THE STUDY FOR
MARITIME TRAFFIC SAFETY SYSTEM DEVELOPMENT PLAN
IN THE REPUBLIC OF INDONESIA

MARITIME TELECOMMUNICATION FACILITIES: INVENTORY, PLANT RECORDS AND OUTLOOK-2001

VOLUME - 4

DISTRICT NAVIGATION AREAS OF SULAWESI - AMBON - IRIAN JAYA

20	1st Class Disnav	Manado-Bitung
21	1st Class Disnav	Ambon
22	1st Class Disnav	Sorong
23	2nd Class Disnav	Jayapura
24	Sub-Disnav	Merauke

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

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Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

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Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

1ST CLASS DISTRICT NAVIGATION AREA (20)
MANADO-BITUNG

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

1st Class District Navigation Area (20)

Manado-Bitung

Table of Content

DISNAV	20	Manado-Bitung	1st Class
KANWIL	20	Manado	
KPLP	20	Bitung	
SROP	171	Bitung	1st Class
	172	Pantoloan	3rd Class
	173	Donggala	4th-A Class
	174	Gorontalo	4th-A Class
	175	Luwuk	4th-A Class
	176	Poso	4th-A Class
	177	Toli-toli	4th-A Class
	178	Ulu Siau	4th-A Class
	179	Manado	4th-A Class
	180	Tahuna	4th-A Class
	181	Parigi	4th-A Class
	182	Kolonodale	4th-A Class
	183	Kuandang	4th-A Class
	184	Tagulandang	4th-B Class
	185	Banggai	4th-B Class
	186	Moutong	4th-B Class
	187	Bunta	4th-B Class
	188	Wani	4th-B Class
	189	Ampana	4th-B Class
	190	Pagimana	4th-B Class

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

1st Class District Navigation Office (Area-20)
Manado-Bitung

Table of Content

- ☑ Summary of Coast Station
- ☐ Inventory
- ☐ Status of Trouble
- ☐ Operation Schedule (Frequencies)
- ☐ Site Location
- ☐ Antenna Layout
- ☐ Equipment Floor Layout
- ☐ E/G Floor Layout
- ☐ System Block Diagram
- ☐ Power Block Diagram

Note :
- ☑ Available in this list
- ☒ Not Available in this list
- ☐ Unnecessary in this list

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF DISNAV

SITE	MANADO-BITUNG		
CLASS	1st	NO.	20

1. LOCATION

Address	Tel.	Fax	Longitude	Latitude
Jl. D.S Sumolang No. 3, Manado 95113	0438-21185	0438-21124	125° 11′ 34″ E	01° 26′ 30″ N

2. GENERAL CONDITIONS

Moving from Jakarta	Site Access from Port	Road Traffic	Accommodation	Population
By Air to Manado [Taking time 4.00 hr]	☐ Highway	☐ Heavy	☑ Hotel	
By Car to Bitung [Taking time 1:30 hr.]	☑ Paved	☐ Medium	☐ Motel	
	☐ Unpaved road	☑ Light		
		☐ None		

3. CONDITIONS OF DISNAV OFFICE

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system
☑ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☐ ☐ Antenna
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☐ ☐ Towers (Masts)
☐ Basin	☐ Clay		☐ Ground Subsidence	☐ ☐ Grounding system
☐ Valley	☑ Sandy			☐ ☐ Lightning system
Altitude	5 m		**Telephone Lines**	☐ ☐ Feeder Cable Way
Land area	1,200 m²		☑ 2 Lines	☑ ☐ City water

3.2 Building Conditions

Constructions	
Num of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Tile
Room Area (m²)	
Operation room	150
E / G room	
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	V
Phase	1	
Wire	2	
kVA	3.5	

Quality of PLN source	
Fluctuations	220 V ± 5 %
Availability of power per day	24 Hours
Power interruption /month	2 Times
Total interpt. hours /month	4 Hours
Max. interpt. hours at once	12 Hours

Existing Power Conditions		
	Good	Bad
☑ ☐ Power Supply System		
☐ ☐ Operations of E/G		
☐ ☐ Operations of AVR		

Capacity of fuel for engine	
Day tank	Liter
Main tank	k Liter

E/G Stand-by System
☐ Single System
☐ Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure

Restoration flow	
Examples of major failure	
Sufficiency of spares	

Records of damages		Environmental Conditions	Good	Bad	
☐ Heavy rainfall					
☐ Storm			☑	☐	External noises
☐ Lightning			☑	☐	Air pollution
☐ Other calamity					

Institutional and Human Statuses

1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☑ Reasonable	☐ Not enough
3	Measuring eqpt./tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☐ Reasonable	☑ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☐ Not so bad	☑ Not capable
7	Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable

5. PERSONNEL FORMATIONS

Chief	
Operator (skilled)	()
Technician (skilled)	()
Administrator	
T o t a l	

Training Record

Course	Class	Location	Period	Trainee

SUMMARY OF DISNAV

SITE	MANADO-BITUNG		
CLASS	1st	NO.	20

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991				1996			
1997					1992				1997			
1998					1993				1998			
1999					1994				1999			
2000					1995				2000			

7. COMMENTS

Suggestion	
Remarks	No data

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

Kanwil Office (Disnav Area - 20)
Manado-Bitung

Table of Content

- ☑ Summary of Coast Station
- ☑ Inventory
- ☐ Status of Trouble
- ☐ Operation Schedule (Frequencies)
- ☐ Site Location

Drawings:

- ☑ Antenna Layout
- ☑ Equipment Floor Layout
- ☐ E/G Floor Layout
- ☑ System Block Diagram
- ☑ Power Block Diagram

Note :

- ☑ Available in this list
- ☒ Not Available in this list
- ☐ Unnecessary in this list

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF KANWIL

SITE	MANADO-BITUNG		
CLASS		NO.	20

1. LOCATION

Address	Tel.	Fax	Longitude	Latitude
Jl. Samratulangi No. 21	0431-867053		124° 49' 17.1" E	01° 28' 14" N

2. GENERAL CONDITIONS

Moving from Jakarta	Site Access from Port	Road Traffic	Accommodation	Population
By Air to Manado [Taking time: 4.00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Car to Location [Taking time: 0.30 hr.]	☑ Paved	☑ Medium	☐ Motel	
	☐ Unpaved road	☐ Light		
		☐ None		

3. CONDITIONS OF KANWIL OFFICE

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system
☐ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes No
☐ Slope	☐ Ordinary	☐ Gravel	☑ Flood Tide	☑ ☐ Antenna
☑ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ ☐ Towers (Masts)
☐ Basin	☐ Clay	☑ Stony	☐ Ground Subsidence	☐ ☑ Grounding system
☐ Valley	☐ Sandy			☐ ☑ Lightning system
Altitude	5 m		Telephone Lines	☑ ☐ Feeder Cable Way
Land area	66.7 m²		☐ Lines	☑ ☐ City water

3.2 Building Conditions

Constructions	
Num. of story	Two
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic
Room Area (m²)	
Operation room	28.90
E / G room	
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	V
Phase	1	
Wire	2	
kVA	3	

Quality of PLN source	
Fluctuations	220 V ± 5 %
Availability of power per day	24 Hours
Power interruption /month	8 Times
Total interpt. hours /month	24 Hours
Max. interpt. hours at once	5 Hours

Existing Power Conditions	Good	Bad
☐ ☑ Power Supply System	☐	☑
☐ ☐ Operations of E/G	☐	☐
☐ ☐ Operations of AVR	☐	☐

Capacity of fuel for engine	
Day tank	Liter
Main tank	k Liter

E/G Stand-by System

☐ Single System

☐ Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure

Restoration flow	Repaired by technician or send to Jakarta
Examples of major failure	
Sufficiency of spares	Not enough spare part and not available in the

Records of damages		Environmental Conditions	Good	Bad
☐ Heavy rainfall				
☐ Storm		☑ ☐ External noises	☑	☐
☐ Lightning		☐ ☑ Air pollution	☐	☑
☐ Other calamity				

Institutional and Human Statuses			
1 Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2 Spares	☐ Enough	☐ Reasonable	☑ Not enough
3 Measuring eqpt./tools	☐ Enough	☑ Reasonable	☐ Not enough
4 Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5 Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6 Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7 Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable

5. PERSONNEL FORMATIONS

Chief	
Operator (skilled)	1 ()
Technician (skilled)	()
Administrator	
Total	1

Training Record

Course	Class	Location	Period	Trainee

SUMMARY OF KANWIL	SITE	MANADO-BITUNG		
	CLASS		NO.	20

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991				1996			
1997					1992				1997			
1998					1993				1998			
1999					1994				1999			
2000					1995				2000			

7. COMMENTS

Suggestion	Maritime telecommunication services can not be done, because the equipment damaged and spare part not available
Remarks	

INVENTORY

Site Name: Kanwil Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**DRCS (Subscriber Station Eqpt)**							
1		Type-II Radio and Control Bay	JUL.105.5	1235-1	JRC	1989	SAR Project		Damaged
2		Type-II Additional Bay	NUL-149		JRC	1989	SAR Project		Good
3		Standard Accessories	6ZPND00115		JRC	1989	SAR Project		Not use
4		Consumable Spares	6ZXND01912		JRC	1989	SAR Project		Not use
1-2		**Operator Console/Desk/Rack**							
1-2-1		**HF TG/TP Console**							
1		TX Telecontroller	NCH-300P		JRC	1989	SAR Project		Good
1-2-2		**Search & Monitor Console**							
1		SAR Console-II	NCA-682C	BP-91903	JRC	1989	SAR Project		Damaged
2		Allwave Receiver	NRD-93		JRC	1989	SAR Project		Good
3		Dialing Unit	NQU-13A/A4		JRC	1989	SAR Project		Damaged
4		Digital Clock	NKH-17		JRC	1989	SAR Project		Damaged
5		2182KHz4/A Monitor	CCN-181		JRC	1989	SAR Project		Good
6		Telephone Device	NQW-143		JRC	1989	SAR Project		Good
1-2-3		**DSC Console**							
		RCRx							
1		RX Telecontroller	NCG-95		JRC	1989	SAR Project		Damaged
2		Accessories			JRC	1989	SAR Project		Not use
3		Spare Parts			JRC	1989	SAR Project		Not use
4		Spot Scanning Unit	NDH-93		JRC	1989	SAR Project		Good
1-2-4		**DSC Equipment**							
1		DSC Equipment	NCT-60G		JRC	1989	SAR Project		Damaged
2		Spare Part	6ZXAF00078		JRC	1989	SAR Project		Not used
3		Spare Part (for NQU-13)			JRC	1989	SAR Project		Not used
4		Accessories	NCA-682C-ACC		JRC	1989	SAR Project		Not used
5		Spare Part (for NRD-93)	6ZXJD-51049		JRC	1989	SAR Project		Damaged

INVENTORY

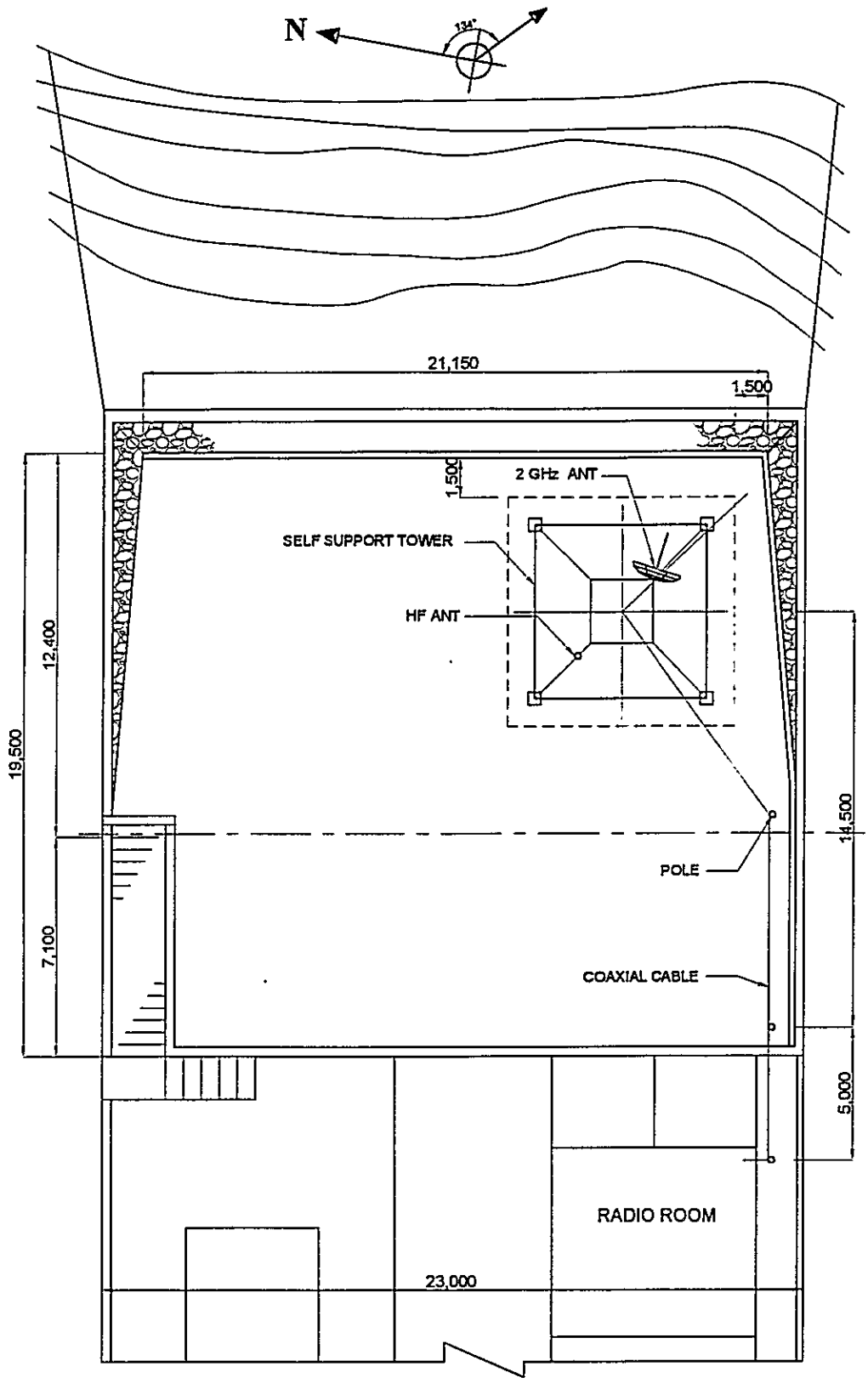
Site Name: Kanwil Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
6		Accessories (for NDH-93)			JRC	1989	SAR Project		Not used
7		Spare Part (for NQP-21)			JRC	1989	SAR Project		Not used
8		Spare Part (for NCH-300P)			JRC	1989	SAR Project		Not used
9		Accessories (for NCH-300P)			JRC	1989	SAR Project		Not used
1-2-5		**NBDP Console**							
1		Signal Controller	NQP-21		JRC	1989	SAR Project		Damaged
2		Jack Panel	NQC-497A		JRC	1989	SAR Project		Good
3		RF Jack Panel	NQE-584C		JRC	1989	SAR Project		Good
4		Interface Unit	CMH-913		JRC	1989	SAR Project		Damaged
5		Junction Box	NQD-1466		JRC	1989	SAR Project		Good
6		Power Supply	EWS.15-12		JRC	1989	SAR Project		Good
7		Power Supply	NBK-31D		JRC	1989	SAR Project		Good
8		Speaker Panel	NVA-64		JRC	1989	SAR Project		Good
9		Analog Clock	HCED-10054		JRC	1989	SAR Project		Good
1-3		**VHF System**							
1		Main Distribution Frame	NQE-40A		JRC	1989	SAR Project		Good
2		**Tower & Antenna System**							
2-1		**Antenna System**							
		RX Antenna							
1		Element	WA-13		JRC	1989	SAR Project		Good
2		Base Bracket			JRC	1989	SAR Project		Good
3		2GHZ 1,2 MO Grid Parabolic	KP4F-23		JRC	1989	SAR Project		Good
4		Antenna Tower 41M X 1 M	3-45M						
2-2		**Antenna Selector**							
1		Antenna Coupler	CB-011/1		JRC	1995	SAR Project		Good

INVENTORY

Site Name: Kanwil Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		AC PDB			JRC	1989	SAR Project		Good
3-2		**Back-up Power Supply Type-2**							
1		1KVA CVCF	EZED00020	167072	JRC	1989	SAR Project		Damaged
2		Spare Parts			JRC	1989	SAR Project		Not used
3		Valve Regulated Scale Battery	HSE-40-12		JRC	1989	SAR Project		Good
4		Battery Accessories			JRC	1989	SAR Project		Not used
3-3		**Isolation Transformer**							
1		1KVA IsolationTransformer	TI-220/220-1	1944	JRC	1989	SAR Project		Good
2		Accessories for Isolation Trans.			JRC	1989	SAR Project		Not used
3-4		**Step-Up Transformer**							
		Tools For HF							
1		Maintenance Tools for HF	ZPED-2		JRC	1989	SAR Project		Not used
2		Multimeter	AX-313TR		JRC	1989	SAR Project		Damaged
3-5		**UPS & AVR System**							
1		Charger Rectifier (24V/10A)	NBB-31-410Z	S-6494	JRC	1989	SAR Project		Good
2		Lead-Accid Battery (30Ah, 13 Cells)	CS-30E		JRC	1989	SAR Project		Damaged
3		Battery Accessories			JRC	1989	SAR Project		Not used
4		Spare Part for Charger Rectifier			JRC	1989	SAR Project		Not used
4		**Others**							
		Digital Clock	NKH-17		JRC	1989	SAR Project		Good
1		TP (Irene Free Hello) 10 Units			JRC	1985	SAR Project		Damaged (7)
2		Air Conditioner			SANYO		SAR Project		Damaged



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JICA –	PT. Aneka Asia Buana	

DRAWN BY AAB

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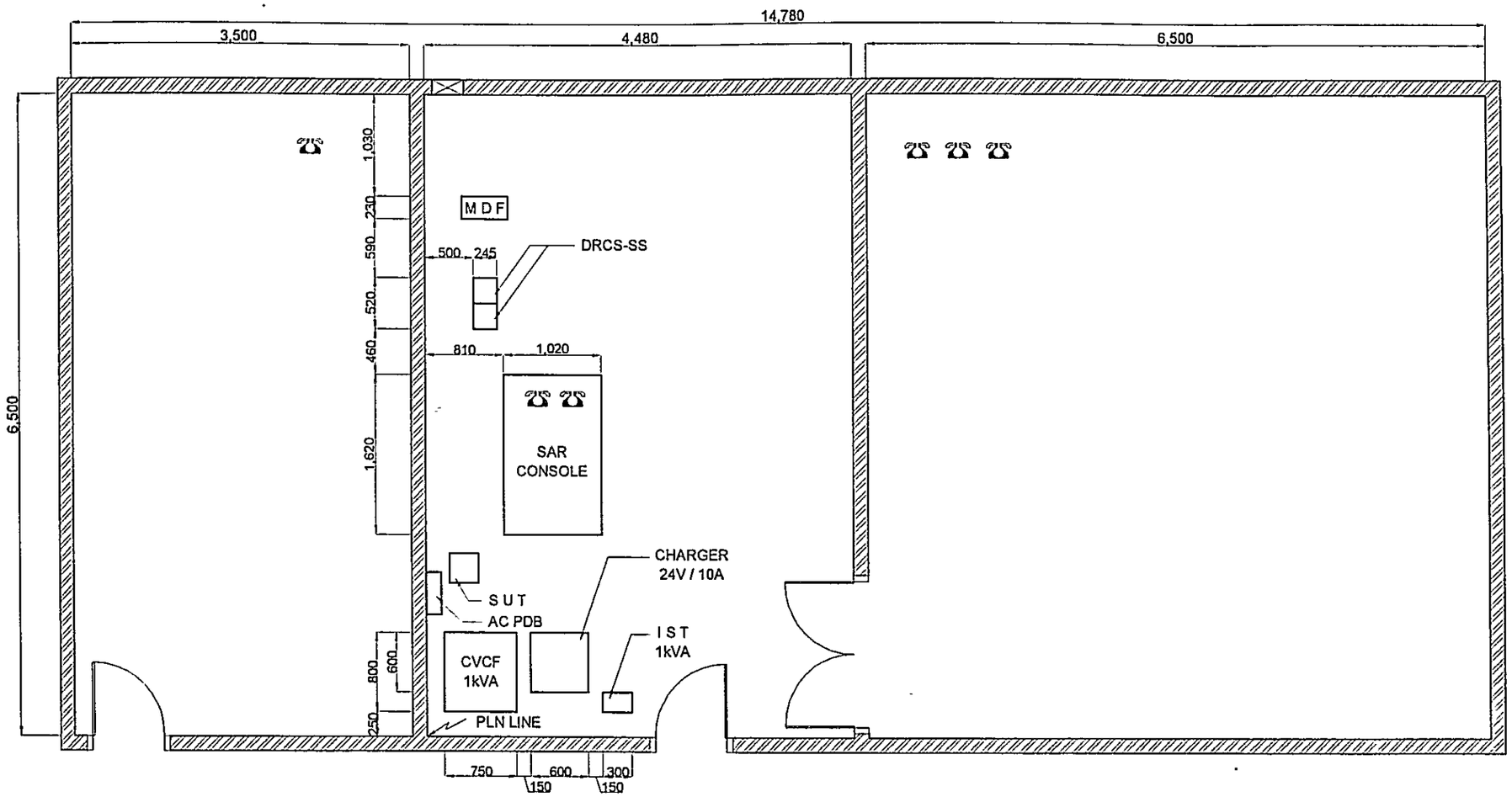

LEGEND

AC	ALTERNATING CURRENT
IST	ISOLATION TRANSFORMER
kVA	KILO VOLT AMPERE
MDF	MAIN DISTRIBUTION FRAME
PDB	: POWER DISTRIBUTION BOARD
SUT	: STEP - UP TRANSFORMER
V	VOLT
☎	TELEPHONE

DRAWN BY AAB:

APPROVED BY JICA:

DATE: July 11, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO: 1/1
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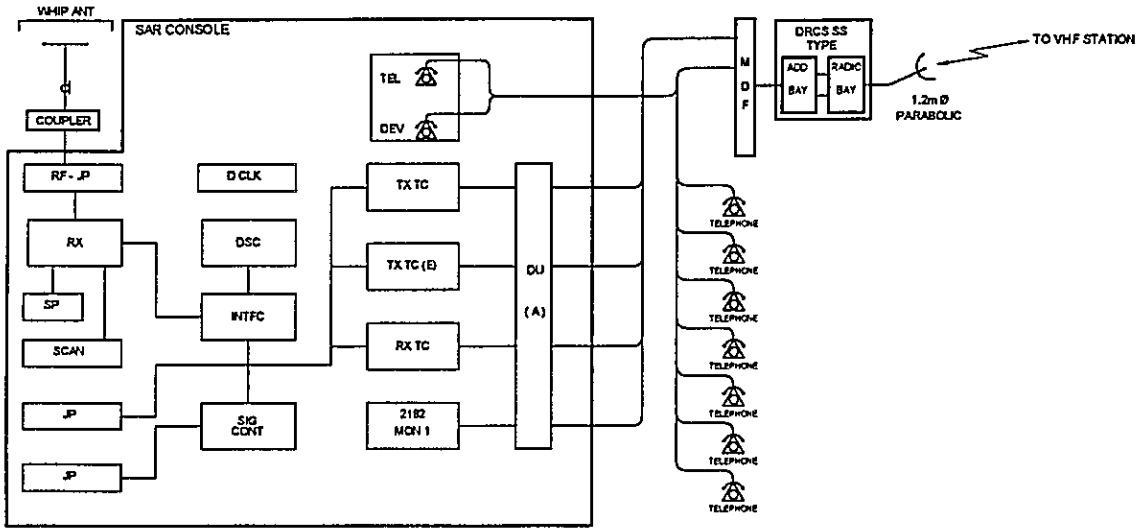
JICA – PT. Aneka Asia Buana



LEGEND

ANT : ANTENNA
BPS : BATTERY POWER SUPPLY
DSC : DIGITAL SELECTIVE CALLING
JP : JACK PANEL
MDF : MAIN DISTRIBUTION BOARD

APPROVED BY JICA

DRAWN BY AAB

DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
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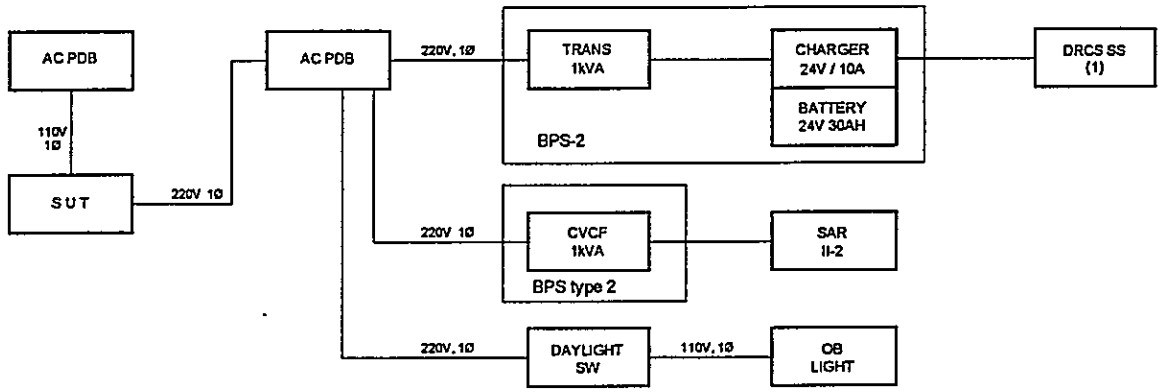
JICA –	PT. Aneka Asia Buana	



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DRAWN BY AAB

LEGEND

AC	: ALTERNATING CURRENT
kVA	: KILO VOLT AMPERE
PDB	: POWER DISTRIBUTION BOARD
SUT	: STEP - UP TRANSFORMER
V	: VOLT
W	: WIRE
Ø	: PHASE

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO.: KWIL-BTG-171-6	
JICA – PT. Aneka Asia Buana		

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

ADPEL/KPLP Office (Disnav Area - 20)
Manado-Bitung

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Note :
- ☑ Available in this list
- ☒ Not Available in this list
- ☐ Unnecessary in this list

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF ADPEL / KPLP

SITE	MANADO-BITUNG		
CLASS		NO.	XX

1. LOCATION

Address	Tel.	Fax	Longitude	Latitude
Jl. D.S Sumolang, Bitung	0438-21044, 21654		125° 11' 33.1" E	01° 26' 29.4" N

2. GENERAL CONDITIONS

Moving from Jakarta	Site Access from Port	Road Traffic	Accommodation	Population
By Air to Manado [Taking time: 4:00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Car to Bitung [Taking time: 1.30 hr.]	☑ Paved	☑ Medium	☐ Motel	
	☐ Unpaved road	☐ Light		
		☐ None		

3. CONDITIONS OF ADPEL/KPLP OFFICE

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system	
☑ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes	No
☐ Slope	☐ Ordinary	☐ Gravel	☑ Flood Tide	☑ Antenna	☐
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ Towers (Masts)	☐
☐ Basin	☐ Clay		☐ Ground Subsidence	☐ Grounding system	☑
☐ Valley	☑ Sandy			☐ Lightning system	☑
Altitude	2.00 m		**Telephone Lines**	☑ Feeder Cable Way	☐
Land area	1,512 m²		☐ Lines	☑ City water	☐

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic

Room Area (m²)	
Operation room	18.00
E / G room	
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	V
Phase	1	
Wire	2	
kVA		

Quality of PLN source	
Fluctuations	220 V ± 5 %
Availability of power per day	24 Hours
Power interruption /month	2 Times
Total interpt. hours /month	4 Hours
Max. interpt. hours at once	Hours

Existing Power Conditions	Good	Bad
Power Supply System	☑	☐
Operations of E/G	☐	☐
Operations of AVR	☐	☐

Capacity of fuel for engine	
Day tank	Liter
Main tank	k Liter

E/G Stand-by System	
☐	Single System
☐	Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired by technician or send to Jakarta
Examples of major failure	
Sufficiency of spares	Unavailable at market

Records of damages		Environmental Conditions	Good	Bad	
☐ Heavy rainfall					
☐ Storm			☐	☑	External noises
☐ Lightning			☐	☑	Air pollution
☐ Other calamity					

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☑ Reasonable	☐ Not enough
3	Measuring eqpt /tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☐ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☐ Not enough
6	Capability of Operator	☐ Skilled	☐ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☐ Not so bad	☐ Not capable

5. PERSONNEL FORMATIONS

Chief	
Operator (skilled)	()
Technician (skilled)	()
Administrator	
Total	

Training Record				
Course	Class	Location	Period	Trainee

SUMMARY OF ADPEL / KPLP

SITE	MANADO-BITUNG		
CLASS		NO.	XX

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991				1996			
1997					1992				1997			
1998					1993				1998			
1999					1994				1999			
2000					1995				2000			

7. COMMENTS

Suggestion	Not operated, because damaged
Remarks	

INVENTORY

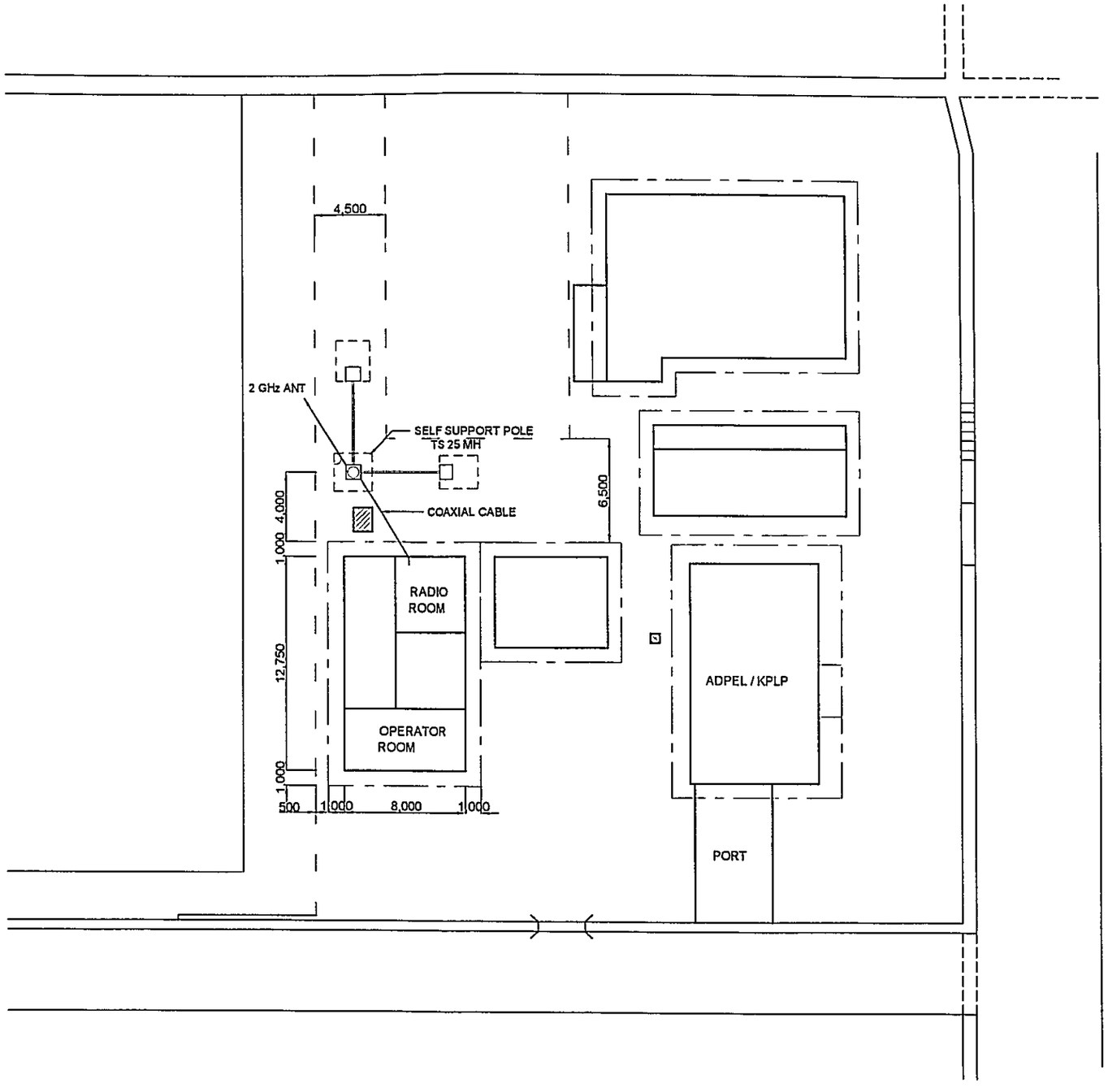
Site Nama: Adpel Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Remote Control Unit**							
1		MTRX	JCC-300RRS		JRC	1989	SAR Project		Damaged
1-2		**DRCS (Subscriber Station Eqpt)**	JUL.105-2		JRC	1989	SAR Project		Good
1		Type-1 Radio and Control Cabinet	NUL-131A		JRC	1989	SAR Project		Good
2		Standard Accessories	6ZPND00113		JRC	1989	SAR Project		Not used
3		Consumable Spares	6ZXND01913		JRC	1989	SAR Project		Not used
1-3		**Operator Console/Desk/Rack**							
1-3-1		**Search & Monitor Console**							
1		SAR Console-III-2	NCA-682E		JRC	1989	SAR Project		Damaged
2		Dialing Unit	NQU-13A/AY		JRC	1989	SAR Project		Damaged
3		Digital Clock	NKH-17		JRC	1989	SAR Project		Damaged
4		Telephone Device	NQW-143		JRC	1989	SAR Project		Good
1-3-2		**DSC Equipment**							
1		Spare Part (for NQU-13)			JRC	1989	SAR Project		Not used
2		Accessories	NCA-682E-ACC		JRC	1989	SAR Project		Not used
1-3-3		**NBDP Console**							
1		Junction Box	NQD-1466		JRC	1989	SAR Project		Good
2		Power Supply	NBK-31D		JRC	1989	SAR Project		Good
3		Analog Clock	HCED-10054		JRC	1989	SAR Project		Damaged
1-4		**VHF System**							
1		Marine VHF Telecontroller	NCE-4378		JRC	1989	SAR Project		Damaged
2		Main Distribution Frame	NQE-375E		JRC	1989	SAR Project		Good
2		**Tower & Antenna System**							
2-1		**Tower & Mast**							
1		Self Support Tower	TS-25M		JRC	1989	SAR Project		Good
2-2		**Antenna System**							
1		2GHz Ant. (1,2 MO Grid Parabolic)			JRC	1989	SAR Project		Good

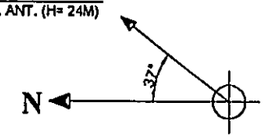
INVENTORY

Site Nama: Adpel Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		AC PDB			JRC	1989	SAR Project		Good
2		AC Branch			JRC	1989	SAR Project		Damaged
3-2		**Back-up Power Supply Type-3**							
1		1KVA CVCF	EZED0002		JRC	1989	SAR Project		Good
2		Spare Parts			JRC	1989	SAR Project		Not used
3		Accessories			JRC	1989	SAR Project		Not used
4		Battery Accessories			JRC	1989	SAR Project		Not used
5		Valve Regulated Seale Battery	HSE-30-12		JRC	1989	SAR Project		Damaged
3-3		**Isolation Transformer**							
1		IssolatorTransformer 0.5KVA	TI-220/220-05		JRC	1989	SAR Project		Good
2		Spareparts for Isolation Trans.			JRC	1989	SAR Project		Not used
3		Accessories for Isolation Trans.			JRC	1989	SAR Project		Not used
3-4		**Step-Up Transformer**							
		Tools For HF							
1		Maintenance Tools for HF	ZPED-2		JRC	1989	SAR Project		Not used
3-5		**UPS & AVR System**							
1		Back-up Battery (12V/40AH)	NBB-244		JRC	1989	SAR Project		Damaged
4		**Measuring Equipment**							
1		Multimeter	AX-313TR		JRC	1989	SAR Project		Damaged
5		**Others**							
1		TP (Irene Free Hello) 3 Units			JRC	1985	SAR Project		Damaged



TO RX STATION
1,2 MØ G. P. ANT. (H= 24M)

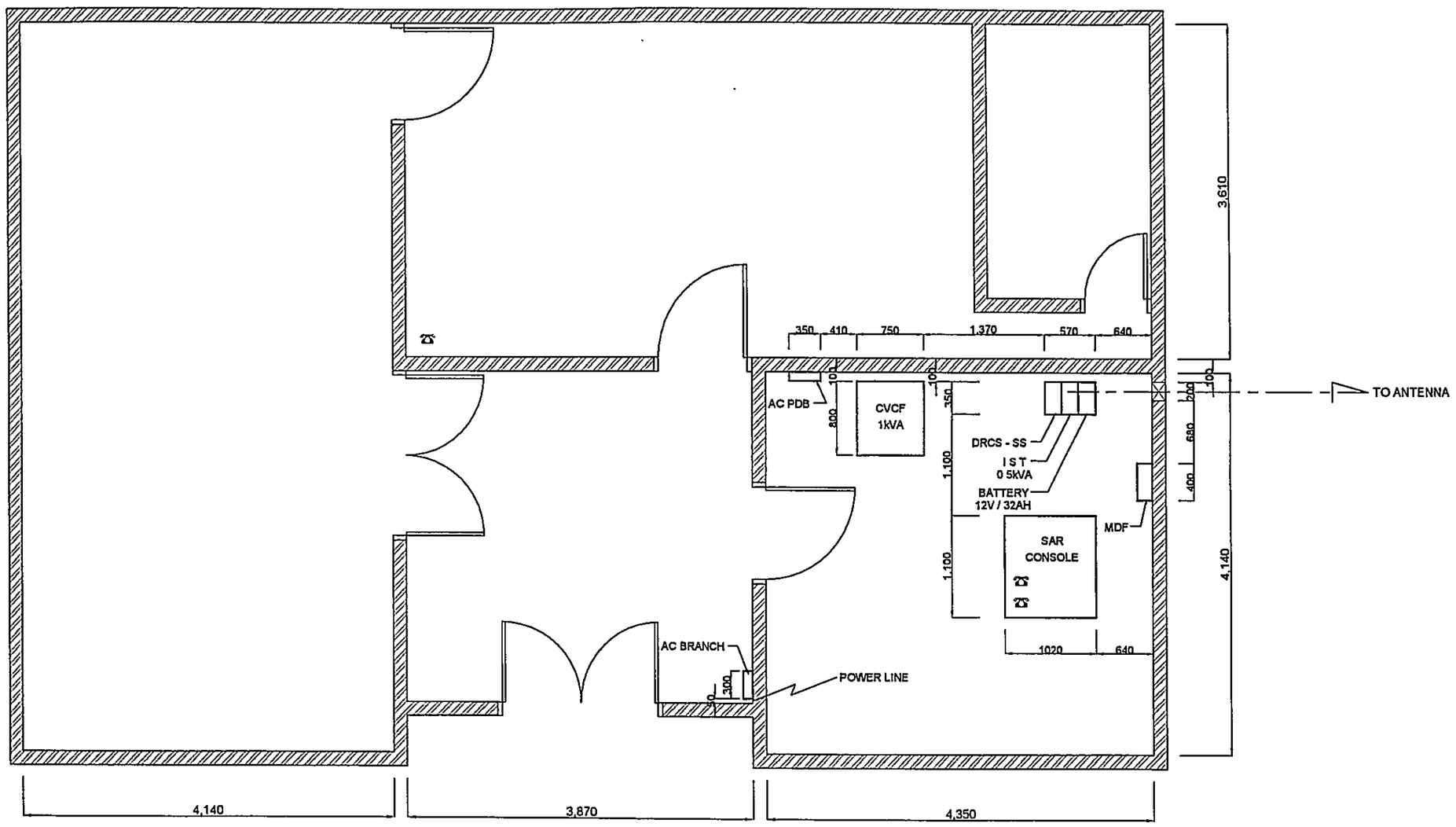


DRAWN BY AAB:

