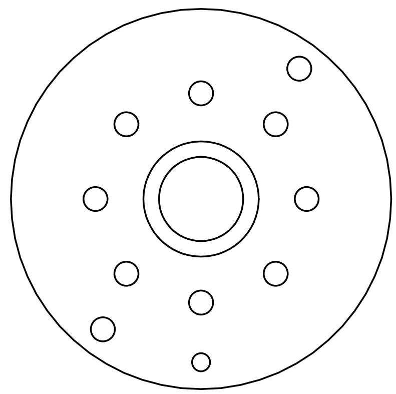
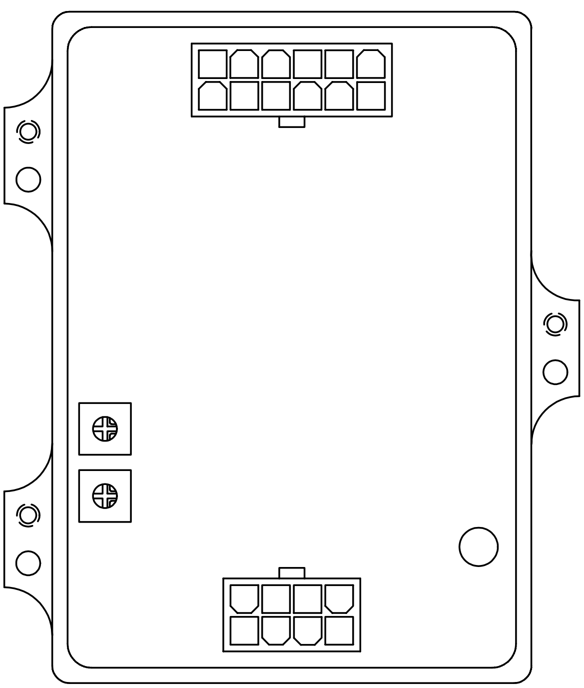
PROBE ENGINEERING, INC.

Installation Instructions

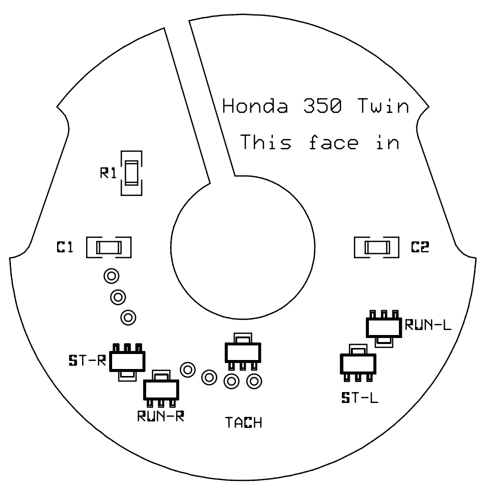
Model BT-05B Electronic Ignition



Trigger Rotor



Control Module



Pickup Plate

PROBE ENGINEERING, INC.

Installation Instructions, Model BT-05B
Version 2.02

The Model BT-05B electronic ignition is designed specifically for 1970s Honda Models CB350, CL350, and SL350, all with derivatives of Honda's 180º crankshaft twin-cylinder engine. The Model BT-05B is the successor to the original Model BT-05 system, and now features a user-adjustable advance curve.

Table of Contents

<u>What should be in the kit:</u>

The Model BT-05B kit includes the following components:

- Control Module
- Pickup Plate (with wire harness and connector)
- Trigger Rotor
- Power Cable Harness
- Pair of NGK BR8ES spark plugs (the use of resistor-type plugs is required)
- Rubber-faced flat washers (2 each, for retaining the Pickup Plate)
- 9V battery connector
- Spare red, black, green, and orange wires (1-foot long each, for optional accessories)
- Tie-wraps (for organizing the wiring)

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What else you will need:

In addition to the usual small hand tools required to get access to the engine's breaker-points assembly and to remove the fuel tank, side panels, etc., installation will require the following tools and supplies:

- 9V snap-connect type battery (for setting the static timing)
- Solderless crimp-type connectors, bullet connectors, or solder and shrink tubing
- Loctite® "blue" medium-strength thread-locking compound or equivalent

Installation:

1. Remove the side panels, if applicable (for general access).

2. Remove the seat.

3. Disconnect the battery.

4. Remove the fuel tank (you will need access to the ignition coils).

5. Remove the alternator rotor cover (for setting the timing later).

6. Remove the breaker-points cover.

7. Remove the bolt and washer that secure the centrifugal advancer mechanism and put them aside (they will be reused to retain the electronic ignition's Trigger Rotor).

