APPENDIX   I

USAIR CHECK PILOT HANDBOOK

SIMULATOR OPERATIONS

GENERAL

The basic duties of a simulator check airman are: (1) initial, upgrade, and transition training (2) proficiency checks (3) proficiency training. Line Oriented Flight Training (LOFT) is normally included in training courses.

SIMULATOR CONTROLS

Only USAir check airmen are authorized to operate the controls of the simulator for USAir training or checking.

Contract training check pilots, if qualified, may operate simulator controls for their own pilots, and FAA inspectors may operate controls for FAA personnel checks.

TRAINING

Training courses are divided into five different types, initial, upgrade, transition, requalification, and differences. Initial is that training conducted for the first time in a particular position. Upgrade training is conducted when a pilot moves from one seat to a higher seat in the same aircraft. For example, a pilot moves from the right seat to the left seat in a 737. Transition training is accomplished when a pilot moves to the same seat in a different airplane. For example, a 737 Captain moves to MD-80 Captain. The distinction between these types can become complicated depending on circumstances, so determination between types is best left to the Pilot Records Department. Student Training Folders normally indicate a category for each pilot; however, most USAir programs are similar regardless of category.

FAR 121.424 describes the requirements for initial, upgrade and transition training. Specific guidelines are found in Appendix E to FAR 121; however, the USAir Form OF-82, if followed, will ensure that all required maneuvers are accomplished during training.

Training courses begin at a fairly basic level and build on acquired skills throughout training until a high level of performance is demonstrated. At the end of the training period, the instructor must feel confident in recommending the student for a type rating or company check. If at any time during training it becomes apparent that the student's progress is questionable, the appropriate Flight Manager should be contacted for authorization to conduct further training and ensure competence.

As training progresses, aircraft system failures and abnormalities are introduced so that at the end of the training course, a pilot will have had experience dealing with almost all important abnormal and emergency checklist items. Often various aircraft systems will be emphasized on a particular training day. Throughout training, basic flying skills will be practiced, resource management capabilities improved, and familiarity with flight guidance when required will increase. It is important for the instructor to provide training in all areas of the syllabus rather than concentrate only on preparing for the check. This will ensure a more well-rounded and competent pilot.

PROFICIENCY CHECKS

The requirement for proficiency checks is found in FAR 121.441. For a pilot in command, a proficiency check is required each 12 calendar months, provided that, within the past 6 calendar months the pilot receives either proficiency training or a proficiency check. For all other pilots, a proficiency check is required each 24 calendar months, provided that, within the past 12 calendar months the pilot receives either proficiency training or a proficiency check. The rules also provide that if a pilot takes a check in either the month before or the month after the due month, it shall be considered that the check was taken in the required month.

A Guideline Simulator Syllabus is published for each aircraft type. This syllabus provides information regarding the maneuvers to be expected during a PC or PT. Also included are 100 questions which give direction for study to insure competence during the oral examination.

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SIMULATOR OPERATIONS (cont'd.)

PROFICIENCY CHECKS (cont'd.)

The first part of a proficiency check is considered to be a warm-up period where the person taking the check regains the "feel" of the simulator. This portion lasts approximately through the first climb out. No particularly difficult problems should be induced during this phase although it would be considered normal to present a starting malfunction, some irregularity on taxi-out, and a problem of some type during the later stages of the climb.

The initial climb is continued to an altitude of approximately 12,000 feet where the airwork (steep turns and approaches to stalls) is completed. After a climb to altitude, a problem is usually induced which would require an emergency descent. While the flow of the session from this point on depends upon personal preference and aircraft requirements, the first approach would probably be either an ILS approach to lower than standard minimums or a non-precision approach.

From this point on, it is very important to plan the flow of the check so that the sequence of events seems as reasonable as can be expected in a simulator session. This is difficult to do considering the requirements for varying aircraft configurations and weather minimums. During training, each check airman will develop a check ride flow that adequately covers the required maneuvers. However, even after a standard flow is established, changes will be needed to react to pilot decisions and accommodate repeated maneuvers.

