

# FURUNO

# INSTALLATION MANUAL

## RADIO CONSOLE

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MODEL      RC-1500-1T

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This manual covers the general description of the Radio Console. Refer to the separate manuals for detailed information on individual units mounted in the console.



**FURUNO ELECTRIC CO., LTD.**  
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(TENI)

PUB. No. IME-55970-F  
RC-1500-1T

•Your Local Agent/Dealer

FIRST EDITION : AUG 1995  
F : JAN. 5, 1999



\* 00080807900 \*



# SAFETY INSTRUCTIONS



## DANGER

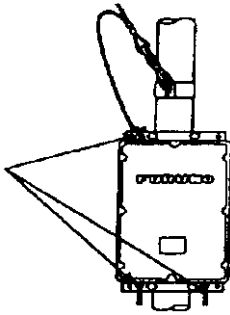


Do not work inside the equipment unless totally familiar with electrical circuits.

Hazardous voltage which will cause death or serious injury exists at the following locations:

- Transceiver unit
- Antenna and antenna coupler (both at TX)

HAZARDOUS VOLTAGE is present at these points.



ANTENNA COUPLER



## WARNING



Turn off the power at the mains switchboard before beginning at installation. Post a sign near the switch to indicate it should not be turned on while the equipment is being installed.

Fire, electrical shock or serious injury can result if the power is left on or is applied while the equipment is being installed.

**Use only the supplied cables.**

Use of other cables can result in fire or serious equipment damage.

**Use the correct fuse.**

Use of wrong fuse can cause fire.



## CAUTION



Ground the equipment to prevent electrical shock and mutual interference.

**When using a copper plate for ground be careful of its edges.**

Edges can cut fingers.

**If the distress alert is accidentally transmitted, transmit appropriate message to nearest coast station to cancel the distress alert.**

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# 1. Rack Console chassis (RC-1500-1T)

## General

The RC-1500 series Radio Console comes in five models: RC-1500-1T-150/250, RC-1500-1T-400/800, RC-1500-1T-2P, and RC-1500-1T-TOKU.

The type and number of components incorporated differs from model to model, however each model contains an Inmarsat-C mobile earth station, NBDP terminal, DSC terminal, DSC watch receiver, and SSB radiotelephone.

Below are the distinguishing characteristics of each model.

RC-1500-1T-150/250: Incorporates the FS-1562-15/1562-25 SSB radiotelephone.

RC-1500-1T-400/800: Incorporates the FS-5000/8000 SSB radiotelephone.

RC-1500-1T-2P: Russian model.

RC-1500-2T: Incorporates the FM-8500 VHF radiotelephone.

RC-1500-1T-TOKU: Special order model.

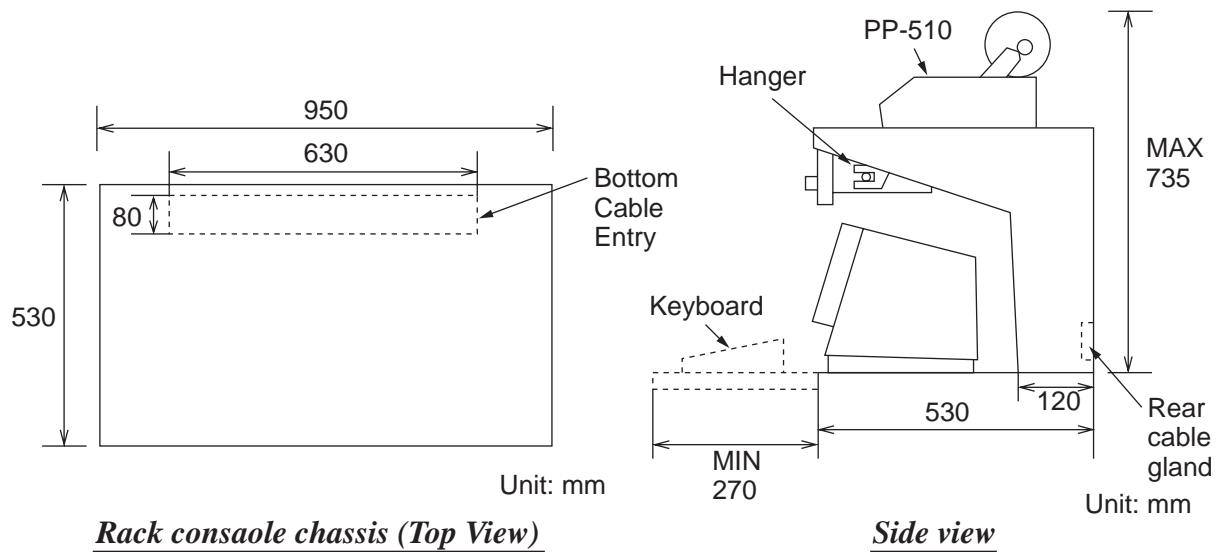
## Mounting considerations (tabletop mount)

When selecting a mounting location;

- Make sure the location is strong enough to support the unit (about 100 kg) under the conditions of continued vibration and shock normally encountered on the vessel. Where necessary, reinforce the mounting location by lining block or doubling plate.
- Locate the unit where it is easily accessible and does not interfere with personnel or operation of other equipment; for example, ship's wheel.
- Select a location where temperature and humidity are moderate and stable.

## Mounting

The mounting dimensions of the RC-1500-1T are as shown in the figure below. (Refer to the outline drawing attached to the end of this manual for further details.)



*Rack console chassis (Top View)*

*Side view*

Before mounting the unit, determine location of cable gland. The interconnection cable should be run through either the rear or bottom side of the rack console chassis. See the outline drawing attached for further details.

### Procedure

1. Place the rack console chassis on the tabletop.
2. Mount three hangers for the DSC-6, AA-50 and FS-1562 as shown above.
3. Set the DSC-6, AA-50 and FS-1562 (only 150W type or 250W type) to the hangers with knobs. Set the FM-8500 to the hanger with knobs (only RC-1500-2T).
4. Mount the two printers PP-510 and printer selector to the top of the console chassis.
5. Place the NBDP and FS-5000 on the tabletop (only 400W type).
6. Place the Inmarsat C outside of rack console.

## 2. AC/DC Power Supply and Battery Charger

### Mounting considerations

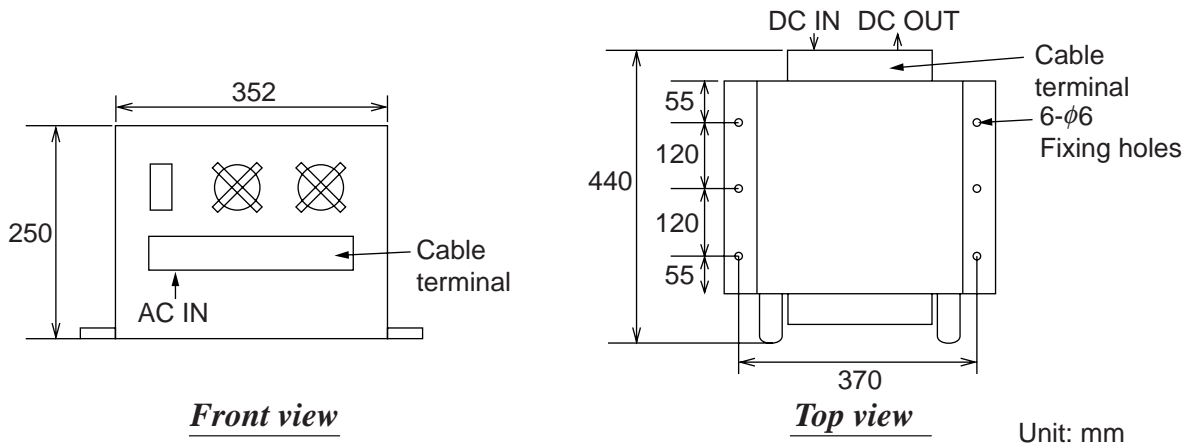
The unit can be mounted almost anywhere provided the location satisfies the following requirements.

- Vibration-free location
- Well-ventilated area
- Free of water splash
- Leave enough space around the sides of the unit to permit maintenance and checking.
- The mounting location must be able to support the weight of the unit (PR-850A: 35 kg, PR-300: 14.5 kg, BC-6158/6200: 28 kg, S-5300A/8300A: 85/110 kg) under the condition of continued vibration normally encountered aboard the vessel.

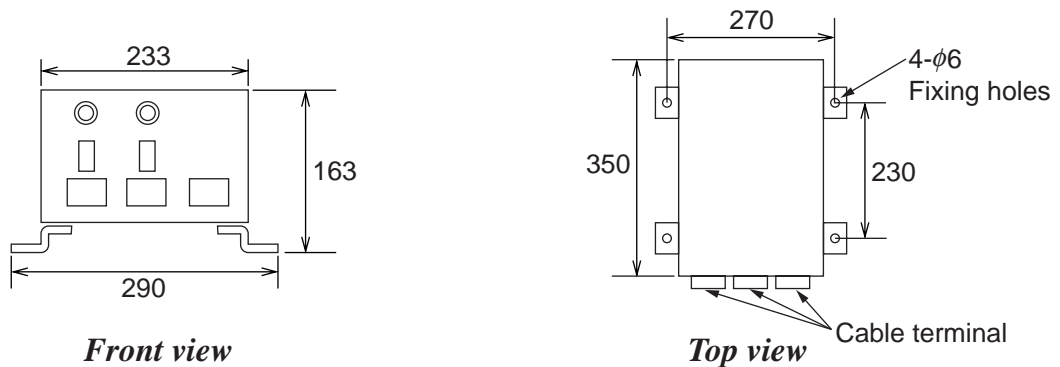
### Mounting

Refer to the outline drawing attached to the end of this manual for further details.

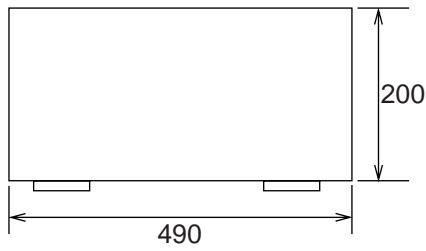
#### • PR-850A



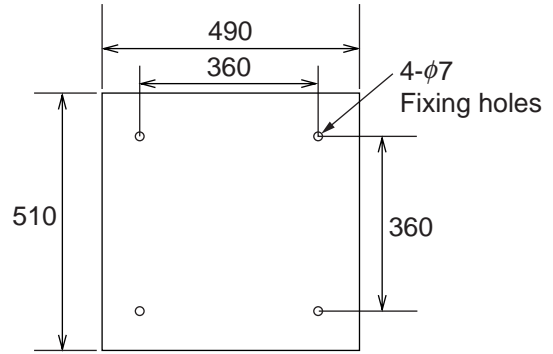
#### • PR-300



• **BC-6158/6200**

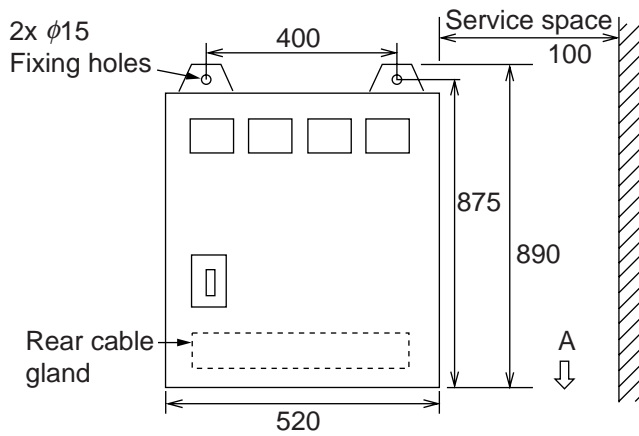


**Front view**

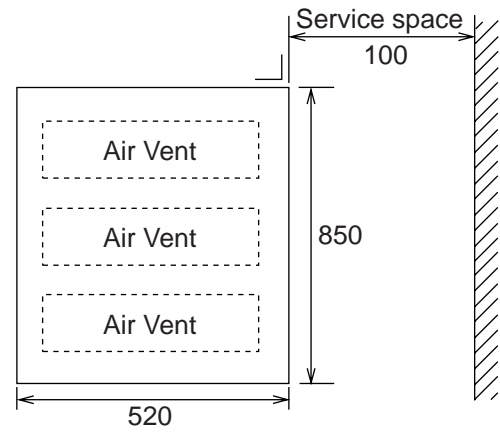


**Top view**

• **S-8300A**

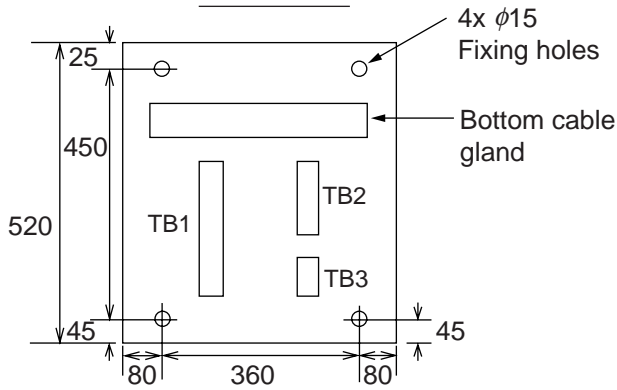


**Front view**



**Side view**

Unit: mm



**View from A**

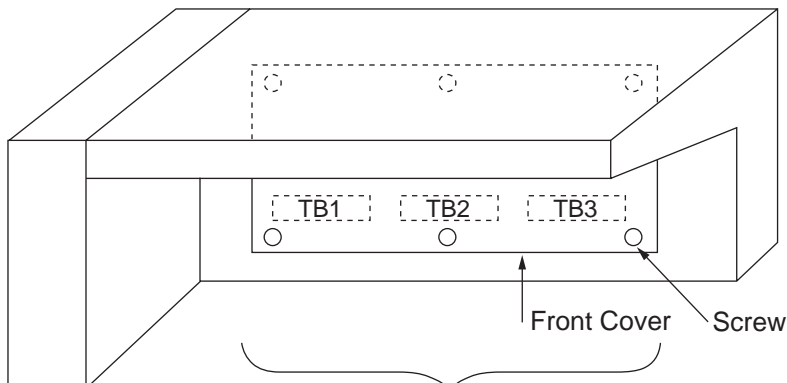
Fasten the S-8300A to the mounting location by fixing four fixing screws ( $\phi 15$ ) at the bottom and two fixing screws ( $\phi 15$ ) at the top.

The interconnection cable between the S-8300A and the rack console chassis should be run through either the bottom or rear side of the S-8300A as shown above.

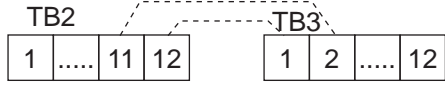
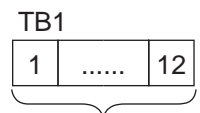


### 3. Connection

The figure belows shows view of rack console chassis. Remove the cover access terminal boards to make connections.

