

Cable-SHiFT

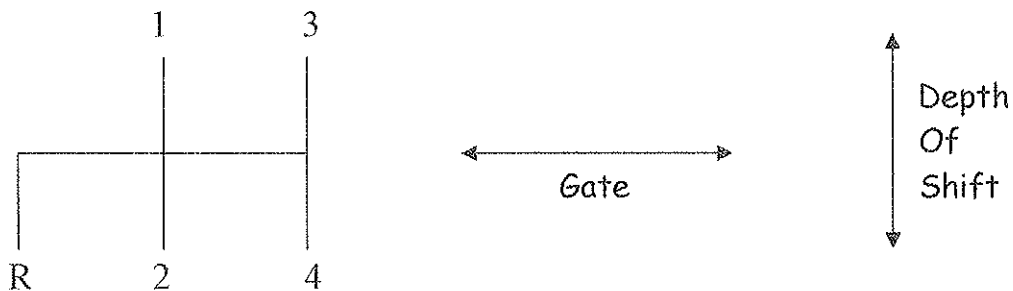
Instructions

Type I

1. Fabricate the mount for the Cable-SHiFT box. The shifter box is normally secured by the pre-punched $\frac{1}{4}$ " diameter holes at the base of the sides. Two through tubes 2-7/8" long are used on the chassis with a single center tube. On a chassis with two center tubes 1/8" brackets are drilled to match the holes in the shifter box, then welded to the center tubes.
2. Next the gate cable bracket and shift rod coupler are removed from the cables at the transaxle end. The gate cable bracket is secured to the nose cone by four 7mm nose cone studs at the top of the transaxle nose cone. The coupler assembly is located on the transaxle shift rod by a 5/16" set screw tightened into the shift rod dimple. Note: Some transaxle shift rods are not 'dimpled' on the top side. Proper dimple location is required, by shift rod replacement or simply drilling a new dimple.
3. The shift cables may now be installed along the route defined during the cable measurement and the shifter box is bolted to the shifter mount.
4. The main (larger) cable is passed through the 5/8" hole in the gate cable bracket and is secured by jam nuts on either side of the bracket. The quick disconnect (QD) socket at the end of the cable is then installed over the ball on the shifter rod coupler.
5. The gate (smaller) cable will approach the shifter rod coupler perpendicular to the main cable and should be installed as freely as practical. The gate cable is secured on either side of the coupler block by a 7/16" jam nut and secured to the gate cable bracket by a ball joint at the end of the gate cable. When all fasteners are secured adjustment of the shifter can begin. Initial adjustment to 'run through the gears' can be made in the shop before the engine is running. Final adjustment and 'fine tuning' should be made under driving conditions.

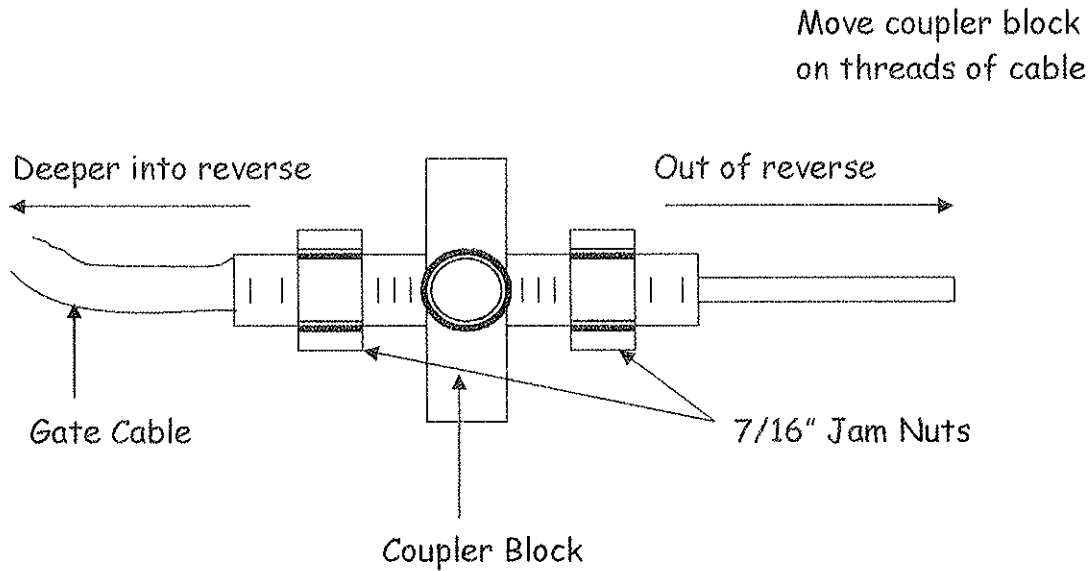
Cable-Shift Adjustments Type I

1. **Set the depth of the shift.** First disconnect the $\frac{1}{4}$ " quick disconnect socket from the shift rod coupler ball and push the shift rod coupler into first gear (center gate, forward position). Push the shift handle forward into the first gear position as well, now with a minimum of $\frac{3}{16}$ " of cable end threaded into the quick disconnect adjust the $\frac{5}{8}$ " jam nuts on the main cable, so the quick disconnect socket fits easily over the shift rod coupler ball. Pull the shift rod coupler back (into second gear) and repeat adjustment until the shift handle functions through the middle of its travel.
2. **Set the gate position.** There are 3 gates in a 4-speed VW transaxle (4 gates in some 5-speed Porsche transaxles). A gate and depth of shift diagram for VW 4-speed transaxle is shown below:



Push the shift rod coupler into first gear and loosen the two $\frac{7}{16}$ " jam nuts on the gate cable. Gently slap the shift handle up against the Cable-Shift lock out bar. Screw the $\frac{7}{16}$ " gate cable jam nuts towards one another and finger tighten against either side of the shift rod coupler block. The Cable-Shift shifter should be close enough to 'run through the gears'. Shifting will improve when the engine is running and the clutch is depressed. Shifting further improves as the synchronizers are worn in.

3. **Fine adjustment of the gate cable.** Fine adjustment of the gate cable is usually necessary after initial test drive, to make a smoother down shift from third to second without 'catching' reverse. A diagram is provided to show this adjustment:



Small adjustments (1/6 of a turn) made with both jam nuts makes a noticeable difference. A smooth shift sequence is therefore attainable first through fourth gears and reverse.

4. When the Cable-Shift shifter has been adjusted to the drivers 'driving style' under driving conditions, tighten all jam nuts, re-tighten bracket fasteners and recheck shifting sequence.