APPROVED BY JICA:

DATE: July 12, 2001	DRAWING TITLE: ANTENNA LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 300	SITE NAME: BITUNG	
DIMENSION: Millimeter	DRAWING NO: KPLP-BTG-171-2	

JICA – PT. Aneka Asia Buana



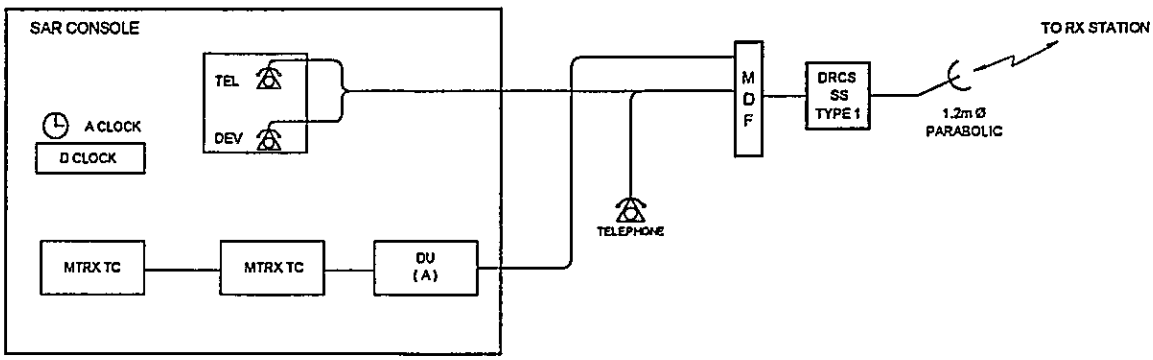
LEGEND

AC : ALTERNATING CURRENT
IST : ISOLATION TRANSFORMER
kVA : KILO VOLT AMPERE
PDB : POWER DISTRIBUTION BOARD
V : VOLT
☎ : TELEPHONE

DATE: July 11, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 50	SITE NAME: BITUNG	
DIMENSION: Millimeter	DRAWING NO.: KPLP-BTG-171-3	

JICA – PT. Aneka Asia Buana

DRAWN BY AAB:
APPROVED BY JICA:



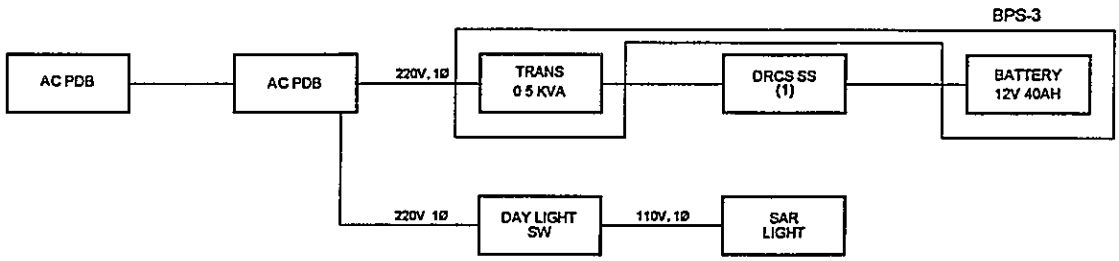
LEGEND

MDF : MAIN DISTRIBUTION BOARD
RX : RECEIVER (ING)

APPROVED BY JICA :

DRAWN BY AAB

DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Millimeter	DRAWING NO: KPLP-BTG-171-5	
JICA - PT. Aneka Asia Buana		



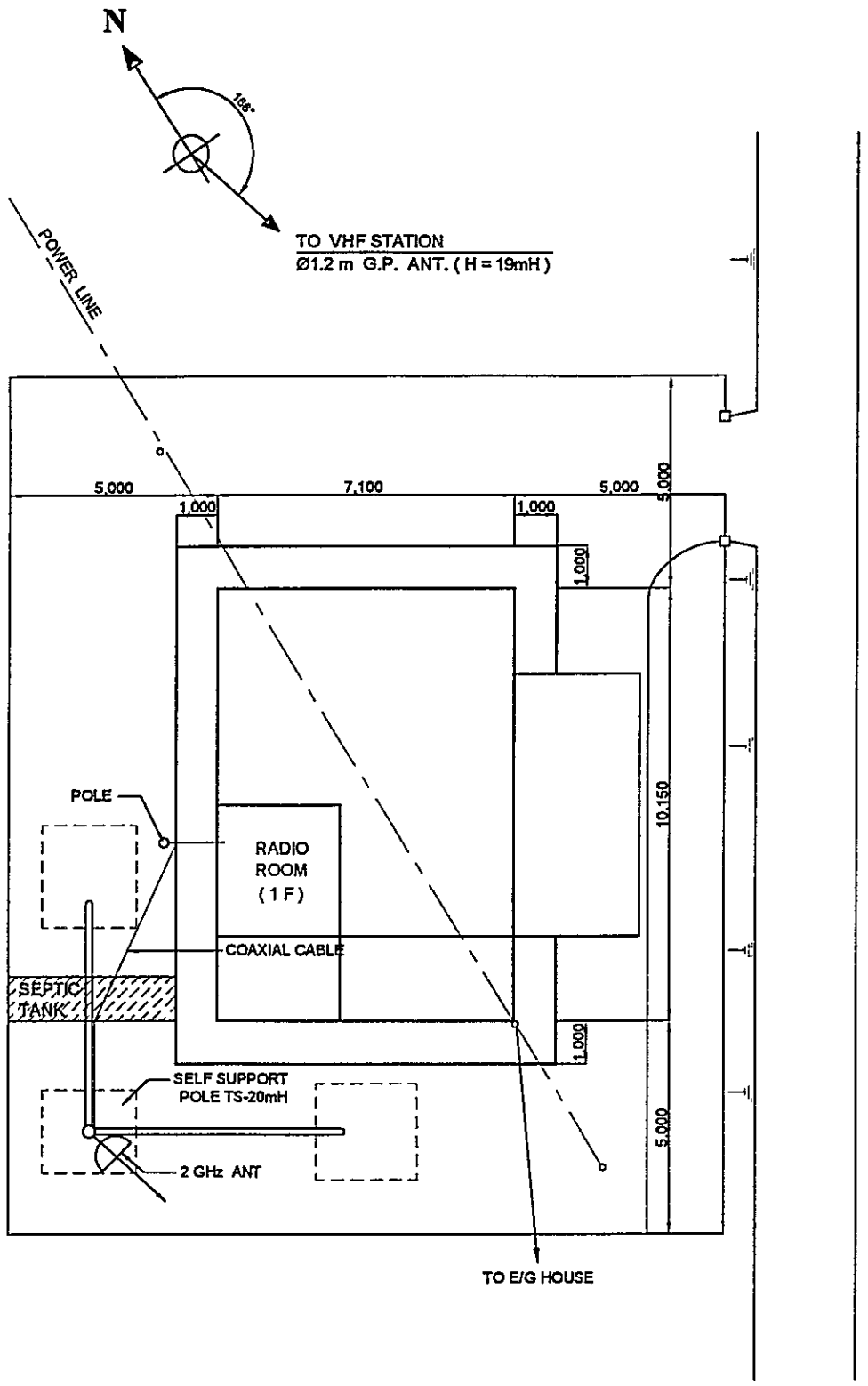
LEGEND

AC :ALTERNATING CURRENT
kVA :KILO VOLT AMPERE
PDB :POWER DISTRIBUTION BOARD
V :VOLT
W :WIRE
Ø :PHASE

APPROVED BY JICA

DRAWN BY AAB

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: KPLP-BTG-171-6	
JICA – PT. Aneka Asia Buana		

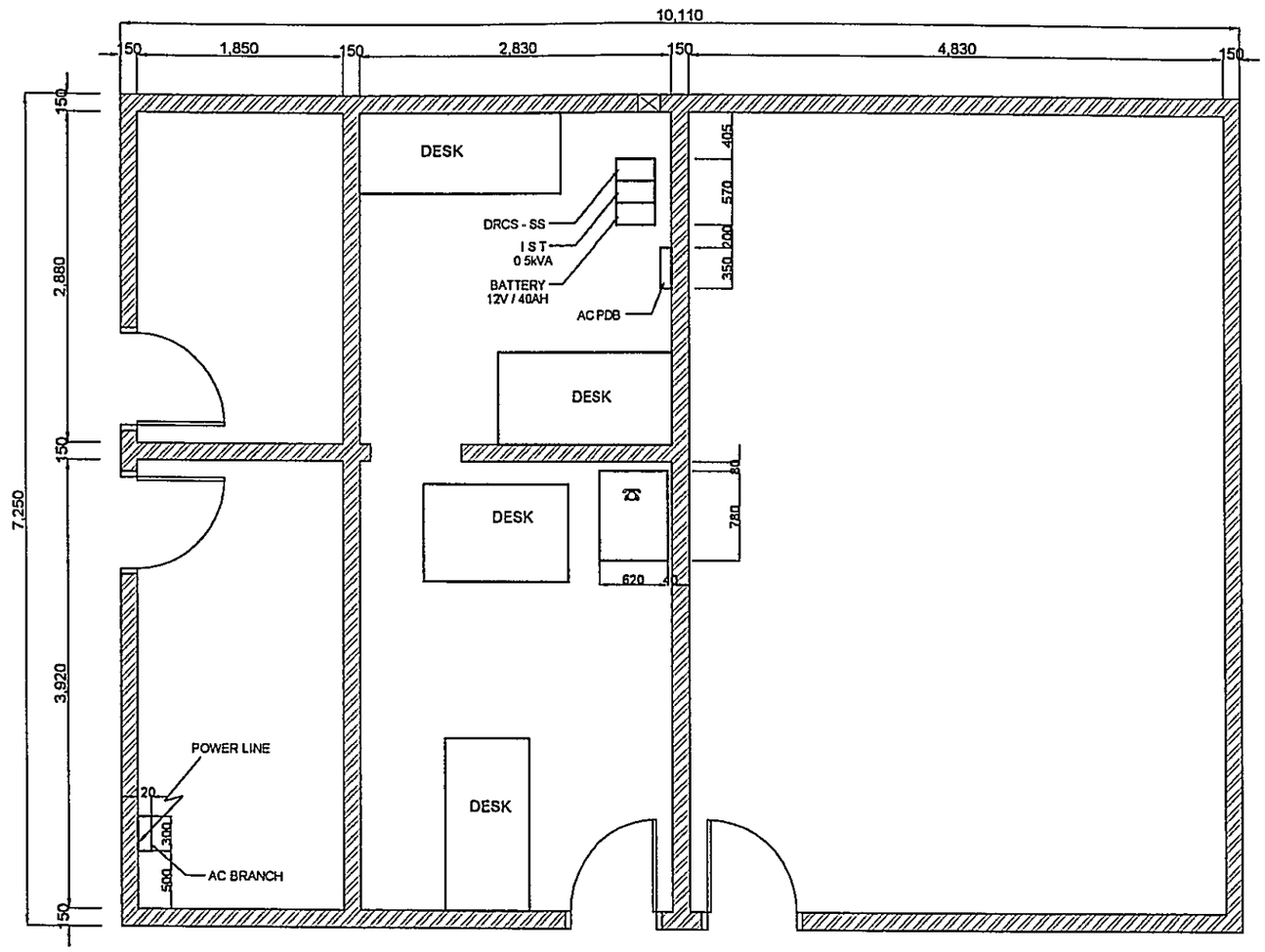


APPROVED BY JICA :

DRAWN BY AAB :

DATE: July 12, 2001	DRAWING TITLE: ANTENNA LAYOUT	SHEET NO: 1/1
SCALE: 1 : 150	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SKR-BTG-171-2	

JICA – PT. Aneka Asia Buana

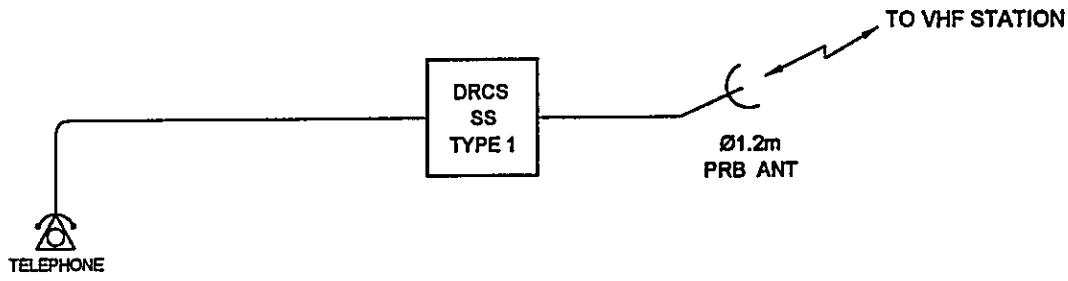


LEGEND

AC : ALTERNATING CURRENT
IST : ISOLATION TRANSFORMER
kVA : KILO VOLT AMPERE
PDB : POWER DISTRIBUTION BOARD
V : VOLT
☎ : TELEPHONE

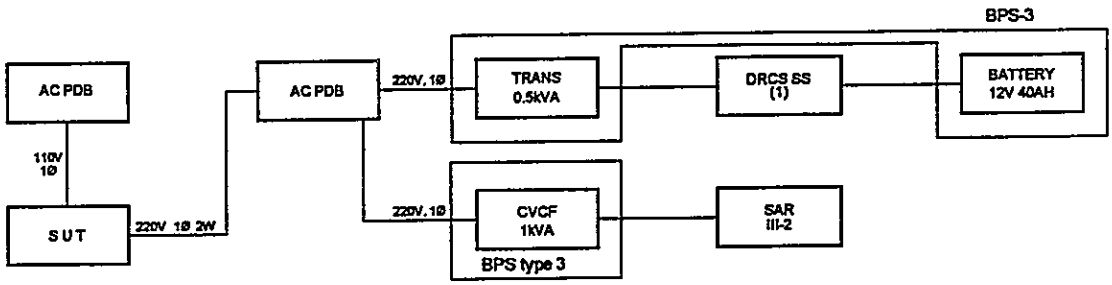
DATE: July 11, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 50	SITE NAME: BITUNG	
DIMENSION: Millmeter	DRAWING NO.: SKR-BTG-171-3	
JICA – PT. Aneka Asia Buana		

DRAWN BY AAB: APPROVED BY JICA:



DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO.: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO.: SKR-BTG-171-5	
JICA – PT. Aneka Asia Buana		

DRAWN BY AAB: APPROVED BY JICA:



LEGEND

AC :ALTERNATING CURRENT
kVA :KILO VOLT AMPERE
PDB :POWER DISTRIBUTION BOARD
SUT :STEP - UP TRANSFORMER
V :VOLT
W :WIRE
Ø :PHASE

APPROVED BY JICA:

DRAWN BY AAB:

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO.: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SKR-BTG-171-6	
JICA – PT. Aneka Asia Buana		

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

1st Class Coast Station
Bitung
(Coast Station No. 171)

Table of Content

- ☑ Summary of Coast Station
- ☑ Inventory
- ☑ Status of Trouble
- ☑ Operation Schedule (Frequencies)

RX	TX	VHF	Drawings:
☑*	☑*	☐	Site Location
☑	☑	☑	Antenna Layout
☑	☑	☑	Equipment Floor Layout
☑	☑	☑	E/G Floor Layout
☑	☑	☑	System Block Diagram
☑	☑	☑	Power Block Diagram

Note :
- ☑ Available in this list
- ☒ Not Available in this list
- ☐ Unnecessary in this list
- * Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	BITUNG		
CLASS	1st	NO.	171

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
RX	Kel. Pateten Lingk.III	0438-21268, 21201		125° 11′ 55″ E	01° 26′ 45″ N
TX	Kel. Pakadoodan	0438-32902		125° 10′ 53″ E	01° 26′ 50″ N

2. GENERAL CONDITIONS

Moving from Jakarta			Site Access from Port	Road Traffic	Accommodation	Population
By Air	to Manado	[Taking time: 4:00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Car	to Bitung	[Taking time: 1:30 hr.]	☑ Paved	☑ Medium	☐ Motel	
			☐ Unpaved road	☐ Light		
				☐ None		

3. CONDITIONS OF RECEIVING STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system
☑ Flat	☐ Dry soil	☐ Limestone	☑ Flood	Yes No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑ ☐ Antenna
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ ☐ Towers (Masts)
☐ Basin	☐ Clay		☐ Ground Subsidence	☑ ☐ Grounding system
☐ Valley	☑ Sandy			☑ ☐ Lightning system
Altitude	3.00 M		Telephone Lines	☑ ☐ Feeder Cable Way
Land area	11,700 m²		☑ 2 Lines	☑ ☐ City water

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Tile/Ceramic
Room Area (m²)	
Operation room	94.00
E / G room	61.00
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	110 V	110 V
Phase	3	1
Wire	4	2
kVA	3.3	3/5

Quality of PLN source		
Fluctuations	110 V ± 5 %	
Availability of power per day	24 Hours	
Power interruption /month	9 Times	
Total interpt. hours /month	24 Hours	
Max. interpt. hours at once	8 Hours	

Existing Power Conditions			
	Good	Bad	
Power Supply System	☑	☐	
Operations of E/G	☐	☑	
Operations of AVR	☑	☐	

Capacity of fuel for engine	
Day tank	10 Liter
Main tank	6 k Liter

E/G Stand-by System

☐ Single System

☑ Dual System

4. CONDITIONS OF TRANSMITTING STATION

Refer to attached drawing

Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system
☑ Flat	☐ Dry soil	☐ Limestone	☑ Flood	Yes No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑ ☐ Antenna
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ ☐ Towers (Masts)
☐ Basin	☐ Clay		☐ Ground Subsidence	☑ ☐ Grounding system
☐ Valley	☑ Sandy			☑ ☐ Lightning system
Altitude	5.00 m		Telephone Lines	☑ ☐ Feeder Cable Way
Land area	16,200 m²		☑ Lines	☑ ☐ City water

SUMMARY OF COAST STATION

SITE	BITUNG		
CLASS	1st	NO.	171

4. CONDITIONS OF TRANSMITTING STATION (Continued)

Refer to attached drawing

Building Conditions		Power Source				
Constructions			PLN Source	E/G	Existing Power Conditions	
Num. of story	One	Voltage	110 V	110 V	Good Bad	
Structure	Concrete	Phase	3	3	☑ ☐	Power Supply System
Type of roof	Flat	Wire	4	4	☐ ☑	Operations of E/G
Type of ceiling	Triplex	kVA	53	50	☑ ☐	Operations of AVR
Type of wall	Brick	Quality of PLN source			Capacity of fuel for engine	
Wall finish	Mortar	Fluctuations	220 V ± 7 %		Day tank	30 Liter
Flooring	Ceramic	Availability of power per day		24 Hours	Main tank	6 k Liter
Room Area (m²)		Power interruption /month		8 Times	E/G Stand-by System	
Operation room	82.00	Total interpt. hours /month		20 Hours	☐	Single System
E / G room	45.00	Max. interpt. hours at once		8 Hours	☑	Dual System
Remark						

5. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired by technician or send to Jakarta
Examples of major failure	PC/CRT DSC repairement send to JRC Jakarta
Sufficiency of spares	Not enough spare part and difficult to find out in the market

Records of damages		Environmental Conditions		
		Good	Bad	
☐ Heavy rainfall				
☐ Storm		☑	☐	External noises
☐ Lightning		☑	☐	Air pollution
☐ Other calamity				

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt./tools	☐ Enough	☑ Reasonable	☐ Not enough
4	Number of Operator	☐ Enough	☐ Reasonable	☑ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☑ Not so bad	☐ Not capable

6. PERSONNEL FORMATIONS

	RX	TX
Chief	1	
Operator (skilled)	27 (24)	0
Technician (skilled)	5 (5)	13 (7)
Administrator	3	
Total	36	13

Training Record				
Course	Class	Location	Period	Trainee
				15

7. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service						
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996	169	1,401			1991	113	464	242	1996	249	904	169
1997	178	1,125	2,066	397	1992	178	534	189	1997	209	706	178
1998	164	1,989	2,15	369	1993	223	899	212	1998	169	594	164
1999	64	1,901	990	376	1994	304	1,225	168	1999	219	681	64
2000	22	2,327	2,26	367	1995	308	1,145	179	2000	246	804	22

8. COMMENTS

Suggestion	Maritime telecommunication services not yet optimal, caused by un-completed equipment, therefore we request for the equipment as below mentioned : Full automatic NBDP, Facsimile & Computer Telephone call : International Call & Long Distance Call
Remarks	

INVENTORY

Site Name: Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Transmitter**							
1		1kW MF/HF Transmitter (MOBIL)	JRS-713AM	JF00036	JRC	1997	F-TA-193: PH3		Good
2		1kW MF/HF Transmitter (FIX)	JRS-713BM	JF00045	JRC	1997	F-TA-193: PH3		Good
3		1 kW HF DSC Transmitter	JRS-713AM	BS-63510	JRC	1996	F-TA-193: PH3		Good
4		1 kW HF NBDP Transmitter	JRS-713AM	BS-63511	JRC	1996	F-TA-193: PH3		Good
5		1kW HF Transmitter	JRS-106 NB	BS-62116	JRC	1989	F-TA-193: PH2		Good
11		1kW MF Transmitter	JRS-108 P	BS-62124	JRC	1989	F-TA-193: PH2		Good
9		1kW HF Transmitter	JRS-106 NB	BS-62092	JRC	1990	SAR Poject		Damaged
10		1kW HF Transmitter	JRS-106 NB	BS-62093	JRC	1990	SAR Poject		Damaged
6		1kW HF Transmitter	JRS-106 NB	BS-61498	JRC	1985	F-TA-193: PH1		Good
7		1kW HF Transmitter	JRS-106 NB	BS-61499	JRC	1985	F-TA-193: PH1		Good
8		1kW HF Transmitter	JRS-106 NB	BS-61500	JRC	1985	F-TA-193: PH1		Good
12		1kW MF Transmitter	NSC-144A		JRC	1968			Damaged
13		1kW MF Transmitter	NSC-144A		JRC	1968			Damaged
14		1kW MF Transmitter	NSC-144A		JRC	1968			Damaged
15		1kW HF Transmitter	NSD-6B		JRC	1968			Damaged
16		1kW HF Transmitter	NSD-6B		JRC	1968			Damaged
1-2		**Remote Control System**							
1-2-1		**Remote Control**							
1		Voice Frequency Telegraph	JUT-1A	EQ-12850	JRC	1985	F-TA-193: PH1		Good
2		Voice Frequency Telegraph	JUT-1A	EQ-12851	JRC	1985	F-TA-193: PH1		Good
3		Remote Control Rack	GED-1049B	BP-89019	JRC	1985	F-TA-193: PH1		Good
4		Remote Control Rack	GED-1110A	BP-91924	JRC	1985	F-TA-193: PH1		Damaged
5		Remote Control & Morse Rack	GED-1050B	BP-89023	JRC	1985	F-TA-193: PH1		Good
6		Morse Transmitter	NGK-2A	BP-61455	JRC	1985	F-TA-193 PH1		Good
7		Local Terminal Unit	JCC-300LR8	BP-89309	JRC	1985	F-TA-193: PH1		Good
8		Local Terminal Unit	JCC-300LR8	BP-89310	JRC	1985	F-TA-193: PH1		Good
9		Local Terminal Unit	JCC-300LR8	BP-91777	JRC	1985	F-TA-193: PH1		Good
10		Local Terminal Unit	JCC-300LR8W	BP-98367	JRC	1996	F-TA-193: PH3		Damaged
11		Local Terminal Unit	JCC-300LR8W	BP-98366	JRC	1996	F-TA-193: PH3		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
12		Remote Control Unit	JCC-300ROS	BP-89325	JRC	1985	F-TA-193: PH1		Good
13		Remote Control Unit	JCC-300ROS	BP-89326	JRC	1985	F-TA-193: PH1		Good
1-2-2		**Supervisory Console**							
1		Operation Console	NCA-56B	BP-89351	JRC	1985	F-TA-193: PH1		Good
2		Receiver	NRD-93	BR-33407	JRC	1985	F-TA-193: PH1		Good
3		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
4		TX Status Display Panel	NCG-61C		JRC	1985	F-TA-193: PH1		Good
5		TX Status Display Panel	NCG-124	BP-98309	JRC	1996	F-TA-193: PH3		Good
6		Ant. matrix status display panel	NCG-62B		JRC	1985	F-TA-193: PH1		Good
7		Ant. matrix status display panel	NCG-125	BP-98314	JRC	1996	F-TA-193: PH3		Good
8		Telecontroller (for AMS)	NCH-391	BP-98657	JRC	1996	F-TA-193: PH3		Good
9		Independent Clock	QA-513		JRC	1985	F-TA-193: PH1		Good
10		Power supply	CBD-665		JRC	1985	F-TA-193: PH1		Good
1-3		**Operator Console/Desk/Rack**							
1-3-1		**MF TG Console**							
1		Operation Console	NCA-559B	BP-89343	JRC	1985	F-TA-193: PH1		Good
2		Receiver	NRD-93	BR-33408	JRC	1985	F-TA-193: PH1		Good
3		Receiver	NRD-93	BR-33413	JRC	1985	F-TA-193: PH1		Good
4		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
5		Radio Terminal	NQP-11	BP-89401	JRC	1985	F-TA-193: PH1		Good
6		Radio Terminal	NQP-11	BP-89402	JRC	1985	F-TA-193: PH1		Damaged
7		TX Controller	NCH-230	BP-89484	JRC	1985	F-TA-193: PH1		Good
8		TX Controller	NCH-230	BP-89485	JRC	1985	F-TA-193: PH1		Good
9		CQ Transmitter	RS-4K		JRC	1985	F-TA-193: PH1		Good
10		Telephone type station	YT-A		JRC	1985	F-TA-193: PH1		Good
11		Slave Clock			JRC	1985	F-TA-193: PH1		Good
12		Power Supply	NBK-31B		JRC	1985	F-TA-193: PH1		Good
1-3-2		**MF TP Console**							
1		Console	NCA-822 D	JF31759	JRC	1997	F-TA-193: PH3		Good
2		Receiver	NRD-93	BR78042	JRC	1997	F-TA-193: PH3		Good
3		Scanning Unit	NDH-93	1	JRC	1997	F-TA-193: PH3		Good
4		Speaker Panel	NVA-64-2	1	JRC	1997	F-TA-193: PH3		Good
5		Signal Controller	NQP-21-1	JF31881	JRC	1997	F-TA-193: PH3		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
6		Telephone Repeater	NQQ-31BB	JF31918	JRC	1997	F-TA-193: PH3		Good
7		Telecontroller	NCH-701M	JF31966	JRC	1997	F-TA-193: PH3		Good
8		Tx Selector	NCJ-676	JF32061	JRC	1997	F-TA-193: PH3		Good
9		Junction Box	NQD-3760	1	JRC	1997	F-TA-193: PH3		Good
10		Jack Panel	NQC-742A	1	JRC	1997	F-TA-193: PH3		Good
11		RF Jack Panel	NQE-584C	1	JRC	1997	F-TA-193: PH3		Good
12		Power Supply	NBK-31	1	JRC	1997	F-TA-193: PH3		Good
13		Clock (+8H)	6HCED00074	1	JRC	1997	F-TA-193: PH3		Good
14		Headset	NTR-3302	1	JRC	1997	F-TA-193: PH3		Good
15		Chair		1	JRC	1997	F-TA-193: PH3		Good
16		Telecontroller	NCH-300P	JF31754	JRC	1997	F-TA-193: PH3		Good
1-3-3		**HF TG/TP Console**							
1		Operation Console	NCA-565A	BP-89358	JRC	1985	F-TA-193: PH1		Good
2		Receiver	NRD-93	BR-33409	JRC	1985	F-TA-193: PH1		Good
3		Receiver	NRD-93	BR-33410	JRC	1985	F-TA-193: PH1		Good
4		Receiver	NRD-93	BR-33411	JRC	1985	F-TA-193: PH1		Good
5		Scanning Unit	NDH-93	BR-35463	JRC	1985	F-TA-193: PH1		Good
6		Scanning Unit	NDH-93	BR-35464	JRC	1985	F-TA-193: PH1		Good
7		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
8		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
9		Radio Terminal	NQP-11	BP-89423	JRC	1985	F-TA-193: PH1		Good
10		Radio Terminal	NQP-11	BP-89424	JRC	1985	F-TA-193: PH1		Good
11		TX Controller	NCH-230	BP-89509	JRC	1985	F-TA-193: PH1		Good
12		TX Controller	NCH-230	BP-89510	JRC	1985	F-TA-193: PH1		Good
13		TX Controller	NCH-230	BP-89511	JRC	1985	F-TA-193: PH1		Good
14		TX Controller	NCH-230	BP-89512	JRC	1985	F-TA-193: PH1		Good
15		Telephone Repeater	NQQ-31A	BP-89454	JRC	1985	F-TA-193: PH1		Good
16		Telephone Repeater	NQQ-31A	BP-89455	JRC	1985	F-TA-193: PH1		Good
17		Telephone type station	YT-A		JRC	1985	F-TA-193: PH1		Good
18		Slave Clock			JRC	1985	F-TA-193: PH1		Good
19		Power Supply	NBK-31B		JRC	1985	F-TA-193: PH1		Good
1-3-4		**FIX COM Console**							
1		Operation Console	NCA-561D	BP-89347	JRC	1985	F-TA-193: PH1		Good
2		Receiver	NRD-93	BP-33445	JRC	1985	F-TA-193: PH1		Good

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No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3		Receiver	NRD-93	BP-33446	JRC	1985	F-TA-193: PH1		Good
4		Telecontroller	NCH-300P	BP-91748	JRC	1985	F-TA-193: PH1		Good
5		Telecontroller	NCH-701M	JF-31967	JRC	1997	F-TA-193: PH3		Good
6		Radio Terminal	NQP-11	BP-89428	JRC	1985	F-TA-193: PH1		Good
7		TX Controller	NCH-230	BP-89497	JRC	1985	F-TA-193: PH1		Good
8		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
9		Lincomplex	NZA-15	BP-10098	JRC	1985	F-TA-193: PH1		Good
10		ARQ Equipment	NCL-550A	GA-10263	JRC	1985	F-TA-193: PH1		Good
11		Telephone Repeater	NQQ-31A	BP-89447	JRC	1985	F-TA-193: PH1		Good
12		Telephone Type Station	YT-A		JRC	1985	F-TA-193: PH1		Good
13		Slave Clock			JRC	1985	F-TA-193: PH1		Good
14		Power Supply	NBK-31B		JRC	1985	F-TA-193: PH1		Good
1-3-5		**Search & Monitor Console**							Good
1		Search & Monitor Console	NCA-564B	BP-31106	JRC	1985	F-TA-193: PH1		Good
2		Receiver	NRD-93	BR-33412	JRC	1985	F-TA-193: PH1		Good
3		Scanning Unit	NDH-93	BR-35465	JRC	1985	F-TA-193: PH1		Good
4		Speaker Panel	NVA-64G		JRC	1985	F-TA-193: PH1		Good
5		500 kHz AA Rec.	JXA-15A	BA-20740	JRC	1985	F-TA-193: PH1		Good
6		2182 kHz AA Rec.	JXA-8A	BA-21038	JRC	1985	F-TA-193: PH1		Good
7		Auto Direction Finder	JLR-1002	MF-12480	JRC	1985	F-TA-193: PH1		Good
8		500 kHz AA Buzzer	BZ-18	BA-20740	JRC	1985	F-TA-193: PH1		Good
9		Power Unit	NBA-3579	BP-20740	JRC	1985	F-TA-193: PH1		Good
10		Power Supply	NBA-1180	MF-12480	JRC	1985	F-TA-193: PH1		Good
1-3-6		**DSC Console**							
1		DSC Console (1U type)	NCA-783	BP-98266	JRC	1996	F-TA-193: PH3		Good
2		Junction Box	NQD-3655B		JRC	1996	F-TA-193: PH3		Good
3		Power Supply	NBK-31		JRC	1996	F-TA-193: PH3		Good
4		Telecontroller	NCH-701M	BP-98705	JRC	1996	F-TA-193: PH3		Good
5		Personal Computer DX4/100	PC100		IBM	1996	F-TA-193: PH3		Good
6		CRT Display	6542 - 105		IBM	1996	F-TA-193: PH3		Good
7		System Floppy Disk (DSC)	7YLED10101		IBM	1996	F-TA-193: PH3		Good
8		Master Clock	NKH-100	BP-99587	JRC	1996	F-TA-193: PH3		Good
9		Printer	LX-300		EPSON	1996	F-TA-193: PH3		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1-3-7		**DSC Rack**							
1		DSC W/K RX Rack (2U type)	GED-1249B	BP-98299	JRC	1996	F-TA-193: PH3		Good
2		RF Jack Panel	NQE-584R-C		JRC	1996	F-TA-193: PH3		Good
3		Junction Box	NQD-3631A		JRC	1996	F-TA-193: PH3		Good
4		ALM Buzzer	CCD-242		JRC	1996	F-TA-193: PH3		Good
5		DSC W/K Receiver	NRD-740	BR-69430	JRC	1996	F-TA-193: PH3		Good
6		DSC W/K Receiver	NRD-740	BR-69431	JRC	1996	F-TA-193: PH3		Good
7		DSC W/K Receiver	NRD-740	BR-69432	JRC	1996	F-TA-193: PH3		Good
8		DSC W/K Receiver	NRD-740	BR-69433	JRC	1996	F-TA-193: PH3		Good
9		DSC W/K Receiver	NRD-740	BR-69434	JRC	1996	F-TA-193: PH3		Good
10		DSC W/K Receiver	NRD-740	BR-69435	JRC	1996	F-TA-193: PH3		Good
11		DSC W/K Receiver	NRD-740	BR-69436	JRC	1996	F-TA-193: PH3		Good
12		DSC W/K Receiver	NRD-740	BR-69437	JRC	1996	F-TA-193: PH3		Good
13		DSC W/K Receiver	NRD-740	BR-69438	JRC	1996	F-TA-193: PH3		Good
14		DSC W/K Receiver	NRD-740	BR-69439	JRC	1996	F-TA-193: PH3		Good
15		RX Controller	NCJ-536A	BP-98376	JRC	1996	F-TA-193: PH3		Good
16		RX Controller	NCJ-536A	BP-98377	JRC	1996	F-TA-193: PH3		Good
17		Antenna Multicoupler	NAJ-110A	BC-19366	JRC	1996	F-TA-193: PH3		Good
18		1600kHz High Pass Filter	CFK-2	BC-19351	JRC	1996	F-TA-193: PH3		Good
19		System Rack	NCT-32	BP-98544	JRC	1996	F-TA-193: PH3		Good
20		DSC DEM	CND-129A	BP-98463	JRC	1996	F-TA-193: PH3		Good
21		DSC DEM	CND-129A	BP-98464	JRC	1996	F-TA-193: PH3		Good
22		DSC DEM	CND-129A	BP-98465	JRC	1996	F-TA-193: PH3		Good
23		DSC MOD	CNM-159A	BP-98499	JRC	1996	F-TA-193: PH3		Good
24		VHF DSC Modem (CH 70)	CNM-158A	BP-98523	JRC	1996	F-TA-193: PH3		Good
25		CPU IF	CDC-721A	BP-98424	JRC	1996	F-TA-193: PH3		Good
26		Power Supply	NBA-3979C	BP-98557	JRC	1996	F-TA-193: PH3		Good
1-3-8		**NBDP Console**							
1		Console (2U Type)	NCA-784A	BP-98281	JRC	1996	F-TA-193: PH3		Good
2		Jack Panel	NQC-742A		JRC	1996	F-TA-193: PH3		Good
3		RF Jack Panel	NQE-584C		JRC	1996	F-TA-193: PH3		Good
4		Junction Box	NQD-3654A		JRC	1996	F-TA-193: PH3		Good
5		Power Supply	NBK-31		JRC	1996	F-TA-193: PH3		Good
6		Receiver	NRD-93	BR-69365	JRC	1996	F-TA-193: PH3		Good