Two of the most important conceptual considerations during a check are that realism must be maintained as much as possible and that the crew concept of cockpit management must be emphasized.

Realism can be promoted in a number of different ways. The check airman should "role play" as much as possible, taking the role of the person the pilot is communicating with. Standard terminology and procedure during communications will insure that the simulator session is similar to line operations.

A simulator technique which has an important effect on realism is the use of the freeze and slew features. While slewing the simulator position can have great benefits regarding the timely flow of a check ride, it can also be disconcerting to those pilots who retain spatial orientation. Therefore, a balance must be maintained between the need to slew or freeze the simulator and the need to promote realism and pilot awareness of position.

The crew concept of cockpit management has become important for all airline operations. It is considered that proper crew resource management can lead to a more beneficial safety record.

The crew concept can be taught effectively in simulator operations. Crew concept and crew resource management should be stressed in all simulator training and checking. Naturally, it is important that the person taking the check is not "lead" by the other crewmember, but each pilot should be allowed to use the full resources available from other crewmembers.

A summary of the FAA Inspectors Handbook regarding type ratings is provided in the Appendix of this manual. This section of the handbook outlines guidelines for conducting an FAA Certification or Type Rating. There are some differences between a type rating and a proficiency check, but they are still very similar. Therefore, the type rating summary should be used as a guideline for conducting a check. This document provides philosophical comments, required maneuvers, and performance parameters among other things and amplifies the FAR and USAir guidelines.

There are no minimum time requirements for a proficiency check except that all required maneuvers must be completed.

It should be emphasized that the only way training can be conducted during a proficiency check is to stop the check, do the training required, and then restart the check. Unless the check is stopped in this manner, the check airman must not become involved with training during the session.

Certain items may be waived during a proficiency check. The maneuvers that can be waived are found in the FAR Appendix F and on the USAir Check Form OF-32. As stated in the FAA Inspectors Handbook, maneuvers should not be waived to save time. They may be waived because the pilot has demonstrated competence and the check airman can determine that additional checks are not required to determine proficiency.

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SIMULATOR OPERATIONS (cont'd.)

PROFICIENCY TRAINING

Proficiency training is similar to a proficiency check in appearance. During a training period, the instructor may become more involved with cockpit interaction than is allowed during a check, but not at the expense of realism or crew management. Other differences are that a training period requires a minimum of 4 hours in a pilot seat and no maneuvers may be waived. During the four hour period, each pilot will manipulate the controls for half the period and perform non-flying duties for the other half. The OF-32 form lists different non-precision approaches that are to be flown on the PT rather than on the PC. Some additional procedures such as windshear recovery also are practiced during this period.

Pilots scheduled for a PT may be rescheduled for a PC if required. This is particularly beneficial in the event only one pilot is available for a specific period. By changing to a PC, the minimum requirement of 4 hours is removed, and the check can be completed once proficiency is established.

In the event that a PT is changed to a PC, the non-precision approaches required for a PT (Back Course and ASR) must be flown, and windshear training must be completed.

When conducting flight training or checking in the simulator, the check airman plays the role of the person with whom the pilot is speaking. Acting the role of the air traffic controller is normally not a problem since we are all familiar with the verbiage used for most situations. The Airport Surveillance Radar (ASR) approach is an exception, however, in that many are not familiar with the terminology used.

The following is ATC suggested language for controllers when conducting an ASR approach:

"USAir One, Charlotte Final Controller, loud and clear, how do you read me?

Roger. This will be a surveillance approach to Runway 36L. Published minimum descent altitude is one-one-two-zero. Missed approach point is landing threshold. If no transmissions are received for one minute in the pattern, or fifteen seconds on final approach, climb and maintain three thousand, proceed direct to the Tyron NDB. Maintain three thousand until Tyron, cleared for the ILS Runway 5 approach.

