Weights (27)

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Why Weights?

First off, Weights do not have to be used to bid with WBid. However, using "Weights" will increase the quality of your bid with minimal effort. Let's show you how with a simple example.

If you are a PM flyer, ask yourself this question: "Would you rather fly a PM line that works 12 days and pays 95 TFP or would rather fly an AM line (same overnights, same days off)that works 12 days and pays 96 TFP?"

Sort = Line Pay					
Line	Points	Pay	Wts	AM /PM	Off
102	96.00	96.00	0.00	AM	18
27	95.00	95.00	0.00	PM	18

Most PM flyers would say, I'll fly the PM line for 95 TFP and give up the 1 TFP difference for the AM line. However, there is a point where you would fly the AM line, because you would not fly a PM at all costs.

Here is a silly example to show that you would do so: The same PM line pays 95 TFP, but there is one AM line that works only 1 day and Pays 200 TFP. Clearly, even most diehard PM flyers would fly the AM line that works 1 day and pays 200 TFP.

So, when you use "Weights" you need to decide what your personal value a specific "Weight" might have.

Let's assume you have decided that you will give up 5 TFP to fly an equal AM line over a PM line. This means that if you had a PM line working 12 days and paid 95 TFP, you would bid the PM line before you would bid an AM line working 12 days and paying 99.9TFP.

Sort = Line Pay					
Line	Points	Pay	Wts	AM /PM	Off
27	100.00	95.00	5.00	PM	18
43	99.90	99.90	0.00	AM	18

Note above that line 27 (a PM line) has a weight of 5.00. Also not that when you take the Pay and add the Wts you get Points of 100.00. The points for line 43 remain equal to 99.90 because line 43 is an AM line and it did not get points.

So when you Sort by Line Pay, WBid will always add the Wts to the Pay to produce points, and then the lines are sorted by the Points column. So as you can see, by giving a value of 5 to all PM lines, you move the PM lines up in the sort based upon that value.

Weights are a unique feature of WBid, and it will definitely improve the quality of your bid.

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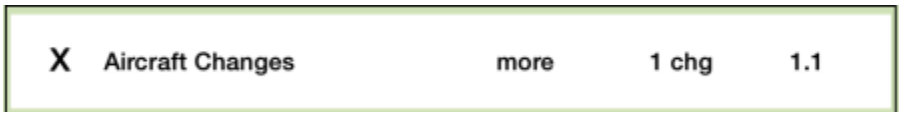
Aircraft Changes

Purpose: Minimize aircraft changes per Line.

Enter a Breakpoint number of aircraft changes and a weight to apply for each desired longest turn time, allowed occurrences per Line, and weight.

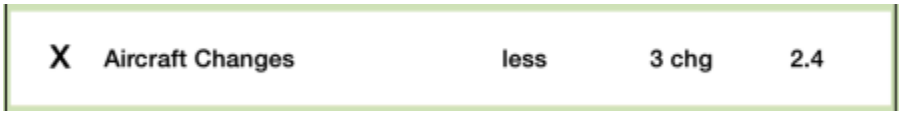
The Weight will be applied for each aircraft change on each Line beyond the breakpoint number of aircraft changes. For instance, if a Line has 5 aircraft changes and the breakpoint is set to "3", then the weight will be applied twice. To make the weight apply to ALL aircraft changes set the Breakpoint to zero (0).

Commonly Used



This weight will add 1.1 times each aircraft change more than 1. If a line had 5 aircraft changes, then it has 4 aircraft changes more than 1, so a weight of 4 x 1.1 = 4.4 will be added to the Wts for the line.

Not User Very Often



This weight will add 2.4 times each aircraft change less than 3. If the line had 1 aircraft change, then the line would get (3-1) * 2.4 = 4.8 added to the weights for the line.

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AM/PM

Purpose: Move Lines with AM pairings, Lines with PM pairings, or Lines with NTE pairings higher or lower in the bid order. Use positive weights to move Lines higher in the bid order. Use negative weights to move Lines lower in the bid order.

Each **AM** Line will receive the AM weight.

Each **PM** Line will receive the PM weight.

Each **NTE** Line will receive the Night weight.

