⊕ AIPHONE®

CONDOMINIUM
VIDEO ENTRY
SECURITY SYSTEM

VGX

INSTALLATION MANUAL

Issued; November, 1996
AIPHONE CO., LTD.

CONTENTS

Mounting Guidelines;

1. Weather-resistancy Standards;

The main entrance station models comply with Weather-resistent type in Weather-Proof Testing General Rules for Electrical Machinery Instruments(JIS-C-0920). So, it can be installed outside. But when washing the wall surface by high-pressure hose, be careful that the main entrance station would not be sprayed with watered directly.

RAIN

YES

HIGH-PRESSURE HOSING

NO
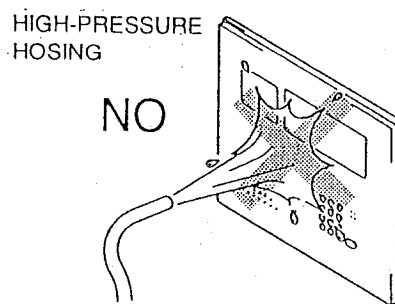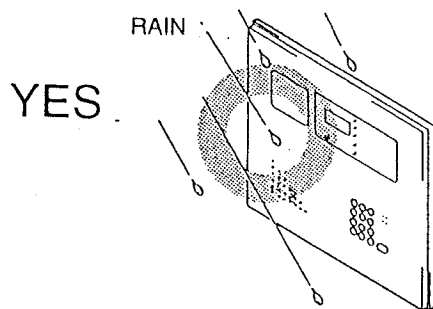
2. When there is a space between main entrance station and wall;

Mount the Main Entrance station in either of the three ways, according to the space between the wall and the Main Entrance station(mounting bracket).

(1) When a space is **less than 0 ~ 3mm**, proceed with the standard installation.

(2) When a space is **less than 3 ~ 5mm**, put the weather-stripping(supplied) on back of the mounting bracket.

(3) When a space is **more than 5mm**, apply cauking compound between mounting bracket and wall.

Space

Main entrance station

Wall

Mounting bracket

Weather-stripping (supplied)
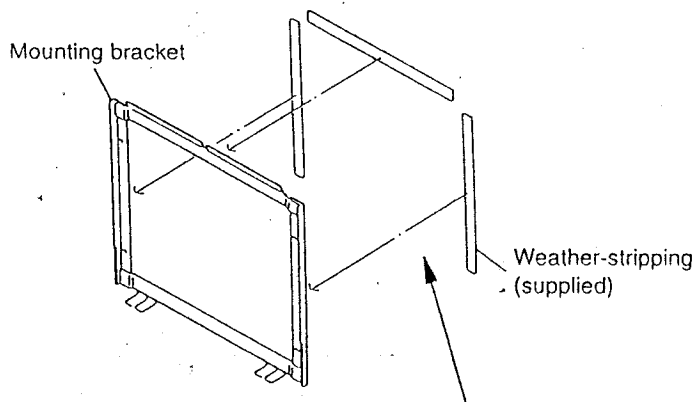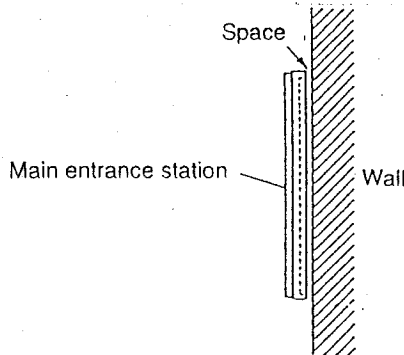
Do NOT apply cauking to bottom side.

Mounting Guidelines; *(cont'd)*

3. Main Entrance station installation location;

Install the main entrance station so that the camera center comes to 150cm high from the floor (50cm is an eye-level of the average Japanese adults).
As shown below, the camera can monitor a range of approx. 175cm(UPPER) and approx. 125cm(LOWER)(at the 50cm distance from the camera).

* Decide the camera mounting height according to the average height of the visitors.

Installation height & monitoring range;

VERTICAL

WALL ←— 5 0 cm —→

To; Center line of camera lens

150 cm

141 cm

To; Center of Built-in back box

約 5 0 cm
Approx. 50cm

Approx. 125cm

Approx. 175cm

FLOOR(finished)

HORIZONTAL

WALL

50cm

←— Approx. 72cm —→
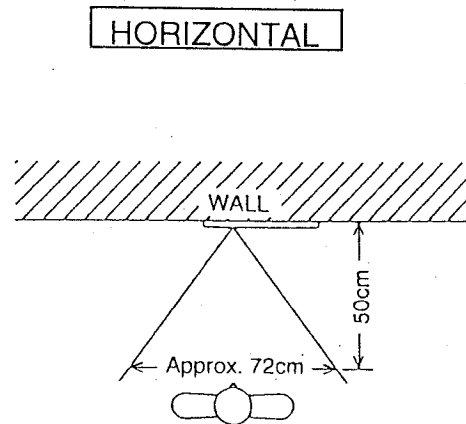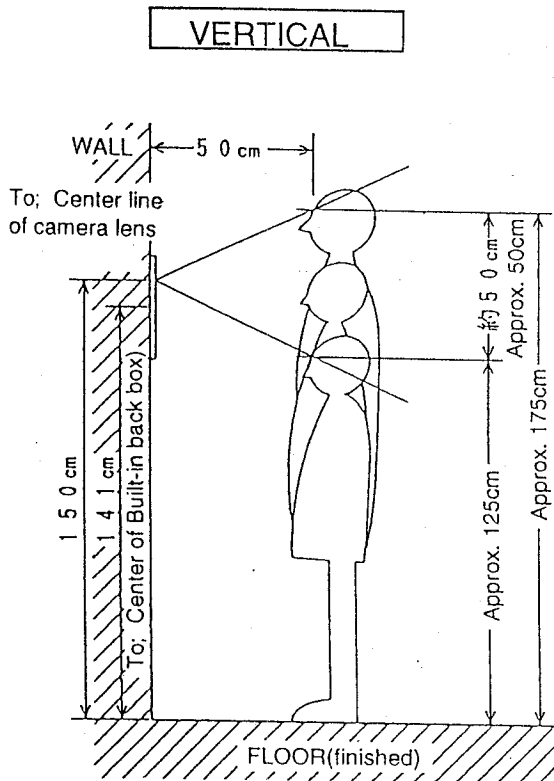
Main Entrance Station (VGX-DB○○ series)

Mounting Guidelines;

(1) Attach the terminal base to inside of the built-in back box.

