



The Traffic Audit Bureau for Media Measurement, Inc.

## Calculating Daily Effective Circulation (DEC)

### *What is “DEC”?*

The *Daily Effective Circulation*, or *DEC*, is the average number of persons 18+ potentially exposed to an out-of-home advertising display for 12 hours (not illuminated, daylight only 6:00 am – 6:00 pm), 18 hours (illuminated until midnight), or 24 hours (illuminated continuously). DEC is computed by using factors which calibrate period of exposure, directional traffic and vehicle occupancy. These factors are listed below.

### *What are “Official Counts”?*

*Official counts* are generally available from departments of transportation at city, county, or state agencies. These counts (such as those from DOT traffic maps, books, websites, etc.) are ***NOT*** DEC. State counts are taken on most roadways in three-year cycles, while city and other regional agencies provide new data less frequently. Unless otherwise noted, these counts take into account two-way directional traffic.

***Official Counts vs. DECs:*** Many have requested clarification on this issue. The TAB-Adjusted (Official) Count represents the annualized official traffic count with statistically derived growth factors for that particular count station assigned to the panel. This is essentially the estimated ***number of vehicles*** that travel that road segment daily (in both directions unless where noted otherwise). This number is then used to calculate the Daily Effective Circulation (DEC). The DEC is the average ***number of persons 18+*** who have the opportunity to see an out-of-home message during a 24-hour period. DECs are typically measured and adjusted for hours illuminated and for 18+ vehicle occupancy (current load factor is 1.38).



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***Derivation of Factors to convert Official Counts to DEC's***

<b>Period of Exposure (panel's illumination)</b>	<b>Formula</b>
24 Hour (daylight + all-night artificial lighting)	$(100 \times 1.38)/2 = .69$
18 Hour (daylight + 6 hours artificial lighting)	$(100 \times 95\% \times 1.38)/2 = .656$
12 Hour (daylight only)	$(100 \times 66.6\% \times 1.38)/2 = .46$

1.38 = Adult 18+ Load Factor

95% = The percentage of the total daily traffic that passes in an 18-hour period

66.6% = The percentage of the total daily traffic that passes in a 12-hour period

***\*Please note:*** The DEC is typically lower than the Official count since the traffic count is halved as part of the traffic to DEC calculation. If any count is taken on a one-way street, the factors must be doubled because of this built-in divisor for directional circulation.



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For Example only (TAB Database entry):

Panel Unit #	Panel Desc.	CROSSARTERY	County NAME	Media Type	Illumination	Size
1234	Main St	1st St	Any County, USA	Bulletins	18	14x48

which is assigned to:

CS Station ID	CS Primary St	CS Cross Street 1	CS Cross Street 2	Count	DEC
MST-1	Main St	1st St	Union Ave	<b>25417</b>	<b>16.67</b>

*How above DEC was calculated:*

$$25417 \times .656 \text{ (18 hr illumination factor)} = 16,673.552/1000 = 16.67$$