

RF CAPTURE EQUIPMENT

4411A

General

This unit can record / reproduce RF signal in center frequency range of 46MHz ~ 960MHz, 8MHz band width, on / from hard disk . Recording time is approx. max. 6 hours. By adding option, It is possible to correspond to wide band width of 24MHz and 2 diversity mode with 8MHz band width.

Also, GPS module is equipped, so that positional information is recorded and to specify recorded position can be made easily.

By using this unit, signals of various places can be recorded and such data can be carried bark. Accordingly, operating confirmation of receiver and etc. can be made in factory or laboratory with close to outside receiving environment . ()

This unit is made for the purpose of RF signal analysis and evaluation test of receiver. Do not use this unit other than such purpose. Be careful that use for purpose of reproduction of contents is prohibited.



This unit is 4411A-001.

Features

• Realized all-in one

Unit is made up of 1 body of 4U rack mount size. All of down converter, A/D·D/A converter part, data recording part and up-converter are built-in.

• Corresponded to wide frequency range and level range

RF signal of input level - 90dBm ~ +10dBm of 8MHz or 24MHz band width in center frequency of 46MHz ~ 960MHz can be recorded.

• Equipped large capacity of HDD for recording

Capacity for recording HDD (2 RAID configuration) is approx. 930 GBytes and approx. max. 6 hours continuous recording is possible.

Also, files in HDD for recording can be managed up to max. 2048 files.

• Adopted 16bits A/D converter, D/A converter

A/D converter and D/A converter of 16bits resolution are adopted, so that wide dynamic range is secured.

• Built-in GPS module

GPS module is built-in, so that recording of positional information of time to time is possible. To specify recording position during reproduction is possible easily.

• Trigger function

By signal from external trigger input terminal, making of recording is possible. Trigger position can be set, so that recording of signals of before / after trigger issue is possible.

• Added information at the time of recording on data

Recording of frequency, setting level information, over-flow information of A/D converter part and trigger function at the time of recording are recorded together, user can be reproduced easily (Reproduction with different frequency and level from recording time is possible).

Also, voluntary character sequence (Alphanumeric 256 characters) can recorded along with recording data.

• Superior user interface

By adopting 6.5 inches TFT color liquid crystal with touch panel for operating indication part, superior user interface for operating and visual literacy is provided. Basic operation relating to recording/ reproduction is possible all by touch panel.

• Equipped HDD for back up of recording data

HDD drive (Removable drive) for back up of recording data is equipped on front panel of unit. Data in HDD for recording can be copied to HDD for back up. Also, this drive has construction to be able to detach HDD easily. (Do detaching of HDD after turning power off).

• Possible to hold recording data commonly with Eiden's existing RF CAPTURE EQUIPMENT (4406A)

Data recorded by 4406A can be reproduced by this unit. Also, data recorded by this unit can be reproduced by 4406A. (But, when data are transferred to 4406A, conversion of recording format is needed).

Main Unit 1
	425 (w) × 177 (H) × 533 (D) mm
	Weight 20kg
Accessories	Power Cable (3 pin 2pin converter) 1
	Instruction Manual 1
Power Source	Input Voltage Allowable Range : AC90V ~ AC250V
	(50Hz/60Hz)
	Power Consumption : Approx. 210VA
Operating Environment	Temperature : +5 ~ +40
	Humidity : Less than 90%RH
	(No dew generation)

Type List

Type	Recording & Reproduction Band Width
4411A-001	8MHz
4411A-002	8MHz , 24MHz
4411A-003	8MHz , 24MHz , 2 Diversity (8MHz × 2 routes)

Rating

Input Terminal

RF Input Terminal [RF INPUT]

Connector / Impedance : N-R / 50
 Input Center Frequency : 46MHz ~ 960MHz
 Input Signal Level : -90dBm ~ +10dBm
 (Regulated with input total power)
 Pass Band Width : 8MHz
 AGC Function : ON / OFF But, normally OFF: Use with MGC)
 Response time constant, possible to switch 5sec. and 30sec.