8. Remove the two screws and washers that retain the points backing plate, and put them aside (the screws will be reused to retain the electronic ignition's Pickup Plate).

9. Remove the breaker points and backing plate as an assembly.

10. Disconnect the breaker points lead wires from the ignition coils.

11. Disconnect and remove the condensers (they should not be used with the solid-state ignition).

12. Remove the advancer mechanism from the quill on the end of the camshaft. It may need gentle persuasion in the form of mild heat, penetrating oil, or a puller. If a puller is required, you can loosely reinstall the retaining nut a few threads shy of full engagement to use as the "push" point.

13. Clean any gross rust or debris from the cam-end quill and from the seating surface (shoulder) at the end of the quill.

14. Slip the Trigger Rotor over the quill, and align the notch in the rotor hub with the 3mm locating dowel on the camshaft end (the notch in the hub is in line with the 0.094" through-hole in the trigger rotor's face, so that you can tell where you are).

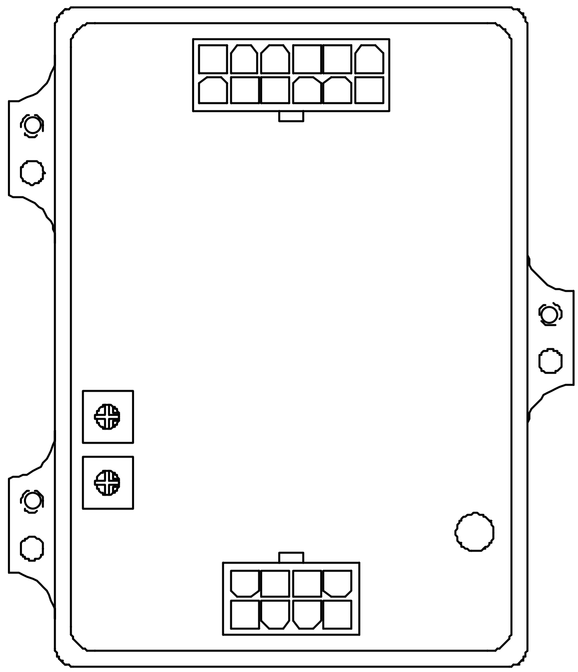
15. Using the original retaining bolt and washer from the centrifugal advancer, bolt the trigger rotor in place with its locating notch over the cam end's locating dowel (that is, seated squarely on the shoulder at the end of the quill). It's good practice to use the medium-strength (Loctite "blue" or equivalent) anaerobic thread locker on the trigger rotor retaining bolt.

16. Slip the Pickup Plate over the trigger rotor (the plate's center hole is large enough to clear the retaining bolt and washer), with the electrical components facing in toward the trigger rotor and the wires facing out toward you. The words "Probe Engineering, Inc." are etched in copper near the bottom of the pickup plate's outer face; you will also find the words "Honda 350 Twin" and "This face out" in the upper left side of the outer face. Align the slot in the pickup plate with the center of the notch in the points-plate housing.

17. Install the two rubber-faced washers provided in the kit onto your original points-plate retaining screws, with the washers' metal faces against the screw heads. The compliant rubber face of the washers provides a way of taking up the small "step" clearance between the thickness of the Pickup Plate and the depth of the recess into which it locates (the original points-plate recess). Loosely reinstall the screws to retain the plate, but don't bother tightening anything up yet. You will final-adjust the pickup plate position to accurately set the timing in the next few steps.

18. Seat the pickup plate leads' flatted grommet into the lead-out hole at the lower right of the points housing. Leave a little play in the wires so that the pickup plate can be rotated later to finalize the timing, and be sure that none of the pickup plate's wires are in contact with the trigger rotor, the retaining bolt and washer, or the sharp edges of the points-plate housing. Don't bother routing the pickup plate lead wires out across the cylinder head yet; you're about to set the static timing, and will temporarily want the connector at the end of the leads dangling down near the alternator rotor.

19. Locate the Control Module in the kit. It looks like this:



20. There is a 12-pin connector housing at the "top" of the module, 8-pin housing at the "bottom" of the module, two blue potentiometers, and a red LED. Use a piece of string or wire or tape or a tie-wrap to temporarily suspend the module somewhere near the alternator assembly, so that you can see both the alternator stator's timing marks and the module's red LED in your field of vision at the same time.

