JRC

Multi-path Fading Simulator

NJZ-1600D

The NJZ-1600D is best solution for evaluating the propagation paths of 3GPP-standard, 3.5-generation mobile phones and wireless LANs. In addition, the NJZ-1600D comes equipped with external control software as a standard feature.

Features

- **The profiles of 3GPP (HSDPA), 3GPP2, and GSM have been installed in the NJZ-1600D.**
  The NJZ-1600D contains the Moving propagation and the Birth-Death propagation for the 3GPP. The functions can be executed easily by using the call function.

- **The NJZ-1600D is equipped with PC external control software as standard, so it can be operated from the PC.**
  The NJZ-1600D can also operate under Ethernet GP-IB external control or as a standalone simulator like the conventional model.

- **The NJZ-1600D is equipped with an extended dynamic option as standard.**
  The environment of the current propagation path can be reproduced by continuously operating the delay profiles of 20,000 patterns. The delay profiles edited in CSV format by using the PC external control software can be downloaded into the memory of the NJZ-1600D. In addition, the NJZ-1600D can be operated alone after the delay profiles have been downloaded.

- **AWGN option available.**
  The amount of work for setting up the noise load test environment can be reduced by the dedicated internal AWGN option.

JRC *Japan Radio Co., Ltd.*

■Specifications

Item	Specification
Configuration	NJZ-1600D
Number of CH	2
Number of Path	12
Input Signal frequency Range	70 to 340, 460 to 3,000 MHz Internal local operation : 800 to 2,600 MHz
Pass bandwidth	20 MHz
Input level range	-20 to -50 dBm
Output level range	-20 to -135 dBm Unit : 0.1 dB
Delay time	0 to 200 μsec Unit : 0.1 nsec
Inter-path relative level	0 to 40 dB, Unit : 0.1 dB
Maximum fading frequency	2,000 Hz
Modulation	Rayleigh, Rice, Doppler, Phase
Weight	25 kg or less
Dimensions	425(W)x199(H)x550(D) mm
Operation method	● 8.4 inch TFT display ● Switches provided on the panel GP-IB, Ethernet (PC control software provided)
Safety standard	CSA, CE

■Standard components

Product Name	Model Number	Quantity	Remarks
Multi-path fading simulator	NJZ-1600D	1	NJZ-1600D including the dynamic function
Distributor	7AZMD0007	2	For 800 to 3,000 MHz
RF cable	7ZCMD0489	4	
U link	7ZCMD0490	2	For local operation
Fuse		1 set	One for each fuse in use
External control software	CYC-279	1	Compatible with Windows®XP
Instruction manual		1	
Ethernet cable		1	
Inspection report, correction certificate,traceability certificate		1	Expressed in both Japanese and English

■Optional components

Product Name	Model Number	Quantity	Remarks
Internal AWGN	CMB-328A	1	
Correlation TX / RX	NJZ-1816	1	Will be of the standalone type.

■Example of using the external control software
  (PC not included in the software product)

## ■Fading test required for HSDPA under the 3GPP standard

Example ： Table D.2.2.1A : Propagation Conditions for multi-path fading environments for HSDPA
ITU vehicular A, Speed 120km/h, (VA120)

Maximum Fading Frequency (Hz)	ON	222.2	Vehicle Speed (km/h)		120.0	
Path No.	1	2	3	4	5	6
State	ON	ON	ON	ON	ON	ON
Delay μs	0.0000	0.3100	0.7100	1.0900	1.7300	2.5100
Level dB	0.0	-1.0	-9.0	-10.0	-15.0	-20.0
Spectrum	Rayleigh	Rayleigh	Rayleigh	Rayleigh	Rayleigh	Rayleigh
LOS						
K Factor dB						
Phase deg						

Recall data : 3GPP UE VA120   Save data :   Delay Spread (μs) 0.3704

Easy to set presetting delay profile

■Configuration (Example of AWGN Unit connection)

Easy to connect, easy to adjust by using One box fading simulator.
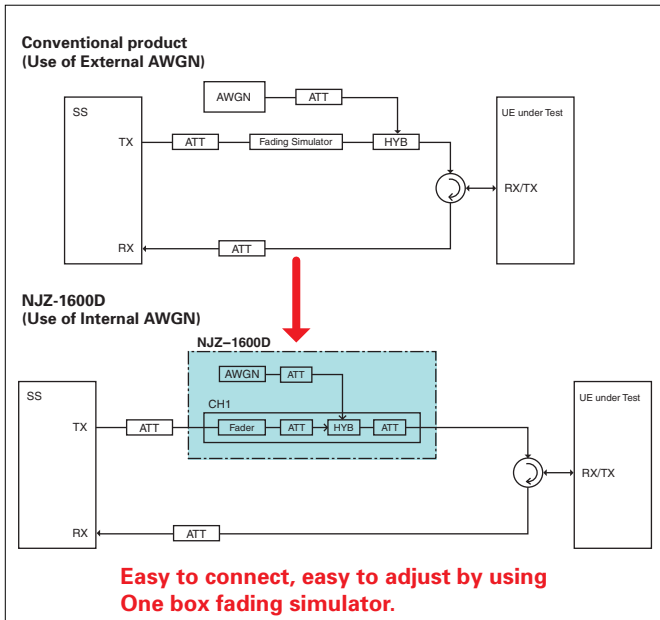
Example : Figure A. 16 : Connection set up for HSDPA fixed reference channel

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⚠ CAUTION

● Read the Instruction Manual before your use for safety in operation.

● Do not install this equipment in a place with water, wetness, vapor, dust and oily smoke. Otherwise, a fire, electric shock or failure may result.

・ **Specifications may be subject to change without notice**   ***For further information, contact:***