Mounting bracket for terminal base

Built-in back box

Terminal board

Screw(2)

Terminal base
(supplied with
Main Entrance station)
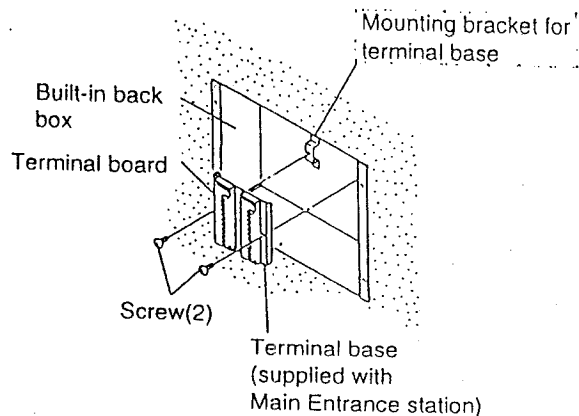
(2) Attach the mounting bracket to built-in back box. *(Apply an installation method according to the space between wall and mounting bracket).*

Mounting bracket

Built-in back box

Washer(4)
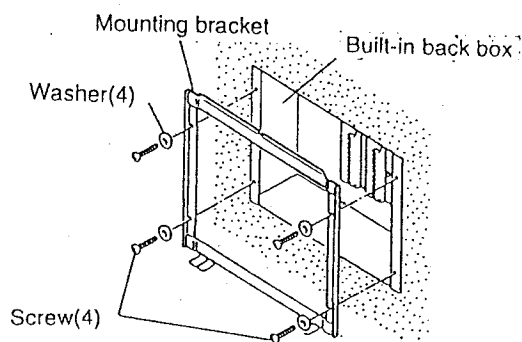
Screw(4)

(3) Connect wires and attach connectors.

Front panel

Connectors
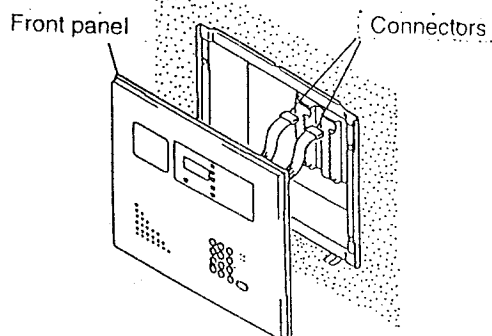
(4) Hook the front panel on the projection at the top of the mounting bracket.

Front panel

Hook onto here.
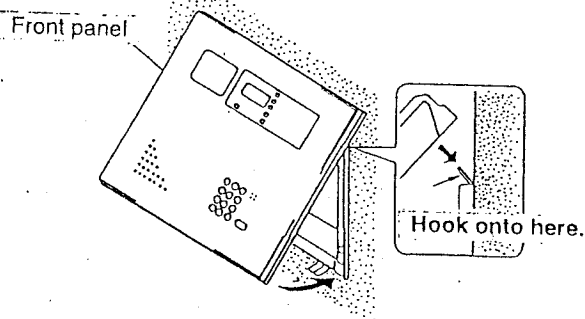
(5) Fasten 2 screws at bottom of front panel.

Speaker

Digital display

10-key pad

Microphone

Panel-mounting screw(2)
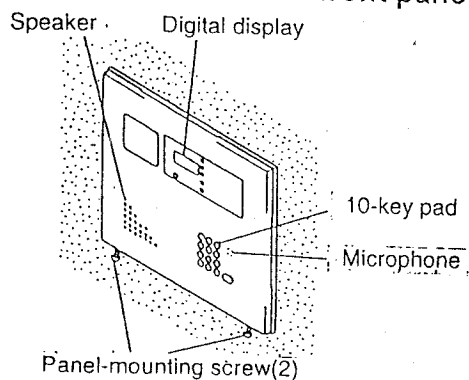
Accessories Included;
* Installation Manual(1)
* Terminal base(1)
* Terminal base mounting screw(2)
* Moutning bracket(1)
* Mounting bracket mounting screw(4)
* Washer(4)
* Weather-stripping(3)
* Cord clamp(1)

To avoid misoperation, be sure to take built-in back box to earth.

Central Control Unit (VGX-3K)
Video Control Unit (VGX-MC)

Installation Guidelines;

1. Central Control Unit is designed for use in temperatures ranging from 0°C ~ +40°C.
2. Do not install CCU in places exposed to;
   * direct sunlight, * on or near heating equipment (stove, air conditioner),
   * temperature extremes, vapor,
   * strong static electricity (where carpet is fully laid on the floor),
   * sand, * vibration, * strong magnetic field
3. It is possible that noise can be induced when installed near radio and TV electromagnetic waves.

Installation;

CABLE INLET

Single-gang box
Low voltage wire cable inlet
AC power line inlet

Main Unit
Inside view
Front cover
Screw holding cover
Power switch

Mounting bracket
Communication, video (low voltage)
AC power lines
Single-gang box(2)
Hook(2)
Screw(4)

Center line
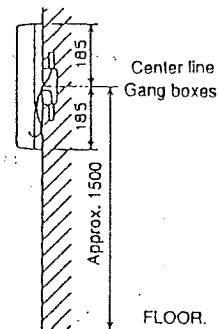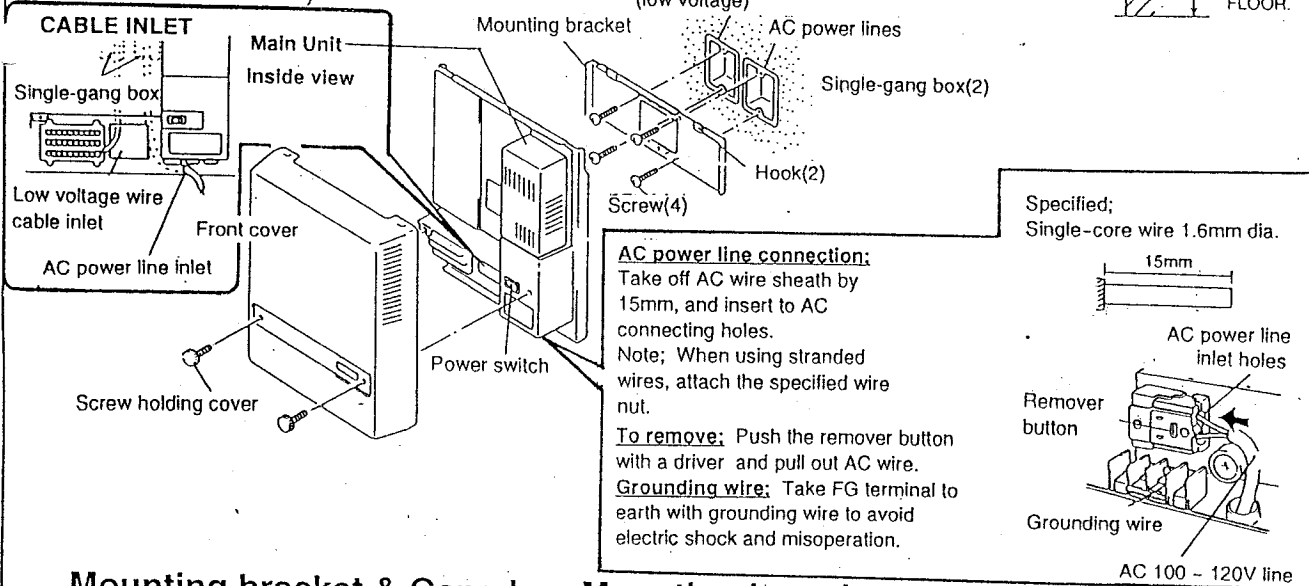Gang boxes
185
185
Approx. 1500
FLOOR.

AC power line connection;
Take off AC wire sheath by 15mm, and insert to AC connecting holes.
Note; When using stranded wires, attach the specified wire nut.
To remove; Push the remover button with a driver and pull out AC wire.
Grounding wire; Take FG terminal to earth with grounding wire to avoid electric shock and misoperation.