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No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
7		Receiver	NRD-93	BR-69366	JRC	1996	F-TA-193: PH3		Good
8		Hybrid	CB721S-S		JRC	1996	F-TA-193: PH3		Good
9		Speaker Panel	NVA-64-2		JRC	1996	F-TA-193: PH3		Good
10		Telecontroller	NCH-701M	BP-98706	JRC	1996	F-TA-193: PH3		Good
11		Signal Controller	NQP-21-1	BP-98630	JRC	1996	F-TA-193: PH3		Good
12		Telephone Repeater	NQQ-31BA	BP-98643	JRC	1996	F-TA-193: PH3		Good
13		System Rack	NCT-32S-A	BP-98570	JRC	1996	F-TA-193: PH3		Good
14		FS Modem	CHF-12A	BP-98399	JRC	1996	F-TA-193: PH3		Good
15		CPU IF	CDC-721A	BP-98425	JRC	1996	F-TA-193: PH3		Good
16		Level Converter	CMH-1280A	BP-98578	JRC	1996	F-TA-193: PH3		Good
17		2W/4W Converter	NHH-556A - 3	BP-99822	JRC	1996	F-TA-193: PH3		Good
18		Personnal Computer	6281-V5B PC-		IBM	1996	F-TA-193: PH3		Good
19		CRT Display	6542-105		IBM	1996	F-TA-193: PH3		Good
20		System Floppy Disk	7YLED10106		IBM	1996	F-TA-193: PH3		Good
21		Desk for Computer	CD4-398		IBM	1996	F-TA-193: PH3		Good
22		Clock (+8H)	6HCED00074		JRC	1996	F-TA-193: PH3		Good
23		Headset	NTR-3302		JRC	1996	F-TA-193: PH3		Good
24		Morse Key	HK-704		JRC	1996	F-TA-193: PH3		Good
25		Cable for Key	KC-547		JRC	1996	F-TA-193: PH3		Good
26		Headphone	ST-3		JRC	1996	F-TA-193: PH3		Good
27		Printer	LX-300		EPSON	1996	F-TA-193: PH3		Damaged
28		Printer	LX-300		EPSON	1996	F-TA-193: PH3		Good
29		Printer Auto-Switch	ASL-21(240)			1996	F-TA-193: PH3		Good
30		Paper Tape Reader/Puncher	DPT-610A		JRC	1996	F-TA-193: PH3		Good
1-3-9		**Connection Rack**							
1		Connection Rack	GED-1056A	BP-89028	JRC	1985	F-TA-193: PH1		Good
2		Common Repeater	NQQ-18G	BP-89466	JRC	1985	F-TA-193: PH1		Good
3		Junction Box	NQD-3013B		JRC	1985	F-TA-193: PH1		Good
4		Audio Select and Monitor	NCJ-280 A	BP-89273	JRC	1985	F-TA-193: PH1	Stored	Damaged
5		Tape Recorder	X-2000 R	50603	TEAC	1985	F-TA-193: PH1	Stored	Damaged
1-4		**VHF System**							
1		VHF TX/RX (CH70 DSC)	JRV-500APM	BH-20435	JRC	1996	F-TA-193: PH3		Good
2		VHF Transceiver (ch: 16)	GFD-260 YK	CV-57461	JRC	1985	F-TA-193: PH1		Good
3		VHF Transceiver (ch: 20)	GFD-260 YL	CV-57473	JRC	1985	F-TA-193: PH1		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
4		VHF Transceiver (ch: 22)	GFD-260 YL	CV-57474	JRC	1985	F-TA-193: PH1		Good
5		Marine Transceiver	GFD-260YM		JRC	1989	SAR Project		Damaged
7		VHF Console	GFD-501 YC(A)	CV-57492	JRC	1985	F-TA-193: PH1		Good
8		Slave Clock		1902	JRC	1985	F-TA-193: PH1		Good
9		Modem for NCU-272-11	CNM-162		JRC	1996	F-TA-193: PH3		Good
10		Modem for JRV-500APM	CNM-162A		JRC	1996	F-TA-193: PH3		Good
11		VHF Controller	NCU-272-11	BP-98024	JRC	1985	F-TA-193: PH1		Good
12		Duplexer	AW-158YB	950711	JRC	1996	F-TA-193: PH3		Good
13		Duplexer	DF 33-1500A	F-44456	JRC	1985	F-TA-193: PH1		Good
14		Duplexer	DF 33-1500A	F-44470	JRC	1985	F-TA-193: PH1		Good
15		Coaxial Arrester	NYZ-150	95061	JRC	1996	F-TA-193: PH3		Good
16		Coaxial Arrester	NZY-400	84012	JRC	1985	F-TA-193: PH1		Good
17		Coaxial Arrester	NZY-400	84048	JRC	1985	F-TA-193: PH1		Good
18		Band Pass Filter	BP2-1500A	F-44447	JRC	1985	F-TA-193: PH1		Good
1-5		**UHF/SHF Link**							
1		Multiplex Radio	JUP-450	EM-11521	JRC	1985	F-TA-193: PH1		Good
2		Multiplex Radio	JUP-450	EM-11522	JRC	1985	F-TA-193: PH1		Good
3		Multiplex Radio	JUP-450	EM-11523	JRC	1985	F-TA-193: PH1		Good
4		Multiplex Radio	JUP-450	EM-11524	JRC	1985	F-TA-193: PH1		Good
5		Multiplex Radio	JUP-450	EM-11501	JRC	1985	F-TA-193: PH1		Good
6		Multiplex Radio	JUP-450	EM-11502	JRC	1985	F-TA-193: PH1		Good
7		Multiplex Radio	JUP-450	EM-11503	JRC	1985	F-TA-193: PH1		Good
8		Multiplex Radio	JUP-450	EM-11504	JRC	1985	F-TA-193: PH1		Good
9		Multiplex Terminal	JUF-5A	EP-11851	JRC	1985	F-TA-193: PH1		Good
10		Multiplex Terminal	JUF-5A	EP-11850	JRC	1985	F-TA-193: PH1		Good
11		Multiplex Terminal	JUF-5A	EP-11840	JRC	1985	F-TA-193: PH1		Good
12		Multiplex Terminal	JUF-5A	EP-11841	JRC	1985	F-TA-193: PH1		Good
13		DRCS-BS (Radio Bay)	NUL-148A		JRC	1990	SAR Project		Good
14		DRCS-BS (Digital Interface Bay)	NUL-93A		JRC	1990	SAR Project		Good
15		Local Exchange	JUX-150D2		JRC	1989	SAR Project		Good
16		Main Distribution Frame	NQE-40A2	EQ-12824	JRC	1985	F-TA-193: PH1		Good
17		Main Distribution Frame	NQE-40A2	EQ-12825	JRC	1985	F-TA-193: PH1		Good
18		Main Distribution Frame	NQE-40A2		JRC	1996	F-TA-193: PH3		Good
19		Main Distribution Frame	NQE-40A2		JRC	1996	F-TA-193: PH3		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
		Mux Ch. Expantion (UHF)							
20		Sub. Rack 12/24ch to 24/24ch	NQD-508	NBX011	JRC	1989	F-TA-193: PH2		Good
21		Sub. Rack 12/24ch to 24/24ch	NQD-508	NBX012	JRC	1989	F-TA-193: PH2		Good
22		Modem Unit (2ch)	NMC-100A1	NBX065	JRC	1989	F-TA-193: PH2		Good
23		Modem Unit (2ch)	NMC-100A1	NBX079	JRC	1989	F-TA-193: PH2		Good
24		Modem Unit (2ch)	NMC-100A1	NBX027	JRC	1989	F-TA-193: PH2		Good
25		Modem Unit (2ch)	NMC-100A1	NBX082	JRC	1989	F-TA-193: PH2		Good
26		Modem Unit (2ch)	NMC-100A1	NBX031	JRC	1989	F-TA-193: PH2		Good
27		Modem Unit (2ch)	NMC-100A1	NBX083	JRC	1989	F-TA-193: PH2		Good
28		Modem Unit (2ch)	NMC-100A1	NBX033	JRC	1989	F-TA-193: PH2		Good
29		Modem Unit (2ch)	NMC-100A1	NBX096	JRC	1989	F-TA-193: PH2		Good
30		Modem Unit (2ch)	NMC-100A1	NBX034	JRC	1989	F-TA-193: PH2		Good
31		Modem Unit (2ch)	NMC-100A1	NBX024	JRC	1989	F-TA-193: PH2		Good
32		Modem Unit (2ch)	NMC-100A1	NBX035	JRC	1989	F-TA-193: PH2		Good
33		Modem Unit (2ch)	NMC-100A1	NBX032	JRC	1989	F-TA-193: PH2		Good
34		GSR Unit	NNE-100	N59072	JRC	1989	F-TA-193: PH2		Good
35		GSR Unit	NNE-100	N59067	JRC	1989	F-TA-193: PH2		Good
2		**Tower & Antenna System**							
2-1		**Tower & Mast**							
		TX Station							
1		35mH Self Supporting	Triangle	T1		1967	Japanese Aids		Good
2		35mH Self Supporting	Triangle	T2		1967	Japanese Aids		Good
3		35mH Self Supporting	Triangle	T3		1967	Japanese Aids		Good
4		35mH Self Supporting	Triangle	T4		1967	Japanese Aids		Good
5		35mH Self Supporting	Triangle	T5		1967	Japanese Aids		Good
		RX Station							
1		25H Panzer Mast		P1		1967	Japanese Aids		Good
2		25H Panzer Mast		P2		1967	Japanese Aids		Good
3		25H Panzer Mast		P3		1967	Japanese Aids		Good
4		25H Panzer Mast		P4		1967	Japanese Aids		Good
5		25H Panzer Mast		P5		1967	Japanese Aids		Good
6		25mH Self Supporting	Square	T1	JRC	1990	SAR Project		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
2-2		Antenna System							
		TX Station							
1		Double Doublet Antenna		1		1967	Japanese Aids		Good
2		Double Doublet Antenna		2		1967	Japanese Aids		Good
3		Double Doublet Antenna				1967	Japanese Aids		Good
4		Multi Doublet Antenna		3		1967	Japanese Aids		Good
5		Multi Doublet Antenna		4		1967	Japanese Aids		Good
6		Fan Antenna		5		1967	Japanese Aids	Modified in 1999	Good
7		Fan Antenna		6		1967	Japanese Aids	Modified in 1999	Good
8		Fan Antenna				1967	Japanese Aids		Good
9		5W T Type Antenna		7		1967	Japanese Aids	Modified in 1999	Good
10		Inverted "L" Antenna		8		1967	Japanese Aids		Good
11		Inverted "L" Antenna				1967	Japanese Aids		Good
12		Multi Doublet Antenna		9	JRC	1990	SAR Project		Good
13		Inverted "L" Antenna	CL-045M	10	JRC	1995	F-TA-193: PH3		Good
14		Inverted "L" Antenna	CL-045M	11	JRC	1995	F-TA-193: PH3		Good
15		8-Elements YAGI Antenna	Y8-4503SA	4091	JRC	1985	F-TA-193: PH1		Good
		RX Station							
1		Inverted "L" Ant		1		1967	Japanese Aids		Good
2		Inverted "L" Ant		2		1967	Japanese Aids		Good
3		Inverted "L" Ant		3		1967	Japanese Aids		Good
4		Inverted "L" Ant				1967	Japanese Aids		Good
5		Inverted "L" Ant				1967	Japanese Aids		Good
6		Double Doublet Antenna		4					Good
7		Inverted "L" Ant		5	JRC	1990	SAR Project		Good
8		Single Doublet Antenna		6					Good
9		RDF Loop Antenna	AE-0-62	7	JRC	1985	F-TA-193: PH1		Good
10		8-Elements YAGI Antenna	Y8-4503SA	4089	JRC	1985	F-TA-193: PH1		Good
11		2GHz Antenna			JRC	1990	SAR Project		Good
12		2GHz Antenna			JRC	1990	SAR Project		Good
13		Brown Cardioide Ant.	BRC-1501		JRC	1985	F-TA-193: PH1		Good
14		Brown Cardioide Ant.	BRC-1501		JRC	1985	F-TA-193: PH1		Good
15		Brown Cardioide Ant.	BRC-1501		JRC	1985	F-TA-193: PH1		Good
16		Brown Cardioide Ant.	BRC-1501		JRC	1990	SAR Project		Good

INVENTORY

Site Name: Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
17		Brown Cardioide Ant.	BRC-1511		JRC	1995	F-TA-193: PH3		Good
2-3		**Antenna Switch**							
1		Antenna Switch Rack	GED-1116M	BP-98652	JRC	1996	F-TA-193: PH3		Good
2		Antenna Switch	NKZ-61	BP-12175	JRC	1996	F-TA-193: PH3		Good
3		Antenna Changer	NKZ-230		JRC	1985	F-TA-193: PH1	Stored (not use)	Good
4		Antenna Exchanger	NKZ-223		JRC	1985	F-TA-193: PH1		Damaged
		Antenna Selector							
1		Antenna Selector Rack	GJD-107 G	BP-89117	JRC	1985	F-TA-193: PH1		Good
2		Antenna Selector	NKZ-220B		JRC	1985	F-TA-193: PH1		Good
3		Antenna Multicoupler	NAF-80FA	BC-13455	JRC	1985	F-TA-193: PH1		Good
4		Antenna Multicoupler	NAF-80FA	BC-13456	JRC	1985	F-TA-193: PH1		Good
5		Antenna Multicoupler	NAF-80FA	BC-13457	JRC	1985	F-TA-193: PH1		Good
6		BC Band Rejection Filter	CFL-172	BC-13537	JRC	1985	F-TA-193: PH1		Good
7		BC Band Rejection Filter	CFL-172	BC-13538	JRC	1985	F-TA-193: PH1		Good
8		BC Band Rejection Filter	CFL-172	BC-13539	JRC	1985	F-TA-193: PH1		Good
9		BC Band Rejection Filter	CFL-172	BC-13540	JRC	1985	F-TA-193: PH1		Good
10		BC Band Rejection Filter	CFL-172	BC-13541	JRC	1985	F-TA-193: PH1		Good
2-3		**Antenna Matching Unit**							
1		Antenna Matching Unit	NFG-2C	BP-88961	JRC	1985	F-TA-193: PH1		Good
2		Antenna Matching Unit	NFG-3CA	BP-91948	JRC	1989	F-TA-193: PH2		Good
3		Matching Unit Control	NCM-134F	BP-88965	JRC	1985	F-TA-193: PH1		Good
4		Antenna Matching Unit	NFG-140A	BP-98595	JRC	1996	F-TA-193: PH3		Good
5		Antenna Matching Unit	NFG-140A	BP-98596	JRC	1996	F-TA-193: PH3		Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		PDB Step-up			JRC	1990	SAR Project		Good
2		PDB Step-up			JRC	1990	SAR Project		Good
3		Power Switch Board	NCB-430		JRC	1985	F-TA-193: PH1		Good
4		Power Switch Board	NCH-429		JRC	1985	F-TA-193: PH1		Good
5		Power Supply Unit	NBA-1180	MF-12480	JRC	1985	F-TA-193: PH1		Good
6		Power Supply Unit	NBA-3579	BP-20740	JRC	1985	F-TA-193: PH1		Good
7		PDB Type TA2 - 220V, 3Ø	NBJ-402TA2	BP-98356	JRC	1996	F-TA-193: PH3		Good

INVENTORY

Site Name: Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
8		PDB Type RA1 - 220V, 1Ø	NBJ-402RA1	BP-98326	JRC	1996	F-TA-193: PH3		Good
9		PDB Type RC - 220V, 1 Ø	NBJ-402RC	BP-98383	JRC	1996	F-TA-193: PH3		Good
10		PDB Type RB - 220V, 1 Ø	NBJ-402RB	BP-98333	JRC	1996	F-TA-193: PH3		Good
3-2		**Isolation Transformer**							
1		55kVA, 220V, 3Ø	NBL-227B2	BP-99807	JRC	1995	F-TA-193: PH3		Good
2		10kVA, 220V, 3Ø	NBL-227E2	BP-99817	JRC	1995	F-TA-193: PH3		Good
3		3kVA IsolationTransformer			JRC	1990	SAR Project		Good
3-3		**Step-Up Transformer**							
1		3kVA Step-Up Transformer	BPS-1		JRC	1990	SAR Project		Good
2		3kVA Step-Up Transformer	BPS-1		JRC	1990	SAR Project		Good
3		3.5kVA, 220/380V, 3Ø	NBA-226B	BP-99790	JRC	1996	F-TA-193: PH3		Good
4		3.5kVA, 220/380V, 3Ø	NBA-226B	BP-99791	JRC	1996	F-TA-193: PH3		Good
5		5kVA, 110/220V, 1Ø	NBL-226C	BP-99799	JRC	1996	F-TA-193: PH3		Good
3-4		**UPS & AVR System**							
1		2kVA, 220V, 1Ø	Net Pro 2000	9503A009	JRC	1996	F-TA-193: PH3		Good
2		1kVA, 220V, 1Ø	MICRO 110	9609A014	JRC	1996	F-TA-193: PH3		Good
3		Accu Charger	24V/20A	BPS-1			SAR Project		Good
4		Accu Charger	48V/10A	BPS-4			SAR Project		Good
5		AVR	NBZ-262	BP-10021	JRC	1968	Japanese Aids		Good
6		Induction VR 10kVA 220V	TMA		Kojima	1968	Japanese Aids		Good
3-5		**Engine Generator**							
1		Engine 70 PK, 1000 rpm	4LG	4146	Kubota	1968	Japanese Aids		Damaged
2		Engine 70 PK, 1000 rpm	4LG	4147	Kubota	1968	Japanese Aids		Good
3		Engine 9PK, 2000 rpm	ER-90		Kubota	1968	Japanese Aids		Damaged
4		Engine 9PK, 2000 rpm	ER-90		Kubota	1968	Japanese Aids		Damaged
5		Generator 50 kVA	NSDETP-275	12860	Taiyo	1968	Japanese Aids		Good
6		Generator 50 kVA	NSDETP-275	113964	Taiyo	1968	Japanese Aids		Good
7		Generator 5 kVA		50891	Sumitsu	1968	Japanese Aids		Damaged
8		Generator 5 kVA			Sumitsu	1968	Japanese Aids		Damaged
		Generator 3 kVA				1968	Japanese Aids		Damaged
4		**Measuring Equipment**							
1		Oscilloscope	2235	B017852		1985	F-TA-193: PH1		Damaged
2		Digital Circuit Tester	MD-200C	841199		1985	F-TA-193: PH1		Damaged

INVENTORY

Site Name: Bitung

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3		Frequency Counter	5383A	2412A061		1985	F-TA-193: PH1		Good
4		Audio Distortion Meter	796F	M-14427021		1985	F-TA-193: PH1		Good
5		RF Signal Generator	MSG-2560B	84113137		1985	F-TA-193: PH1		Good
6		Electronic Voltmeter	ML-69A	M15186		1985	F-TA-193: PH1		Good
7		Megaohm Tester	3213	035058	JRC	1985	F-TA-193: PH1		Good
8		VHF Signal Generator	MG-54E	M44284		1985	F-TA-193: PH1		Good
9		VHF Output Testing Equipment	MS-52B	M49383		1985	F-TA-193: PH1		Good
10		Directional Coupler	MA-52A	M94687		1985	F-TA-193: PH1		Good
11		VHF/UHF Dummy Load	TP-5J1D	22162	JRC	1985	F-TA-193: PH1		Good
12		Selec. Level Meter/Gen.	AD-7530	534583		1985	F-TA-193: PH1		Good
13		UHF Signal Generator	MG-54D	M36991		1985	F-TA-193: PH1		Good
14		Psophometric Weighting Netw.	NJM-776B	ES11470		1985	F-TA-193: PH1		Good
15		Portable test rack (1)	206			1985	F-TA-193: PH1		Good
16		DC Power Supply Unit	PAD-35-5L	1840891	JRC	1985	F-TA-193: PH1		Good
17		Motor Drive Wire Wrapper	EW-70			1985	F-TA-193: PH1		Good
18		Tools (1)	ZPED00002			1985	F-TA-193: PH1		Good
19		Tools (1)	S-10			1985	F-TA-193: PH1		Good
20		Tools (1)	ND-XP217A-74			1985	F-TA-193: PH1		Good
21		Dummy Load	DL-102A-SJ-A	93895-3	JRC	1985	F-TA-193: PH1		Good
5		**Others**							
1		Panel Adaptor	6JWND0002			1985	F-TA-193: PH1		Good
2		Teleprinter (with stand)	T-1000	BC/S280780	Siemens	1985	F-TA-193: PH1		Damaged
3		Master Clock	KM-6TH-IPS	2127					Damaged
4		Air Conditioner (19)							Good

STATUS OF TROUBLES

SITE NAME : BITUNG **BTG-171-(1/4)**

Item / Equipment	Power Supply, Power Supply, Supervisory Console / -		
Manufacturer	JRC		
Manufacturer in year	1989,1989, 1985		
Defective panel / unit	VHf Sarcom, LT-2A JCC-300LR, power Supply		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☑ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

Necessary availability of new equipment
Un-availability spare part

STATUS OF TROUBLES

SITE NAME : BITUNG **BTG-171-(2/4)**

Item / Equipment	Antenna System / -		
Manufacturer	JRC		
Manufacturer in year	1985		
Defective panel / unit	Antenna Matching Unit		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☑ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

SWR always change if changing the weather

STATUS OF TROUBLES

SITE NAME : BITUNG **BTG-171-(3/4)**

Item / Equipment	Teleprinter T-1000 / -		
Manufacturer	Siemen		
Manufacturer in year	1985		
Defective panel / unit	Power Supply Unit		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☑ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

Spare part is not sell in the market, but it is very urgent for communications between Jakarta and others

STATUS OF TROUBLES

SITE NAME : BITUNG **BTG-171-(4/4)**

Item / Equipment	Engine Generator / -		
Manufacturer	Kubota		
Manufacturer in year	1968		
Defective panel / unit	-		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☑ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

Aged condition and always trouble, necessary availabelity of new Generator 30 KVA (for RX Station) and 50 KVA for TX station

OPERATION SCHEDULE (FREQUENCIES)

Site Name: Bitung

BTG-171-(1/3)

Call Sign : Mobile Service : PKM
Fix Service : 8AS2

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	500,0	A1A	1000		
2	6 428,0	A1A	1000		
3	8 694,0	A1A	1000		
4	12 704,0	A1A	1000		
5	2.182,0	J3E	1000		
6	4.125,0	J3E	1000		
7	6.215,0	J3E	1000		
8	8 291,0	J3E	1000		
9	12.290,0	J3E	1000		
10	16.420,0	J3E	1000		
11	2.090,0	J3E	1000		
12	2.690,0	J3E	1000		
13	4 116,0	J3E	1000		
14	4 408,0	J3E	1000		
15	6.209,0	J3E	1000		
16	6.510,0	J3E	1000		
17	8 282,0	J3E	1000		
18	8.806,0	J3E	1000		
19	12 257,0	J3E	1000		
20	13 104,0	J3E	1000		
21	16 387,0	J3E	1000		
22	17 269,0	J3E	1000		
	DSC Service				
23	2 187,5	F1B	1000		
24	4 207,5	F1B	1000		
25	6.312,0	F1B	1000		

OPERATION SCHEDULE (FREQUENCIES)

Site Name: Bitung

BTG-171-(2/3)

Call Sign : Mobile Service : PKM
Fix Service : 8AS2

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
26	8.414,5	F1B	1000		
27	12 577,0	F1B	1000		
28	16 804,5	F1B	1000		
30	2.189,5	F1B	1000		
31	8 415,0	F1B	1000		
32	8 438,5	F1B	1000		
33	13 577,5	F1B	1000		
34	12 657,0	F1B	1000		
35	16 903,0	F1B	1000		
	NBDP Service				
36	2 174,5	F1B	1000		
37	4 177,5	F1B	1000		
38	6.268,0	F1B	1000		
39	8 376,5	F1B	1000		
40	12 520,0	F1B	1000		
41	16 695,0	F1B	1000		
42	6 263,5	F1B	1000		
43	6 264,5	F1B	1000		
44	8 383,0	F1B	1000		
45	8 423,0	F1B	1000		
46	12 582,0	F1B	1000		
47	12 478,5	F1B	1000		
48	16 821,0	F1B	1000		
49	16 698,0	F1B	1000		

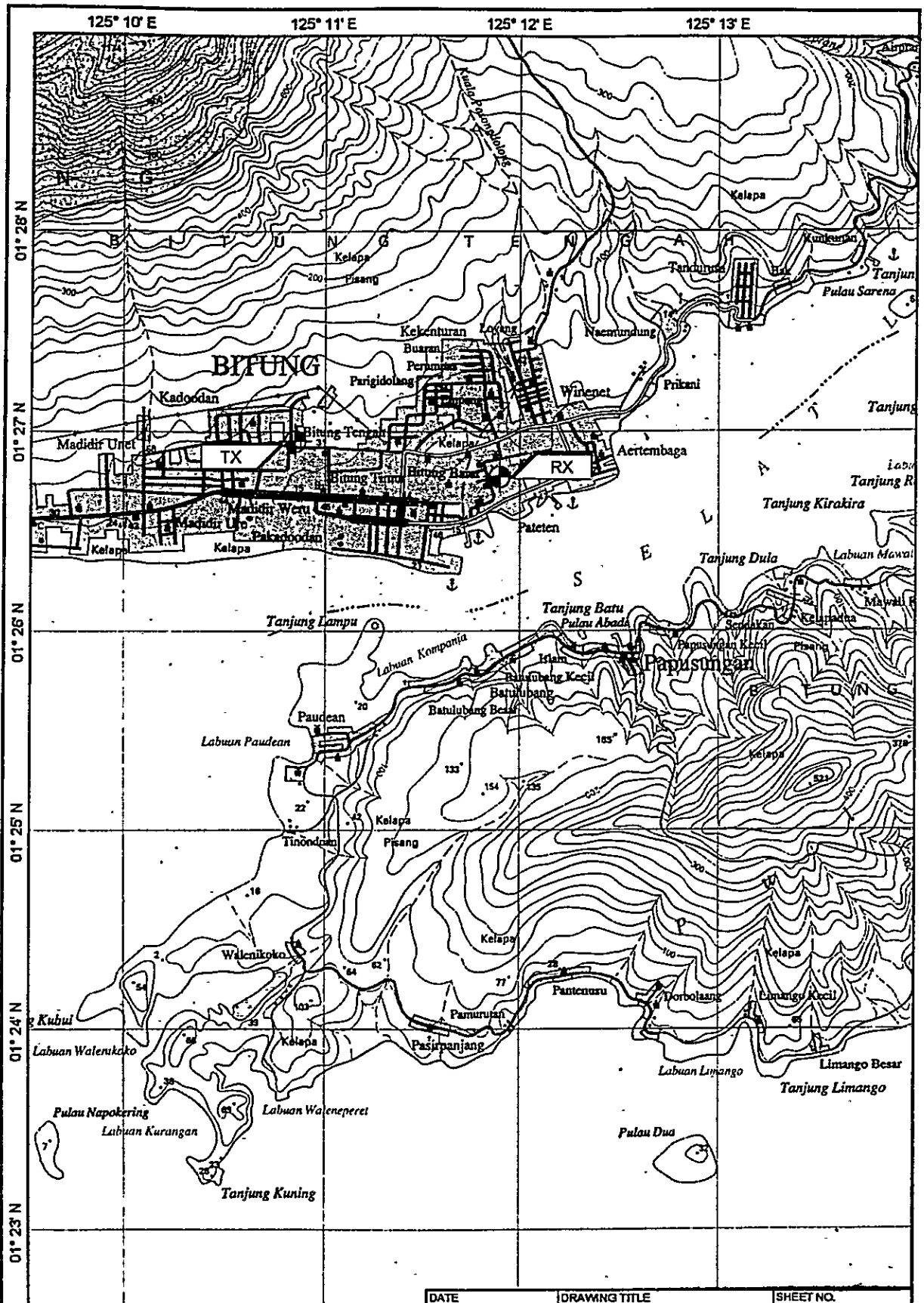
OPERATION SCHEDULE (FREQUENCIES)

Site Name: Bitung

BTG-171-(3/3)

Call Sign : Mobile Service : PKM
Fix Service : 8AS2

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	VHF Service				
50	156,525	G3E	50		
51	156,800	G3E	50		
53	161,600	G3E	50		
54	161,900	G3E	50		
	Fix Service				
55	5 381,5	J3E	1000		
56	6 926,0	J3E	1000		
57	9 110,0	J3E	1000		
58	9 925,0	J3E	1000		
59	10 225,0	J3E	1000		
60	11 060,0	J3E	1000		
61	13 661,0	J3E	1000		
62	13 444,0	J3E	1000		
63	14 639,0	J3E	1000		
64					
65					
66					
67					
68					
69					
70					
71					
72					



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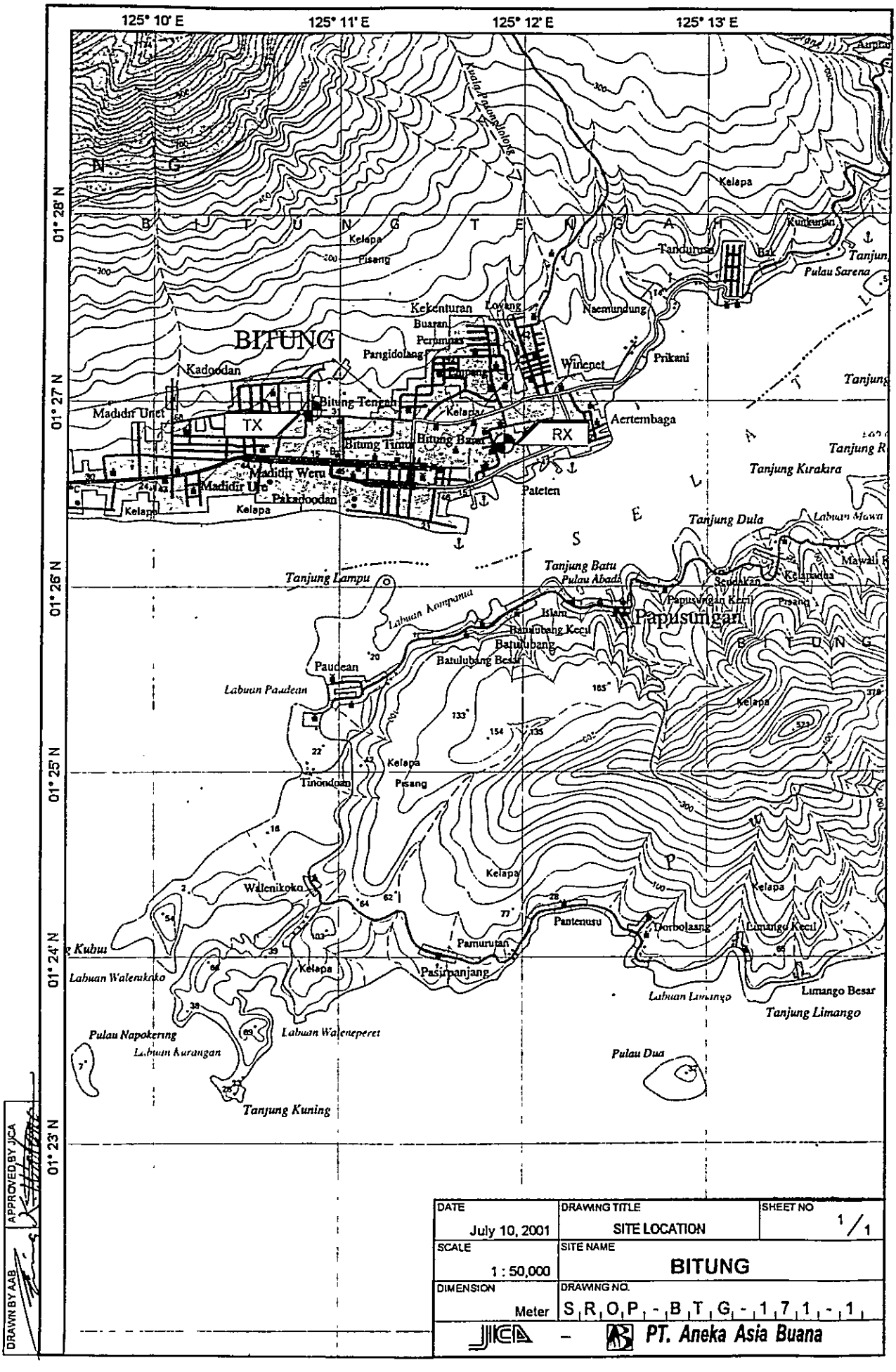
SCALE: 1 : 50,000	SITE NAME: BITUNG	
DIMENSION: Meter	DRAWING NO.: SROP-BTG-171-1	

JICA – PT. Aneka Asia Buana

DRAWN BY AAB: APPROVED BY JICA:



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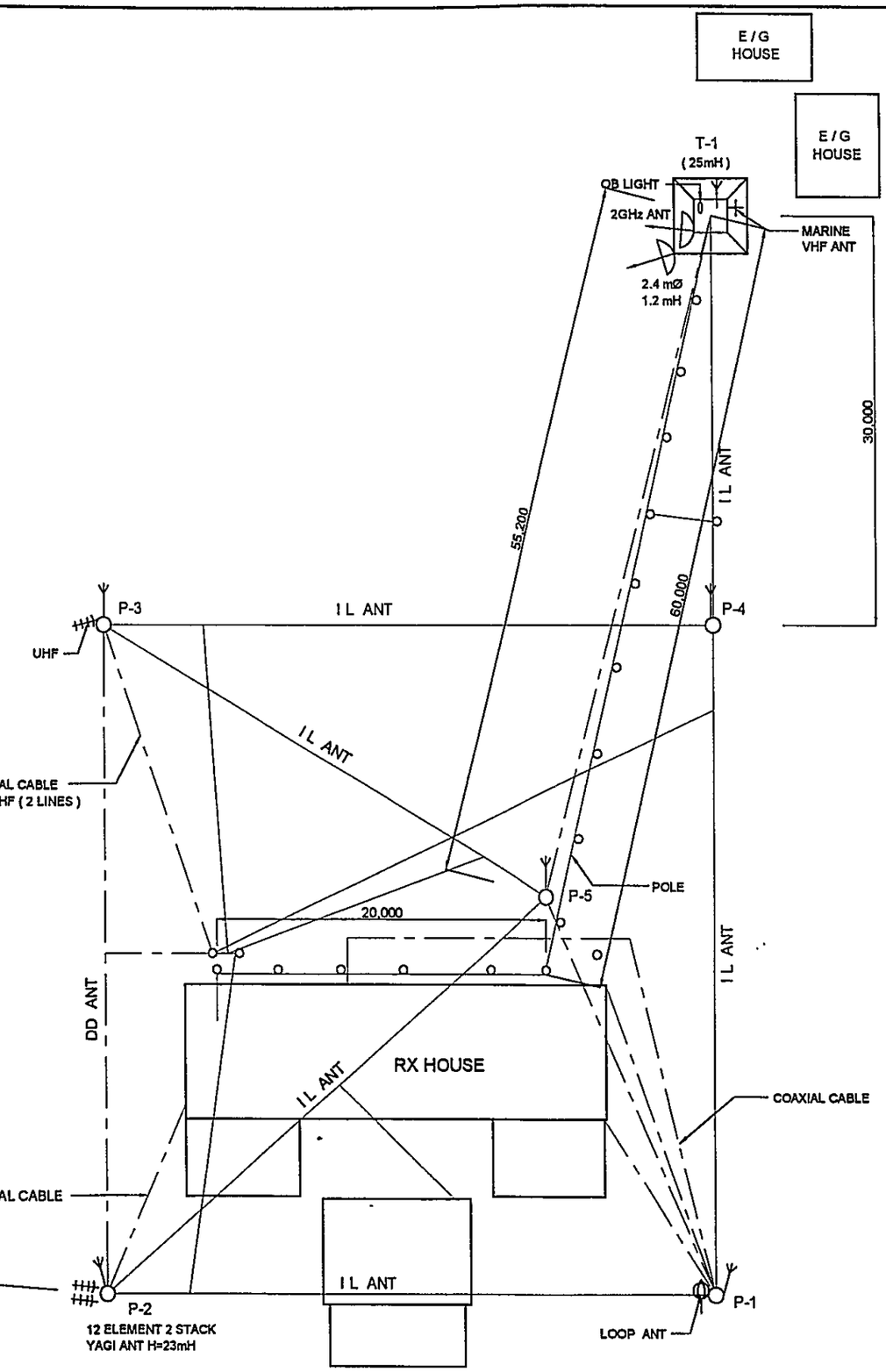
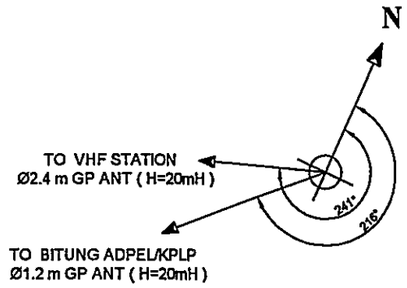
SCALE: 1 : 50,000	SITE NAME: BITUNG	
DIMENSION: Meter	DRAWING NO.: S R O P - B T G - 1 7 1 - 1	
JICA – PT. Aneka Asia Buana		

APPROVED BY JICA

DRAWN BY AAB





LEGEND

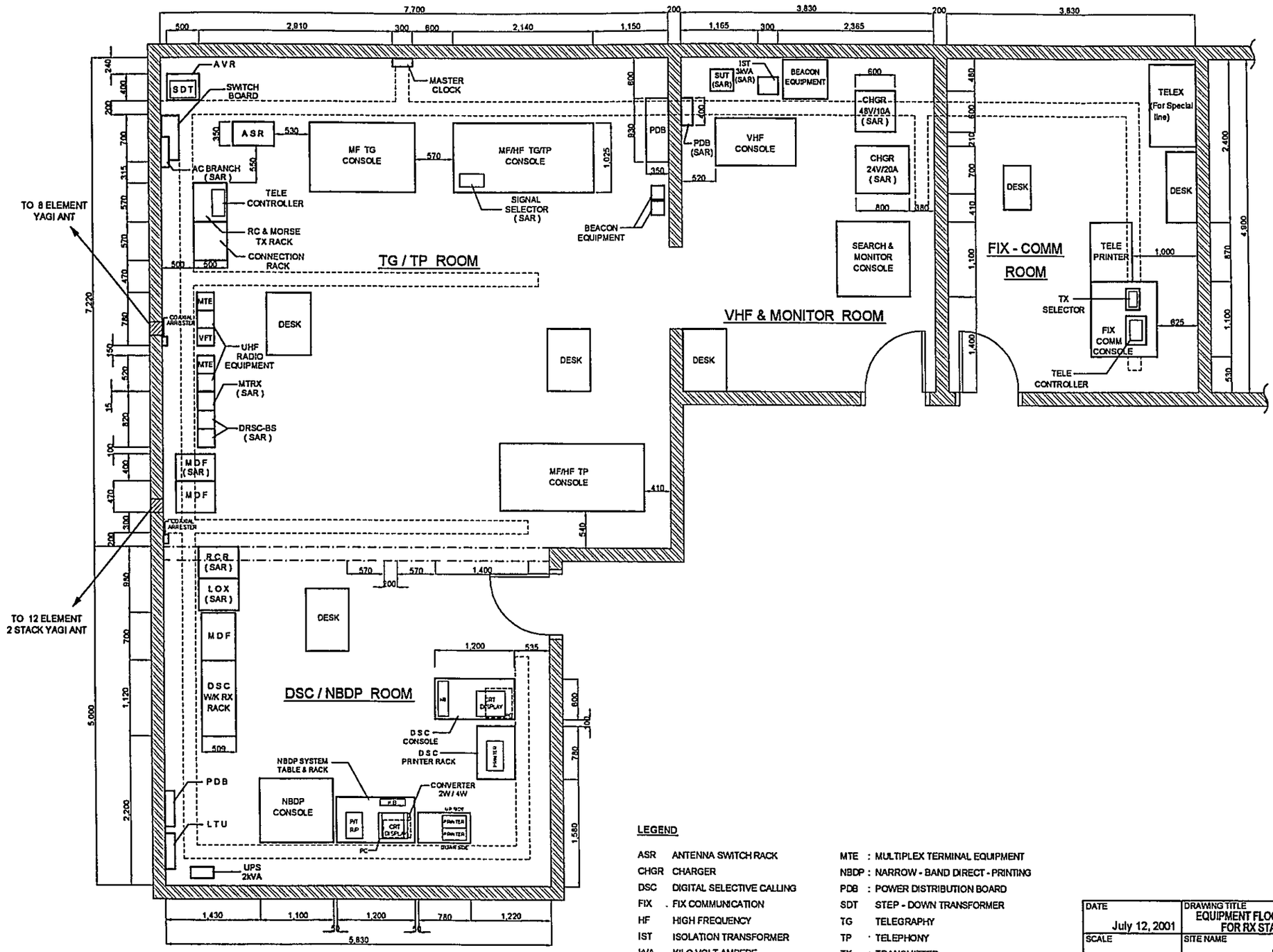
ANT : ANTENNA
DD : DOUBLE DOUBLET
E/G : ENGINE GENERATOR
IL : INVERTED L
UHF : ULTRA HIGH FREQUENCY
VHF : VERY HIGH FREQUENCY

APPROVED BY JICA :

DRAWN BY :

DATE: July 10, 2001	DRAWING TITLE: ANTENNA LAYOUT FOR RX STATION	SHEET NO.: 1/1
SCALE: 1 : 300	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO.: SROP-BTG-171-2R	

