Radio Meter Statistics

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NUMERIS

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Meter statistics for buying, selling and programming radio fall into three general categories: Basic statistics, Time Spent and Loyalty statistics, and Buying and Selling statistics.

This document covers the most-used statistics; however, meter software programs also use a variation of statistics such as Loyalty, # and Length of Daily Sessions, Average Cume and Average Minutes. These are all just variations of the 3 basic statistics: AMA, Reach (Cume) and Total Hours Tuned.

Basic Statistics

Using meter audience estimates is easy once you understand the three Basic statistics: **Average Minute Audience (AMA)**, **Cume** and **Total Hours Tuned**.

The Basic audience statistics really show only two things: HOW MANY people are listening and HOW LONG they are listening.

- HOW MANY is reported as Reach
- HOW LONG is reported as Total Hours Spent

Reach tells you how popular a station/program/daypart is: Are there lots of people tuning in?

Hours Tuned (time spent) tells you how loyal people are to a station/program/daypart: Do they spend lots of time with a station and their favourite programs, or do they flip from station to station?

AMA (Average Minute Audiences) is where HOW MANY and HOW LONG <u>intersect</u>. AMA gives you an idea of both popularity and loyalty of a station/program/daypart.

AMA can be affected by cume and/or hours tuned. If the AMA is going up or down, you need to look at both reach and hours to see where the change is coming from…

- Are less people tuning in?
- Are people spending less time?
- Is it a combination of both – less people listening and those that do, don't stay very long?

For example, a station could have a bump up in its AMA and you could conclude that the station is doing great. However, when you look at the cume and hours tuned, you see that although there was a huge increase in hours tuned (may be due to a sports/weather/special event) the station actually lost listeners (cume). This means that the big increase in hours tuned managed to "push" up the AMA despite the loss in reach. If you just looked at the AMA you wouldn't be seeing the whole picture.

Time Spent and Loyalty Statistics

The following statistics are used in determining how much time people spend with radio and how loyal they are: **Share**, **Total Hours Tuned** and **Average Hours per Listener**.

Buying and Selling Statistics

The following statistics are used in the buying and selling of radio and some are useful for the programming side as well: **Gross Impressions**, **Cost per Thousand**, **Gross Rating Points**, **Frequency**, **Cost per Point**, **Cume** and **AMA**.

AMA (Average Minute Audience)

Answers the question…"*On average, how many people listened to a program/daypart?*"

- The average number of people who listened to radio during an average minute within a specified time period.

- AMA is also called DUPLICATED AUDIENCE. This is because AMA is determined by adding the total number of listeners in each minute and dividing by the number of minutes in the daypart. If a person tuned in for more than one minute, they are counted more than once.

$$\text{AMA} = \frac{\text{Total Audience}}{\text{Total Minutes}}$$

How to calculate Average Minute Audience (AMA) example:

Station CAAA has an AMA of 3,900 for Monday 7am – 7:05am in the Women 25-54 demographic. It is calculated as follows:

Minute	Women 25-54
Mon 7:00 – 7:01am	3,700
Mon 7:01– 7:02am	3,700
Mon 7:02 – 7:03am	4,000
Mon 7:03 – 7:04am	3,800
Mon 7:04 – 7:05am	4,300
	19,500

$$\text{AMA} = \frac{\text{Total Audience}}{\text{Total Minutes}} = \frac{19,500}{5} = 3,900$$

This means that an average of 3,900 Women 25-54 tuned into CAAA during any 1 minute period between 7-7:05am on Monday.

AMA can be used to …

- Determine the value of scheduling advertising during a specific daypart/program
- Identify dayparts with greatest audience potential and optimum time periods for sponsorship/promotional placement
- See how a station's audience flows throughout the day
- Determine which stations/dayparts/programs have the largest average audience
- Evaluate the performance of regular or special programming
- Identify the most popular on-air personalities
- Evaluate performance and establish pricing of specific dayparts/programs

Rating

Answers the question… *"On average, what percentage of a population listened to radio during a daypart/program?"*

- The average percentage of people in a specified population who listened to radio during any minute within a specified time period.

- RATING is AMA (Average Minute Audience) expressed as a percentage of a population in a geographically defined area. One RATING point equals 1% of a population.

