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S. NO.

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ELECTRONIC HORN

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**IBUKI KOGYO CO. , LTD.**

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TABLE OF PLAN  
計 画 表

ORDER NO.  
工事番号

S. NO.

ELECTRONIC HORN  
電子ホーン

| NAME<br>品 名  | PRESSURE<br>圧 力<br>(MPa) | DWG. NO.<br>図 面 番 号  | QUANTITY<br>PER VESS.<br>数量/1隻 | PAINTING<br>塗 装 色 |
|--|--------------------------|--|--------------------------------|-------------------|
| Whistle (Above 130dB)<br>汽 笛 (130dB 以上)<br>ES300<br>HORN UNIT<br>ホーンユニット<br>ELECTRONIC HORN<br>電子ホーン |                          | OUTLINE<br>外形図 SOJ-8910                                      | 1                              | 7.5BG7/2          |
|  |                          | CONSTRUCTION<br>構造図 SSJ-8910                                 |                                |                   |
|  |                          | PARTS LIST<br>部 品 表 PJ-8910                                  |                                |                   |
| OSCILLATOR UNIT<br>オシレータユニット   |                          | OUTLINE<br>外形図 SOJ-8910B                                     | 1                              | N3.0              |
|  |                          | CONSTRUCTION<br>構造図 SSJ-8910B                                |                                |                   |
|  |                          | PARTS LIST<br>部 品 表 PJ-8910B                                 |                                |                   |
|  |                          | OUTLINE<br>外形図<br>CONSTRUCTION<br>構造図<br>PARTS LIST<br>部 品 表 |                                |                   |
| MICROPHONE & HOOK<br>マイクロホン及びフック   |                          | EAA-4543   | 1                              |                   |
|  |                          |  |                                |                   |
|  |                          |  |                                |                   |
|  |                          |  |                                |                   |
|  |                          |  |                                |                   |
|  |                          |  |                                |                   |
| SYSTEM DIAGRAM & NAME PLATE<br>系 統 図 及 び 銘 版   |                          | SWJ-08-1065 1/2, 2/2   |                                |                   |
|  |                          |  |                                |                   |
| WIRING DIAGRAM<br>接 続 図  |                          |  |                                |                   |
|  |                          |  |                                |                   |

|               |                            |                |                               |  |  |      |
|---------------|----------------------------|----------------|-------------------------------|--|--|------|
| SOURCE<br>電 源 | MAIN CIRCUIT<br>主 回 路      | DC24V          | AUTO. FOG SIGNAL              |  |  |      |
|               | CONTROL CIRCUIT<br>操 作 回 路 | DC24V          | SOUND - REST - SOUND - REST   |  |  |      |
| NOTE<br>注 記   | NAME PLATE<br>銘 板          | ENGLISH<br>英 文 | 1 BLOW ... 5 - 55             |  |  | Sec. |
|               |                            |                | 2 BLOW ... 5 - 2 - 5 - 48     |  |  | Sec. |
|               |                            |                | 3 BLOW ... 5 - 1 - 1 - 1 - 51 |  |  | Sec. |
|               |                            |                | CYCLE ... 60                  |  |  | Sec. |

MAY. 14. 2008

IBUKI KOGYO CO., LTD.

## INSTRUCTIONS

### 1. Items relating to safety

#### 1.1. WARNINGS

When servicing the whistle at a high place, provide a safety scaffold and wear a lifeline.

Always switch off power first when working on the whistle.  
Make sure that no voltage exists.

Before sounding the whistle for test, be sure the area is cleared of all unauthorized personal and all personal in the area wear ear protection (e.g. earplugs).

## 2. Electric shock safety guidelines

### 2.1. General

#### 2.1.1. Effect of electric shock to human body

- (1) Electric shock has very high degree of risk of bodily injury.

Even relatively low, the current flowing through heart, lung and other critical organs can result in personal injury or even death.

- (2) In general, when working with low AC volts, for example, around 100 volts, people tend to ignore the risk involved.

Remember that a power source capable of flowing 50 mA at 100 VAC, 60/50 Hz can be dangerous to human body.

100 mA current can result in serious personal injury from electric shock.

#### 2.1.2. Symptoms of electric shock

Typical symptoms of electric shock are usually not chronic.

In the case of unconsciousness or apparent death, do not give the victim of electric shock up for dead.

Intead, immediately render first aid and resuscitation such as artificial respiration and heart massage.

Continuous resuscitation for several hours may revive by victim.

- (1) In the case of breathless, perform artificial respiration until the respiratory center recovers the respiratory function.
- (2) In the case of serious electric shock, the face of the victim turns pale, the heart palsates faintly or stops.
- (3) In the case of unconsciousness, the victim's body becomes rigor in three minutes.

### 2.2. To prevent electric shock

Personnel in charge of operation, maintenance, repair, etc., of the whistle and the supervisor must strictly observe applicable electric safety standards and regulations and implement the following special precautions and handling techniques to assure positive prevention of electric shock.

- (1) Personal injury and property damage caused by electric shock often resulted from live power line which should have been off.

Verify that the power switch is off and verify that power line is dead by using a voltmeter and the like.

(2) Do not solely rely on safety and protective system.

Always protect against failure of these system.

(3) Wear rubberized/insulated gloves and shoes.

Place insulating material (e.g. rubber mat) between the surface.

(4) Do not turn on and off power during service except for unavoidable case.

When power is off during service, the work area should be designated to caution people that power must be kept off.

