



**Operation Manual Part D Appendix H  
B777**

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## 0 Preface

Rev. No	Date Entered	Amended By

### 0.1 Revision Highlights

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# 1 Introduction

- The B777 aircraft (B777-200ER and B777-300ER) consists of long-haul wide body aircraft. BAVirtual operate over 50 aircraft of the B777 series.
- Route structure is primarily Long-haul with some mid and short-haul destinations.
- The Operation of the Aircraft is in line with the Manufacturer's procedures and SOPs wherever possible

## 1.1 B777 Training Manual and Operation Manual

This Appendix of the OM Part D manual forms part of the B777 Training Manual as required by AMC1 ORA.ATO.230(b). In addition trainees will need access to the suite of ATO Manuals set out below. Access to these manuals will be made available electronically.

The BAVirtual ATO Operations Manual consists of the following sections:

OM Part A: BAVirtual SOP Manual

OM Part B: B777 FCOM,

OM Part C: Route Information Manual, Aerodrome charts.

OM Part D: Training Manual and Appendix H B777 Specific Training courses.

## **2 B777 Type Rating Course (Full)**

TBC

## **3 Line Training**

### **3.1 Introduction**

Line Training within BAVirtual is a voluntary scheme for pilots to receive feedback and advice to enable them to operate the aircraft in a realistic manner in accordance with BAVirtual SOPs. It is also an opportunity to highlight some of the resources that BAVirtual has available for pilots and the use of BAVirtual's software and technology.

As a trainee-led scheme, there is no minimum number of Line Training sectors specified. However, trainees are encouraged to continue training until they are able to achieve a Competency Standard of 3. A recommended programme to cover all Line Training elements is outlined below, but there is no obligation for trainees to commit to this full programme.

A list of topics which may be discussed during Line Training is provided below. However, this list should not be considered exhaustive and trainees are encouraged to bring their own questions and areas for discussion

### **3.2 Objectives**

The objectives of Line Training are:

To consolidate handling skills and confirm that the trainee is using the correct skill and technique for Take-off and Landing.

Provide training and development within the Line environment of B777 operation including both Technical and Non-technical skills. Ideally a cross-section of the route network will be experienced. However, it is recognised that this will not always be possible, and this will not jeopardise completion of the course. Similarly, exposure to all B777 variants would be ideal, however this is difficult to arrange in practice and again would not cause issues with course completion.

Line Training provides the opportunity for a pilot to put in to practice the BAVirtual B777 Standard Operating Procedures and to learn and practice new techniques. This is accomplished under the supervision of a BAV member specifically nominated and trained for the task. At the end of Line Training the respective crew member should be able to perform a safe and efficient flight conducted in line with the BAVirtual B777 SOPs

### **3.3 Conduct**

The instructor will normally observe the session via Discord screen sharing. Line training will always be carried out in one of the private Discord rooms designated for training and no other observers should be permitted except as operationally necessary (e.g. a TSC observing a Line Trainer or a new LTC observing a line training detail).

### 3.4 Standard Required on Completion

Continuous assessment will occur throughout the Line Training process and a report entered in Moodle at the end of each trip summarising the progress of the trainee and highlighting any development points for the next trip.

Because Line Training is a trainee-led programme there is no absolute requirement to commit to further sectors or a full 'programme' of Line Training. However, to 'complete' Line Training and earn a Line Check award the trainee must request and complete a Line Check and demonstrate that they have achieved a Competency Standard of 3 in all areas.

### 3.5 Recommended Course Footprint

The recommendations below are designed to permit sufficient time for the Route Training and Discussion items to be completed in a relevant level of detail for the trainee's experience with both the B777 and within BAV. However, these recommendations should neither be considered targets nor restrictions.

Trainee Type	Recommended Sectors
B777 TEP*	10
NEP with B777 experience**	6
Following BAV Type Rating Course	3
Experienced BAV B777 pilot	3

\*TEPs (Trainee Entry Pilots) are pilots with little or no experience of B777 operations, whether new entrants to BAV or new joiners.

\*\*NEPs (New Entrant Pilots) are those pilots who are new to BAV, typically with <50 hrs or 3 months experience.

### 3.6 Training Considerations

#### 3.6.1 General

Normal SOPs will be employed at all times however, SOPs may be varied at the discretion of the trainer if useful training value will be gained. Both trainer and trainee must be clear as to how and why this variance will take place.