Specified;
Single-core wire 1.6mm dia.
15mm
AC power line inlet holes
Remover button
Grounding wire
AC 100 ~ 120V line

Mounting bracket & Gang box Mounting Locations;

(1) When a separator is not provided;

MOUNTING BRACKET
94
SINGLE-GANG BOX(2)
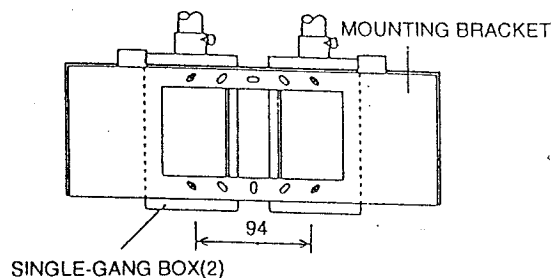
(2) When a separator is provided;

Mounting bracket
Separator   2~3-gang box
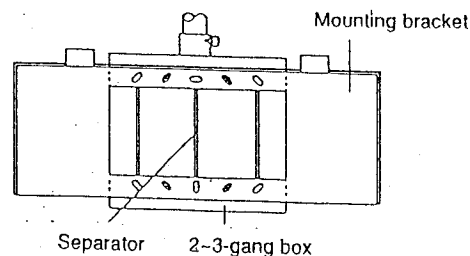
When connecting both AC 100~ 120V lines and low voltage lines in the same box, provide a separator to divide.

Electrical Facilities Technical Standard   Article 204, Item 3- 1

Provide a rigid separating wall between AC in-house wires and low voltage wires in the gang box earth-grounded at the metallic part, so that both wires would never touch each other.
If the box and a separator is non-metallic(insulator), there is no need to take the box to earth-ground.

Installation;

(1) Wall-mounting;

Replace the desk-top knob with wall-mount knob.

Wall-mount knob

Knob

Remove by a coin.

Front case fixing screw(2)

Wall-mounting screw

Sub-chassis wall-mounting screw(4) (supplied)

2-GANG BOX

Front case

Attach the sub-chassis upside down, when wall-mounted.

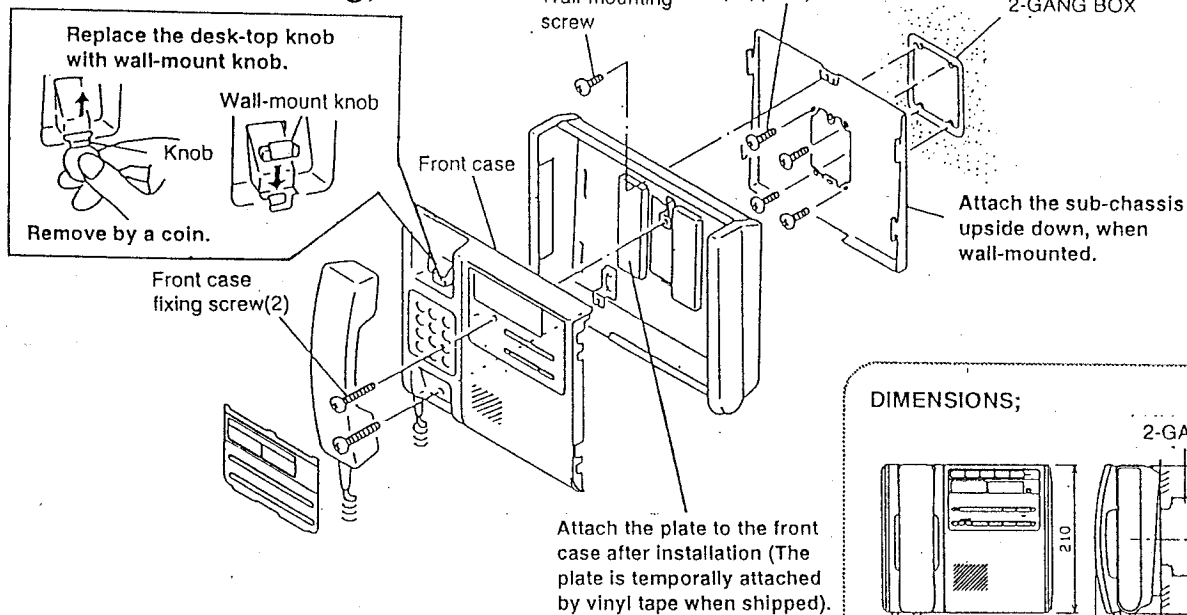Attach the plate to the front case after installation (The plate is temporally attached by vinyl tape when shipped).

(2) Desk-top installation;

0.9mm 2P(3P) twisted pair cable

Security Guard station unit

The sub chassis may remain unchanged.

DIMENSIONS;

2-GANG BOX

210   105

105

245   98

DIMENSIONS;

210

245   98

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* **For wiring connections, remove front case in both wall and desk-top mounting.**

To remove the front panel;
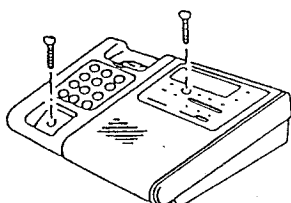
Remove 2 screws, lift the front case and unplug connectors.

To remove the sub-chassis;
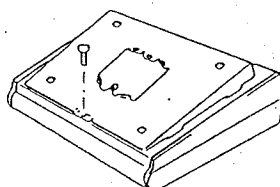
Unscrew at one point on back of the chassis, and turn the chassis upside down and mount onto the gang box. *(only for wall-mounting)*

Accessories;
* Operation Manual(1)
* Hook-knob for wal-mounting(1)
* Screw for mounting chassis to sub chassis(1)
* Wood screw for mounting sub chassis to wall(1)

Video Adaptor(VGX-VU)

Installation;
* The video adaptor must be installed outside the residence for maintenance reason.
* Select a location where the video adaptor is not exposed to rain, etc.

VGX-VU

Single-gang box
(w/mud ring)

Terminal base

Terminal section

ain unit

Screw(2)

Connector

Fixing screw

Accessories;
* Screw(2)
* Wood screw(2)
* Shorting link(1)

Wiring;
From; Trunkage line
(from control unit, preceeding residence)