(5) When operating the power switch, always use the right hand while keeping the left hand off the body (stretch the left hand backward).

(6) Always have another member of staff stand near the power disconnecting device capable of turning off power quickly in the case of electric shock.

# ES300 TYPE ELECTRONIC HORN

## INSTRUCTION

### 1. GENERAL

ES300TYPE ELECTRONIC HORN is the whistle for the vessel its length 20m but less than 75m in length.

This system consist of one horn unit and one oscillator unit. The oscillator unit have the function of automatic fog signal and function of general emergency alarm generator. In addition it have some additional function that outboard broad cast by microphone or AUX input.

### 2. INSTRUCTION OF OPERATION

#### 2 - 1 SWITCH PANEL

An outline of switch panel is shown Fig1 and Table1.

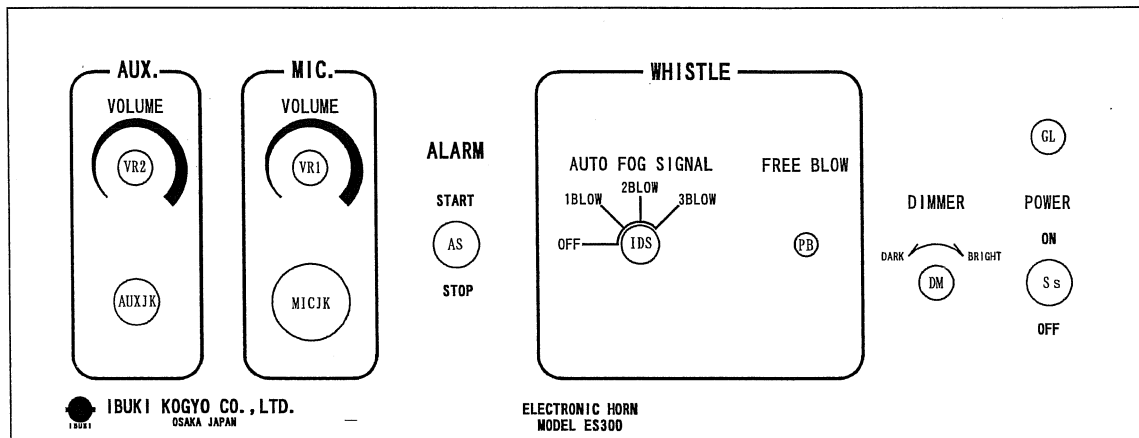


Fig.1 SWITCH PANEL

Table1 SWITCHES

| SYMBOL | SWITCHES AND INDICATORS             | TYPE               | REMARKS              |
|--------|-------------------------------------|--------------------|----------------------|
| Ss     | Power source switch<br>(ON/OFF)     | Change over switch |                      |
| GL     | Power source indicator lamp         | LED                |                      |
| DM     | Dimmer                              | Variable register  | For Power source LED |
| PB     | Push button for free blow           | Push button switch |                      |
| IDS    | Selector switch for auto fog signal | Rotary switch      |                      |
| AS     | Alarm switch                        | Change over switch |                      |
| VR1    | MIC volume control VR               | Variable register  |                      |
| MICJK  | MIC receptacle                      |                    |                      |
| VR2    | AUX volume control VR               | Variable register  |                      |
| AUXJK  | JACK for AUX input                  |                    |                      |

## 2 - 2 STARTING

Power source switch (Ss) turn to ON, and confirm power source indicate LED(GL) is lit.  
The brightness of LED can be controlled by Dimmer (DM).

## 2 - 3 WHISTLE BLOW

### 2-3-1 FREE BLOW

The whistle can be blown freely by push button switch (PB).

### 2-3-2 AUTOMATIC FOG SIGNAL

In or near an area of restricted visibility, whether by day of night, the signals prescribed in this Rule shall be used as follows.

It can blow automatic fog signal to be selected signal type by selector switch for auto fog signal(IDS).

#### 1 BLOW (1-LONG BLAST REPEATED)

A power -driven vessel making way through the water shall sound 1-Blow Signal.

#### 2 BLOW (2-LONG BLAST REPEATED)

A power-driven vessel underway but stopped and making no way through the water shall sound 2-Blow Signal

#### 3-BLOW (1-LONG BLAST 2-SHORT BLAST REPEATED)

A vessel not under command, a vessel restricted in her ability to manoeuvre, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall blow 3-Blow signal

## 2 - 4 ALARM FUNCTION

It is additional function that can blow electronic alarm sound from horn unit .

But if whistle blow when alarm is sounding, the whistle sound is selected and blown from horn unit

### 2-4-1 STARTING ALARM

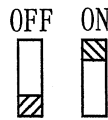
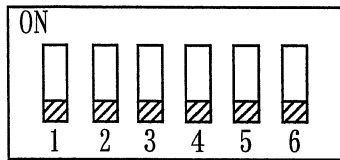
Alarm switch (AS) turn to START ,then electronic alarm sound is blown from horn unit.

### 2-4-2 ALARM TONE SELECT

Alarm tone can be selected by internal DIP switch of oscillator unit. Please refer Fig.2.

#### **NOTICE**

Please select the alarm tone when power source switch "OFF". If you will select alarm tone when power source switch is "ON", Alarm tone cannot be changed.