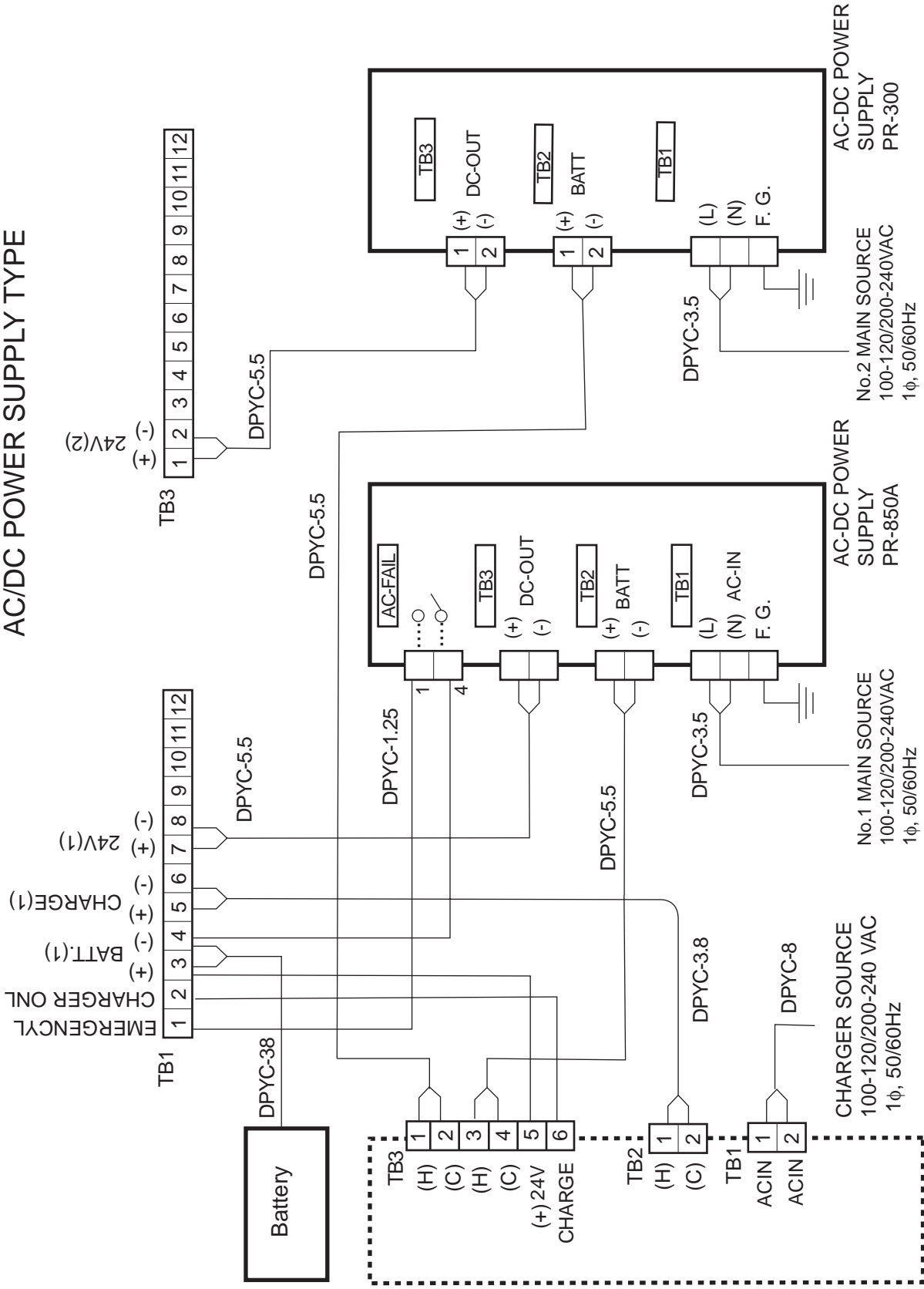


- ① Remove cover to access three terminal boards, TB1, TB2 and TB3.
- ② Remove jumper wires between TB2 and TB3.



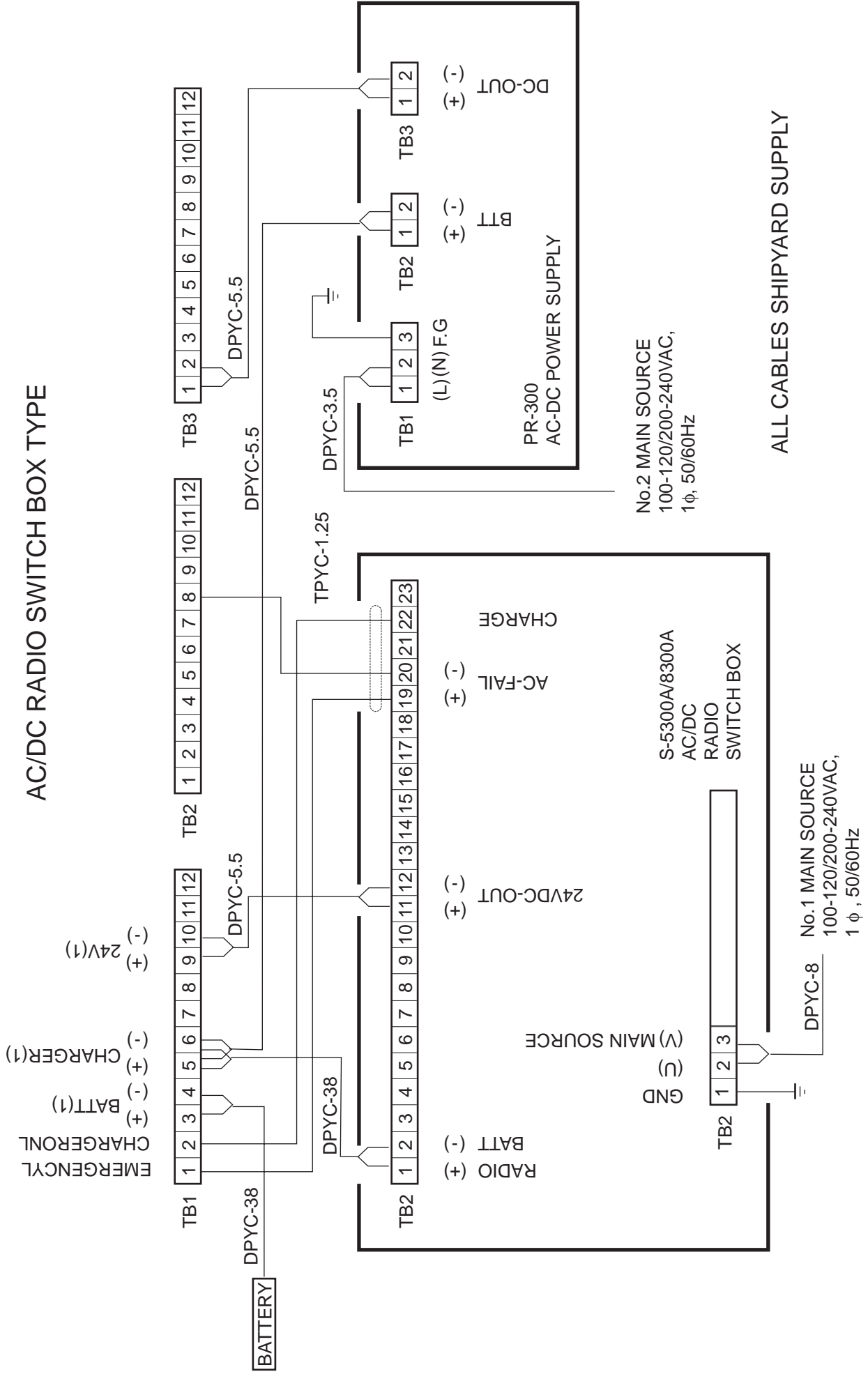
- See next page. ③ Connect cables to the AC/DC Power Supply Unit.

AC/DC POWER SUPPLY TYPE



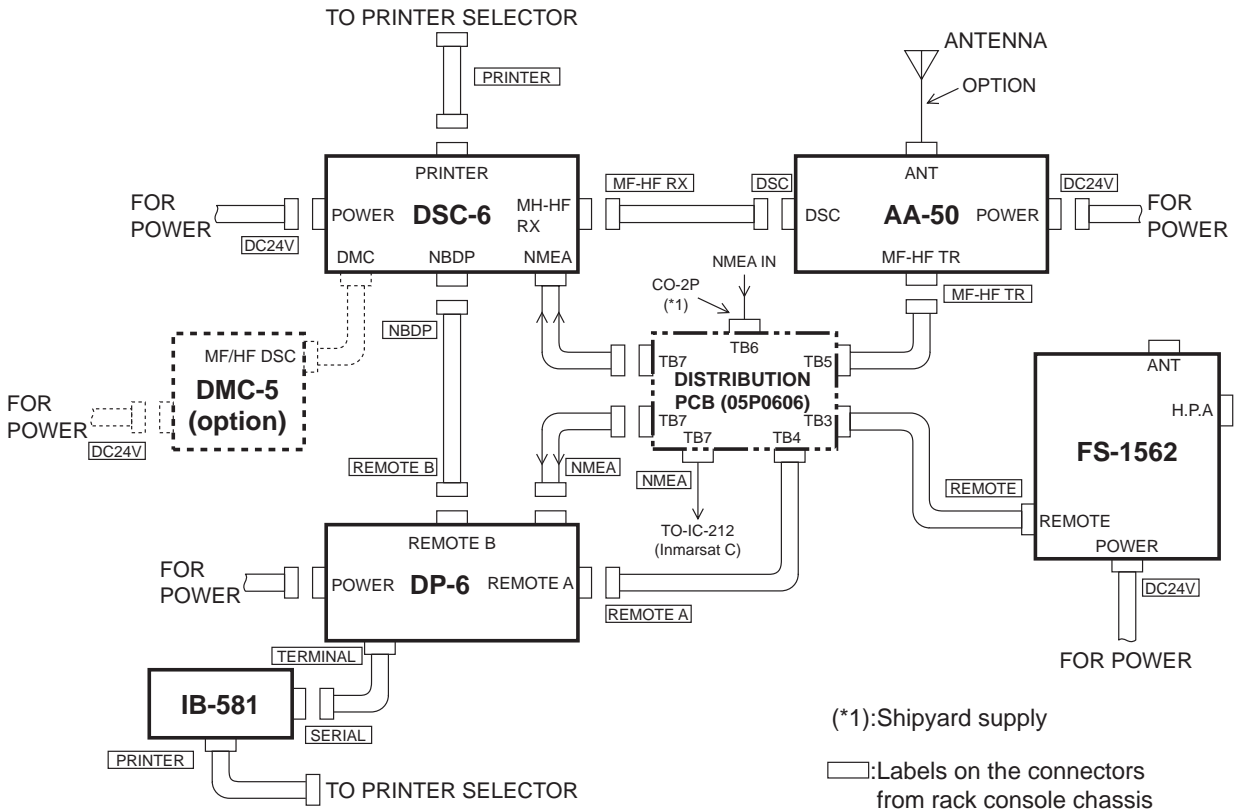
ALL CABLES SHIPYARD SUPPLY

# AC/DC RADIO SWITCH BOX TYPE

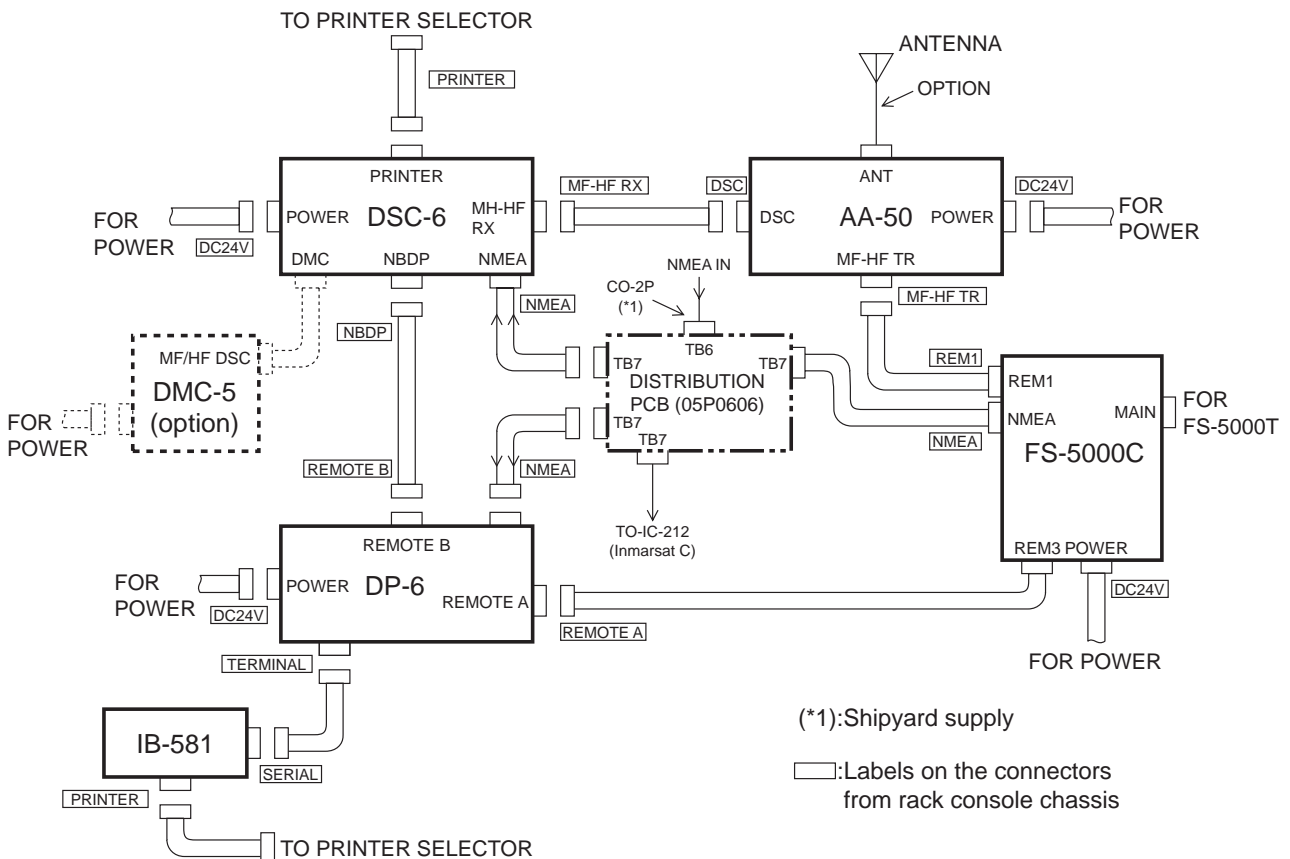


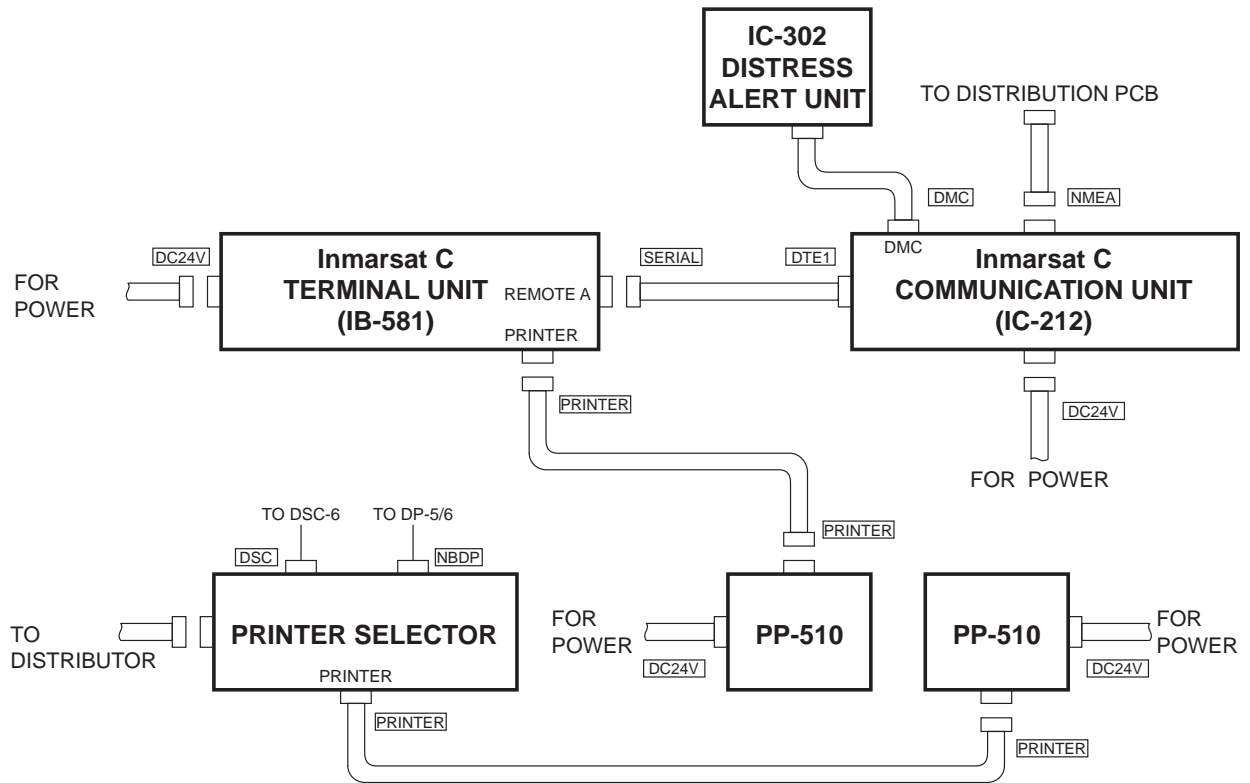
Connect cables with connectors in the rack console chassis among the equipment.

