A Guide to Basic Depreciation Calculation

Based on Federal Income Tax Regulations

The tax laws and accounting standards that apply to the depreciation of business assets can be complex, confusing and difficult to decipher. This guide to basic Depreciation Calculations has been developed to make the complex task of depreciating your business assets as easy as possible. This will also assist you in understanding the basic concepts of depreciation, as well as, the methodology used by The Bassets Fixed Asset System to enter depreciation information and perform required calculations.

The information required for the depreciation calculations are as follows:

1. Property Types

In general, depreciation is allowed on tangible and intangible property with a limited useful life of more than one year that is used in a trade or business or held for the production of income. There are two basic types of property:

- Personal Property (P): Referred to as Section 1245 property. Under IRS Code, this property type includes all depreciable property other than real property.
- Real Property (R): Referred to as Section 1250 property. This property type includes buildings and their structural components.

Personal and Real Property has numerous subcategories such as:

- Luxury Automobiles (X): IRS rules limit the amount of depreciation that may be deducted annually for automobiles placed in service after June 18, 1984. Please note that an automobile with a three year recovery period will require eight to ten years to fully depreciate, as long as, the vehicle is still used for business beyond the original three year recovery period.
- Farm Property (F): IRS clarifies that a farming business includes the raising, shearing, feeding, caring for, training, and managing of animals. For additional information see IRS Publication 225 (Farmer's Tax Guide).

2. Service Date

IRS rules define when an asset is placed in service and depreciation of the asset may begin. An asset is considered to be placed in service when it is first placed in a condition or state of readiness and availability for a specifically assigned function.

3. Useful Life

Depreciation is allowed on tangible and intangible property with a useful life (Recovery Period or Amortization Period) of more than one year. Under the General Depreciation System (GDS), personal property according to its class has 3-, 5-, 7-, 10-, 15, & 20-yr depreciable life. Residential rental property is depreciated over 27.5 years and nonresidential (commercial) real property is depreciated over 39 years.

4. Cost Basis

The basis is equal to asset's purchase price. You may need to make some adjustments, under a number of different circumstances. The following positive or negative adjustments to an assets basis may be required:

- The basis is increased by all costs associated with the purchase of the asset.
- The basis is reduced by any amount expensed under the IRS Code Section 179 or 190 or amounts amortized under IRS Code Sections 169 (Pollution Control Facilities) or 174 (Research and Experimentation Expenses).
- The basis is reduced by 100 % of Investment Credits available under current law or reduced by 50% of Investment Credits claimed under prior law. The basis of an automobile is reduced by any Gas-Guzzler tax paid or the credit for diesel powered vehicles.
- The basis is increased by capital additions or improvements to the asset.
- Salvage value is the amount an asset could be sold for at the end of its useful life. Salvage value must be subtracted from an assets purchase price to determine its depreciable basis.

5. Depreciation Methods

The Tax rules allow various methods to depreciate assets. Below are several methods used to calculate depreciation:

- MACRS — Modified Accelerated Cost Recovery System.

  For Property placed in service after 1986, IRS requires you to depreciate the asset using MACRS method. Most taxpayers elect to use this method in order to get the largest possible deductions in the earliest years. Under this method you can elect to use: General Depreciation System (GDS) or Alternative Depreciation Schedule (ADS)

  - 200% declining balance method (D200SL) **-** for 3-, 5-, 7- & 10-year personal property with switch to straight line with no salvage value.

  - 150% declining balance method (D150SL) **-** for 15– and 20-year property with switch to straight line with no salvage value.

  - Straight-line method (SL) **-** for residential and commercial rental properties with 27.5- or 39-year life with no salvage value.

- SL **—** Straight Line.

  Staight Line is the simplest and most commonly used depreciation method. It allocates depreciation evenly over the life of the asset.

*Generally, you can use any of the depreciation methods above for most assets. One exception is for residential and rental properties which must be depreciated under the SL method.