One zero miles from runway. Turn right heading two-seven-zero. Prepare to descend in three miles.

Nine miles from runway. Turn right heading three-six-zero. Do not acknowledge further transmissions.

Eight miles from runway. Slightly right of course. Turn left heading three-five-five.

Seven miles from runway. Descend to YOUR minimum descent altitude.

Six miles from runway. USAir One is cleared to land. Wind zero-one-zero at seven. Acknowledge."

NOTE: Give position and track every mile such as "slightly left/right of course OR well left/right of course, turn . . . . OR, on course.

"One mile from runway, on course. Report the runway in sight.

USAir One is over landing threshold. If runway or approach lights not in sight, execute missed approach. Fly runway heading, climb and maintain three thousand. Vectors for the ILS Runway 5 approach."

NOTE: If pilot reports runway in sight, controller says, "Roger, no need to acknowledge. Cleared to land. Stay with me."

When aircraft slows to taxi speed, say "Turn right when able. Hold short of the parallel taxiway and contact ground control on point nine."

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SIMULATOR OPERATIONS (cont'd.)

WINDSHEAR TRAINING

Windshear training must be completed on all Proficiency Training sessions and all Proficiency Checks administered in place of proficiency training. The training must be conducted in accordance with the procedures set forth in the Flight Operations Training Manual (FOTM).

There are six windshear profiles available in the USAir FAA Approved Training Program. These profiles are divided into three categories:

1. Takeoff prior to V_R.
2. Takeoff after V_R.
3. Approach and landing.

During initial, transition, and upgrade training, a pilot must experience one encounter in each of the above phases of flight.

A requirement of the approved program is that pilots must experience a different scenario during each proficiency training period. Since record keeping of that detail is not possible, the method used to ensure this variation will be to assign a different scenario each 12 months. Check airmen will be advised when the scenario is changed.

Recurrent windshear training will include:

— Recognition of onset of a severe windshear encounter from available flight instrumentation.

— Coordination of cockpit activities to improve ability to recognize and recover from an inadvertent windshear encounter.

— Proper use of pitch, power and aircraft configuration to recover from an inadvertent windshear encounter.

— Certain non-routine precautionary measures when indicated by weather conditions.

— Difficulties of maintaining flight path control in realistic severe windshear encounters to reinforce avoidance as the best-defense. Pilots will be trained with and without warning/escape guidance. When the warning/escape guidance equipment (or operational equivalent) is installed and approved for use in the simulator, pilots will be trained using such equipment.

A briefing period is required prior to commencing windshear training. This briefing will include:

— Evaluation of the weather to decide proper course of action.

— Avoidance of known windshear.

— Adherence to standard operating procedures.

— Compliance with windshear recovery technique if a windshear is inadvertently encountered. Discussion should include proper thrust and pitch management, aircraft configuration, crew coordination, and proper pilot reports.

— Scenario briefing to include a description, initial conditions, and piloting technique requirements.

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SIMULATOR OPERATIONS (cont'd.)

WINDSHEAR TRAINING (cont'd.)

A debriefing is an important part of windshear training. In addition to a discussion of techniques used in the simulator, the debriefing will include:

— Windshear avoidance is the best defense.

— Characteristics of recorded windshear events are very similar.

— There is limited time for windshear recognition and action.

— Windshear recognition is difficult.

— Flight path control must be through pitch attitude.

— Unusual stick forces may be required to maintain pitch attitude during airspeed variations away from the norm.

— Low airspeed must be accepted.

— Flight crew must coordinate.

— Lack of communication between flight crews and controllers can contribute to windshear accidents and incidents.

— In all past accidents and incidents, there has been evidence of severe weather in the area.