21. The sensor assembly's wire bundle has an 8-pin plug that matches the 8-pin connector housing in the control module. Plug it in; it is keyed, and only goes one way, which will be obvious. There is a plastic retaining latch that will make a satisfying "click" when the connector goes all the way home.

22. Find the 9V battery connector harness in the kit (it has a 9V battery "snap" connector on one end, and a 12-pin plug that matches the connector housing in the control module on the other). Don't plug it into the module yet.

23. Snap a fresh 9V battery onto the matching terminals of the connector harness (you do this first, before plugging the harness into the module, so that if you get the battery terminals backward at first, nothing bad will happen).

24. Plug the 9V battery and harness into the 12-pin housing in the control module.

25. Using a 14mm socket or box end wrench on the alternator rotor's retaining nut, rotate the crankshaft slowly counterclockwise while watching the timing marks and the module's LED. Some prefer to loosen or remove the spark plugs at this point, so that you're not trying to spin the engine over against compression. Either way will do. The author has learned to keep plug holes open to the breeze to the least extent practical, but "plugs-in" may be a poor choice for 12.5:1 competition engine. The installer is encouraged to use his/her preferred technique here.

26. As you rotate the engine, the red LED on the control module will alternately illuminate and go dark. Lighting up signifies that the left-hand Hall-effect "run" sensor (for the left-hand cylinder) is in the "dwell" mode; this is when coil current will be passing through the coil when the installation is complete and the bike is running.

27. Exactly as the LED goes dark at the end of the dwell mode is when the spark plug for the left cylinder will fire at the full-advance point. Note that unlike the points-type setup, for which factory-type "static" timing is usually done at the full-retard position, the electronic ignition's timing LED changes state at the full-advance timing; also note that once the LED goes dark at the "fire" point, you can't get it to re-illuminate by just "backing-up" the crankshaft a few degrees like you can with a points setup; you must continue rotating the crankshaft counterclockwise to get back into dwell mode for the next "fire" event.

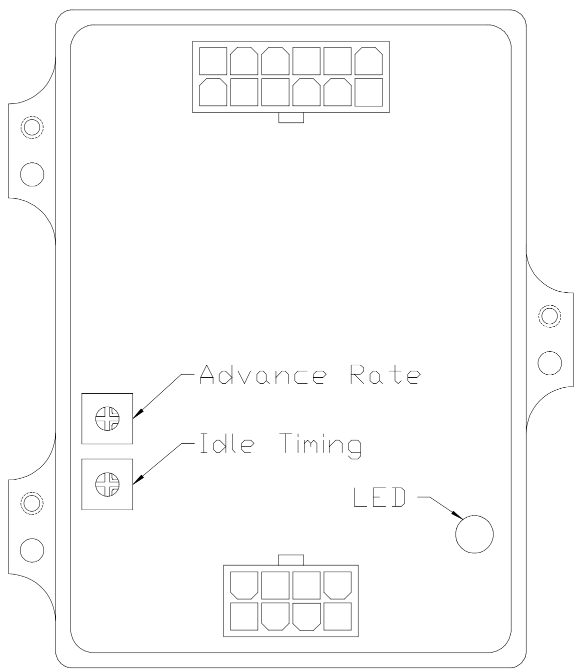
28. The left-cylinder's factory full-advance timing location is marked on the alternator rotor by a pair of parallel lines located counterclockwise from the "LT" and "LF" marks. The control module's static-timing LED is connected to the left-cylinder's "run" (more about that later) Hall-effect sensor. With the control module temporarily suspended where you can simultaneously see the red LED and the alternator rotor's full-advance timing marks as they rotate past the engine's fixed timing reference mark, you can determine how close to correct is your initial pickup plate installation position.

29. If correction is needed in the pickup plate position to get the timing spot-on, loosen the two retaining screws and adjust the plate's position until the red LED goes dark *just* as the full-advance timing marks on the alternator rotor align with the fixed timing indicator. Rotating the pickup plate clockwise will advance the timing, and rotating it counterclockwise will retard the timing, just as with the original breaker-points setup. For every 0.021" of movement at the edge of the pickup plate, the timing will change by two degrees at the crankshaft.