R1 R2 VO EO B1 B2

Video adaptor
VGX-VU

R1
R2
VO
EO
A1
A2
B1
B2
END

R1 }
R2 } To; Residential
+ station
-
A1 } To; Video monitor
A2

R1 R2 VO EO A1 A2
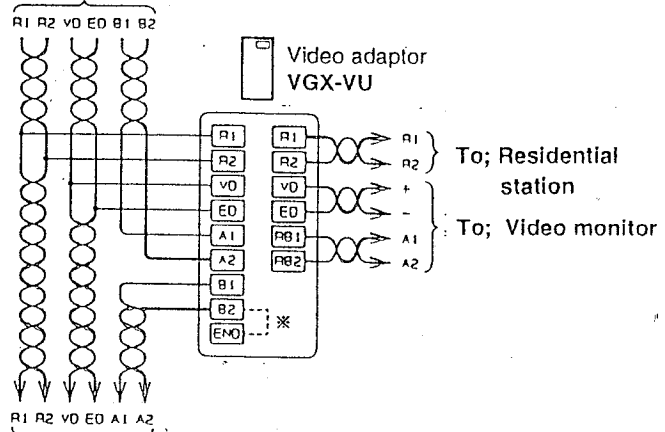
To; Next residence

* Only for the last video adaptor(there is no next adaptor),
The B1 and B2 terminals remain unconnected, For all other
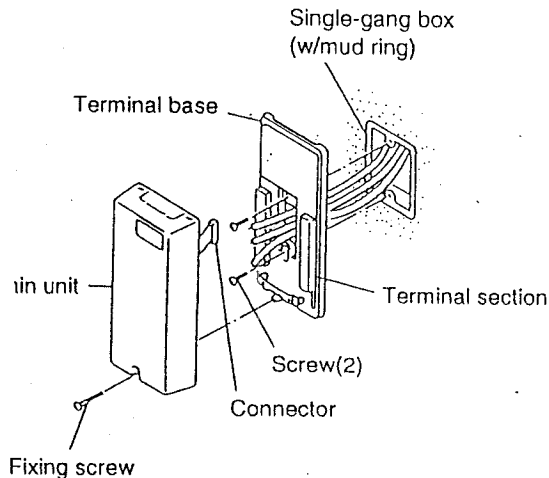video adaptors make a short between terminals B2 - END
with the supplied shorting link.

Residential Number Setting(VG-2G/VG-2A)

* The VGX Condominium Entry Security System needs parallel wiring, and
residential station number setting must be made at each residential station.
Refer to the supplied RESIDENTIAL STATION NO. & SWITCH SETTING TABLE.

Switch setting;
(1) The setting switch is located on back of the
residential station.When shipped, all the
switches are set to lower OFF position(00).
(2) Set the DIP switch with ball-point pen, etc.

ON
1 2 4 8 1 2 4 8

INITIAL
POSITION

First digit of Room
number(1 ~ 15)

Second digit of
Room number
(1 ~ 15)

Residence number
setting switch

Example;
To set residence number 0513;

ON
1 2 4 8 1 2 4 8
1+4 1+4+8
0   0
05   13

ROOM NO.(   )

Fill in room number here.
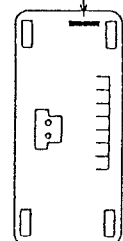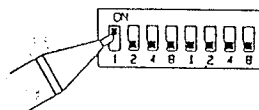
BACK VIEW
RESIDENTIAL
STATION

Setting for Entrance Station Capacity

1. Entrance Station Number Setting;

VGX system allows connection of max. 4 main entrance stations.

Setting must be made according to the number of entrance stations and types (with or without cameras).

Upon shipment, each entrance station is so programmed as matched with the system configuration. Please check upon installation. If necessary, change the setting accordingly.

On back of the front panel, the setting mode is clearly marked with ○ on the table.

The following 2 items can be programmed(changed) by the switch setting.

(1) Security guard station calling by pressing ⊗ button*(set to VOID upon shipment).*

(2) Security guard station dial number(100 or 1000).*(set to 100 upon shipment).*

2. Switch Location

(1) Remove the front panel.

Loosen panel-fixing screws.

Front panel

Front panel back view

Cover   SETTING TABLE
(upon shipment)
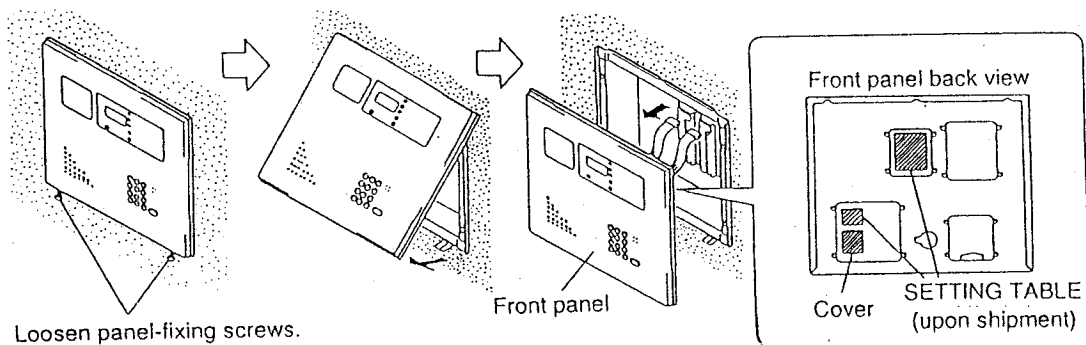
(2) Remove the switch cover.

Reset switch   Switch 103

ON
1 2 3
SW103

ON
1 2 3 4
SW102

LOW / HIGH   SW102

Speaker volume control   Switch 102

(3) Replace the cover after switch setting is completed.

Cover
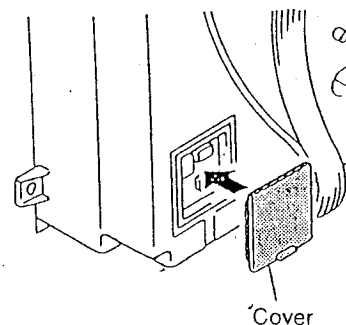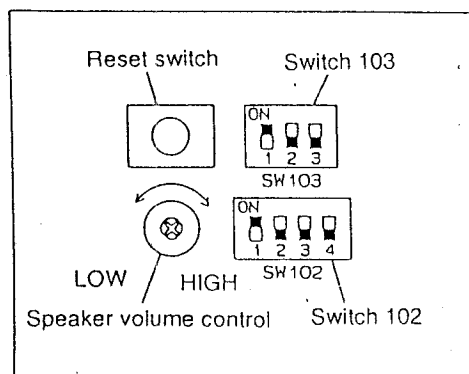
Main Entrance Station (VGX-DB ○○ series)

⌐ 3. Switch setting;

(1) Type of Main Entrance Station;

Proceed with setting switches 102 & 103 following questions below.
At security guard station, etrance station No.(1 ~ 8) and type of audio/video or audio only can be programmed.

Notes; * The number of main entrance stations installed does not correspond with the number of calling main entrance station displayed at security guard station.
   * After setting alteration, be sure to press RESET switch.

Set for each Main Entrance Station.		Calling entrance station number on display (SW102)	Video or Audio only (SW103)	Entrance station number on Security display
1st station?	With video			1
	w/o video			2
2nd station?	With video			3
	w/o video			4
3rd station?	With video			5
	w/o video			6
4th station?	With video			7
	w/o video			8

3. Switch setting;

(2) Setting for calling Security Guard station with CALL button ⊗ ;

1. To make ⊗ button dialing void;

Pre-set mode

| SW103 |
| 1   2   3 |

Set SW1 to ON.
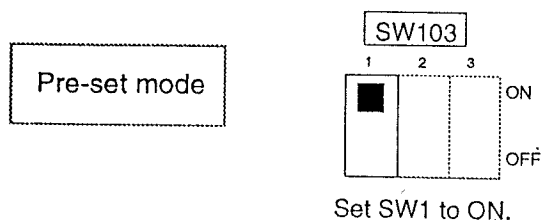
When the ON/OFF mode has been changed, be sure to press RESET switch

2. To make ⊗ button dialing operational;

| SW103 |
| 1   2   3 |

Set SW1 to OFF.
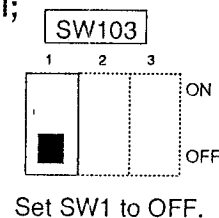
(3) Setting for Security Guard station No. 100 or 1000;

Programs the Security Guard station number so as to be dialed with 10-key pad.
This dialing is effective also when ⊗ button is set to ON.