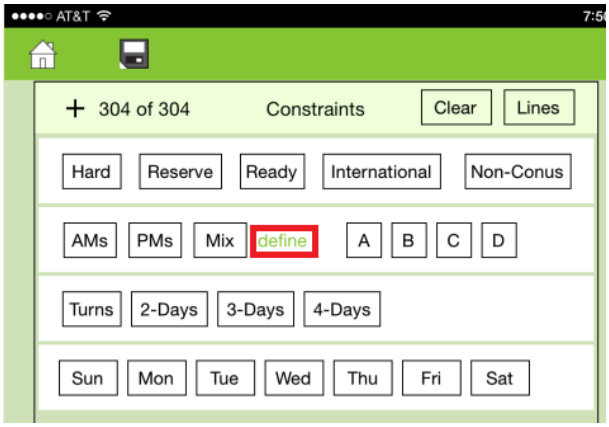
Commonly Used

X	AM/PM	am	5

This weight will add a weight of 5 to each AM line

Note: The definition of an AM/PM can be changed with the "define" line in the fixed constraints.

AM/PM define – located in the AM-PM-Mix fixed Constraints area



Expanded Information regarding AM/PM definitions

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Blocks of Days Off

Purpose: Lines with specific stretches of days free from duty can be moved higher or lower in the bid order. Positive weight values should be used if the goal is to bid for Lines with a large stretch of days off.

Commonly Used

This weight will apply a weight of 10 to all blocks of days off more than 4 in a row. If a line had break that was 8 days off and a break that was 5 days off, this line would get 20 added to its weights.

X	Blocks of Days Off	more	blk 4	10

This weight will apply a weight of 10 to all blocks of days off equal to 4. If a line had a 2 four day breaks between trips of exactly four day, then this line would have 20 added to its weights.

X	Blocks of Days Off	equal	blk 4	10

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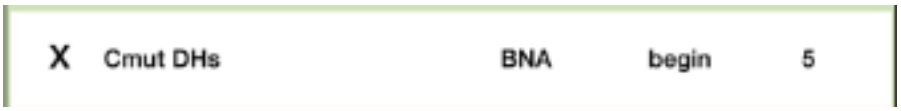
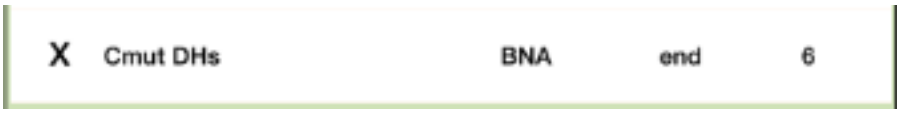
Cmut DHs

Purpose: Lines that have deadheads to or from a specific city are moved up or down in the order based upon their weights

Commonly Used



This weight will add a weight of 5 to each line for every trip that starts with a deadhead to BNA.



This weight will add a weight of 5 to each line for every trip that ends with a deadhead from BNA.

This weight will add a weight of 7 to each line for every trip that starts OR ends with a deadhead to or from BNA.

Note the “both” logic is not AND logic – it is OR logic.

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Commutable Lines

Purpose: Lines that are commutable on the front end, back end or both are moved up higher in the sort process.