30. When you've got the full-advance timing set, tighten the two pickup plate hold-down screws.

31. Disconnect the pickup plate wire harness and the 9V battery harness from the control module.

32. Find a place where you'd like to mount the control module. There are two small blue potentiometers visible on the face of the module; one is used to trim in the idle-speed spark advance, and the other adjusts the spark advance rate ("curve"). They are identified in the illustration below:



33. When you mount the module, it is handy to have screwdriver access to these potentiometers. The idle-timing potentiometer is pre-set at the factory, but may be varied by those who prefer more or less idle-speed advance than standard. The advance-curve rate is pre-set at the factory to be all-in (full advance) at 3,250 RPM, but is adjustable to be all-in anywhere between 3,000 and 4,000 RPM. Directions on how to adjust both of these controls are included in Appendix 1 of these instructions.

34. The control module should be mounted where it will not be directly exposed to engine heat. Each of the module's three mounting feet has one M3 x 0.5mm tapped-through hole and a 0.125" diameter clearance hole. Each clearance hole will pass an M3 screw, a #4-40 screw, or a 1/8" diameter pop-rivet. Thus, there are several options available to obtain a secure mount for the module, and the installer should

employ his or her preferred method. The module dissipates low power during operation, and will get just warm to the touch. It does not require direct airflow, but should not be mounted in a sealed volume with no airflow at all.

35. Route the pickup plate assembly's wire bundle to the location of the control module. The pickup plate wires are insulated using high-temperature Teflon, and have a tinned-copper braided shield surrounding them; the wires can be routed pretty much anywhere (except to an exhaust pipe!) without major temperature concerns. *However, the wires must be kept well away from the spark-plug leads, so that the electronics won't get confused or damaged by radiated spark energy from the high-voltage secondary side of the coil.*

36. Look at the12-pin connector at the end of the Power Cable Harness. On the connector's rear surface, where the wires enter, there are (hard-to-see) molded-in numbers showing each wire's position. Numbers 1 through 6 are in the first row (furthest away from the molded "latch"), and 7 through 12 are in the second row. The wires in each position are described in the following table. For the basic system installation, you only have to deal with the six wires shown in **boldface** type:

♦	Position 1:	**Heavy-gauge green wire – goes to chassis ground**
♦	Position 2:	Open (reserved for kill-switch option)
♦	Position 3:	Open (reserved for electronic tach option)
♦	Position 4:	Open (reserved for electronic tach option)
♦	Position 5:	Open (reserved for electronic tach option)
♦	Position 6:	**Heavy-gauge red wire – goes to switched +12 volts**
♦	Position 7:	Open (unused)
♦	Position 8:	**Heavy-gauge green wire – goes to chassis ground**
♦	Position 9:	**Heavy-gauge blue wire – goes to right-cylinder coil**
♦	Position 10:	Open (reserved for electronic tach option)
♦	Position 11:	**Heavy-gauge green wire – goes to chassis ground**
♦	Position 12:	**Heavy-gauge yellow wire – goes to left-cylinder coil**

37. **<u>Important notes</u>**:

- When routing wires, keep the power cable harness wires separated from the pickup plate wires.
- It is important to keep *all* wires away from the high-voltage spark plug leads. We strongly recommended the use of carbon-type suppression plug wires or modern spiral-wound suppression plug wires with electronic ignition systems.
- If you cannot use suppression-type wires, you must use resistor plug caps (at least 5k ohm, as the Honda original components).

- Resistor-type spark plugs are included in the kit, and their use is required with the BT-05B system. NGK brand plugs will have an "R" in the alpha prefix if they are resistor type; you may prefer to use a different heat-range plug than the included BR8ES, but it should always be a resistor-type.