1. To set a number to 100;

Pre-set mode

| SW103 |
| 1   2   3 |

Set SW2 to OFF.
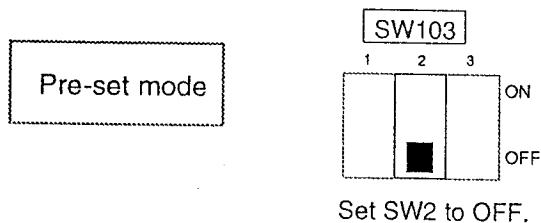
When the ON/OFF mode has been changed, be sure to press RESET switch

2. To set a number to 1000;

| SW103 |
| 1   2   3 |

Set SW2 to ON.
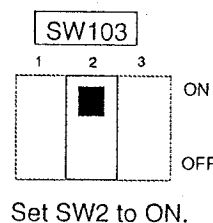
(4) Adjustment of open voice speaker volume when acoustic feedback occurs;

When acoustic feedback occurs
at Main Entrance station, turn the
speaker volume control counterclockwise.

LOW   HIGH

VOLUME

SPEAKER VOLUME
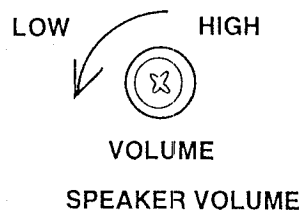
Central Control Unit (VGX-3K)

Door release activation time & Secret Number setting;

Be sure to turn off power, and remove the cover.
Turn on power after all programmings are completed.

Secret Number Setting

Program 4-digit secret numbers.

To set secret number for 2023;
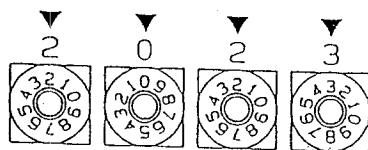
Door release activation time setting

The activation time can be programmed in a range from 1 to 60 seconds in 1-second intervals.

To set time for 15 seconds;

2 0 2 3   1 5
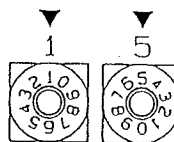
SECRET NUMBER 1   TIMER 1

暗 証 番 号 1   タイマー1

X C-173A
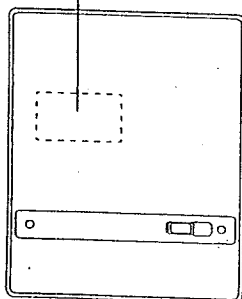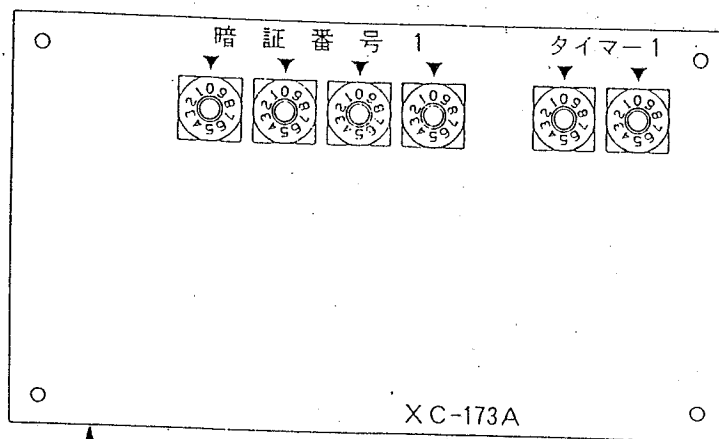
* When door release activation by secret number is not used;
Set secret number to 0000.
Set activation time to any arbitrary time.
(It is possible to activate door release from Security Guard station and Residential station).

* When door release function is not used;
Set activation time to 00 (second).

Post-installation check(Operations)

* All the communications are cut off in approx. 3 minutes.
  After all the wirings are completed, proceed with the following
  system operation checks.

Residential Station;

Receiving a call from Residential Door Station;
4-stroke electronic chime sounds, and visitor call LED(yellow green) flashes(or is lit). While the visitor call LED flashes(is lit), pick up handset and communciate.

Receiving a call from Main Entrance station;
2-stroke electronic chime sounds, and visitor call LED(red) is lit and the image appears on the video monitor. While the visitor call LED flashes(is lit), pick up handset and communicate.

Receiving a call from Security Guard station;
Incoming call is annunciated by Ding-Dong Ding chime.
Simply pick up handset to reply.

Calling Security Guard station;
Pick up handset and press SECURITY CALL button.
Talk after the Security Guard station replies.

Activating electric door release;
While communicating with Main Entrance Station, press DOOR RELEASE button.
Door release activation LED is lit on Main Entrance station, and the door release gets activated during a timer-programmed period of time(door release can only be activated during communciation with main entrance station, to avoid mis-operation).

Panic alarm(only in VGX-GVP system);
Firmly depress PANIC ALARM button. The alarm is transmitted.
To stop the signal, remove the cover.
Push the cover from the back to its original position and replace the cover.

Function	Residential station	Residential door station		Security Guard station	
	Alarm signal	Indicator	Alarm signal	Indicator	Alarm signal
Panic alarm	Pipo, Pipo	Flashing	Pipo, Pipo	Red LED & room number on display	Wow, wow

Note;
While communicating with Residential door station, incoming call tone from Security Guard or Main Entrance station sounds softly. Momentarily hang up handset to reply to Security Guard or Main Entrance station's call.

Main Entrance station(VGX-DB series)

Calling the Residential station;

Dial the Room number on 10-key pad, and see the number on digital display.
Then, press CALL button. When the residential station replies, the displayed number
goes off and communicate handsfree.

If there is no corresponding number, E appears on the digital display.
Press CANCEL button and redial.

Activating electric door release;

First press CALL button, and dial the secret number on 10-key pad(there is no number on
display). If wrongly dialed, press CANCEL button and redial.
If the secret number is correctly dialed, DOOR RELEASE activation LED is lit and the
activation is started. If not correct, E appears on the display.

Calling Security Guard Station on 10-key pad;

Press 100 or 1000 on 10-key pad, the number appears on the display(as programmed).
Press CALL button, and the number goes off when the Security Station replies and
communciate handsfree.

Calling Security Guard station with ⊗ button;
(when programmed for calling with ⊗ button)

Press ⊗ button, and 100 or 1000 appears on the display(as programmed).
Press CALL button, and the number goes off when the Security Guard station replies and
communicate handsfree.

Security Guard station

Receiving a call from Residential station;
A call-in from a residence is annunciated by intermittent electronic tone and
digital number on the display. See the calling room number, and pick up handset to reply.

Calling each Residential station;
Pick up handset, and dial a Room number (3~4-digit) and see the number on the display.
Press CALL button, and communicate when the Residential station replies.
When a busy tone is heard, the Main Entrance station is communicating with the
Residential station. Call later.
If the dialed number is not programmed, E appears on the display.

Activating door release;
While communicating with Main Entrance station, press DOOR RELEASE button.
The activation indicator LED is lit on Main Entrance station, and the door release gets
activated during a timer-programmed period of time (The door release activation is only
effective while communciating with Main Entrance station).

