



rf/microwave instrumentation

## Application Note #55 Antenna Cross References of Old and New Model Numbering System

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AR RF/Microwave Instrumentation has instituted a new, descriptive model numbering system for its antennas. Model numbers in the new system incorporate information identifying the basic antenna “type” and the frequency range covered by the antenna. This application note describes the logic used to code antenna model numbers and provides complete cross referenced tables relating the old and new model numbers.

**Coding system:** The first two letters are always AT signifying the product is an Antenna. The third letter identifies the “type” of antenna. The two sets of numbers separated by a letter following the antenna “type” represent the frequency range of the antenna. If an antenna of the same “type” and of identical frequency range has already been named, a -# suffix is used.

AT[Type B, C, E, H, L, P,R, S,...][Start freq][Start freq units H,k,M,G][Stop freq][Stop freq Units M,k,M,G][-#]

AT	=	Antenna			
Type	=	Bowtie/Biconical	= B	Log-Periodic (LP)	= L
		AR Cavitenna	= C	Parallel Transmission Line	= P
		E-Field generator	= E	AR Radiant Arrow	= R
		Horn antenna	= H	Stacked LP	= S

This method of coding allows for other types to be added as needed.

**Start & Stop Frequency:** Shown as kHz, MHz, or GHz rounded to the nearest whole number (start frequencies are rounded down, ending frequencies are rounded up).

**Start and stop freq. units:** For simplicity, the units are abbreviated; H =Hz, K =kHz, M = MHz and G =GHz. When the start/stop frequency units are the same, the stop frequency unit is not shown.

-# suffix is appended to the model number if it has already been used.

**Note:** An M# suffix is used by AR to identify a slightly modified product. The new model numbering system retains this policy. Modified versions are normally listed at the end of the model specification sheet.

### Examples:

- **ATS700M11G** Applying the logic described above, this is a stacked LP antenna covering an approximate frequency range of 700 MHz to 11 GHz. This “reading” of the model number closely correlates with the actual description from the data sheet noting that this is indeed a stacked Log-Periodic antenna with a frequency range of 700 MHz – 10.5 GHz with a power rating of 300 - 150 Watts. As an aside, this particular antenna has excellent field uniformity and its bandwidth is more than sufficient to meet IEC 61000-4-3 testing requirements covering 1 – 6 GHz.
- **ATH200M1G-1** This horn antenna covering 200 MHz to 1 GHz was formerly the AT4501. The (-1) indicates that there is another horn antenna with the same frequency coverage. (Note the ATH200M1G (the old AT4000A) in the cross reference tables)
- **ATP10K100MM1** This is a unique antenna consisting of parallel transmission lines. It is of the same type and frequency range as the ATP10K100M. The reason the M1 suffix is used rather than the -1 is that this product is a modification of an existing product rather than based on a new design.

## Cross Reference Old Model Numbers to New Model Numbers

<i>Old Model</i>	<i>New Model</i>	<i>Frequency Range</i>	<i>Type</i>
AT1000B	ATL150M1G	150 – 1000 MHz	Log-Periodic
AT1080B	ATL80M1G	80 – 1000 MHz	Log-Periodic
AT2000	ATC25M1G	25 MHz – 1 GHz	Cavitenna
AT2526A	ATR26M250	26 – 250 MHz	Radiant Arrow
AT3000	ATE10K30M	10 kHz – 30 MHz	E-Field Generator
AT3001	ATE10K30M-1	10 kHz – 30 MHz	E-Field Generator
AT3100	ATE10K100M	10 kHz – 100 MHz	E-Field Generator
AT3400	ATB27M80	27 – 80 MHz	Bowtie Antenna for ARCell
AT4000A	ATH200M1G	200 – 1000 MHz	Horn Antenna
AT4001A	ATH400M1G	400 – 1000 MHz	Horn Antenna
AT4002A	ATH800M5G	0.8 – 5 GHz	Horn Antenna
AT4003A	ATH4G8	4 – 8 GHz	Horn Antenna
AT4004	ATH7G18	7.5 – 18 GHz	Horn Antenna
AT4010	ATH2G10	2 – 10 GHz	Horn Antenna
AT4403	ATH200M2G	200 MHz – 2 GHz	Horn Antenna
AT4418	ATH1G18	1 – 18 GHz	Horn Antenna
AT4444	ATH2G4	2 – 4 GHz	Horn Antenna
AT4446	ATH4G6	4 – 6 GHz	Horn Antenna
AT4448	ATH6G8	6 – 8 GHz	Horn Antenna
AT4501	ATH200M1G-1	200 – 1000 MHz	Horn Antenna
AT4510	ATH1G4	1 – 4.2 GHz	Horn Antenna
AT4520	ATH2G8	2.5 – 7.5 GHz	Horn Antenna
AT4540	ATH18G27	18 – 26.5 GHz	Horn Antenna
AT4550	ATH26G40	26.5 – 40 GHz	Horn Antenna
AT4560	ATH18G40	18 – 40 GHz	Horn Antenna
AT4640	ATH18G27-1	18 – 26.5 GHz	Horn Antenna
AT4650	ATH26G40-1	26.5 – 40 GHz	Horn Antenna
AT4710	ATH33G50	33 – 50 GHz	Horn Antenna
AT5000	ATP10K100M	10 kHz – 100 MHz	Parallel Strip Lines
AT5000M1	ATP10K100MM1	10 kHz – 100 MHz	Parallel Strip Lines
AT5000M3	ATP10K100MM3	10 kHz – 100 MHz	Parallel Strip Lines
AT6026A	ATR26M6G	26 MHz – 6 GHz	Radiant Arrow
AT6080A	ATR80M6G	80 MHz – 6 GHz	Radiant Arrow
New Model	ATS700M11G	700 MHz – 10.5 GHz	Stacked LP (Good choice for IEC 61000-4-3)

