

CHAPTER 7

R22 MANEUVER GUIDE

INTRODUCTION

The intention of this guide is to aid both the student and instructors while conducting training in the R22. It should be understood that because of the many variables in geographic location, altitudes, loading and individual instructor techniques, minor modifications to certain maneuvers might be necessary. For the purposes of training, the following parameters should be adhered to:

Normal Climb	60 kts @ 104% RPM
Normal Cruise	75 kts @ 102%–104% RPM
Hovering	5 feet @ 104% RPM
Takeoffs	104% RPM
Autorotative Descents	60–70 kts
Maximum Hover Speed—Forward	10 kts groundspeed
Maximum Hover Speed—Lateral/Rearward	5 kts groundspeed

HOVERING FLIGHT

PURPOSE:

To maneuver the helicopter forward, sideward, rearward and turn the aircraft while hovering.

DESCRIPTION:

Forward, sideward and rearward flight

From a stabilized 5-foot hover, headed into the wind, move the cyclic smoothly towards the desired direction of flight. Maintain heading with small pedal corrections and altitude with collective. As movement begins, adjust the cyclic to keep the groundspeed at a constant rate equivalent to a normal walk. Reference points along the direction of flight can be used to maintain correct ground track. To stop the movement, apply cyclic opposite to the direction of movement until the helicopter stops. During all phases of hovering, cyclic changes should be small and smooth to minimize the effects of over controlling or pendular action.

Crosswind hovering is accomplished in much the same manner. The cyclic must be inclined into the wind enough to cancel out any tendency for the helicopter to drift.

Hovering Turns

Hovering turns are accomplished by use of the pedals. With the helicopter headed into the wind, apply pedal in the desired direction of turn. As the helicopter turns, counter pressures on the opposite pedal should be used to maintain a slow, constant rate of turn. (A rate of 360° in 15 seconds is recommended.)

Cyclic is used to control attitude and position over the ground and should be continually adjusted into the wind to avoid drifting and excessive attitude changes during the turn. Maintain a constant altitude with the collective. Normally, a slight altitude and RPM loss will occur in a left turn due to the increased pitch of the tail rotor blades. This can be corrected with a slight increase in collective and the governor will increase throttle if necessary. Right turns produce just the opposite effect. A decrease in the tail rotor pitch will cause a slight increase in RPM and altitude. If necessary, compensate by slightly lowering the collective and the governor will reduce throttle. As the desired heading is reached, stop the turn by applying slight pressure on the opposite pedal.

PERFORMANCE STANDARDS:

	Private	Commercial
Altitude	± 2 feet	± 1 foot
Heading	± 10°	± 5°
Ground Track	± 5 feet	± 3 feet