### RC-1500-1T-150/250, RC-1500-2T type

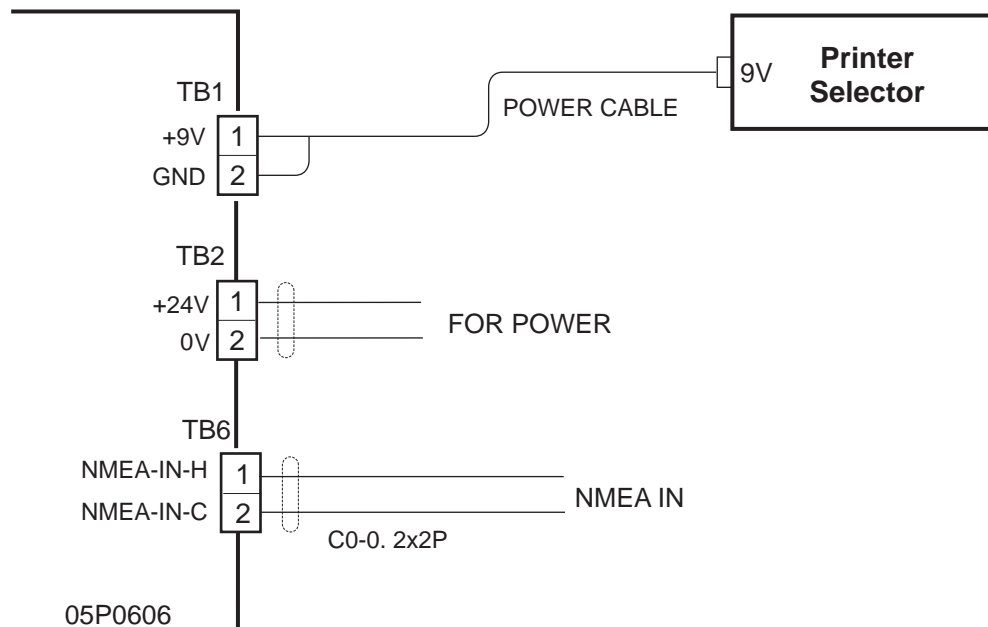


### RC-1500-1T-400/800, RC-1500-1T-2P type





### Distribution PCB



## **4. Adjustment at Installation**

### **1. SSB Radiotelephone**

#### **For FS-1562**

Register permitted frequency and change system setting if necessary, referring to the Service Manual SME-5572.

#### **For FS-5000**

Register permitted frequency and change system setting if necessary, referring to the Service Manual SME-5519.

### **2. DP-6**

To change the system setting and conduct self-test, refer to the Operator's Manual OME-5610.

### **3. FELCOM 12**

To carry out log-in and set the system setting, refer to Installation Manual IME-5613 and Operator's Manual OME-5613.

### **4. DSC-6**

To set the system setting and conduct self-test, refer to the Operator's Manual and Installation Manual.

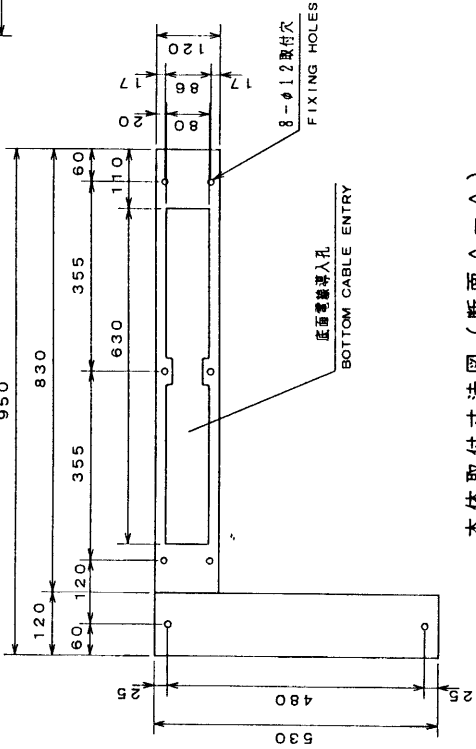
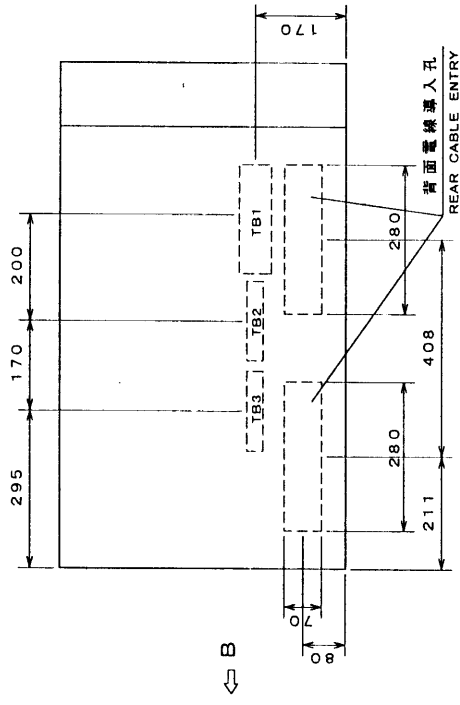
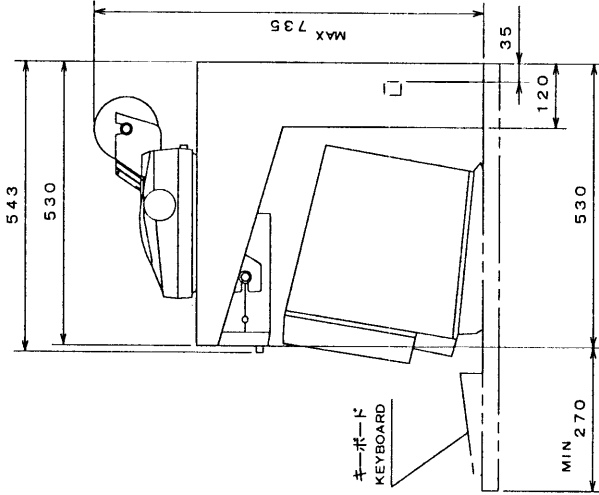
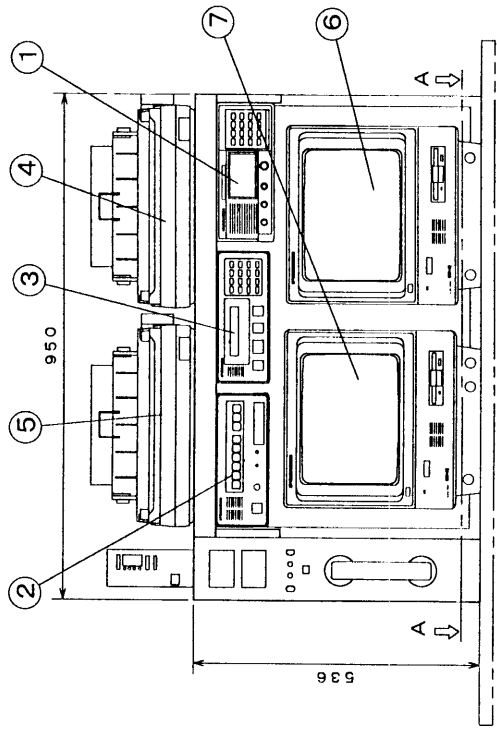
### **5. PP-510**

Set a recording paper and a cartridge and carry out self-test, referring to Operator's Manual OME-5080.

### **6. DMC-5 (option)**

To set the system setting, refer to Operator's Manual OME-5544.

To check the printer selector, transmit data from the DSC-6 and the NBDP and confirm that it is printed correctly.

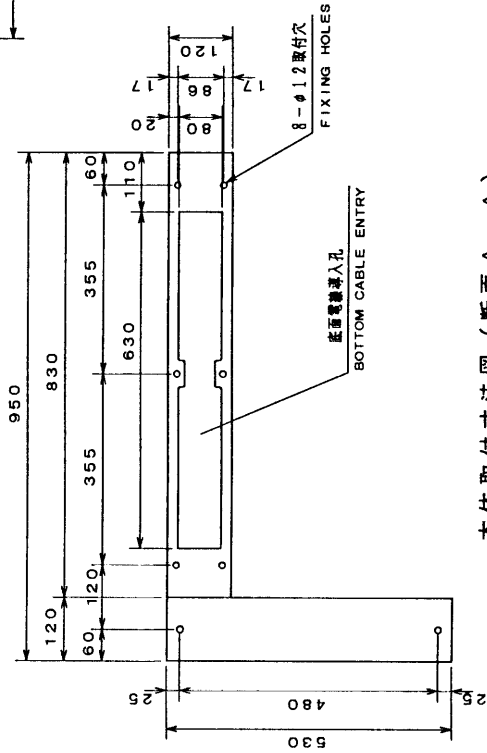
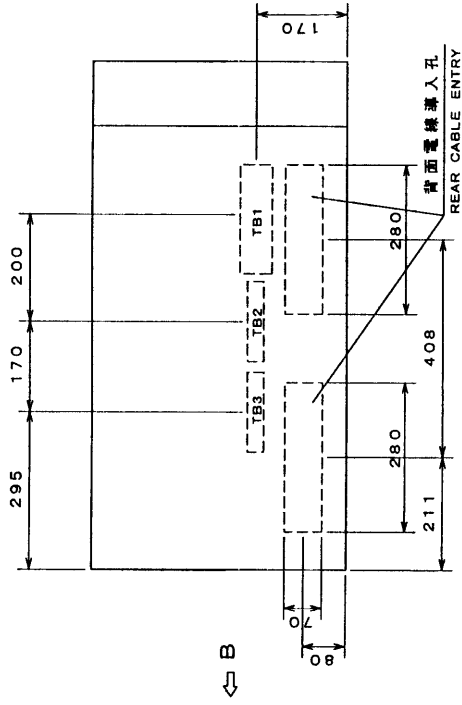
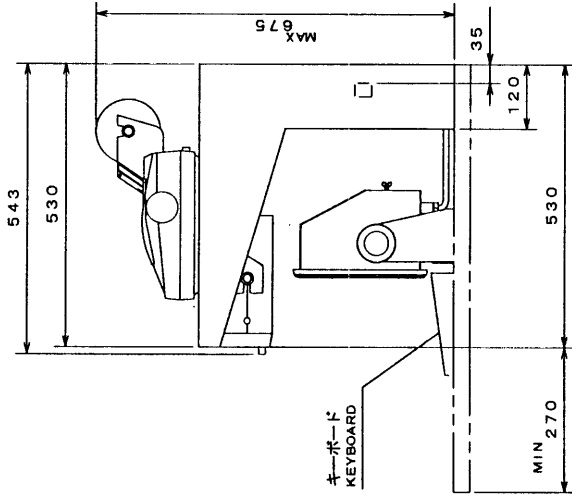
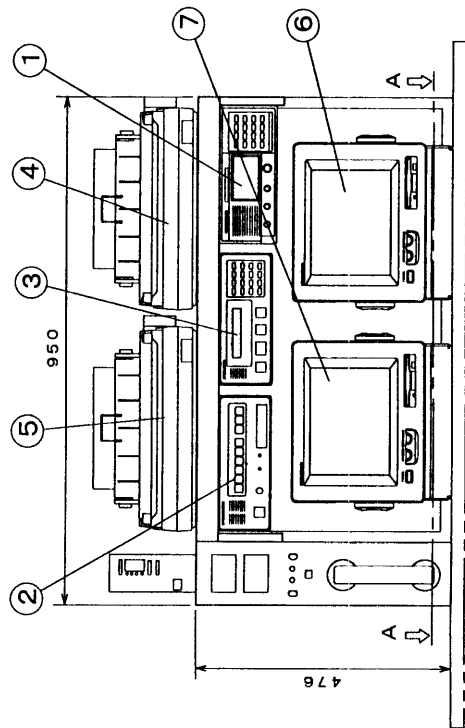


矢視 B  
VIEW B

本体取付寸法図 (断面 A-A)  
MOUNTING DIMENSIONS (A-A SECTIONAL VIEW)

ユニット名	ユニット名称	ユニット型名
UNIT NAME	UNIT NAME	TYPE OF UNIT
1	デジタルMF・HF送受信機	FS-1562
2	MF・HFデジタル選択呼出受信機	AA-50
3	MF・HF DSC WATCH RECEIVER	DCS-6
4	MF・HFデジタル選択呼出装置	DCS-6
5	インマルサットC プリンタ	PP-510
6	INMARSAT-C PRINTER	PP-510
7	NBDP/DSC プリンタ	PP-510
8	PRINTER FOR NBDP AND DSC	PP-510
9	インマルサットC ターミナルユニット	IC-511
10	INMARSAT-C TERMINAL UNIT	IC-511
11	狭帯域復調印刷電報装置ターミナルユニット	DP-5
12	NBDP TERMINAL UNIT	DP-5

DRAWN	REV. 27176	TITLE	RC-1500-1T
CHECKED	K. Kikuchi	名	卓上型無線ラックコンソール
APPROVED	T. Shihido	外	寸 図
SCALE	1/50	N	TABLETOP TYPE RADIO CONSOLE
DMC No.	C5597-G01-D	OUTLINE	DRAWING



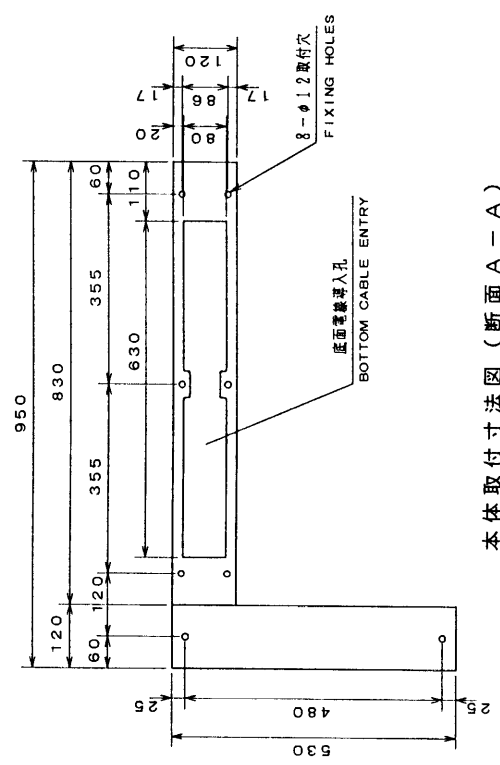
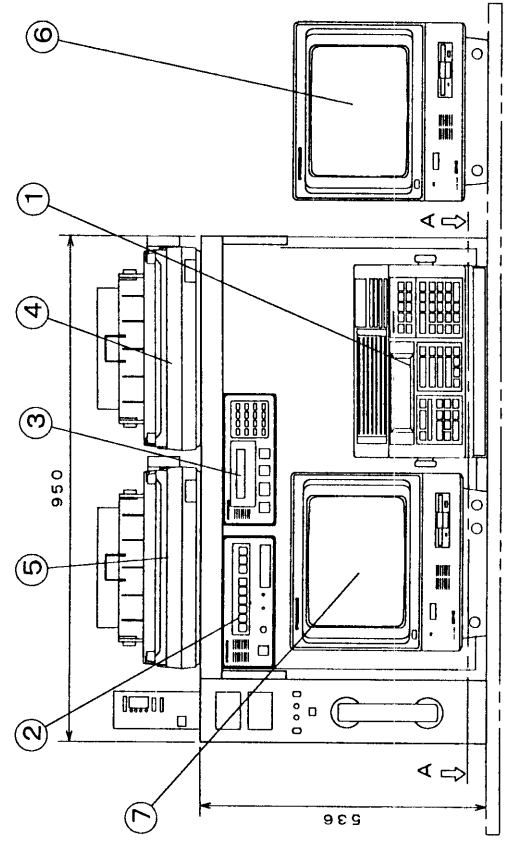
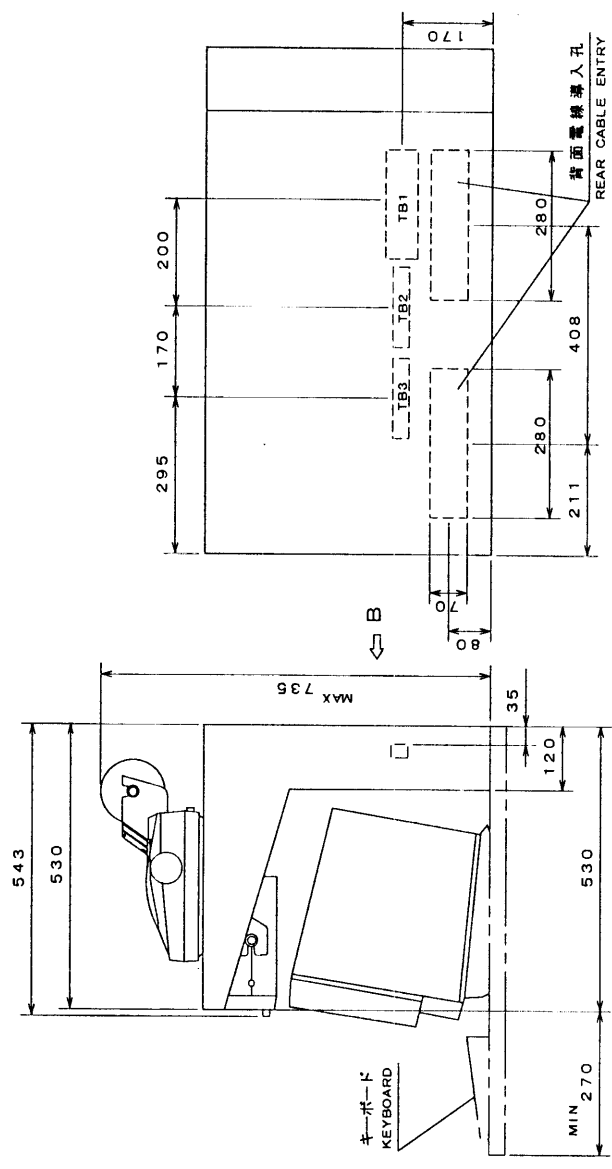
矢 視 B  
V I E W B