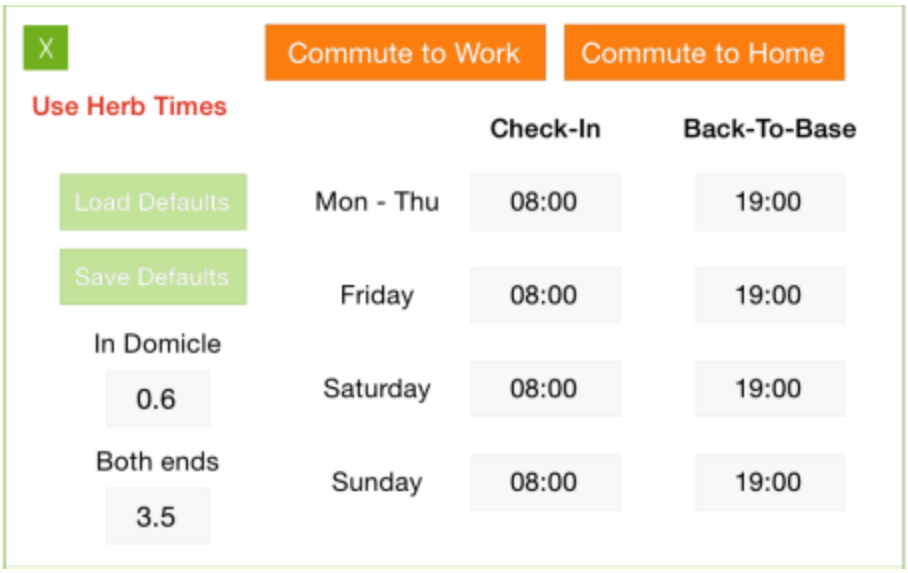
Commonly Used

The logic for the Commute to Home and Commute to Work buttons are as follows:

Both cannot be off (Cyan).

If one button is off, and the other is touched the off button is turned on and the on button is turned off.

Both can be on (default)



A common application of weights is to consider the value in Trips for Pay (tfp).

Here is the logic for the weights used above. If the user has to stay in domicile on both ends, then that is the equivalent of losing ½ day. If the user values a day off at 7 tfp, then losing a ½ day would be 3.5. Every line that has a trip that is not commutable on either end will be subtracted a weight of 3.5 for each trip.

In the above example, the domicile weight is used to approximate the cost of a hotel stay for each night in domicile.

If you want to test this feature, so you can learn how it applies to lines with the weights you enter for Check-in and Back-To-Base, go ahead and enter .1 in Domicile and 10.0 in both ends. A line with a weight of -10.5 would have one trip that is in Domicile on both ends (10) and 5 overnights in Domicile total (5 *.1 = .5)

If you touch any of the times, you can change the time to the desired times. When doing so, the “Save Defaults” and “Load Defaults” buttons will become active. If you touch “Save Defautls” the currently set times will become the defaults, and the buttons will become inactive. If you touch Load Defaults, the currently set Default times will load, and the buttons will again become inactive.

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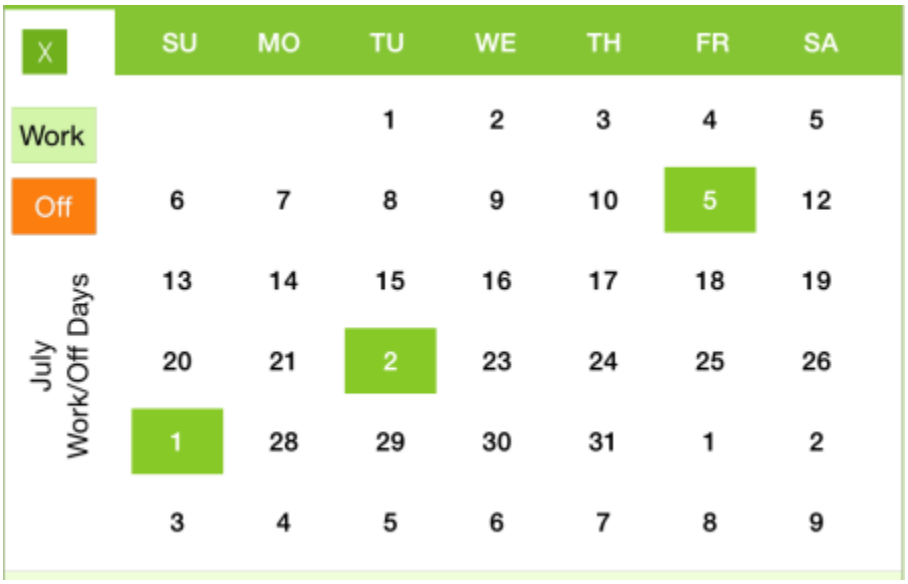
Days of the Month

Purpose: Move specific lines that either Work or Have days off up in the order

Commonly Used



With the above settings, any line that has the 11th, 22nd, and 27th off will be given a weight of 8. The possible weight values for the lines is 8 (11th, 22nd, and 27th off), 7 (11th and 22nd off), 6 (11th and 27th off), 5 (11th off), 3 (22nd and 27th off), 2 (22nd off), 1 (27th off) and 0 (none of the 3 days off)

Note you can also use negative weights and also apply the weights to days that are Working if the "Work" button is selected.

