisting of thousands of intercom stations, however, the number of functions decreases which are otherwise available.

No	Classification	Function	Standard Function	Selectable Function		Optional Function	Single Exchange	Tie-line		
				By DIP Switch	By No 200 Programming			Own Exchange	TI-62 Exchange	TI-600 Exchange
1		Camp-On-Busy	O				O	O	O	O
2		Busy call back	O				O	O	O	X
3		Mic-Off					O	X	X	O
4	Single Digit	Single Digit Dialing	O				O	O	O	O
5		Automatic Access to Paging			O		O	O	O	O
6		Master/Sub Relationship			O		O	O	X	X
7	Continuous Calling Tone	Privacy Camp On-Privacy/Continuous Calling Tone at Privacy Mode *1		O			O	O	O	O
8		Continuous Calling Tone . One-touch Response *2		O	O		O	O	O	O
9	PTT	Press To-Talk	O				O	O	O	O
10		Press-To-Talk Control		O*3		O	O	X	X	O
11	Personal Number	Personal Number Call			O*4		O	O	O	O
12		Personal Number Paging		O		O	O	X	X	O
13	Transfer	Remote Response	O				O	O	X	O
14		Call Transfer . Paging during Normal call		O		(O)*5	O	O	X	O
15		Group Hunting			O		O	O	X	-
16		Secretary Transfer		O	O		O	O	X	-
17		Call Forwarding		O			O	X	X	
18	Priority	Priority		O			O	X	X	O
19		Executive Priority					O*6	X	X	O
20		Highest Executive Priority		O	O		O*6	O	O	O
21	Conference	Conference		O		O	O	O	O	O
22	Paging and Response	PA Paging . Station Paging *7		O	(O)*5	O	O	O	O	O
23		Combination Paging		O	O	O	O	X	X	O
24		Emergency All-Call		O		O	O	X	X	X
25		Paging Priority		O	O	O	O	X	X	O
26	Selection of Dial Operation	Selectable numbering digit		O			O	O	O	
27		Selectable First Station Number of Each Exchange		O	O		O	O	O	O
28		Output Capacity of Paging Zone		O			O		-	O
29		Selectable Dial Operation for Paging Response		O			O	O	O*9	O
30		Output Capacity of General Purpose Control		O			O	O	X	O
31		Programmable Station Numbering		O	O		O	O	O*10	O
		Selectable function operation		O			O		-	

Notes.

- XX/YY indicates to select either XX (Function) or YY (Function).
- Not all circles (O) in The Switch Selection table correspond to the DIP switches of the CP unit.
- *1: "PV" (system with Privacy function) Type: with the Privacy switch in the ON position, a brief Privacy Tone sounds.
"NP" (system without Privacy function) Type: A station may be called by the continuous calling tone when the Privacy switch is placed in the ON position.

*2: When a hands-free station without handset is called by the continuous calling tone, conversation may start by touching any Key.
([] ~ [] , [] or []).

*3: Using the Press-to-talk control function reduces the maximum number of paging zone to All call + 23 zones.

*4: This function may not be used if numbers 100 through 199 are used in the Station Numbering Schedule. Either "Personal number call" or "Personal number paging" may be selected.

3. Link Capacity

A) Single exchange system (no tie-line function is used.)

Normal links...

Expandable to 16 links (without conference)

Conference Links

Expandable to 4 links (with 8 normal links)

B) Tie-lined system

No tie-line link is especially established. Normal links are used for a tie-line purpose between exchanges.

(Note: A maximum of 16 links may be used in a same exchange area of the tie-lined system.)