- RATING is based on a specific market and demographic - so a RATING point in one market does not necessarily equal a RATING point in another market.

- RATING is also called AMA%, RATING POINT or AMA RATING.

$$\text{Rating} = \frac{\text{Average Minute Audience}}{\text{Population}} \times 100$$

How to calculate Ratings (AMA Rating) example:

Station CAAA has an AMA audience of 1,800 for Wednesday 3-6pm in the Men 18-34 demographic and the Central Market Population for this age/sex group is 56,940.

$$\text{RATING} = \frac{\text{AMA Audience}}{\text{Area Population}} \times 100 \qquad \frac{1,800}{56,940} \times 100 = 3.2$$

This means that for the Drive show running Wednesday 3-6pm, 3.2% of Men aged 18-34 in the market were listening during any 1 minute period of this daypart.

AMA Rating can be used to …

- Determine the value of scheduling advertising during a specific daypart/program
- Identify dayparts with greatest audience potential and optimum time periods for sponsorship/promotional placement
- See how a station's audience flows throughout the day
- Determine which stations/dayparts/programs have the largest average audience
- Evaluate the performance of regular or special programming
- Identify the most popular on-air personalities
- Evaluate performance and establish pricing of specific dayparts/programs

Cume (Reach)

Answers the question…*"How many different individuals tuned in for at least 1 minute during a specific daypart?"*

- The estimated total number of <u>different</u> people who listened to radio for at least one minute during a specified period.

- CUME is also called UNDUPLICATED AUDIENCE. This is because each listener is only counted once during the time period, even if they listened for more than one minute.

- CUME is also called REACH

How to calculate Reach example:

Audience Cume (or Reach) is the estimated number of different (or unduplicated) persons who listened to a station for at least one minute within a program or daypart. No matter how long the tuning period, each person is counted only once. The value of each person is equal to their representation value (or weight) of the population. This metric cannot be manually calculated; it is computed directly from meter level data using special industry software programs.

Cume can be used to …

- Determine how many people within a specified demographic group listened to a program/daypart/ station/group of stations in a particular market
- Find out how many people are listening to stations from outside of the market
- Compare the strength of radio to other media
- Estimate potential audience for an advertising campaign
- Develop scheduling strategies
- Estimate the potential audience for an advertising, sponsorship or promotional campaign
- Develop pricing strategies
- Evaluate competition in and out of the market

Cume%

Answers the question…*"What percentage of a population tuned in during this daypart?"*

- The percentage of <u>different</u> people in an area who listened to radio for at least one minute during a specified period.
- CUME% is the cume (reach) audience expressed as a percentage of a population in a particular area or market.
- Within a cume audience, each listener is only counted once during the time period, even if they listened to for more than one minute.
- Also called REACH%

CUME%   =   # of People Listening   X 100
                          Population

How to calculate Cume% example:

Station CAAA has a reach of 15,400 for all Men 25-54 during Sunday noon-4pm, within the Central Market. The population of this age/sex group is 78,500; therefore the Cume% for CAAA is 19.6%.

$$\text{Cume\%} = \frac{\text{Cume Audience}}{\text{Area Population}} \times 100 \qquad \frac{15,400}{78,500} = 19.6$$

This means that 19.6% of Men 25-54 who live in the Central Market listened to CAAA at least 1 minute during noon-4pm on Sunday.

Reach% can be used to …

- Determine how many people within a specified demographic group listened to a program/daypart/ station/group of stations in a particular market
- Find out how many people are listening to stations from outside of the market
- Compare the strength of radio to other media
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Share (%)

Answers the question…*"Of all people who are listening to radio, how many are listening to station CAAA?"*

- The percentage of the total listening audience that is tuned to a particular station/daypart.

- SHARE can help you see how the listening audience in a market is distributed among different stations during a time period. Share does not indicate the size of a station's audience – only its relative performance compared to other stations or dayparts. A 10% share in a higher listening daypart may represent more minutes of tuning than a 20% share in a lower listening daypart.

$$\text{Share} = \frac{\text{Total Station Minutes}}{\text{Total Radio Minutes}} \times 100$$

How to calculate Share% example:

Station CAAA Total Minutes for Monday to Friday 6am-9am is 935,200,000 for Adults 25-54. The Total Minutes tuned to radio for that daypart is 2,296,200,000.

$$\frac{\text{Total Station Minutes}}{\text{Total Radio Minutes}} \times 100 \qquad \frac{935,200,000}{2,296,200,000} \times 100 = 40.7$$

This means that out of all the minutes tuned in the market for adults aged 25-54 the Breakfast daypart, 40.7% were listening to station CAAA.

