January 2004

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What is Take Off/Landing Chart

The SATA International real Airbus A320 airline pilots use this chart. Almost every airlines have their one Take Off/Landing charts.

This chart was made to help the pilots by having all the fundamental information for the respective Take Off and Landing.

So we decided to bring more realism to our virtual flights by getting these charts. Now your flights will be the most interesting ones.

I’ve created this document to A320 pilots get an idea of the way the chart is well used.

Let’s start with the Take Off chart.

Take Off Chart

SATA Internacional **A320** **TAKE OFF**

CO/RTE/FLT N.º	FROM/TO /	DATE

TOW:	V1 :	ATIS CODE:
	VR:	RWY:
FLAPS:	V2 :	WIND: / Kt
FLEX TEMP:	F:	VISIBILITY/ CEILING:
CG: % PITCH:	S:	QNH/QFE:
ACCEL ALT:	O:	TEMP: / °C
		TRANS ALT:

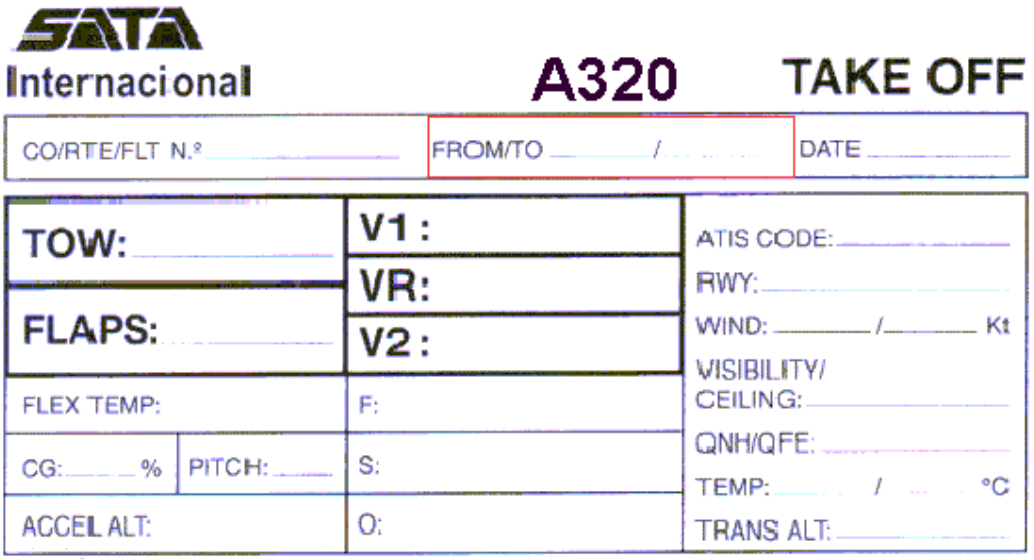
1. First, right down the flight number.

SATA Internacional **A320** **TAKE OFF**

CO/RTE/FLT N.º	FROM/TO /	DATE

TOW:	V1 :	ATIS CODE:
	VR:	RWY:
FLAPS:	V2 :	WIND: / Kt
FLEX TEMP:	F:	VISIBILITY/ CEILING:
CG: % PITCH:	S:	QNH/QFE:
ACCEL ALT:	O:	TEMP: / °C
		TRANS ALT:

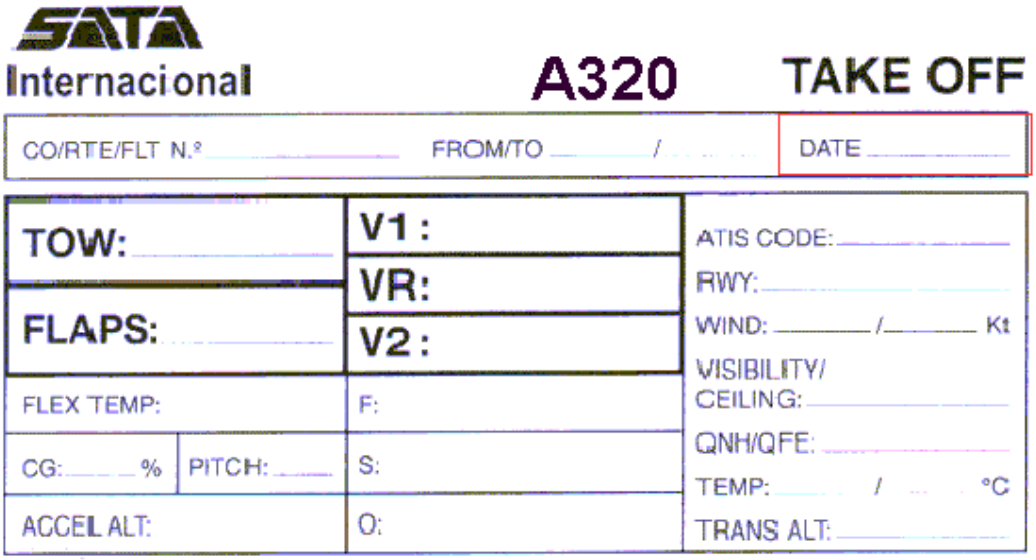
2. Next, insert the departure and destination ICAO airport. For example, LPPT/LPPD.