Receiving PANIC ALARM signal (in VGX-GVP system only);
When PANIC ALARM signal is transmitted from a Residential station, alarm signal starts and
the indicator LED is lit, as well as the Room number is shown on the display.
Press SIGNAL STOP button to mute, but the Room number remains.
After pressing SIGNAL STOP button, you may press ALARM RESET button. The Room
number goes off, if the PUNIC button ie released at the initialing station.

If the multiple alarm signals have been received at the time, NEXT ALARM indicator LED is lit.
Press SIGNAL STOP button, and alarm-originating station numbers are shown consecutively
(Max. 20 numbers can be received).

Room number will be shown also by ALARM RESET button, but the number will be released
when displayed.

Wiring

Block 1

VG-2G-6-E

2P(3)

2

3

PS-24N

2P(3)

QF-DK

Block 2   Block 3

2P(3)   2P(3)

VGX-3K

2P   2P   2P   to sub

to next
Panel

VGX-DB(L)-E

VGX-MKA-IS-E

VG-2A-6-E

Trunk

VG-2A-6-E

2P(3)

R1
R2

IF-DA

D1
E1

1
2

S
E2   to IER-2

PS-24N

+
−
G   Red
Black

R11
R12
−

VGX-3K   Use R21, R22 for 2nd Trunk, R31, R32
for 3rd Trunk.

VG-2G-6-E

Trunk

VG-2G-6-E

2P(3)

R1
R2

QF-DK

D1
E1
AL

1
2
3

S
E2
K   to IER-2

Panic
Alarm
button

PS-24N

+
−
G   Red
Black

R11
R12
−

VGX-3K   Use R21, R22 for 2nd Trunk, R31, R32
for 3rd Trunk.
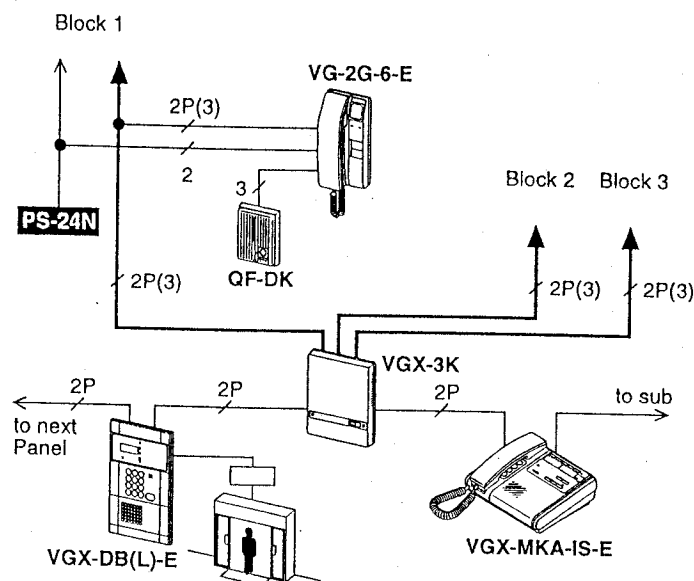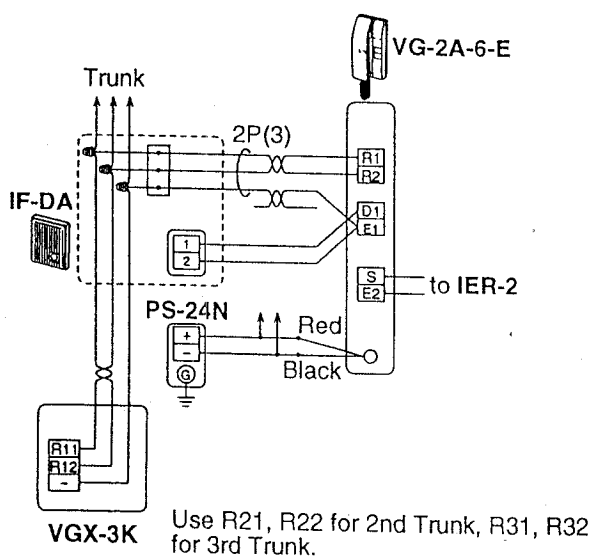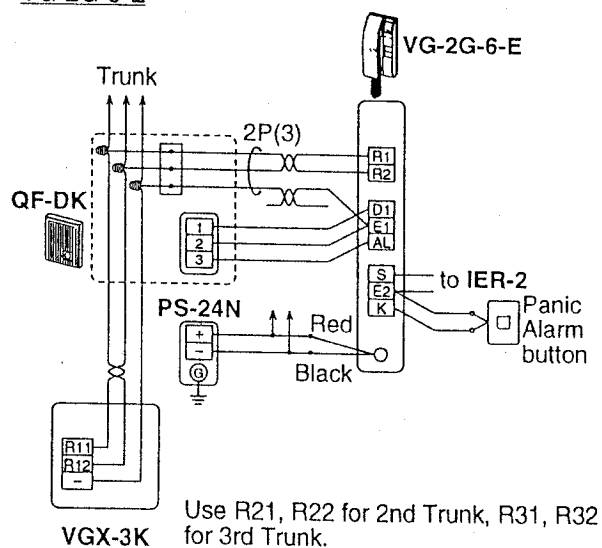
Wiring diagram(audio); Trunkage Line Connection

Trunkage Line Connection

Trunk to Residences
1   2   3

Entrance Panel

VGX-DB(L)-E

DL1 — DL1 R11   R21   R31
DL2 — DL2 R12   R22   R32
+ — +
− — −

Auto
door   EL
control EL

(FG)

Security station

KL1 — KL1
KL2 — KL2
+ — +
− — −

(FG)   (FG)

VGX-3K   **VGX-MKA-IS-E, etc.**

Entrance Station Connection

VGX-DB(L) **VGX-DB(L)** **VGX-3K**
        2P   2P   2P

DL1   DL1   DL1
DL2   DL2   DL2
+   +   +
−   −   −
EL   EL
EL   EL

To Auto (FG) To Auto (FG) (FG)
Door   Door

Security Guard Station Connection

VGX-3K   **VGX-MA-N-E**   **VGX-S-N-E**
        2P   2P

KL1   KL1   KL1
KL2   KL2   KL2
+   +   +
−   −   −
           SP+
           SP−

(FG)   (FG)   (FG)
           IER-2

Wiring

Trunk 1

VGX-VU — VG-2A-6-E (or VG-2G-6-E) MY-VU — 30

VGX-VU — 2 / 3P — 3

VGX-VU — 2 / 3P — 2

VGX-VU — 2 / 3P — 1

PS24

Max. distance allowed for monitor power supply
150m

1P / 2P

VGX-3K   VGX-MC

VG-2A-6-E w/ MY-VU

VGX-VU   VG-2A-6-E   MY-VU

R1
R2
RB1
RB2   A1
VD   A2
ED   +
       −
       TV+ TV+
IF-DA TV− TV−   IER-2
       D1
1   E1
2   E2
PS-24N S   1
       Red (+)   E
PS24   Black (−)

VG-2G-6-E W/MY-VU

VGX-VU   VG-2G-6-E   MY-VU

R1   R1
R2   R2
RB1   A1
RB2   A2
VD   +
ED   −
            TV+ TV+
            TV− TV−   IER-2
QF-DK   1   D1
        2   E1
        3   AL   1
            S   E
PS-24N   E2
            K   Panic
       Red (+)   Alarm
PS24   Black (−) Button