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Days of the Week

Purpose: Lines that either Work or are Off are moved up or down in the order depending upon the weights assigned to each day.

Commonly Used

A weight of 5 for each WED off will be assigned to the lines.

If the Work-Off button is set to “Work”, then a weight of 5 would be assigned to lines for each Wed they work.

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DH – first – last

Purpose: Lines that deadhead in the front or back are moved up or down in the order depending upon the weights assigned to each day. Alternatively, this weight can be used to simply identify those lines that have deadheads on the front or back.

Commonly Used

X	DH - first - last	first	10
X	DH - first - last	last	1

The weights set above are used to identify all the lines that start of end with a deadhead. A line with a weight of 23 would mean that there are two deadheads on the front and three deadheads on the back.

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Duty Period

Purpose: Lines that have duty periods over the amount set, will be given a negative weight and will be moved lower in the order.

Commonly Used

X	Duty period	longer	08:00	1

With the above settings each duty period will be evaluated. Let’s say line 124 has 13 duty periods with 3 duty periods longer than 8:00. Duty period 3 has a duty period of 8:25 (25 minutes over 8:00), duty period 6 has a duty period of 10:40 (160 minutes over 8:00), and duty period 11 has a duty period of 11:25 (205 minutes over 8:00). Thus 25 + 160 + 205 = 390 minutes over the 8:00 setting. 390 minutes is 6.5 hours, so the line will be given a weight of 1 * 6.5 = 6.5 as the weight

Note if the setting is for “relative” then weights will be added for duty periods less than the duty period setting (8:00 above) and subtracted for duty periods greater than the duty period setting.

The “shorter” setting is rarely used, but can be used to identify by amount those lines that have duty periods shorter than the duty period setting.

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Equip Type

Purpose: Lines that have flights in certain types of aircraft can be moved up or down in the order. You can set multiple weights of "Equipment Type" as shown below.

Commonly Used

X	Equipment Type	500	3 legs	-1
X	Equipment Type	800	1 legs	5

The above setting would subtract 1 for every 500 leg over 3 legs, and would add 5 for every 800 leg over 1 leg.

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Flight Time

Purpose: Lines that Flight Hours that are more or less than the set Flight Hours will be given weights IAW the settings

Commonly Used

X	Flight Time	less	75	1

The above settings will cause each line to be given a weight of 1 time the number of Flight Hours less than 75, rounded off to the nearest tenth. If a line has 73:30 minutes of flight time, then that is 1.5 hours less than 75, so the line will be given a weight of 1.5 x 1 = 1.5.

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Ground Time

Purpose: Lines that Ground Times that are more or less than the set Flight Hours will be give weights IAW the settings

Commonly Used

The above settings will cause each line to be given a weight of 1 every turn time greater than 45 minutes, which occurs more than once.

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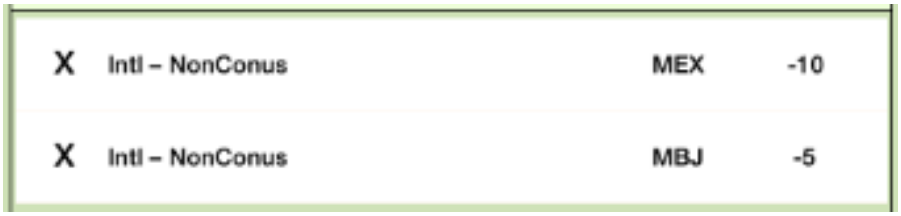
Intl-NonConus

Purpose: Lines that pass through designated International or Non-Conus cities can be assigned points to move those lines up or down in the order. You can set multiple Intl-NonConus weights.

Commonly Used



The above settings will assign a weight value of -10 for every landing in MEX and every landing in MBJ. Note, the landing does not have to be an overnight.

If you want to assign points for Overnight cities, then use the "Overnights" weights item.

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Largest Block of Days Off

Purpose: Assigns a weight to the number of days off in the largest block of days off. This weight is primarily used to normalize different Largest Blocks of Days Off with one another. Let say the most important aspect of a line is the largest block of days off. In that case, you could just use block sort, largest block of days off and you would be done. But if you value Largest Blocks of Days Off highly, but not at all costs, then this weight can help.