本体取付寸法図 (断面 A-A)  
MOUNTING DIMENSIONS (A-A SECTIONAL VIEW)

ユニット番号	ユニット名称	ユニット型式
1	デジタルMF・HF送受信装置	FS-1542
2	MF/HF SSB TRANSCEIVER	AA-50
3	MF・HFデジタル選呼受信装置	DCS-8
4	MF/HF DSC WATCH RECEIVER	PP-510
5	MF・HFデジタル選呼受信装置	PP-510
6	インマルサットC プリンタ	IB-581
7	INMARSAT-C PRINTER	IB-581
	INMARSAT-C ターミナルユニット	IB-581
	INMARSAT-C ターミナルユニット	IB-581
	印刷機用印字機選呼受信装置ターミナルユニット	IB-581
	NEBP TERMINAL UNIT	IB-581

DRAWN	RC-1500-1T
CHECKED	RC-1500-1T
APPROVED	RC-1500-1T
SCALE	1/10
DMCNG	C5597-G15-A





矢視 B  
VIEW B

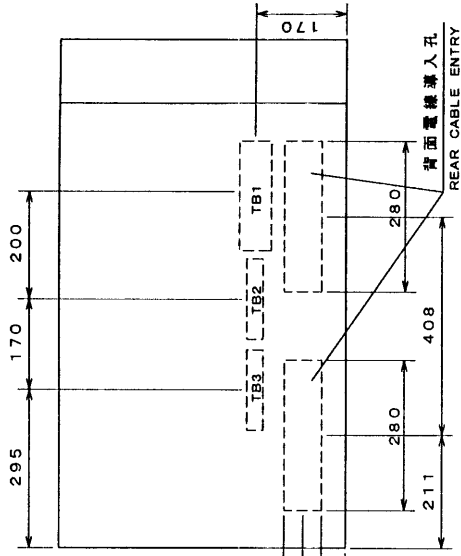
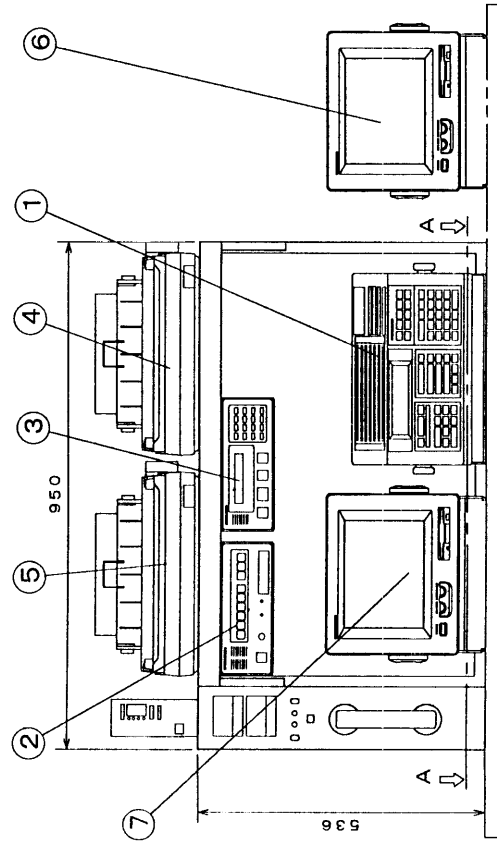
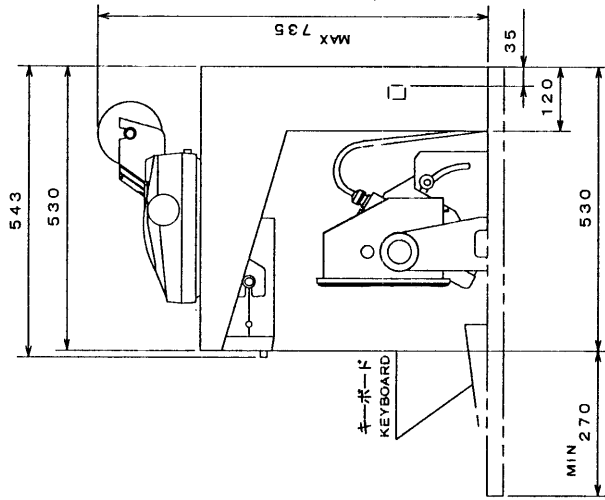
ユニット名称 UNIT NAME	ユニット型名 TYPE OF UNIT
デジタル・HF 送受信機コントロールユニット MF/HF SSB TRANSMITTER CONTROL UNIT	FS-5000C
MF・HF デジタル選呼機 MF/HF DSC SWITCH RECEIVER	AA-50
MF・HF デジタル選呼機 MF/HF DSC TERMINAL	DCS-6
インマルサット プリンタ INMARSAT-C PRINTER	PP-510
NBDP/DSC プリンタ PRINTER FOR NBDP AND DSC	PP-510
インマルサット ターミナルユニット INMARSAT-C TERMINAL UNIT	IC-511
送受信機印刷機 NBDP TERMINAL UNIT	DP-5

TITLE	RC-1500-1T
名称	卓上型無線ラックコンソール
外寸図	
NAME	TABLETOP TYPE RADIO CONSOLE
OUTLINE DRAWING	
SCALE	1/50 MASS 55 kg
DWG No.	C5597-G04-C

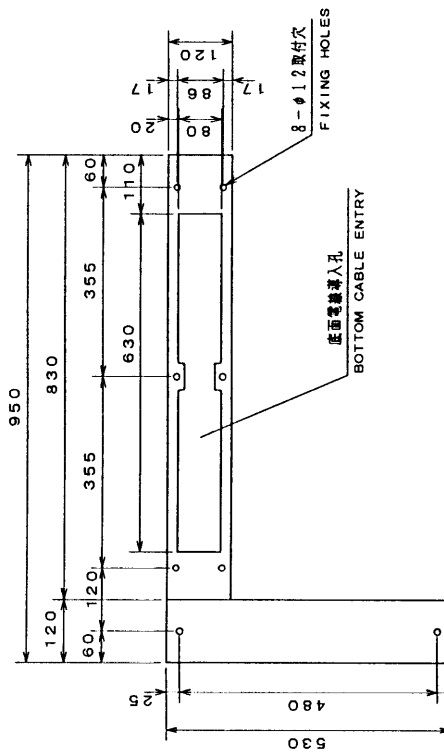
本体取付寸法図 (断面 A-A)  
MOUNTING DIMENSIONS (A-A SECTIONAL VIEW)

表 1 TABLE 1

範囲 DIMENSIONS	公差 TOL
L ≤ 50	± 1 mm
50 < L ≤ 100	± 2 mm
100 < L ≤ 500	± 3 mm
500 < L ≤ 1000	± 4 mm
1000 < L ≤ 2000	± 5 mm
2000 < L ≤ 4000	± 7 mm
4000 < L ≤ 8000	± 10 mm
8000 < L	± 15 mm



矢 視 B  
VIEW B



本体取付寸法図 (断面 A-A)

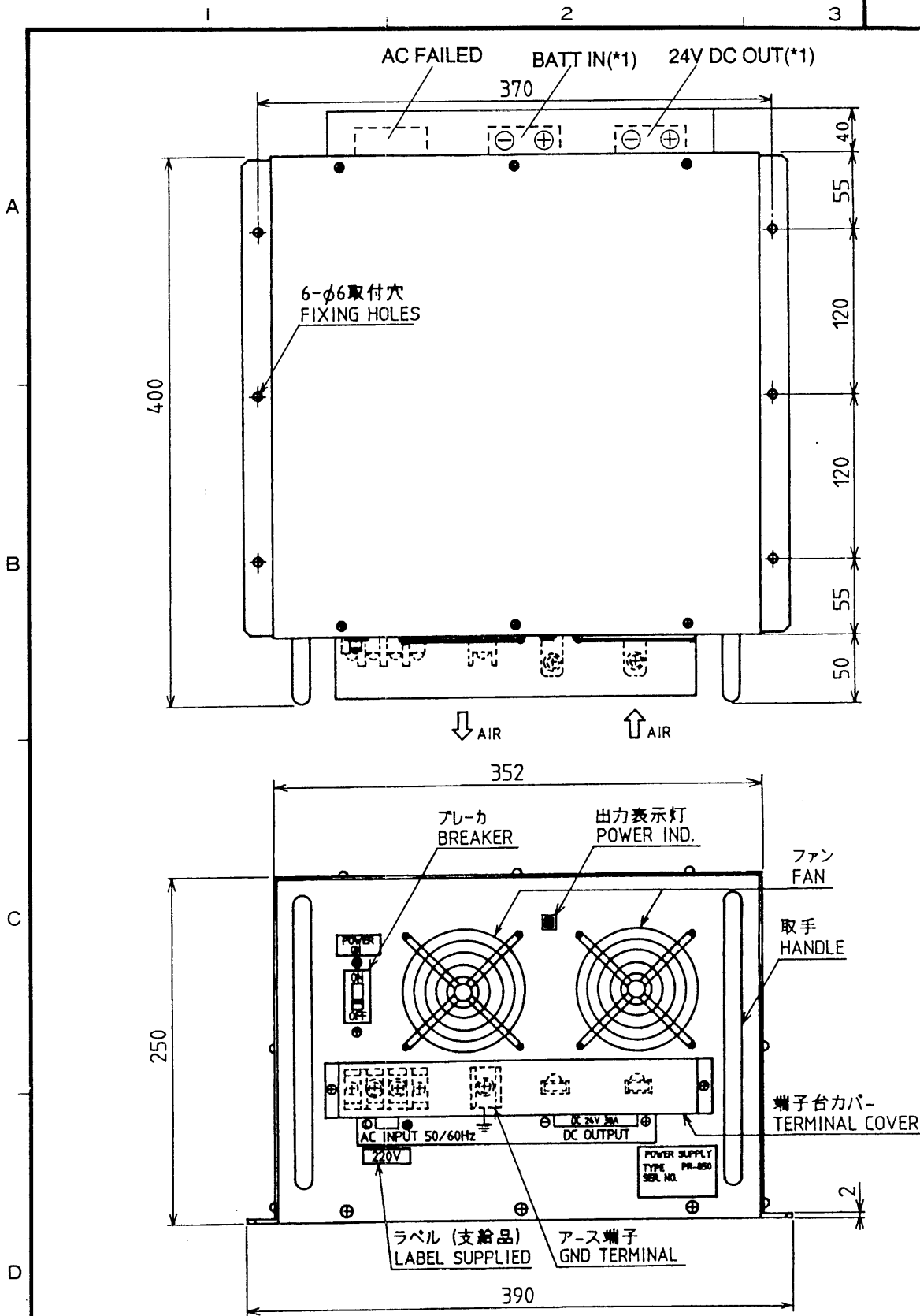
MOUNTING DIMENSIONS (A-A SECTIONAL VIEW)

ユニット名	ユニット名称	ユニット名	ユニット名称
UNIT	NAME	UNIT	NAME
1	MF/HF SSB TRANSMITTER CONTROL UNIT	FS-5000C	FS-5000C
2	MF/HF デジタル選択呼出留守装置	AA-50	AA-50
3	MF/HF デジタル選択呼出装置	DCS-6	DCS-6
4	インマルサット プリンタ	PP-510	PP-510
5	INMARSAT-C PRINTER	PP-510	PP-510
6	NBDP/DSC プリンタ	PP-510	PP-510
7	PRINTER FOR NBDP AND DSC	PP-510	PP-510
8	インマルサット ターミナルユニット	IB-581	IB-581
9	INMARSAT-C TERMINAL UNIT	IB-581	IB-581
10	携帯端末用印刷機	IB-581	IB-581
11	NBDP TERMINAL UNIT	IB-581	IB-581

DRAWN	Jan 16 '97	T. YAMASAKI
CHECKED	JUN 16 '97	K. Kusunoki
APPROVED	JUN 16 '97	T. YAMASAKI
SCALE	1/10	MMSS 55 kg
DWG No.	C5597-G14-A	

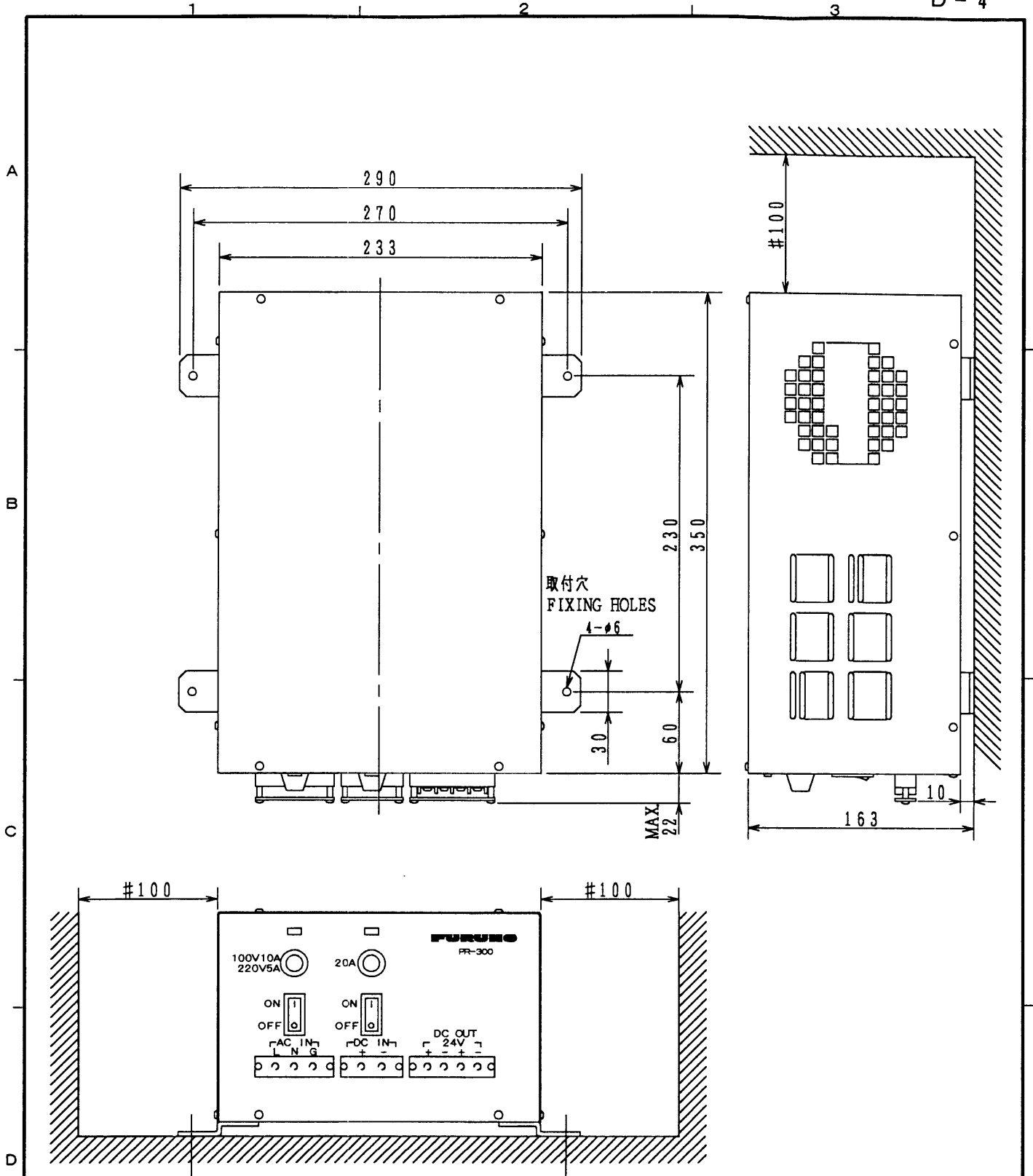
注 記  
指定なき寸法公差は表 1 による。  
NOTE  
TABLE 1 INDICATES TOLERANCE OF DIMENSION

TABLE 1 INDICATES TOLERANCE OF DIMENSION



注(\*1): ケーブル端子の太さ 最大22mm<sup>2</sup>.  
 Note(\*1): Cable thickness: max. 22sq.

