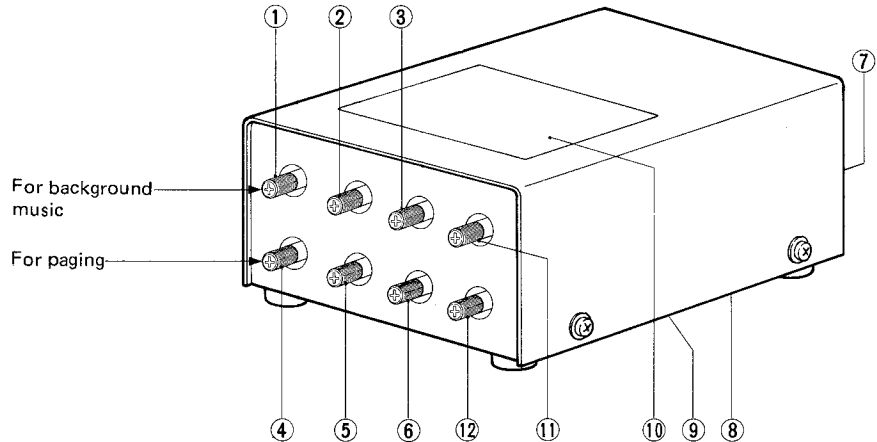
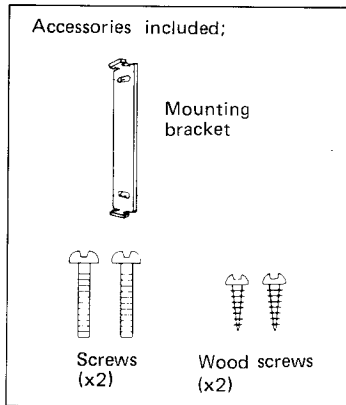


# TALKBACK PAGING ADAPTOR

**MODEL:**
**PD-2**

 Talkback paging adaptor, 1 zone  
for TD-H & TD-Z systems

## INSTRUCTIONS



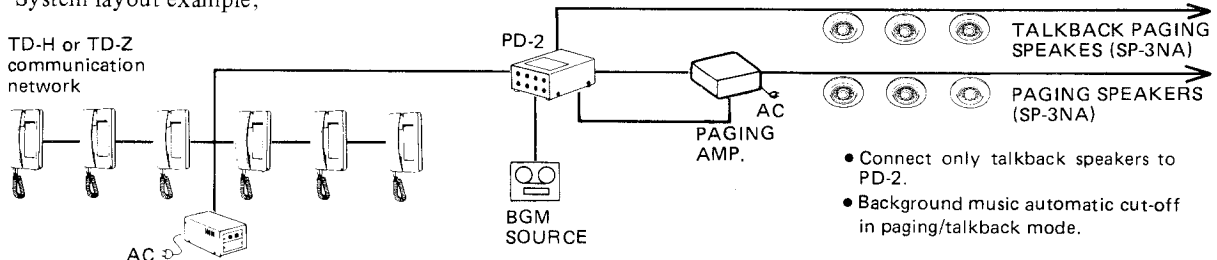
## 1 NAMES AND FUNCTIONS

- |                  |                        |   |
|------------------|------------------------|---|
| ① Volume control | } for background music | ⑦ Terminal block  |
| ② Bass control   |                        | ⑧ Pre-tone volume control (bottom)                                      |
| ③ Treble control |                        | ⑨ Connection diagram label  |
| ④ Volume control | } for paging           | ⑩ Control identification label  |
| ⑤ Bass control   |                        | ⑪ Talkback volume control   |
| ⑥ Treble control |                        | ⑫ Talkback noise control (to tune out or reduce line noise on talkback) |

## 2 FEATURES

- \*Provides a zone page with talkback for Aiphone's TD-H and TD-Z systems.
- \*Multiple paging zones with talkback may be established. A station capacity must be deducted for each talkback paging zone.
- \*One PD-2 adaptor suffices for talkback paging. PD-1 is not required.
- \*Individual volume and tone controls for background music and paging.
- \*Pre-tone prior to paging announcement to draw people's attention.

### \*System layout example;



- Connect only talkback speakers to PD-2.
- Background music automatic cut-off in paging/talkback mode.
- Any master station can initiate a paging and receive a reply from talkback speakers.
- PAGE button conveniently located in handset. Push to page, and release to listen.