First determine what you consider the value of a day off – a common value is 7 tfp. What that means is that a line that has 19 days off and pays 93 would be equal in value to a line that has 18 days off and pays 100 (a 7 tfp difference).

With the Largest Block of Days Off weight set to 7, and then choosing the sort method of "Line Pay", the weights of "Largest Block of Days Off" will be added to the line pay to create points, and the lines will be sorted on Points. As a result, the Largest Block of Days Off weight has normalized the lines with one another based upon your value for a day off.

Commonly Used

If a line has a largest block of days off equal to 10, then a weight of 70 will be given to the line.

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Legs Per Duty Period

Purpose: Move lines up or down in the list depending upon how many legs are in a duty period. Each duty period is considered individually.

Commonly Used

Every duty period with less than 3 legs would get a weight of 1

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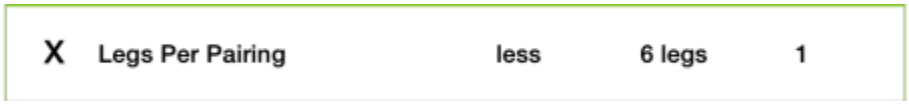
Legs Per Pairing

Purpose: Move lines up or down in the list depending upon how many legs are in a pairing. Each pairing is considered individually.

Commonly Used



A weight of 1 would be assigned to each pairing with less than 6 legs. If the line had 3 pairings with less than 6 legs, then the Wts would be 3.

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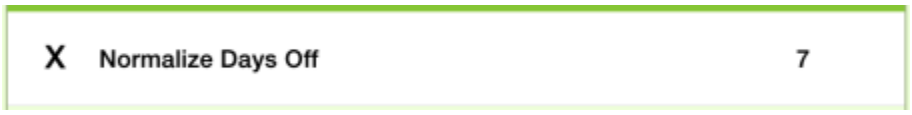
Normalize Days Off

Purpose: Add weight to each line to make lines with different amounts of days off equal in value to one another. For example, if you consider a day off equal to 7 tfp, then you could use a weight of 7 for each day off above the least amount of days off in the lines.

If the least amount of days off in the lines is 16, then all 16 day off lines will get 0 weight. Lines with 17 days off would get a weight of 7. Lines with 18 days off would get a weight of 14. Lines with 19 days off would get a weight of 21, etc.

Then after normalizing the lines for days off, if you sort by "Line Pay" the weights will be added to the pay to create points, and the lines will be sorted by the points – thereby normalizing the lines for days off.

Commonly Used



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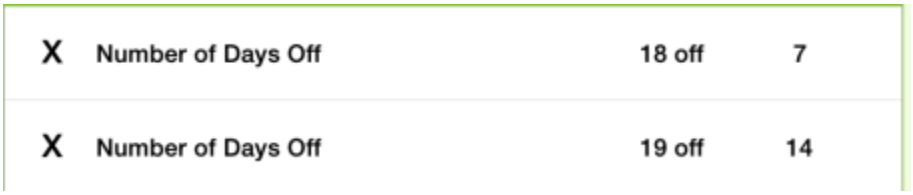
Number of Days Off

Purpose: Move lines up or down in the list depending upon how many days off the line has.

Commonly Used

This weight is often used to compare lines of different days off with one another. This is called normalization.

Lets say I have constrained the lines and the only non-constrained lines are those with 17, 18 and 19 days off. The following weights will help to normalize the lines based upon my personal value of 7 tfp per day off. In other words, If I have one less day off, I expect the line to pay 7 tfp more.



So you can see, that lines with 17 days off will get zero weights, lines with 18 days off will get a weight of 7 and lines with 19 days off will get a weight of 14. Now if I sort using "Line Pay", the weights will be added to the Pay for the line to create points, and the lines will be sorted on the Points.

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Overnight Cities

Purpose: Move lines up or down in the list depending upon the weight of specific overnight cities.

Commonly Used

X	Overnight Cities	BNA	1

The above weight would assign a weight of 1 for every BNA overnight in the line.

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PDO-after

Purpose: Move lines up or down in the list depending upon whether or not the day is partially off (after) based upon the criteria set below

Commonly Used

X	PDO-after	11 / June	16:00	ORF	1

Every line that overnighted in ORF on the 11th and was off after 16:00 Herb, would be assigned a weight of 1. This weight is typically used with AM lnes.