Trainers must not interfere with normal operation of the aircraft systems.

Whenever possible allow trainees time to correct minor errors as valuable learning can occur from this process. Significant errors should be corrected immediately, however.

Do not allow a situation to occur where either crew member becomes overloaded. For example, trainers should not permit a scenario to develop where a go-around is required because trainer intervention was delayed.

Remain aware of commercial considerations and the importance of maintaining schedule.

#### 3.6.2 LVOS

An autoland for the purposes of familiarisation with the proper checks and procedures is desirable during Line Training but not essential.

### **3.6.3 De-briefs**

All de-briefs must identify areas for ongoing development. These should be discussed with the trainee and included in the Moodle report.

## **3.7 Grading**

A common BAV grading system is used for all conversion and recurrent training and checks.

Trainees should not progress to the next phase of training unless they achieve a Competency Standard of 3 at the completion of the current phase.

### **3.7.1 Ready for Line Check**

When the trainer is confident that the trainee will achieve a Competency Standard of 3 or greater in the Line Check, he/she should make a note to this effect in the report and advise the trainee to request a line check.

The trainee should be reassured that there is no such thing as a perfect sector. A good sound performance is all that is required

## **3.8 Route Training Items**

The following flying exercises should be considered for inclusion within a full Line Training sequence. Instructors should consider completing these at the earliest opportunity as future weather may preclude their completion on a subsequent line training detail.

1. Visual approach from 1000'
2. Raw Data ILS with A/THR \*\*\*\*\*
3. Non-precision/RNAV approach

### 3.9 Discussion Items

The list of items below is provided as a list of possible areas where trainee and Training Captain may find fruitful discussion and trainees are encouraged to use this list as a starting point for their own research. However, it should not be considered exhaustive and trainees are encouraged to bring their own questions and areas for discussion to the sector. Likewise during the course of training the instructor may find it appropriate to explore other areas of the trainee's knowledge (e.g. route/destination etc).

Discussion items covered should be noted in the Moodle Line Training Report. In-flight discussion must not continue to the extent that the trainee has insufficient time to project ahead and plan for the descent and approach. Discussion items may be completed 'downroute' (e.g. in Discord outside of a flight) where necessary or desired

The discussion items are:

1. Windshear/Severe Turbulence/Weather Radar usage
2. AWOPS inc cold/hot weather
3. Descent below MSA
4. Flight Planning/Fuel Policy
5. BAVirtual DocStore, BAV main SOPs/rules, BAV B777 SOPs, manuals, charts, checklists
6. OM C – Charts/RIM/AV briefings/interactive presentations
7. Oceanic Procedures
8. Merlin, other BAVirtual software
9. Non-standard altimetry
10. Takeoff Performance
11. Stable Approaches
12. Discontinued approaches/Go-arounds/Balked landings
13. RNAV Visual/RF legs/circling approaches

## **4 Line Check**

### **4.1 General**

The Line Check is a voluntary check which any BAVirtual pilot may request. In the first instance it will normally follow one or more sectors of line training, but pilots who have already completed line training and an initial line check may request a recurrent line check immediately without the requirement for training sectors if they so desire. However, this does not preclude a pilot from requesting additional line training at any time.

Line Checks are a test of a pilot's ability to perform a complete line operation, including pre-flight and post-flight procedures and use of resources provided, and as an opportunity for an overall assessment of his/her ability to perform the duties of a BAVirtual pilot. The line check must be completed on a standard BAVirtual mainline flight, whilst connected to the VATSIM network if that is the pilot's normal means of flying. The pilot will be assessed on their non-technical skills as well as their flying ability.

The route chosen should be such as to give adequate representation of the scope of a pilot's normal operations. When weather conditions preclude a manual landing, an automatic landing is acceptable. The line check is not intended to determine competence on any particular route.

The Examiner will always be an observer only and must not be involved in the operation of the aircraft.

## **5 Base Training**

For generic Base Training information see OM-D Appendix P

### **5.1 TBC**

## **6 TRI Training**

Refer to OM-D Appendix G

### **6.1 Introduction**

The objective of the TRI course is to train to the level of proficiency necessary for the issue of a BAVirtual B777 TRI (V) rating. The course is designed to give training to the applicant in: both theoretical knowledge instruction and in-flight instruction in order to instruct on BAV B777 training courses.