# 3

## BEFORE YOU INSTALL AND OPERATE THE EQUIPMENT — Prohibitions and precautions —

### \* Installation;

1. Do not attempt to install your PD-2 adaptor until you have read and thoroughly understand the installation procedure. Requirements indicated under SPECIFICATIONS on Page 6 of this Manual must be met. Aiphone's warranty for the adaptor and the system is void if adaptor is installed in a manner other than described in this manual.
2. DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.
3. Select the installation locations that would not be exposed to temperature/humidity extremes, water, oil, dust, iron dust, inflammable & chemical products, etc.
4. Be sure not to plug power supply into AC receptacle until you complete wiring connections, and unplug before opening the unit.

### 5. General notes on paging equipment installation;

- ① Wiring from **[M]** , **[G]** and **[A]** terminals (PD-2) to BGM source and paging amplifier input;  
Use shielded wires and locate PD-2 adaptor(s) as close as possible to the amplifier and BGM source.
- ② Wiring on **[V]** **[V]** , **[S]** **[S]** on PD-2;
  - (1) Use either 70V or 100V (or 25V in North America) constant voltage output of amplifier for speaker line and connect paging speakers in parallel.
  - (2) Keep speaker line at least 50 cm (20") away from communication line and from amplifier input line and BGM source output line.  
If speaker line runs closely with the above lines, use a shielded single pair wires.
  - (3) The two speaker lines for paging speakers, directly connected to **[V]** **[V]** terminals, and talkback speakers, connected to **[S]** **[S]** terminals, must be shielded cables or kept apart from each other as much as possible.
  - (4) The total input of talkback speakers must not exceed 50W on either 25V, 70V or 100V line.
  - (5) The talkback speaker line **[S]** **[S]** on the PD-2 should be connected to only speakers which are required talkback, in order to minimize the number of speakers on the line. Large number of speakers for the talkback line may deteriorate talkback sound quality due to accumulated ambient noise from each speaker.
  - (6) If all speakers are connected on talkback speaker line **[S]** **[S]** , the amplifier will have no-load in talkback mode. Therefore, it is recommended to install some speakers for paging only on **[V]** **[V]** terminals or a dummy resistor equivalent to 20 to 30% of the rated amplifier output.
- ③ It is recommended that **[AUX]** terminals be used for amplifier input.  
If **[PHONO]** input is used, the sound quality of both paging and BGM would deteriorate due to the RIAA equalizing circuit that is normally used in **[PHONO]** input circuitry.  
In case **[PHONO]** input must be used, make tone adjustment on PD-2 adaptors, taking the above into account.
- ④ It is suggested that PD-2 adaptors should be installed near the center of the system, along with power supply PS-12A (or PS-12C).  
However, PD-2 must be kept more than 20 cm (8") away from PS-12A (or PS-12C) to avoid inductive noise.

### \* Unit selection;

1. Installation of a paging zone deducts a station capacity in TD-H or TD-Z systems.
2. If talkback is required, select a PD-2 adaptor. PD-1 adaptor is not required.

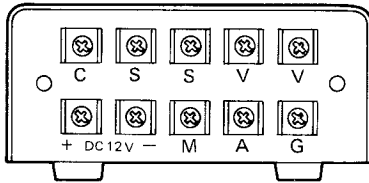
### \* Operation;

1. On TD-H station, do not depress more than one number buttons each assigned for paging zone.
2. Do not depress number buttons for (talkback) paging zone and communication simultaneously. It may cause an incomplete paging announcement to be and high-pitched noise to come out from the speakers.

# 4

## INSTALLATION

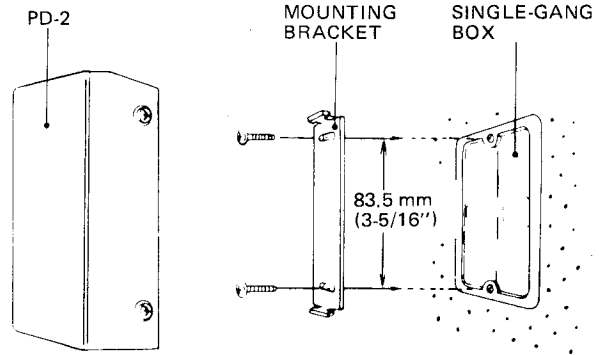
### (1) ACTUAL TERMINAL LOCATION;



- C** : for paging input and zone selection.
- S**, **S** : for connecting to the paging speakers.
- V**, **V** : for connecting to the amplifier output.
- +**, **-** : for connecting to power supply PS-12A (or PS-12C).
- M**, **G** : for connecting to music output.
- A**, **G** : for connecting to the amplifier input.