REMARKS		FS-5000 FS-8000 FS-2550	TYPE PR850A
DRAWN T.Y.	APPROVED July 25 5x KED A	FS1562-25 RC1500-1T	名称 AC-DC電源ユニット
SCALE X	MASS 35 kg	APPLICABLE TO: (MODEL)	NAME AC-DC POWER SUPPLY UNIT
		BLOCK NO.	DWG NO. C5519-G11- D



注記

1) # : 推奨する最小サービス空間寸法。

NOTE

1. # : RECOMMENDED SERVICE CLEARANCE DIMENSION.

DRAWN Jan 8 '98 T. YAMASAKI		TITLE PR-300
CHECKED Jan 8 '98 K. Kusunoki	FS-75	名称 AC-DC電源ユニット
APPROVED Jan 8 '98 H. Yamauchi	FS-15 FS-1562-15	外寸図
SCALE 1/4	MASS 14.5 kg	NAME AC-DC POWER SUPPLY UNIT
DWG No. C5003-G02-C		OUTLINE DRAWING

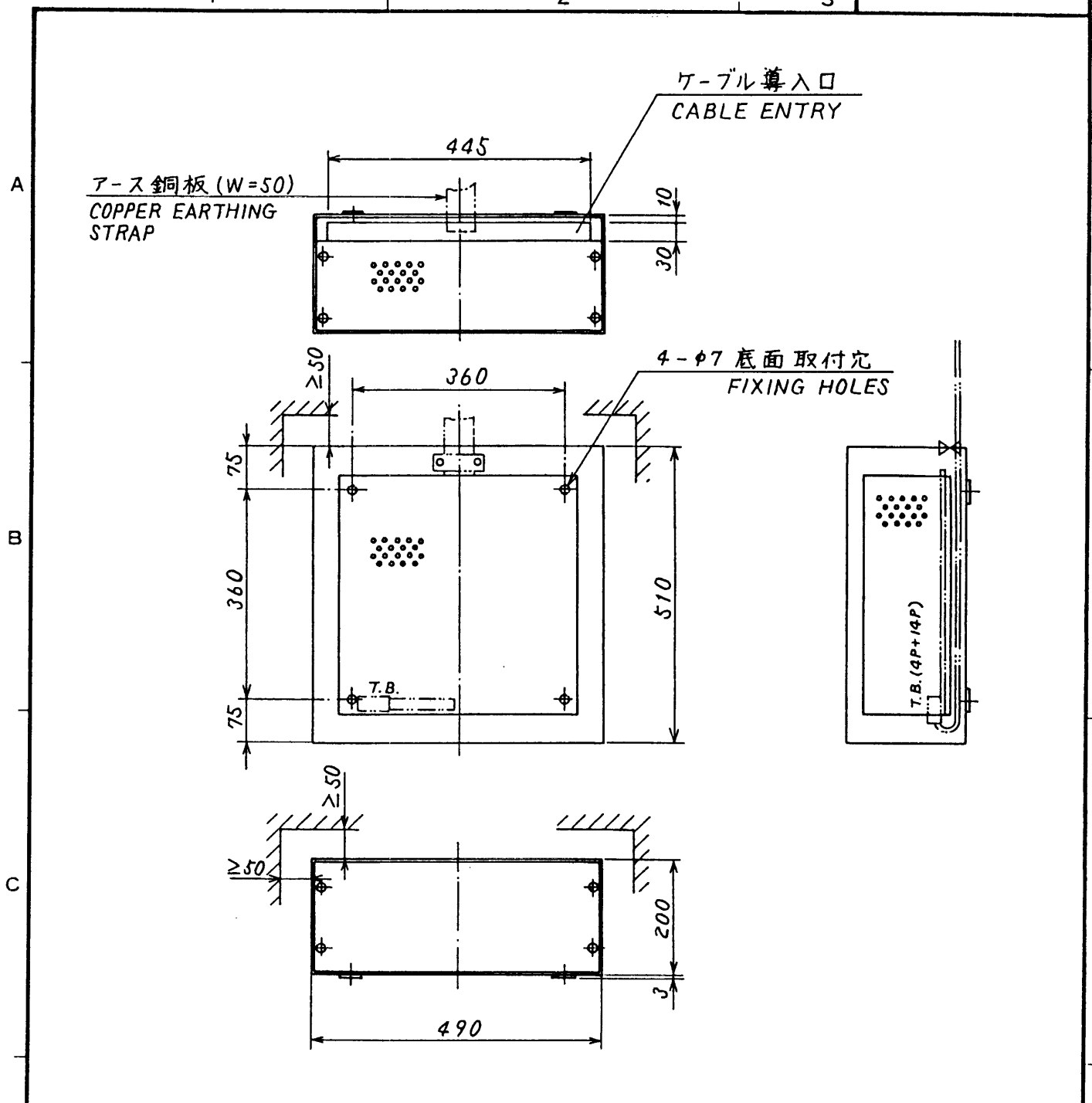
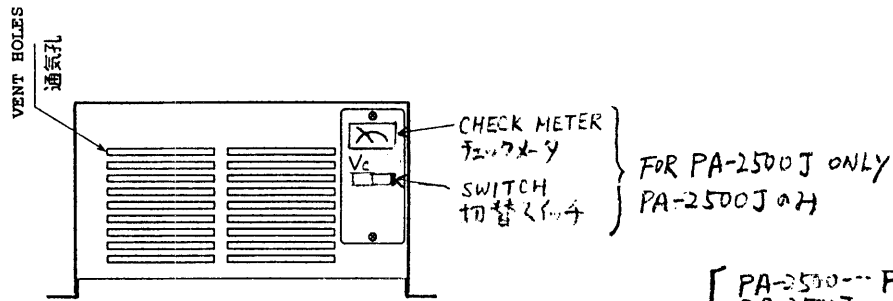
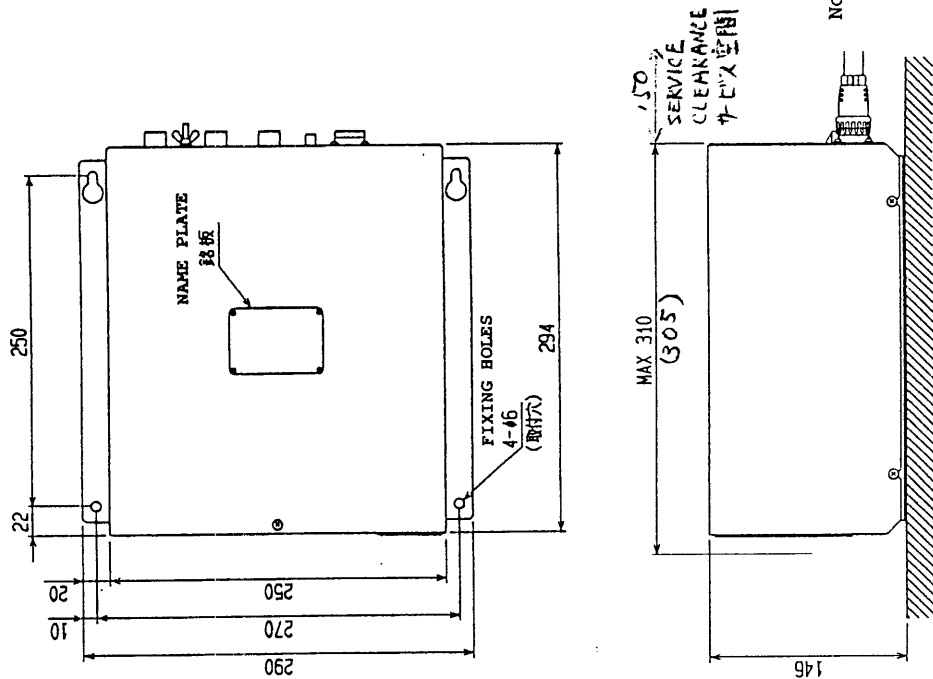
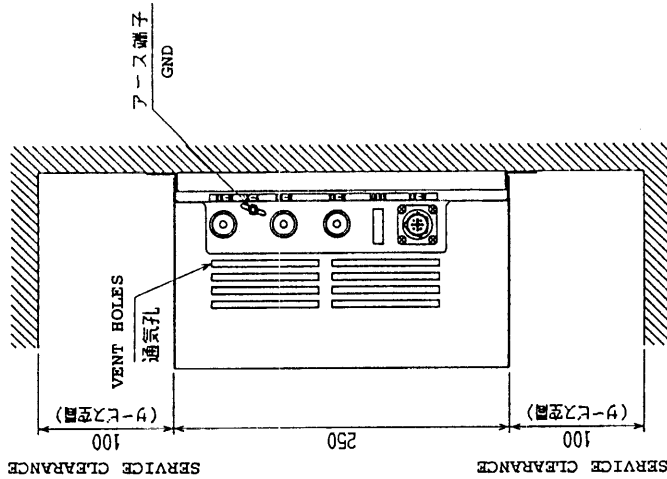


表 1 TABLE 1

範囲 DIMENSIONS	公差 TOL
$L \leq 50$	$\pm 1 \text{ mm}$
$50 < L \leq 100$	$\pm 2 \text{ mm}$
$100 < L \leq 500$	$\pm 3 \text{ mm}$
$500 < L \leq 1000$	$\pm 4 \text{ mm}$

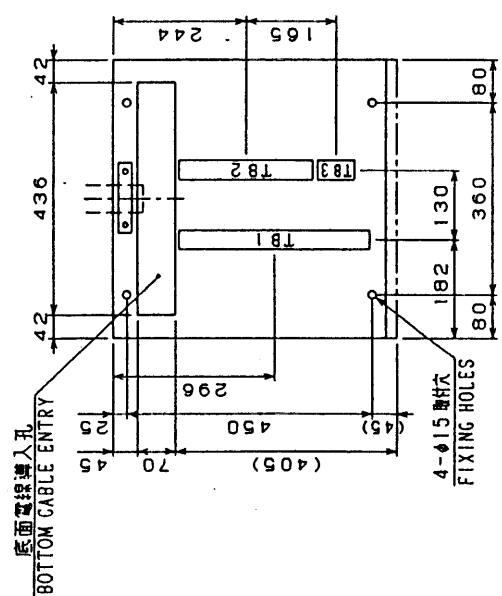
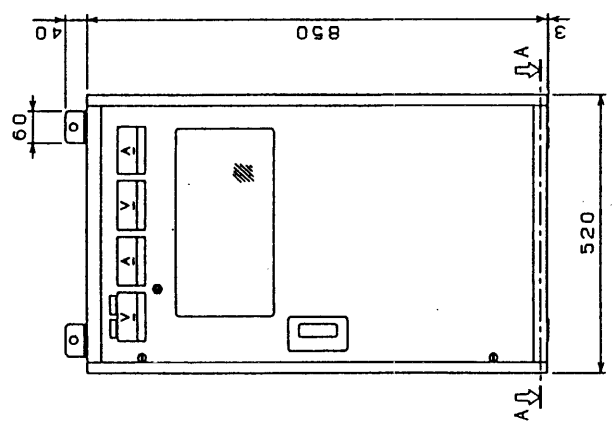
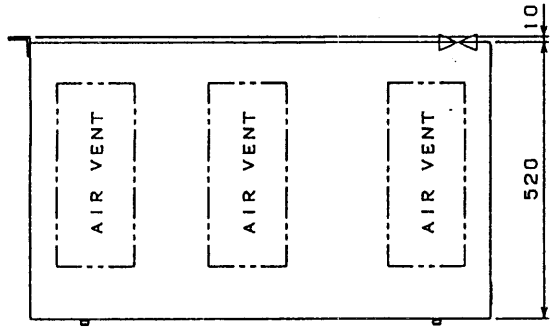
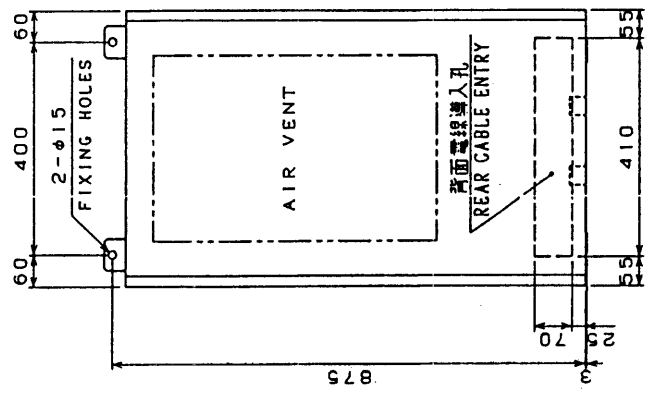
DRAWN July 4, '97 T. YAMASAKI			TYPE BC-6158/6200
CHECKED July 4, '97 K. Kusunoki			名称 バッテリーチャージャー (単相用) ケース付
APPROVED July 7, '97 M. Yamaguchi			外寸図
SCALE 1/5 MASS 28 kg	APPLICABLE TO; (MODEL)	BLOCK NO.	NAME BATTERY CHARGER (W/CABINET)
DWG NO. C5007-G05-A			OUTLINE DRAWING

A  
B  
C  
D



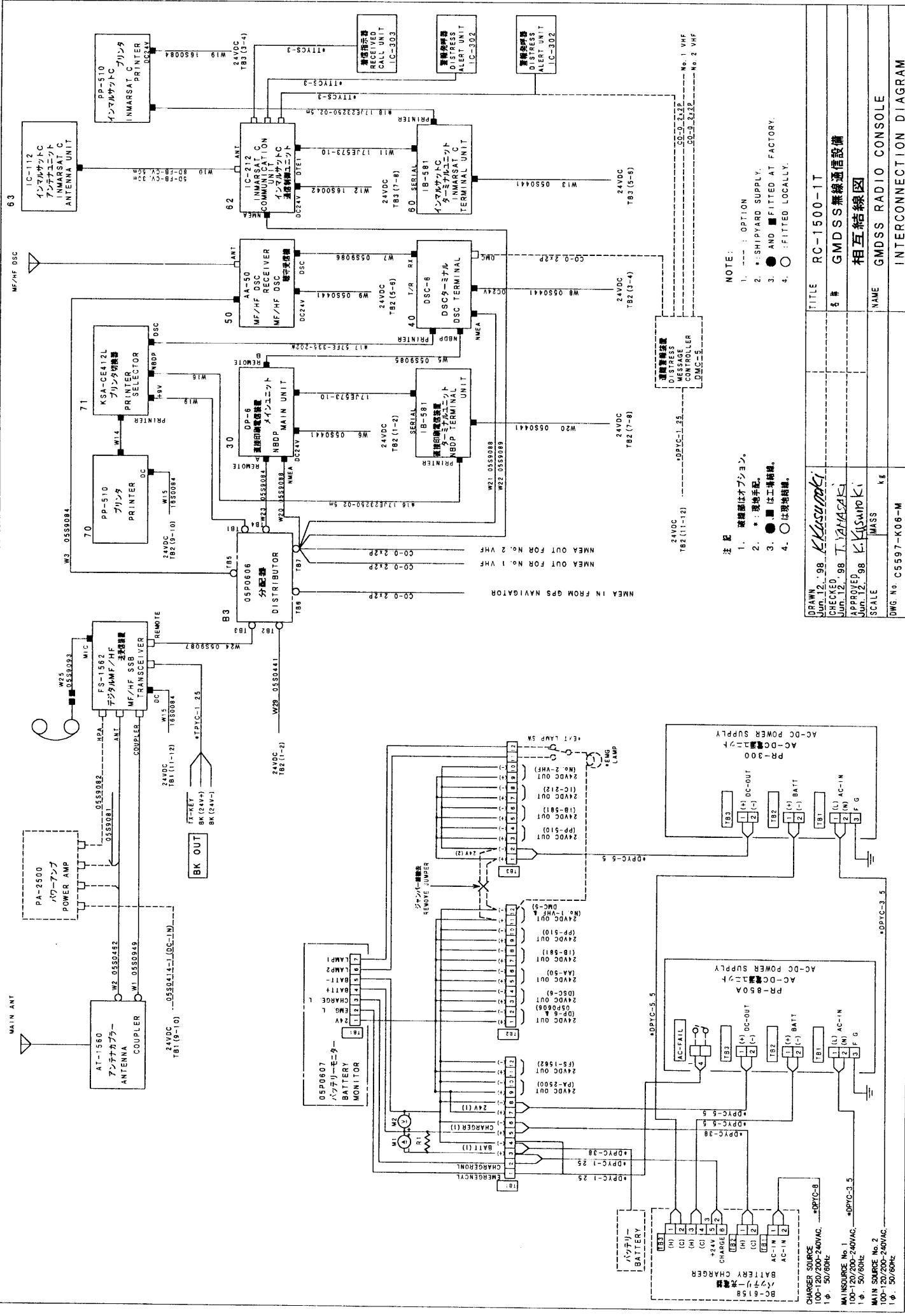
Note: Use tapping screws (5 x 20) for installation.  
注記 取付ネジはタトラスタップピッチ呼び径5×20を使用のこと