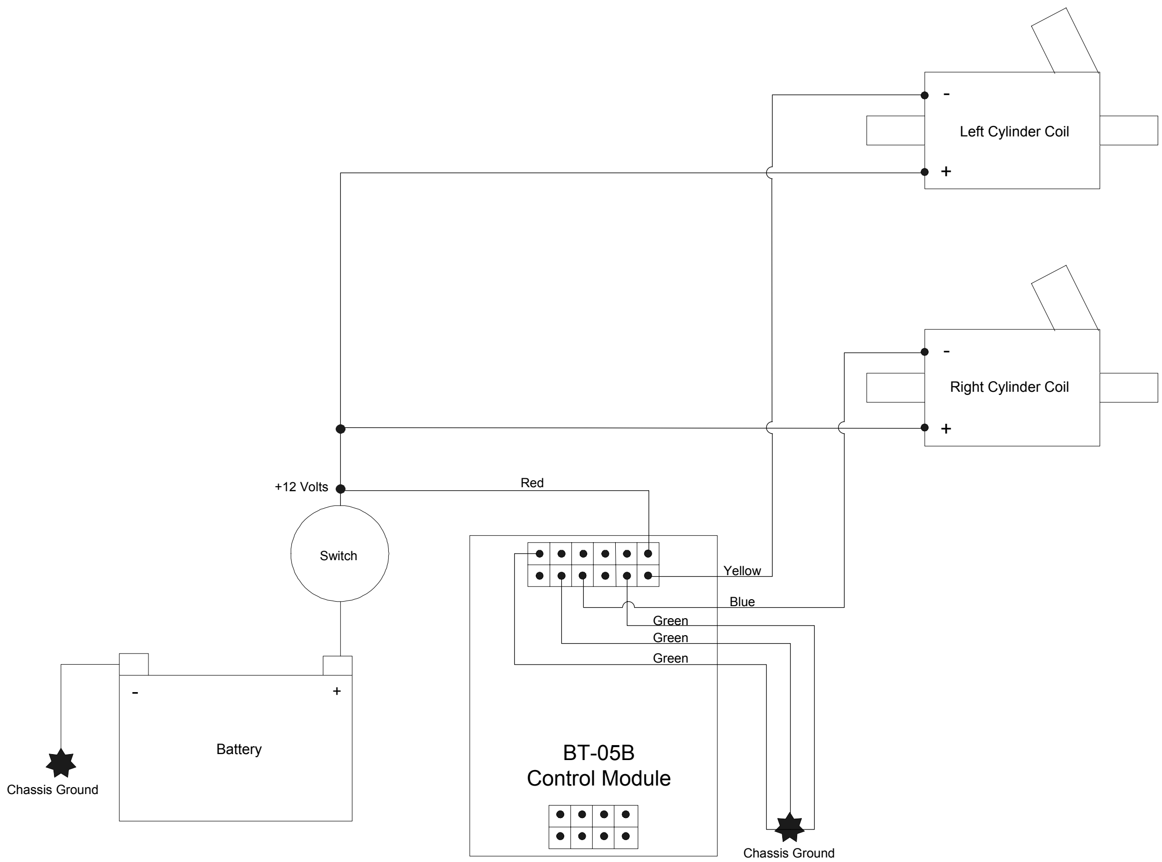
38. The power cable harness' heavy-gauge green wires (connector positions 1, 8 and 11) must go to a good chassis ground. All the usual notes apply regarding the ground being free of paint and being clean, bright metal. It is not unusual to find things such as battery boxes rubber-mounted, with no direct electrical path to chassis ground; make sure your "ground" really is one. The ground wires are 18" long as supplied. If you want to make them shorter, you may, but they should not be extended.

39. The power cable harness' heavy-gauge red wire (connector position 6) goes to a switched source of +12 volts. You can pick this up from the wire supplying +12 volts to the ignition coils. On the stock CB/CL/SL350 series, these are black with a white stripe in the original Honda wiring harness; they go to the coils' (+) connections.

40. The heavy-gauge yellow wire (connector position 12) goes to the minus (-) terminal of the ignition coil for the left cylinder. On an original and stock bike, the left cylinder's ignition coil has a yellow lead coming out of it, and the colors will match. However, it is possible to swap coils from side-to-side (or you may have aftermarket coils that don't match the Honda color code), so no matter what, route the yellow power cable harness wire from connector position 12 to the left cylinder's ignition coil.

41. The heavy-gauge blue wire (connector position 9) goes to the minus (-) terminal of the ignition coil for the right cylinder. On an original and stock bike, the right cylinder's ignition coil has a blue lead coming out of it, and the colors will match. However, it is possible to swap coils from side-to-side (or you may have aftermarket coils that don't match the Honda color code), so no matter what, route the blue power cable harness wire from connector position 9 to the right cylinder's ignition coil.

42. The following wiring diagram shows how the system connections should be made. For those not familiar with such diagrams, a "dot" where wires meet signifies that they are connected together electrically, while a "jog" signifies that they are not connected.



43. Once you've got the pickup plate wire harness and the power cable harness wiring and routing complete, plug the two connectors into the control module.