### (2) WALL-MOUNTING INSTALLATION;

PD-2 is shipped with the mounting bracket. Attach the mounting bracket to single-gang box or to wall/rack, with the supplied screws. Insert the prongs of the bracket into the holes on back of the adaptor and pull the body downward.



### (3) PAGING SPEAKERS INPEDANCE-MATCHING;

\*Determine the number of the speakers and output power for each so that the total of required power for the speakers will be equal or less than the rated output power of the amplifier.

\*Impedance matching table (Example);

Model	Rated input	Impedance	speaker input		Terminals
			100 V line	70 V line	
SP - 3NA	3 W	10 K ohm	1 W	0.5 W	0 - 3
		5 K ohm	2 W	1 W	0 - 2
		3.3 K ohm	3 W	1.5 W	0 - 1

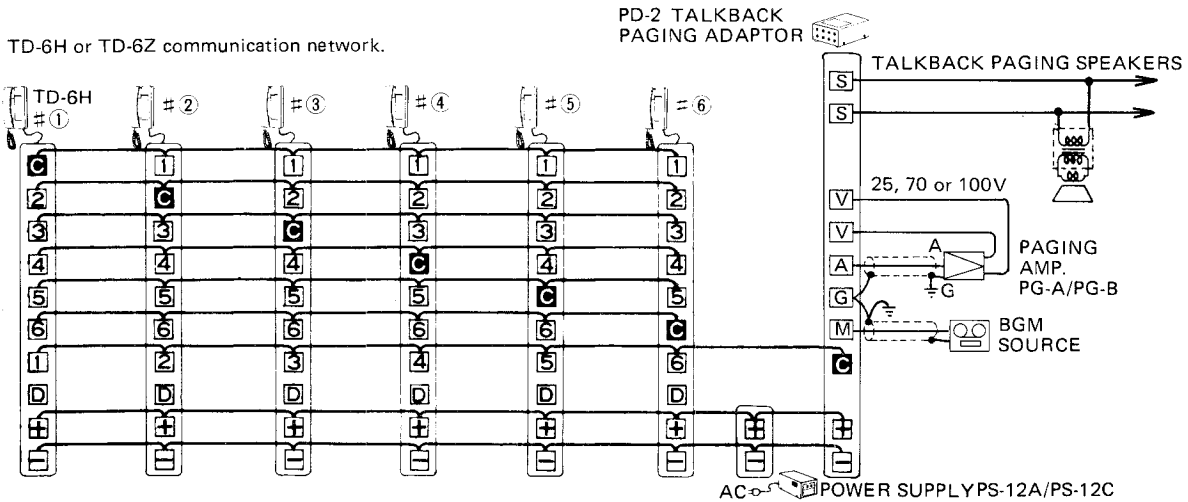
### (4) ADJUSTING CONTROLS;

Upon completing all the wiring connections, proceed with the following steps before turning the system on.

1. Set PD-2 adaptor VOLUME, TREBLE & BASS controls (and of paging amplifier and BGM source, if included) at MIDPOINT.
2. Set also TALKBACK VOLUME & NOISE controls at MIDPOINT.
3. Turn on power supply PS-12A (or PS-12C) of TD-H or TD-Z system, paging amplifier & BGM source.
4. Initiate paging or talkback operations (prior to BGM control adjustment).
5. Adjust paging VOLUME control on PD-2 to achieve desired level. Fine tune paging TREBLE & BASS controls on PD-2. In places where a TD-H/TD-Z station is located near the paging speakers, feedback might take place if the paging volume is too high.
6. By PD-2 noise control, tune out or reduce interference on talkback only created by line induction and then adjust talkback volume.  
NOTE: When adjusting talkback level we recommend having a radio playing or an assistant available in the talkback paging zone to facilitate proper volume adjustments.
7. Adjust PD-2 background music VOLUME control to achieve desired background music level.  
Fine tune background music TREBLE & BASS, while listening to the background music. Adjust background music VOLUME, TREBLE & BASS controls on BGM source, if included.