- 6 : QUU QUU
- 5 : PIPO PIPO
- 4 : AS SIREN (CONTINUOUS)
- 3 : AS SIREN (REPEATED)
- 2 : Pi Pi Pi
- 1 : Po Po Po

PLEASE SET ONLY SELECTED TONE NO. IS ON, AND SELECT ONOTHER SWITCH IS OFF

Fig.2 ALARM TONE SELECT

#### 2 - 4 OUTBOARD BROAD CAST FUNCTION

When broad cast function use, please insert the receptacle of the microphone attached this system . And then push the talk switch of microphone.

The volume of broad cast can be controlled by MIC volume control VR (VR1).

**NOTICE** When the case that bridge window opened and exceed proper sound volume, there is a possibility to occur howling . Please control its MIC volume in a range that don't occurred howling.

#### 2 - 5 AUX INPUT

When input sound signal from AUX input jack (AUXJK), (i.e. from CD player), can broadcast its sound from horn unit. The volume of AUX input, can be controlled by AUX control VR (VR2).

#### WARNINGS

Before touch the inside of oscillator unit and horn unit for repair or inspection , please turn off its breaker of power source and confirm no voltage exists

When servicing the whistle at a high place, provide a safety scaffold and wear a lifeline.

Before sounding the whistle for test, be sure the area is cleared of all unauthorized personal and all personal in the area wear ear protection (i.e. ear plugs)

### IBUKI KOGYO CO., LTD.

HEAD OFFICE FACTORY  
7-28, TAKADONO 1-CHOME  
ASAHI-KU, OSAKA 535-0031, JAPAN

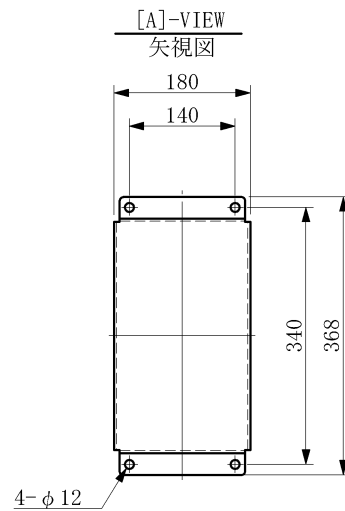
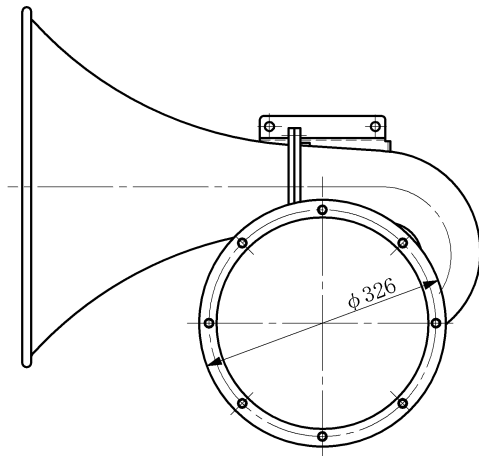
TEL : 06-6922-5115  
FAX : 06-6924-3567

TOKYO SLES OFFICE  
HONMOKU BLDG.,5F  
1-22, KANDA SUDACHO,CHIYODA-KU,  
TOKYO 101-0041, JAPAN

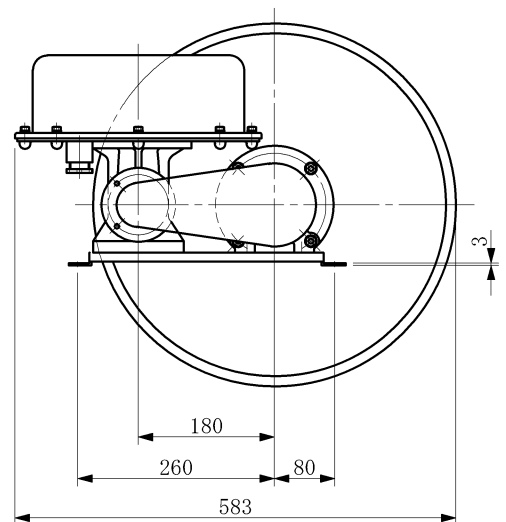
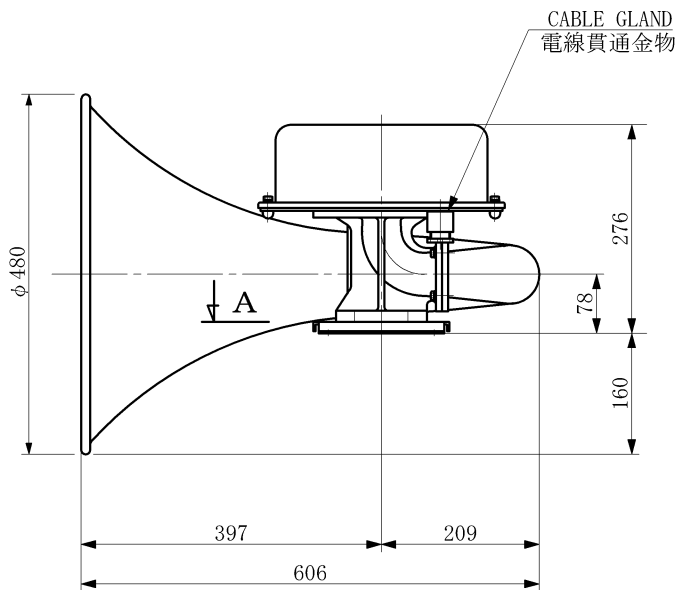
TEL : 03-3251-4153  
FAX : 03-3251-4158

IBUKI KOGYO CO., LTD.

