

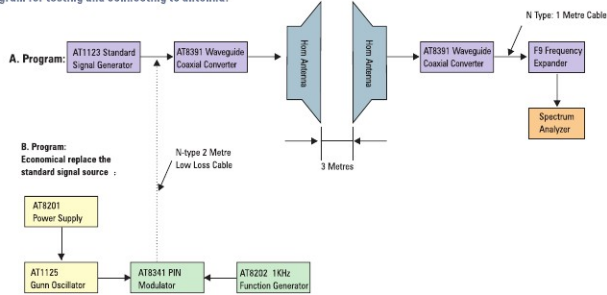
Antenna Measurement Experiment System AT3201

Purpose of experiment

1. Understand the theory of antenna
2. Find out gain of antenna, vertical & horizontal diagram and the methods and concept of test

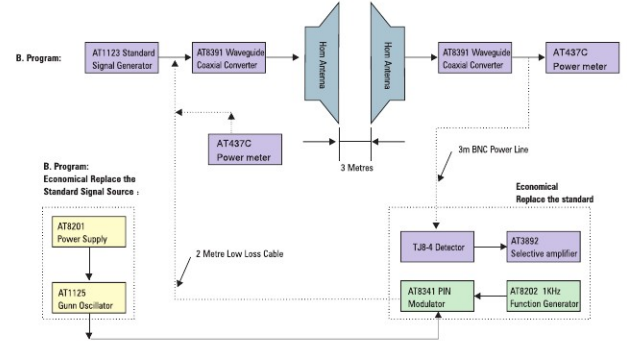
Requirements of experiment

1. Diagram for testing and connecting to antenna:



AT1123 standard signal generator (or AT1125 Gunn Oscillator, AT8201 Power Supply, AT8202 Function Generator and AT8341 PIN Modulator)
AT2421 (AT437C) power meter (or TJ8-4 detector and AT3892 selective amplifier) are used to test direction of antenna to drawing direction diagram.

2. Antenna testing and equipment connection



AT1123 standard signal generator (or AT1125 Gunn Oscillator, AT8201 Power Supply), AT2422 (or AT4373) power meter are used to test the direction of antenna.

Antenna Measurement Experiment System

AT3201

Instruments of experiment list (AT3201A, AT3201B)

Item	Name of configuration device	Model	Specification	Quantity (unit)	Remarks
1	Horn Antenna	AT8912	VSWR: = 1.5 Gains: = 15dB	2Piece	program A B
2	Power Meter	AT2422 or AT437C	Power:100mW (max) ; AT11802 sensor; VSWR: 1.34 (10MHz~18GHz) LED display. Automatically adjust and correct	1 desk	Program A
	Detector	ATJ8-4	~12.4GHz	1 Piece	Program B. economical type replace power meter
	Selective amplifier	AT3892	Frequency:1KHz±40Hz, gain:60dB,sensitivity:< 2uV	1 desk	
	PIN modulator	AT8341	VSWR:≤1.5; modulating depth:≥15dB	1 Piece	
	Function generator	AT8202	Frequency:0.5~2KHz; output square:7V	1 Piece	
3	Coaxial Waveguide Converter	AT8392	VSWR: = 1.5;	3 Piece	Program A---2 piece Program B ---3piece
4	Standard signal generator	AT1123	frequency: 7.5~12.4GHz; LED display; power: =5mW methods of modulating ; square、external modulating、 outside the goose、 internal modulating repetition frequency: 30~3KHz; pulse: 1~30mS	1 desk	Program A
	Gunn oscillator	AT1125	frequency: 8.2~12GHz; Power: =10mW	1 Piece	program B. economical type replaces standard signal generator
	Power supply	AT8201	Voltage:0-12V; current: 500mA	1 Piece	
5	Bracket with horizontal and vertical scale		Three, with horizontal and vertical scale	2 Piece	Program A B
6	2m wire	N-type connector		1 root	Program B- with Gunn oscillator
	3m wire	BNC connector		1 root	Program B with AT3892 selective expander
7	Frequency expander	F9		1 desk	Program A B testing gain of antenna
8	Spectrum analyzer	AT5010 +		1 desk	Program A B testing gain of antenna (optional)
	Spectrum analyzer	AT6010 +		1 desk	Program A B testing gain of antenna (optional)
	Spectrum analyzer	AT6030D		1 desk	Program A B testing gain of antenna (optional)