

2-WIRE INTERCOM SYSTEM

EXES-2000

System Specifications

Exchange EX-200



EX-200

System Description

The TOA intercom System EXES-2000 is composed of a central exchange and various types of stations and uses 2-wire star cabling. The EX-200 is a microcomputer-controlled electronic exchange used exclusively for internal communications. The EXES-2000 provides fast and efficient hands-free duplex conversation between any two stations and accepts maximum 32 stations per exchange and expands up to 90 stations in a system by means of 3 exchanges tie-lined. Various functions such as Three-channel BGM, Personal Number Call, Conference, Paging and Speech Message are also included. The TOA Intercom System EXES-2000 is designed to provide truly effective internal communications.

Features

- 1 Compact, light in weight and reliable thanks to total employment of electronic parts.
- 2 Modular construction for easy system 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 32 stations.
- 6 Tie-line system of up to 90 stations connecting 2 or 3 exchanges.
- 7 Three-channel BGM programs available in selection.
- 8 Two speech paths for simultaneous private conversations and/or 4-party conferences.
- 9 Three individual paging zones plus all-call paging. Any grouping is possible.
- 10 Paging to desired stations (Selected Paging).
- 11 Speech message for calling and/or called party.
- 12 Other functions such as Master-sub relationship, Call transfer, Executive (Highest) priority and 2-circuit Door remote controls by using the Programming Station (No.24) without changing wiring.

System Composition

The system is composed of three basic blocks: (1) Exchange EX-200 (2) Power transformer unit PU-200 and (3) Stations and Associated equipment.

- 1) Exchange
 - 1 EX-200 (Basic system) consisting of one Central unit CC-20 and two Line modem units LM-20.
 - 2 FC-210 Expansion cabinet
 - 3 Expansion or option unit
 - LM-20 Line modem unit
 - BI-20 BGM unit
 - RC-20 Remote control unit
 - SM-20 Speech message unit
 - PC-20 Pager control unit
 - TI-20 Tie-line unit
 - 4 Connecting cable
 - YR-820 for LM-20
 - YR-821 for SM-20
- 2) Power transformer unit
 - 1 PU-200 for EX-200 and/or FC-210