DRAWN Aug. 21. '96 T. YAMASAKI			TYPE PA-2500, PA-2500J
CHECKED Aug 23 '96 Y. K.			名称 パワーブースター
APPROVED Aug 23 '96 K. OTO	FS-2550 FS-1562		外寸図
SCALE 1/4	MASS 6.0 kg	APPLICABLE TO: (MODEL)	BLOCK NO.
DWG NO. C5596-G01-C			NAME POWER BOOSTER
			OUTLINE DRAWING



本体取付寸法図 (断面A-A)  
MOUNTING DIMENSIONS (A-A SECTIONAL VIEW)

REMARKS		TYPE	S5300/8300
DRAWN		名称	無線スイッチボックス
SCALE		NAME	AC/DC RADIO SWITCH BOX
APPROVED		BLOCK NO.	
1/12		APPLICABLE TO:	
1/12		(MODEL)	
MASS		DWG. NO.	G5556-G02-C
85/110 kg			

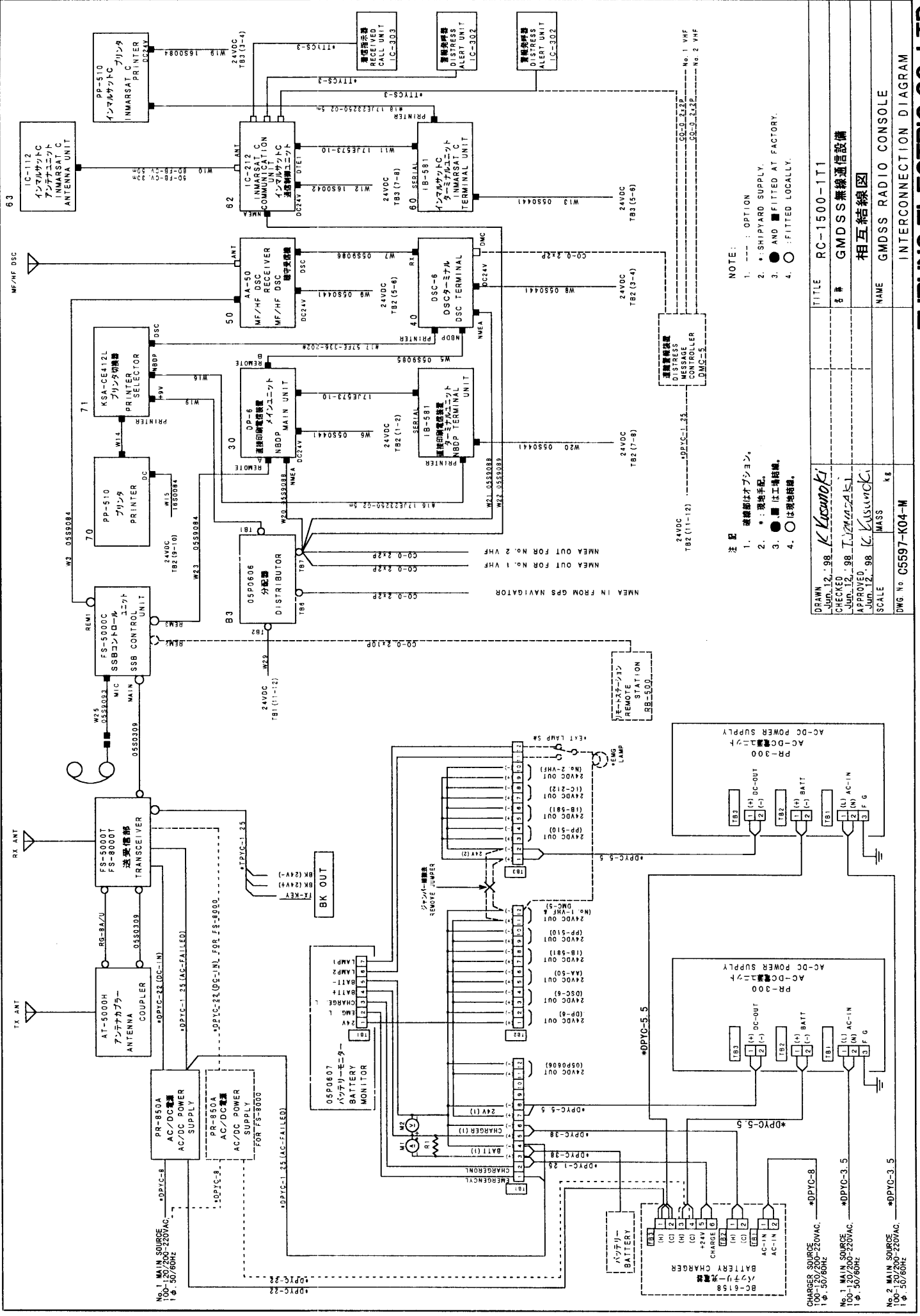


NOTE:  
 1. --- : OPTION  
 2. \* : SHIPYARD SUPPLY.  
 3. ● : FITTED AT FACTORY.  
 4. ○ : FITTED LOCALLY.

注 記  
 1. 破線部はオプション。  
 2. \* : 船場手配。  
 3. ● : 工場結線。  
 4. ○ : 現場結線。

DRAWN	Jun.12.'98	K.Kasumi	TITLE	RC-1500-1T
CHECKED	Jun.12.'98	T.YAMASAKI	名 称	GMDSS無線通信設備
APPROVED	Jun.12.'98	K.KASUMI	相互結線図	
SCALE			NAME	GMDSS RADIO CONSOLE
			MASS	kg
			DWG. No	C6597-K06-M
INTERCONNECTION DIAGRAM				





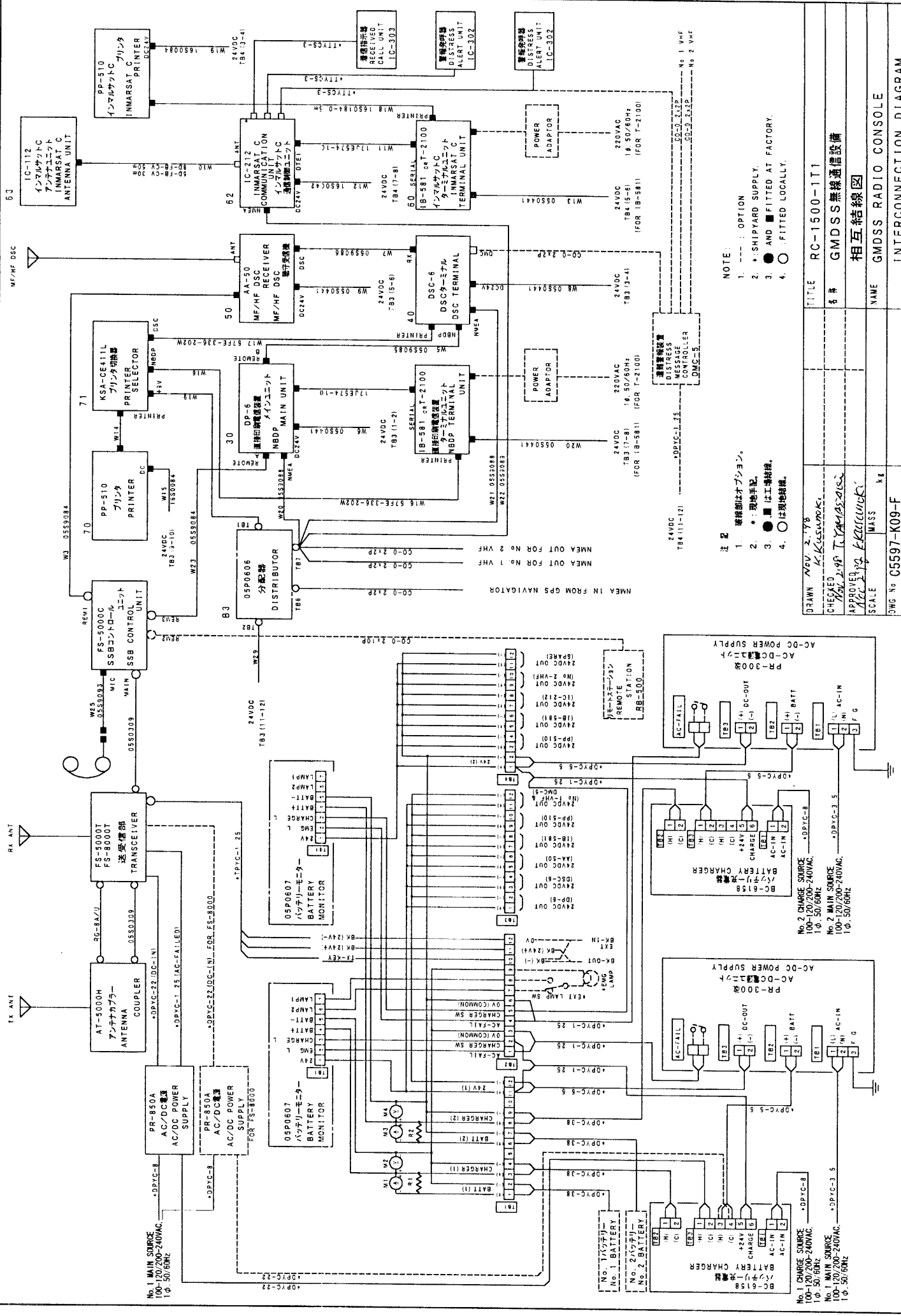
NOTE:

1. --- : OPTION
2. \* : SHIPYARD SUPPLY.
3. ● AND ■ : FITTED AT FACTORY.
4. ○ : FITTED LOCALLY.

注 記

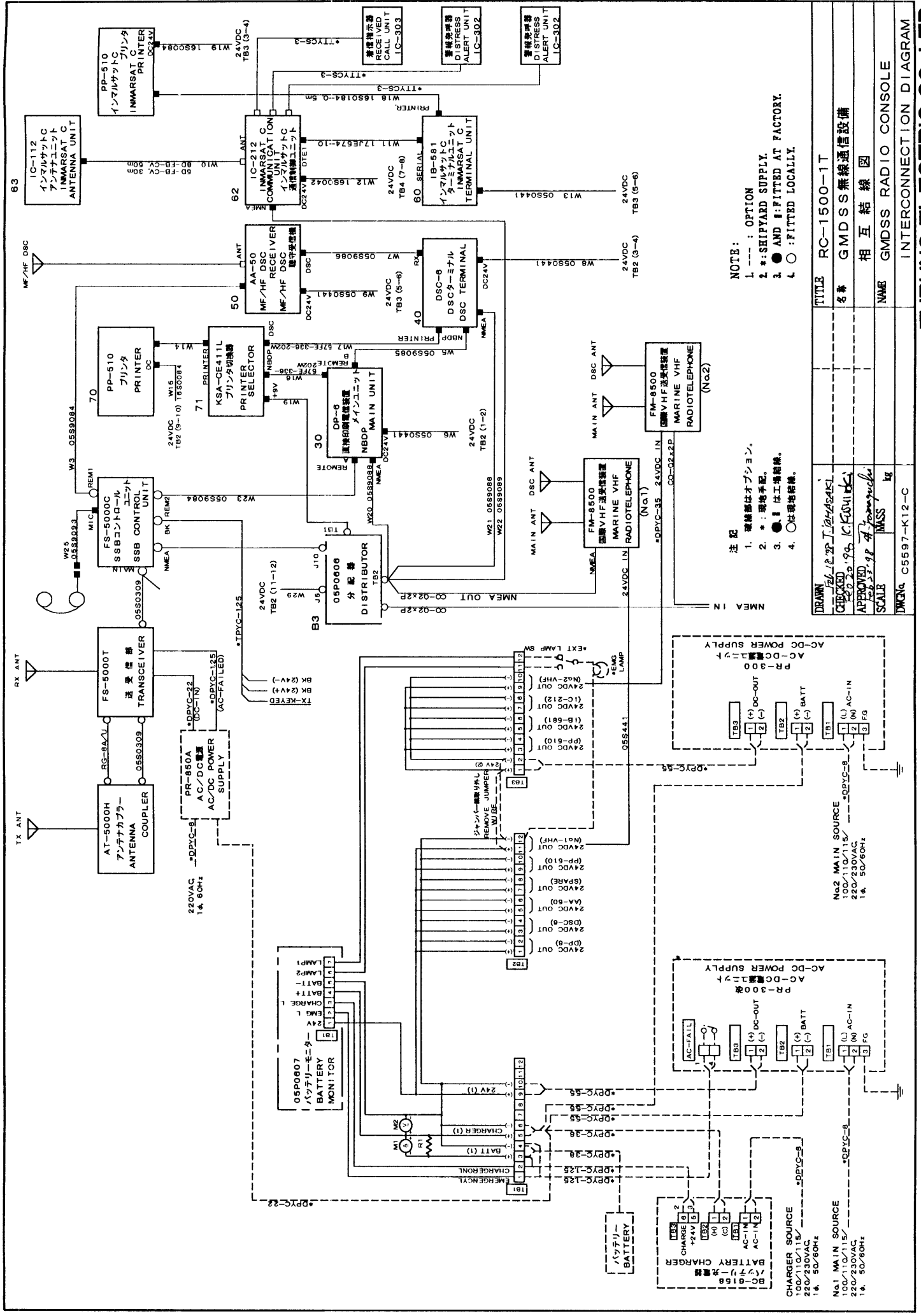
1. 破線部はオプション。
2. \* : 現地手配。
3. ●、■ : 工場組立。
4. ○ : 現地組立。

DRAWN	Jun.12.98	K. Kusunoki	TITLE	RC-1500-1T1
CHECKED	Jun.12.98	T. Yamazaki	名 称	GMDSS無線通信設備
APPROVED	Jun.12.98	K. Kusunoki	相互結線図	
SCALE		1/100	NAME	GMDSS RADIO CONSOLE
		kg		INTERCONNECTION DIAGRAM
DWG No	C5597-K04-M			



- NOTE:
1. 接続部はオプション。
  2. \* : 現地手配。
  3. ● : は工場接続。
  4. ○ : 比較接続線。
- NOTE:
1. --- : OPTION
  2. \* : SHIPYARD SUPPLY.
  3. ● : AND ■ FITTED AT FACTORY.
  4. ○ : FITTED LOCALLY.