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PDO-before

Purpose: Move lines up or down in the list depending upon whether or not the day is partially off (before) based upon the criteria set below

Commonly Used

X	PDO-before	4 / June	12:00	PVD	1

This weight is typically used with PM lines. If I overnight in PVD on the 3rd of June, and I don't lobby until 13:30 on the 4th, then this line would meet the criteria and would have a weight of 1.

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Position

Purpose: Move lines up or down in the list depending upon whether or not the set position exists for this line.

Commonly Used

X	Position	D	1.2

Every D position line will be given a weight of 1.2.

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Rest

Purpose: Move lines up or down in the list depending upon whether or not the set position exists for this line.

Commonly Used

This is a fairly complex weight. As you can see there are multiple options. Typically this would be used to move lines with insufficient rest lower in the bid order. As shown above, any rest period with less than 13:00 hours will have a weight of 1 subtracted for each hour and fraction thereof less shorter than 13:00. If a rest period was 11:30, that would be 1.5 hours less than 13:00, so -1.5 would be assigned to the weight for this rest period. This is done for all rest periods in the line.

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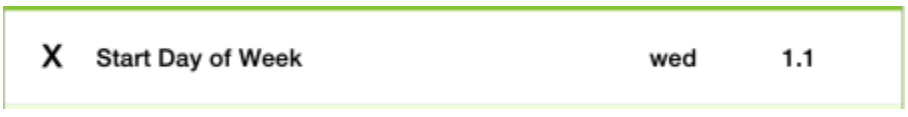
Start Day of Week

Purpose: Move lines up or down in the list depending upon whether or not all work blocks start on the set day of the week for this line.

Commonly Used



Every line that has the primary start day of week on Wed, will be given a weight of 1.1. Remember the line SDOW will be considered “mix” if every work block does not start on the same day (3 Tue starts and 1 Wed start would be a “mix” SDOW)

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Time-Away-From-Base

Purpose: Move lines up or down in the list depending upon whether or not the set position exists for this line.

Purpose: Move Lines up or down in the bid order based on how much Per Diem is assigned to the Lines. This can be used to minimize the amount of time away from base (the basis for Per Diem) or to maximize Per Diem pay.

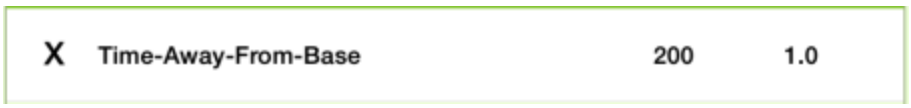
A Breakpoint Per Diem serves as a benchmark against which all Lines are measured. It must be entered in HHH:MM format. This is used as a benchmark against which other lines are measured.

The Per Diem Weight should be entered as a positive value to minimize time away from home. It will be applied to each hour **under** the Breakpoint Per Diem Time. Each hour **over** the Breakpoint Per Diem Time receives a negative weight. Therefore, Lines with a lot of Per Diem will move lower in the bid order.

The Per Diem Weight should be entered as a negative number to maximize Per Diem pay. Each hour under the breakpoint time will receive this penalty. Therefore, Lines with a lot of Per Diem will move higher in the bid order.

Commonly Used

Example: Set the Breakpoint to 200:00 hours and use a weight of 1.0.



A line that has 190 Per Diem hours will gain 10.00 Points.

A line that has 220 Per Diem hours will lose 20.00 Points.

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Trip Length

Purpose: Move desired or undesired trips up or down in the sort list based upon your value of trip length.

Commonly Used

X	Trip Length	4 day	-2.3
X	Trip Length	Turn	1.1

You have decided any 4-day trip is a negative 2.3, and you like turns, so you give any turn a positive weight of 1.1.

If a line has two 4-day trips and three turns, the line would get 2 * (-2.3) + 3 * 1.1 = -1.3 in weight.

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Work Blk Length

Purpose: Moving Lines having certain work block lengths up or down in the bid order. Use negative weights on undesired work blocks. Use positive weights on desired work block length.

A Work Block consists of consecutive days away from domicile.

For instance, a 4-day block of work may consist of any of the following:

- a 4-day pairing

- two consecutive 2-day pairings.