Trunkage Line Connection

Trunk Cable

Audio | Video | (max. /5)

VGX-VU

B1	B2	END
R1		
R2		

RED
BLACK
VG

R1 — R1
R2 — R2

VD	
ED	
RB1	
RB2	

VD — +
ED — −
RB1 — A1
RB2 — A2

MY-VU

| R1 | R2 | VD | ED | A1 | A2 |

RED
BLACK
VG

VGX-VU

B1	B2	END
R1	
R2	

R1 — R1
R2 — R2

VD	
ED	
RB1	
RB2	

VD — +
ED — −
RB1 — A1
RB2 — A2

MY-VU

| R1 | R2 | VD | ED | A1 | A2 |

| + | − | G | **PS24** |

| R11 | R12 | VD | ED | 1B1 | 1B2 |

VGX-3K   VGX-MC

Entrance Station Connection

2P

VGX-DB(L)M | VGX-DB(L)M

2P

VGX-3K | VGX-MC

2P

2 | 1 | 2P

2P

| A1 |
| A2 |
| T4 |
| E |

| 2A1 |
| 2A2 |
| 2T4 |
| 2E |

| A1 |
| A2 |
| T4 |
| E |

| 1A1 |
| 1A2 |
| 1T4 |
| 1E |

| DL1 |
| DL2 |
| + |
| − |

| DL1 |
| DL2 |
| + |
| − |

| DL1 |
| DL2 |
| + |
| − |

| EL |
| EL |

| EL |
| EL |

To Auto Door   To Auto Door

Video distributor connection

Use Video distributor, VD-2Y, when connect more than 30 residence on each trunkage line

Calculate line loss of video distributor, video adaptor and line resistance.
VGX line loss **must not exceed 36.25dB** per trunkage line.

Trunk

3.5 dB ↑ ↑ 3.5 dB

VD-2Y

0.5 dB

12.0 dB

VGX-VU

VG &
MY-VU

Line loss calculation
- Line loss: 0.065dB/m
- Through VGX-VU: 0.5dB on trunk line
                              12dB on Monitor line
- Through VD-2Y: 3.5dB
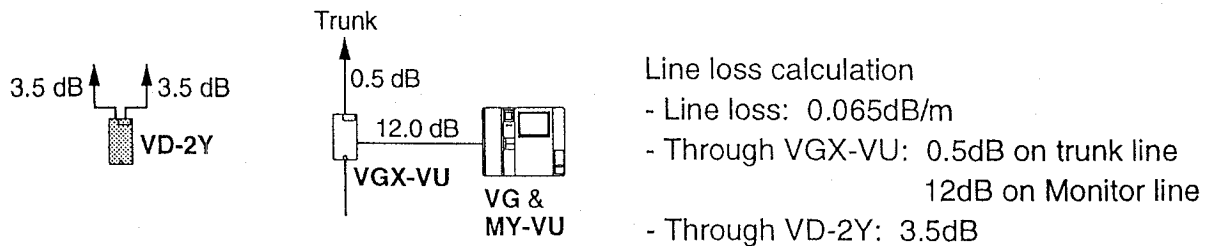
Three VD-2Y's to install 64 VGX-VU's per line (max. 192 stations).

VGX-VU

To
VGX-VU's

(※)

VD-2Y

VGX-MC

F

1

Block 1

max.
150m
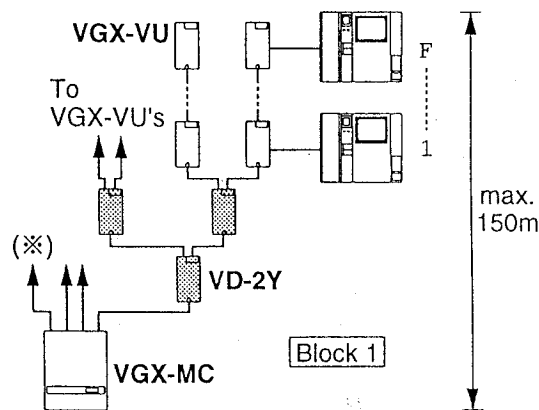
Video distributor connection

Basic wiring block diagram;

Max. 20 residences   Max. 20 residences

1st TRUNKAGE LINE   2nd TRUNKAGE LINE

3 TWISTED PAIR CABLE (CPEV) 1.0MM

VD-2Y VIDEO DISTRIBUTOR

2   4

R1, R2

AC100V

VIDEO CONTROL UNIT
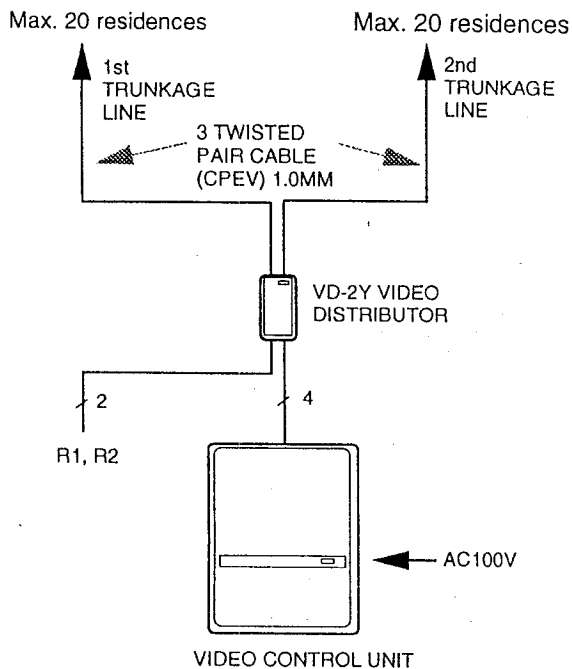
Video distribution to max. 40 residences per block;

Max. 20 residences   Max. 20 residences

1st TRUNKAGE LINE   VD-2Y VIDEO DISTRIBUTOR   Distributed trunkage line

VIDEO CONTROL UNIT ((for each block)
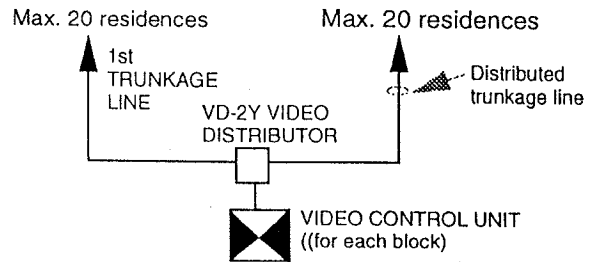
Video distribution to max. 192 residences in 3 blocks;

Max. 64 residences   Max. 64 residences   Max. 64 residences

16 16 16 16   16 16 16 16   16 16 16 16

32   32   32   32   32   32

VD-2Y VIDEO DISTRIBUTOR

Wiring diagram;

VIDEO CONTROL UNIT VGX-MC

VIDEO DISTRIBUTOR VD-2Y

BLOCK 1

A1
A2

BLOCK 1 - 1

1B1
1B2
VD
ED

1B1
1B2
VD
ED
R1
R2

A1^
A2^
+ ^
- ^
R1^
R2^

R1
R2

BLOCK 2 AND BLOCK 3 CAN ALSO BE DISTRIUBTED TO 2 SUB BLOCKS.