44. Reconnect the battery.

45. Disconnect the spark plug caps and remove the spark plugs. Reinstall the caps onto the new BR8ES plugs, and lay the metal base of the plugs down so they contact the cylinder head surface. **Make sure that the spark plugs are well away from the empty spark plug holes in the head, and that the carburetors and cylinders are "dry" (no fuel), so that you will not ignite fuel vapor with the sparks you are about to create at the plug gaps.**

46. Turn the ignition key to the "on" position, or otherwise energize the ignition with battery power.

47. Rotate the engine through a couple of revolutions while keeping an eye on the spark gaps in the two spare plugs. Each plug should spark in turn. At low engine speeds, the spark timing is NOT controlled by the "run" Hall-effect sensor pickups; there are dedicated sensors that are used just for the range from zero to about 500 RPM. This means the slow-speed turnover spark won't occur exactly as the red LED goes dark for the left cylinder (the LED will go dark a little before the spark event, because the LED state changes at full advance, and the low-speed spark is retarded relative to it). You're just convincing yourself at this step that the system's wired OK, and that the left and right cylinder wiring and spark timing aren't reversed. For real certainty, you can remove the valve clearance adjust cap on the left-side intake, and use that to show you where the engine is in its cycle when the plugs are firing; the left-hand plug should fire as the left-cylinder piston is on the upstroke after its intake valve has closed.

48. If everything looks good, switch ignition power to the "off" position.

49. Disconnect the spark plugs from the plug caps, install the BR8ES plugs in the engine, and reinstall the plug caps onto the plugs.

50. Reinstall the seat, any side panels, and the fuel tank; open the petcock, and set the choke or enrichener, as required for a cold start.

51. Loosely reinstall the alternator cover; you are about to start and warm up the engine, and this will minimize the oil-fling mess from the "wet" alternator cavity.

52. Start the bike. The kick or electric starter may be used (or bump start, if you prefer).

53. Warm up the engine a little bit, so that it will carburet cleanly.

54. Connect a xenon-flash timing light (the bright kind) to the left-hand cylinder's spark plug wire and to the battery (if required; some of us are lucky enough to use the Summit Racing/Flaming River self-powered timing light, and love it).

55. With the engine stopped, remove the alternator cover again, and restart the engine. Watch out for oil fling.

56. With the timing light operating, slowly rev the engine up about 3,500 RPM. You'll see the timing advance from somewhere around the "LF" mark (at low speeds) to the full-advance marks; as you approach 3,250 RPM, you'll see the last degree of two of spark lead come in, and thereafter, there will be no further advance. Since calibration between tachometers is always in question, we'll measure the full-advance timing at about 3,500 RPM. At 3,500 RPM, the timing light should "freeze" the alternator rotor's timing indicator between the two full-advance marks, just as you set it using the red LED and the 9V battery during initial setup. If small corrections are needed to get the timing spot-on, make them now in the same way that you did while setting the static timing.

57. Once the full-advance timing is verified, check the idle-speed timing. Let the engine idle at its recommended idle speed (see your owner's manual; Clymer says the correct 350 twin idle speed is in the range from 1,000 to 1,200 RPM), and shine the timing light on the alternator rotor. You will see the rotor's nominal "LF" idle-speed timing mark "frozen" somewhere near the fixed reference mark. To finalize idle-speed timing, the blue Idle Timing potentiometer on the face of the control module can be used to alter the low-speed timing delay; turning the potentiometer clockwise increases the timing delay and retards the timing; turning the potentiometer counter-clockwise advances the timing.

58. Move the timing-light pickup to the right-hand cylinder's plug wire and check its timing at 3,500 RPM. The relative spark timing should be very close to that of the left-hand cylinder. Small differences can be "split" by repositioning the pickup plate a little, if desired. Generally, the timing will be as identical as printed-circuit board tolerances and Hall-effect device matching will allow.

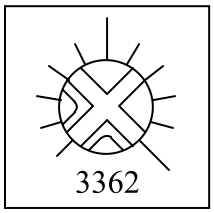
59. When the desired timing has been set and verified, shut off the ignition power, close the petcock, reinstall the alternator rotor cover and points housing cover, and top up the oil level.

Appendix 1, advance curve options:

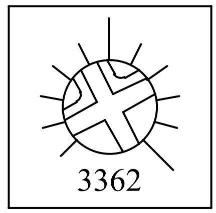
The Model BT-05B system is delivered with the advance-curve rate adjustment potentiometer set for all-in timing at 3,250 RPM. The adjustment range is from 3,000 RPM all-in timing (potentiometer set to its counterclockwise limit) to 4,000 RPM all-in timing (potentiometer set to its clockwise limit). Any intermediate value between the two limits may be obtained.