# 5

## LAYOUT EXAMPLE AND WIRING DIAGRAM (1) TD-H/TD-Z SYSTEM WITH ONE PAGING ZONE WITH TALKBACK

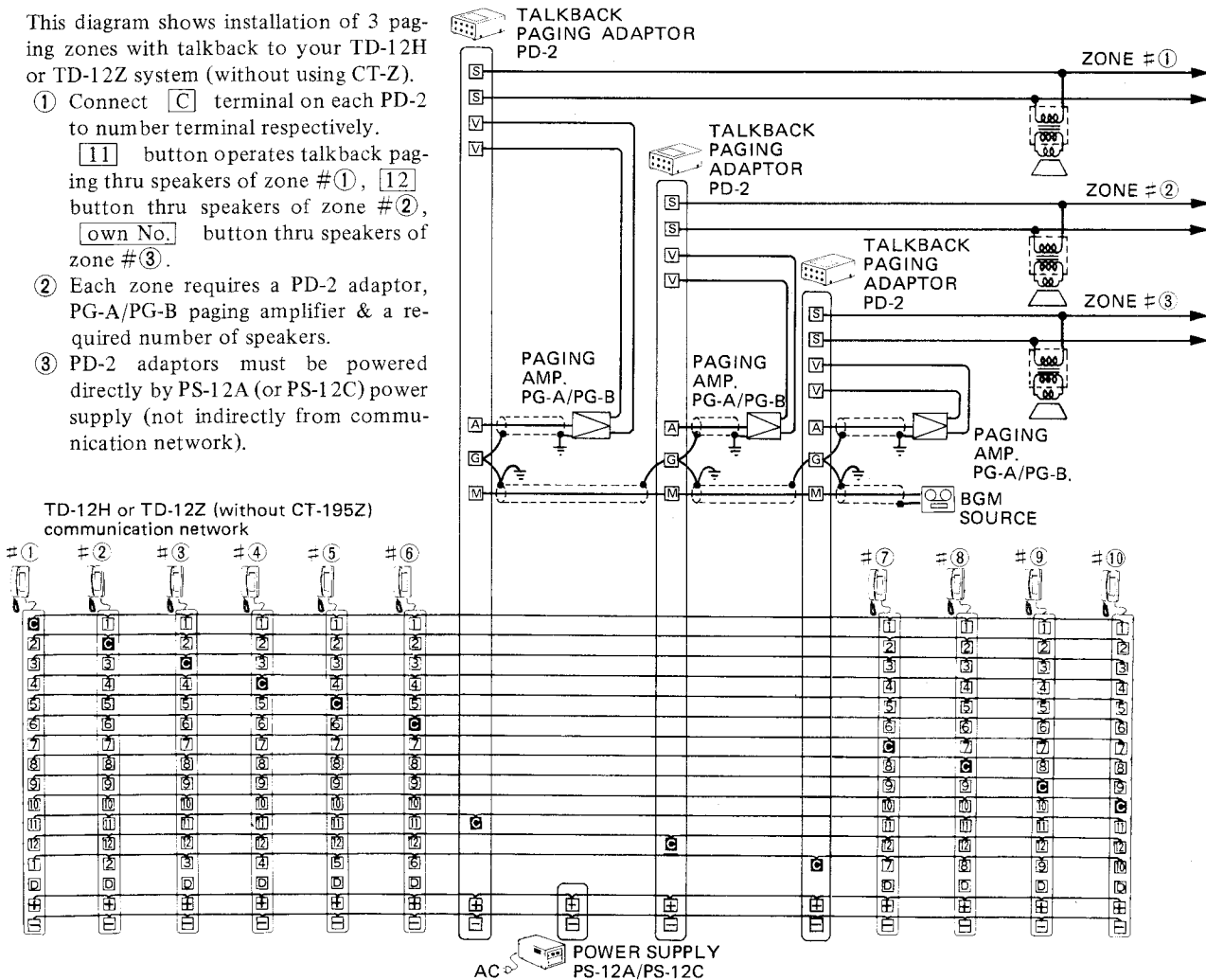


- ① On any phone station, own No. button operates a paging with talkback.
- ② Talkback paging zone requires a PD-2 adaptor, PG-A/PG-B paging amp. & a required number of paging speakers.
- ③ PD-2 adaptor must be powered by a system's power supply PS-12A (or PS-12C).

## (2) TD-H/TD-Z SYSTEM WITH 3 PAGING ZONES WITH TALKBACK

This diagram shows installation of 3 paging zones with talkback to your TD-12H or TD-12Z system (without using CT-Z).

- ① Connect C terminal on each PD-2 to number terminal respectively.
  - ① 11 button operates talkback paging thru speakers of zone #①, 12 button thru speakers of zone #②, own No. button thru speakers of zone #③.
- ② Each zone requires a PD-2 adaptor, PG-A/PG-B paging amplifier & a required number of speakers.
- ③ PD-2 adaptors must be powered directly by PS-12A (or PS-12C) power supply (not indirectly from communication network).