Tie-line link capacity between exchanges:

16 (max.) for 2 exchanges

8 (max.) for 3 exchanges

Number of Unit installed		Number of Links Available	
DL-62A	CL-62A	Normal Link	Conference Link
4	0	16	0
3	1	14	1
2	2	10	2
1	3	10	3
0	4	8	4

No	Classification	Function	Standard Function	Selectable		Optional Function	Single Exchange	Tie-line			
				By DIP Switch	By No 200 Programming			Own Exchange	T1- 62 Exchange	T1-600 Exchange	
32	33	Group Blocking (Restricted Dialing)		○	○		○	○	○	○	
		Restricted Access to All-Call Paging			○		○	○	○	○	
		Zone paging			○		○	○	○	○	
		Restricted Access to Conference			○		○	○	○	○	
		Restricted Access to General Purpose Control	One-shot make output		○		○	○	○	x	○
			Make/break output			○					
	8 selectable one-shot make output			○							
	8 selectable make output/Decimal output		○								
	4 decimal digits output		○								
34	35	Calling Tone . paging Pre-Announcement Tone Duration *11			○		○	○	○	○	
		Time out of Conversation and Paging Call			○		○	○	○	○	
36	41	IN/OUT Annunciation			○*4		○	○	○	○	
37		Destination Annunciation Indication				○	○	x	x	x	
38		Calling Party Indication (Lamp type) (with/without memory)			○*12		○	○	○	x	x
39		Calling Party Indication (Numerical type)					○	x	x	x	x
40		Station called indicator (Lamp Type)			○		○	○	○	x	x
41		Pager			○	○	○	○	○	○	x
		42	General Purpose Control		○		○	○	○	x	○
			One-shot make output								
	Make/break output										
	8 selectable one-shot make output										
43		Speech message			○		○	○	○	○	
44		Pager calling and responding			○		○	○	—	—	
45		BGM			○		○	○	—	—	
46		Alarm and time announcement			○		○	○	—	—	
47		Selectable paging			○		○	○	○	○	

*5: Additional equipment is required for paging.

*6: Either "Executive Priority" or "Highest Executive Priority" may be selected.

*7: Each zone of paging provides Station paging and/or PA paging.

*8: It is necessary to respond only by touching [7], [9] (without zone No.)

*9: It is possible to make a paging and its response across the other exchange. However, a response to the zone paging is possible only from a station connected to the exchange having the paged zone.

*10: Station numbers of each exchange can be changed freely within the range of "Selectable numbering schedule of each exchange",

*11: Calling tone: 0.3 sec (Trill note tone)/0.2 sec. (Single note tone)/none. Paging pre-announcement tone: 2 set/1 sec/none.


*12: Selects whether or not the indication of the calling party station continuously lights up, after the calling party has cancelled the call to a line which is busy or in the privacy mode.

EXES-6000

4. Numbering Schedule for Stations and Paging Zones

1) Standard schedule (when personal Nos. are provided)


Type of exchange	System	Numbering for stations		Numbering for paging zones	
		Without paging	With paging	Paging zones/exchange	
				All station calls	Zones
EX-1 (Single)	EX-610	200-263	200-255 (247)* ¹	00	01-07 (15)* ¹
	EX-620	200-327	200-319 (311)* ¹		01-07 (15)* ¹
	EX-630	200-455	200-455		01-07 (31)* ¹
A EX-2A/EX-3A	EX-610	200-247, 256-263	200-247		01-07
	EX-620	200-311, 320-327	200-311		01-07
	EX-630	200-455	200-455		01-15
B EX-2B/EX-3B	EX-610	470-517, 526-533	470-517		08-14 (16-22)* ²
	EX-620	470-581, 590-597	470-581		08-14 (16-22)* ²
	EX-630	470-725	470-725		16-30
C EX-3C	EX-610	740-787, 796-803	740-787		15-21 (31-37)* ²
	EX-620	740-851, 860-867	740-851		15-21 (31-37)* ²
	EX-630	740-995	740-995		31-45

*1 When the paging dial operations is set for .