- a 3-day pairing followed consecutively by a 1-day pairing.

- a 1-day pairing followed consecutively by a 3-day pairing.

- four consecutive 1-day pairings.

Example: Apply a Weight of -2.0 on 4-day work block.

A Line having two 4-day blocks of work would lose 4.00 Points.

Commonly Used

X	Work Blk Length	4 day	-2.3
X	Work Blk Length	Turn	1.1

You have decided any 4-day trip is a negative 2.3, and you like turns, so you give any turn a positive weight of 1.1.

If a line has two 4-day trips and three turns, the line would get 2 * (-2.3) + 3 * 1.1 = -1.3 in weight.

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Work Days

Purpose: Move desired or undesired trips up or down in the sort list based upon the number of days worked in the line.

Commonly Used

X	Work Days	more	12 wk days	-3

This weight applies to the line. If a line has 13, 14, 15, 16 work days, the line would be given -3 in weight.

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Expanded Information

AMPM Definitions

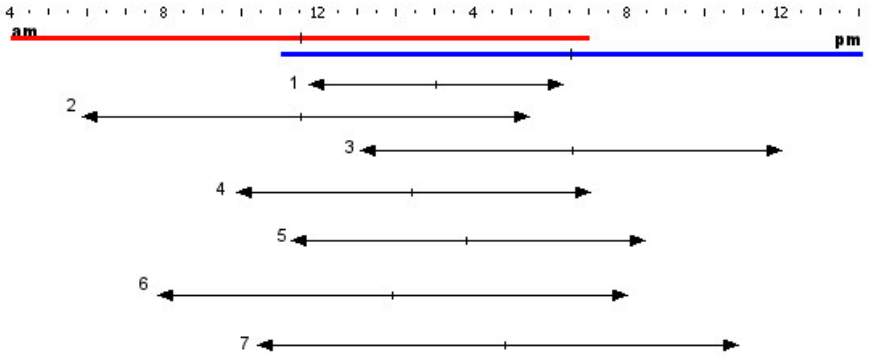
WBid provides three definitions for AM/PM:

A. **AM-Terminate/PM-Arrival**

B. **AM/PM Push and Terminate**

C. **Banded Centroid**

Example illustration:



The black lines represent different duty periods.
AM band is illustrated in red; PM band in blue.
The different rules:

A. AM's terminate before 19:00, PM's push after 11:00
B. AM' push after 04:00 and terminate before 19:00. PM's push after 11:00 and terminate before 02:00
C. AM 'band' is from 04:00 to 19:00 (center is at 11:30). PM 'band' is from 11:00 to 02:00 (center is at 18:30).

	A.	B.	C.
1. 11:30 – 18:30	None*	**AM** & **PM**	None*
2. 05:30 – 17:30	**AM**	**AM**	**AM**
3. 13:00 – 23:45	**PM**	**PM**	**PM**
4. 09:30 – 18:45	**AM**	**AM**	**AM**
5. 11:15 – 20:30	**PM**	**PM**	**PM**
6. 08:00 – 20:00	None	None	**AM** – center of duty period is closer to the center of the AM band.
7. 10:00 – 23:00	None	None	**PM** – center of the duty period is closer to the center of the PM band.

* - special short duty day exception

AM-Terminate/PM-Arrival

A duty period that terminates **before** the AM time is an AM.
A duty period that pushes **after** the PM time is a PM.
Therefore, each duty period can be one or more of AM, PM, or NTE.

A special exception is made for short duty periods where the first push of the day is after the PM start time AND the last arrival is before the AM terminate time. This day is neither an AM nor PM day. The result is the short duty day does not have an impact on whether a line is an AM or a PM.

Return to AM/PM Definitions

AM/PM Push and Terminate

Each of the AM, PM, and NTE (night) have "bands" of time.

A duty period that pushes after the AM push time and arrives before the AM terminate time is an AM duty period.

A duty period that pushes after the PM push time and arrives before the PM terminate time is an PM duty period.

A duty period that pushes after the NTE push time and arrives before the AM terminate time is an NTE duty period.

Therefore, each duty period can be one or more of AM, PM, or NTE.

Return to AM/PM Definitions

Banded Centroid

Each of the AM, PM, and NTE (night) have "bands" of time.