3) Stations and Associated equipment

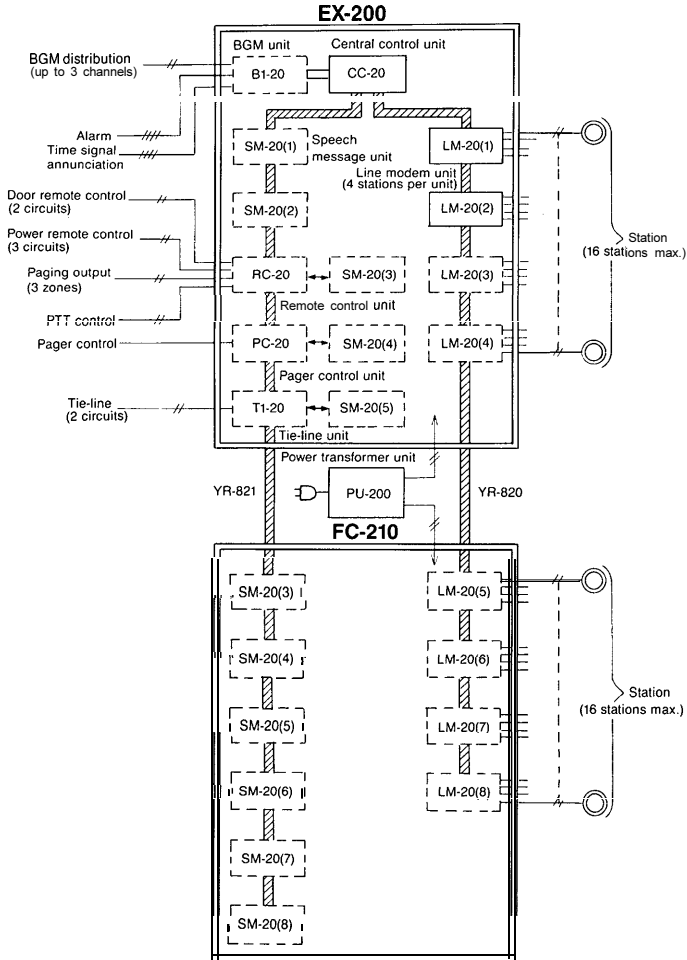
Stations

- 1 HF-200M
Desk/Surface-Mounted Master Station
- 2 HF-210M
Desk/Surface-Mounted Master Station
- 3 HF-610M
Flush-Mounted Master Station
- 4 HF-610S
Flush-Mounted Substation
- 5 HF-630M
Flush-Mounted Master Station
- 6 HF-630S
Flush-Mounted Substation
- 7 HF-631M
Flush-Mounted Master Station
- 8 HF-631S
Flush-Mounted Substation
- 9 HF-640S
Door Station
- 10 HF-650M
Surface-Mounted Master Station
- 11 HF-660M
Desk/Surface-Mounted Master Station
- 12 AK-024
Auto-Dialer Key Unit
- 13 TL-600M
Desk/Surface-Mounted Master Station
- 14 TL-600S
Desk/Surface-Mounted Substation
- 15 TL-610M
Desk-Top Type Master Station
- 16 TL-620M
Surface-Mounted Master Station

Associated Equipment

- 1 YC-601
Surface-Mounted Station Jack
- 2 YC-603
Flush-Mounted Station Jack
- 3 YC-510A
Flush-Mounted type Back Box for HF-610M/S
- 4 YC-120
Flush-Mounted type Back Box for HF-630M/S & HF-631M/S
- 5 YC-121
Surface-Mounted type Back Box for HF-630M/S & HF-631M/S
- 6 YC-150
Flush-Mounted type Back Box for HF-640S & CU-62
- 7 YC-150E
Flush-Mounted type Back Box for HF-640S & CU-62
- 8 YC-200
Substation panel for HF-200M/210M
- 9 YS-13
Surface-Mounted type Back Box for HF-640S & CU-62
- 10 PAM-05
Booster Amplifier (5W) for HF-650M
- 11 DS-100
DC Power Supply Unit for PAM-05/HF-650M & CU-62
- 12 YC-024
Surface Mounted Bracket for HF-660M
- 13 TK-12
Talk Back Unit
- 14 CU-62
Call Alert Relay Unit

Examples of System Configuration



Notes

- The basic EX-200 exchange consists of one (1) central control unit and 2 line modem units.
- When shown as [A] or [B], A or B can be selected.
- Shows Toa standard cable. — shows one-pair cable. --- shows two-pair cable.

Functions of EXES-2000

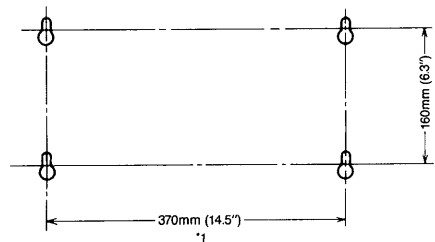
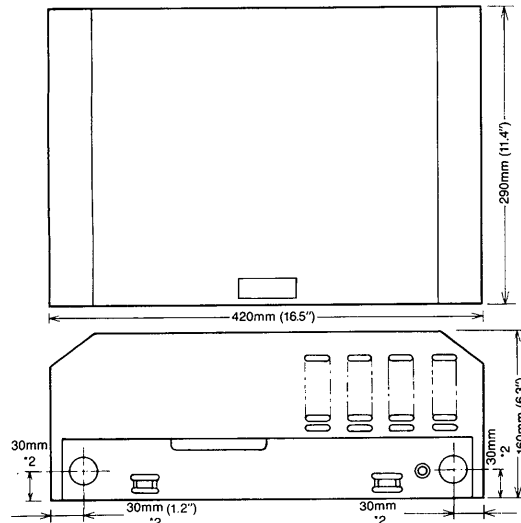
No	Classification	Function	Basic function	Selectable function No 24 programming must be established	Additional functions
1		Camp-on-busy	●		
2		Busy call-back	●		
3		Mic off	●		
4		Master sub relationship		●	
5		Privacy/Camp-on-privacy	●		
6	Call	Continuous call tone station (1*)		●	
7		Handset operated station (2*)		●	
8		Press to talk	●		
9	PTT	Talkback			●
10		Press-to-talk control			●
11		Personal number call	●		
12		Conference	●		
13		Call transfer	●		
14	Transfer	Call forwarding	●		
15		Secretary transfer		●	
16		Hurry up	●		
17		Executive (Highest) priority		●	
18	Paging	Station paging call-up (all-call paging+3 zone paging calls) and its response (3*)		●	
19		PA paging call-up (all-call paging+3 zone paging) and its response (3*)		●	●
20		Selected station paging		●	
21		Emergency all-call paging		●	
22	Selection	PA paging & power remote/3-channel general purpose control		●	●
23		Time-Out of paging call (no limit/20 seconds)		●	
24		Speech message hurry up recording (with/without)		●	
25		3-channel BGM		●	●
26		Alarm and time signal		●	●
27		Pager calling and response			●
28		Door remote control (2 circuits)		●	●
29		Speech message		●	●
30		Tie-line (4*)		●	●