JICA – PT. Aneka Asia Buana



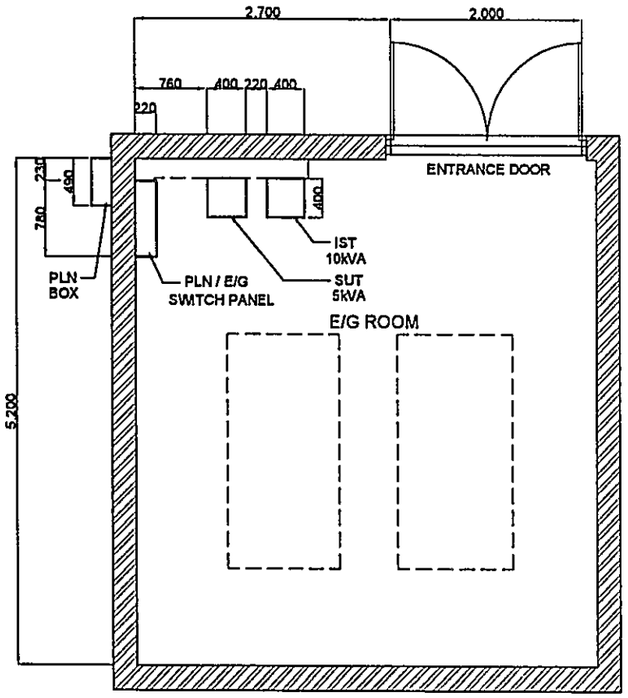
LEGEND

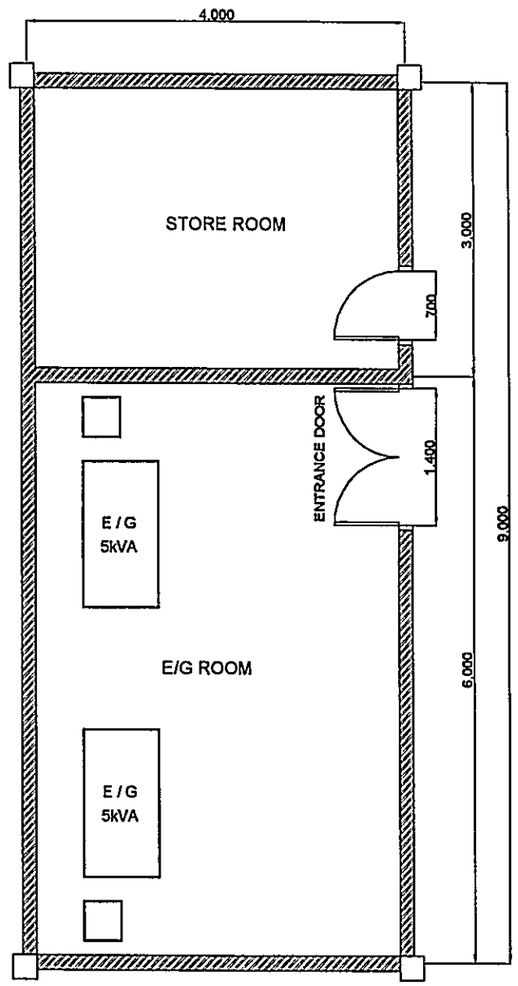
ASR	ANTENNA SWITCH RACK	MTE	: MULTIPLEX TERMINAL EQUIPMENT
CHGR	CHARGER	NBDP	: NARROW - BAND DIRECT - PRINTING
DSC	DIGITAL SELECTIVE CALLING	PDB	: POWER DISTRIBUTION BOARD
FIX	. FIX COMMUNICATION	SDT	STEP - DOWN TRANSFORMER
HF	HIGH FREQUENCY	TG	TELEGRAPHY
IST	ISOLATION TRANSFORMER	TP	TELEPHONY
KVA	KILO VOLT AMPERE	TX	: TRANSMITTER
LTU	LOCAL TERMINAL UNIT	UHF	: ULTRA HIGH FREQUENCY
MF	MEDIUM FREQUENCY	UPS	: UNINTERRUPTED POWER SUPPLY
MDF	. MAIN DISTRIBUTION FRAME	VFT	VOICE FREQUENCY OMMDIRECTIONAL

DRAWN BY AAB: APPROVED BY JICA:

DATE: July 12, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT FOR RX STATION	SHEET NO.: 1/1
SCALE: 1 : 60	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO.: SROP-BTG-171-3R	

JICA – PT. Aneka Asia Buana





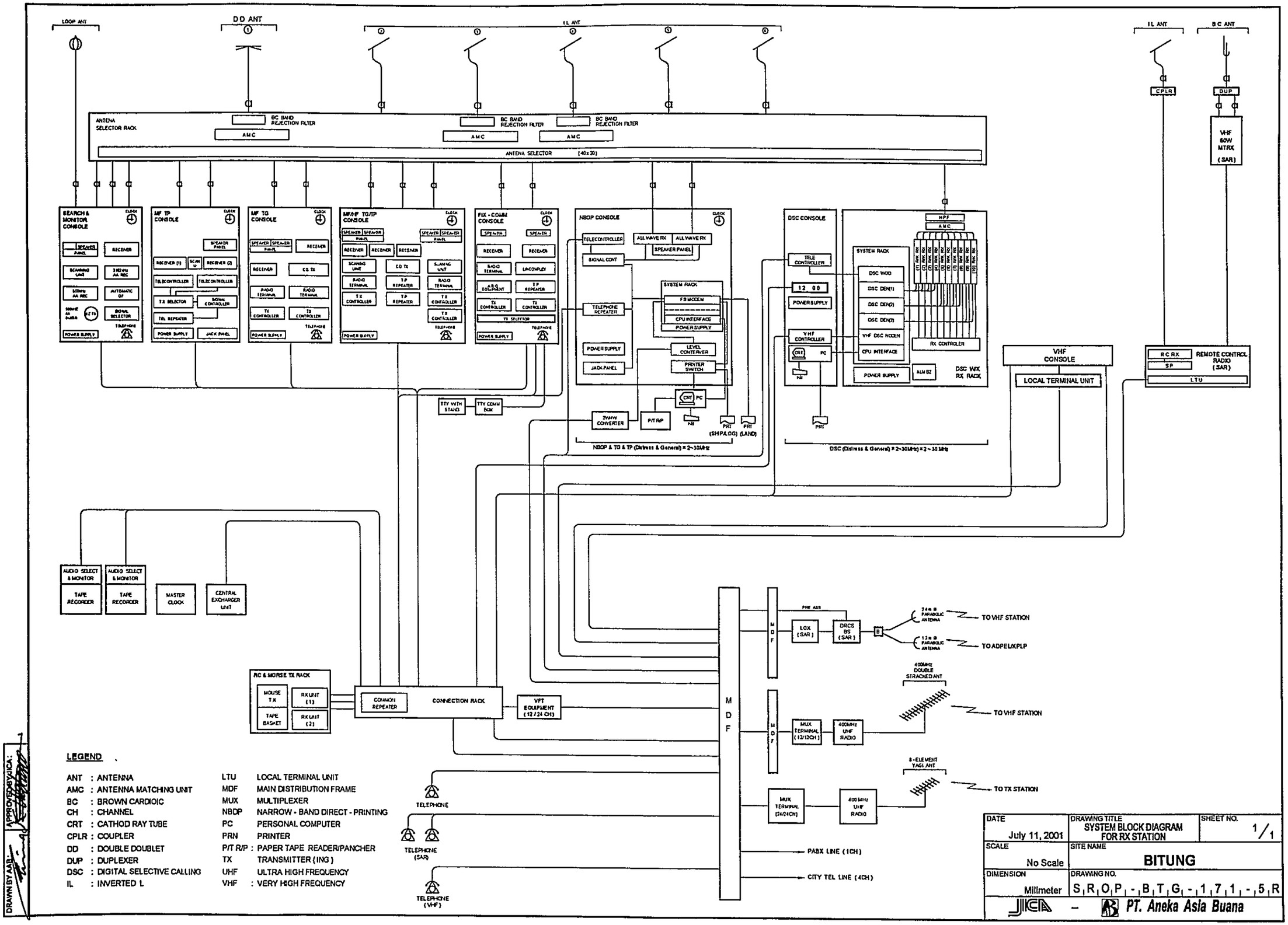
LEGEND

E/G : ENGINE GENERATOR
IST : ISOLATION TRANSFORMER
kVA : KILO VOLT AMPERE
SUT : STEP - UP TRANSFORMER

DATE: July 10, 2001	DRAWING TITLE: E/G FLOOR LAYOUT FOR RX STATION	SHEET NO: 1/1
SCALE: 1 : 60	SITE NAME: BITUNG	
DIMENSION: Millmeter	DRAWING NO.: SROP-BTG-171-4R	
JICA – PT. Aneka Asia Buana		

APPROVED BY JICA :

DRAWN BY AAB :



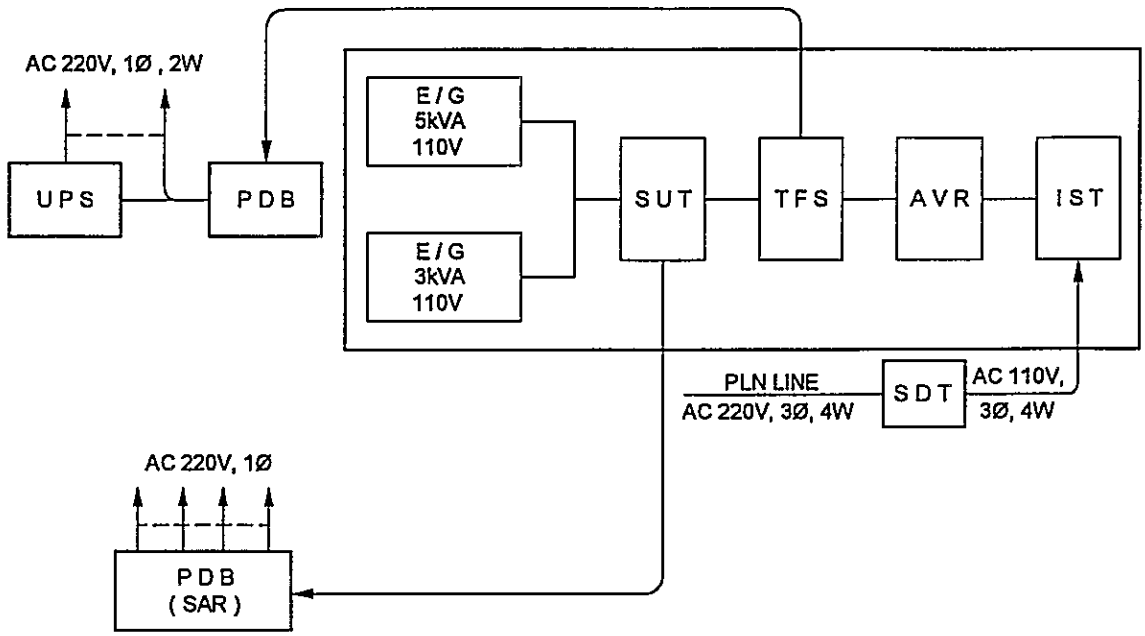
LEGEND

ANT	: ANTENNA	LTU	LOCAL TERMINAL UNIT
AMC	: ANTENNA MATCHING UNIT	MDF	MAIN DISTRIBUTION FRAME
BC	: BROWN CARDIOIC	MUX	MULTIPLEXER
CH	: CHANNEL	NBDP	NARROW - BAND DIRECT - PRINTING
CRT	: CATHOD RAY TUBE	PC	PERSONAL COMPUTER
CPLR	: COUPLER	PRN	PRINTER
DD	: DOUBLE DOUBLET	P/T R/P	: PAPER TAPE READER/PANCHER
DUP	: DUPLEXER	TX	TRANSMITTER (ING)
DSC	: DIGITAL SELECTIVE CALLING	UHF	ULTRA HIGH FREQUENCY
IL	: INVERTED L	VHF	: VERY HIGH FREQUENCY

DRAWN BY AAB | APPROVED BY HCA:

DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM FOR RX STATION	SHEET NO.: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Millmeter	DRAWING NO.: S R O P - B T G - 1 7 1 - 5 R	

JICA – PT. Aneka Asia Buana



LEGEND

AC	ALTERNATING CURRENT
AVR	AUTOMATIC VOLTAGE REGULATOR
E/G	ENGINE GENERATOR
IST	ISOLATION TRANFORMER
kVA	KILO VOLT AMPERE
PDB	POWER BLOCK DIAGRAM
SDT	STEP - DOWN TRANSFORMER
SUT	STEP - UP TRANSFORMER
TFS	TRANSFER SWITCH
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT
W	WATT / WIRE
Ø	PHASE

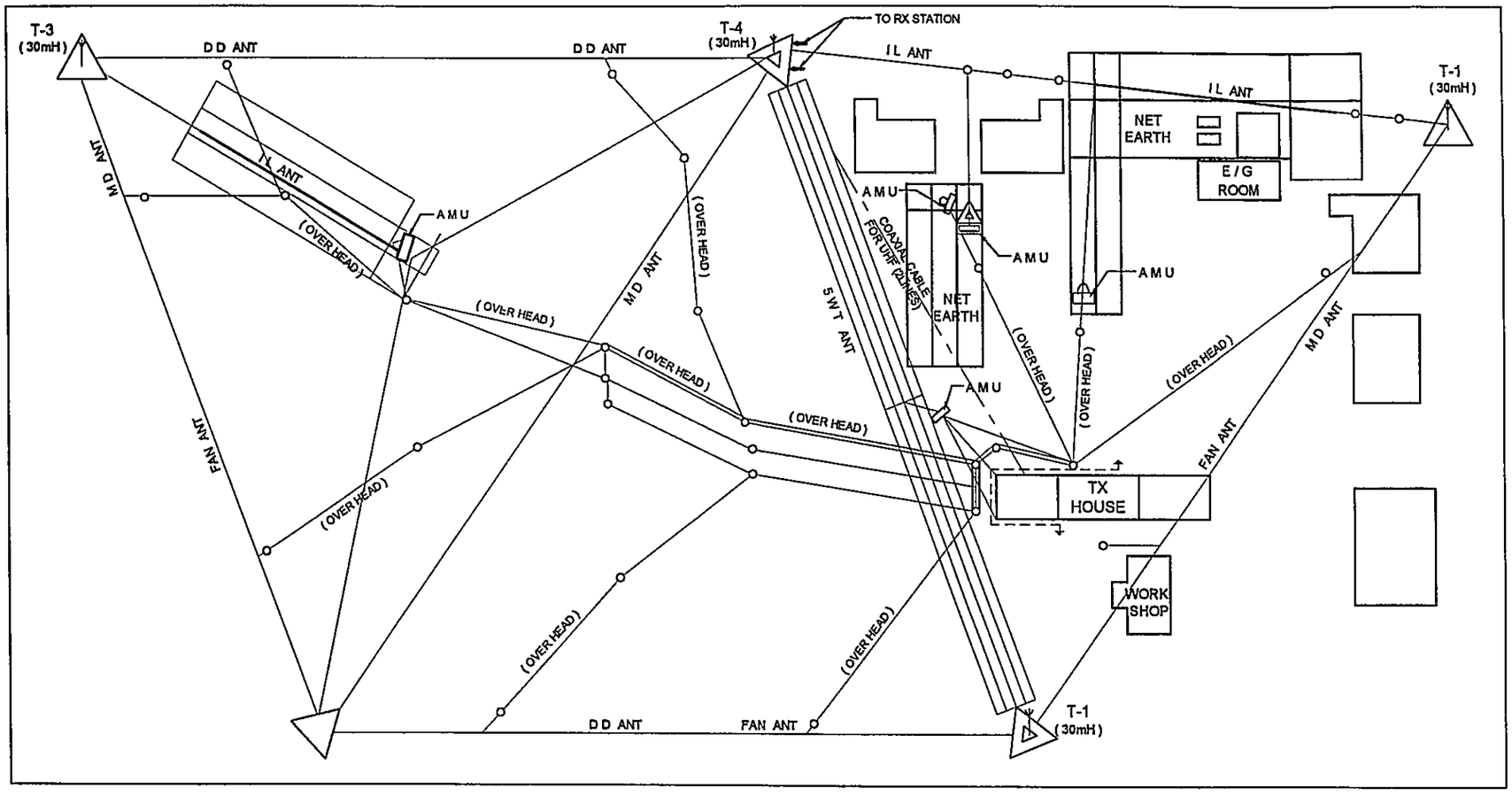
APPROVED BY JICA

DRAWN BY AAB

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM FOR RX STATION	SHEET NO.: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,B,T,G,-,1,7,1,-,6,R	
JICA –	PT. Aneka Asia Buana	

N

TO RX STATION

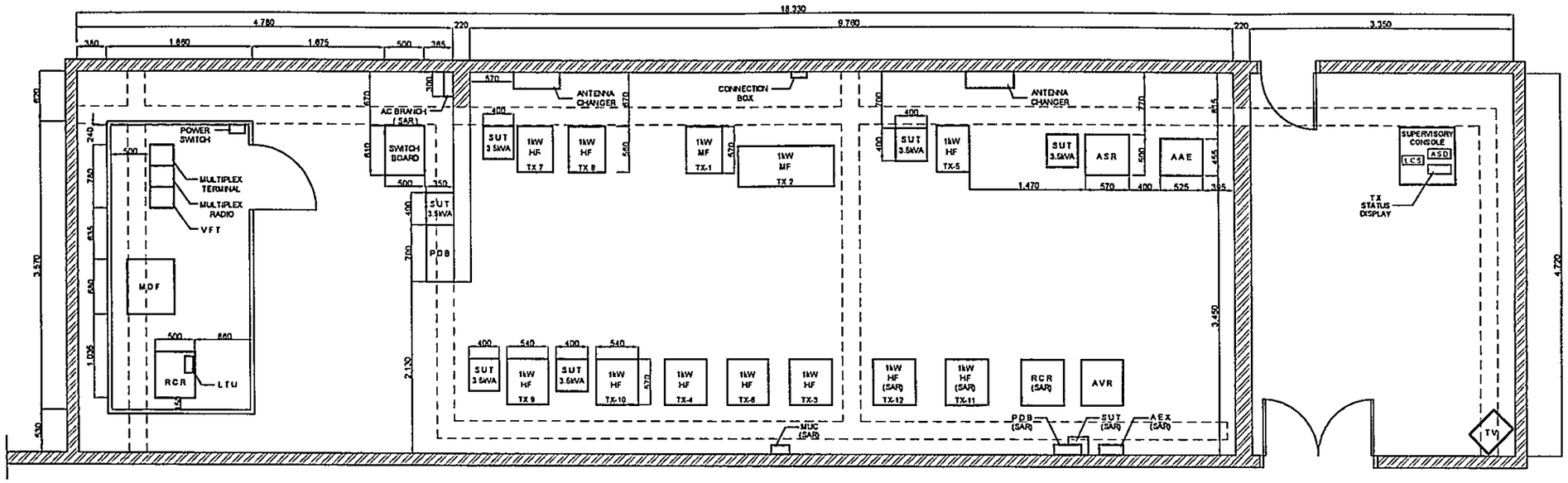


LEGEND

ANT	: ANTENNA	MD	: MULTI DOUBLET
AMU	: ANTENNA MATCHING UNIT	RX	: RECEIVER (ING)
DD	: DOUBLE DOUBLET	TX	: TRANSMITTER (ING)
E/G	: ENGINE GENERATOR	UHF	: ULTRA HIGH FREQUENCY
IL	: INVERTED L		

DRAWN BY AAB | APPROVED BY JICA:

DATE: July 10, 2001	DRAWING TITLE: ANTENNA LAYOUT FOR TX STATION	SHEET NO.: 1/1
SCALE: 1 : 1,000	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SRO P-BTG-1171-2T	
JICA – PT. Aneka Asia Buana		



LEGEND

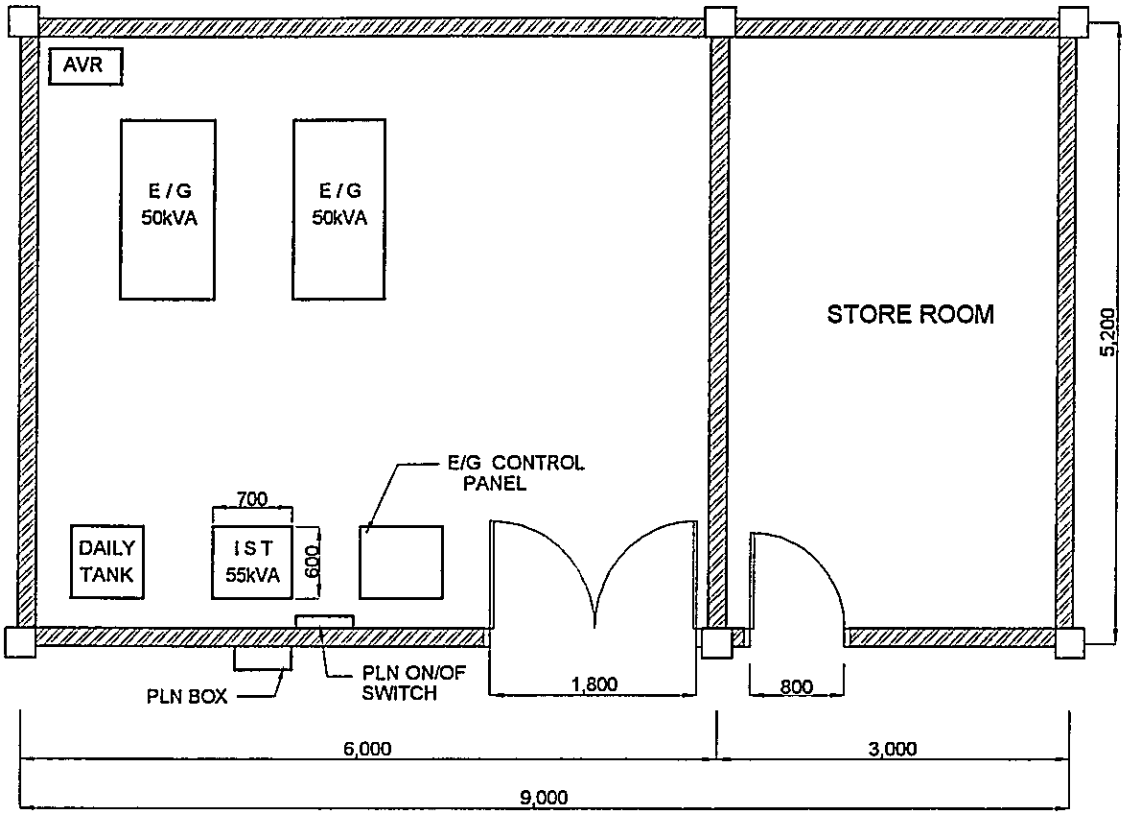
AAE	ANTENNA ARIAL EXCHANGE	MDF	MAIN DISTRIBUTION BOARD
AEX	ANTENNA EXCHARGER	MUC	MATCHING UNIT CONTROL
ASD	ANTENNA STATUS DISPLAY	PDB	POWER DISTRIBUTION BOARD
ASR	ANTENNA SWITCH RACK	RCR	REMOTE CONTROL RADIO
HF	HIGH FREQUENCY	SUT	STEP - UP TRANSFORMER
KVA	KILO VOLT AMPERE	TX	TRANSMITTER (ING)
LCS	LOCAL CONTROL SWITCH	VFT	VOICE FREQUENCY TELEGRAPH
MF	MEDIUM FREQUENCY		

DRAWN BY AAB

APPROVED BY JICA

DATE: July 11, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT FOR TX STATION	SHEET NO: 1/1
SCALE: 1 : 60	SITE NAME: BITUNG	
DIMENSION: Millimeter	DRAWING NO.: SRO P - BTG - 1 7 1 - 3 T	

JICA – PT. Aneka Asia Buana



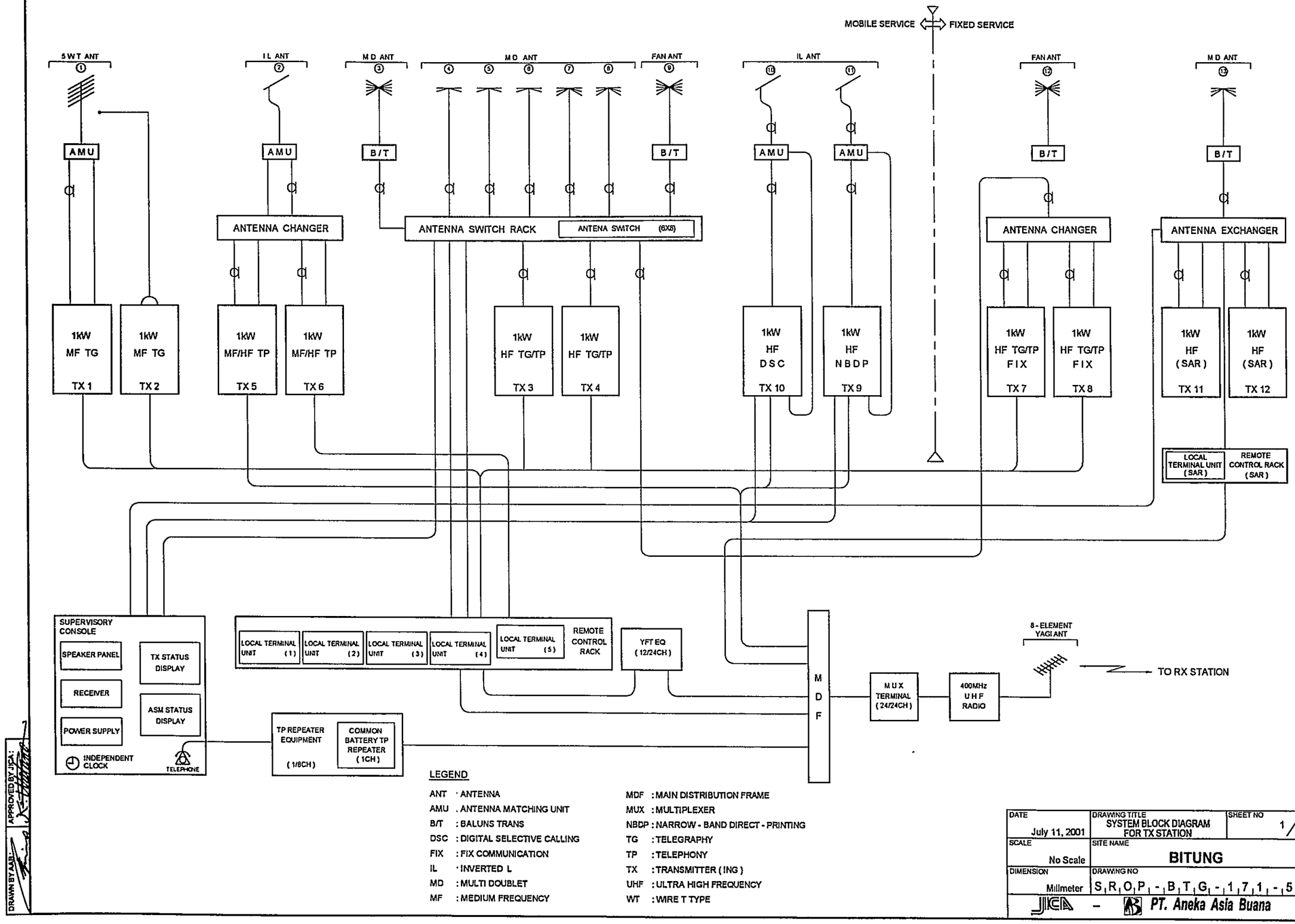
LEGEND

AVR : AUTOMATIC VOLTAGE REGULATOR
E/G : ENGINE GENERATOR
IST : ISOLATION TRANSFORMER
kVA : KILO VOLT AMPERE

DATE: July 10, 2001	DRAWING TITLE: E/G FLOOR LAYOUT FOR TX STATION	SHEET NO: 1 / 1
SCALE: 1 : 60	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,B,T,G,-,1,7,1,-,4,T	
JICA – PT. Aneka Asia Buana		

APPROVED BY JICA

DRAWN BY AAB :



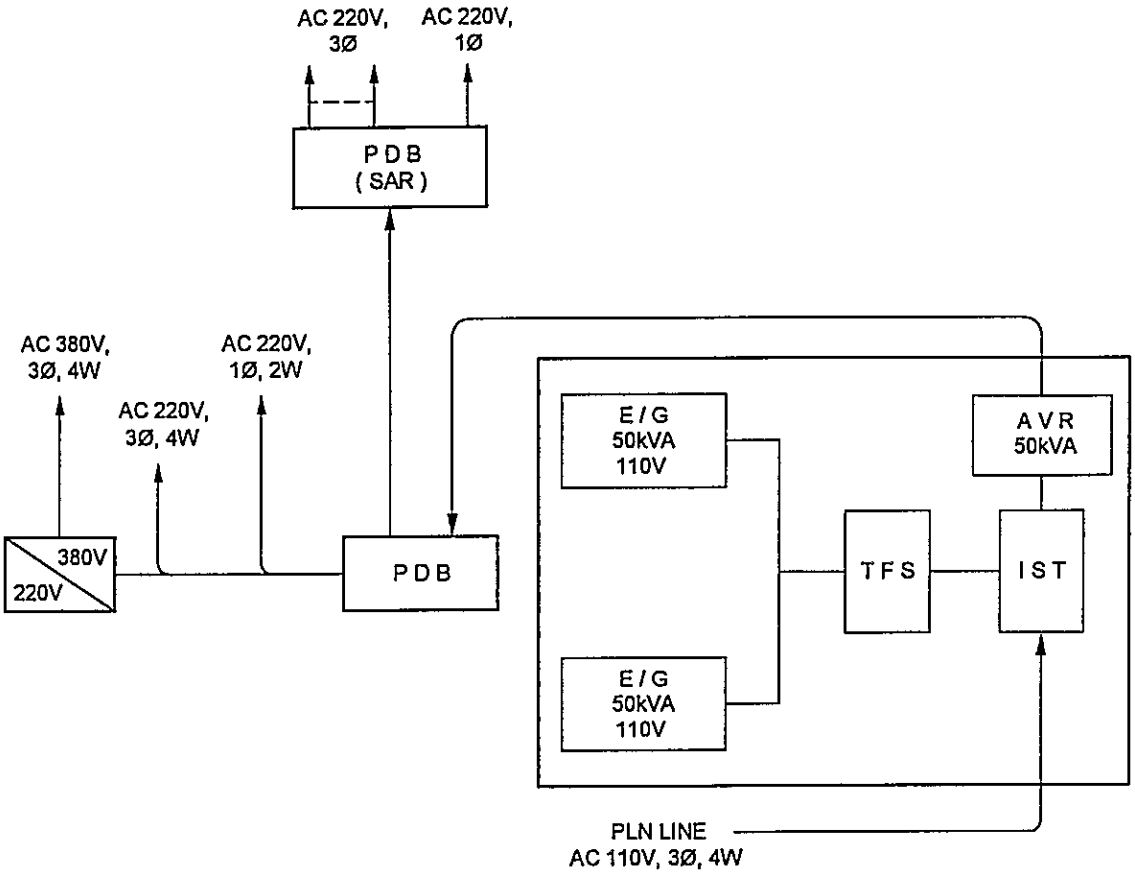
LEGEND

ANT	: ANTENNA	MDF	: MAIN DISTRIBUTION FRAME
AMU	: ANTENNA MATCHING UNIT	MUX	: MULTIPLEXER
B/T	: BALUNS TRANS	NBDP	: NARROW - BAND DIRECT - PRINTING
DSC	: DIGITAL SELECTIVE CALLING	TG	: TELEGRAPHY
FIX	: FIX COMMUNICATION	TP	: TELEPHONY
IL	: INVERTED L	TX	: TRANSMITTER (ING)
MD	: MULTI DOUBLET	UHF	: ULTRA HIGH FREQUENCY
MF	: MEDIUM FREQUENCY	WT	: WIRE T TYPE

DRAWN BY AAB
APPROVED BY JICA :

DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM FOR TX STATION	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Millmeter	DRAWING NO: SROP-BTG-171-5T	

JICA – PT. Aneka Asia Buana



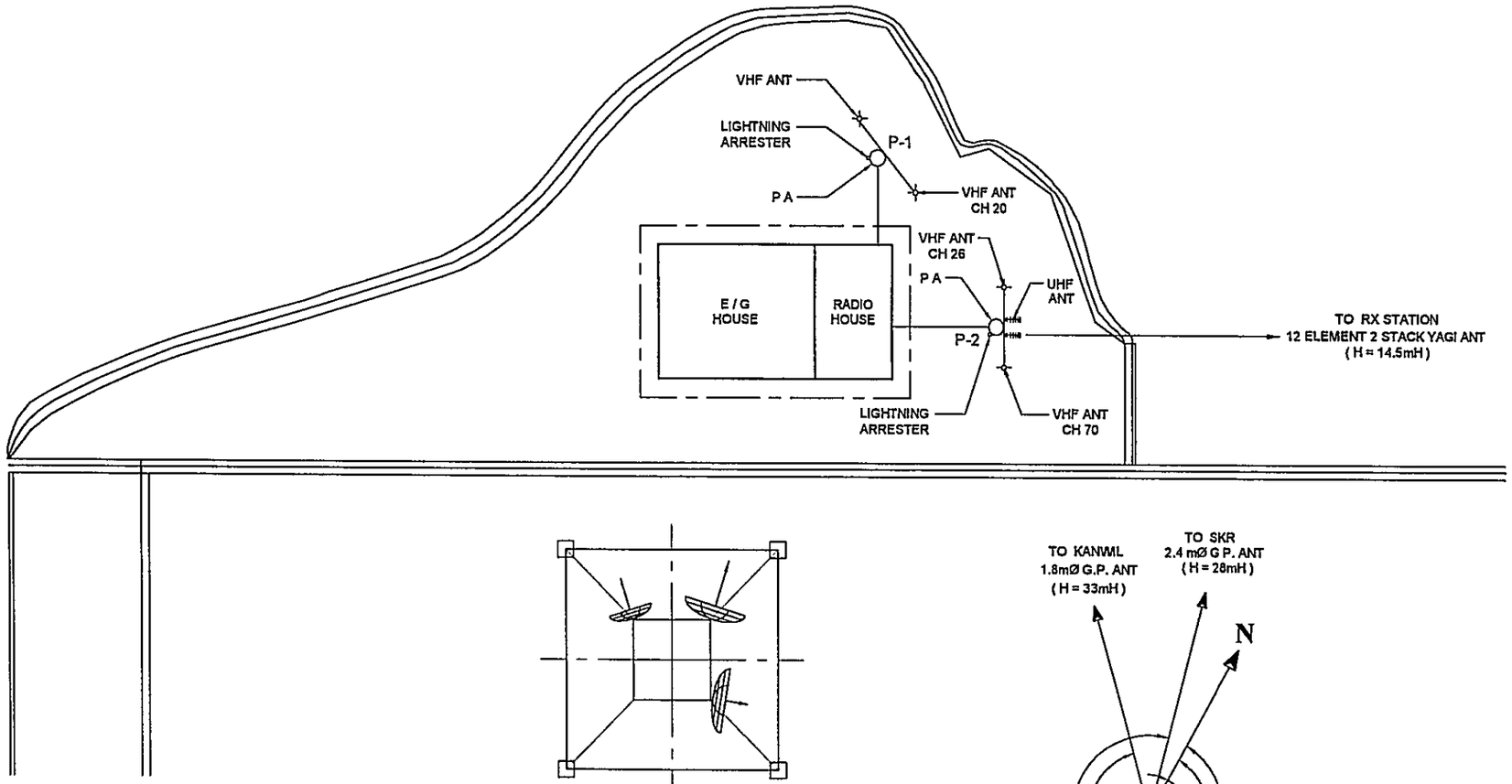
LEGEND

AC	ALTERNATING CURRENT
AVR	AUTOMATIC VOLTAGE REGULATOR
E/G	ENGINE GENERATOR
IST	ISOLATION TRANFORMER
kVA	KILO VOLT AMPERE
PDB	POWER BLOCK DIAGRAM
TFS	TRANSFER SWITCH
V	VOLT
W	WATT / WIRE
Ø	PHASE

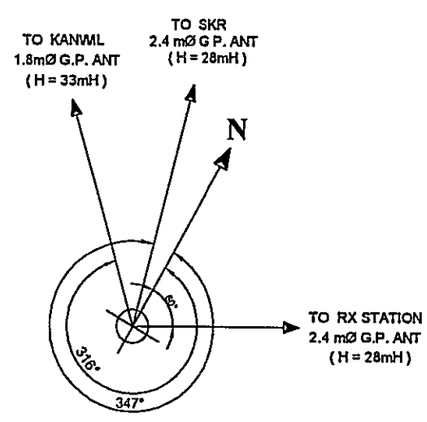
DRAWN BY AAB

APPROVED BY IØA

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM FOR TX STATION	SHEET NO: 1 / 1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,B,T,G,-,1,7,1,-,6,T	
JICA – PT. Aneka Asia Buana		



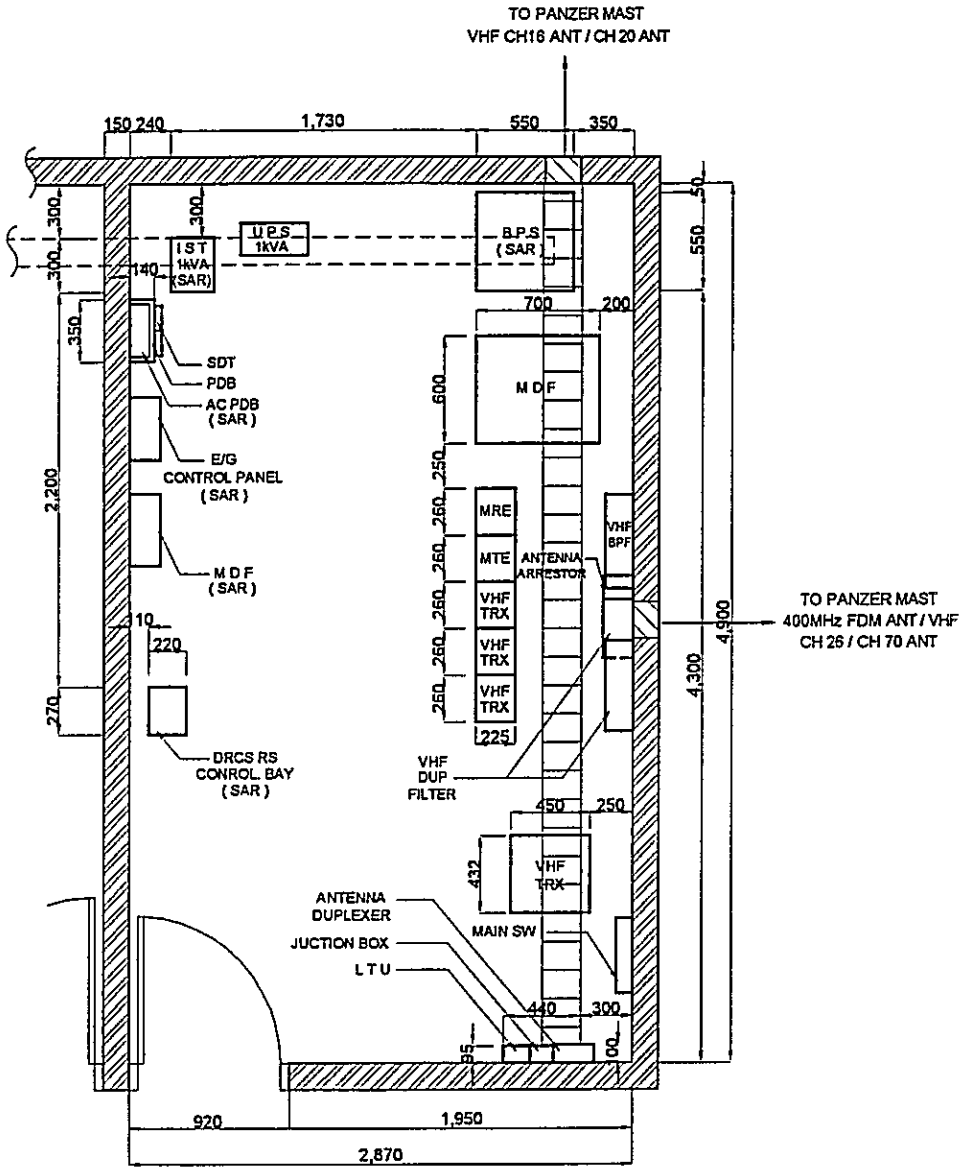
TOWER 42 mH



DRAWN BY A&R:

APPROVED BY JICA:

DATE: July 12, 2001	DRAWING TITLE: ANTENNA LAYOUT FOR VHF STATION	SHEET NO: 1/1
SCALE: 1 : 40	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SROP-BTG-1711-2	
JICA –	PT. Aneka Asia Buana	



APPROVED BY JICA

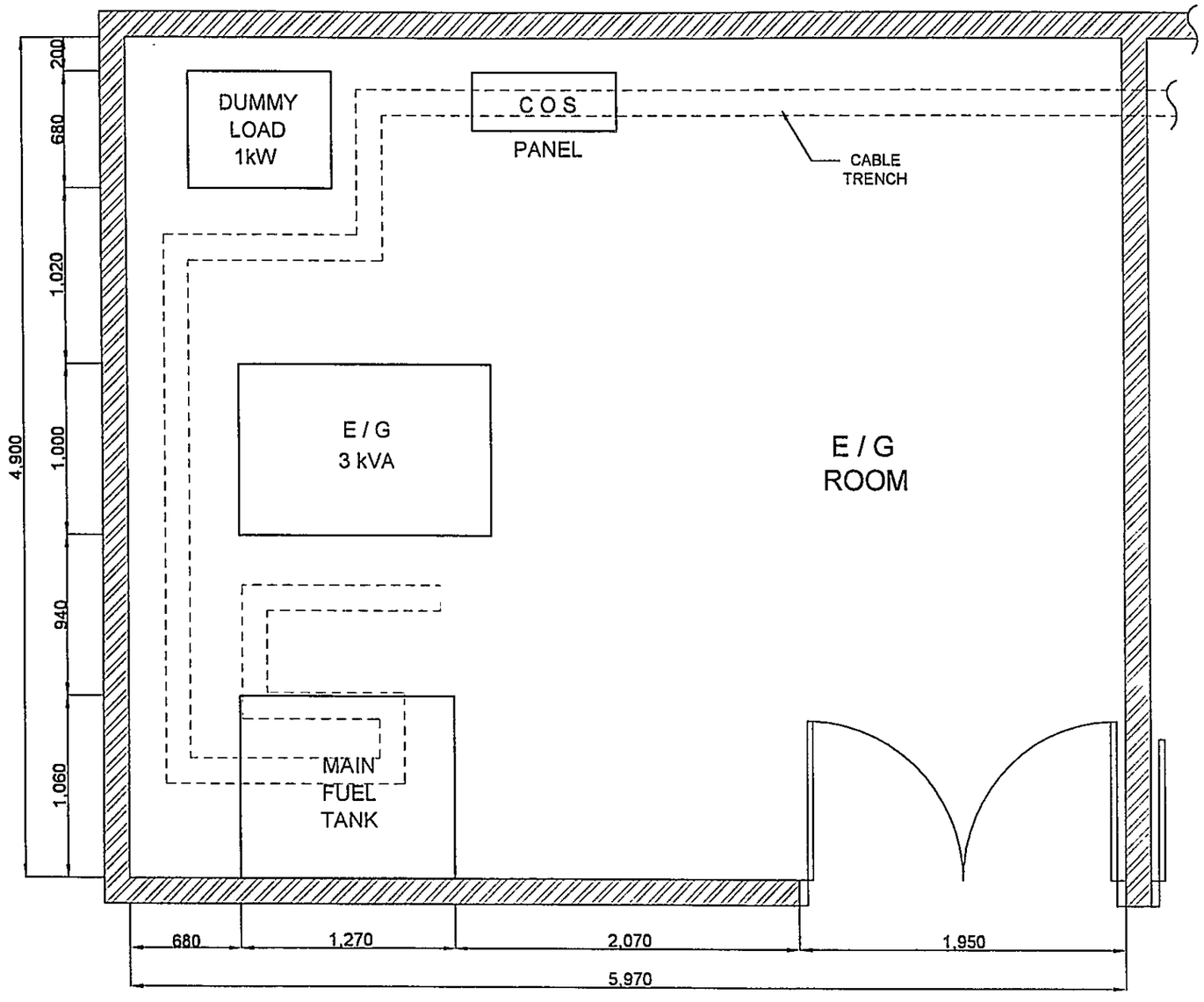
DRAWN BY AAB

LEGEND

BPF	BAND PASS FILTER	MRE	MULTIPLEX RADIO RELAY
BPS	BACK - UP POWER SUPPLY	MTE	MULTIPLEX TERMINAL EQUIPMENT
DUP	DUPLEXER	PDB	POWER DISTRIBUTION BOARD
IST	ISOLATION TRANSFORMER	SDT	STEP DOWN TRANSFORMER
kVA	KILO VOLT AMPERE	TRX	TRANSCEIVER
LTU	LOCAL TERMINAL UNIT	UPS	UNINTERRUPTED POWER SUPPLY
MDF	MAIN DISTRIBUTION BOARD	VHF	VERY HIGH FREQUENCY

DATE: July 11, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT FOR VHF STATION	SHEET NO: 1/1
SCALE: 1 : 40	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SROP-BTG-171-3	

JICA – PT. Aneka Asia Buana

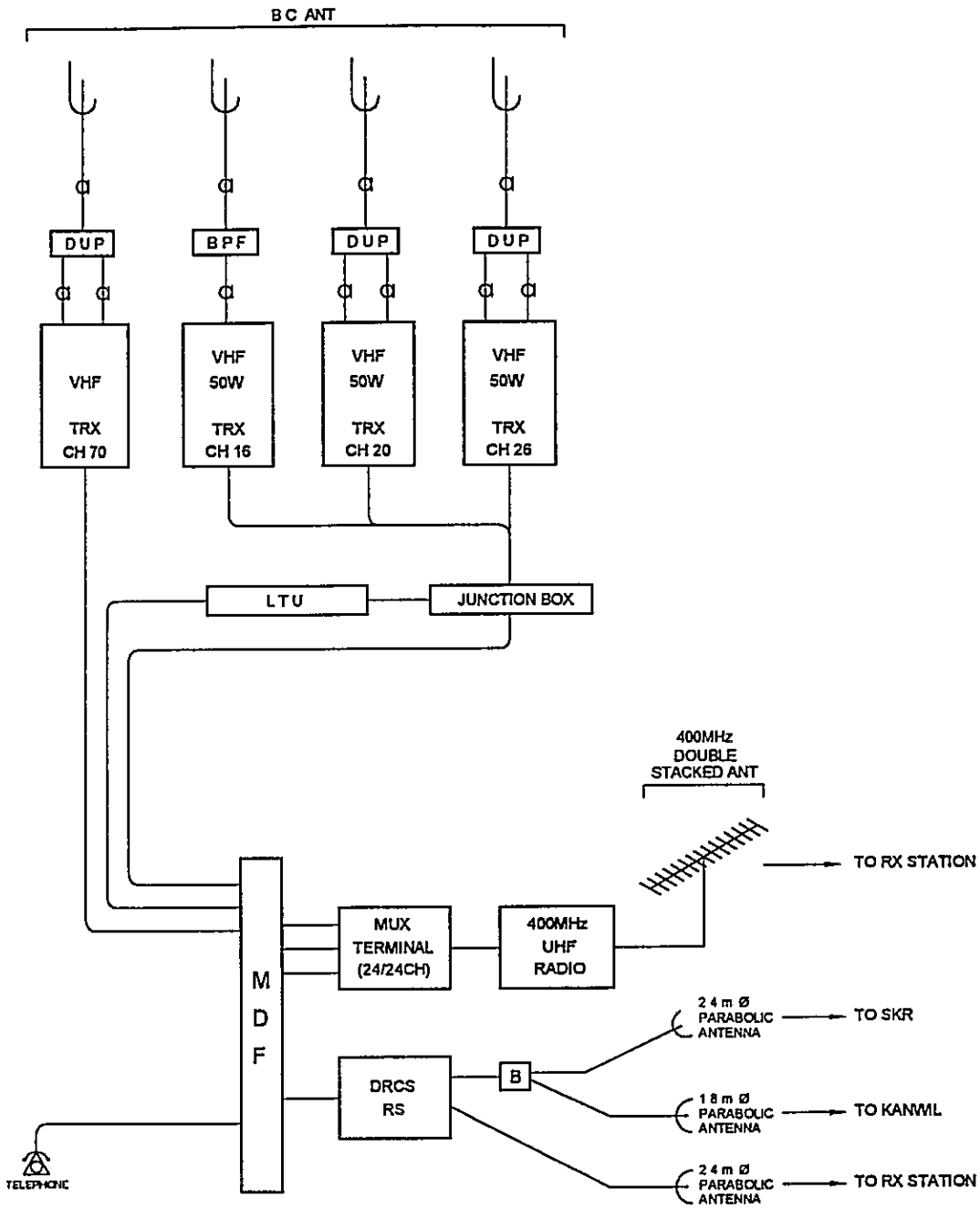


LEGEND

E/G : ENGENE GENERATOR
kVA : KILO VOLT AMPERE
COS : CHANGE OVER SWITCH

DATE: July 11, 2001	DRAWING TITLE: E/G FLOOR LAYOUT FOR VHF STATION	SHEET NO: 1/1
SCALE: 1 : 30	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SROP-BTG-1711-4	
JICA –	PT. Aneka Asia Buana	

DRAWN BY AAB
APPROVED BY JICA



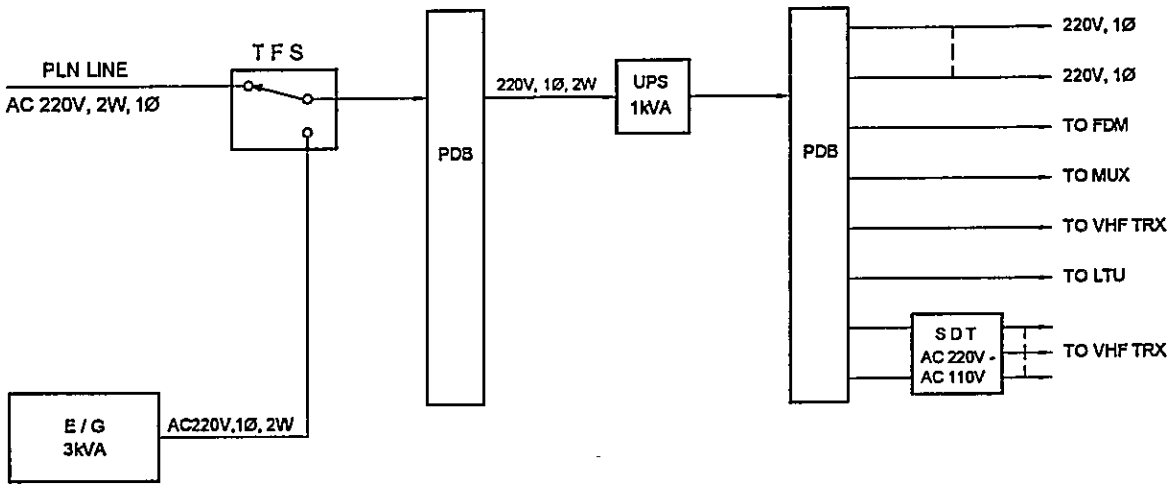
LEGEND

ANT	ANTENNA	UHF	ULTRA HIGH FREQUENCY
BPF	BAND PASS FILTER	VHF	VERI HIGH FREQUENCY
CH	CHANNEL	W	WATT / WIRE
DUP	DUPLEXER		
LTU	LOCAL TERMINAL UNIT		
MDF	MAIN DISTRIBUTION BOARD		
MUX	MULTIPLEXER		

APPROVED BY JICA:

DRAWN BY AAB:

DATE: July 11, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM FOR VHF STATION	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO: SROP-BTG-171-5	
JICA – PT. Aneka Asia Buana		



DRAWN BY AAB :

APPROVED BY JICA :

LEGEND

AC	. ALTERNATING CURRENT
kVA	- KILO VOLT AMPERE
PDB	POWER BLOCK DIAGRAM
SDT	. STEP - DOWN TRANSFORMER
TFS	TRANSFER SWITCH
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT
Ø	PHASE

DATE: July 11, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM FOR VHF STATION	SHEET NO.: 1/1
SCALE: No Scale	SITE NAME: BITUNG	
DIMENSION: Milimeter	DRAWING NO.: S R O P - B T G - 1 7 1 - 6	
JICA – PT. Aneka Asia Buana		

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

3rd Class Coast Station

Pantoloan

(Coast Station No. 172)

Table of Content

☑ Summary of Coast Station
☑ Inventory
☑ Status of Trouble
☑ Operation Schedule (Frequencies)

TRX Drawings:
☑ Site Location
☑ Antenna Layout
☑ Equipment Floor Layout
☑ E/G Floor Layout
☑ System Block Diagram
☑ Power Block Diagram

Note :
☑ Available in this list
☒ Not Available in this list
☐ Unnecessary in this list
* Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	PANTOLOAN		
CLASS	3rd	NO.	172

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
TX/RX	Jl. Uwe Vuku Desa Baiya Taweeli	0451-491349		119° 52′ 00″ E	01° 43′ 15″ S

2. GENERAL CONDITIONS

Moving from Jakarta			Site Access from Port	Road Traffic	Accommodation	Population
By Air	to Palu	[Taking time: 3.00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Car	to Pantoloan	[Taking time: 0 30 hr.]	☑ Paved	☑ Medium	☐ Motel	
			☐ Unpaved road	☐ Light		
				☐ None		

3. CONDITIONS OF STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system	
☑ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes	No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑ Antenna	☐
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ Towers (Masts)	☐
☐ Basin	☐ Clay		☐ Ground Subsidence	☑ Grounding system	☐
☐ Valley	☑ Sandy			☑ Lightning system	☐
Altitude	5.00 M		**Telephone Lines**	☑ Feeder Cable Way	☐
Land area	5,000 m²		☑ 1 Lines	☐ City water	☑

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Roof Tile
Type of ceiling	Asbestos
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic

Room Area (m²)	
Operation room	24.00
E / G room	20.00

Remark

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	220 V
Phase	1	1
Wire	2	2
kVA	11	7.5

Quality of PLN source		
Fluctuations	220 V ± 10 %	
Availability of power per day		24 Hours
Power interruption /month		15 Times
Total interpt. hours /month		45 Hours
Max. interpt. hours at once		12 Hours

Existing Power Conditions	Good	Bad
Power Supply System	☑	☐
Operations of E/G	☑	☐
Operations of AVR	☑	☐

Capacity of fuel for engine	
Day tank	100 Liter
Main tank	1 k Liter

E/G Stand-by System	
☑	Single System
☐	Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired by technician or send to Bitung
Examples of major failure	Power Amplifier
Sufficiency of spares	Not available

Records of damages		Environmental Conditions	Good	Bad
☐ Heavy rainfall				
☐ Storm		☑	☐	External noises
☐ Lightning		☑	☐	Air pollution
☐ Other calamity				

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt./tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☑ Reasonable	☐ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☑ Not so bad	☐ Not capable

5. PERSONNEL FORMATIONS

	TX/RX	
Chief	1	
Operator (skilled)	6 (3)	()
Technician (skilled)	1 ()	()
Administrator		
T o t a l	8	

Training Record				
Course	Class	Location	Period	Trainee

SUMMARY OF COAST STATION

SITE	PANTOLOAN		
CLASS	3rd	NO.	172

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service								
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991				1996			
1997					1992				1997			
1998					1993				1998	84	260	110
1999					1994				1999	128	447	157
2000					1995				2000	63	218	123

7. COMMENTS

Suggestion	GMDSS to be repaired, especially for telephone call, Request for facsimile facility
Remarks	

INVENTORY

Site Name: Pantoloan

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**MF System**							
1-1-1		MF Console	RH-002		Sailor	1996	F-TA-193: PH3		Good
1		MF Transmitter							
		400W MF Transmitter	T1127L	504096	Sailor	1996	F-TA-193: PH3		Good
		400W MF Transmitter	T1127L	504126	Sailor	1996	F-TA-193: PH3		Good
		Exciter	S1301L	504135	Sailor	1996	F-TA-193: PH3		Good
		Exciter	S1301L	504163	Sailor	1996	F-TA-193: PH3		Good
		Tuner	H1201	504163	Sailor	1996	F-TA-193: PH3		Good
		Tuner	H1201	504164	Sailor	1996	F-TA-193: PH3		Good
		Power Supply	N1401	504151	Sailor	1996	F-TA-193: PH3		Good
		Power Supply	N1401	501456	Sailor	1996	F-TA-193: PH3		Good
1-2		**MF/HF System**							
1		MF/HF Console	RH-16-3	008	Sailor	1996	F-TA-193: PH3		Good
2		MF/HF Equipment							
		600 W MF/HF Transmitter	T2131	517363	Sailor	1996	F-TA-193: PH3		Good
		601 W MF/HF Transmitter	T2131	513472	Sailor	1996	F-TA-193: PH3		Good
		AC Power Supply	N2171	515492	Sailor	1996	F-TA-193: PH3		Good
		AC Power Supply	N2171		Sailor	1996	F-TA-193: PH3		Good
		Antenna Coupler	AT2112		Sailor	1996	F-TA-193: PH3		Good
		Antenna Coupler	AT2112		Sailor	1996	F-TA-193: PH3		Good
		CW Unit	H2185	512151	Sailor	1996	F-TA-193: PH3		Good
		CW Unit	H2185	513508	Sailor	1996	F-TA-193: PH3		Good
3		All Wave Receiver							
		Control Unit HF1	RE2100	516791	Sailor	1996	F-TA-193. PH3		Good
		Control Unit HF2	RE2100	521649	Sailor	1996	F-TA-193: PH3		Good
		Duplex Receiver	R2120T	512133	Sailor	1996	F-TA-193: PH3		Good
		Duplex Receiver	R2120T	511882	Sailor	1996	F-TA-193: PH3		Good
		Loudspeaker	H2054		Sailor	1996	F-TA-193: PH3		Good
		Loudspeaker	H2054		Sailor	1996	F-TA-193: PH3		Good

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
4		Spot Receiver							
		MF/HF DSC W/K RX	RM2150	1523394	Sailor	1996	F-TA-193: PH3		Good
		Power Supply	N2165		Sailor	1996	F-TA-193: PH3		Good
5		Terminal Unit (DSC VHF/HF)							
		DSC System	TT-6200A		Sailor	1996	F-TA-193: PH3		Good
		LAN	TT-101064		Sailor	1996	F-TA-193· PH3		Good
		LAN I/O	TT-101065		Sailor	1996	F-TA-193: PH3		Good
		CPU	TT-101051		Sailor	1996	F-TA-193: PH3		Good
		CPU I/O	TT-10123		Sailor	1996	F-TA-193· PH3		Good
		Paralel	TT-101190		Sailor	1996	F-TA-193· PH3		Good
		Paralel I/O	TT-101217		Sailor	1996	F-TA-193: PH3		Good
		VHF Modem	TT-102239		Sailor	1996	F-TA-193 PH3		Good
		HF Modem	TT-1022337		Sailor	1996	F-TA-193: PH3		Good
		Modem I/O	TT-102238		Sailor	1996	F-TA-193: PH3		Good
		Modem I/O	TT-102238		Sailor	1996	F-TA-193· PH3		Good
		Alarm I/O	TT-101242		Sailor	1996	F-TA-193. PH3		Good
		Power Supply	TT-101122		Sailor	1996	F-TA-193: PH3		Good
		Power Input	TT-101241		Sailor	1996	F-TA-193: PH3		Good
		DSC Op Position Term./PC							
		1) Personal Computer	Proline 466	160648202	Compaq	1996	F-TA-193: PH3		Good
		2) Monitor	140	A5973	Compaq	1996	F-TA-193. PH3		Good
		Printer (H-1252A)	TT-1608C	5BAP3196145	Sailor	1996	F-TA-193: PH3		Good
		Monitor Display	TT-3602B	9603546	Sailor	1996	F-TA-193: PH3		Good
		DSC Alarm	TT-1542B		Sailor	1996	F-TA-193: PH3		Good
6		Signal Control Panel							
		Audio/Digital Matrix	MTX-1616	142	Sailor	1996	F-TA-193: PH3		Good
		Keyer	KK-1		Sailor	1996	F-TA-193: PH3		Good
		Loudspeaker	H2054		Sailor	1996	F-TA-193: PH3		Good
		Loudspeaker	H2054		Sailor	1996	F-TA-193: PH3		Good
7		Telephone Repeater (Phone Patch)							
		Radio/Tel I/F Unit	RTU-282	127	Sailor	1996	F-TA-193: PH3		Good

INVENTORY

Site Name: Pantoloan

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
8		ARQ Equipment							
		Radiotelex Modem	TT-1585E	9603306	Sailor	1996	F-TA-193. PH3		Good
		ARQ Key Board	TT-1601 A		Sailor	1996	F-TA-193: PH3		Good
		Printer (H1252A)	TT-1680C		Sailor	1996	F-TA-193: PH3		Good
		Telex Alarm	TT-1542B		Sailor	1996	F-TA-193: PH3		Good
1-2		VHF System							
1		Operation Console	RH-16-1		Sailor	1996	F-TA-193: PH3		Good
2		Multichannel VHF Transceiver							
		VHF Transceiver	RT 2048	523690	Sailor	1996	F-TA-193. PH3		Damaged
		VHF Transceiver	RT 2048	523680	Sailor	1996	F-TA-193: PH3		Good
		VHF Transceiver	RT 2048	523691	Sailor	1996	F-TA-193: PH3		Good
		VHF Transceiver	RT 2048	523699	Sailor	1996	F-TA-193: PH3		Damaged
		Linier Power Amplifier	A2080BE-H		Sailor	1996	F-TA-193: PH3		Good
		Linier Power Amplifier	A2080BE-H		Sailor	1996	F-TA-193: PH3		Good
		Linier Power Amplifier	A2080BE-H		Sailor	1996	F-TA-193: PH3		Good
		Linier Power Amplifier	A2080BE-H		Sailor	1996	F-TA-193: PH3		Good
		Duplex Filter			Sailor	1996	F-TA-193: PH3		Good
		Duplex Filter			Sailor	1996	F-TA-193: PH3		Good
2		CH-70 VHF T/R							
		VHF Transceiver	RT2048	523684	Sailor	1996	F-TA-193. PH3		Damaged
		High Low I/F Unit (2)			Sailor	1996	F-TA-193: PH3		Good
		RF Power Amplifier	A2080BE-H		Sailor	1996	F-TA-193. PH3		Good
		AC Power Supply	N163S		Sailor	1996	F-TA-193. PH3		Good
		DC Power Supply	N420		Sailor	1996	F-TA-193: PH3		Good
		AC Power Supply	PSF-1		Sailor	1996	F-TA-193: PH3		Good
3		Term.Equipt (DSC VHF/HF)							
		Audio/Digital Matrix	MTX-1616		Sailor	1996	F-TA-193: PH3		Good
4		Telephone Repeater							
		Radio/Tel I/F Unit	RTU-280	1087	Sailor	1996	F-TA-193. PH3		Good

INVENTORY

Site Name: Pantoloan

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
2		**Tower & Antenna System**							
2-1		**Tower & Mast**							
1		30mH Self Supporting Structure	AT30SS		Sailor	1996	F-TA-193: PH3		Good
2		20mH Self Supporting Structure	AT20SS		Sailor	1996	F-TA-193: PH3		Good
3		Lightning Protector			Sailor	1996	F-TA-193: PH3		Good
4		Lightning Protector			Sailor	1996	F-TA-193: PH3		Good
5		Grounding			Sailor	1996	F-TA-193: PH3		Good
6		Grounding			Sailor	1996	F-TA-193: PH3		Good
2-2		**Antenna System**							
1		T Type Antenna TX (1)	CA5/1-20-15		Sailor	1996	F-TA-193: PH3		Good
2		Inverted L Antenna TX (2)	HF7		Sailor	1996	F-TA-193: PH3		Good
3		D/D Antenna (1)	E-22		Sailor	1996	F-TA-193: PH3		Good
4		VHF Antenna (3)	VHF 3		Sailor	1996	F-TA-193: PH3		Good
2-3		**Antenna Selector**							
1		Antenna Distributor	AAD10/1/A-J1-6G		Sailor	1996	F-TA-193· PH3		Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		7.5kVA PDB				1996	F-TA-193: PH3		Good
2		10 kVA Control Panel (AMF)	PL 95-7s	9514		1996	F-TA-193: PH3		Good
3-2		**Isolation Transformer**							
1		7.5kVA, 4W, 3P	IST 10P3	9510		1996	F-TA-193: PH3		Good
3-3		**Step-Up Transformer**							
1		9.9kVA, 4W, 3P	STU 10P3	9503		1996	F-TA-193: PH3		Good
3-4		**UPS & AVR**							
1		AVR . 7.5kVA, 4W, 3P	AVR7P3	9512		1996	F-TA-193: PH3		Good
3-4		**Engine Generator**							
1		10 kVA E/G Single Standby System				1996	F-TA-193: PH3		Good
		Engine	EG 10 RA	584140		1996	F-TA-193: PH3		Good
		Generator	V-1505E	CO51634/6		1996	F-TA-193: PH3		Good
		E/G Panel	BC1-164-D	9510		1996	F-TA-193: PH3		Good
2		Fuel System							
		Starting, Fuel, Exhaust System				1996	F-TA-193: PH3		Good

INVENTORY

Site Name: Pantoloan

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
		Fuel Control Unit				1996	F-TA-193: PH3		Good
		100 L Fuel Day Tank				1996	F-TA-193: PH3		Good
		1000 L Fuel Storage Tank				1996	F-TA-193: PH3		Good
4		**Measuring Equipment**							
1		Analog Oscilloscope	PM3065		Sailor	1996	F-TA-193: PH3		Good
		Probe/Lead (2)							
		Power Cable (1)							
		Black Cover (1)							
		Operation Manual							
2		Fluke 87 Multimeter (3)			Sailor	1996	F-TA-193: PH3		Good
		Test Lead Set (3x1)							
		Hoester House Yellow (3x1)							
		User Manual (3x2)							
3		Insulation Tester	2406A		Sailor	1996	F-TA-193: PH3		Good
		Line Plobe (1)							
		Earth Plobe (1)							
		Carrying Case x1)							
		Instruction Manual (1)							
4		RF Coaxial Load Resistor (2)	8201		Sailor	1996	F-TA-193: PH3		Good
		Connection Cable (1)							
5		**Others**							
1		Telephone set with call timer (2)			Sailor	1996	F-TA-193. PH3		Good
2		Headset (2)	DM 811		Sailor	1996	F-TA-193: PH3		Good
3		Hand set (6)			Sailor	1996	F-TA-193· PH3		Good
4		Desk Microphone (2)	DM 6500		Sailor	1996	F-TA-193: PH3		Good
5		Morse Key			Sailor	1996	F-TA-193: PH3		Good
6		Quartz Clock			Sailor	1996	F-TA-193· PH3		Good
7		Services Engineers Kit	RS 541-365		Sailor	1996	F-TA-193. PH3		Good
8		Mouse			Sailor	1996	F-TA-193: PH3		Good
9		Chair			Sailor	1996	F-TA-193: PH3		Good

STATUS OF TROUBLES

SITE NAME : PANTOLOAN **PTL-172-(1/1)**

Item / Equipment	Transceiver, VHF Transceiver, DSC/NBDP / -		
Manufacturer	Sailor		
Manufacturer in year	1993		
Defective panel / unit	Power Amplifier		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☐ Lack of Spares		☐ Unnecessary
	☑ Others		

General Comment for Maintenance:

- HF Power Amplifier/Power Supply has been damaged since the year 2000, we request for repairing
- Switch Matrix MTX 1616 (2 units) has been damaged, since the middle of year 2000
- Necessary completed by all wave receiver for monitoring, as build drawing book and cabling wiring diagram
- For MF Frequency used T Antenna, installed in the high 10M, but it is not in accordance with technical condition
- For HF Frequency used Antenna Long Wire Vertical, but it is not in accordance to the technical condition
- Breaking system not yet installed and there is self interference from Receiver (inefective)

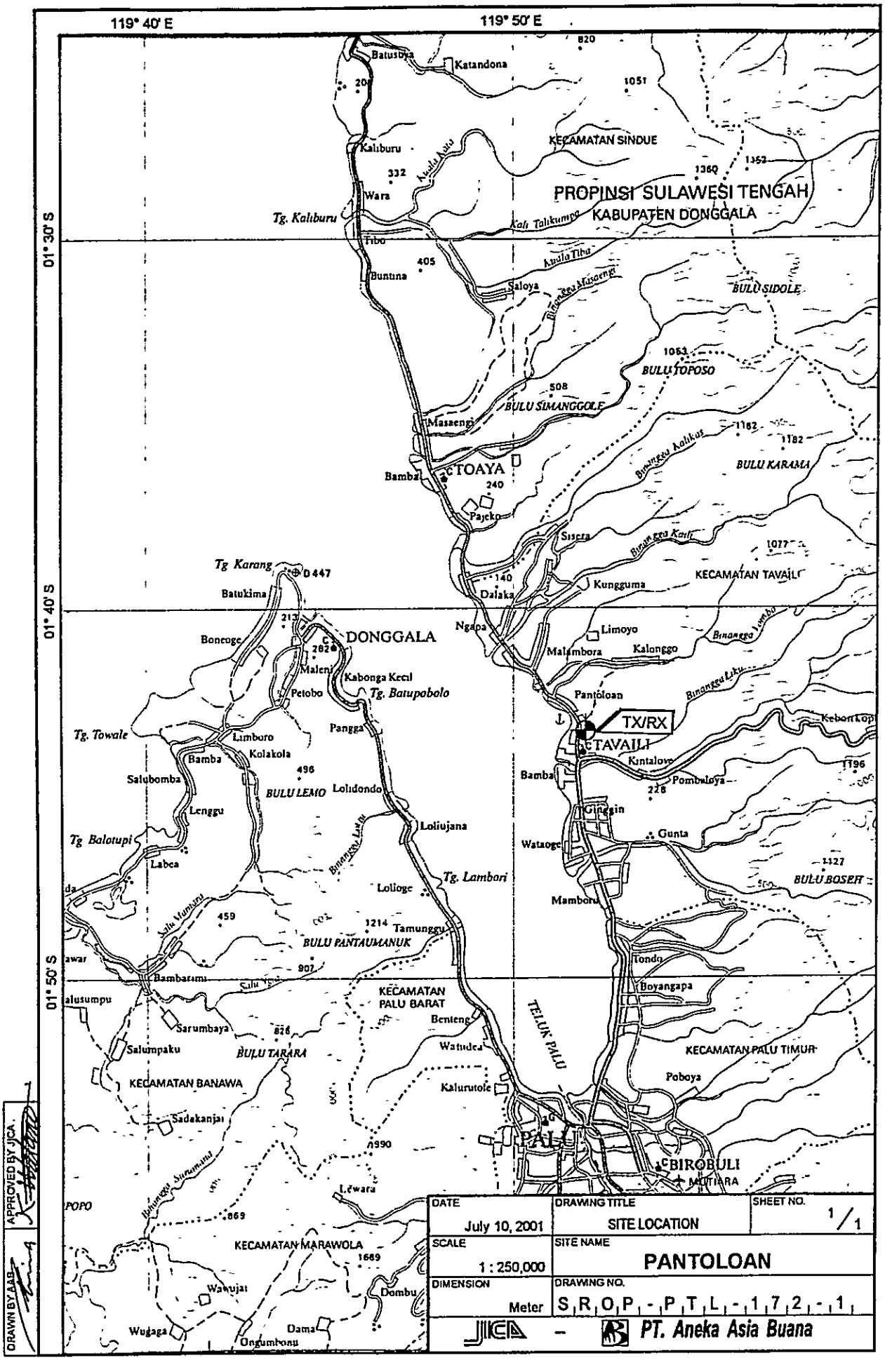
OPERATION SCHEDULE (FREQUENCIES)

Site Name: Pantoloan

PTL-172-(1/1)

Call Sign : Mobile Service : PKM.44
Fix Service :

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	500,0	A1A	500		
2	2.174,5	F1B	500		
3	2 177,0	F1B	500		
4	2 187,5	F1B	500		
5	6 284,0	F1B	500		
6	6 330,0	F1B	500		
7	6.312,0	F1B	500		
8	8 385,0	F1B	500		
9	8 425,0	F1B	500		
10	2 182,0	J3E	500		
11	2 090,0	J3E	500		
12	2 690,0	J3E	500		
13	6 215,0	J3E	500		
14	6.209,0	J3E	500		
15	6.510,0	J3E	500		
	VHF Service				
16	156,525	G2B	50		
17	156,800	G3E	50		
18	161,600	G3E	50		
	Fix Service				
19	5 381,5	J3E	100		
20	9 110,0	J3E	100		
21					
22					
23					



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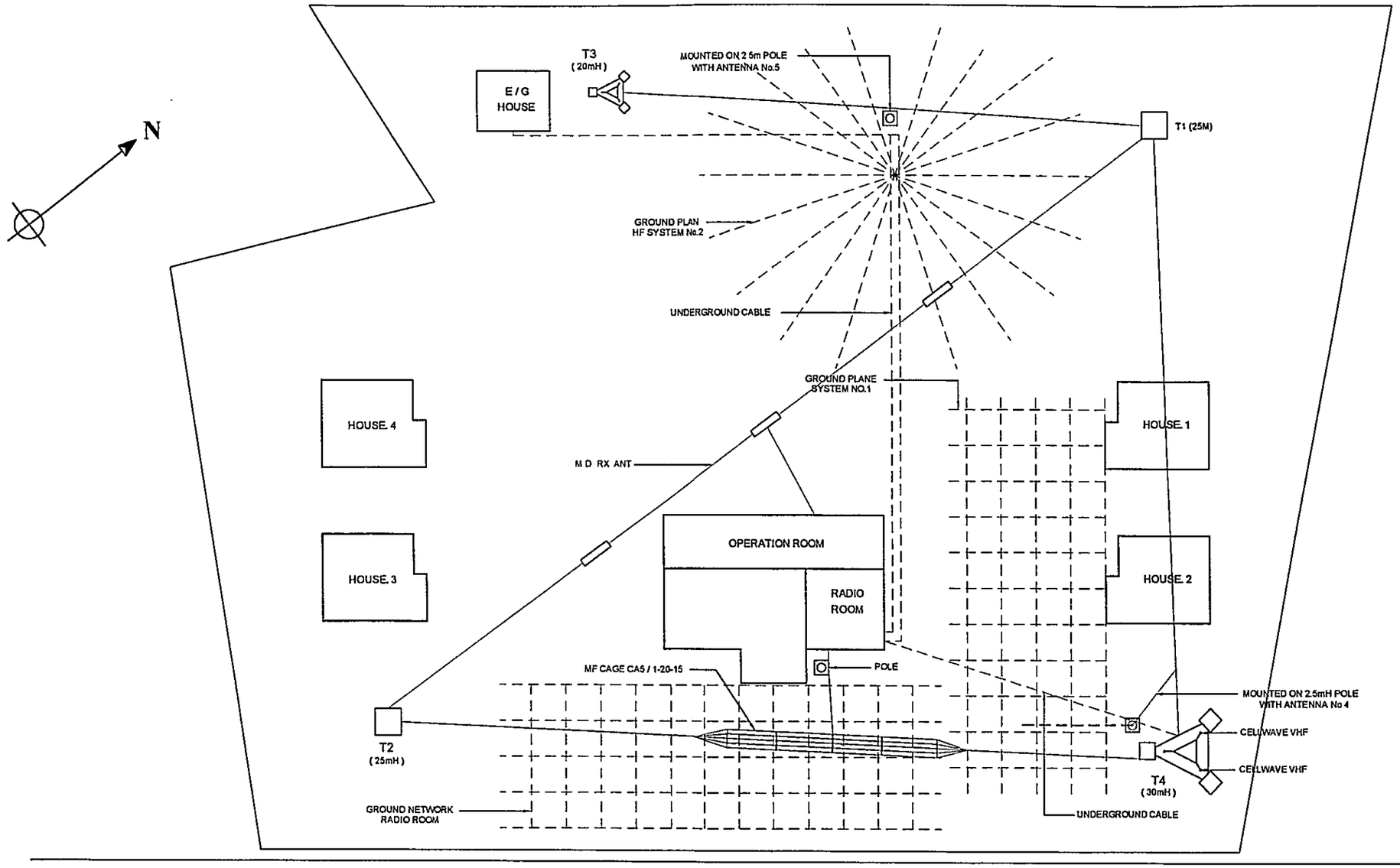
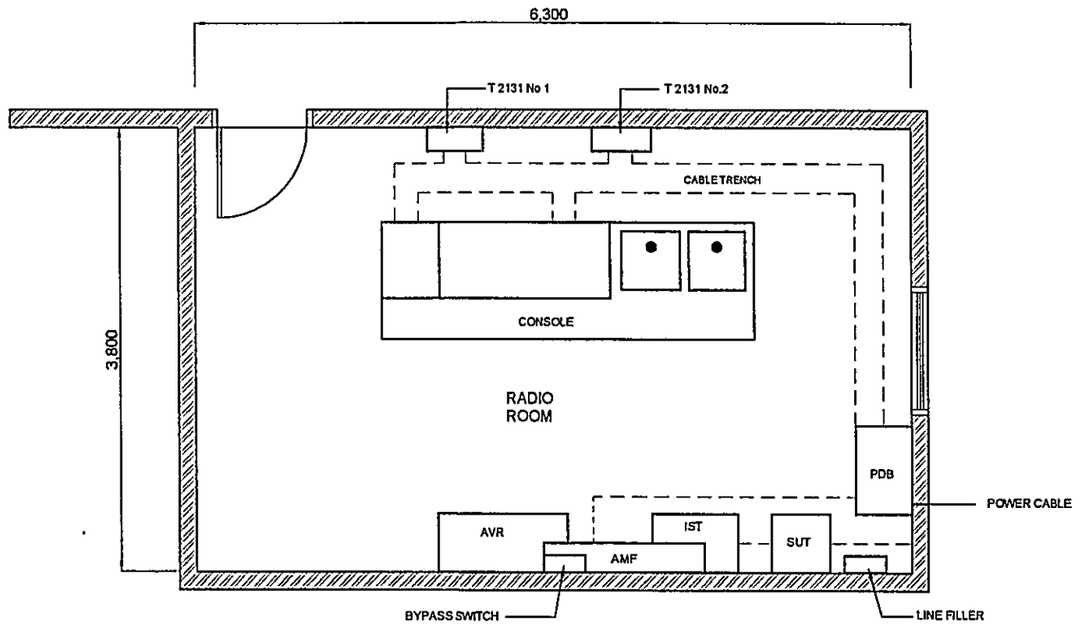
DIMENSION: Meter	DRAWING NO.: S R O P - P T L - 1 7 2 - 1	
JICA – PT. Aneka Asia Buana		