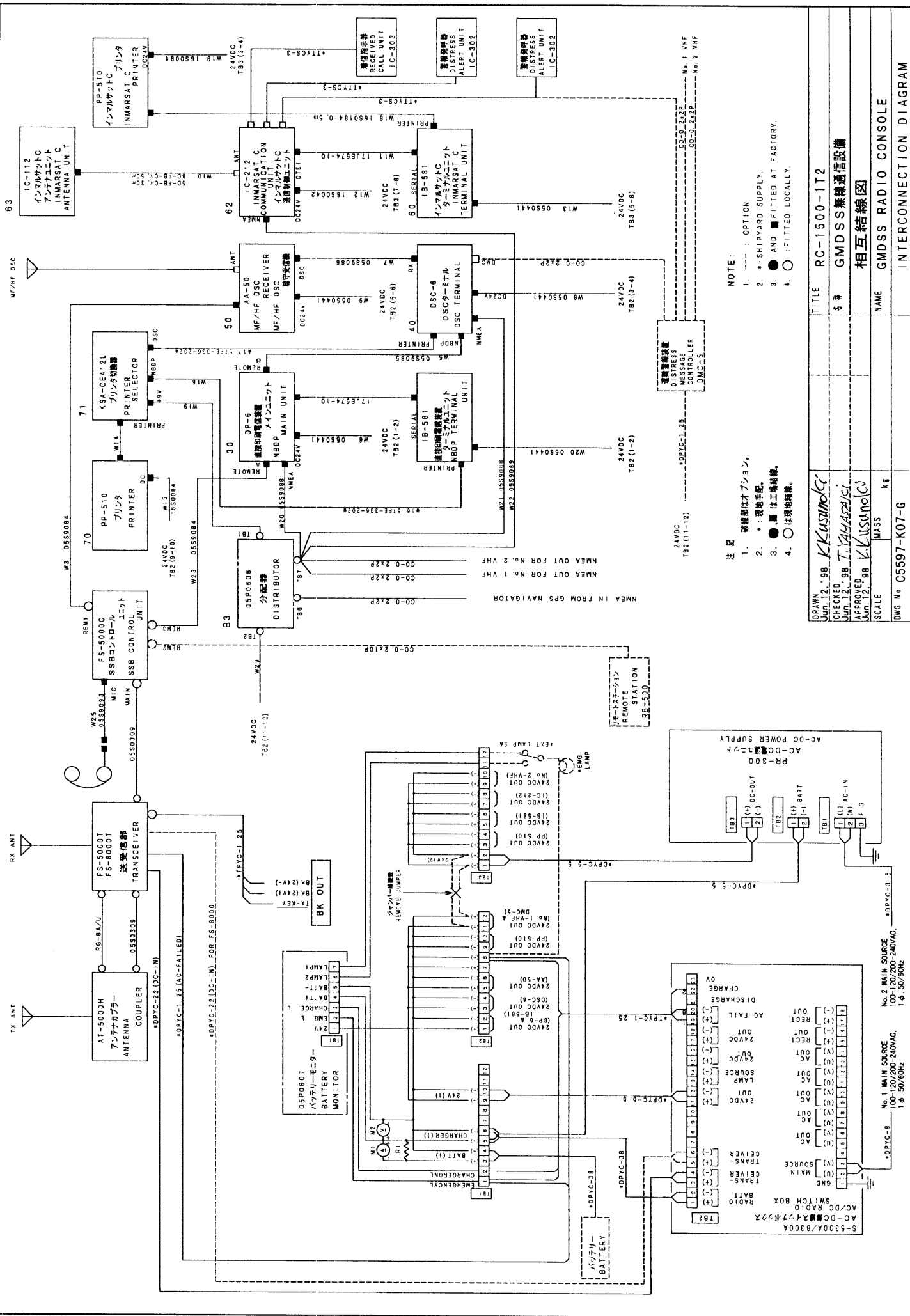
DRAWN	Nov. 2, 1978	TITLE	RC-1500-1T1
CHECKED	K. Kusumoto	名 称	GMDSS無線通信設備
APPROVED	Nov. 2, 1978 T. Yamazaki	相互結線図	
SCALE	As Shown	NAME	GMDSS RADIO CONSOLE
		WASS	kg
			INTERCONNECTION DIAGRAM



- NOTE:
1. --- : OPTION
  2. \* : SHIPYARD SUPPLY.
  3. ● AND ○ : FITTED AT FACTORY.
  4. ○ : FITTED LOCALLY.

- 注記
1. 破線はオプション。
  2. \* : 船場手配。
  3. ●、○は工場接続。
  4. ○は船場接続。

DRAWN Feb. 12. 82 P. J. Takahashi		TITLE RC-1500-11
CHECKED Feb. 20. 82 K. Kasuoka		名称 GMDSS無線通信設備
APPROVED Feb. 23. 82 T. Yamaguchi		相互結線図
SCALE 1/20	MASS	NAME GMDSS RADIO CONSOLE
PWNG. C5597-K12-C		INTERCONNECTION DIAGRAM



注 記

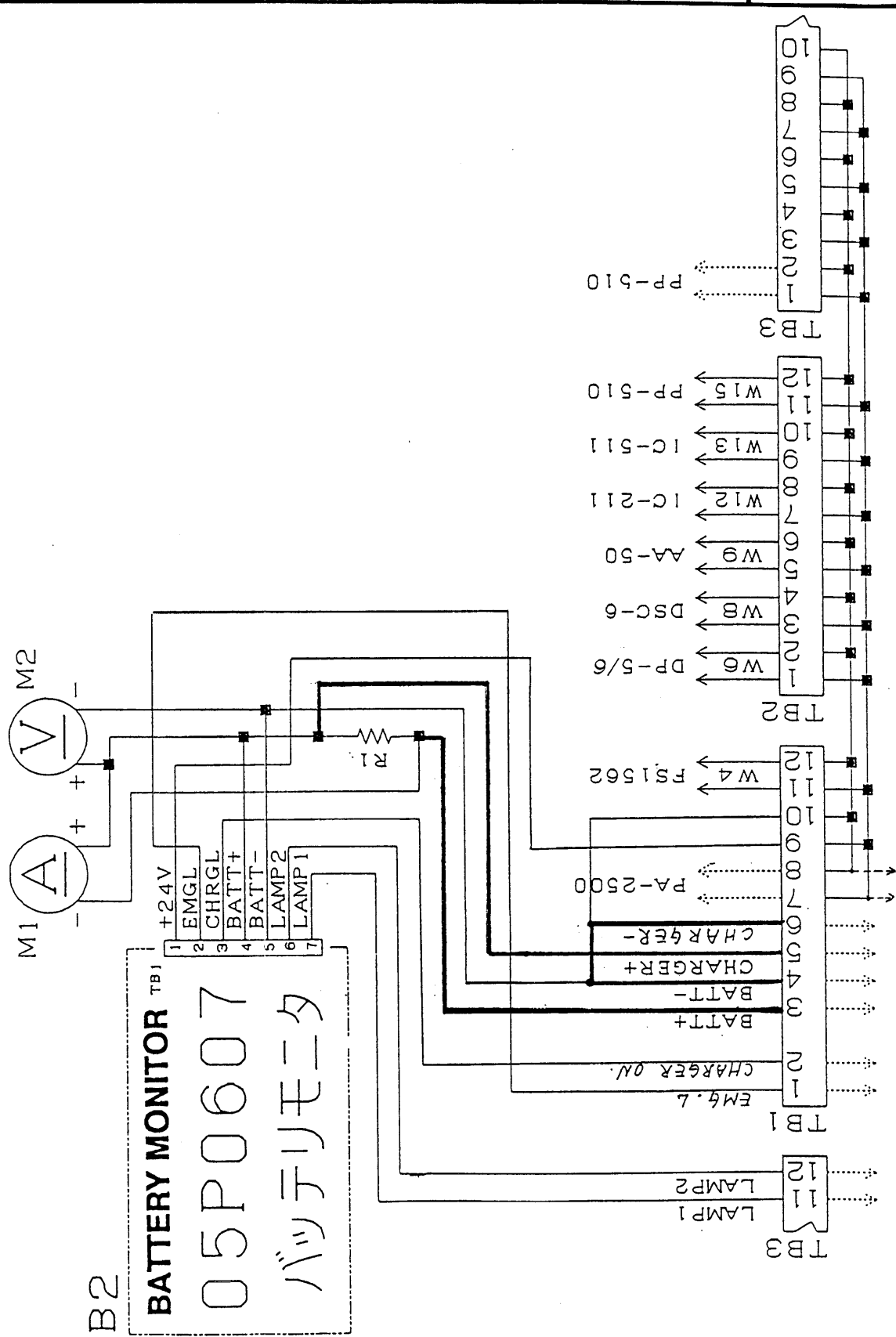
1. 破線部はオプション。
2. \* : 現場手配。
3. ● : 工事情報。
4. ○ : 現場接続。

NOTE:

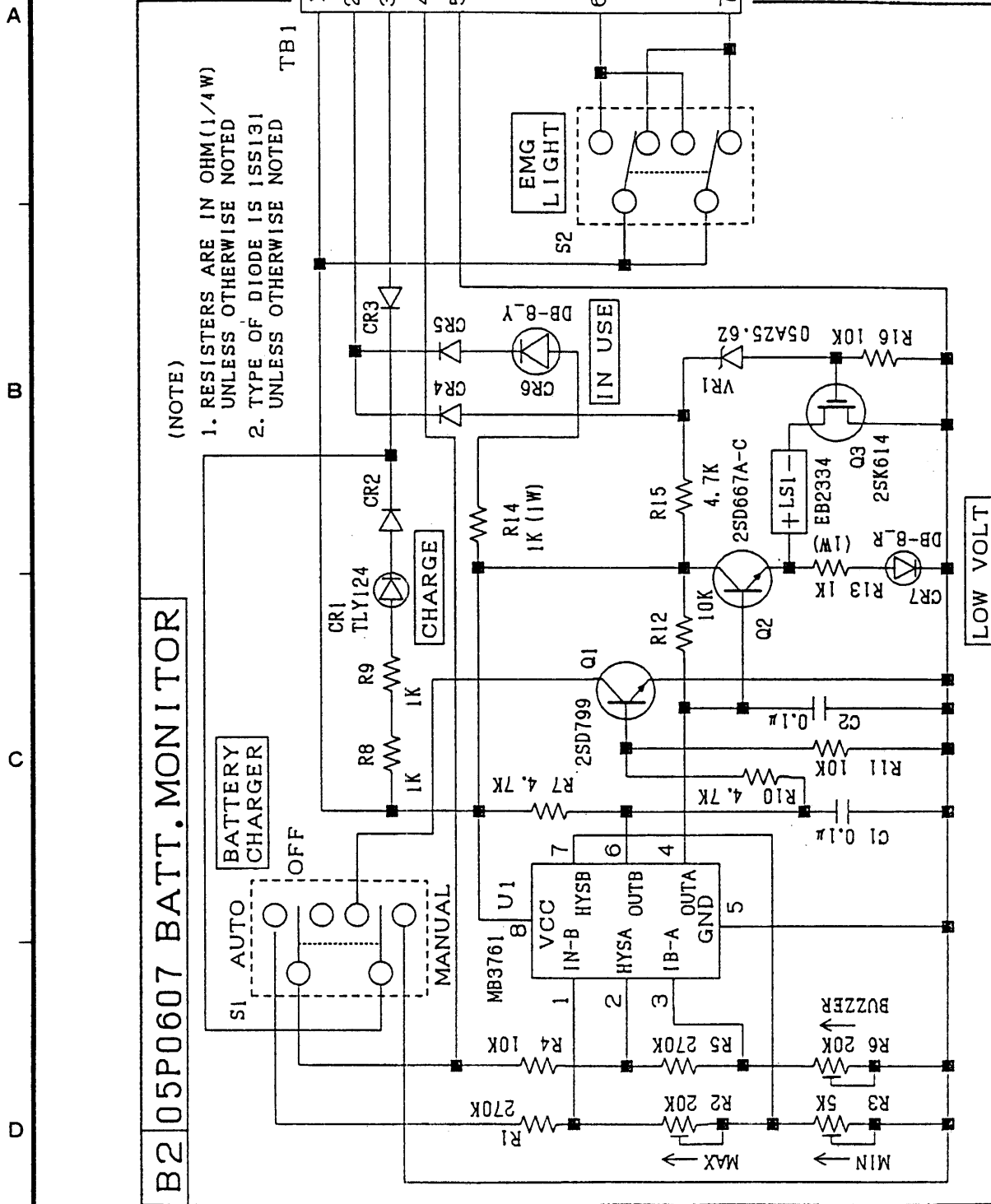
1. --- : OPTION
2. \* : SHIPYARD SUPPLY.
3. ● AND ○ : FITTED AT FACTORY.
4. ○ : FITTED LOCALLY.

DRAWN JUN. 12, '98 K. KUSUNO	TITLE RC-1500-1T2
CHECKED JUN. 12, '98 T. YAMAZAKI	名 称 GMDSS無線通信設備
APPROVED JUN. 12, '98 K. KUSUNO	相互結線図
SCALE MASS k g	NAME GMDSS RADIO CONSOLE
DWG No C5597-K07-G	INTERCONNECTION DIAGRAM

A  
B  
C  
D

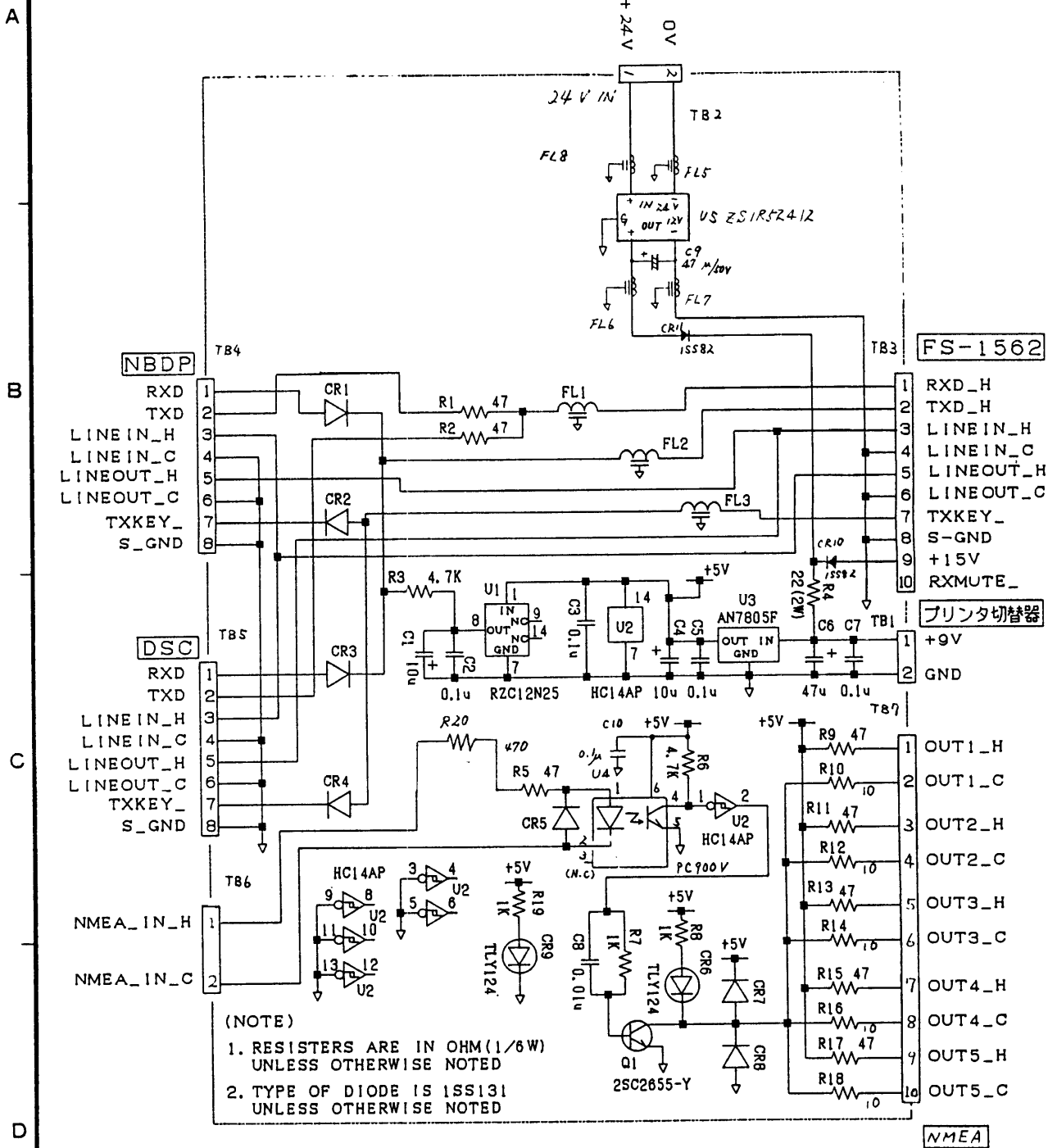


DRAWN Jan 19 '98 T. YAMASAKI CHECKED Jan 19 '98 K. Kasunoki APPROVED Jan 19 '98 H. Yamaguchi SCALE MASS kg		TYPE 05P0607 名称 電源部	
RC-15001T APPLICABLE TO; (MODEL)		回路図 NAME POWER SUPPLY	
DWG NO. C5597-K05- C		BLOCK NO. NAME SCHEMATIC DIAGRAM	



REMARKS		TYPE	
		05P0607	
		名称 バッテリーモニタ	
DRAWN T.Y.	APPROVED Tame 3/99 1/15ED.3	RC-1500	B 2
SCALE	MASS kg	APPLICABLE TO: (MODEL)	BLOCK NO.
		NAME BATTERY MONITOR	
		DWG NO. C5597-K02-	
		A	

