

## DUV FCO: layout and documentation

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## 1. Introduction

This document constitutes a readily available reference for defining the procedures for submitting and receiving the DUV (*Dichiarazione Unica del Vettore* [Unique Carrier Declaration]) in the Aeroporti di Roma airport systems.

This documentation relates to Fiumicino and the data contained in the DUV are normally all those required to proceed with the active invoicing of passenger fees, as well as other services linked to quantities and specific types (e.g. adults/children/infants, originating/transits, etc.), in addition to preparing reports (e.g. Airport Newspaper) on passengers passing through the airport.

Aeroporti di Roma provides carriers and handlers possibly delegated by the former with three different procedures for submitting and receiving the DUV: AMB data entry, PDUV/ADUV telex, ADBM automatic interface (other DCS).

Below is a description of the fields constituting the informational content of the DUV, as well as the detailed formats for each supported submission and receipt procedure.

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## 2. Informational content of the DUV

The diagram below summarises the informational content of the DUV for Fiumicino Airport.

### 2.1 Departing flight

#### DUV header

COM	Pilot's name
CRO	Operational crew number
UNL	Underload (Kg.)
JST	Jumpseats permitted
TOB	Total On Board: total number of passengers on board, including adults/children/infants, both originating and in direct or indirect transit (*), including any passengers on jumpseats, including any transfer crew (Crew Must Go), with the sole exclusion of the operational crew

#### DUV detail

The departure route for each airport (after FCO):

SCA	Airport (three-letter acronym)
IMB	Total number of passengers boarded
CMG	of which: Transfer crew (Crew Must Go)
CHN	of which: Number of child passengers boarded
CHO	of which: Number of originating child passengers boarded
CHD	of which: Number of child passengers boarded in indirect transit from a Domestic Area
CHS	of which: Number of child passengers boarded in indirect transit from a Schengen Area (including a Domestic Area)
CHE	of which: Number of child passengers boarded in indirect transit from an EU Area (including a Domestic Area) (**)
INF	of which: Number of infant passengers boarded
ORI	of which: Number of adult passengers originating from Rome and travelling to the airport (all passengers expect inbound)
DOM	of which: Number of adult passengers boarded in indirect transit from a Domestic Area
SCH	of which: Number of adult passengers boarded in indirect transit from a Schengen Area (including a Domestic Area)
EUR	of which: Number of adult passengers boarded in indirect transit from an EU Area (including a Domestic Area) (**)
BAG	Total baggage weight (Kg.)
MTO	Total cargo weight (Kg.)
PTO	Total post weight (Kg.)



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(\*) **direct** transit refers to passengers who do not get off the flight but depart again with the same flight to continue towards their destination airport; **indirect** transit refers to passengers originating from another flight who board another flight to continue towards their destination airport.

(\*\*) it should be noted that the departure DUV does not require the provisions of the number of passengers boarded, be they adults or children, in indirect transit from a Non-EU Area, given that they are calculable (for each airport on the route) by difference:

- CHI = CHN – CHO – CHE
- EUE = IMB-CMG-CHN-INF-ORI-EUR

## 2.2 Arriving flight

### DUV header

COM	Pilot's name
<b>CRO</b>	Operational crew number
UNL	Underload (Kg.)
JST	Jumpseats permitted

### DUV detail

**The arrival route for each airport (before FCO):**

SCA	Airport (three-letter acronym)
<b>TPS</b>	Total number of passengers disembarked
<b>TPD</b>	Total number of passengers in direct transit
<b>BAG</b>	Total baggage weight (Kg.)
<b>MTO</b>	Total cargo weight (Kg.)
<b>PTO</b>	Total post weight (Kg.)





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**END**

END OF MESSAGE

**DUV key to sections specific to the PDUV telex:**

(for all others, please see paragraph 2.1)

- SCE = Number of adult passengers boarded in indirect transit from a European Schengen Area – **excluding Domestic Area**
- SCN = Number of adult passengers boarded in indirect transit from a non-European Schengen Area (e.g. Norway, Iceland, Switzerland)
- EUN = Number of adult passengers boarded in indirect transit from a non-Schengen European Area (e.g. United Kingdom, Ireland)
- CHSCE = Number of child passengers boarded in indirect transit from a European Schengen Area – **excluding Domestic Area**
- CHSCN = Number of child passengers boarded in indirect transit from a non-European Schengen Area (e.g. Norway, Iceland, Switzerland)
- CHEUN = Number of child passengers boarded in indirect transit from a non-Schengen European Area (e.g. United Kingdom, Ireland)
- MOR = Total originating cargo weight (kg.), MTR = Total weight of cargo in transit (kg.)
- POR = Total originating post weight (kg.), PTR = Total weight of post in transit (kg.)