Note that XX/YY (Example, with/without of item No.24) shows either XX or YY can be adopted.

- The station having its Privacy switch in the OFF mode can select either a "brief" call tone or "continuous" call tone. (The station without the Privacy switch is the same as one having its Privacy switch in OFF)
- With the Privacy switch in the ON position, either the "Privacy tone" or "continuous tone" can be selected. (The handset operated station is always in the same Privacy state as the station whose Privacy switch is set to OFF)
- Each paging channel can be either station paging or PA paging or combined station and PA paging.
- Some functions have limitations in the tie-line system.

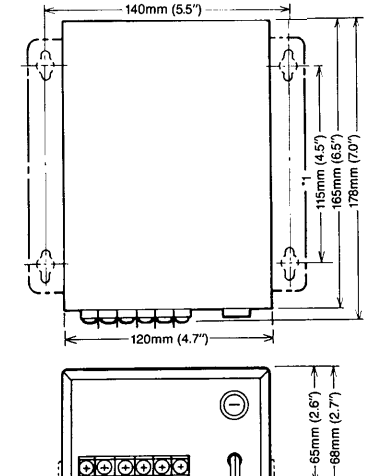
Appearance and Dimensional Diagram

EX-200 and FC-210



- *1: Dimensions for wall-mounting
*2: Knock-out hole for wiring

PU-200



Specifications

1) Exchange		Maximum output signal level:	+30 dBm
Exchange system:	Space dividing system	Input/output transmission band:	Base band: 200k--5k Hz FM carrier band: 15k--35k Hz
Control:	Stored program control system	Output noise level:	-40 dBm or less (idle mode)
Calling type:	Signal tone call or voice call through speaker. Single calling tone for hands-free operation or continuous calling tone for handset operation.	Crosstalk attenuation:	-60 dB or less (1.5k Hz)
Speech method:	Hands-free conversation and/or handset conversation	Power source:	20V AC \pm 10% 2.5A (EX-200 full system) 24V DC \pm 10% 2.2A (EX-200 full system)
Dialing code:	Amplitude modulated pulse number code	Power consumption:	130w (Max.)(EX-200 plus FC-210 Full system)
Line capacity:	16. Expandable up to 32 in 4-line step by using LM-20 and FC-210. (Two LM-20's are included in basic system.)	Ambient temperature:	0° to 40°C (32° to 104°F)
Link capacity:	2 (Fixed)	Dimensions:	420(w) x 290(h) x 160(d)mm (16.5"(w) x 11.4"(h) x 6.3"(d)) (EX-200 and FC-210 are identical in size.)
Station numbering schedule:	No.20--No.35 No.20--No.51 (FC-210 is used)	Weight:	EX-200 Approx. 5Kg (11.0 lbs.) FC-210 Approx. 4Kg (8.8 lbs.)
Personal numbering schedule:	No.100--No.131	Material:	Cool strip steel plate
Wiring:	Non-polar two-wire system Loop resistance: 300 ohms or less Impedance: 600 ohms balanced	Color:	Off-white
Voice transmission:	Base band signal transmission (from exchange to station) Frequency division multiplex transmission by FM signal (from station to exchange)	Type:	Wall-mounted type
Minimum input signal level:	-27 dBm	2) Power transformer unit	
		Power source:	AC mains
		Output voltage and current:	20VAC 2.5A x 2
		Dimensions:	120(w) x 65(h) x 178(d)mm (4.7"(w) x 2.6"(h) x 7.0"(d)) Approx. 2.8Kg (6.2 lbs.)
		Weight:	Cool strip steel plate
		Material:	Beige
		Colour:	Wall-mounted type
		Type:	

Specifications are subject to change without notice.