VIRTUAL ALLIED AIR FORCES SOUTHERN EUROPE

SOME NOTES ON GROUND CONTROLLED APPROACH PROCEDURES MADE WITH Vpar (Virtual PRECISION APPROACH RADAR)

- There are several procedures to which a GCA/PAR controller must adhere to ensure the success of a Ground Controlled Approach. Some of these steps are very basic, like performing a radio check with the pilot, to ensuring the pilot knows what to do to complete the approach or fly a missed approach.
- The controller and pilot must each find out a few things from each other:
  - The controller must know what the pilot intends to do upon completion of the approach.
  - Does he intend to land?
  - Does he intend to do a touch and go and continue VFR?
  - Maybe he wants to do a touch and go and then get vectored for another approach.
  - This would be called a "radar square", where the final controller also vectors the aircraft around in what amounts to a traditional circuit pattern.
- The pilot needs to know some basic information about the approach, among other things.
  - What is the glidepath angle? This information, along with his indicated speed on final approach, helps the pilot figure out how fast to descend. For example, if he's going to fly final at about 140 knots, the wind might slow him down a little, and a 3° glideslope would require approximately 600-700 feet per minute in descent.
  - The pilot also has to know the published Decision Height for the approach. If the runway environment is not in sight by the time the pilot reaches this altitude, a missed approach must be executed. What is he do in the event of a missed approach, planned or not?
  - As a pilot, remember to keep corrections small under normal circumstances, just like hand-flying an ILS.
  - Experience with autopilots should be avoided, we would recommend that you disengage the AP and fly the aircraft by hand.

All of above said, here down some example patterns of good communications between a GCA controller and the pilot.

FIRST RADIO CONTACT WITH ASR

EAGLE 3: “VIPER 1 this is your radar controller EAGLE 3. How do you read me ?”
VIPER 1: “loud and clear, sir”

EAGLE 3: “VIPER 1 this will be a precision radar approach to Rimini airbase runway 31, glidepath angle on final set at 2.8°, published decision height 278 feet”
VIPER1: “roger, after this approach, requesting touch and go around for another precision approach”

EAGLE 3: “ VIPER 1 roger, Rimini wheather reports wind 290°/5 kts, visibility 2500 meters, low clouds at 800 feet, base is Yellow”
VIPER 1: copied.

EAGLE 3: “VIPER 1, if no transmissions received for a period of 30 seconds while on traffic or 5 seconds while on final assume radio failure and..” [Your missed approach instructions go here... Example of options are things like:]

"fly runway heading for radar vectors, climb to 3000", or
"carry out the published missed approach", or
"maintain last assigned heading and climb to 3000", or
"proceed direct to the Rimini VOR and climb to 4000",

[followed by:]

"...and attempt to contact Romagna radar on frequency.."

VIPER 1: “copied “[should read back frequency if any]

When the aircraft is nearing the final approach course and you have transitioned to the PAR display ...

EAGLE 3: “VIPER 1, fly heading 307. Now on final approach at 12 NM from touchdown, do not acknowledge any further transmissions unless requested by radar.”

Issue instructions and position information while the aircraft is on final approach at least every 5 seconds, preferably more often, to make sure the pilot is kept abreast of where he is and that he is still in communication with you. These transmissions should sound like the following:

EAGLE 3: "well right of the on course correcting rapidly - fly heading 302"
EAGLE 3: "12 miles from touchdown - fly heading 305"
EAGLE 3: "intercepting the on course, fly heading 307"
EAGLE 3: "on course - 11 miles from touchdown"
EAGLE 3: "left of the on course - correcting slowly" (or "nicely", or "rapidly")
EAGLE 3: "left of course and paralleling" or “runway centerline is on your right”
EAGLE 3: "drifting left of course, turn right heading 312"
EAGLE 3: "well left of the on course - turn right heading 320"
EAGLE 3: "on course fly heading 308 - 10 miles from touchdown - 2 miles to glidepath interception"
EAGLE 3: "slightly left of the on course - standby for glidepath interception - wheels should be down"
EAGLE 3: "intercepting glidepath - commence descent for a 2.8° glidepath NOW published decision height 278 feet"

EAGLE 3: "slightly below glidepath, adjust rate of descent"
EAGLE 3: "on course"
EAGLE 3:"above glidepath - adjust rate of descent"
EAGLE 3:"back on glidepath - resume normal rate of descent - on course"
EAGLE 3 "below glidepath adjust rate of descent - 3 and one half miles from touch down - on course"
EAGLE 3 "3 miles from touchdown - dangerously below the glidepath - level off your aircraft - acknowledge"

[To which a pilot should level off and report doing so]

EAGLE 3 "back on glidepath - resume normal rate of descent - two and one half miles from touchdown"
EAGLE 3 "on course"
EAGLE 3 "on glidepath"
EAGLE 3 "2 miles from touchdown - tower clears VIPER 1 to land runway 31 - winds 290 at 7 - check gear down - acknowledge"

[and so on to ensure the pilot stays on or near the approach path]

EAGLE 3"one half mile from touchdown"
EAGLE 3 "passing through radar control limits"
EAGLE 3: “report runway on sight”
VIPER 1: “runway on sight, taking over visually”

EAGLE 3 "approaching threshold - look ahead your touch and go - radar standing by"

VIPER 1: radar again with you, climbing to 2500 feet
EAGLE 3: roger VIPER 1, still on radar contact, turn right heading 130° for the downwind leg, report reaching 2500 feet.