### (3) TD-12Z HOME-RUN WIRED SYSTEM WITH 2 PAGING ZONES (ONE WITH TALKBACK)

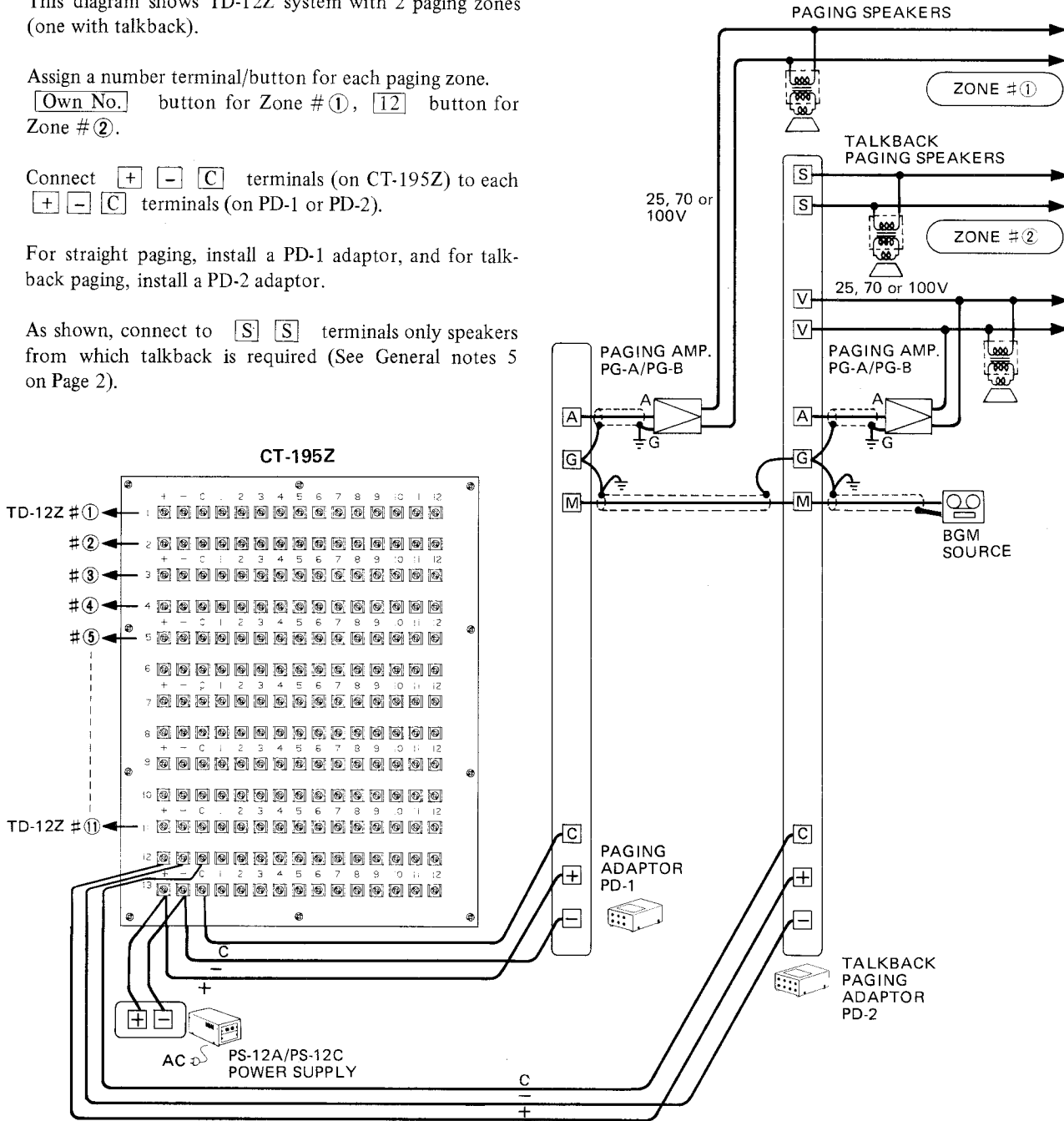
This diagram shows TD-12Z system with 2 paging zones (one with talkback).

Assign a number terminal/button for each paging zone.  
 [Own No.] button for Zone #①, [12] button for Zone #②.

Connect [ + ] [ - ] [ C ] terminals (on CT-195Z) to each [ + ] [ - ] [ C ] terminals (on PD-1 or PD-2).