The following figure illustrates three positions of the advance-curve rate adjustment potentiometer:

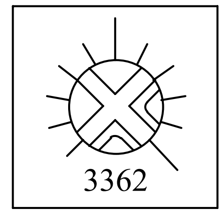
3,000 RPM



3,250 RPM (as delivered)



4,000 RPM



If you look carefully at the potentiometer, you'll see the markings "3362" along one edge, and engraved position markers around the adjustment screw. The screw has a small relieved area that shows where it is set.

The middle image shows the potentiometer setting as delivered, with the all-in timing set to occur at 3,250 RPM. The left image shows the screw at its counterclockwise limit, where the all-in timing occurs at 3,000 RPM. The right image shows the adjustment screw at its clockwise limit, where the all-in timing occurs at 4,000 RPM.

If you change the advance rate using the advance-curve adjustment potentiometer, it will also change the idle-speed timing; advancing the all-in timing from 3,250 RPM to 3,000 RPM will make the idle-speed timing advance, and retarding all-in timing from 3,250 RPM to 4,000 RPM will have the opposite effect. So, if the advance-rate potentiometer is changed, the idle-speed timing potentiometer must be readjusted.

Summarizing, here are the relationships between the various timing adjustments of the BT-05B system:

- Full advance is set by rotating the sensor assembly. Changing the full advance timing will also alter the idle-speed advance, which can then be corrected with the idle-speed advance potentiometer. Changing the full advance point will not affect the advance-curve rate.

- The spark timing at idle is set using the idle-speed advance potentiometer. Changing the idle-speed advance potentiometer setting doesn't affect either the full advance timing or the advance-curve rate.

- The advance-curve adjustment potentiometer changes the engine speed at which full advance is achieved. Changing the advance-curve potentiometer doesn't alter the full-advance timing, but does alter the idle-speed timing, which can then be corrected using the idle-speed advance potentiometer.

Appendix 2, tachometer and kill switch options:

As noted in the wiring table earlier in this document, there are tachometer and kill switch options available. If you've completed the basic ignition system installation, you've already dealt with the six heavy-gauge wires that came pre-installed in the 12-pin power cable harness connector. The remaining five open positions on the connector housing are associated with the tachometer and kill switch options. Their numbers are:

♦ Position 2:	Kill switch
♦ Position 3:	"4-cylinder" tachometer output (2 pulses per engine revolution)
♦ Position 4:	Return (ground) wire to tachometer (powers tach)
♦ Position 5:	+12V power to tachometer
♦ Position 10:	"2-cylinder" tachometer output (1 pulse per engine revolution)

Positions 3, 4, 5, and 10 are for the system's electronic tachometer drive. You can connect a typical electronic tachometer to the control module, and drive it entirely without having to make any other connection to the bike; the tach will draw both power and RPM signals directly from the module.

The control module's tach outputs make two different "rates" available; **connector position 10** carries the **"2-cylinder"** tachometer output, which gives one signal pulse per crankshaft revolution, exactly the way a 2-cylinder 360º crank engine with a dual-tower coil (waste spark on one cylinder or the other on each rev) would do. An electronic tach for a 4-cylinder bike will generally tie to just one coil; these also usually operate at "2-cylinder" tach rates, since each coil services two cylinders 360 crank degrees out of phase, as described above.

Connector position 3 carries the **"4-cylinder"** tachometer output, which gives two signal pulses per crankshaft revolution, exactly the way a 4-cylinder automotive engine would do. This output gives you the option of tapping into the automotive aftermarket for tachometers. Most of these will have 4-6-8-cylinder selection options; pretty much any automotive tach that can be set to a 4-cylinder calibration will work. We have found aftermarket automotive tachs to be inexpensive, rugged, reliable, and typically more accurate than the average OEM bike tach.

Connector position 5 carries **+12V**, which you can connect to the tachometer to power it (but you don't have to; if you prefer to wire the tach directly into the bike's system, you can). If you use this power lead, it's a VERY GOOD IDEA to put one of those in-line fuse holders into the tach's power lead. A 500mA (one-half ampere) fuse is about right;

an Auto-Meter mini-tach, for example, draws only about 150mA with the backlight illumination running.