These sections are automatically referred to those of the standard DUV (paragraph 2.1) by applying the following re-mappings:

- SCH = DOM + SCE + SCN; EUR = DOM + SCE + EUN
- CHS = CHD + CHSCE + CHSCN; CHE = CHD + CHSCE + CHEUN
- MTO = MOR + MTR; PTO = POR + PTR

N.B.: if not provided, the sections detailing the type of children (in curly brackets in the description of the telex format) are valued as follows: CHO = CHN, CHD = CHS = CHE = 0 (all children are considered as originating)

**ADUV Telex Format (arrival)**

<b>FCODGXH</b>	RECIPIENT ADDRESS
<b>.XXXXXXX</b>	SENDER ADDRESS
<b>ADUV</b>	TELEX TYPE
<b>XX12345/GGMAA/A</b>	<CARRIER><FLIGHT>/<ORIGIN DATE>/A (Arrival)
<b>FCO</b>	SCHEDULED AIRPORT
<b>XXXXX/999</b>	COM/CRO
<b>999/999</b>	TOB/JST
<b>XXXX</b>	SENDER INITIALS (e.g. handler code)
<b>CDG/999/999/999/999/999/999/999</b>	SCA/TPS/TPD/BAG/MSB/MTR/PSB/PTR
<b>LHR/999/999/999/999/999/999/999</b>	
<b>...NOTES</b>	NOTES
<b>END</b>	END OF MESSAGE

**DUV key to sections specific to the ADUV telex:**

(for all others, please see paragraph 2.2)

- MSB = Total disembarked cargo weight (kg.), MTR = Total weight of cargo in transit (kg.)
- PSB = Total disembarked post weight (kg.), PTR = Total weight of post in transit (kg.)

These sections are automatically referred to those of the standard DUV (paragraph 2.2) by applying the following re-mappings:

MTO = MSB + MTR; PTO = PSB + PTR

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**Note:** alphanumeric strings are indicated by 'X', whilst the numerical quantities are indicated by '9'; the related length is not necessarily fixed, given that it is determined by the section separator '/'.

### **3.3. ADBM automatic interface (other DCS)**

In addition to the two official interfacing procedures, Aeroporti di Roma provides third parties with a standard interface for data input into the ADBM central system, within which data codes specific to the DUV are also supported.

This possibility can be used by third parties that wish to interface their own DCS (or other proprietary system containing the data required to calculate the DUV) automatically with Aeroporti di Roma's computer system.

This interfacing is carried out via a direct computer connection, the technical specifications of which are defined by Aeroporti di Roma and comprises complex messages that can be divided into elementary messages automatically sent by the issuing system to the receiving system (ADBM).

The elementary interface data required by the Aeroporti di Roma ADBM system are all those listed in paragraph 2 of this document. Please refer to Appendix C to this document for the full interfacing technical details.



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#### 4. Appendix A: operational notes on AMB data entry

The AMB system can be accessed from a Windows PC (provided by Aeroporti di Roma) by connecting to the local network by typing in the link.

At this point, the system is entered and a login form is displayed where the user's name must be typed in along with his/her password (assigned by Aeroporti di Roma at the request of the authorised carrier/provider).

##### Login

**User**
**Password**

After logging in, a summary form is displayed with a dynamic menu through which the system can be browsed according to the authenticated profile.

#### DATA STRING DUV ARR DUV PAR PSW ESCI

##### 4.1 DUV Departure Data Entry

By selecting the link 'DEPARTURE DUV', the data management form for a DUV for a departing flight is accessed. A form is displayed in which the key for the flight to be edited is to be entered. For example:

```

18:36:40                N E W D E P A R T U R E D U V                18/06/2018
Carrier AZ Flight 00610 Date 2018/06/18 Type D                Airport FCO
Std.: /                Atl.: /                Etd.: /                Atd.: /
Aircraft
Initials.:                type:                Off:                Mtow:                Pzl:
--- DUV DATA ---
Tob: TOB Pilot: COM / CRO Unld: UNL Jumpseat: JST
DUV
..Airport..... : SCA
..Boarded..... : TOR
..Crew Must Go..... : CMG
..Children..... : CHN
..Originating children... : CHO
..Chn.In.Tr.Nat..... : CHD
..Chn.In.Tr.Sch+Nat... : CHS
..Chn.In.Tr.Eu+Nat... : CHE
..Chn.In.Tr.NonEU... : CHI = CHN-CHO-CHE
  .Infant..... : INF
..Originating..... : ORI
..In.Tr.Nat..... : DOM
..In.Tr.Sch+Nat..... : SCH
..In.Tr.Eu+Nat..... : EUR
..In.Tr.NonEU..... : EUE = IMB-CMG-CHN-INF-ORI-EUR
  .Baggage weight..... : BAG
Cargo
Weight..... : MTO
Post
Weight..... : PTO

```

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After having entered the flight code, detailed data are displayed and it is possible to enter or edit the information relating to the departing DUV.

The data to be entered (or edited) are those highlighted in yellow; the relevant key is shown in paragraph 2.1. The fields in sky blue are protected and calculated by the system.

Before saving, automatic checks are carried out to validate and check the consistency of the data.

In the event of errors or inconsistency in the data, a video message is shown at the bottom of the page.

To exit the system, go to the menu item 'EXIT' + enter.

To fully close the connection window, click on the 'x' on the top right-hand side of the window or type in the letter 'q', positioning the cursor on a non-editable point of the form.