#### **6.1.1 Pre-Entry Requirements**

##### General

An applicant for an instructor certificate shall:

- Have a minimum of 50 BAV hours

##### Additional pre-requisites for the initial issue of a TRI (V) B777 Rating

- Have successfully completed the BAV Initial Instructor Training course
- Have completed within the 12 months preceding the application at least 10 route sectors on the B777 for BAVirtual.

Waivers to the above may be granted by the Director of Training in accordance with OM-D (General).

### **6.2 Initial Instructor Training Course**

See OM-D Appendix G Section G.5

## 7 Line Training Captain (LTC) Course

### 7.1 Introduction

This course is designed to introduce Captains to line training. It is designed to be undertaken by both non-TRI and TRI qualified pilots. Prior to commencement of the course, the trainee must at some point have completed the online e-learning modules of the Initial Instructor Training course (refer to OM-D Appendix G.5 for more details).

The LTC role is internal to BAV and there is no accompanying VATSIM paperwork required.

Candidates should have above average skills in the following areas:

- Aircraft technical knowledge
- Aircraft handling
- Standard Operating Procedures
- Pilot Competencies

#### 7.1.1 Objectives

The aim is for candidates to:

- Complete a Line Check
- Develop the instructional skills acquired during the Initial Instructor Training course
- Conduct simulated Line Training with a TSC role-playing a trainee
- Conduct Line Training with actual trainees whilst under TSC supervision
- Learn to recognise normal progress in trainees
- Learn to assess when a trainee has achieved Line Check Standard.

#### 7.1.2 Method

During the course the Student Instructor will:

- Complete a Line Check
- Develop his/her instructional technique
- Demonstrate a sound understanding of the Discussion Items
- Demonstrate aircraft handling and instructional pattern
- Identify and correct errors
- Give and receive feedback and tutoring
- Reach a satisfactory standard for a final test

#### 7.1.3 Terminology

- SI: The LTC candidate
- Tutor Pupil (TP): the LTC Trainer who will act as the student instructor's pupil
- SI One/Two: A term used when there is a need to differentiate between candidates undertaking training simultaneously

#### 7.1.4 Administration

The LTC course is assigned in Moodle by the course tutor. All records for this course are maintained within Moodle and there is no external paperwork required for completion. The course consists of four main stages:

- Initial Instructor Course online modules
- Line Check
- Offline simulator training
- Live training and final check

Upon successful completion of the course, the observing TSC will inform the FTM. The observing TSC will complete the Final Check detail of the SI's Moodle course.

#### 7.1.5 Standard Required on Completion

The LTC course is a continual assessment course and the trainee's progress throughout the various elements is closely monitored. The course tutor will provide comprehensive feedback after each detail and Moodle reports will be completed.

#### 7.1.6 Course Overview

##### 7.1.6.1 Line Check

Prior to commencement of the Simulator Training phase, the SI should be scheduled for a Line Check. Preferably this should be conducted by a fleet TSC but any approved LCC may conduct the check if necessary. A minimum grade of 3 is required in all areas before further LTC training may continue.

##### 7.1.6.2 Simulator (Offline) Phase

Detail	Briefing	Session	Debriefing	Exercise
1	1:00	1:00	0:30	Practice line training
2	0:30	1:30	0:30	Practice line training

##### 7.1.6.3 Aircraft Phase

Sectors	Event
1-2	Line training of actual trainees. Supervised by a fleet TSC Observing.
3	Final Check observed by a fleet TSC

#### 7.1.7 Pre-Course Preparation

Prior to commencement of the course, Sis should:

- Review and revise the following manuals:
  - OM-D – Training Manual
  - OM-D – Appendix H B777
  - FCOM and B777 ~~Flight Training Study Guide~~
- Ensure they have Trainer access to Moodle and the Trainers' library in DocStore
- Review the Line Training Discussion Items

- Familiarise themselves with Pilot Competencies so that they can discuss the concepts using the appropriate terminology

## 7.2 Offline Simulator Training

The TP will facilitate discussion on a wide range of associated topics. SIs will give a short training brief before detail 2.

The TP will go 'Bloggs ON' when the lesson begins and will remain in role as a trainee, allowing the SI freedom to conduct the lesson. He will go 'Bloggs OFF' if it is necessary to communicate as a tutor.