A duty period that pushes after the AM push time and arrives before the AM terminate time is an AM duty period, etc. Similar bands exist for PM and NTE times.

However, with this definition a duty period can only be an AM, a PM, or a NTE. The middle, or centroid, of the duty period is used to make the final determination. If the center of the duty period is closer to the center of the AM band then the duty period is an AM.

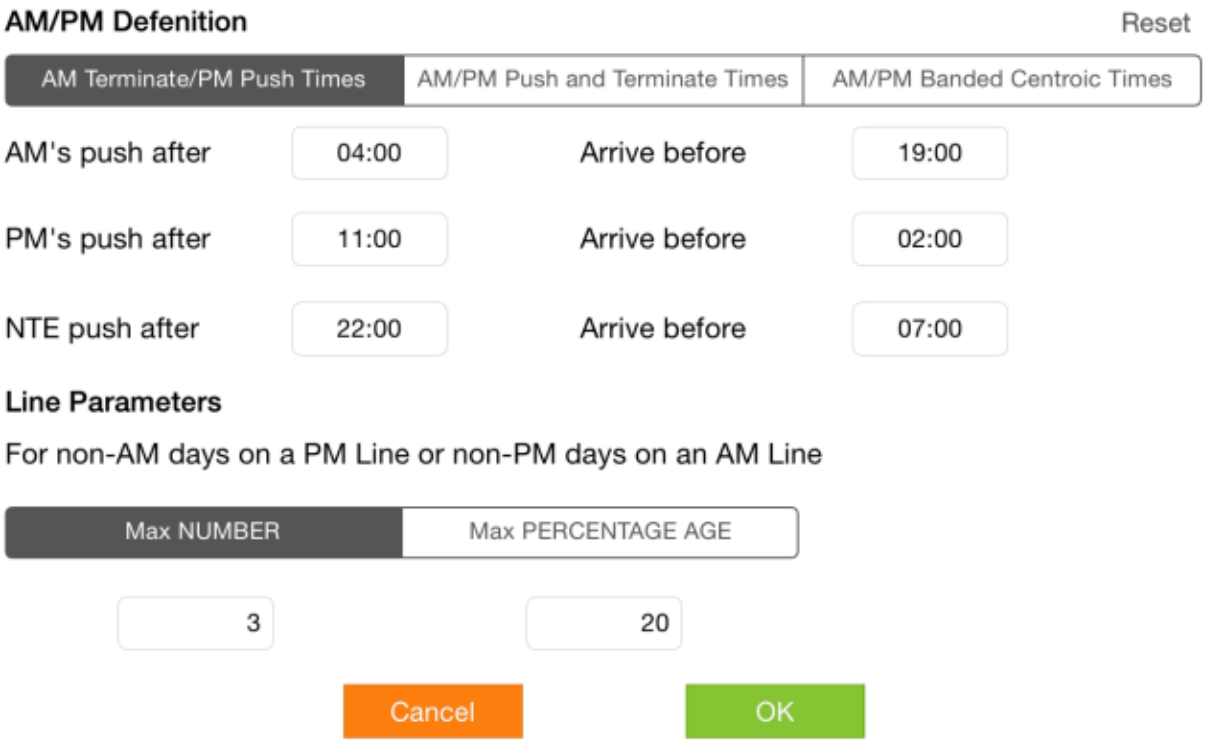
A special exception is made for short duty periods where the first push of the day is after the start of the PM band AND the last arrival is before the end of the AM band. This day is neither an AM nor PM day. The result is the short duty day does not have an impact on whether a line is an AM or a PM.

Return to AM/PM Definitions

AM/PM Define

You can access the AM/PM Definition popover by touching the “define” link in the AM-PM-Mix fixed constraints area as shown below.

After touching the “define” link, the following popover will appear and allow you to edit the AM/PM definition IAW will the information presented in the previous two pages.



With the above settings, you can have a maximum of 3 AM days on a PM line, and the line will be still considered a PM. Also, you can have a maximum of 3 PM days on an AM line, and the line will still be considered an AM.

Touching the “Reset” link will set the AM/PM Definition back to the standard WBid settings shown above.

[Return to AM/PM Definitions]

[Return to Weights Index]