## 4.2 DUV Arrival Data Entry

By selecting the link 'ARRIVAL DUV', the data management form for a DUV for a arriving flight is accessed. A form is displayed in which the key for the flight to be edited is to be entered. For example:

```

18:43:22                                D V U                                18/06/2018
.....                                N E W A R R I V A L                                .....
Carrier AZ Flight 00611 Date 2018/06/18 Type A Airport FCO
Sta/d / Ato/l.: / Eta/d.: / Ata/d.: /
Initials.
: Aircraft type: Off.: Mtow.: Pzl.:

--- DUV DATA ---
Pilot: COM / CRO Underload: UNL Jumpseat: JST
DUV
.....
...Airport : SCA
Disembarked..... : TPS
..... : TPD
Direct Tran. Pass.....: TPD
Baggage
Weight..... : BAG
Cargo
Weight..... : MTO
.... : PTO
Post
Weight.....
....

```

After having entered the flight code, detailed data are displayed and it is possible to enter or edit the information relating to the arriving DUV.

The data to be entered (or edited) are those highlighted in yellow; the relevant key is shown in paragraph 2.2.

Before saving, automatic checks are carried out to validate and check the consistency of the data.

In the event of errors or inconsistency in the data, a video message is shown at the bottom of the page.

To exit the system, go to the menu item 'EXIT' + enter.

To fully close the connection window, click on the 'x' on the top right-hand side of the window or type in the letter 'q', positioning the cursor on a non-editable point of the form.

## 5. Appendix C: ADBM interface specifications

The standard interfacing procedure is via middleware IBM MQ Series.

The ADBM system is configured as an MQ client, which, in real time (on event) connects to the MQ queue to read its contents. This type of configuration uses a Server-Connection communication channel. Upon request, the connection with the sender system adopting an MQSeries Server is also supported. In this case, a Sender-Receiver communication channel is configured.

The necessary connection parameters: <queue manager name>, <host name>, <port>, <channel name>, <queue name> are defined by ADR and provided upon request, following appropriate authorisation on all firewall systems involved in the TCP-level dialogue.

The standard structure anticipated for each message received contains the following information:

<Flight code> <Data code> <Data value>

More specifically, the standard XML format of ADBM input messages is as follows:

<pre> &lt;MSG&gt; &lt;HEAD&gt;&lt;/HEAD&gt; &lt;ORI_DATE&gt;2008-10-21&lt;/ORI_DATE&gt; &lt;APT_SOURCE&gt;FCO&lt;/APT_SOURCE&gt; &lt;FL_AD&gt;A&lt;/FL_AD&gt; &lt;FL_CAR&gt;AZ&lt;/FL_CAR&gt; &lt;FL_NUM&gt;00021&lt;/FL_NUM&gt;  &lt;FUN&gt;U&lt;/FUN&gt; &lt;PROV1&gt;DC2&lt;/PROV1&gt; &lt;ROOT_CODE&gt;8050&lt;/ROOT_CODE&gt; &lt;CHILD_CODE&gt;8050&lt;/CHILD_CODE&gt; &lt;VALUE&gt;2500&lt;/VALUE&gt;  &lt;/MSG&gt; </pre>	<pre> <b>Flight origin date</b> <b>Airport (FCO)</b> <b>Flight type (A/D)</b> <b>Carrier (@@@)</b> <b>Flight number (####X)</b> Parameter 1 - <b>Function</b> (1) Parameter 2 - <b>Origin</b> (2) Parameter 3 - <b>Code</b> (3) <b>Date code (nnnn)</b> <b>Data value (max len 1000)</b> </pre>
--	---

### Notes:

- (1) the "Parameter 1 – Function" data must be populated with 'I' for the first entry (Insert), otherwise with 'U' (Update)
- (2) the "Parameter 2 – Origin" data must be populated with the name of the source system (to be agreed), e.g. "DC2"
- (3) the "Parameter 3 – Code" data must always be populated with the same value entered in CHILD\_CODE (Data code)

The interface briefly described herein enables a third-party system to send data relating to flight updates to Aeroporti di Roma's central system. Only the codes relating to the management of the DUV for Fiumicino are shown below; however, for those who may be interested, a more extensive document including all the main flight data that can be submitted automatically is available upon request.

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Data Code	Data Description	Data Format	Data Key
6550	NEW DUV – DEPARTURE - PASSENGERS FOR AIRPORT	3 CHAR + 39 CHAR PER MAX 6 SLOT	<TOB>+6x<SCA><IMB><CMG><CHN><INF><OR I><DOM><SCH><EUR><CHO><CHD><CHS><C HE>

6550	NEW DUV – ARRIVAL	9 CHAR FOR MAX 6 SLOT	6x<SCA><TPS><TPD>
9750	NEW DUV – BAG CARGO AND POST	18 CHAR PER MAX 6 SLOT	6x<SCA><BAGXX><MTOXX><PTOXX>
8030	PILOT NAME	CHAR(25)	<COM> (X(25))
8050	CREW	CHAR(3)	<CRO>
8200	UNDERLOAD	CHAR(5)	<UNL> (99999)
7300	JUMP SEAT	CHAR(2)	<JST> (99)