|   |           |                                |                          |            |         |
|---|-----------|--------------------------------|--------------------------|------------|---------|
| WHISTLE (ABOVE 130dB)<br>汽 笛 (130dB以上)  |           | <b>ES300</b>                   | ELECTRONIC HORN<br>電子ホーン | MASS<br>質量 | 17.5 kg |
| 1/3 rd-OCTAVE BAND LEVEL<br>オクターブバンドレベル | 130 dB/1m | FUNDAMENTAL FREQUENCY<br>基本周波数 | APPROX.<br>約             | 420 Hz     |         |
| SOURCE<br>電 源                           | DC 24V    | RATING<br>定 格                  |                          | 10 MIN     |         |
| CURRENT<br>電 流                          | 13A 以下    |                                |                          |            |         |
| TYPE APPROVAL No.<br>型式承認番号             | 4 4 7 3   | ANIVOCAL<br>単位 : mm            |                          |            |         |



取付板寸法

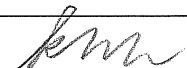


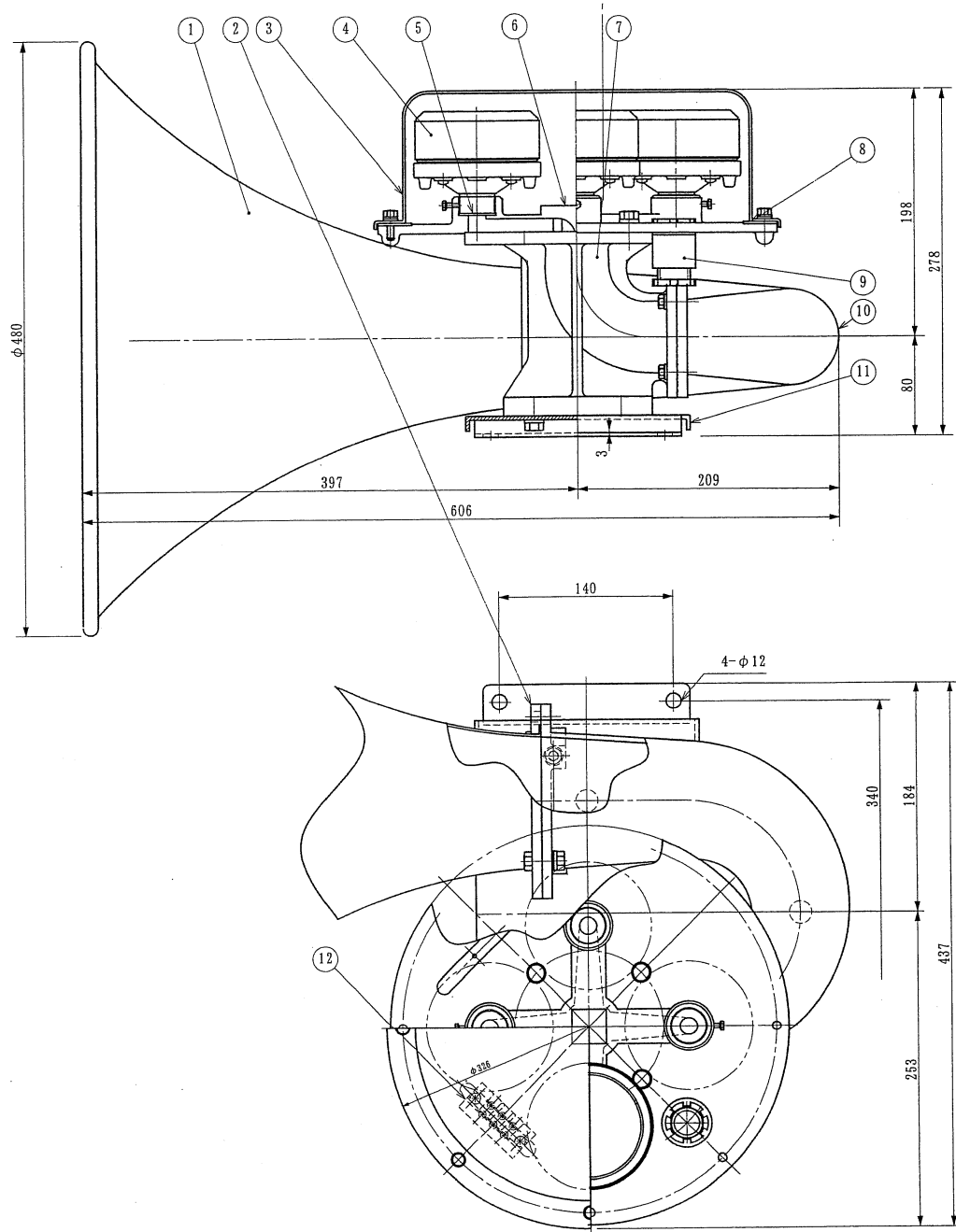
C. K. D.