For straight paging, install a PD-1 adaptor, and for talkback paging, install a PD-2 adaptor.

As shown, connect to [ S ] [ S ] terminals only speakers from which talkback is required (See General notes 5 on Page 2).



Installation of paging zone (with or without talkback) reduces one station capacity of TD-Z system.

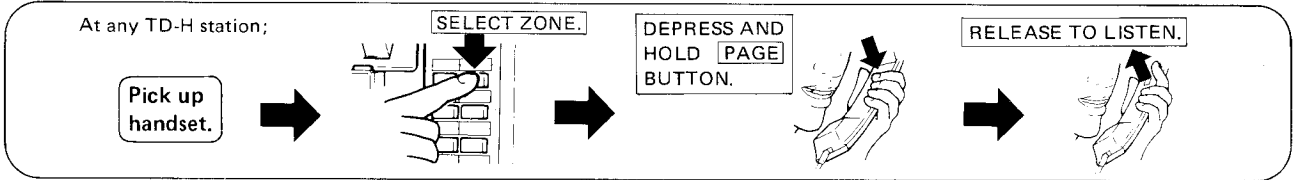
PS-12A (or PS-12C) power supply can be connected to [ + ] , [ - ] terminals of any row on CT-195Z central terminal board.

Background music source can be used in common for all zones.

# 6

## OPERATION

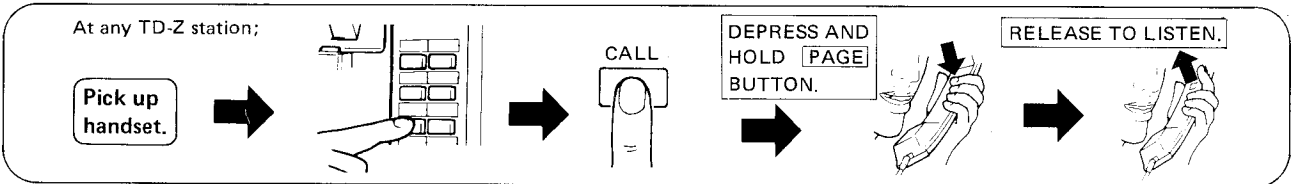
### TD-H TALKBACK PAGING OPERATION



Pick up handset, and depress a number button for desired paging zone. Push **PAGE** button in handset to make announcement, and release to listen to the reply.

NOTE; When a number button A1 ~ A12 is assigned for a paging zone (on TD-24H/24HW), select a corresponding number button and then momentarily depress **CALL A** button.

### TD-Z TALKBACK PAGING OPERATION



Pick up handset, depress a number button for desired paging zone, and momentarily push **CALL** button.

Push **PAGE** button in handset to make announcement, and release to listen to the reply.

Background music is automatically cut off during paging operation, and comes back on when handset is hung up.

# 7

## SPECIFICATIONS

- \*Power source: DC 12V. PD-2 adaptor must be connected directly to PS-12A (or PS-12C in North America) power supply.
- \*Current consumption: 48 mA maximum (in talkback mode). 20 mA maximum (in paging mode).
- \*Output: 5 K ohm; Max. 1.5V.
- \*Tone controls for music: Treble: at 10 KHz., 12dB. Bass : at 100 Hz., 12dB.
- \*Tone controls for paging: Treble: at 10 KHz., 12dB. Bass : at 100 Hz., 12dB.
- \*Music input: 17 K ohm, 0.3 V, 1KHz. for full output.
- \*Talkback gain: 40 dB, 1 KHz. at maximum volume.
- \*Environmental noise: Less than 80dB (phon).

### AMPLIFIER REQUIREMENTS;

- \*Input: Connect to either AUX or PHONO terminal 100K-500K ohm, 0.12 ~ 0.5 V.

### TUNER OUTPUT REQUIREMENTS;

- \*Use audio output: RANGE; 100 mV ~ 1.2 V, 10 K ohm or less.

### TAPE OUTPUT REQUIREMENTS;

- \*Use low level output: RANGE; 100 mV ~ 1.2V, 600 ohm.

Dimensions: Height: 51.5 mm (2-1/32") x Width: 90 mm (3-9/16") x Depth: 138 mm (5-7/16")

Weight: Approximately 380 g (0.84 lbs.).

### WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.

This warranty does not cover batteries or damage caused by batteries used in connection with the product.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

Aiphone Co., Ltd., Nagoya, Japan  
Aiphone Corporation, Bellevue, Washington

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**AIPHONE**  
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