*2 When the EX-610 or EX-620 is connected to the EX-630 by tie-line

2) When no personal Nos. are provided

Type of exchange	System	Numbering for stations		Numbering for paging zones	
		Without paging	With paging	Paging zones/exchange	
				All station calls	Zones
EX-1 (Single)	EX-610	100-163	100-155 (147)* ¹	00	01-07 (15)* ¹
	EX-620	100-227	100-219 (211)* ¹		01-07 (15)* ¹
	EX-630	100-355	100-355		01-07 (31)* ¹
A EX-2A EX-3A	EX-610	100-147, 156-163	100-47		01-07
	EX-620	100-211, 220-227	100-211		01-07
	EX-630	100-355	100-355		01-15
B EX-2B EX-3B	EX-610	400-447, 456-463	400-447		08-14 (16-22)* ²
	EX-620	400-511, 520-527	400-511		08-14 (16-22)* ²
	EX-630	400-655	400-655		16-30
C EX-3C	EX-610	700-747, 756-763	700-747		15-21 (31-37)* ²
	EX-620	700-811, 820-827	700-811		15-21 (31-37)* ²
	EX-630	700-955	700-955		31-45

When the paging dial operations is set for .

When the EX-610 or EX-620 is connected to the EX-630 by tie-line

Function Specifications

Besides fixed standard functions, there are selectable standard functions and optional functions.

Selectable standard functions can be selected by changing over the CP Unit switches and/or by establishing station No. 200 programming. Optional functions can be made available by using external equipment or additional units.

Note: When Tie-line function is employed, some functions are disabled and/or restricted. Refer to function table for details.

Function Description

1. Fixed Standard Functions

1) Automatic Line Release

The calling station is released from the speech path if dialing is not completed within 5 seconds. The calling station is also released from the speech path if no response is given within 10 seconds, when calling a station in the privacy mode.

2) Camp-on-Busy

When the called party is busy, the caller can camp-on the line. After the conversation is finished, he is automatically put through.

3) Busy call-back

As soon as the busy line is freed, a reminder tone is transmitted to the third party who made a call during the conversation.

4) Press-To-Talk and Release-To-Listen

One-way conversation is possible by pressing the Press-to-Talk (PTT) bar when the ambient noise is high at one party's station.

5) Mic-off

Line is held temporarily.

6) Remote Response

The station called by continuous calling tone can be remotely answered by other stations.

7) Single Digit Dialing

Single digit calling of numbers up to 4 digits in length can be made by one-touch operation.

2. Selectable Functions

1) Master/Sub Relationship

Substations can call the specific Master stations by one-touch operation. In the event of Handset Substation, a call can be made from Substation to its designated master station by simply picking up a handset.

2) Automatic Access to Paging

Specific Substations may initiate a Paging Call or Paging Response or Personal Number Call, etc. by simply picking up a handset.

3) Privacy

When calls are unwanted, turn Privacy switch on and a brief privacy tone sounds when the station is called.

4) Camp-on- Privacy

When called in the privacy mode from another station, calls can be connected immediately after turning the Privacy switch off.

5) Handset Response in Continuously Called Stations

Full duplex handset conversation is available by lifting the handset when the continuous calling tone is heard.

6) One-touch Response in Continuously Called Stations

Hands-free conversation is available by touching any key except PTT when the continuous calling tone is heard.

7) Personal Number Call

Calls can be connected by using Personal Numbers, other than normal station numbers when Personal Numbers are registered into any designated station.

8) Call Transfer

The called party can transfer the call to other selected station. Call Hold and Call Back are also possible.

9) Group Hunting

When the first called party in a group is busy, the call is automatically transferred to the next available stations.

10) Secretary Transfer

Calls to an "Executive" may be automatically transferred to a "Secretary".

11) Call Forwarding

Calls to stations are automatically transferred to any other designated station.

12) Priority

When the party called is busy, by just sending priority tone, conversation is available if response is given, holding the original conversation.

13) Executive Priority

When the party called is busy, the caller can break in on the called party without the response, holding the original conversation.

14) Highest Executive Priority

The preprogrammed caller can interrupt forcibly the called party in busy mode. In this event, original conversation is cancelled.

15) Selection of Dial Operation

1. Selectable First Station Number

The first station number for system may be selected from any of the following numbers: 100/200/300/400/500/600/700/800/900.

