There is one specific timing that is most ideal for a specific engine and nitrous tune-up. In the end the best and correct method to determine timing in a car is to read the spark plugs.

Due to all these variables, it is difficult to recommend a generic timing for a given amount of nitrous. However the information below is intended to provide a starting point. After this, it is best to use the spark plugs as an indicator as to what timing a specific engine requires. The spark plugs also will help with nitrous and fuel jetting as well as fuel pressure needs.

One large variable that determines the ideal ignition timing is the “combustion efficiency”. This is determined by combination of the cylinder head valve angle, combustion chamber size and burn characteristics, and piston dome design.. The more efficient the overall combustion efficiency is the less ignition timing is needed with nitrous.

**NOTE:**  *The old rule of “taking out four degrees per 100 HP of nitrous” is not wise especially on larger settings*

The following timing recommendations below are based on nitrous HP amounts and a factor called “ The Combustion Efficiency”. The Combustion Efficiency takes into account the piston dome, chamber size, valve angle, and other factors. It is split up into three categories, “High”, “Medium”, and “Low”.

**“High”** – An engine with an exceptionally efficient and quick burn rate when running nitrous. Typically this would have a piston with a dish, flattop, or very small, flat dome design. Combustion chambers are small and valve angles are greatly reduced from the “factory” valve angle. Generic examples are engines with current high end race heads that have valve angles reduced 7-11 from stock, very small combustion chambers, and flat top piston that still maintain 13-14:1 compression ratios. For example Any Spread Port SBC or BBC cylinder head.

**“Medium”** – An engine with a small and efficient chamber – An example could be a SBC with an 18 degree head with a moderate piston dome.

**“Low”** – Older engines with factory valve angles. Pistons may have large domes to maintain high compression ratios - Large, open combustion chambers. An example would be a BBC engine with an 119cc open chamber and large dome piston.

The following are some initial recommendations for timing. Be conservative and read your plugs. Run an 1/8th mile hit rather than a ¼ mile pass to start to see initial plug strap readings. The “Plug” recommendation is based on NGK heat ranges. An equivalent Autolite can be used.

**Tuning the air/fuel ratio:** **The best way tune a Nitrous injected engine is to retard the ignition timing to these baselines timing and lean the system down to get the air/fuel ratio correct first. After the air-fuel-ratio is close, then tune the ignition timing. Read the plugs because they never lie!**