B3 05P0606 DISTRIBUTOR



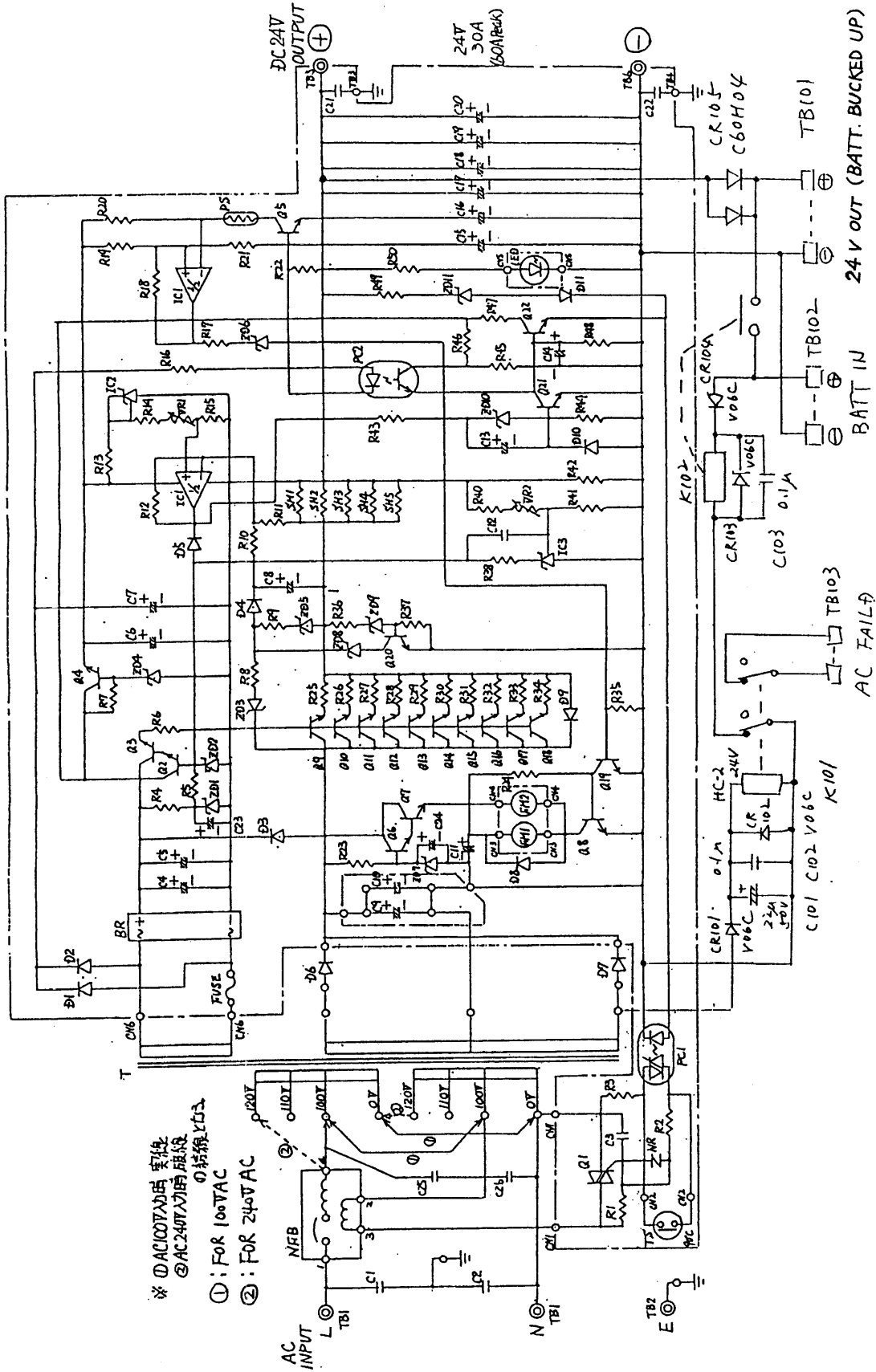
DRAWN Jan. 19 '98 T. YAMASAKI CHECKED Jan. 19 '98 K. Kusuriki APPROVED Jan. 19 '98 H. Yamaguchi SCALE MASS kg	DB-120 RC-1500 APPLICABLE TO; (MODEL)	BLOCK NO. B 3	TYPE 05P0606 名称 分配器 回路図 NAME DISTRIBUTOR SCHEMATIC DIAGRAM
DWG NO. C5597-K03-E	05-001-4330-4		

A

B

C

D



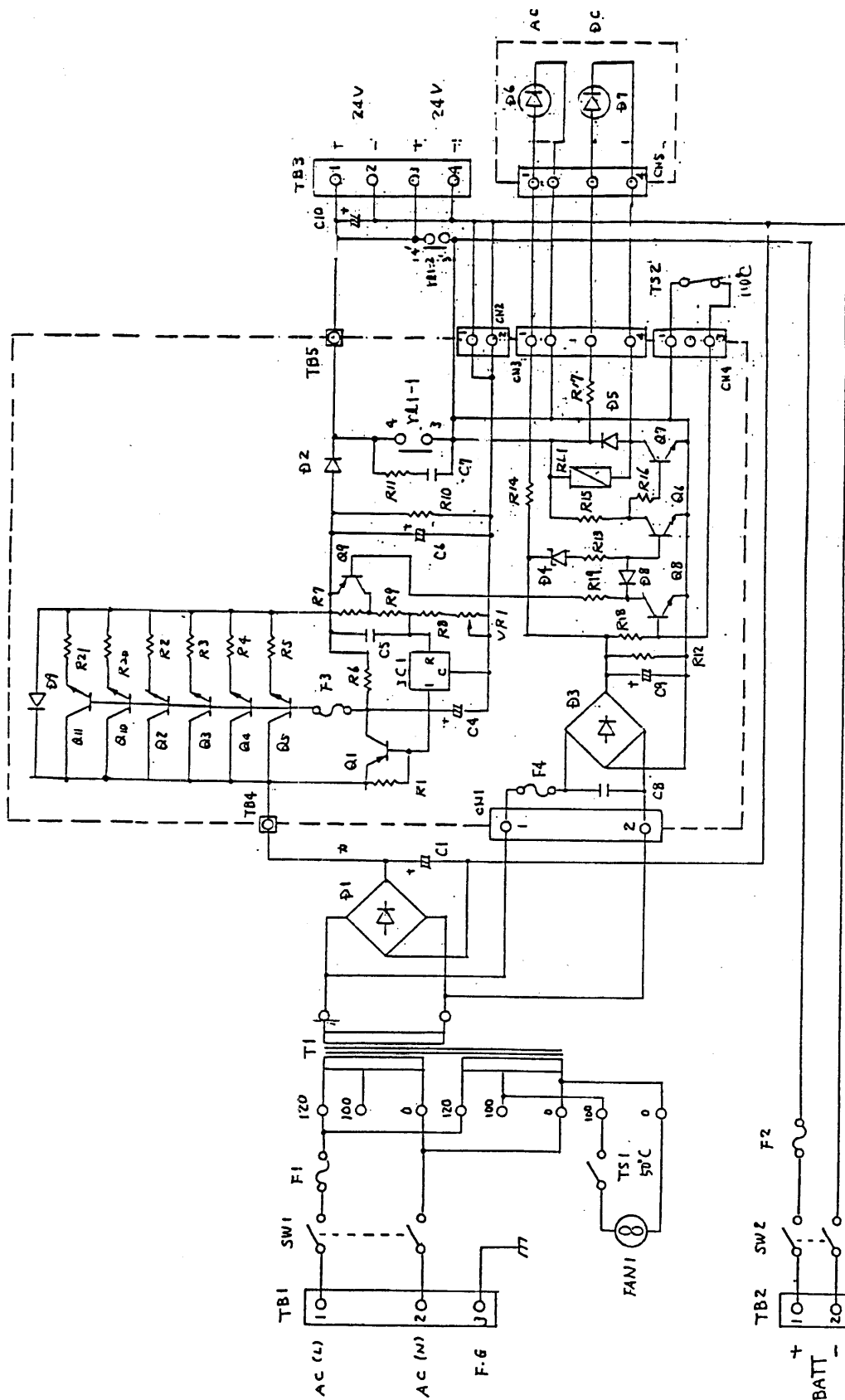
※ ① AC100V用 実線  
 ② AC240V用 破線  
 の接続 Y 点

① : For 100VAC  
 ② : For 240VAC

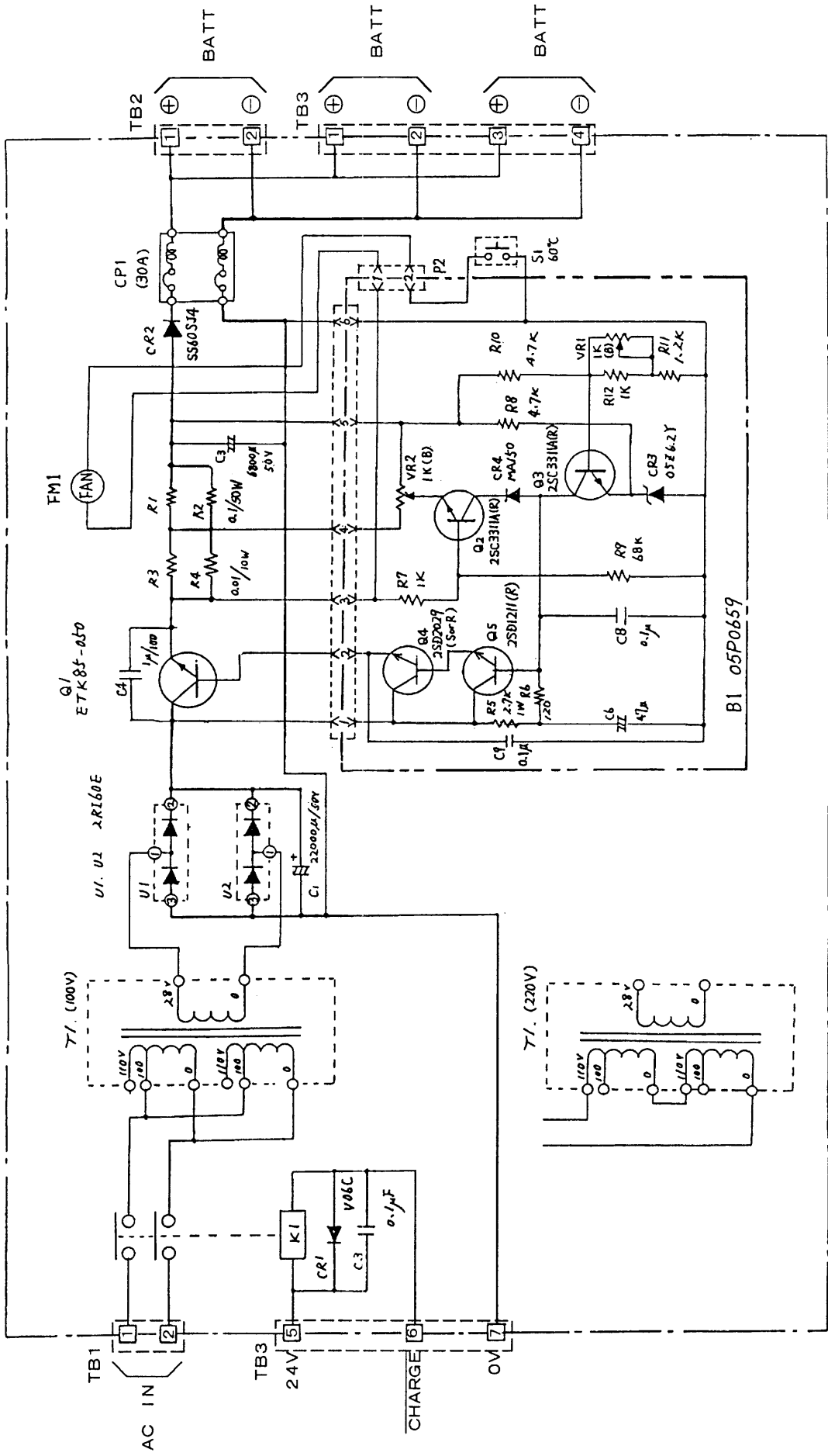
REMARKS		TYPE PR850A	
DRAWN I.Y.		名称 AC電源ユニット	
APPROVED July 15 1994 I.K.E.D.		NAME AC POWER UNIT	
SCALE	MASS kg	APPLICABLE TO: (MODEL) RC1500-1T	BLOCK NO. DWC NO. C5519-K24- A



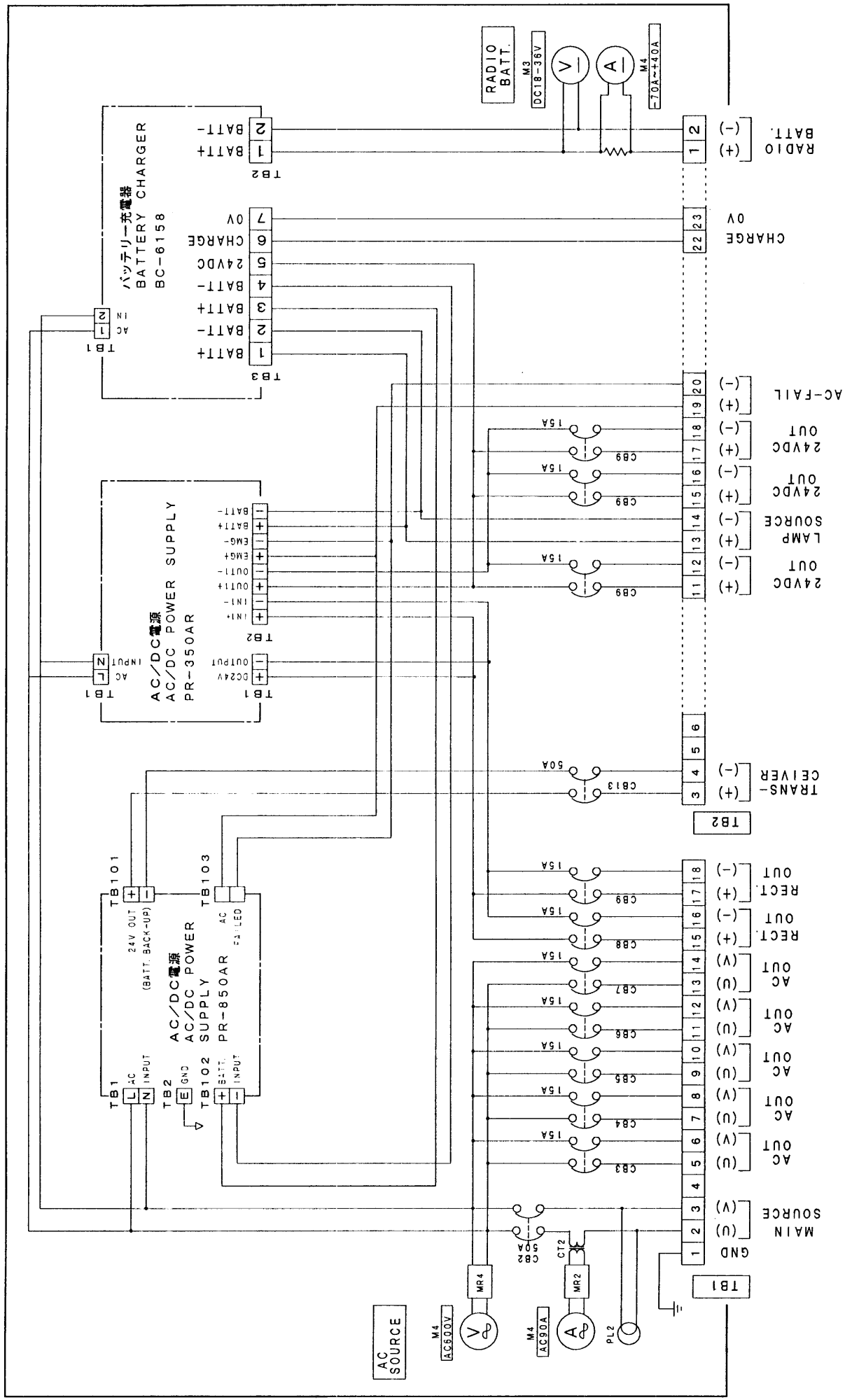
A  
B  
C  
D



DRAWN Dec. 21. '95 S. Yamashita		TYPE PR-300	
CHECKED Dec. 21. '95 K. Kusumaki		名称 AC-DC電源ユニット	
APPROVED Dec 21. '95 K. OTH		回路図	
SCALE	MASS 14.5 kg	APPLICABLE TO: (MODEL)	NAME AC-DC POWER SUPPLY UNIT
DWG NO. C5572-K17- A		BLOCK NO. 3P-M1-0990A	
SCHEMATIC DIAGRAM			



DRAWN Feb. 3 '97	TITLE BC-6158
CHECKED FEB. 4 '97	名称 バッテリー充電器
APPROVED FEB. 4 '97	回路図
SCALE MASS	NAME BATTERY CHARGER
DWG No. C5075-K16-A	SCHEMATIC DIAGRAM



DRAWN	Mar 11 '97	TITLE	S-5300A
CHECKED	Mar 12 '97	品名	無線スイッチボックス
APPROVED	Mar 12 '97	回路図	
		NAME	AC/DC RADIO SWITCH BOX
		OUTLINE DRAWING	
DWG No. C5075-K18-A			