LINE ORIENTED FLIGHT TRAINING

A Line Oriented Flight Training (LOFT) period is required for advanced simulation training programs. Not all students qualify for advanced simulation. The factors involved are the phase level of the particular simulator and, in some cases, the background of the student. USAir LOFT programs are FAA-approved and must be conducted in accordance with the approved scenario.

When a student participates in an advanced simulation program, no aircraft training is required. The pilot goes directly to the line for Initial Operating Experience (IOE) after simulator training. The LOFT session is designed to facilitate the transition from the simulator to the aircraft.

When conducting a LOFT session, every detail of realism must be maintained. Students are given a departure time and appropriate paperwork and are expected to be ready at scheduled departure time. The instructor must play the role of each person the pilot would come in contact with on a normal flight. Dispatch releases, weight and balance, and fuel slips are all provided for the flight to be flown.

A LOFT period must be 4 hours long and consists of two segments. One should be a normal flight with few irregularities. The second should be similar but with some abnormal or emergency situations introduced. These should be of a reasonable nature and any attempt to "overload" should be avoided. An engine failure or landing gear problem with a divert to the alternate would be a good example of a typical problem.

It must be stressed during the LOFT that there is not a definite right or wrong answer to all problems presented. This is a learning experience. The debrief plays an especially important role in LOFT training. Student reactions to the training received should be solicited as well as possible alternative actions suggested during the debrief.

Line type procedures should be stressed in the LOFT period. Particularly those that are not stressed during simulator training such as descent planning, SID and STAR restrictions, fuel conservation, and passenger consideration.

If the loft training is done correctly, it will provide a great benefit to the pilot in the transition from the simulator to the line.

OF-32, TRAINING FORM

The following pages will discuss the different aspects of documenting TR's, PC's and PT's on USAir's form OF-32.

All entries must be made in **BLACK INK.**

To find the required maneuvers for all rides, check the SIMULATOR SYLLABUS GUIDE.

The first seven lines are filled out in a similar manner for TR's, PT's and PC's.

Line 1 — NAME and EMP. NO. (print pilot's name and emp. no.)

     — Check ATPC — if the ride is pilot's first ATP TR

     — Check TYPE RATING — if pilot is getting an additional TR

     — Check PROF. CHK. — if a PC for currency or for a F/O following initial upgrade or transition training

     — Check SIM or ACFT. — appropriate to the PC if given in *only one* environment.

Line 2 — DOMICILE (print 3 letter identifier)

     — POSITION (Captain or F/O, position for which pilot is being checked)

     — CERTIFICATE NUMBER (enter pilot's certificate number)

Line 3 — TYPE OF SIMULATOR/AIRCRAFT

     — NO. of LDGS in SIM or ACFT (an approach rejected below 100 feet can be counted as a landing for documentation purposes)

     — DATE OF PHYSICAL (Captain must have current 1st Class good for 6 mo., F/O must have at least a 2nd Class good for 12 mo.)

Line 4 — SIM INSTRUCTOR/CHECK AIRMAN (*cross out instructor*, enter written signature of check airman conducting the ride, followed by his/her employee number — when all or part of the ride is given *in the simulator*)

     — FAA SIM (name of FAA Inspector or USAir Designated Examiner, if none present, enter NONE)

     — DATE (day of ride)

Line 5 — CHECK AIRMAN CERTIFICATION (written signature of check airman giving the ride, followed by his/her employee number — when all or part of the ride is given *in the aircraft*.

     — FAA ACFT (name of FAA Inspector or USAir Designated Examiner, if none present, enter NONE)

     — TIME (for a PT the time must be at least 4+00; for all other checks, this entry reflects the pilot's part of the ride for which s/he has primary responsibility (time at the controls)

Line 6 — BRIEFING/EQUIPMENT EXAM (circle ORAL)

Line 7 — PREFLIGHT INSPECTION (circle PILOT)

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DOCUMENTATION FOR A "TR/PC" IN THE SIMULATOR

— The required maneuvers for a TR and PC are the same with the exception that the TR also requires a ZERO FLAP APPROACH and LDG.