DRAWN BY AAB
APPROVED BY JICA

DATE: July 09, 2001	DRAWING TITLE: ANTENNA LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 50	SITE NAME: PANTOLOAN	
DIMENSION: Milimeter	DRAWING NO: SROP-PTL-172-2	
JICA – PT. Aneka Asia Buana		



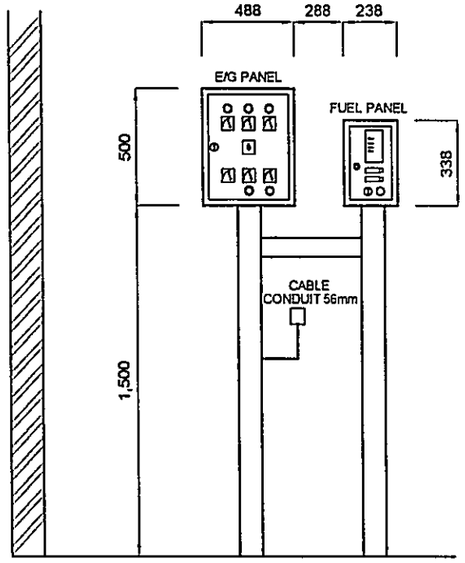
LEGEND

AVR : AUTOMATIC VOLTAGE REGULATOR
IST : ISOLATION TRANSFORMER
PDB : POWER DISTRIBUTION BOARD
SUT : STEP - UP TRANSFORMER

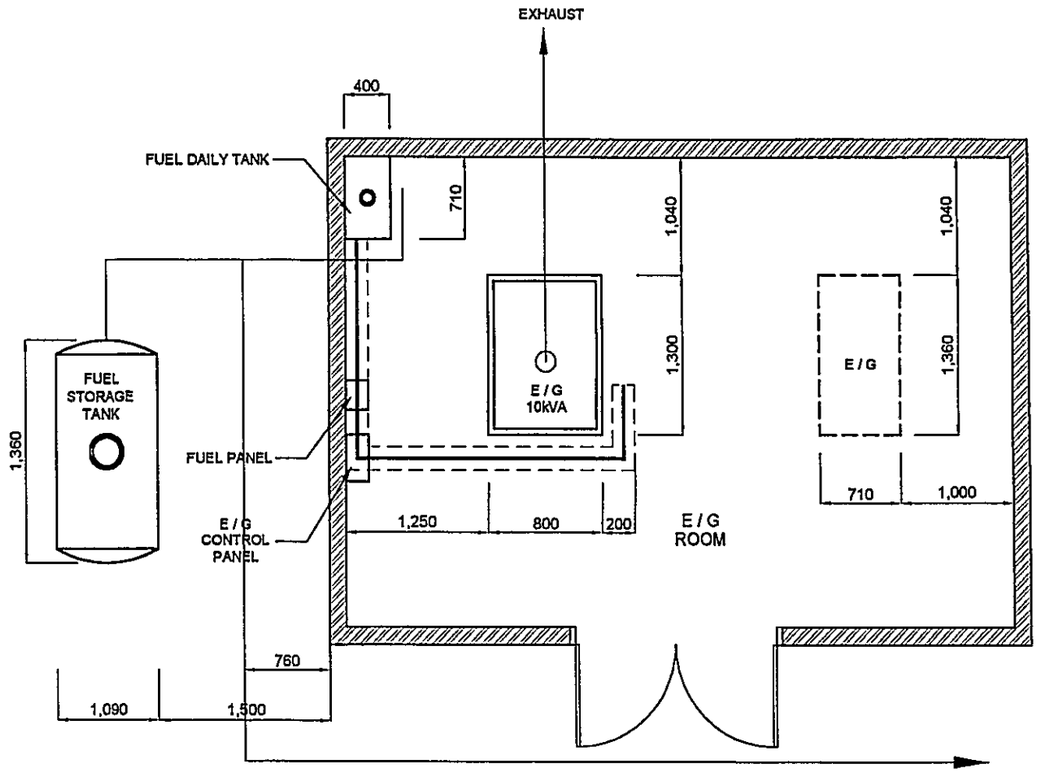
DRAWN BY AAB | APPROVED BY JICA:

DATE: July 09, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 50	SITE NAME: PANTOLOAN	
DIMENSION: Milimeter	DRAWING NO.: SROP-PTL-172-3	

JICA – PT. Aneka Asia Buana



FRONT VIEW E/G PANEL



LEGEND

E/G : ENGINE GENERATOR
kVA : KILO VOLT AMPERE

DRAWN BY JICA:

APPROVED BY JICA:

DATE: July 09, 2001	DRAWING TITLE: E/G FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 50	SITE NAME: PANTOLOAN	
DIMENSION: Millimeter	DRAWING NO: S,R,O,P,-,P,T,L,-,1,7,2,-,4,	

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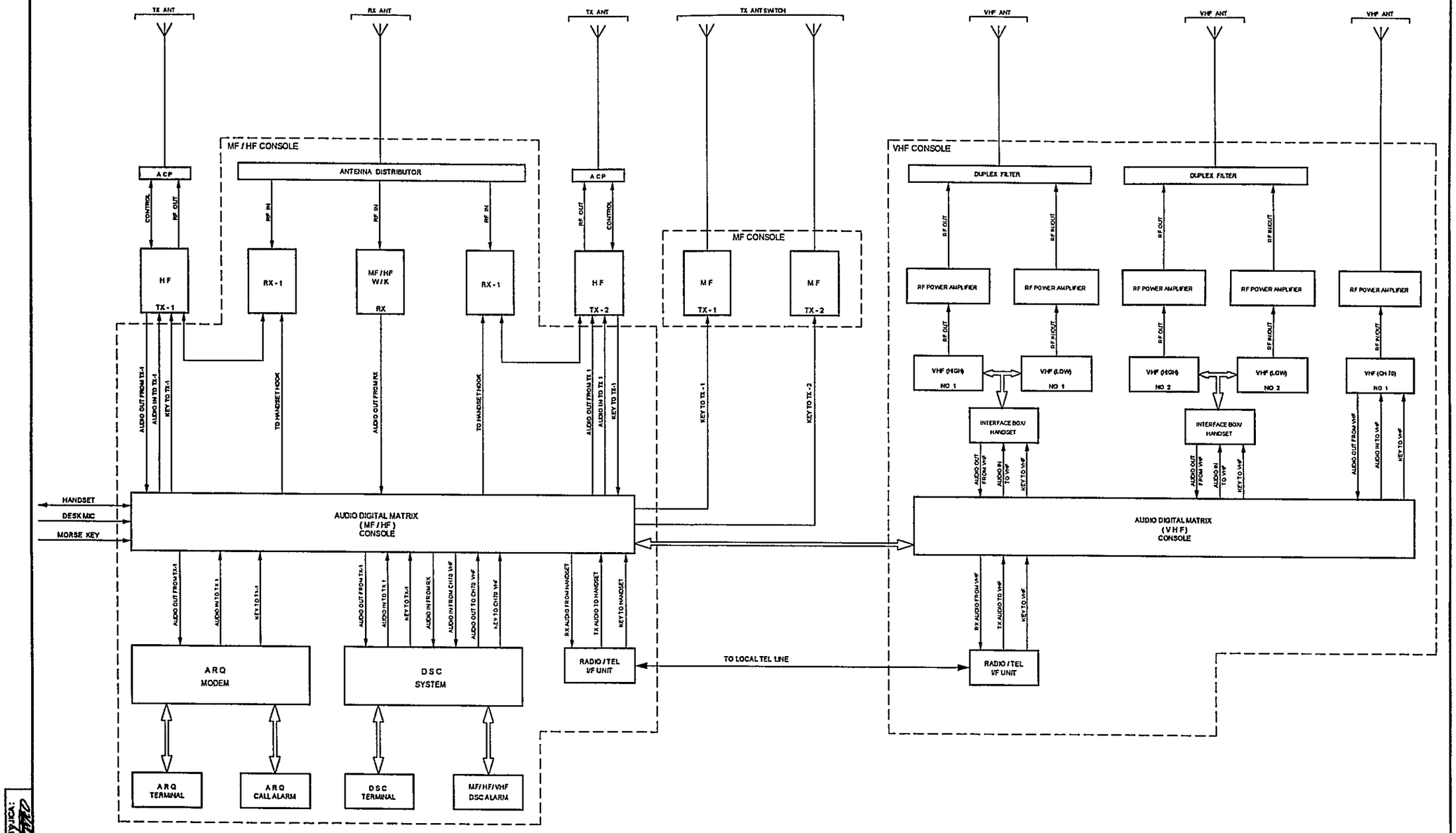


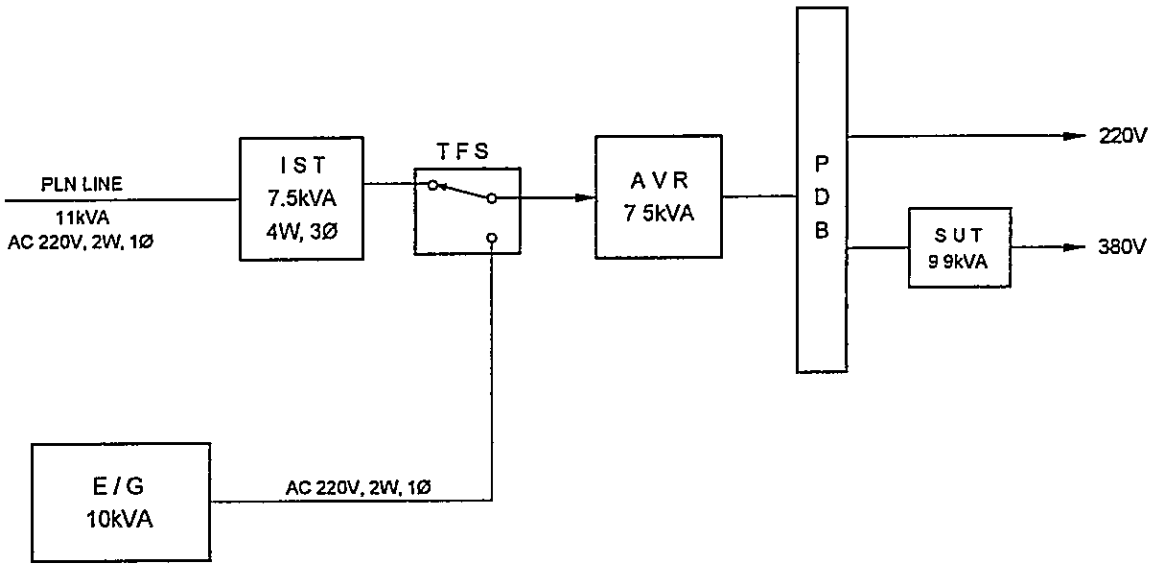
LEGEND

ANT ANTENNA
DSC . DIGITAL SELECTIVE CALLING
HF : HIGH FREQUENCY
MF MEDIUM FREQUENCY
VHF · VERY HIGH FREQUENCY

DRAWN BY AAB | APPROVED BY JICA:

DATE: August 01, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: PANTOLOAN	
DIMENSION: Millimeter	DRAWING NO: S R O P - P T L - 1 7 2 - 5	

JICA – PT. Aneka Asia Buana



LEGEND

AC	ALTERNATING CURRENT
AVR	AUTOMATIC VOLTAGE REGULATOR
E/G	ENGINE GENERATOR
HF	HIGH FREQUENCY
IST	ISOLATION TRANSFORMER
kVA	KILO VOLT AMPERE
SUT	STEP UP TRANSFORMER
TFS	TRANSFER SWITCH
TRX	TRANSCEIVER
V	VOLT
W	WIRE
Ø	PHASE

APPROVED BY JICA

DRAWN BY AAB

DATE: August 02, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1 / 1
SCALE: No Scale	SITE NAME: PANTOLOAN	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,P,T,L,-,1,7,2,-,6,	
JICA –	PT. Aneka Asia Buana	

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

4th-A Class Coast Station
Donggala
(Coast Station No. 173)

Table of Content

☑ Summary of Coast Station
☑ Inventory
☑ Status of Trouble
☑ Operation Schedule (Frequencies)

TRX Drawings:
☑ Site Location
☑ Antenna Layout
☑ Equipment Floor Layout
☑ E/G Floor Layout
☑ System Block Diagram
☑ Power Block Diagram

Note :
☑ Available in this list
☒ Not Available in this list
☐ Unnecessary in this list
* Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	DONGGALA		
CLASS	4th-A	NO.	173

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
TX/RX	Jl. Kamata No 41	71031		119° 44′ 47″ E	01° 40′ 30″ S

2. GENERAL CONDITIONS

Moving from Jakarta			Site Access from Port	Road Traffic	Accommodation	Population
By Air	to Palu	[Taking time. 3.00 hr]	☐ Highway	☐ Heavy	☑ Hotel	50,000
By Car	to Location	[Taking time: 0.45 hr.]	☑ Paved	☑ Medium	☐ Motel	
			☐ Unpaved road	☐ Light		
				☐ None		

3. CONDITIONS OF STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system	
				Yes	No
☐ Flat	☑ Dry soil	☐ Limestone	☐ Flood	☑	☐ Antenna
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑	☐ Towers (Masts)
☑ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☐	☑ Grounding system
☐ Basin	☐ Clay		☐ Ground Subsidence	☐	☑ Lightning system
☐ Valley	☐ Sandy			☐	☑ Feeder Cable Way
Altitude	20.00 M		**Telephone Lines**	☐	☑ City water
Land area	1,600 m²		☑ 1 Lines		

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic
Room Area (m²)	
Operation room	85.00
E / G room	20.00
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	220 V
Phase	1	3
Wire	2	4
kVA	1.2	7.5

Quality of PLN source		
Fluctuations	220 V ± 10 %	
Availability of power per day	24 Hours	
Power interruption /month	9 Times	
Total interpt. hours /month	20 Hours	
Max. interpt. hours at once	6 Hours	

Existing Power Conditions	Good	Bad
☐ Power Supply System	☐	☑
☐ Operations of E/G	☐	☑
☑ Operations of AVR	☑	☐

Capacity of fuel for engine	
Day tank	5 Liter
Main tank	k Liter

E/G Stand-by System

☑ Single System

☐ Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired in Disnav Bitung
Examples of major failure	
Sufficiency of spares	

Records of damages		Environmental Conditions	Good	Bad	
☐ Heavy rainfall					
☐ Storm			☐	☑	External noises
☑ Lightning	Eqpt. damage by lightening		☑	☐	Air pollution
☐ Other calamity					

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt./tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable

5. PERSONNEL FORMATIONS

	TX/RX	
Chief	1	
Operator (skilled)	2 (1)	()
Technician (skilled)	()	()
Administrator		
T o t a l	3	

Training Record				
Course	Class	Location	Period	Trainee

SUMMARY OF COAST STATION

SITE	DONGGALA		
CLASS	4th-A	NO.	173

7 Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable					

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service						
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991			69	1996			113
1997					1992			33	1997			97
1998					1993			92	1998			2
1999					1994			91	1999			
2000					1995			85	2000			

7. COMMENTS

Suggestion	Request to completed by GMDSS, Facsimile and additional personnel as accordance with Class-IV
Remarks	

INVENTORY

Site Name: Donggala

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Transmitter**							
1		85W MF Transmitter	NSD-125	5696	JRC	1968			
2		85W MF Transmitter	NSD-125	5276	JRC	1968			
3		HF SSB Transceiver JSB-50, 100W	NTD-177	BS-12240	JRC	1972			Damaged
4		HF SSB Transceiver JSB-50, 100W	NTD-177	BS-12241	JRC	1972			Damaged
5		150W HF SSB Transceiver	NS-11A	5320033	Furuno	1978			Damaged
6		100W SSB Transceiver	FTC-300C	08341005 OH4	Yaesu	1983			
7		SSB Transceiver	P-1000	384305	Sailor	1986			Damaged
8		SSB Transceiver	IC-M700	4838	ICOM	1985			Good
1-2		**Receiver**							
1		All Wave Receiver (0.25-30MHz)	NMR-1030K	21093	JRC	1967			
2		All Wave Receiver (0 25-30MHz)	FRG-8800	9D-320079	Yaesu	1986			Good
3		All Wave Receiver (0.25-30MHz)	FRG-7700	M-IH-10012	Yaesu	1980			Damaged
4		MF/HF Tuner 400W	H-1201	279241	Sailor	-			
1-3		**VHF System**							
1		VHF Transceiver (40W)	FTC-1540A	1H-120151	Yaesu	1983			
2		VHF T/R (40W)	FM-400	245505	Furuno	1983			Good
2		**Tower & Antenna System**							
2-1		**Tower & Mast**							
		TX Station							
1		25mHx2 Tower							
2		15mHx2							
3		12mHx1 Pipe							

INVENTORY

Site Name: Donggala

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
2-2		**Antenna System**							
		TX Station							
1		T-Type Antenna							
2		T-Type Antenna							
3		Inverted "L" Antenna							
4		Inverted "L" Antenna							
5		Inverted "L" Antenna							
2-3		**Antenna Switch**							
1		Antenna Coupler	XW-49	BP-73285	JRC	1972			Good
2		Antenna Coupler	XW-49	BP-73284	JRC	1972			Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		Power Distribution Board	NCB-4430A	BP-10232	JRC	1972			Damaged
3-2		**UPS & AVR**							
1		Power Supply	NBA-901C	BP-74821	JRC	1974			Good
2		Power Supply	NBA-901C	BP-73646	JRC	1972			Damaged
3		Power Supply	109R	7-146826	NPC USA	1985			Good
4		Automatic Voltage Regulator	MA-1020	210103	JRC	1972			Damaged
5		Battery Charger			Gama USA	1985			Good
6		Battery Charger	12E(A)	8133	Stanley	1972			Damaged
7		Power Supply Regulator 3.6V DC, 25A	109R		NPC				
3-3		**Engine Generator**							
1		Engine	TS-155C	N1566	Yanmar	1983			Damaged
2		AC Generator (127/220V, 7 5kVA 26-2A, 4W, 3P	FA10F	8222	N.Denyo				
4		**Others**							
1		Type Writter	Express 13		Royal				
2		Fan	F-20AEC		National	1982			Good

STATUS OF TROUBLES

SITE NAME : DONGGALA **DGL-173-(1/1)**

Item / Equipment	Transceiver / -		
Manufacturer	Sailor		
Manufacturer in year	1986		
Defective panel / unit	TX/RX		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☑ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☐ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

Un-availability of technician, therefore damaged equipment must be repaired in Bitung
Spare part is very difficult to find out

OPERATION SCHEDULE (FREQUENCIES)

Site Name: Donggala

DGL-173-(1/1)

Call Sign : Mobile Service : PKM 9
Fix Service :

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	2.182,0	J3E	100		
2	6.215,0	J3E	100		
3	6.510,0	J3E	100		
4	500,0	A1A	800		
5	448,0	A1A	800		
6	8.686,0	A1A	800		
	VHF Service				
7	Channel-16	G3E	40		
	Fix Service				
8	5 381,5	J3E	100		
9	6 926,0	J3E	100		
10	9 110,0	J3E	100		
11					
12					
13					
14					
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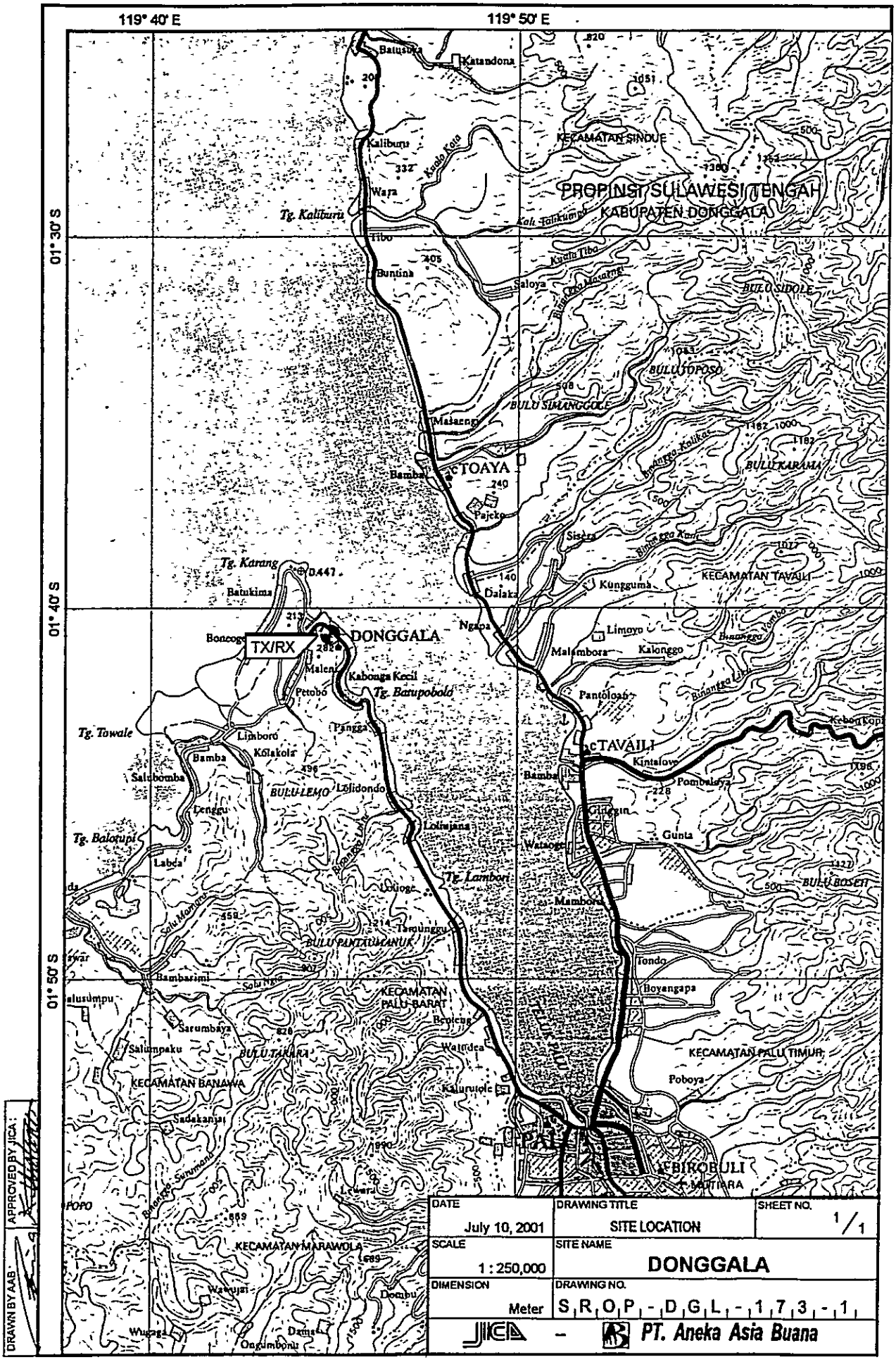
18					
19					
20					
21					
22					
23					



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SCALE: 1 : 250,000	SITE NAME: DONGGALA	
DIMENSION: Meter	DRAWING NO.: S R O P - D G L - 1 7 3 - 1	
JICA – PT. Aneka Asia Buana		

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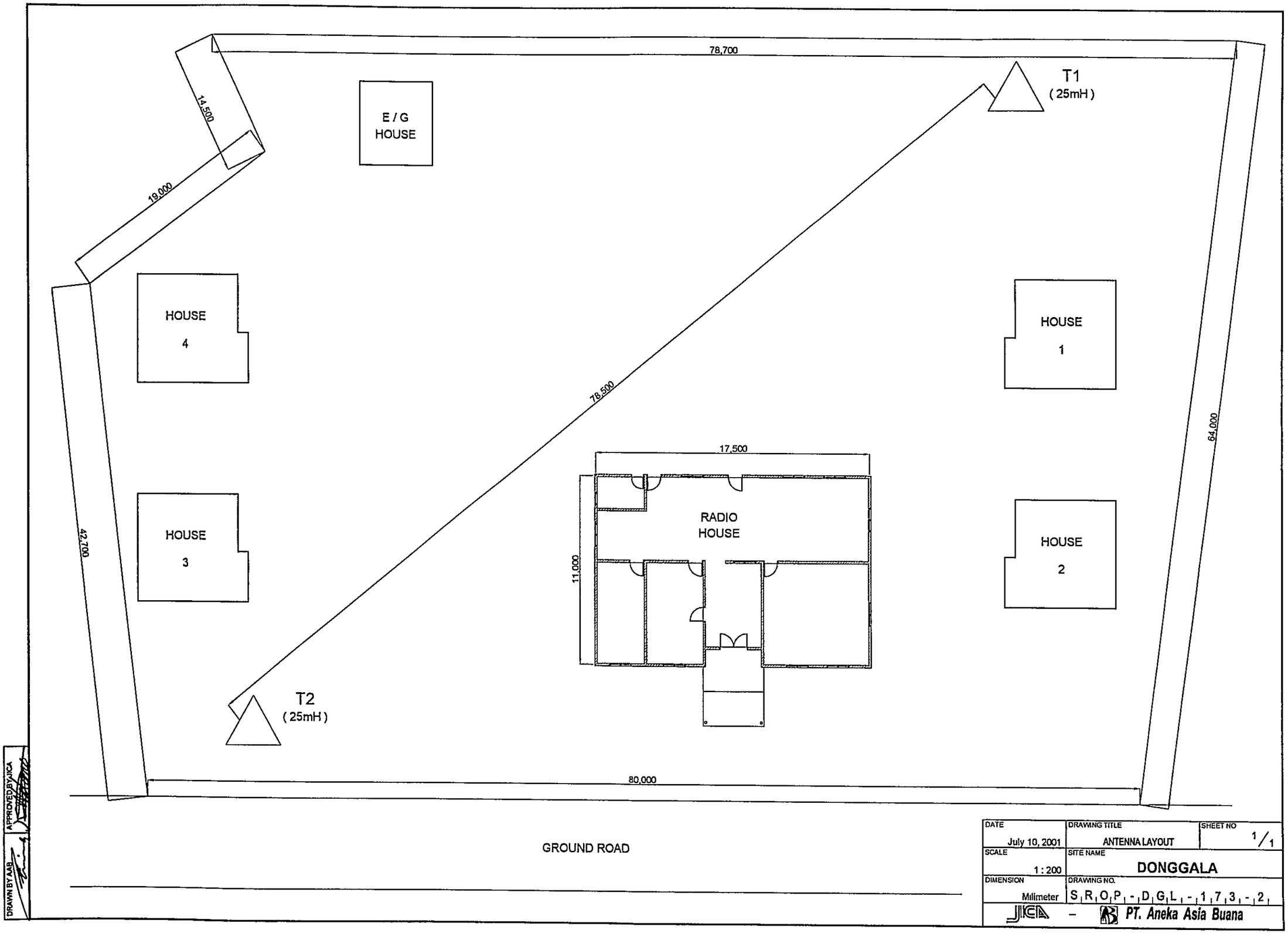

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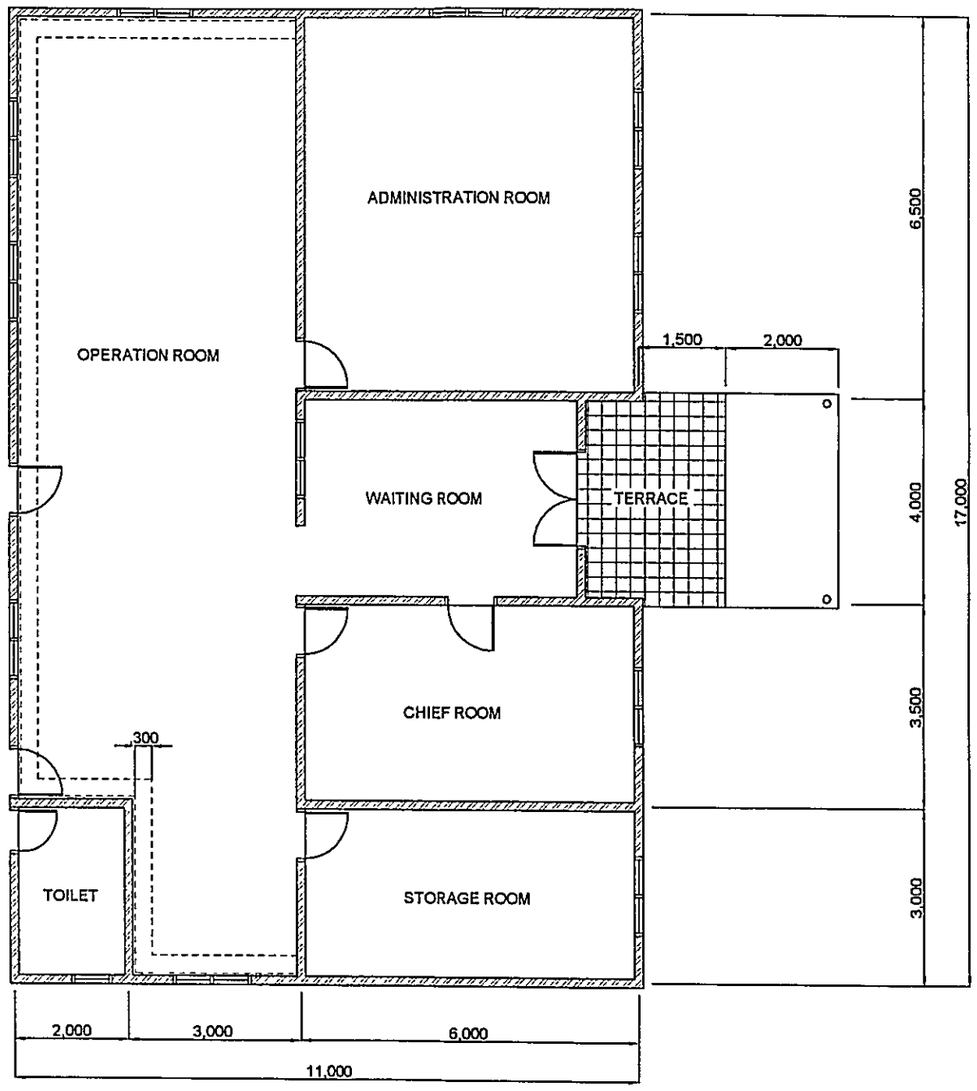
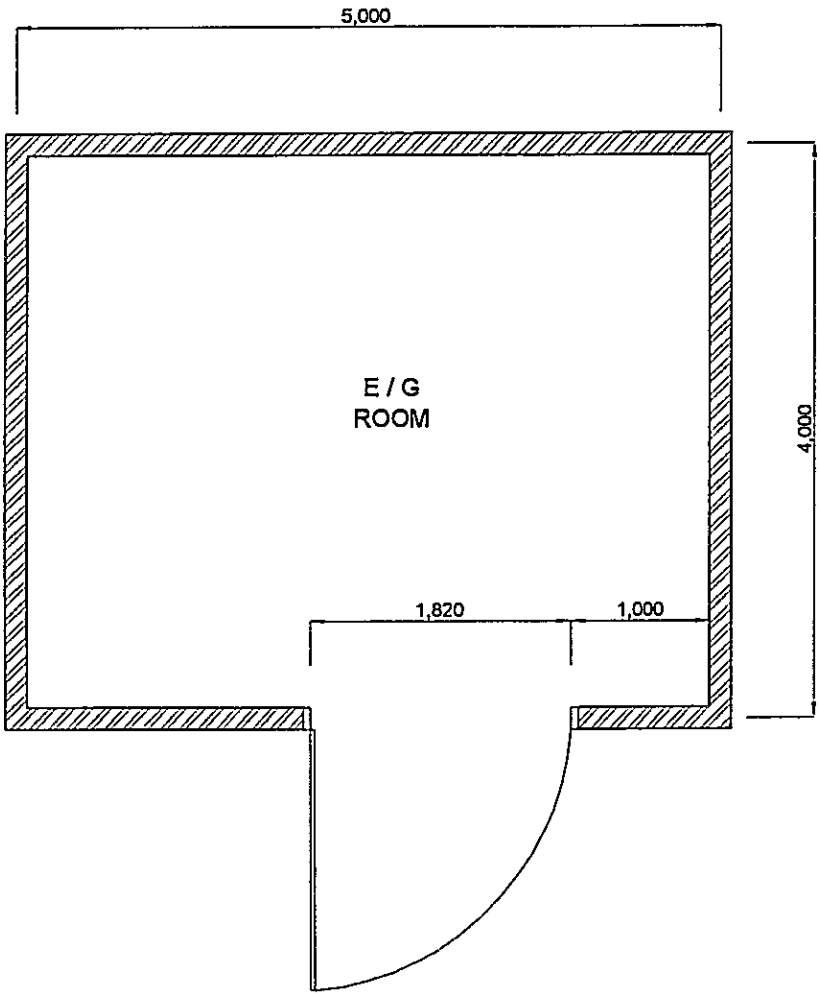
DIMENSION: Milimeter	DRAWING NO.: S_R_O_P_-_D_G_L_-_1_7_3_-_2_	
JICA – PT. Aneka Asia Buana		



DRAWN BY AAB:

APPROVED BY JICA:

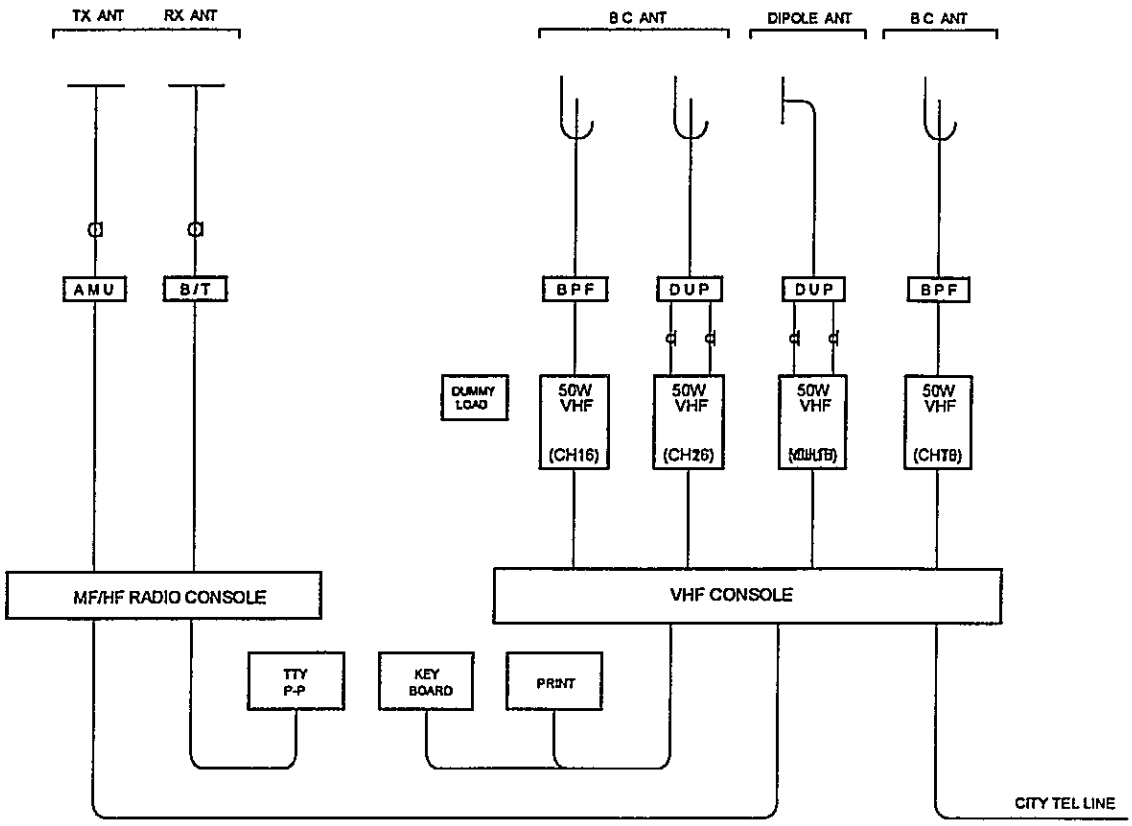
DATE: July 10, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 100	SITE NAME: DONGGALA	
DIMENSION: Millimeter	DRAWING NO.: SROP-DGL-173-3	
JICA –	PT. Aneka Asia Buana	



DRAWN BY AAB

APPROVED BY JICA

DATE: July 10, 2001	DRAWING TITLE: E/G FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 50	SITE NAME: DONGGALA	
DIMENSION: Milimeter	DRAWING NO: SROP-DGL-173-4	
JICA – PT. Aneka Asia Buana		



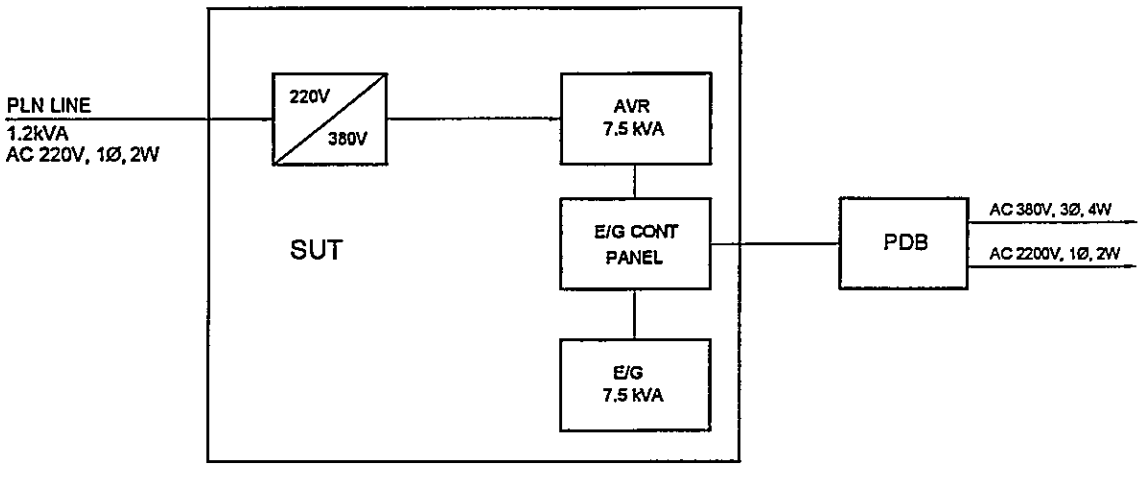
LEGEND

ANT	: ANTENNA	MF	MEDIUM FREQUENCY
AMU	ANTENNA MATCHING UNIT	RX	RECEIVER (ING)
BC	. BROWN CARDIOID	TX	TRANSMITTER (ING)
B/T	BALUNS TRANS	VHF	VERY HIGH FREQUENCY
BPF	: BAND PASS FILTER		
CH	: CHANNEL		
DUP	DUPLEXER		
HF	HIGH FREQUENCY		

APPROVED BY JICA:

DRAWN BY AAB:

DATE: July 10, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: DONGGALA	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,D,G,L,-,1,7,3,-,5,	
JICA – PT. Aneka Asia Buana		