BLOCK 1 - 2

2B1
2B2
VD
ED
R1
R2

A1^
A2^
+ ^
- ^
R1^
R2^
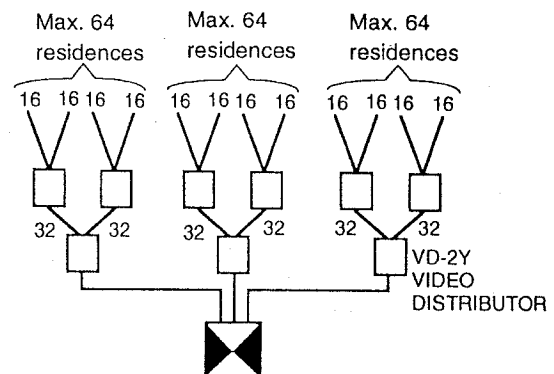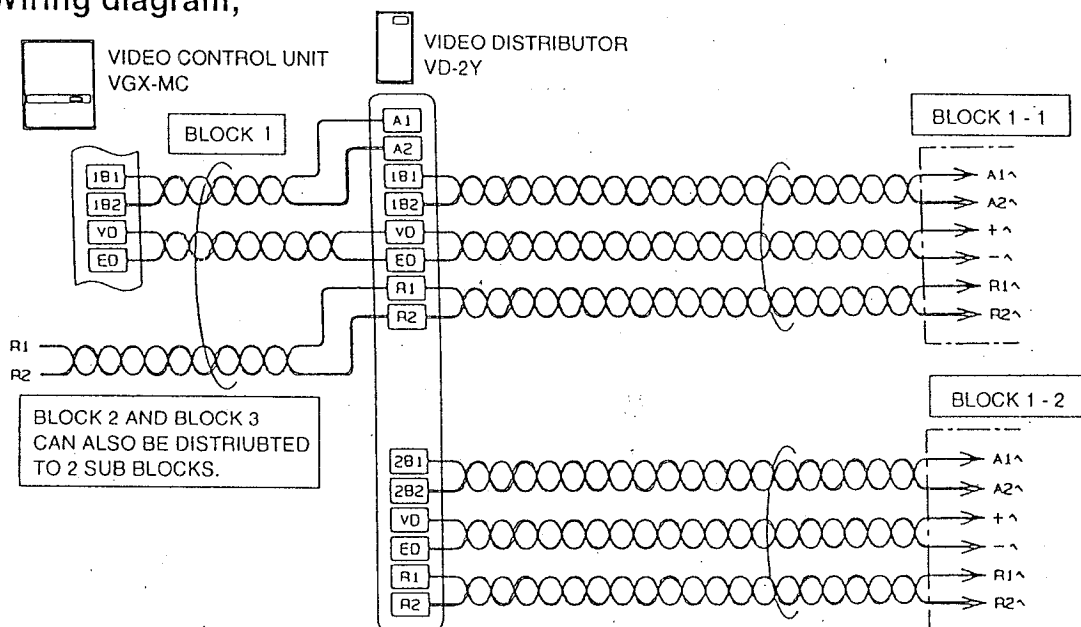
Installing Video Monitor to Security Guard Station;

VIDEO CONTROL
UNIT VGX-MC

SECURITY GUARD
STATION

VIDEO MONITOR
MY-VU

U1
E

VD
ED
4B1
4B2

TV+
TV-
+
-
A1
A2
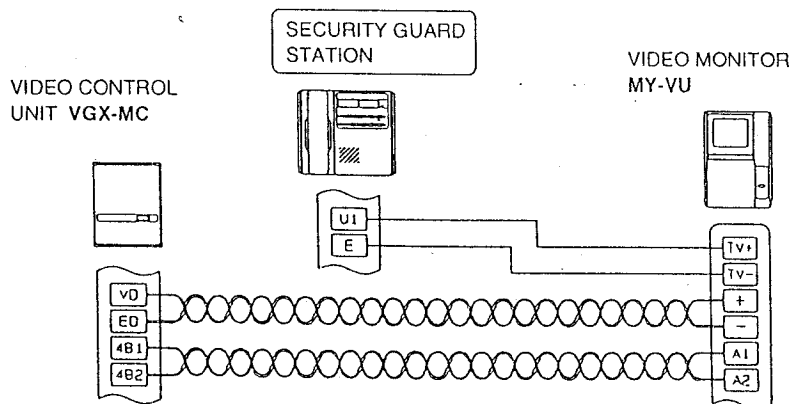
When installing a video monitor to sub security guard station;

VIDEO CONTROL
UNIT VGX-MC

SECURITY GUARD
STATION

VIDEO MONITOR
MY-VU

U1
E

VD
ED
4B1
4B2

TV+
TV-
+
-
A1
A2

VIDEO
DISTRIBUTOR
VD-2Y

2B1
2B2
A1
A2
1B1
1B2

A video monitor can be
installed at sub security
guard station, using a video
distributor VD-2Y and a
power supply PS-18C, 18D.

SUB SECURITY
GUARD STATION

VIDEO MONITOR
MY-VU

U1
E

TV+
TV-
+
-
A1
A2

+
-
G

AC

GROUNDED

POWER SUPPLY
PS-18D or PS-18C

Specifications

Power source	Central Control unit .... AC 100 ~ 120V, 50/60Hz. Video Control unit .... AC 100 ~ 120V, 50/60Hz. Main Entrance station ...... DC 12V, supplied from control unit. Video adaptor .... DC 12V, - do - Security Guard station ..... DC 12V, - do -
Power consumption Current consumption	Central Control unit .... Max. 28W Video Control unit .... Max. 65W Main Entrance staiton ...... Max. 400mA, 100mA(standby) Video adpator .... Max. 30mA Security Guard station ..... Max. 800mA, 60mA(standby)
Calling	Residential door station to Residential station; **4-stroke electronic chime** (w/volume control) and LED flashing or lit for approx. 45 seconds. Main Entrance station to Residential station; **2-stroke electronic chime** (w/volume control) and LED flashing or lit for approx. 45 seconds. Security Guard station to Residential station; **Chime tone (Ding-dong, ding)** Residential station to Security Guard station; **Intermittent** electronic tone & **Room number** on display Main entrance station to Security Guard station; **2-stroke electronic chime** (w/volume control)
Wiring	Central control unit to Main entrance station; **2 twisted pairs, 1.0mm dia.** Video control unit to Main entrance station; **2 twisted pairs, 1.0mm dia.** Central control unit to Security guard station; **2 twisted pairs, 1.0mm dia.** Central control unit to Residential station; **1 twisted pairs, 1.0mm dia.** Video control unit/Central control unit to Residential station/Video adaptor; **3 twisted pairs, 1.0mm dia.**
Wiring distance	Central control unit to Main entrance station; **Max. 50m** with cable(type CPEV) 2(or 3) twisted pairs, 1.0mm dia. Central control unit to Security guard station; **Max. 50m** with cable(type CPEV) 2(or 3) twisted pairs, 1.0mm dia.
Trunkage line max. extended distance	Audio system; **Max. 1000m.** Audio/Video system; **Max. 1000m,** **Max. 150m from video control unit to the farthest monitor.**
Station capacity	3-wiring block Central Control unit ... Max. 64 Residential stations per block. max. 192 Residential stations in entire system.