D. W. N.

Y.  
UEDA

|          |  |                       |          |          |
|----------|--|-----------------------|----------|----------|
| WORK NO. |  | IBUKI KOGYO CO., LTD. | DWG. NO. | SOJ-8910 |
|----------|--|-----------------------|----------|----------|

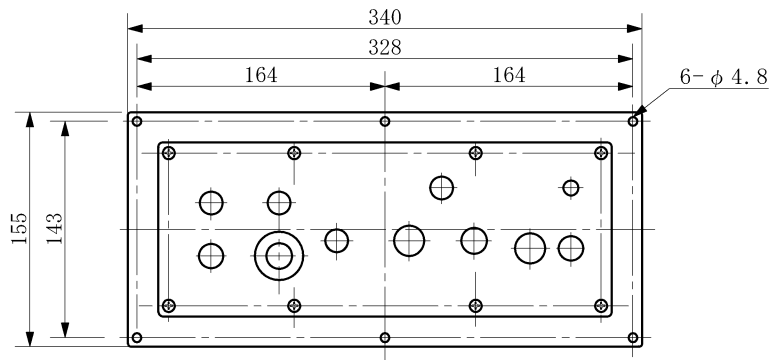
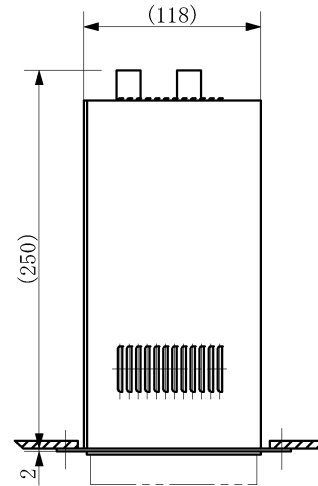
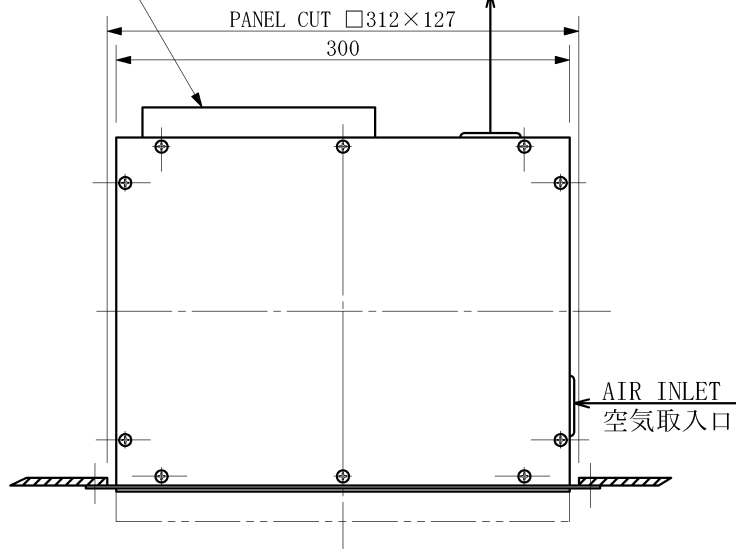
| PARTS LIST |   | ES300形                            | HORN UNIT<br>ホーンユニット |
|------------|---|-----------------------------------|----------------------|
| NO.        | PART NAME   | MATERIAL                          |                      |
| 1          | Horn (Bell)<br>ラッパ (開口部)  | Aluminium plate<br>A1050P         |                      |
| 2          | Horn bell mounting plate<br>ラッパ押え金具   | Aluminium alloy casting<br>AC7A-F |                      |
| 3          | Driver unit cover<br>ドライバユニットカバー  | Aluminium plate<br>A1050P         |                      |
| 4          | Driver unit<br>ドライバユニット   |                                   |                      |
| 5          | Driver unit packing<br>ドライバユニットパッキン   | Synthetic rubber<br>合成ゴム          |                      |
| 6          | Driver unit mount<br>ドライバユニット取付台  | Aluminium alloy casting<br>AC7A-F |                      |
| 7          | Body<br>本体  | Aluminium alloy casting<br>AC7A-F |                      |
| 8          | Packing<br>パッキン   | Synthetic rubber<br>合成ゴム          |                      |
| 9          | Cable gland<br>電線貫通金物   | Aluminium<br>A5052                |                      |
| 10         | Horn (Conical part)<br>ラッパ (根本部)  | Aluminium alloy casting<br>AC7A-F |                      |
| 11         | Mounting plate<br>取付板   | Stainless steel<br>SUS304         |                      |
| 12         | Terminal block<br>端子盤   |                                   | C20-3P               |
| D.W.N.     |  | IBUKI KOGYO CO., LTD.             | DWG. NO. PJ-8910     |



|                                   |       |         |               |
|-----------------------------------|-------|---------|---------------|
| Whistle (Above 130dB)             |       |         |               |
| 汽笛 (130dB 以上)                     |       |         |               |
| ES300 TYPE ELECTRONIC HORN        |       |         |               |
| 形 電子ホーン                           |       |         |               |
| HORN UNIT                         |       |         |               |
| ホーンユニット                           |       |         |               |
| D.W.N.                            | F. S. | DATE    | OCT. 29. 2001 |
| C.K.D.                            | F. S. | DWG.NO. | SSJ-8910      |
| IBUKI KOGYO CO., LTD. OSAKA JAPAN |       |         |               |

TERMINAL BLOCK  
端子盤

AIR OUTLET  
空気吐出口



| No. | SIGNALS OF ALARM |              |                                      |        |
|-----|------------------|--------------|--------------------------------------|--------|
| 1   | Quu Quu          | (Repeated)   | 750~1500Hz                           | 60/Min |
| 2   | PiPo PiPo        | (Repeated)   | Pi...900Hz Po...600Hz                | 60/Min |
| 3   | As siren         | (Repeated)   | 400~900Hz Sound 2.25 Sec.-Rest 1Sec. |        |
| 4   | As siren         | (Continuous) | 400→800Hz 800Hz (Continuous)         |        |
| 5   | Pi Pi Pi         | (Repeated)   | 1200Hz                               | 60/Min |
| 6   | Po Po Po         | (Repeated)   | 500Hz                                | 60/Min |