The system with Personal Numbers can't use No. 100

2. Paging Response

Paging response may be made either by pressing the "Zone No.", or by simply pressing

3. General Purpose Control/Numbering for Paging Zone

Dialing digit number may be selected for "single" or "double," depending on the number of controls and paging zones.

16) Programmable Station Numbering

The system has programmable station numbers up to No. 999 rather than only the normal hardwired station numbers.

17) Group Blocking (Restricted Dialing)

Stations can be blocked into groups which cannot call or page each other unless further programming is done.

18) Restricted Access

Stations with access to All-call Paging, Conference and General Purpose Control can be limited.

19) Selectable Calling Tone Duration

(Calling Tone/Paging Pre-Announcement Tone)

The time duration of the Calling Tone can be set for "long" (Trill note tone) or "short" (Single note tone) or none. Similarly, Paging Pre-Announcement Tone may be set for "long" (2 sec.) or "short" (1 sec.) or none.

20) Time-out of Conversation and Paging Call

A Calling Time Limitation can be set, in case paging and normal calls are to be kept short or where cancelling calls might be forgotten.

3. Optional Functions

1) Talk-Back (Talk-Back Unit and PA system are required.)

Press-to-talk conversation is possible through external PA speakers.

2) Station Paging and Response (PI-62 Unit is required.)

Paging is available through the built-in station speakers. Paging calls can be responded to by the nearest master station.

3) Paging Priority and Response (PI-62 Unit is required.)

Conversation may be interrupted temporarily to accept the priority station paging.

4) Combination Paging and Response

(PI-62 Unit is required.)

Combination paging which cover 2 or more independent paging zones is allowed in the system.

5) Paging during Normal Call (PI-62 Unit is required.)

Calls can be transferred to a third party after paging while speaking.

6) Personal Number Paging (PI-62 Unit is required.)

Zone paging is made by Personal Numbers when Personal Numbers are registered into any designated station within a zone.

7) PA Paging and Response

(PI-62 Unit and PA System are required.)

Paging through PA System and response.

8) Emergency All-Call Paging (PI-62 Unit is required.)

Top priority of all-call paging is available from one specified station.

9) Conference (CL-62 Unit is required.)

Conference calls can be made including up to 4 persons.

10) Press-to-Talk Control (PI-62 Unit is required.)

The operation of Press-to-Talk activates Relay Outputs, thus controlling Door-Lock and Radio Transmitting Equipment.

11) In/Out Annunciation

(Interface for the Indicator Board needs to be made by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

In or Out status is annunciated by registration/cancellation of Personal Numbers.

12) Destination Annunciation Indication

(Interface for the Indicator Board needs to be made by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

Personal number registered stations are indicated.

13) Calling Party Indication [Lamp Type]

(Interface for the Indicator Board needs to be made by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

One lamp for one calling station. This can memorize the station numbers of stations which put through calls to stations in the privacy or busy modes.

14) Conversation Partner Indication [Lamp Type]

(Interface for the Indicator Board needs to be made by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

When a station having the Indication Panel makes a call, a lamp of the called station lights on until the conversation is cancelled.

When a station having the Indication Panel receives a call, a lamp of the calling station lights on until the conversation is cancelled.

15) Calling Party Indication [Numerical Type]

(Interface for the Indicator Board needs to be made by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

A numerical type calling party indication panel can be provided at certain specified stations.

16) Pager Calling and Response

(Interface is accomplished by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

Pagers with relay input interface can be connected. A maximum of 10,000 pager receiver and party called can answer the call via the nearest station.

17) General Purpose Control

(Make the Indicator Board and General Purpose Control Interface by using Data Transmitter DT-E60 and Data Receiver DR-B61.)

Various types of Relay Output modes for control are available. Use as Remote Control for such applications as In/Out Annunciation, Destination Annunciation Indication, VTR and ITV.

18) Simplified Paging

Simplified PA paging is possible if an external speaker is connected instead of a station.