Share% can be used to …

- Determine which stations have the strongest share for a specific demo/daypart/program
- See how one station compares with other stations in the same market
- Find out which programs have the largest share within a specific time period
- See how different programs compare to each other – on a specific station or all stations – i.e. Breakfast Show
- Evaluate competition
- Help make programming decisions (i.e. schedule, lineup, personalities)

Total Hours Tuned

Answers the question…*"How many hours in total did listeners tune in for?"*

- The total number of hours listeners spent tuned to radio station/program/dayparts

- In the meter software TOTAL HOURS TUNED is calculated on a weekly basis:

$$\text{Total Hours Tuned} = \frac{\text{AMA X \# of Minutes}}{60}$$

How to calculate Total Hours Tuned example:

Station CAAA has an AMA of 33,400 for Adults 25-54 during the full week of Monday to Sunday 6am-10am. There are 1680 minutes during this period (7 days x 4 hours x 60 minutes).

$$\text{THT} = \frac{\text{AMA X \# of Minutes}}{60} \qquad \frac{33,400 \text{ X } 1680}{60} = 935,200$$

Therefore, Adults 25-54 spend a total of 935,200 hours tuned to this daypart on CAAA in one week.

Total Hours Tuned can be used to…

- Determine whether listeners are spending more or less time with radio

- Compare listening trends from one area to another

- Find out which demographic groups listen to more or less radio

- Compare listening trends among different stations, dayparts and different areas

- Compare hours spent with radio to other media

- Monitor trends in levels of usage for radio

- Determine impact of any market or station programming changes

- Look at competitive information about other stations/dayparts

- Make programming decisions and monitor their impact

- Make pricing decisions

- Adjust planning/selling/buying strategies based on market trends

- Determine how changes in programming or on-air personalities affect audience loyalty

Average Hours per Listener

Answers the question… *"What are the average hours listeners tuned in for?"*

- The average number of hours listeners spent tuned to radio/station/program/daypart

- This is a measure of audience loyalty or a program's success in maintaining audience interest

- This is also known as TIME SPENT LISTENING (TSL) AVERAGE HOURS TUNED or AVERAGE WEEKLY HOURS

$$\textbf{Avg Hrs per Listener} \quad = \quad \frac{\textbf{Total Hours}}{\textbf{Cume}}$$

How to calculate Average Hours per Listener example:

The total number of Adults 18+ who listened to radio during Monday to Sunday 5am-1am is 61% of the population of the market, which equates to 1,022,000. The total hours that radio listeners aged 18+ spent with radio during Monday to Sunday 5am-1am is 34,804,00.

$$\frac{\text{Total Hours}}{\text{Cume}} \quad \frac{34,804,000}{1,022,000} \quad = 34.1$$

Therefore the average adult aged 18+ who listened to radio (of which there were 1,022,000) spent an estimated 34.1 hours per week tuning in.

Average Hours per Listener can be used to…

- See how many hours on average people listened to radio

- Determine if people are spending more or less time listening

- Find out which demographic groups listen more (or less) to radio

- Compare the strength of radio to other media

- Compare listening patterns of different demographic groups

- Monitor trends in levels of usage

- Make comparisons on a regional, provincial or national basis

- Determine how changes in programming and on-air personalities affect audience loyalty

- Compare stations in the same markets; similar formatted stations in other markets; and the market average

Gross Impressions

Answers the question…*"How many times could an ad be potentially listened to?"*

- The estimated number of potential exposures to an advertisement or advertising campaign

- GROSS IMPRESSIONS is also called TOTAL IMPRESSIONS

Gross Impressions = AMA Audience X # of Spots (in each daypart)

How to calculate Gross Impressions example:

Gross Impressions are the sum of the AMA audience for a one week schedule (all commercial spots within a campaign). For example, a schedule of 16 spots aired on Station CAAA for Women 18-49 in the Central Market: 5 spots aired during Mon-Fri 7-7:30pm, 6 aired during Mon-Fri 4pm– 6pm and 5 spots during Mon-Sun 11pm-1am.