IF Input Terminal for Recording [IF INPUT (for Record)]

Connector / Impedance : BNC-R / 50
 Input Center Frequency : 36MHz
 Input Level : -10dBm
 Pass Band Width : 8MHz
 Normally, connected with [IF OUTPUT (for Record)] terminal by U-link.

IF Input Terminal for Reproduction [IF INPUT (for Play)]

Connector / Impedance : BNC-R / 50
 Input Center Frequency : 44MHz
 Input Level : -10dBm
 Pass Band Width : 8MHz
 Normally, connected with [IF OUTPUT (for Play)] terminal by U-link.

External Reference Input Terminal [10MHz INPUT]

Connector / Impedance : BNC-R / 50
 Input Frequency : 10MHz
 Input Level : 0dBm ± 3dB

External TRIGGER Input Terminal [TRIGGER INPUT]

Connector : BNC-R
 Input Level : TTL
 Signal Format : Operating at edge of Low High or High Low

GPS ANTENNA Input Terminal [GPS ANT. INPUT]

Connector / Impedance : BNC-R / 50
 Input Center Frequency : 1.57542GHz
 Connect attached GPS antenna to this terminal.

Output Terminal

RF Output Terminal [RF OUTPUT]

Connector / Impedance : N-R / 50
 Output Center Frequency : 46MHz ~ 960MHz
 Output Level : Max. +10dBm
 Pass Band Width : 8MHz

IF Output Terminal for Recording [IF OUTPUT (for Record)]

Connector / Impedance : BNC-R / 50
 Output Center Frequency : 36MHz
 Output Level : -10dBm
 Pass Band Width : 8MHz
 Normally, connected with [IF INPUT (for Record)] terminal by U-link.

IF Output Terminal for Reproduction [IF OUTPUT (for Play)]

Connector / Impedance : BNC-R / 50
 Output Center Frequency : 44MHz
 Output Level : -10dBm
 Pass Band Width : 8MHz

Normally, connected with [IF INPUT (for Play)] terminal by U-link.

Internal Reference Output Terminal [10MHz OUTPUT]

Connector / Impedance : BNC-R / 50
 Output Frequency : 10MHz
 Output Level : 0dBm ± 2dB

Digital Processing Part

A/D, D/A Resolution : 16bits
 Data Sampling Rate : 21.524475MHz
 (2 times of ATSC symbol rate)
 21.671957MHz
 (8/3 times of ISDB-T symbol rate)
 Possible to select.

Data Recording Capacity : 930 Gbytes

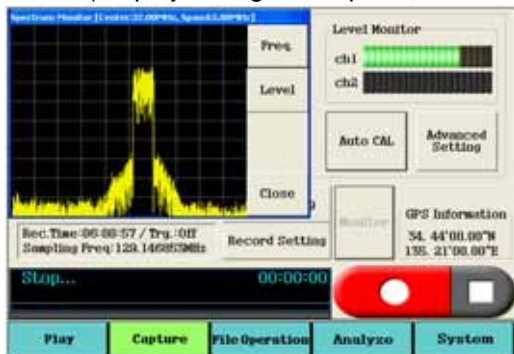
Interface to External Device

USB 2.0 : 4 routes
 SATA(1.5Gbps) : 1 route
 ETHERNET (Giga bit Ethernet) : 1route

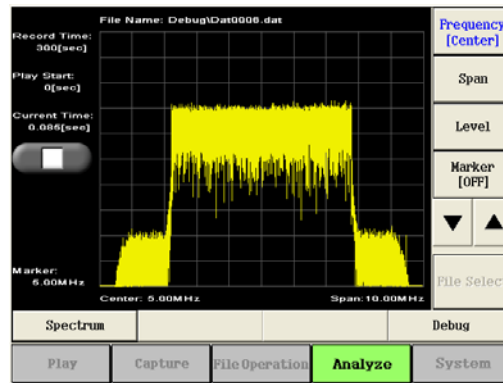
Operating Display (Main Display)



(Display during RF Capture)



(Analyzer Display)



(Display during reproduction)



By adopting color TFT touch panel for indicating panel, increased operation function is realized by eliminating complicated cursor operation and more visual literacy.