19) Speech Message

By using both the SI-62 interface and SM-600 speech message unit, absence mailing, message mailing and remote message pick up can be provided.

20) External Interfaces

(Interface is accomplished by using PBX interface OD-600/LD-600 or telephone interface CB-600.) Various types of external interface are available.

PV type & NP type

Either "PV" Type (the system with Privacy function) or "NP" Type (without Privacy function) mode should be selected for the whole intercom system.

When Privacy Switch (SW) of station is turned ON, privacy tone is available in "PV" Type system, while continuous calling tone is available in "NP" Type system.

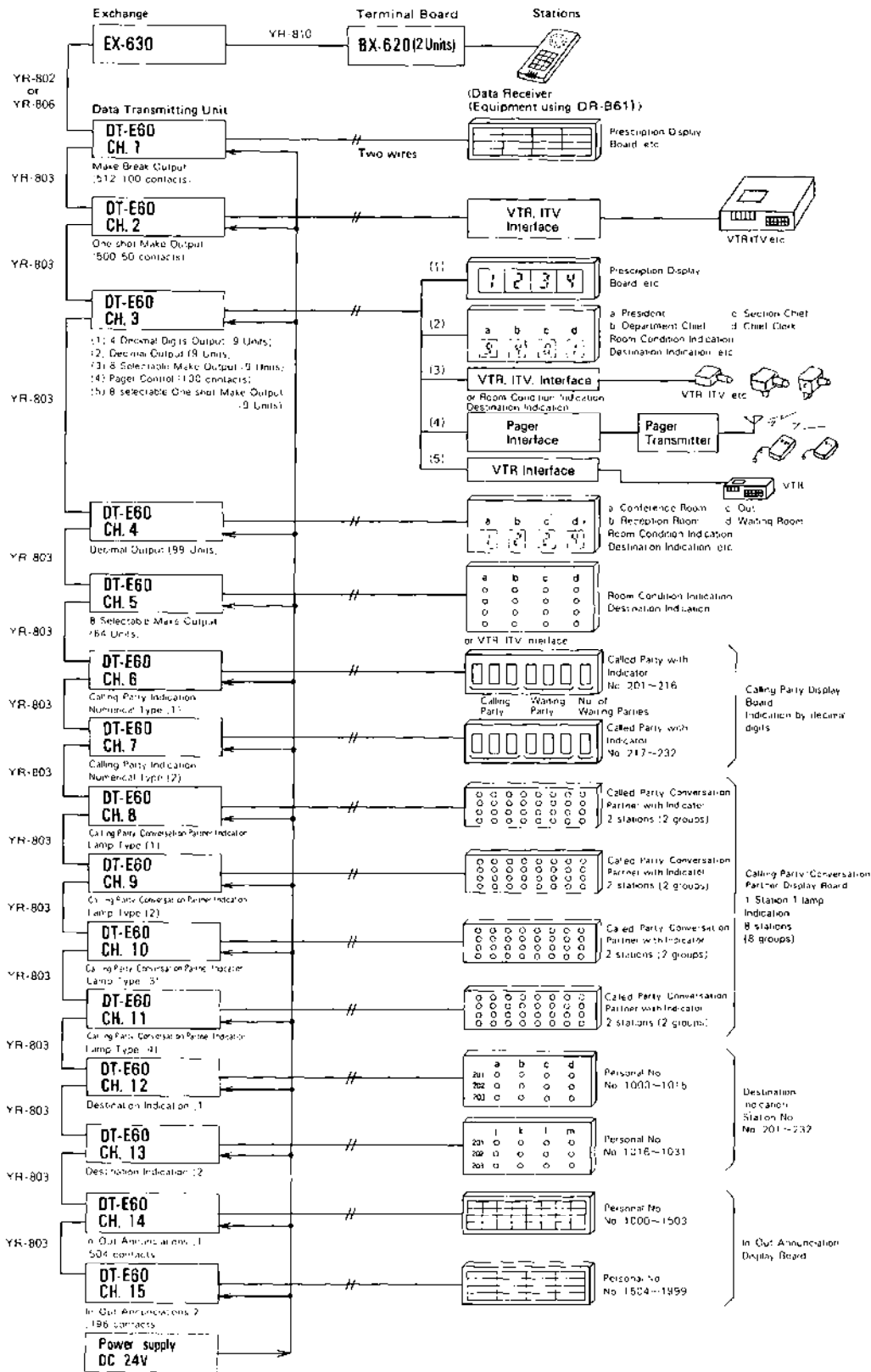
	Functions	System types		Descriptions	Stations *2		Privacy SW	
		PV	NP		Without Privacy SW	With Privacy SW		
Calling	Dialing	O	O	Calls are made by touching dial key. Even when the Privacy SW is on, calling is possible.	HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	ON/OFF	
	One-Touch Dialing	O	O	Substations can make a call to designated master stations by one-touch dialing. Calling is possible even when the Privacy SW is on	HF-640S		ON/OFF	
	Dialing after picking up handset and confirming dial tone	O	*2	O	Calls can be made by touching dial key after picking up handset, and confirming dial tone is heard.	TL-610M TL-620M TL-600M	HF-660M HF-200M, 200MB	ON
	Calling by picking up handset	O	*2	O	Substations can make a call to designated master stations by simply picking up the handset.	TL-600s	-	ON
Voice	Voice Calling	O	O	When called by continuous calling tone or privacy tone, voice can be sent by pressing PTT bar.	All stations except HF-640S		ON/OFF	