## Cross Reference New Model Numbers to Old Model Numbers

<i>New Model</i>	<i>Old Model</i>	<i>Frequency Range</i>	<i>Type</i>
<b>LOG-PERIODIC ANTENNAS</b>			
ATR26M250	AT2526A	26 – 250 MHz	Radiant Arrow
ATR26M6G	AT6026A	26 MHz – 6 GHz	Radiant Arrow
ATR80M6G	AT6080A	80 MHz – 6 GHz	Radiant Arrow
ATL80M1G	AT1080B	80 – 1000 MHz	Log-Periodic
ATL150M1G	AT1000B	150 – 1000 MHz	Log-Periodic
ATS700M11G	New Model	700 MHz – 10.5 GHz	Stacked LP <small>(Good choice for IEC 61000-4-3)</small>
<b>CAVITENNA</b>			
ATC25M1G	AT2000	25 MHz – 1 GHz	Cavitenna
<b>E-FIELD GENERATORS</b>			
ATE10K100M	AT3100	10 kHz – 100 MHz	E-Field Generator
ATE10K30M	AT3000	10 kHz – 30 MHz	E-Field Generator
ATE10K30M-1	AT3001	10 kHz – 30 MHz	E-Field Generator (Use for large EUTs)
ATB27M80	AT3400	27 – 80 MHz	Bowtie Antenna for ARCell
<b>PARALLEL TRANSMISSION LINES</b>			
ATP10K100M	AT5000	10 kHz – 100 MHz	Parallel Strip Lines
ATP10K100MM1	AT5000M1	10 kHz – 100 MHz	Parallel Strip Lines
ATP10K100MM3	AT5000M3	10 kHz – 100 MHz	Parallel Strip Lines
<b>RF &amp; MICROWAVE HORNS</b>			
ATH200M1G	AT4000A	200 – 1000 MHz	Horn Antenna
ATH200M1G-1	AT4501	200 – 1000 MHz	Higher power Horn Antenna
ATH200M2G	AT4403	200 MHz – 2 GHz	Horn Antenna
ATH400M1G	AT4001A	400 – 1000 MHz	Horn Antenna
ATH800M5G	AT4002A	0.8 – 5 GHz	Horn Antenna
ATH1G18	AT4418	1 – 18 GHz	Horn Antenna
ATH1G4	AT4510	1 – 4.2 GHz	Horn Antenna
ATH2G10	AT4010	2 – 10 GHz	Horn Antenna
ATH2G4	AT4444	2 – 4 GHz	Horn Antenna
ATH2G8	AT4520	2.5 – 7.5 GHz	Horn Antenna
ATH4G8	AT4003A	4 – 8 GHz	Horn Antenna
ATH4G6	AT4446	4 – 6 GHz	Horn Antenna
ATH6G8	AT4448	6 – 8 GHz	Horn Antenna
ATH7G18	AT4004	7.5 – 18 GHz	Horn Antenna
ATH18G27	AT4540	18 – 26.5 GHz	Horn Antenna
ATH18G27-1	AT4640	18 – 26.5 GHz	Horn Antenna w/large spot size
ATH18G40	AT4560	18 – 40 GHz	Horn Antenna
ATH26G40	AT4550	26.5 – 40 GHz	Horn Antenna
ATH26G40-1	AT4650	26.5 – 40 GHz	Horn Antenna w/large spot size
ATH33G50	AT4710	33 – 50 GHz	Horn Antenna