MASS  
質量

7.3 kg

FLUSH TYPE  
埋込型

ES300 TYPE ELECTRONIC HORN  
形 電子ホーン

OSCILATOR UNIT  
オシレータユニット

OUTLINE VIEW  
外形図

|                      |        |               |
|----------------------|--------|---------------|
| D. W. N. Y. ueda     | DATE   | AUG. -9. 2001 |
| C. K. D. F. Shintaku | DWGNO. | SOJ-8910B     |
| IBUKI KOGYO CO., LTD |        | OSAKA JAPAN   |

## PARTS LIST

ES300形

OSCILATOR UNIT  
オシレータユニット

| NO. | PART NAME                           | MATERIAL           |  |
|-----|-------------------------------------|--------------------|--|
| 1   | Printed circuit board (A)<br>基板 (A) |                    |  |
| 2   | Printed circuit board (B)<br>基板 (B) |                    |  |
| 3   | Printed circuit board (C)<br>基板 (C) |                    |  |
| 4   | Transformer<br>トランス                 |                    |  |
| 5   | Terminal block<br>端子盤               |                    |  |
| 6   | Body<br>箱体                          |                    |  |
| 7   | Cover<br>カバー                        | Aluminium<br>A5052 |  |

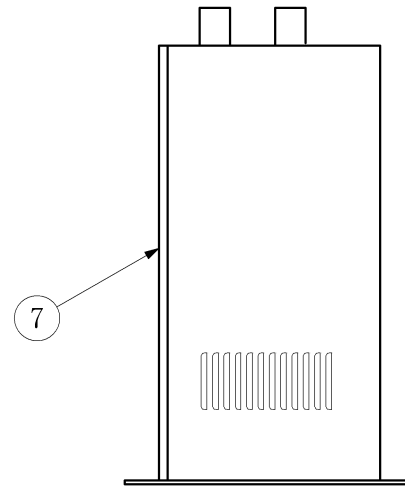
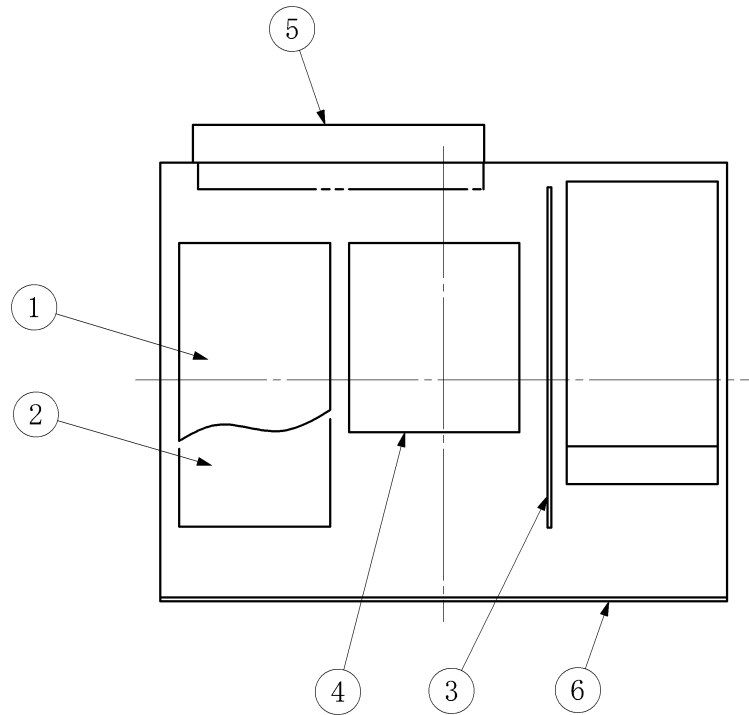
D.W.N.



IBUKI KOGYO CO., LTD.

DWG. NO.