Receiving	Hands-free calling and conversation	O	O	By one-touch dialing keys, after a brief calling tone hands-free conversation can get started.	HF-640S HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	OFF	
	Continuous calling tone response by one-touch dialing (No. 200 programming) *1	O	O	One-touch dialing keys transmits a continuous calling tone. Hands-free Conversation can get started when called party depresses, the PTT bar or PTT key.	HF-640S HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	OFF	
	Privacy	O	x	When calls are unwanted, turn ON Privacy SW. Then a brief privacy tone sounds when called. By turning off Privacy SW or touching any key (PTT bar, PTT key) or by picking up a handset, conversation becomes possible.	-	HF-660M HF-200M, 200MB HF-210M, 210MB	ON	
	Continuous calling tone picking up response (in Privacy mode)	O	*2	O	When called by continuous calling tone, conversation is possible by picking up handset.	TL-610M TL-620M TL-600M/S	HF-660M HF-200M, 200MB	ON
	Continuous calling tone one-touch response (in Privacy mode)	O	*2	O	Calls can be answered by dialing the PTT bar or PTT key without picking up handset when called by continuous calling tone		HF-660M HF-200M, 200MB HF-210M, 210MB	
Speech Methods	Voice switch conversation	O	O	Two-way conversation is achieved automatically when two parties speak in hands-free mode.	HF-640S HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	ON/OFF	
	Simplex conversation by press-to-talk key	O	O	One-way conversation is made by a party who presses PTT bar. Releasing the PTT bar will reverse the one-way conversation flow	HF-640S HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	ON/OFF	
	Fully duplex conversation	O	O	Fully duplex conversation is made when at least either party uses a handset	TL-610M TL-620M TL-600M/S HF-640S HF-650M	HF-660M HF-200M, 200MB HF-210M, 210MB	ON/OFF	