— Only one non-precision approach is required on the initial TR/PC if the NPA stamp is used and signed off (see line 21).

— Every non-shaded box in column (C) must be marked with one of the grades found in the LEGEND, NOTES at the bottom of the form (S,SS,W,N/A).

— For a list of the required maneuvers on a TR/PC, refer to the SIMULATOR SYLLABUS GUIDE.

To document the ride, refer to the following along with the example.

Line 1 — Type of check — check one block only

       3 — LDGS (TR requires minimum of 3) (PC requires minimum of 3)

       4 — SIM INSTRUCTOR, CHECK AIRMAN (cross out instructor, insert signature/emp. #); FAA (print name of FAA or DE, if none present, enter NONE)

      17 — REQUIRED FOR CAPTAIN ONLY, IF NOT DONE BY F/O INDICATE WITH N/A

      18 — MUST DEMONSTRATE AT LEAST 1 TURNING STALL

      21 — CIRCLE — THE REQUIRED APPROACHES, WHICH FOR PC'S ARE — VOR and ADF

      22 — CIRCLE — if documenting CAT IIIA enter 50 feet, CIRCLE — FD A/C, M/A, or LDG

      23 — CIRCLE — APPROPRIATE PARAMETERS (200 feet IS REQUIRED MINIMUM ALT for CAT I)

      24 — ALWAYS N/A

      25 — ONE COMPLETE M/A PROCEDURE MUST BE FLOWN

      26 — CAPTAIN MUST FLY AN ADDITIONAL M/A — FOR A TOTAL OF 2

      27 — CAPTAIN MAY BE REQUIRED ON A TR. IF A PC — GRADE N/A

      32 — ALWAYS N/A

      34 — CAPTAIN MAY BE REQUIRED ON A TR. IF A PC — GRADE N/A

In the REMARKS, RECOMMENDATIONS section:

— Enter any remarks pertinent to the session.

— If a maneuver/procedure must be repeated before it is graded (S), this must be noted in REMARKS section, i.e., TAKEOFFS, (Rejected) was repeated.

— If a maneuver/procedure receives a grade of (SS), this must be noted in the REMARKS section with an explanation of why the grade was given. The reason for the grade must be reviewed with the pilot and s/he must demonstrate a satisfactory accomplishment of the maneuver/procedure (following additional training as determined by the Flight Manager — Training) prior to returning to flight duty.

— USAir does not normally completely waive (W) any maneuver/procedure in the simulator.

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CHECK AIRMAN HANDBOOK

DOCUMENTATION FOR A "TR/PC" IN THE SIMULATOR (cont'd.)

EXAMPLE — TR/PC IN SIMULATOR ONLY

DOCUMENTATION FOR CHECK IN THE SIMULATOR & AIRCRAFT

— The following categories of pilots may require checking in both the simulator and aircraft following training, depending on the phase level of the simulator.

1. All S/O's upgrading to F/O.
2. All new hire F/O's.
3. All Pilots who do not meet any of the following requirements:
    a. a current F/O having been a F/O on two USAir turbojets and having either 2500 pilot hours or a turbojet ATP
    b. a current F/O who was or is qualified on the aircraft and has 500 pilot hours with USAir

— For a list of the required maneuvers in the Simulator and Aircraft, refer to the SIMULATOR SYLLABUS GUIDE.

— To document the rides, refer to the following along with the example:

THE SIMULATOR SESSION:

— Should be conducted and completed in the same manner as a normal PC or TR.
— Should be reflected by grading in column (A).