Daypart	# of Spots		AMA		GIs
M-F 7pm-7:30pm	5	X	48,200	=	241,000
M-F 4pm-6pm	6	X	25,800	=	154,800
M-Su 11pm-1am	5	X	12,300	=	61,500
					457,300

The Gross Impressions for this schedule are 457,300. This means that the advertisement could potentially have been heard 457,300 times by Women aged 18-49 during the one week campaign.

Gross Impressions can be used to …

- Determine what the potential exposure to the ad campaign is
- Calculate how well a station/schedule performed in delivering the campaign objectives
- Compare stations, programs and radio buys in terms of delivering the desired weight
- Evaluate effectiveness of a schedule/daypart/station/program
- Plan and allocate advertising budgets more efficiently among particular markets/stations
- Establish pricing of commercials

GRP (Gross Rating Point)

Answers the question…*"What is the total expected audience delivery for this schedule?"*

- GRP is the sum of ratings achieved for all exposures to an ad during a specific time period or advertising schedule.

- GRPs can be calculated the following ways:

$$\text{GRP} = \frac{\text{Gross Impressions}}{\text{Population}} \times 100$$

$$\text{GRP} = \text{Reach\% X Frequency}$$

$$\text{GRP} = \text{Rating X \# of Spots (in each daypart)}$$

How to calculate Gross Rating Points example:

A schedule of 16 spots aired on Station CAAA for Women 18-49 in the Central Market with a population of 1881,200, and generated Gross Impressions of 457,300.

$$\frac{\text{Gross Impressions}}{\text{Population}} \times 100 \qquad \frac{457,300}{881,120} \qquad \times 100 = 51.9$$

The schedule of 16 spots ran as follows:

Daypart	# spots		AMA Rating		GRPs
M-F 7pm-7:30pm	5	x	5.5	=	27.5
M-F 4pm-6pm	6	x	2.9	=	17.4
M-Su 11pm-11:30pm	5	x	1.4	=	7.0
					51.9

The GRPs for this schedule are 51.9 – regardless of which formula you use. This means that the expected audience delivery of this advertising schedule is 51.9 GRPs for Women aged 18-49 in this market.

Gross Rating Points can be used to …

- Evaluate effectiveness of a schedule/daypart/station/program
- Plan and allocate advertising budgets more efficiently among particular markets/stations
- Project the cost of buying a market/station/daypart
- Evaluate effectiveness of a proposed ad schedule in meeting campaign objectives
- Establish pricing of commercials

Frequency

Answers the question… *"How many times on average did each listener hear the ad?"*

- The average number of times a listener heard an advertisement or campaign.

- This statistic is also called AVERAGE FREQUENCY

- FREQUENCY can be calculated two different ways:

$$\text{Frequency} = \frac{\text{GRP}}{\text{Cume\%}}$$

$$\text{Frequency} = \frac{\text{Gross Impressions}}{\text{Cume}}$$

How to calculate Frequency example:

Software programs calculate the frequency automatically but if you know the GRPs or Gross Impressions and the Cume or Cume% you can figure out the estimated frequency for a schedule. A one week campaign for A18-49 in a market that has a population of 957,000, delivers a Cume of 47%, GRP of 175 and Gross Impressions of 1,664,223.

$$\frac{\text{GRP}}{\text{Cume\%}} \quad \frac{175}{47} = 3.7$$

$$\frac{\text{Gross Impressions}}{\text{Cume}} \quad \frac{1,664,223}{449,790} = 3.7$$

The frequency for this schedule is 3.7 – regardless of which formula you use. This means with this advertising campaign, people aged 18-49 are estimated to hear the ad an average of 3.7 times for each person, during this weeklong advertising campaign.

Frequency can be used to …

- Determine how many times an ad schedule was listened to on average

- Find out how stations/dayparts/programs compare in effectiveness

- Make decisions about schedule frequency

- Choose dayparts/stations/programs to include in the advertising schedule

- Equalize Frequency across several stations/dayparts

- Monitor effectiveness of an advertising schedule for posting purposes

- Determine how the frequency of a station compares to other stations/dayparts

CPM (Cost per Thousand)

Answers the question…*"How much does it cost to reach 1,000 people?"*

- The cost of reaching one thousand potential people to an advertising schedule.
- Potential exposures can be determined by finding the number of Gross Impressions.