*1 This function may be employed for the industrial type of station (Model HF-650M) or in the "PV" system that needs to be continuously called

*2 Before you use a PV-type handset station, it is necessary that you first register that station by station No 200 programming.

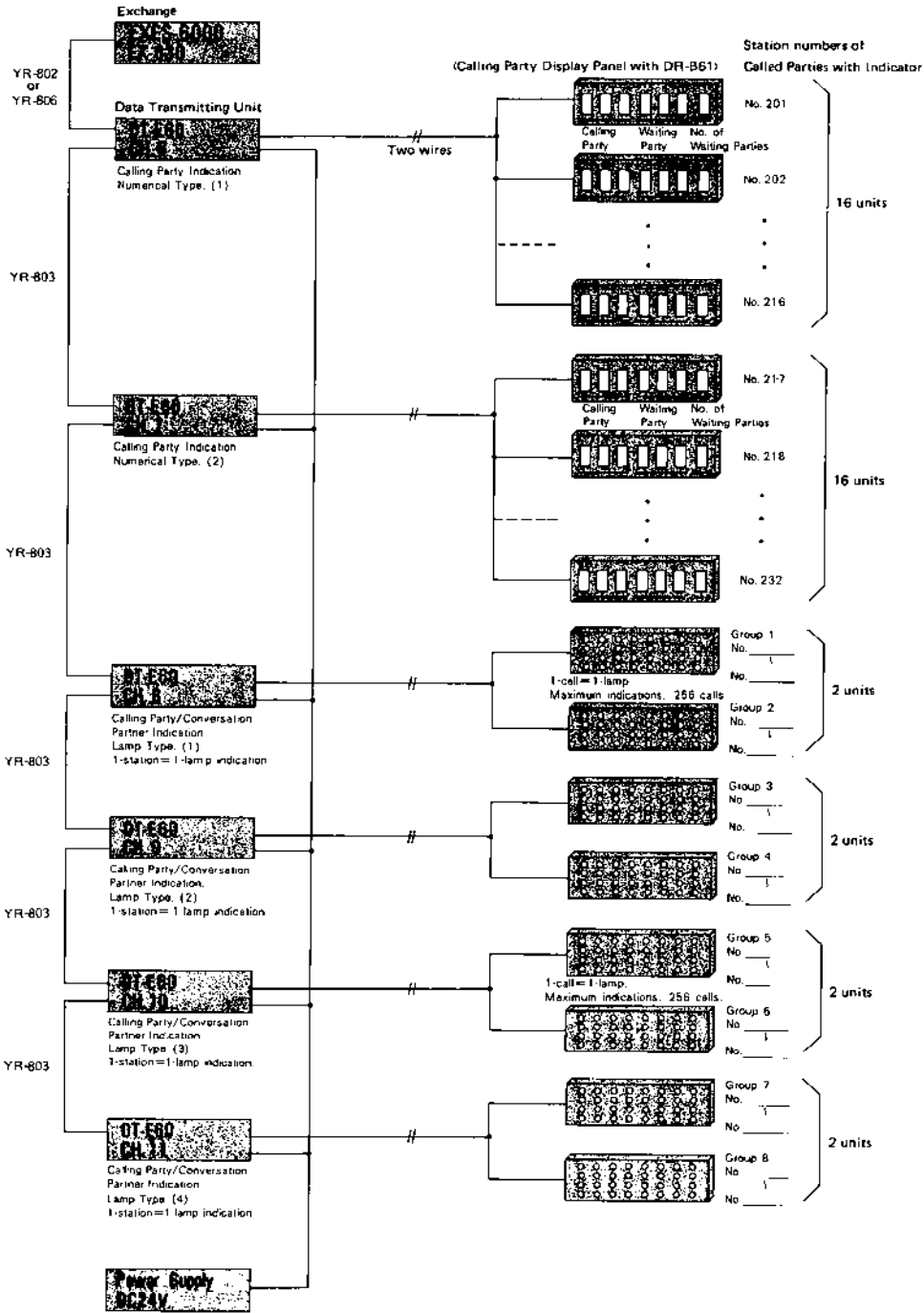
CP-66: One Exchange system

System Diagram of Data Transmitting and Receiving Units (Single Exchange)