The TP will 'role-play' trainees from different backgrounds with varying abilities, but endeavour to moderate the role-play to that which is required for effective instruction.

Particular attention should be given to instructional skills learned from the Initial Instructor Training course modules, for example dealing with errors (identify, prioritise, symptoms, causes, remedies etc).

### 7.2.1 Detail LT1

This detail is focussed on handling techniques, particularly for take-off and landing. The TP will introduce a variety of common handling errors during the circuits for the SI to observe and analyse.

#### 7.2.1.1 Briefing LT1

Tutor Briefing and Discussion:

- Course introduction and safety briefing
- Training Captain's Role and Responsibilities
- Initial Instructor Training Course refresher:
  - What trainers do
  - Creating a learning environment
  - Trainee's needs
  - How people learn
  - Instructional techniques
  - Training Cycle
  - Knowledge/Skill/Attitude
  - Errors
- The objectives of Line Training
- BAVirtual's Grading Systems (OM-D 4.6)
- Moodle – report writing and recording progress

Pre-Simulator Discussion:

- Takeoff and landing technique
- Touch and Go Profile

### 7.2.1.2 Simulator LT1 – Practice Line Training

Setup				
Initial State	LFLX Rwy 21 Day, Engines Running			
ATIS	Rwy 21 Dry Fair Weather CAVOK 15/10 Q1013			
CDU	LFLX/LFLX Rwy 21			
Clearance	LH visual circuits Sq 3427			
Perf Init	ZFW XXX.X	Fuel XXXX	TOW XXX.X	
Speeds	V1 XXX	VR XXX	V2 XXX	Assumed XX Deg C

TPs should have their simulator loaded with the following parameters:

- Take-off
- Circuits
- Full stop landing
- Taxi back

### 7.2.1.3 Debrief LT1

- Tutor debrief and wash-up of LT1
- Briefing for LT2

## 7.2.2 Simulator LT2 – Practice Line Training

This takes the form of an 'offline' flight from LHR to MAN, flown by the TP. The SI will act as an LTC and practice observing, taking notes and providing feedback.

### 7.2.2.1 Briefing LT2

Tutor Briefing and Discussion:

- Typical trainee personality profiles
- Review of prepared 'trainee'
- Preparing and planning a training session
- BAV Airbus SOPs
- Pre-flight briefing
- Avoiding overload
- Taxiing
- Descent planning and monitoring
- The rushed approach – Avoid/Trap/Mitigate
- Go-arounds
- Avoiding an altitude bust or flap overspeed
- Recognising an unsafe final approach

### 7.2.2.2 Simulator LT2 – Practice Line Training

- LHR-MAN
- SI observing as Line Trainer
- TP role-plays trainee

- SI practice note-taking and debriefing
- SI debriefs TP
- Tutor debrief

### 7.2.2.3 Debriefing LT2

- Tutor debrief
- Report writing and Moodle
- Briefing for Aircraft Phase

## 7.3 Aircraft Training

### 7.3.1 Introduction

The aircraft phase of the LTC course will consist of a minimum of two sectors of line training with a real trainee or trainees, observed by a TSC. The final stage of the course consists of a one sector check with a real trainee, with the check conducted by a TSC observing.

Additional training sectors with the TP flying and SI acting as Line Trainer may be arranged prior to the observed sectors with real trainees if desirable or necessary to ensure the SI feels prepared and comfortable to conduct training with a real trainee.

### 7.3.2 Route Training Discussion Items

The following should be covered/discussed during the LTC course:

- Communication
- Analysis and correction of faults
- Technical knowledge
- SOPs
- Manuals (FCOM/OM-D/OM-D Appendix H)
- Grading system
- Moodle
- Liaison with FTM

### 7.3.3 Observed Line Training Sectors

The next sectors (minimum of 2) will consist of the SI being observed conducting line training with a real trainee. The observing TSC will watch via screen share. The trainee could be from any background and it is acceptable for the SI to conduct the training via screen share or Connected Flight Deck if mutually agreed with the trainee. These details will need careful management by the TSC as there may be appropriate training input for both the SI and their trainee.

### 7.3.4 LTC Line Check

The final assessment for the LTC course will consist of one sector of line training. This sector will be conducted with a real trainee. A TSC will conduct the assessment via Discord screen share and the TSC will notify FTM and record the outcome in Moodle.