Cost Per Thousand   =   <u>Cost of Schedule</u>   X 1000
                                       Gross Impressions

How to calculate Cost Per Thousand (CPM) example:

An advertising campaign costs $70,000, 500,000 Men 18-49 potentially listened to the ad an average of 4.5 times, yielding 2,250,000 gross impressions.

<u>Cost of schedule</u>   <u>$70,000 </u>   X 1000   = 31.10
Gross Impressions X 1000   2,250,000

CPM for this schedule is $31.10. This means that it will cost $31.10 to reach every 1000 men aged 18-49 with this schedule.

Cost Per Thousand can be used to …

- Calculate how effective the advertising schedule was for the money
- Determine how the cost to deliver a message by radio compares to other media
- Evaluate return on investment in radio advertising
- Use advertising budget more effectively
- Compare cost-efficiency of radio to other media
- Compare cost-efficiency of different stations/dayparts/programs/spots/campaigns

CPP (Cost Per Point)

Answers the question…*"How cost-efficient is this station program/schedule?"*

- The value of each rating point of a daypart/program/station/schedule stated in terms of its cost in an advertising schedule
    - i.e. How much does it cost to buy 1 rating point?
- This statistic is also called CPR, COST PER RATING and COST PER RATING POINT

$$\text{Cost Per Point} \quad = \quad \frac{\text{Cost of Schedule}}{\text{GRP}}$$

How to calculate Cost Per Point (CPP) example:

A week long advertising campaign costs $25,000 and is estimated to have a GRP weight of 200 for the target group of Adults 25-54.

$$\frac{\text{Cost of Schedule}}{\text{GRP}} \qquad \frac{\$25,000}{200} \quad = \quad 125$$

CPP for this schedule is $125 - this means that it will cost $125 to buy each rating point. In other words, with this schedule, it will cost $125 to reach 1% of adults aged 25-54 in this specific market.

Cost Per Point can be used to …

- Determine which daypart/station/program is a more efficient buy
- Calculate how effective the advertising schedule was for the money spent
- Find out how much budget it takes to include a specific market in an advertising campaign
- Figure out how the cost to deliver a message by radio compares to other media
- Compare cost efficiency of different stations/programs/dayparts
- Evaluate return on investment in radio advertising
- Project the cost of buying a market
- Quantify return on investment in radio advertising
- Demonstrate cost efficiency of radio advertising
- Establish and evaluate pricing of commercials
- Compare CPPs across different market to see if a specific market's CPP is justifiable/reasonable

Statistics Quick Reference Formula Chart

To Find	Use this Formula
Average Minute Audience	$\dfrac{\text{Total Audience}}{\text{\# minutes}}$
Average Minute Rating	$\dfrac{\text{Average Minute Audience}}{\text{Area Population}} \times 100$
Share	$\dfrac{\text{Station's AMA Audience}}{\text{All Station's AMA Audience}} \times 100$ **OR** $\dfrac{\text{Station's Total Hours of Tuning}}{\text{All Station's Total Hours of Tuning}} \times 100$
Time Spent Listening	$\dfrac{\text{Total Hours Tuned}}{\text{Cume}}$
Cost per Rating (CPR)	$\dfrac{\text{Cost of Schedule}}{\text{GRPs}}$
Cost per Thousand (CPM)	$\dfrac{\text{Cost of Schedule}}{\text{Gross Impressions (000)}}$
%Cume (Reach Rating or %Reach)	$\dfrac{\text{Cume Audience}}{\text{Area Population}} \times 100$
Frequency	$\dfrac{\text{Gross Impressions}}{\text{Reach of Schedule}}$ O $\dfrac{\text{Gross Rating Points}}{\text{\%Reach of Schedule}}$
Gross Impressions	AMA Audience X # of Spots **OR** Reach X Frequency
To Find	**Use this Formula**

Gross Rating Points	$$\frac{\text{Gross Impressions}}{\text{Population}} \times 100$$ **OR** %Reach X Frequency **OR** AMA Rating X # of Spots
Total Hours Tuned	$$\frac{\text{AMA Audience X \# of Minutes}}{60}$$