Connector position 4 is the return (**ground**) wire, which you also connect to the tachometer to power it, if you elect to obtain both tach signal and power from the control module.

Typical automotive aftermarket tach wire color codes seem to have become fairly standardized (BUT READ YOUR LITERATURE, AND USE IT AS A GUIDE!). They are:

- +12V power: red lead
- Ground: black lead
- Tachometer RPM input: green lead
- Backlight: white lead (sometimes this is not present, and the red +12V lead powers the lights, too).

The Model BT-05B installation kit includes terminated wires that can be inserted into the 12-pin connector housing for tach connection, and they are color-matched to the typical automotive aftermarket pattern. They are:

♦ Position 3:	"4-cylinder" tachometer output (GREEN WIRE)
♦ Position 4:	Return (ground) wire to tachometer (BLACK WIRE)
♦ Position 5:	+12V power to tachometer (RED WIRE)
♦ Position 10:	"2-cylinder" tachometer output (GREEN WIRE)

Since you use EITHER position 3 or position 10 for the tach output, there is only one green accessory wire in the kit. The wires are 12" long; you will have to splice them, as appropriate, to your tachometer leads. The terminals preinstalled onto the ends of the wires insert into the housing from the back end (where the molded-in numbers are, and where the pre-installed wires are sticking out). The terminals "snap" into place and are then permanently retained; you can feel and hear them "click" when they go all the way home.

The simplest way to see how the terminals must be oriented to snap them into place (they only go one way) is to use one of the other five wires that are already installed in the connector as a guide. You want to align the heart-shaped "insulation crimp" that bites into the colored part of the wire so that it matches the pre-installed wires.

If you get a wire in the wrong hole, the special remover tool is pricey little bit of sheet metal that is available mail-order from Digi-Key (www.digi-key.com); their part number is **WM9918-ND**. If you do get the wrong color in a hole, it won't make any difference so long as the correct connector location number goes to the correct tachometer input function, but then you won't have color- matching wires (red-to-red, black-to-black), which makes life easier. It'll still work though. By the time it's in your hands, the extraction tool will cost you $30.00 and will not look like a bargain, but there's no other easy way to get a wrongly located terminal out without destroying the connector.

The last option is the Kill Switch:

♦ Position 2:	Kill switch (ORANGE WIRE)

This one's easy. If you install this wire in connector position 2, and the other end of the wire is shorted to chassis ground, the plugs will stop sparking for as long as the electrical connection is made. The kill function does NOT disable the ignition's control module or tachometer; they continue to operate (the module draws about 100mA). What the kill function does is to inhibit the coil current, so that there can be no spark.

If you wire in an old-fashioned momentary kill button and push it with the engine running, all cylinders will stop firing for as long as you hold down the button. You can also use a toggle-type switch to ground, so that the sparks are interrupted when the switch is in the "kill" position. You can connect more than one kill switch to the wire from the control module if you want to; the rule is if ANY ONE of the multiple (parallel-connected) switches is in the "kill" position, there will be no spark.

Other details and notes:

- The Model BT-05B ignition system has two magnets spaced at 180º on the trigger rotor; one magnet results in a "fire" command from the right- or left-hand cylinder's Hall-effect sensor pickup, and the other magnet results in a "dwell" command. "Fire" interrupts battery current through the ignition coil's primary windings, and "dwell" resumes current through the coil; this means that each coil's "crankshaft dwell" is 360º, much longer than is provided by points-type ignitions. At 13,000 crankshaft RPM, this equates to a dwell time of just over 4.6 milliseconds, which is adequate to get most of the maximum coil energy to the plug. The benefit of the electronic ignition's longer dwell time compared to points is higher spark energy (able to jump a larger gap at higher cranking pressures); this will be particularly true at higher engine speeds.

- For those who are running high-compression, high-RPM applications and wish to use high-performance aftermarket coils, a coil with a primary resistance down to 3.0 ohms is permissible. As previously noted, suppression-type sparkplug wire should be used with aftermarket coils (the OEM Honda coils typically do not have replaceable plug wires).

- Coils intended for capacitive-discharge ignition (CDI) systems are generally less than 1 ohm primary resistance, and are incompatible with the Model BT-05B ignition system. The wrong ignition coils will cause overheating and damage to the control module. Many inexpensive multimeters can't measure accurately down to a few ohms, so be especially careful to know what coil resistance you've really got.

For questions and/or assistance, contact:

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