LEGEND

AC	ALTERNATING CURRENT
AVR	AUTOMATIC VOLTAGE REGULATOR
E/G	ENGINE GENERATOR
kVA	KILO VOLT AMPERE
PDB	POWER DISTRIBUTION BOARD
SUT	STEP - UP TRANSFORMER
V	VOLT
W	WIRE
Ø	PHASE

APPROVED BY JICA

DRAWN BY AAB

DATE: July 10, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: DONGGALA	
DIMENSION: Milimeter	DRAWING NO.: SROP-DGL-173-6	
JICA – PT. Aneka Asia Buana		

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

4th-A Class Coast Station
Gorontalo
(Coast Station No. 174)

Table of Content

☑ Summary of Coast Station
☑ Inventory
☑ Status of Trouble
☑ Operation Schedule (Frequencies)

TRX Drawings:
☑ Site Location
☑ Antenna Layout
☑ Equipment Floor Layout
☑ E/G Floor Layout
☑ System Block Diagram
☑ Power Block Diagram

Note :
☑ Available in this list
☒ Not Available in this list
☐ Unnecessary in this list
* Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	GORONTALO		
CLASS	4th-A	NO.	174

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
TX/RX	Jl. Laks. Martadinata No. 2	0435-821486		123° 03′ 49″ E	00° 30′ 30″ N

2. GENERAL CONDITIONS

Moving from Jakarta			Site Access from Port	Road Traffic	Accommodation	Population
By Air	to Manado	[Taking time: 4:00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	120,000
By Air	to Gorontalo	[Taking time: 1:00 hr.]	☑ Paved	☐ Medium	☐ Motel	
By Car	to Location	[Taking time: 0:30 hr.]	☐ Unpaved road	☑ Light		
				☐ None		

3. CONDITIONS OF STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system
☐ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑ ☐ Antenna
☑ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑ ☐ Towers (Masts)
☐ Basin	☐ Clay	☑ Stony	☑ Ground Subsidence	☑ ☐ Grounding system
☐ Valley	☐ Sandy			☑ ☐ Lightning system
Altitude	5.00 **M**		**Telephone Lines**	☐ ☑ Feeder Cable Way
Land area	246 50 **m²**		☑ 1 Lines	☑ ☐ City water

3.2 Building Conditions

Constructions	
Num of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic
Room Area (m²)	
Operation room	12.00
E / G room	24.75
Remark	

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	110 V
Phase	1	1
Wire	2	2
kVA	0.9	5

Quality of PLN source		
Fluctuations	V ± %	
Availability of power per day	24 Hours	
Power interruption /month	8 Times	
Total interpt hours /month	24 Hours	
Max. interpt. hours at once	4 Hours	

Existing Power Conditions	Good	Bad
Power Supply System	☑	☐
Operations of E/G	☑	☐
Operations of AVR	☐	☐

Capacity of fuel for engine	
Day tank	30 Liter
Main tank	k Liter

E/G Stand-by System

☑ Single System

☐ Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure

Restoration flow	Spare Parts
Examples of major failure	Repaired in Disnav Bitung
Sufficiency of spares	Not enough

Records of damages		Environmental Conditions	Good	Bad	
☐ Heavy rainfall					
☐ Storm			☐	☑	External noises
☐ Lightning			☐	☑	Air pollution
☐ Other calamity					

Institutional and Human Statuses

1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt /tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable

5. PERSONNEL FORMATIONS

	TX/RX	
Chief	1	
Operator (skilled)	2 ()	()
Technician (skilled)	()	()
Administrator		
Total	3	

Training Record

Course	Class	Location	Period	Trainee

SUMMARY OF COAST STATION

SITE	GORONTALO		
CLASS	4th-A	NO.	174

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991			53	1996			135
1997					1992			103	1997			119
1998					1993			132	1998			102
1999					1994			165	1999			88
2000					1995			152	2000			43

7. COMMENTS

Suggestion	Request to completed by GMDSS and Facsimile equipment
Remarks	

INVENTORY

Site Name: Gorontalo

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Transmitter**							
1		HF Transceiver	JSB-50	BS-14333	JRC	1974			Damaged
2		HF Transceiver	JSB-50	BS-14334	JRC	1974			Damaged
3		MF/HF Transceiver	FT-300C	08504071	Yaesu	1986			Damaged
4		MF/HF Transceiver	FS-100	0654	Furuno	1989			Damaged
5		MF/HF Transceiver	IC-M700	6030	ICOM	1995			Good
6		MF/HF Transceiver	FRG-8800	9D-320069	Yaesu	1989			Damaged
1-2		**VHF System**							
1		VHF Transceiver	FM-400	245440	Furuno	1989			Good
2		**Tower & Antenna System**							
2-1		**Antenna System**							
1		Vertical Antenna	RLL F-55		JRC	1974			Good
2		VHF Dipole Antenna				1989			Good
3		Open Dipole Antenna				1989			Good
2-2		**Antenna Switch**							
1		Antenna Coupler	XW-49	BP-74149	JRC	1974			Good
2		Antenna Coupler	XW-49	BP-74150	JRC	1974			Good
3		XMTR Select			JRC	1974			Good
4		Automatic Antenna Tuner	AT-120		ICOM	1995			Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		Distribution Board	NCB-430A	BP-10294	JRC	1974			Good
3-2		**Step-Up Transformer**							
1		3000W Step-Up/Down	BOSS	9652		1980			Damaged

INVENTORY

Site Name: Gorontalo

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3-3		UPS & AVR							
1		Power Supply	RE-2000	183027	VEDIO	1989			Good
2		Power Supply	CA-3030P		Carlton	1989			Damaged
3		Power Supply	AK-4040VA		DAKAI	1995			Good
4		Power Supply	CA-1010S		DAKAI	1989			Damaged
5		Power Supply	NBA-901C	B-74827	JRC	1974			Damaged
6		Power Supply	NBA-901C	B-74828	JRC	1974			Damaged
7		Accumulator 1x12V/200AH			GS	1995			Damaged
8		Accu Charger 5x12V	BC-500		Lancer	1995			Good
9		Accu Charger 2x12V			Makita	1993			Damaged
3-4		Engine Generator							
1		Generator 5kVA	TS-130C	7DT001	Yanmar	1974			Good
4		Measuring Equipment							
1		Multi Meter	3201	NO3J1152	Y'Gama	1974			Damaged
2		Multi Meter	SP-15D	6139027	Sanwa	2001			Good
5		Others							
1		Fan		71080	National	1976			
2		Fan		011283	National	1984			

STATUS OF TROUBLES

SITE NAME : GORONTALO **GTL-174-(1/1)**

Item / Equipment	HF Transceiver (2 Units) / -		
Manufacturer	Icom, Furuno		
Manufacturer in year	-		
Defective panel / unit	Final Amplifier, Relay Section		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☐ Aging		☐ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☑ By next project
	☑ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

Request for new office building construction and official house, because the old office location is in the middle of people residence and closed to quay port

Request for Air Conditioner.

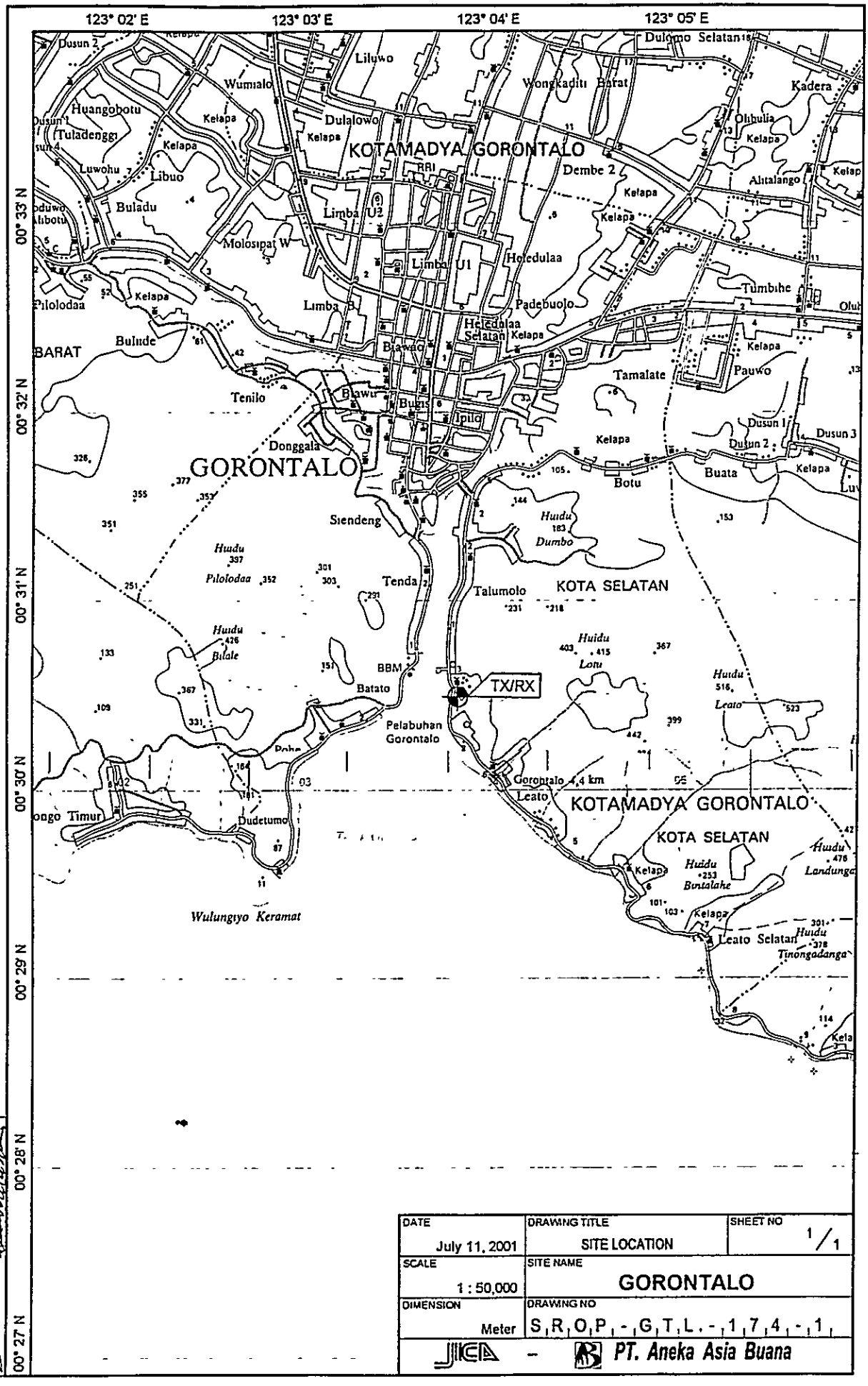
OPERATION SCHEDULE (FREQUENCIES)

Site Name: Gorontalo

GTL-174-(1/1)

Call Sign : Mobile Service : PKM.8
Fix Service :

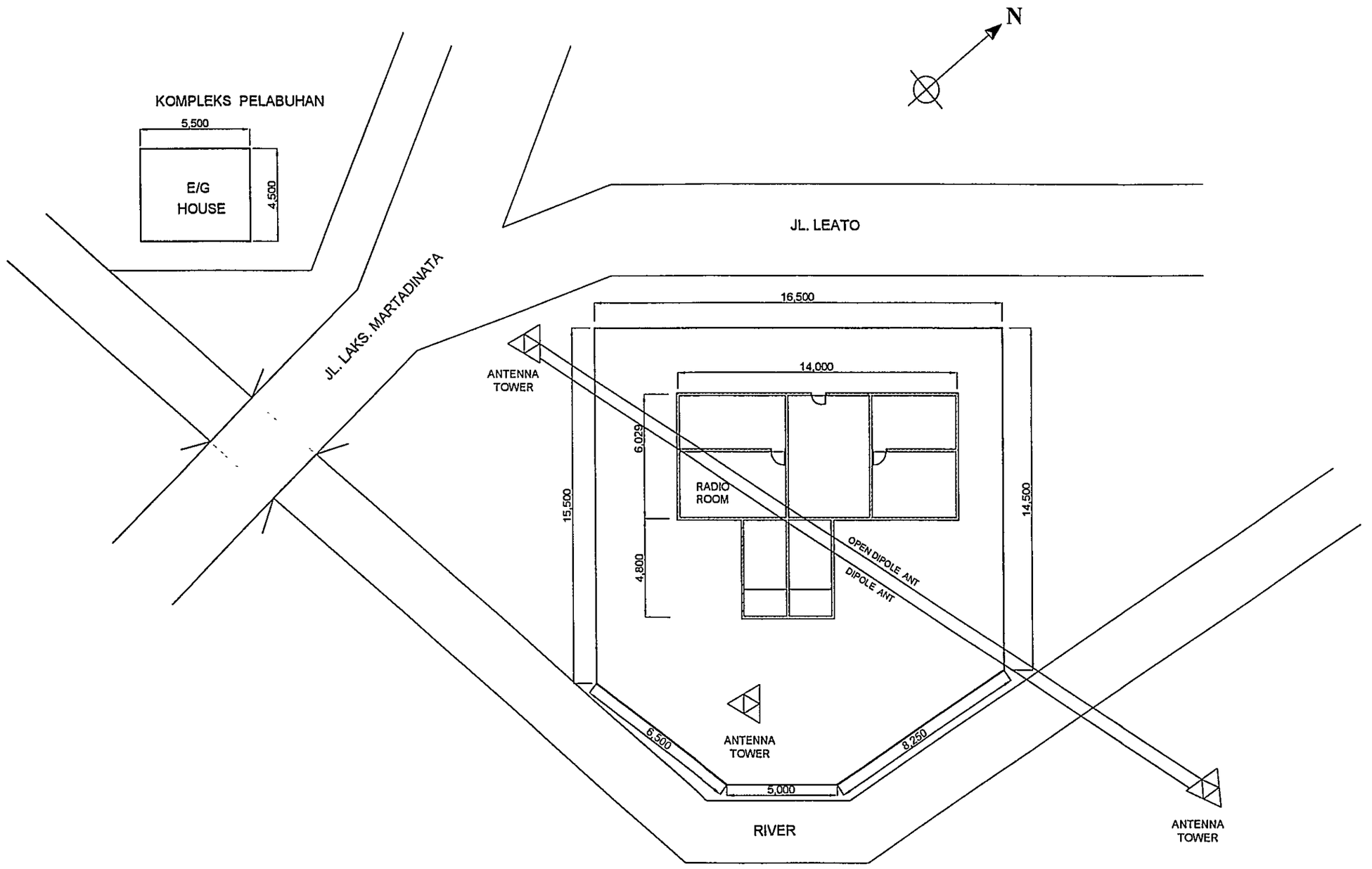
	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	6 215,0	J3E	100		
2	6.224,0	J3E	100		
3	6 510,0	J3E	100		
4	2 182,0	J3E	100		
5	2.690,0	J3E	100		
6	3.180,0	J3E	100		
	VHF Service				
7	Channel-12	G3E	40		
8	Channel-13	G3E	40		
9	Channel-14	G3E	40		
10	Channel-16	G3E	40		
11	Channel-20	G3E	40		
12	Channel-22	G3E	40		
	Fix Service				
13	5 165,0	J3E	100		
14	5 380,0	J3E	100		
15	5 381,5	J3E	100		
16	6.926,0	J3E	100		
17	9 110,0	J3E	100		
18					
19					
20					
21					
22					
23					



DATE: July 11, 2001	DRAWING TITLE: SITE LOCATION	SHEET NO: 1/1
SCALE: 1 : 50,000	SITE NAME: GORONTALO	
DIMENSION: Meter	DRAWING NO: S,R,O,P,-,G,T,L,-,1,7,4,-,1,	
JICA – PT. Aneka Asia Buana		

DRAWN BY AAB

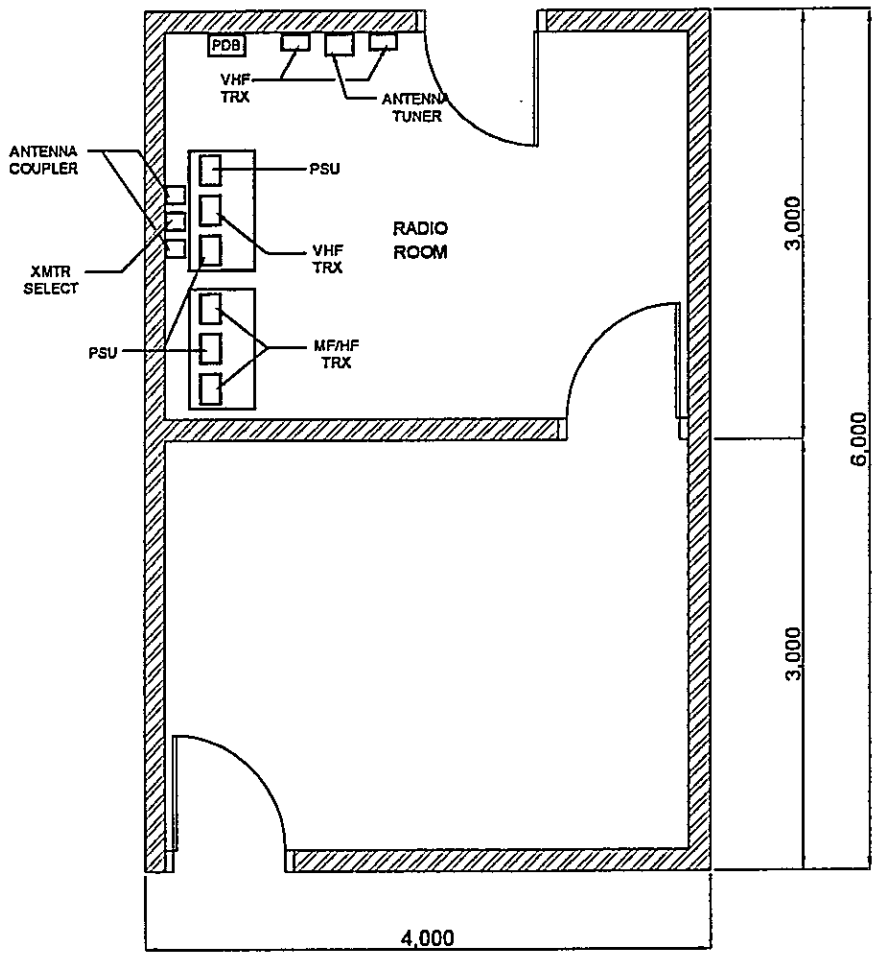
APPROVED BY JICA



DRAWN BY AAB :

APPROVED BY JICA :

DATE: July 10, 2001	DRAWING TITLE: ANTENNA LAYOUT	SHEET NO: 1/1
SCALE: 1 : 200	SITE NAME: GORONTALO	
DIMENSION: Milimeter	DRAWING NO.: S R O P - G T L - 1 7 4 - 2	
JICA –	PT. Aneka Asia Buana	

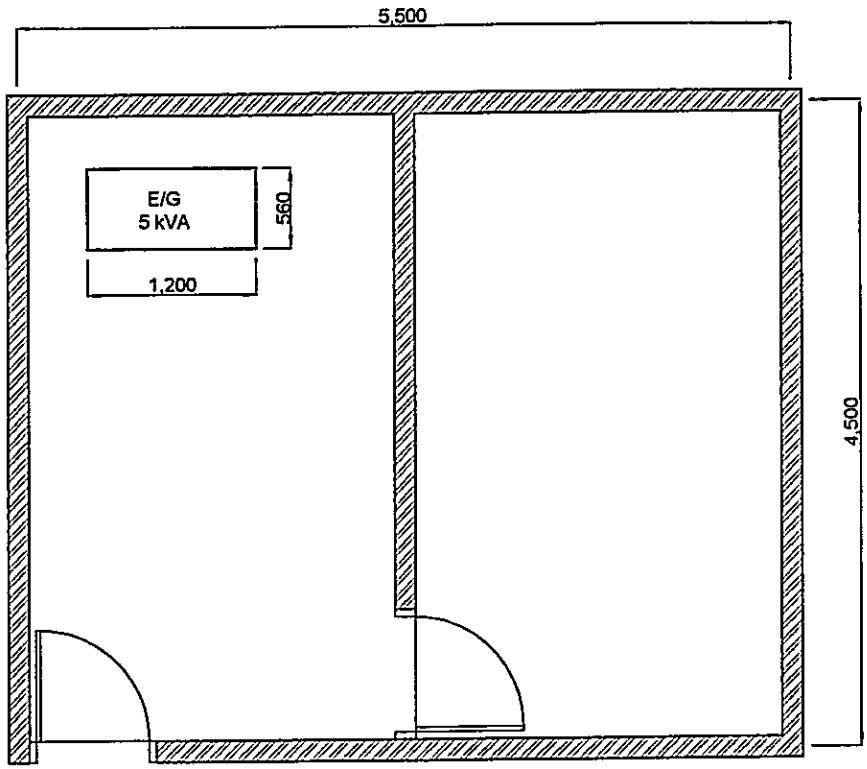


LEGEND

HF	. HIGH FREQUENCY
MF	: MEDIUM FREQUENCY
PDB	: POWER DISTRIBUTION BOARD
PSU	: POWER SUPPLY UNIT
TRX	: TRANSCEIVER (ING)
VHF	: VERY HIGH FREQUENCY

DATE: July 10, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 50	SITE NAME: GORONTALO	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,G,T,L,-,1,7,4,-,3,	
JICA –	PT. Aneka Asia Buana	

DRAWN BY AAB | APPROVED BY JICA



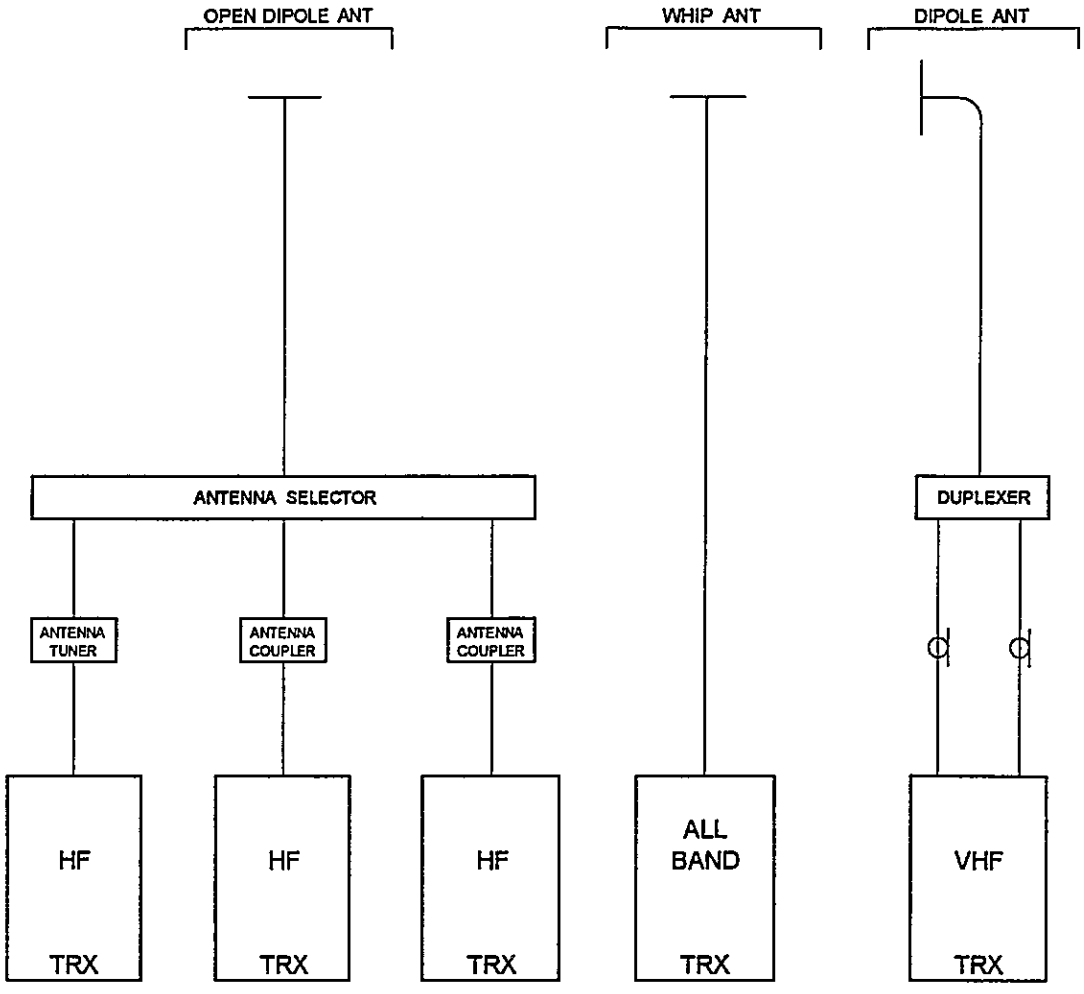
LEGEND

E/G : ENGINE GENERATOR
kVA : KILO VOLT AMPERE

DATE: July 10, 2001	DRAWING TITLE: E/G FLOOR LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 50	SITE NAME: GORONTALO	
DIMENSION: Milimeter	DRAWING NO: S R O P - G T L - 1 7 4 - 4	
JICA –	PT. Aneka Asia Buana	

APPROVED BY JICA

DRAWN BY AAB



LEGEND

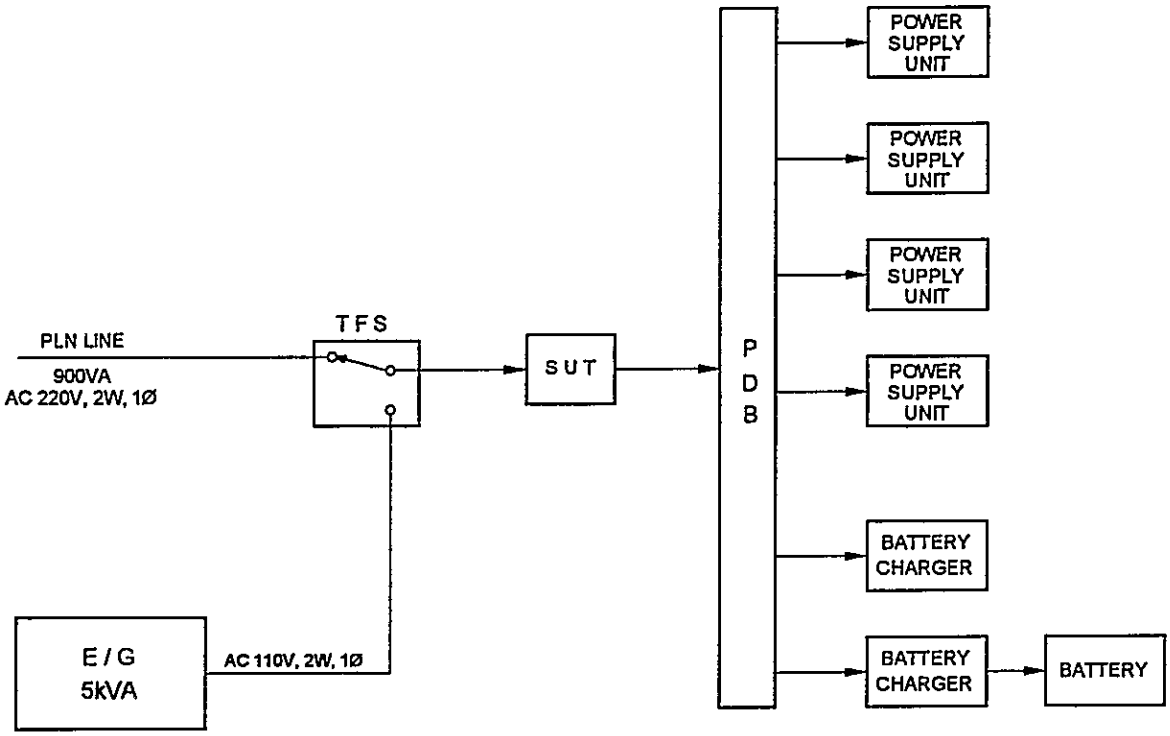
ANT : ANTENNA
HF : HIGH FREQUENCY
TRX : TRANSCEIVER (ING)
VHF : VERY HIGH FREQUENCY

APPROVED BY JICA :

DRAWN BY AAB

DATE: August 02, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: GORONTALO	
DIMENSION: Milimeter	DRAWING NO: S R O P - G T L - 1 7 4 - 5	

JICA – PT. Aneka Asia Buana



LEGEND

AC	: ALTERNATING CURRENT
E/G	: ENGINE GENERATOR
HF	: HIGH FREQUENCY
kVA	: KILO VOLT AMPERE
PDB	: POWER DISTRIBUTION BOARD
TFS	: TRANSFER SWITCH
TRX	: TRANSCEIVER (ING)
V	: VOLT
W	: WIRE
Ø	: PHASE

APPROVED BY JICA :

DRAWN BY AAB :

DATE: August 02, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: GORONTALO	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,G,T,L,-,1,7,4,-,6,	
JICA –	PT. Aneka Asia Buana	

Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

4th-A Class Coast Station
Luwuk
(Coast Station No. 175)

Table of Content

☑ Summary of Coast Station
☑ Inventory
☑ Status of Trouble
☑ Operation Schedule (Frequencies)

TRX Drawings:
☑ Site Location
☑ Antenna Layout
☑ Equipment Floor Layout
☑ E/G Floor Layout
☑ System Block Diagram
☑ Power Block Diagram

Note :
☑ Available in this list
☒ Not Available in this list
☐ Unnecessary in this list
* Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	LUWUK		
CLASS	4th	NO.	175

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
TX/RX	Jl. Batu Putih KM 2 Kel. Bungin	0461-21320		122° 47′ 24″ E	00° 56′ 58″ S

2. GENERAL CONDITIONS

Moving from Jakarta	Site Access from Port	Road Traffic	Accommodation	Population
By Air to Palu [Taking time: 3:00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Air to Luwuk [Taking time: 1:00 hr.]	☑ Paved	☑ Medium	☐ Motel	
	☐ Unpaved road	☐ Light		
		☐ None		

3. CONDITIONS OF STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system	
☑ Flat	☐ Dry soil	☐ Limestone	☐ Flood	Yes	No
☐ Slope	☐ Ordinary	☐ Gravel	☐ Flood Tide	☑	☐ Antenna
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☑	☐ Towers (Masts)
☐ Basin	☐ Clay	☑ Stony	☐ Ground Subsidence	☐	☑ Grounding system
☐ Valley	☐ Sandy			☐	☑ Lightning system
Altitude: 2.00 M			Telephone Lines	☑	☐ Feeder Cable Way
Land area: 420.00 m²			☑ 1 Lines	☑	☐ City water

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Ceramic

Room Area (m²)	
Operation room	21.00
E / G room	10.00

Remark:

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	220 V
Phase	1	1
Wire	2	2
kVA	1.5	1.5

Quality of PLN source		
Fluctuations	209 V ± 94 %	
Availability of power per day	24 Hours	
Power interruption /month	14 Times	
Total interpt. hours /month	8 Hours	
Max. interpt. hours at once	4 Hours	

Existing Power Conditions		
Good	Bad	
☑	☐	Power Supply System
☑	☐	Operations of E/G
☑	☐	Operations of AVR

Capacity of fuel for engine	
Day tank	50 Liter
Main tank	k Liter

E/G Stand-by System	
☑	Single System
☐	Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired in Disnav Bitung
Examples of major failure	
Sufficiency of spares	

Records of damages		Environmental Conditions		
		Good	Bad	
☐ Heavy rainfall				
☐ Storm		☑	☐	External noises
☐ Lightning		☑	☐	Air pollution
☐ Other calamity				

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt./tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable

5. PERSONNEL FORMATIONS

	TX/RX	
Chief	1	
Operator (skilled)	2 (1)	()
Technician (skilled)	()	()
Administrator		
T o t a l	3	

Training Record				
Course	Class	Location	Period	Trainee

SUMMARY OF COAST STATION

SITE	LUWUK		
CLASS	4th	NO.	175

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991			24	1996			45
1997					1992			38	1997			45
1998					1993			32	1998			36
1999					1994			26	1999			37
2000					1995			53	2000			22

7. COMMENTS

Suggestion	Request to completed by GMDS equipment.
Remarks	

INVENTORY

Site Name: Luwuk

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Transmitter**							
1		MF/HF SSB Transceiver	FT-300C	085040729	Yaesu	1985			Good
2		MF/HF SSB Transceiver	FT-300C	08504075	Yaesu	1986			Good
3		HF SSB Transceiver	FS-1000	5590-2958	Furuno	1987			Good
4		HF Transceiver	IC-M710	03016	ICOM	1997			Damaged
1-2		**VHF System**							
1		VHF Transceiver	JHV-217	CA-51952	JRC	1974			Damaged
2		VHF Transceiver	JHV-217	CA-51960	JRC	1974			Damaged
1-3		**Receiver**							
1		MF/HF Receiver	FRG-7700	MIH-100119	Yaesu	1981			Good
2		**Tower & Antenna System**							
2-1		**Tower & Mast**							
1		Tower	Triangle Bar			1997			Good
2		16mH Panzer Mast (x2)	RLL		JRC	1974			
2-2		**Antenna System**							
1		VHF Dipole Antenna (x2)			JRC	1974			
2		Double Doublet Antenna				1997			Good
2-3		**Antenna Switch**							
1		Antenna Changer	AW-244	BP-6114	JRC	1974			
2		Antenna Coupler	XW-49	BP-73266	JRC	1974			Good
3		Automatic Antenna Tuner	AT-130		ICOM	1997			Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		Distribution Board	NCB-430		JRC	1974			Good

INVENTORY

Site Name: Luwuk

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
3-1		UPS & AVR							
1		Accumulator 2x12V/120AH			GS	1994			
2		Accu Charger	12-E(A)	9638	Stanley	1974			Good
3		Battery Charger	100A		Atasi	1997			Good
4		AVR 5kVA	JAC-5K	A3-4313	Y'Bhisi	1974			Good
5		Power Supply			Carlton	1989			Good
6		Power Supply	SP-3500		Swallow	1997			Good
3-2		Engine Generator							
1		Engine 7PK	TS-130C	YS-13896	Yanmar	1974			
2		Generator 1.5kVA	Acelight	YSG-5(5)	Yanmar	1974			
3		Engine Generator	TF65HDI		Yanmar	1996			Good
4		Measuring Equipment							
1		Oscilloscope	VP-508A	119044	Matsushita	1974			Good
2		Electronic Volt Meter	PM-9B	A723358B	TOA	1974			Damaged
3		Multi Tester	YX-360		Sanwa	1996			Good
4		Multi Tester	SP-15D		Sanwa	2001			Good
5		Others							
1		AC Split	RAS-82NKX	50090763	Toshiba	1996			Damaged
2		Fan			Maspion	1986			Good

STATUS OF TROUBLES

SITE NAME : LUWUK **LWK-175-(1/1)**

Item / Equipment	VHF Transceiver / -		
Manufacturer	JRC		
Manufacturer in year	1974		
Defective panel / unit	-		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☑ Aging		☑ Immediacy
	☐ Lightning		☐ By next year budget
	☐ Corrosion		☐ By next project
	☐ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

In radio room is needed Air Conditioner (AC)

Needed new AVR (220V), because voltage is un-stable

Needed new VHF Transceiver

Needed one motor cycle for official transportation

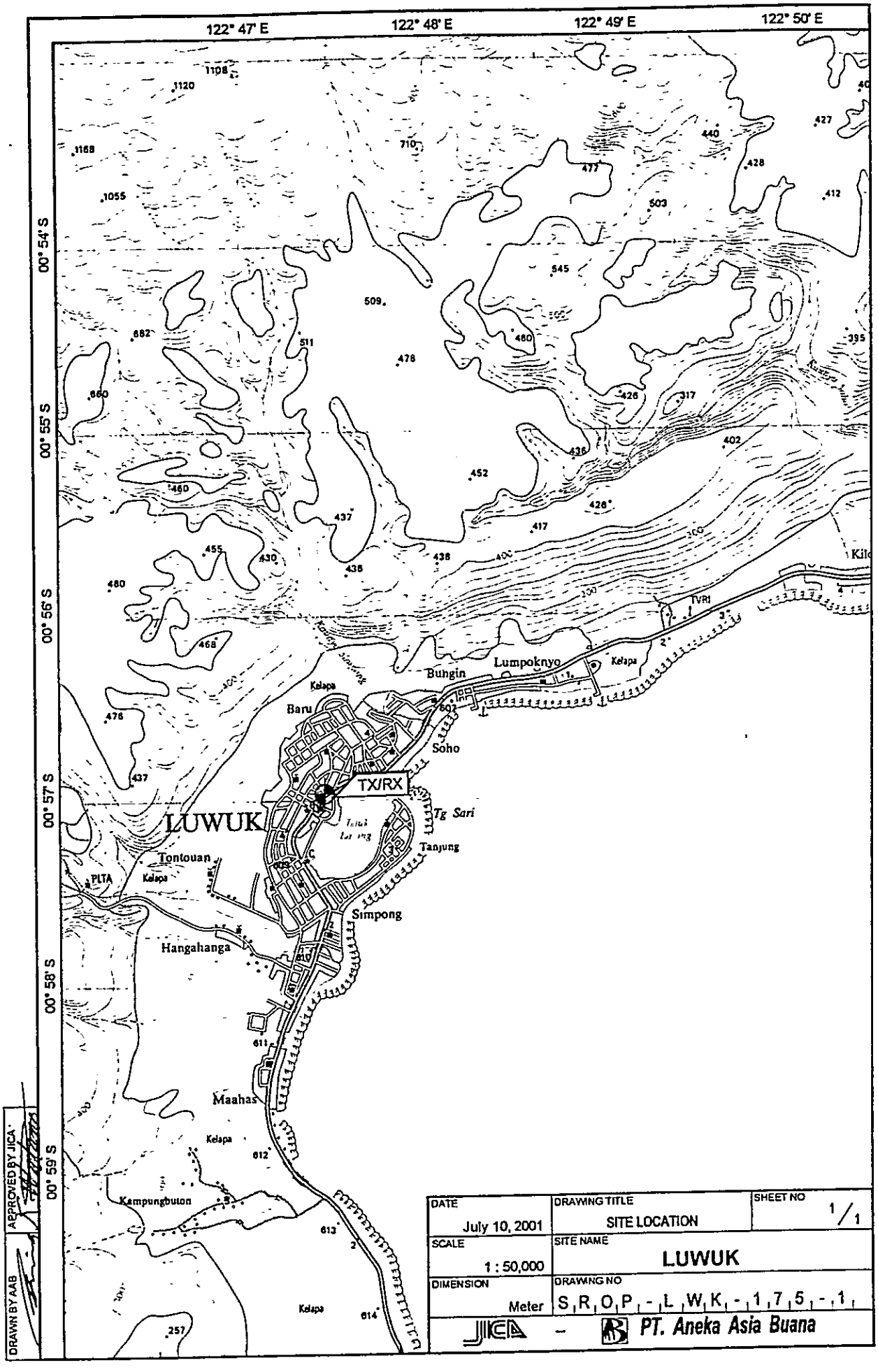
OPERATION SCHEDULE (FREQUENCIES)

Site Name: Luwuk

LWK-175-(1/1)

Call Sign : Mobile Service : PKM.5
Fix Service .