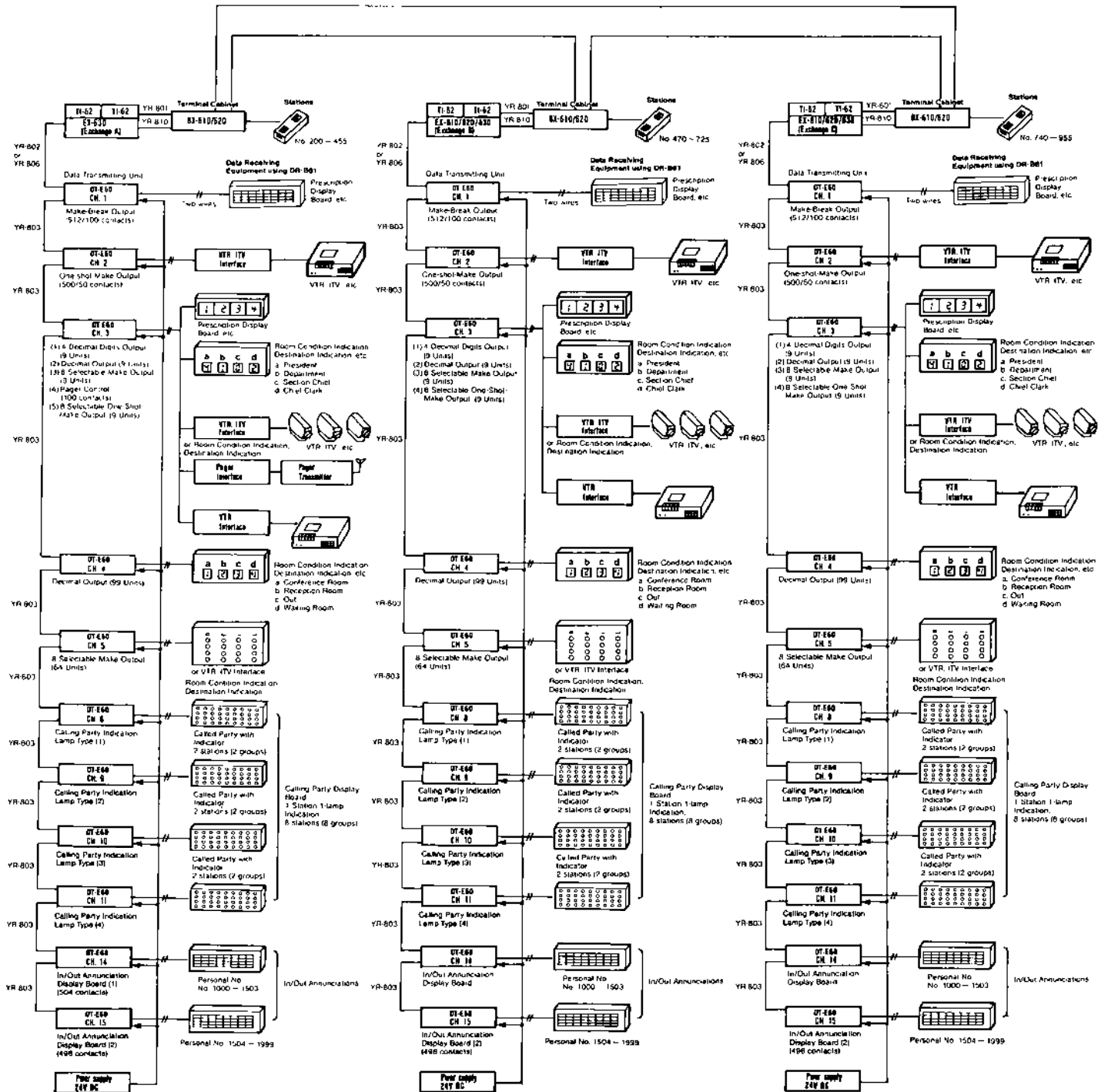
EXES-6000

Enlarged Block Diagram of Calling Party Indication



CP-66: Tie-line system

System Diagram of Data Transmitting and Receiving Unit (Tie-line System)



*Refer to "System Specifications EX-630 for Composition of Exchange and Electronic Specifications.

*It is also possible to tie-line between the EX-630 and the other exchanges EX-610/620 which are employing the CP-63.

*Specifications are subject to change without notice.



TOA

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