6. First Year Conventions

When a piece of property is placed in service, you are required to use a particular convention to determine the depreciation deduction you will get for the first year. Below are the convention types:

- Half Year (HALFYR): Whether an asset is acquired on the first day of a calendar year or acquired on the last day of a fiscal or calendar year, six months of depreciation is allowed during the year of acquisition.
- Mid Month (MIDM): (MACRS & ACRS) MACRS real property and ACRS real property acquired after 06/22/1984 assets acquired at anytime during the month, one half of the normal monthly depreciation is allowed during the month of acquisition.

  All Other Methods: An asset acquired on the 1st of the month through the 15th of the month, the full normal monthly depreciation is allowed during the month of acquisition. An asset acquired on the 16th of the month through the end of the month, one half of the normal monthly depreciation is allowed during the monthly acquisition.
- Mid Quarter (MIDQ): (MACRS personal property) Whether an asset is acquired on the first day of a quarter or on the last day of a quarter, one half of the quarters normal depreciation is allowed for the quarter of acquisition.

  MACRS 40% Rule: Personal Property under MACRS will use a Half Year Convention unless the 40% Rule is violated. The 40% Rule states that when 40% or more of the assets acquired in any given tax year are acquired in the 4th quarter of that tax year, all assets acquired in that year will use the Mid Quarter Convention.
- Full Month (FULLMO): Whether an asset is acquired on the first day of the month or the last day of the month, the normal monthly depreciation is allowed for the month of acquisition.

Comprehensive Example

Now that you know the Basic depreciation calculation requirements, you can use this information in calculating your depreciation deductions. Below is an example that illustrates the requirements:

A Corporation bought a set of furniture amounting to $1,500.00 and placed it immediately in service. The corporation depreciates the furniture under MACRS (200% double declining balance with switch to straight line) using a 7-yr life and no salvage value. Assuming a calendar year, applies the half year convention.

The deduction is determined as follows:

First-year:
(1) 1 / 7 (the no. of yrs in the recovery period) = **14.286%**
(2) 14.286% x 2 (to reflect the 200% declining balance method under MACRS) =**28.57%**
(3) 28.571% of $1,500.00 (the cost of furniture) is = **$428.56**
(4) $428.55 / 2 (to reflect the half year convention) is = **$214.29**

*The depreciation deduction is $214.29 for the first year.

The table below shows the complete depreciation deduction for the entire life of the asset. As you can see, deduction for the first year has already been determined as $214.29. For the succeeding years the deduction will be determined by multiplying the Net Book Value by 28.57% which is the declining balance rate. But in later years, you may have to switch to straight line. For a 7-year life class, the switch is on the 5th year.

Year	Cost	Deduction	NBV	SL = NBV / Remainig years	
1	$1,500	$ 214.29	$ 1,285.71	183.65	(7)
2		367.33	918.38	153.06	(6)
3		262.38	656.00	131.20	(5)
4		187.42	468.58	117.14	(4)
5		133.87	334.71	111.57 -switch to SL	(3)
6		111.57	223.14		(2)
7		111.57	111.57		(1)
8 Final year		111.57	0.00		(0)

You switch to straight line when the straight line rate gives a greater deduction. You can determine the Straight line rate by dividing NBV by the remaining years. In this example, if you continue to multipy the NBV of 334.71 by 28.57%, the deduction will be $95.63. This shows that SL rate which is $111.57 (334.71/3) gives greater deduction than $95.63.

This document is intended to give you a better understanding of the basic depreciation concepts. If you need more information, visit us at www.bassets.net and download our depreciation calculator. It allows you to enter the six required variables and calculate depreciation for the entire life of an asset. The depreciation calculator will also export a detailed schedule to a spreadsheet for further analysis.

We hope that you found this guide useful in answering your basic depreciation questions. Please feel free to forward this document to any friends or associaites who are looking for depreciation answers.