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	2 182,0	J3E	100		
2	2 690,0	J3E	100		
3	6 215,0	J3E	100		
4	6 510,0	J3E	100		
	VHF Service				
5	Channel-10	F3E	25		
6	Channel-15	F3E	25		
7	Channel-16	F3E	25		
8	Channel-20	F3E	25		
9	Channel-22	F3E	25		
	Fix Service				
10	5 381,5	J3E	100		
11	9.110,0	J3E	100		
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					



DRAWN BY AAB

APPROVED BY JICA

DATE: July 10, 2001	DRAWING TITLE: SITE LOCATION	SHEET NO: 1/1
SCALE: 1 : 50,000	SITE NAME: LUWUK	
DIMENSION: Meter	DRAWING NO: S R O P - L W K - 1 7 5 - 1	

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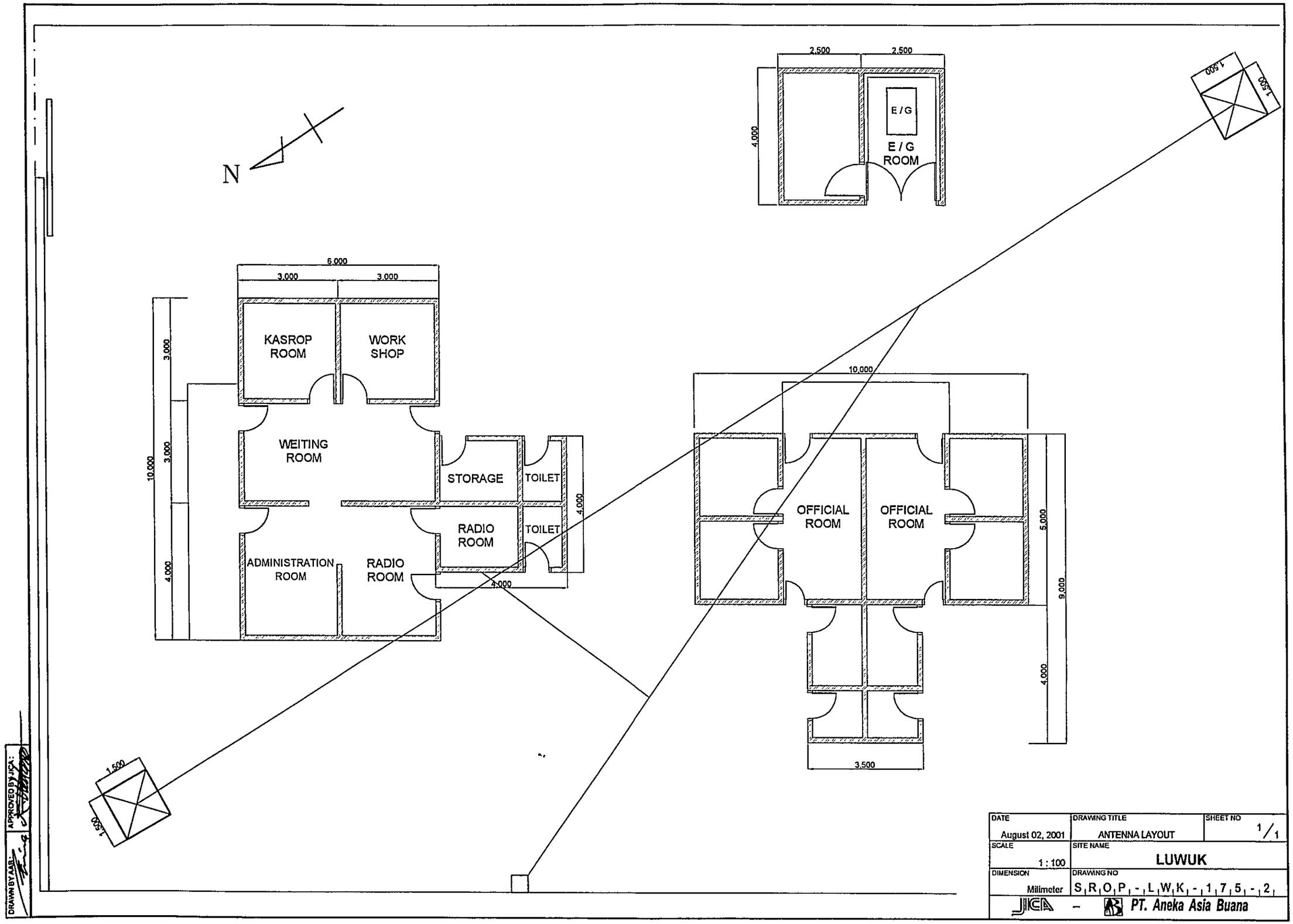

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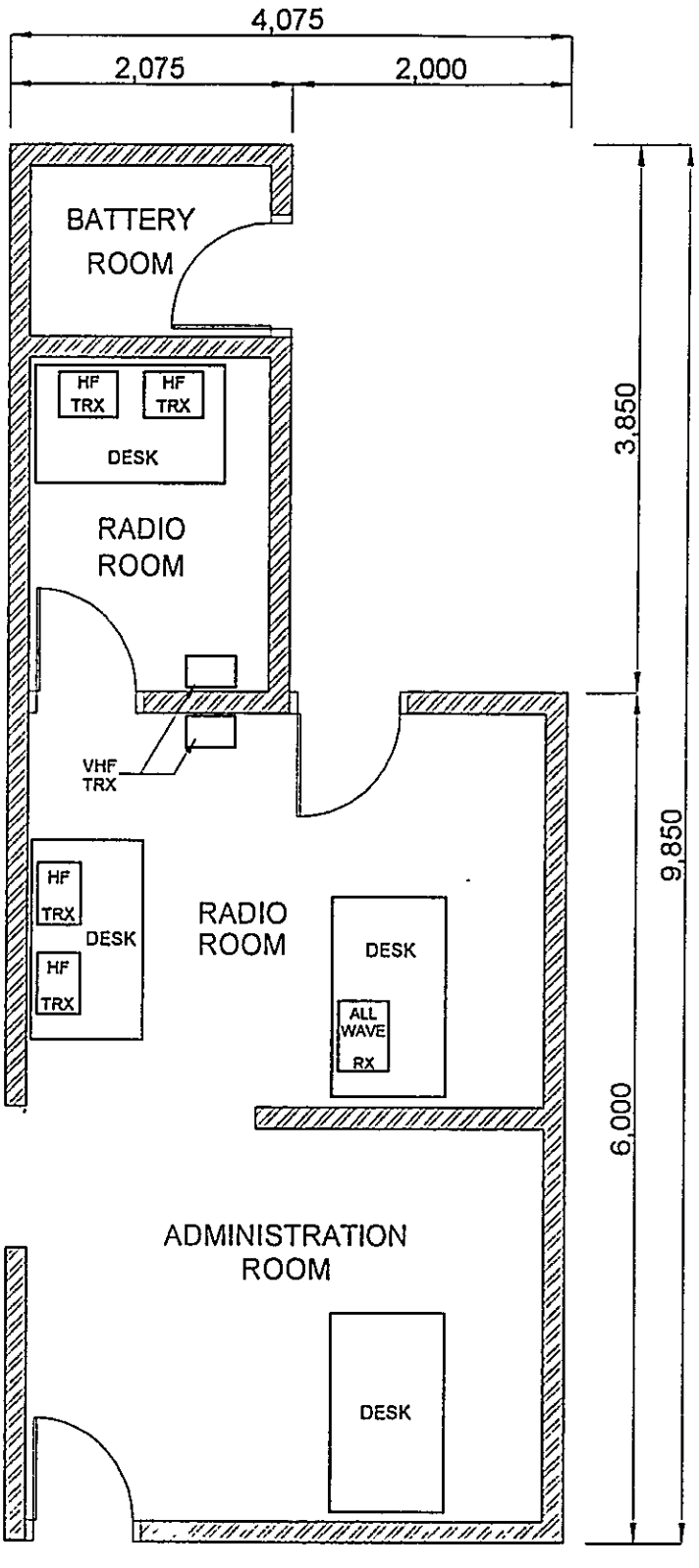

LEGEND

HF : HIGH FREQUENCY
MF : MEDIUM FREQUENCY
RX : RECEIVER
TRX : TRANSCEIVER
VHF : VERY HIGH FREQUENCY

APPROVED BY JICA

DRAWN BY AAB

DATE: August 02, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 100	SITE NAME: LUWUK	
DIMENSION: Milimeter	DRAWING NO.: S,R,O,P,-,L,W,K,-,1,7,5,-,3,	
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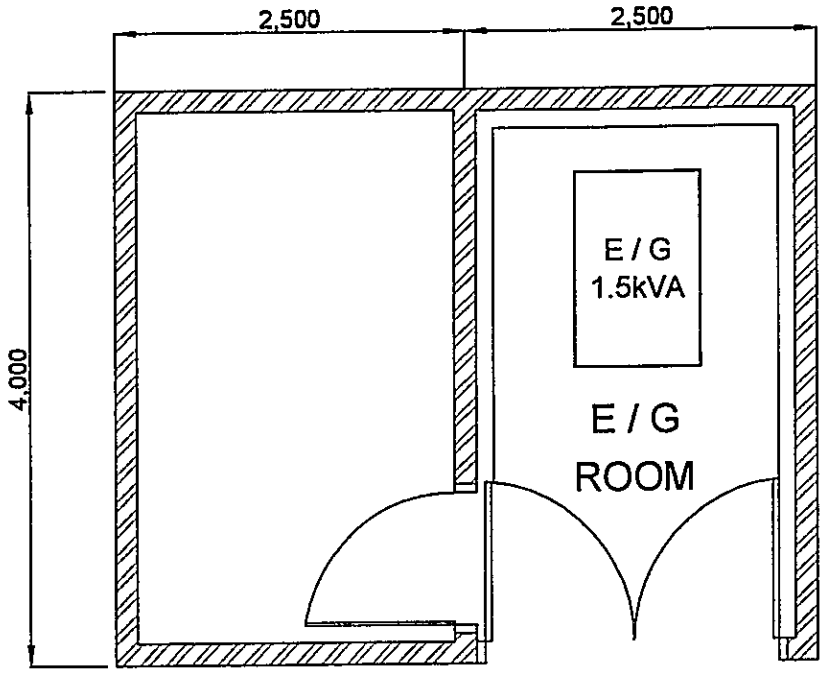

LEGEND

E/G : ENGINE GENERATOR

kVA : KILO VOLT AMPERE

APPROVED BY JICA

DRAWN BY AAB:

DATE: August 02, 2001	DRAWING TITLE: E/G FLOOR LAYOUT	SHEET NO.: 1/1
SCALE: 1 : 50	SITE NAME: LUWUK	
DIMENSION: Milimeter	DRAWING NO.: S R O P - L W K - 1 7 5 - 4	
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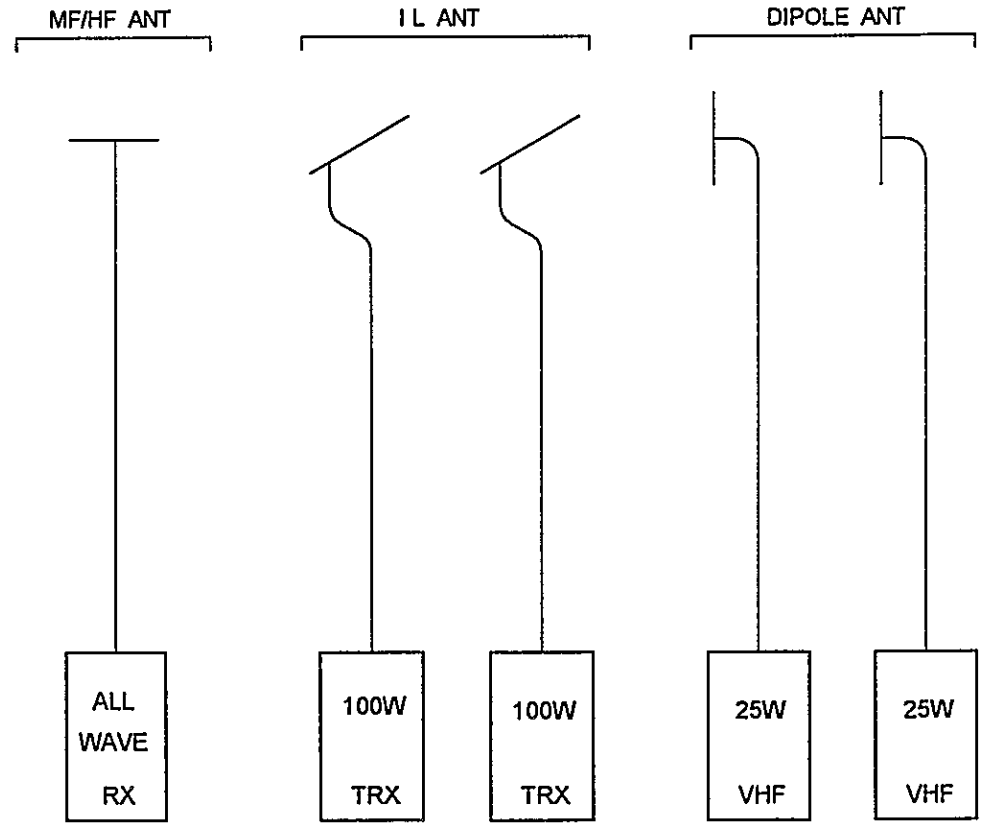

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APPROVED BY JICA :

DATE: July 10, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: LUWUK	
DIMENSION: Milimeter	DRAWING NO: SROP-LWK-175-5	
JICA –	PT. Aneka Asia Buana	

LEGEND

AVR : AUTOMATIC VOLTAGE REGULATOR
E/G : ENGINE GENERATOR
kVA : KILO VOLT AMPERE
V : VOLT

APPROVED BY JICA:

DRAWN BY AAB

DATE: July 10, 2001	DRAWING TITLE: POWER BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: LUWUK	
DIMENSION: Milimeter	DRAWING NO: SROP-LWK-175-6	
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Maritime Telecommunication Facilities: Inventory, Plant Records and Outlook-2001

4th-A Class Coast Station

Poso

(Coast Station No. 176)

Table of Content

☑ Summary of Coast Station
☑ Inventory
☑ Status of Trouble
☑ Operation Schedule (Frequencies)

TRX Drawings:
☑ Site Location
☑ Antenna Layout
☑ Equipment Floor Layout
☑ E/G Floor Layout
☑ System Block Diagram
☑ Power Block Diagram

Note :
☑ Available in this list
☒ Not Available in this list
☐ Unnecessary in this list
* Combined in one drawing

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

November 2001

SUMMARY OF COAST STATION

SITE	POSO		
CLASS	4th-A	NO.	176

1. LOCATION

Station	Address	Tel.	Fax	Longitude	Latitude
TX/RX	Jl. Pattimura No. 02	21519		120° 45′ 20″ E	01° 22′ 48″ S

2. GENERAL CONDITIONS

Moving from Jakarta			Site Access from Port	Road Traffic	Accommodation	Population
By Air	to Palu	[Taking time: 3.00 hr.]	☐ Highway	☐ Heavy	☑ Hotel	
By Car	to Poso	[Taking time: 5:00 hr.]	☑ Paved	☐ Medium	☐ Motel	
			☐ Unpaved road	☑ Light		
				☐ None		

3. CONDITIONS OF STATION

Refer to attached drawing

3.1 Site Conditions

Topography	Nature of Soil		Past disaster of site	Confirmation of existing system	
☑ Flat	☑ Dry soil	☐ Limestone	☐ Flood	Yes	No
☐ Slope	☐ Ordinary	☐ Gravel	☑ Flood Tide	☑ Antenna	☐
☐ Hill-top	☐ Swampy	☐ Rocky	☐ Rain Leakage	☐ Towers (Masts)	☑
☐ Basin	☐ Clay		☐ Ground Subsidence	☑ Grounding system	☐
☐ Valley	☐ Sandy			☑ Lightning system	☐
Altitude	2.00 M		**Telephone Lines**	☑ Feeder Cable Way	☐
Land area	200.00 m²		☑ 1 Lines	☑ City water	☐

3.2 Building Conditions

Constructions	
Num. of story	One
Structure	Concrete
Type of roof	Zinc
Type of ceiling	Triplex
Type of wall	Brick
Wall finish	Mortar
Flooring	Tile

Room Area (m²)	
Operation room	16.00
E / G room	5.00

Remark

3.3 Power Source

	PLN Source	E/G
Voltage	220 V	V
Phase	1	
Wire	2	
kVA	0.75	

Quality of PLN source		
Fluctuations	220 V ± 5 %	
Availability of power per day	24 Hours	
Power interruption /month	2 Times	
Total interpt. hours /month	10 Hours	
Max. interpt. hours at once	6 Hours	

Existing Power Conditions		
Good	Bad	
☐	☑	Power Supply System
☐	☑	Operations of E/G
☐	☑	Operations of AVR

Capacity of fuel for engine	
Day tank	3 Liter
Main tank	k Liter

E/G Stand-by System

☐ Single System

☐ Dual System

4. OPERATION AND MAINTENANCE

Actions taken in equipment failure	
Restoration flow	Repaired in Disnav Bitung
Examples of major failure	
Sufficiency of spares	

Records of damages		Environmental Conditions		
		Good	Bad	
☐ Heavy rainfall		☑	☐	External noises
☐ Storm		☑	☐	Air pollution
☐ Lightning				
☐ Other calamity				

Institutional and Human Statuses				
1	Budget	☐ Sufficient	☐ Reasonable	☑ Insufficient
2	Spares	☐ Enough	☐ Reasonable	☑ Not enough
3	Measuring eqpt./tools	☐ Enough	☐ Reasonable	☑ Not enough
4	Number of Operator	☐ Enough	☑ Reasonable	☐ Not enough
5	Number of Technician	☐ Enough	☐ Reasonable	☑ Not enough
6	Capability of Operator	☐ Skilled	☑ Not so bad	☐ Not capable
7	Capability of Technician	☐ Skilled	☐ Not so bad	☑ Not capable

5. PERSONNEL FORMATIONS

	TX/RX	
Chief	1	
Operator (skilled)	1 ()	()
Technician (skilled)	()	()
Administrator		
T o t a l	2	

Training Record

Course	Class	Location	Period	Trainee

SUMMARY OF COAST STATION

SITE	POSO		
CLASS	4th-A	NO.	176

6. STATISTICAL COMMUNICATION TRAFFIC DATA

Maritime Safety					Public Telecommunication Service							
Years	TG	TEL	DSC	NBDP	Years	Telephone		TG Call	Years	Telephone		TG Call
						Call	Minute			Call	Minute	
1996					1991			33	1996			26
1997					1992			47	1997			18
1998					1993			35	1998			18
1999					1994			28	1999			17
2000					1995			25	2000			

7. COMMENTS

Suggestion	Request to completed by GMDSS equipment, additional personnel as accordance with Class-IVA. Request for new building/new office to support the above equipment
Remarks	

INVENTORY

Site Name: Poso

No	Registered No.	Description	Type	Serial No	Manufacturer	Date	Reference	Maintenance Record	Condition
1		**Radio Equipment**							
1-1		**Transmitter**							
1		HF Transceiver	FS-1000	5590-2466	Furuno	1989			Good
2		HF Transceiver	JSB-50	BS-14327	JRC	1975			Damaged
1-2		**VHF System**							
1		VHF Transceiver	JHV-217	CE-51953	JRC	1974			Damaged
2		VHF Transceiver	JHV-217	CE-51958	JRC	1974			Damaged
2		**Tower & Antenna System**							
2-1		**Antenna System**							
1		Antenna (HF)			JRC	1974			Good
2		Antenna (VHF)			JRC	1974			Good
3		**Power Supply Equipment**							
3-1		**Power Distribution Board**							
1		Distribution Board	NCB-430A	BP-10293	JRC	1974			Damaged
3-2		**UPS & AVR**							
1		Accumulator			Yuasa				
2		Battery Charger	DELTA			1988			Damaged
3		Power Supply	Akay	AK-4040AV		1993			Good
4		**Measuring Equipment**							
1		Volt Meter	TOA PM-9B	CT-7360aA		1973			Damaged
2		Fan	National		National				Good

STATUS OF TROUBLES

SITE NAME : POSO **PSO-176-(1/1)**

Item / Equipment	SSB / -		
Manufacturer	JRC		
Manufacturer in year	-		
Defective panel / unit	Transformer		
Details of Trouble Status	Cause doe to:	Urgency of Repair	Repairing to be:
	☑ Aging		☐ Immediacy
	☐ Lightning		☑ By next year budget
	☐ Corrosion		☐ By next project
	☐ Lack of Spares		☐ Unnecessary
	☐ Others		

General Comment for Maintenance:

In radio room is needed Air Conditioner (AC)
The equipment facility has been 20 years old, it does not so effective
Needed Generator

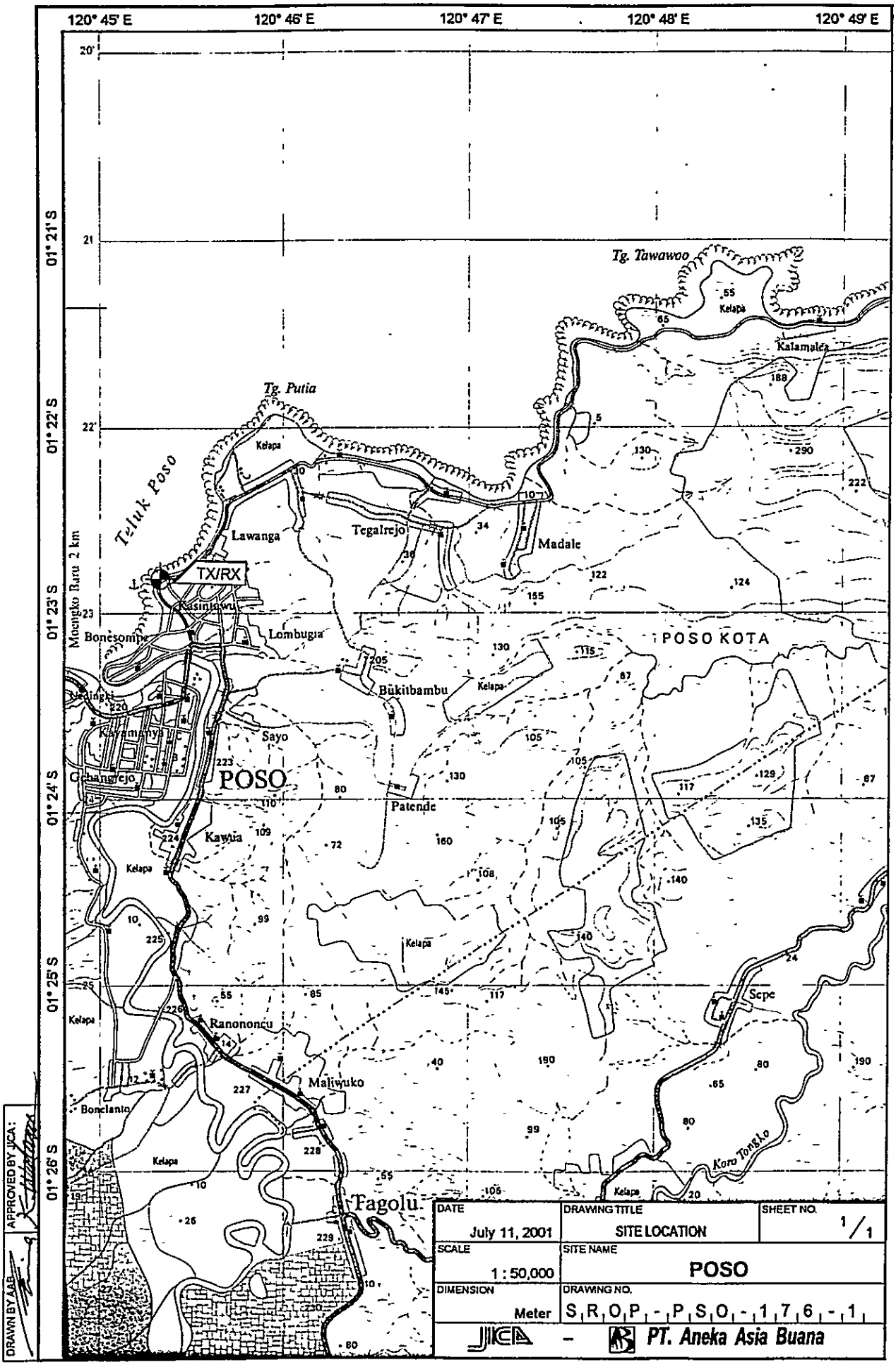
OPERATION SCHEDULE (FREQUENCIES)

Site Name: Poso

PSO-176-(1/1)

Call Sign : Mobile Service : PKM.6
Fix Service :

	FREQUENCY (kHz)	EMISSION	POWER (W)	UTC 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	REMARK
	Mobile Service				
1	2 182,0	J3E	100		
2	6 215,0	J3E	100		
	VHF Service				
3	Channel-10	F3E	20		
4	Channel-15	F3E	20		
5	Channel-16	F3E	20		
6	Channel-20	F3E	20		
7	Channel-22	F3E	20		
	Fix Service				
8	5 381,5	J3E	100		
9	9 110,0	J3E	100		
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					



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DIMENSION: Meter	DRAWING NO.: SROP-PSO-176-1	

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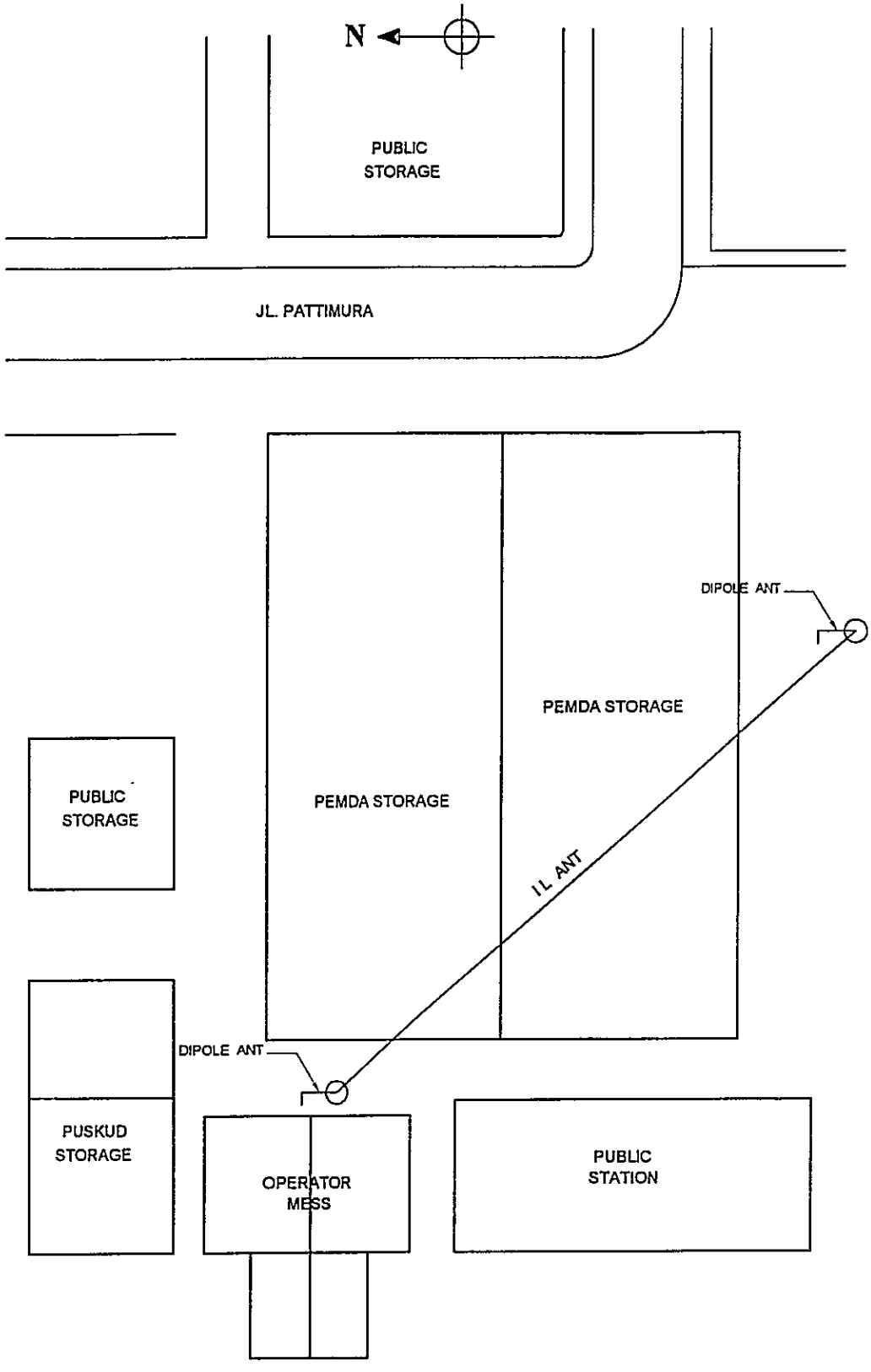

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SCALE: 1 500	SITE NAME: POSO	
DIMENSION: Milimeter	DRAWING NO: S,R,O,P,-,P,S,O,-,1,7,6,-,2,	
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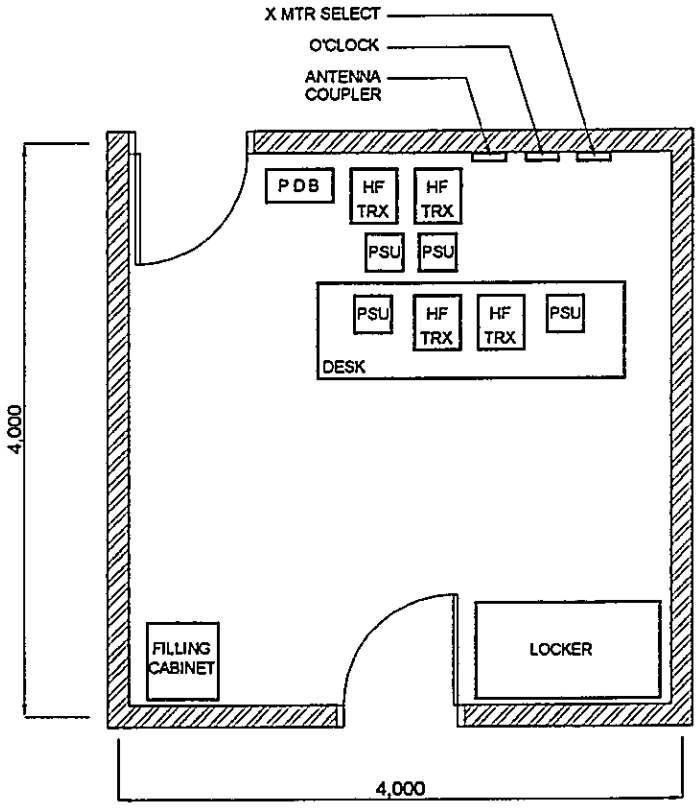

LEGEND

HF : HIGH FREQUENCY
PDB : POWER DISTRIBUTION BOARD
PSU : POWER SUPPLY UNIT
TRX : TRANSCEIVER (ING)
VHF : VERY HIGH FREQUENCY

APPROVED BY JICA

DRAWN BY AAB

DATE: July 10, 2001	DRAWING TITLE: EQUIPMENT FLOOR LAYOUT	SHEET NO: 1/1
SCALE: 1 : 25	SITE NAME: POSO	
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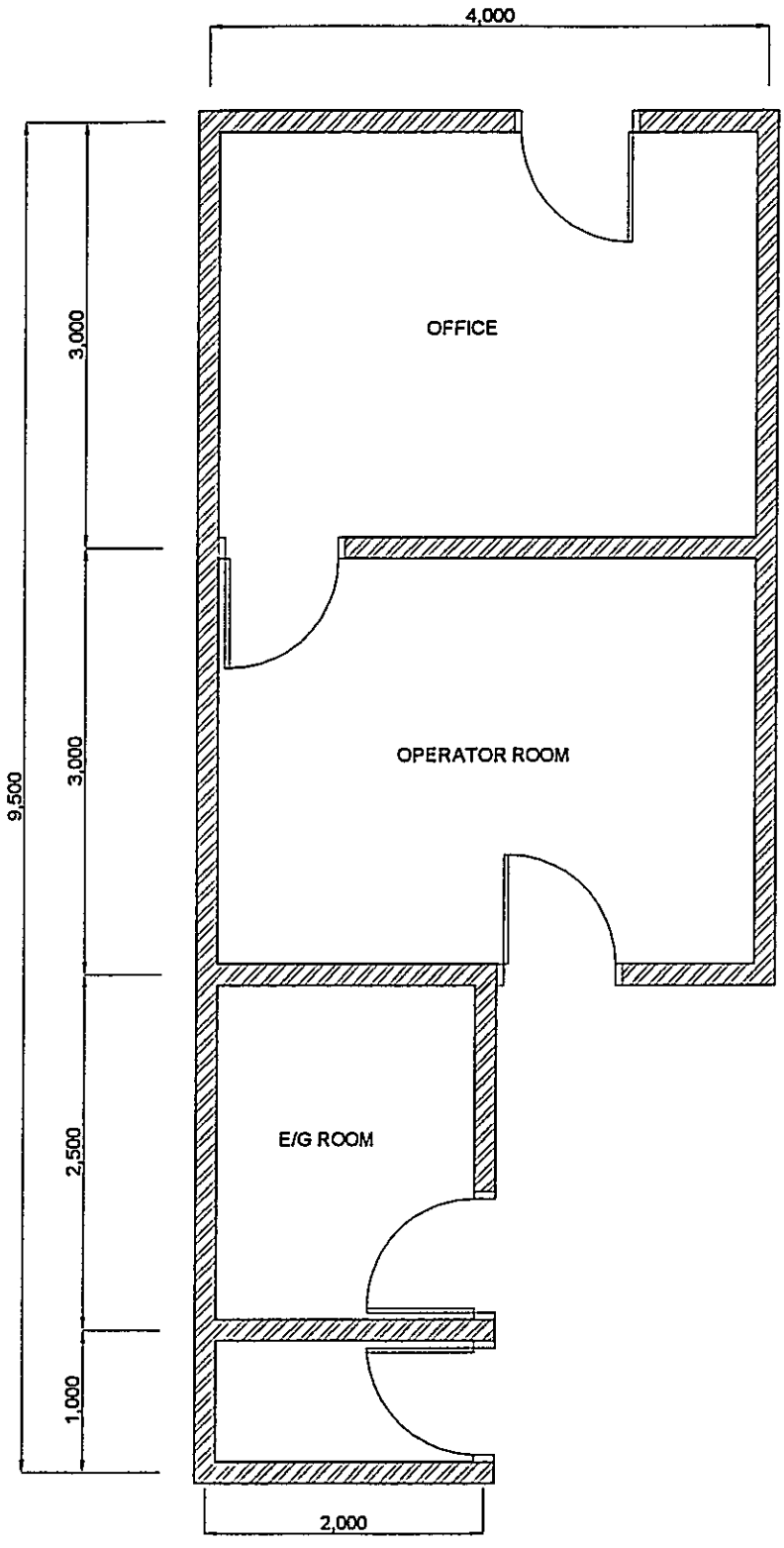
JICA – PT. Aneka Asia Buana		



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DIMENSION: Milimeter	DRAWING NO: SROP-PSO-176-4	

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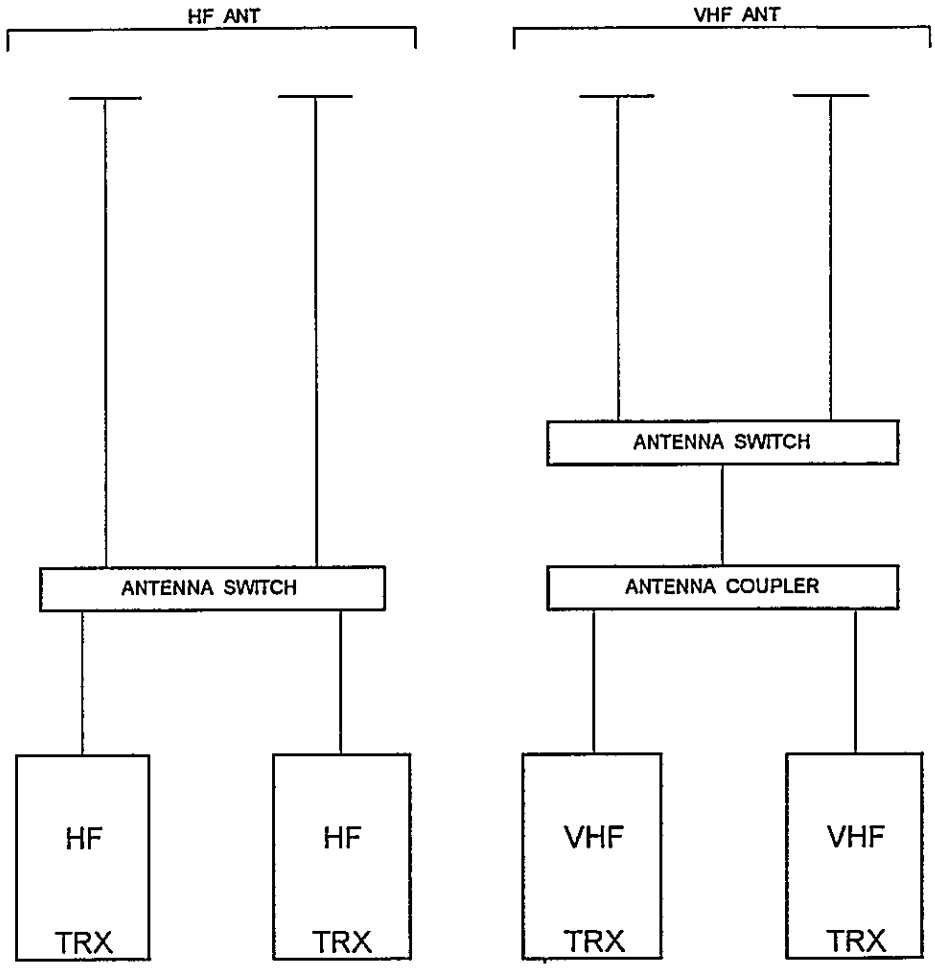

LEGEND

ANT : ANTENNA
HF : HIGH FREQUENCY
I L : INVERTED L
TRX : TRANSCEIVER (ING)
VHF : VERY HIGH FREQUENCY

APPROVED BY JICA

DRAWN BY AAB

DATE: July 10, 2001	DRAWING TITLE: SYSTEM BLOCK DIAGRAM	SHEET NO: 1/1
SCALE: No Scale	SITE NAME: POSO	
DIMENSION: Milimeter	DRAWING NO: SROP-PS0-176-5	

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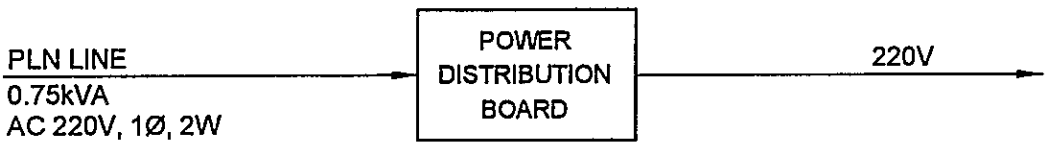

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SCALE: No Scale	SITE NAME: POSO	
DIMENSION: Milimeter	DRAWING NO: SROP-PSO-176-6	
JICA –	PT. Aneka Asia Buana	