PJ-8910B



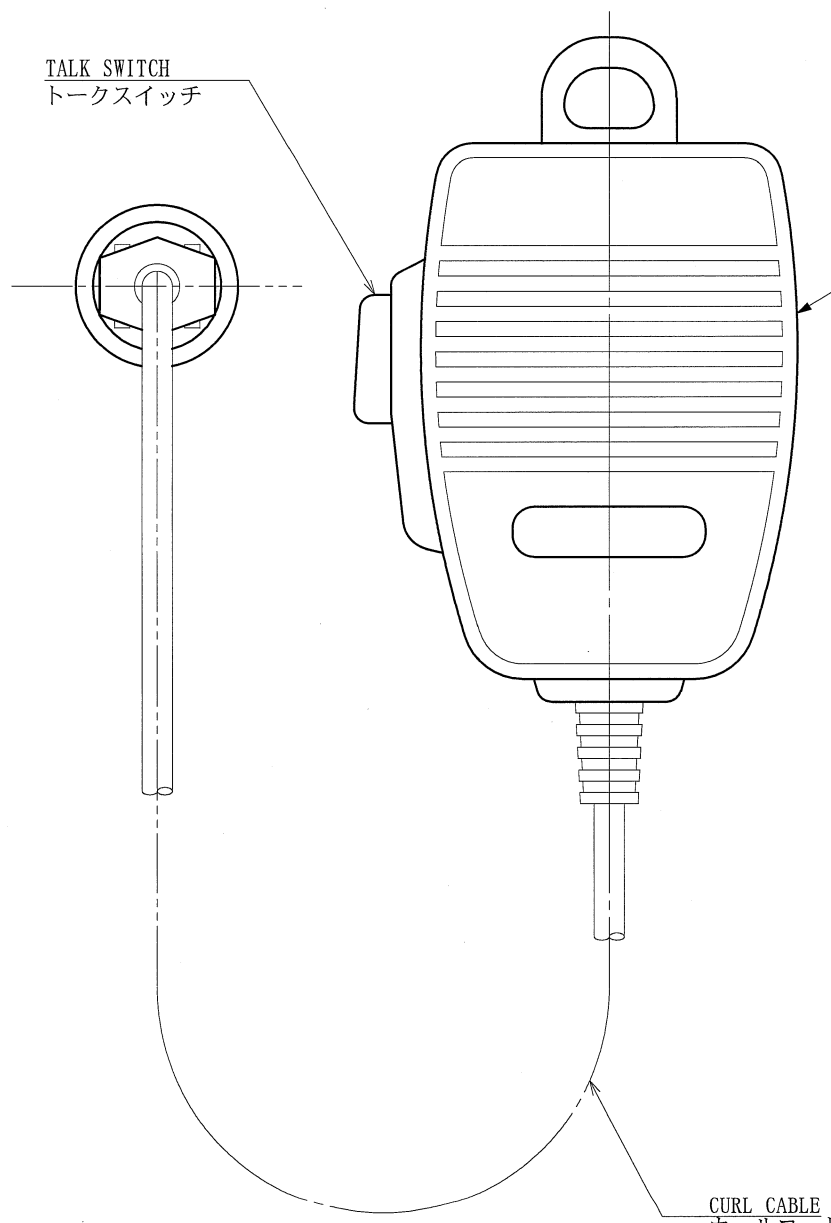
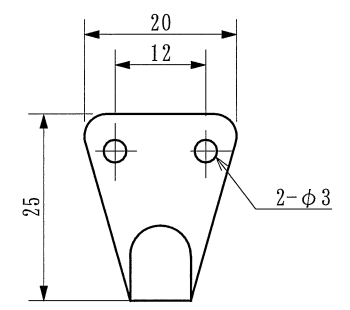
ES300 TYPE ELECTRONIC HORN  
 形 電子ホーン  
 OSCILLATOR UNIT  
 オシレータユニット  
 CONSTRUCTION VIEW  
 構造図

|                                   |       |         |               |
|-----------------------------------|-------|---------|---------------|
| D.W.N.                            | Y. U. | DATE    | AUG. -9. 2001 |
| C.K.D.                            | F. S. | DWG.NO. | SSJ-8910B     |
| IBUKI KOGYO CO., LTD. OSAKA JAPAN |       |         |               |