Line 3 — Need to log at least (3) landings

    4 — SIM INSTRUCTOR CHECK AIRMAN (cross out instructor, insert signature/empl. #) FAA (printed name of FAA or DE, if none present, enter NONE)

    17 — REQUIRED FOR CAPTAIN ONLY, IF NOT DONE BY F/O INDICATED WITH N/A

    21 — CIRCLE — THE REQUIRED APPROACHES, WHICH FOR PC'S ARE — VOR and ADF

    22 — CIRCLE — If documenting CAT IIIA, enter 50 feet, CIRCLE — FD A/C, M/A, or LDG

    23 — CIRCLE — APPROPRIATE PARAMETERS (200 feet IS REQUIRED MINIMUM ALT for CAT I)

    24 — ALWAYS N/A

    25 — ONE COMPLETE M/A PROCEDURE MUST BE FLOWN

    26 — CAPTAIN MUST FLY AN ADDITIONAL M/A — for a total of 2

    27 — CAPTAIN MAY BE REQUIRED ON TR, IF F/O or A PC — GRADE N/A

    32 — IS ALWAYS N/A

    34 — CAPTAIN MAY BE REQUIRED ON TR, IF F/O or A PC — GRADE N/A

THE AIRCRAFT SESSION:

— Should be reflected by grading in column (B)

— The TR or CAPT PC check must include (but is not limited to):
    1 nomal T/O   1 full stop LDG   1 M/A from ILS
    1 normal LDG   1 manual ILS   1 S.E. LDG

— The F/O CHECK must additionally include:
    1 LDG from an ILS   1 S.E. LDG

Line 3 — Need to log at least (3) landings

    5 — CHECK AIRMAN (signature/empl. #) FAA (printed name of FAA or DE, if none present, enter NONE)

    22 — CIRCLE — APPROPRIATE PARAMETERS

    23 — CIRCLE — APPROPRIATE PARAMETERS — ILS to M/A or LDG

    29 — Grade for F/O

In the REMARKS, RECOMMENDATIONS section:

— Enter any remarks pertinent to the session.

— See REMARKS, RECOMMENDATIONS section as expanded for "in the simulator".

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DOCUMENTATION FOR CHECK IN THE SIMULATOR & AIRCRAFT (cont'd.)

EXAMPLE — TR/PC IN SIM and AIRCRAFT

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DOCUMENTATION FOR A "PT" SESSION

— A PT must last at least 4+00 and NO maneuver can be waived. The purpose of a PT is to ensure each pilot is trained to proficiency. Every non-shaded box must be marked with a ✔ after training is accomplished or with an INC for uncompleted training.

— For a list of the required maneuvers on a PT, refer to the SIMULATOR SYLLABUS GUIDE.

— To document the session, refer to the following along with the example:

Line 4 — SIMULATOR INSTRUCTOR CHECK AIRMAN (cross out instructor, insert signature/emp. #) FAA (printed name of FAA or DE, if present.)

5 — TIME (AT LEAST 4+00 MUST BE LOGGED — TIME OF SESSION)

6 — CIRCLE — ORAL

7 — CIRCLE — PILOT

17 — REQUIRED FOR CAPT ONLY, IF NOT DONE BY F/O INDICATE WITH N/A

18 — MUST DEMONSTRATE ALL STALLS

21 — CIRCLE — THE REQUIRED APPROACHES, WHICH FOR PT'S ARE — LOC and ASR

22 — CIRCLE — If documenting CAT IIIA enter 50 feet, FD A/C, M/A or LDG

23 — CIRCLE —APPROPRIATE PARAMETERS (200 FEET IS REQUIRED ALT for CAT I)

24 — ALWAYS N/A

25 — ONE COMPLETE M/A PROCEDURE MUST BE FLOWN

26 — CAPTAIN MUST FLY AN ADDITIONAL M/A — FOR A TOTAL OF 2

27 — SHADED

32 — ALWAYS N/A

34 — SHADED

38 — ADD AND CHECK OFF WINDSHEAR

In the REMARKS, RECOMMENDATIONS section:

— Enter any remarks pertinent to the session.

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DOCUMENTATION FOR A "PT" SESSION (cont'd.)

EXAMPLE — PT