

## Connectivity testing of wireless terminal equipment

- ◇ By preventing interference with the unnecessary radio waves around AP, making transmission level constant and also keeping the distance between two points exactly, the reproducibility of measurement is improved.

### \*Application\*

As a feature of recent equipment such as LCD TV, projector and electronic device, almost equipments are equipped with a wireless terminal in the display and allow intercommunication with an external network by connecting to peripheral wireless network.

When developing this low power transmission device, in order to keep the transmission level of the AP constant, it is necessary to adjust the distance between two terminals or to adjust the reference level using an attenuator.

Because the accurate relative comparison can't be performed if the level is different.

In addition, if the external noise such as another wireless network, a wireless microphone and a base station of mobile phone in the periphery occurs the interference when testing, the test result won't be correct.

The measurement system using anechoic box and step attenuator will be very useful in order to solve these two problems.

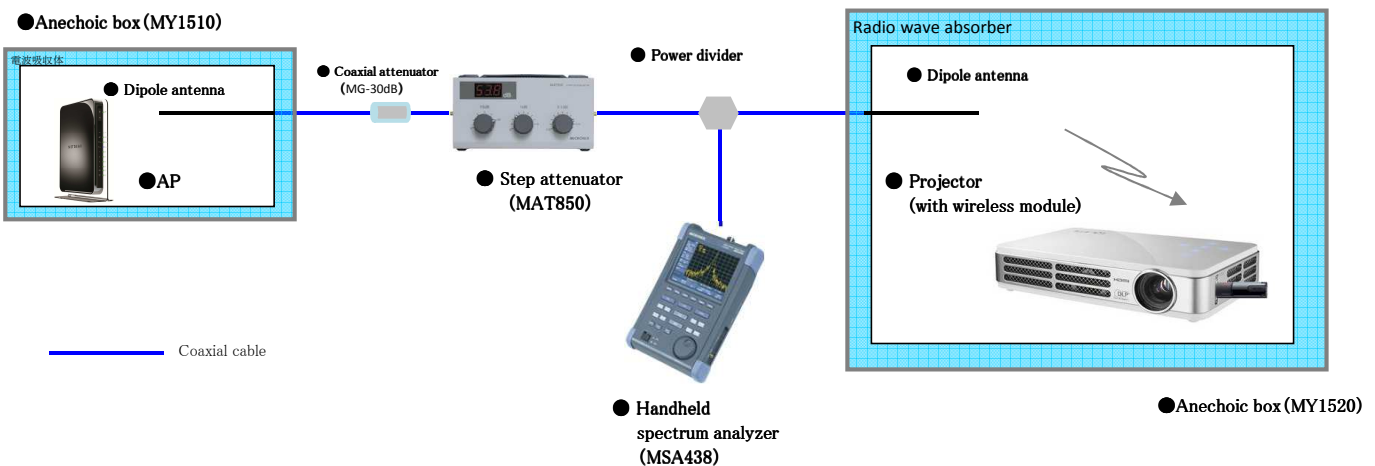
### \*Solution\*

AP and a dipole antenna are installed in an anechoic box, and LCD TV and a dipole antenna are installed in another anechoic box. the intercommunication environment by the coaxial cable connection is made.

The dipole antenna of AP side and the step attenuator are connected with a coaxial cable, and this step attenuator and the dipole antenna of Projector side are connected through a power divider. On the other hand, the power divider is connected to the spectrum analyzer. By varying the attenuation of the step attenuator and observing the receiving level with the spectrum analyzer, the receiving state at Projector side is adjusted.

1. Measuring the transmission level of AP with the spectrum analyzer.
2. Blocking the unnecessary noise around the test place.

#### Connection example )



### \*System configuration\*

Anechoic box	MY1520	1
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Dipole antenna	M304	2
Coaxial attenuator	MG-30dB	1
Coaxial cable	MC201 SMA(P)/SMA(P) 0.5m	5
Power divider		1
Step attenuator	MAT850	1
Handheld spectrum analyzer	MSA438	1