TALK SWITCH  
トークスイッチ

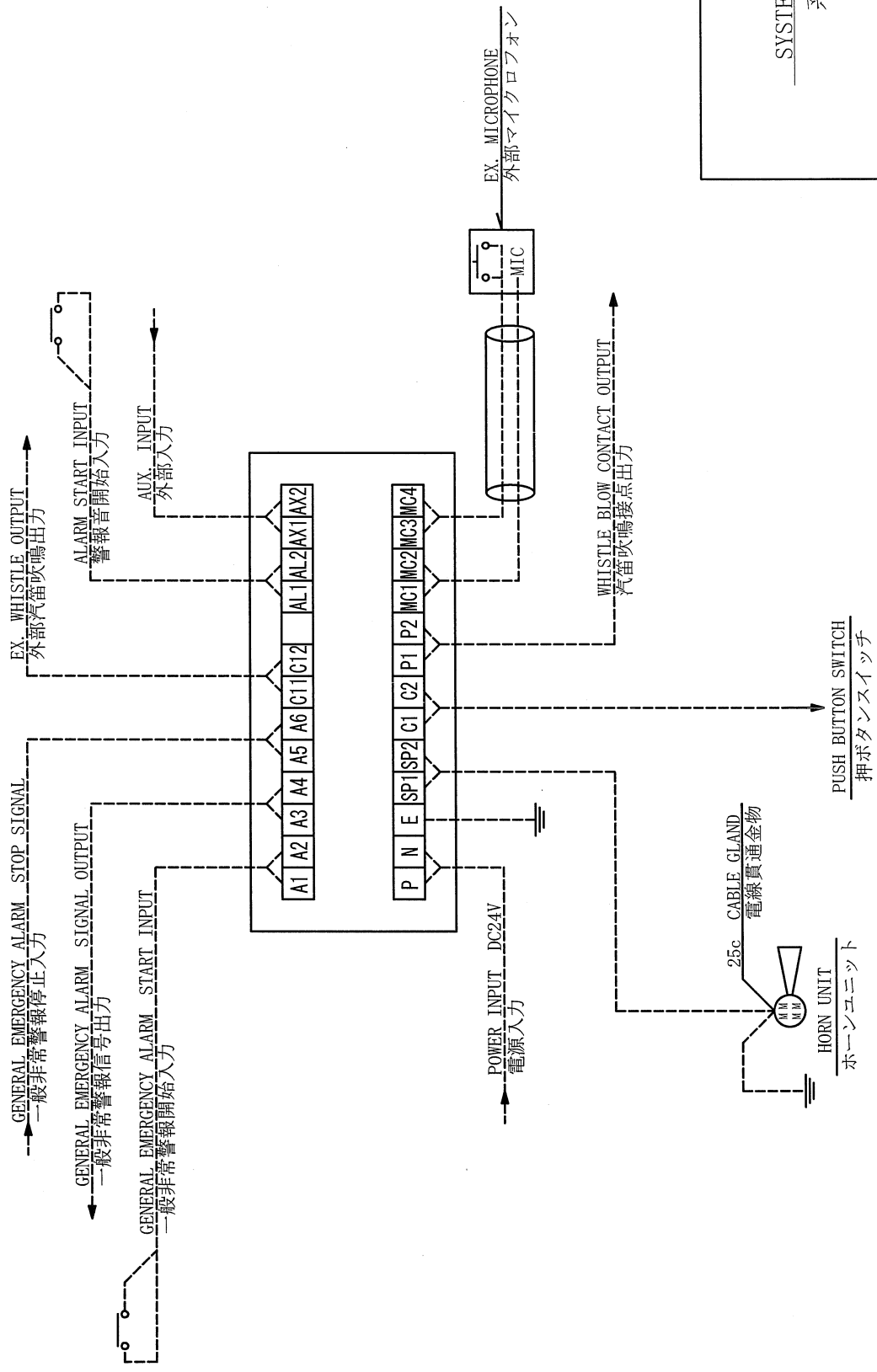
MICROPHONE  
マイクロホン

MICROPHONE HOOK  
マイクフック



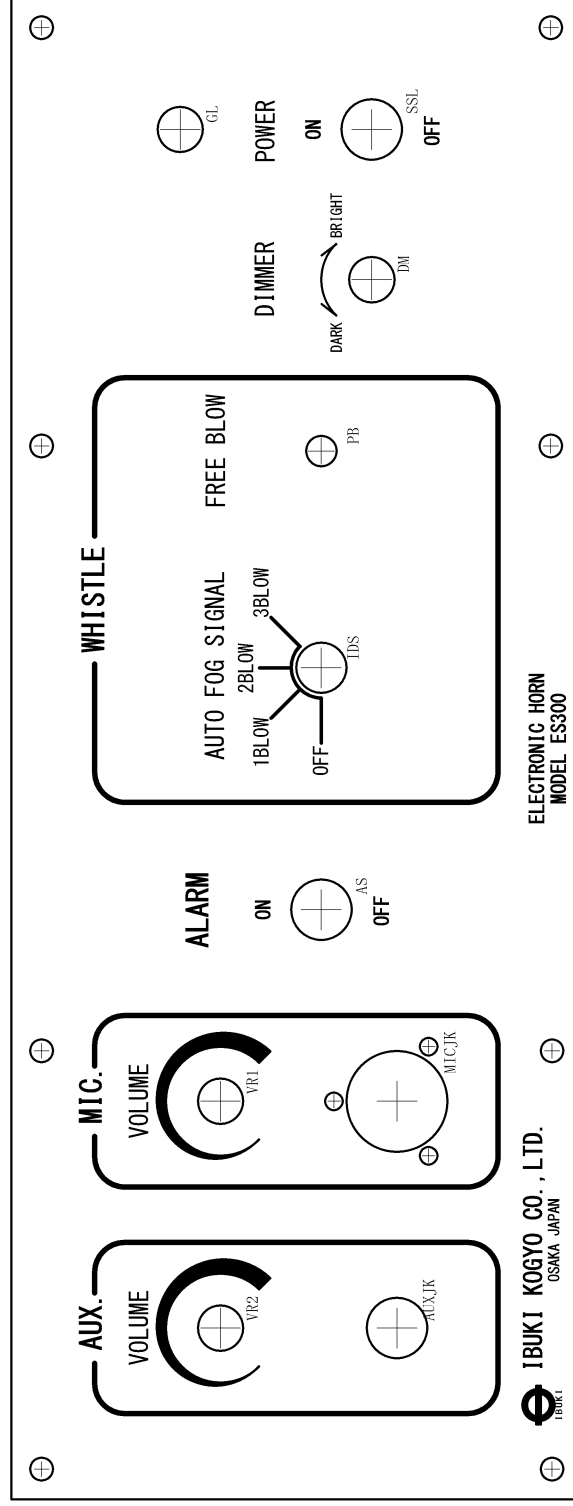
CURL CABLE  
カールコード 400mm

|                                  |             |        |              |
|----------------------------------|-------------|--------|--------------|
| MICROPHONE                       |             |        |              |
| OUTLINE VIEW                     |             |        |              |
| D. W. N.                         | F. Shintaku | DATE   | FEB-28. 2002 |
| C. K. D.                         | F. Shintaku | DWGNO. | EAA-4543     |
| IBUKI KOGYO CO., LTD OSAKA JAPAN |             |        |              |



SYSTEM DIAGRAM  
系統図

|                                  |        |                 |
|----------------------------------|--------|-----------------|
| D. W. N.                         | DATE   | JAN. 30. 2002   |
| C. K. D.                         | DWGNO. | SWJ-08-1065 1/2 |
| IBUKI KOGYO CO., LTD OSAKA JAPAN |        |                 |



ELECTRONIC HORN  
MODEL ES300

 **IBUKI KOGYO CO., LTD.**  
OSAKA JAPAN

NAME PLATE  
銘板

|                                  |             |        |                 |
|----------------------------------|-------------|--------|-----------------|
| D. W. N.                         | F. Shintaku | DATE   | APR. 16. 2002   |
| C. K. D.                         | F. Shintaku | DWGNO. | SWJ-08-1065 2/2 |
| IBUKI KOGYO CO., LTD OSAKA JAPAN |             |        |                 |