SATA Internacional **A320** **TAKE OFF**

CO/RTE/FLT N.º	FROM/TO ____ / ____	DATE
TOW:	V1 :	ATIS CODE:
	VR:	RWY:
FLAPS:	V2 :	WIND: ____ / ____ Kt
FLEX TEMP:	F:	VISIBILITY/ CEILING:
CG: ____ % PITCH: ____	S:	QNH/QFE:
		TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT:

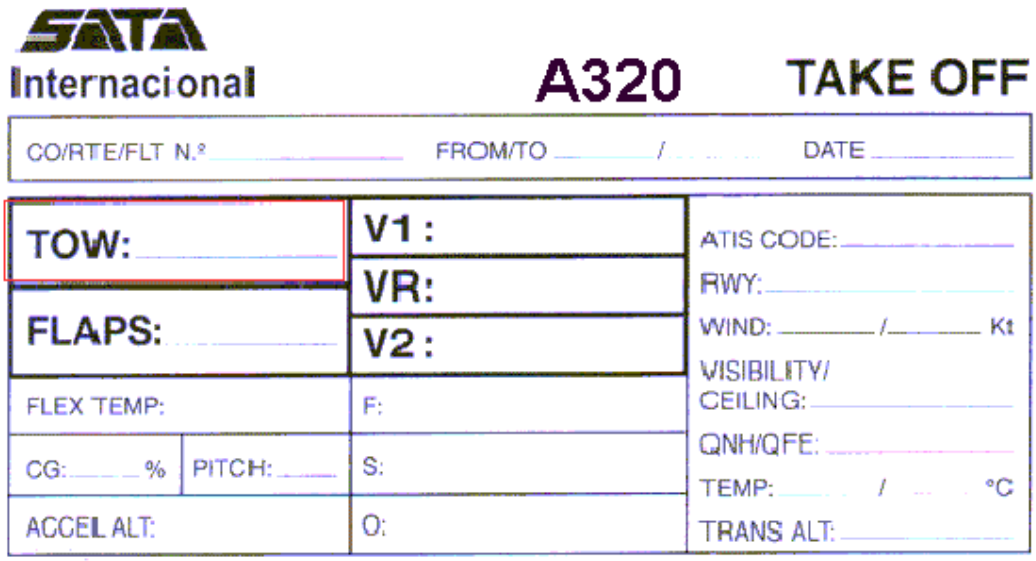
3. Then, note down the date of the flight.



SATA Internacional **A320** **TAKE OFF**

CO/RTE/FLT N.º	FROM/TO ____ / ____	DATE
TOW:	V1 :	ATIS CODE:
	VR:	RWY:
FLAPS:	V2 :	WIND: ____ / ____ Kt
FLEX TEMP:	F:	VISIBILITY/ CEILING:
CG: ____ % PITCH: ____	S:	QNH/QFE:
		TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT:

4. In the forth step you will take note of the Take Off Weight. To get that information, go to your flight plan and there you have what is necessary.

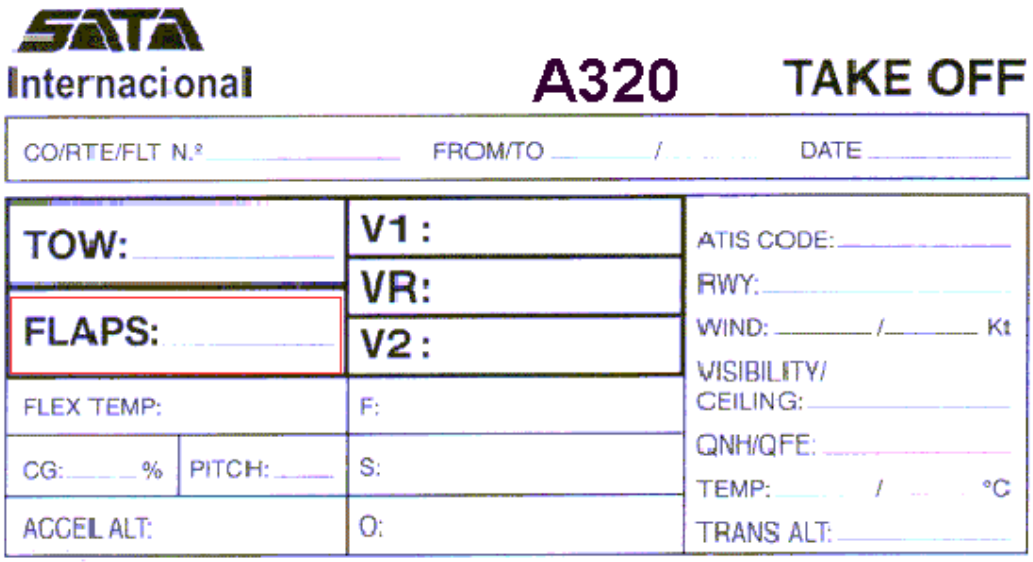


SATA Internacional — A320 TAKE OFF

CO/RTE/FLT N.º _____ FROM/TO ____ / ____ DATE _____

TOW: _____	V1 :	ATIS CODE: _____
	VR:	RWY: _____
FLAPS: _____	V2 :	WIND: ____ / ____ Kt
		VISIBILITY/ CEILING: _____
FLEX TEMP:	F:	
CG: ____ % PITCH: ____	S:	QNH/QFE: _____
		TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT: _____

5. Simply right down the flap position for Take Off.

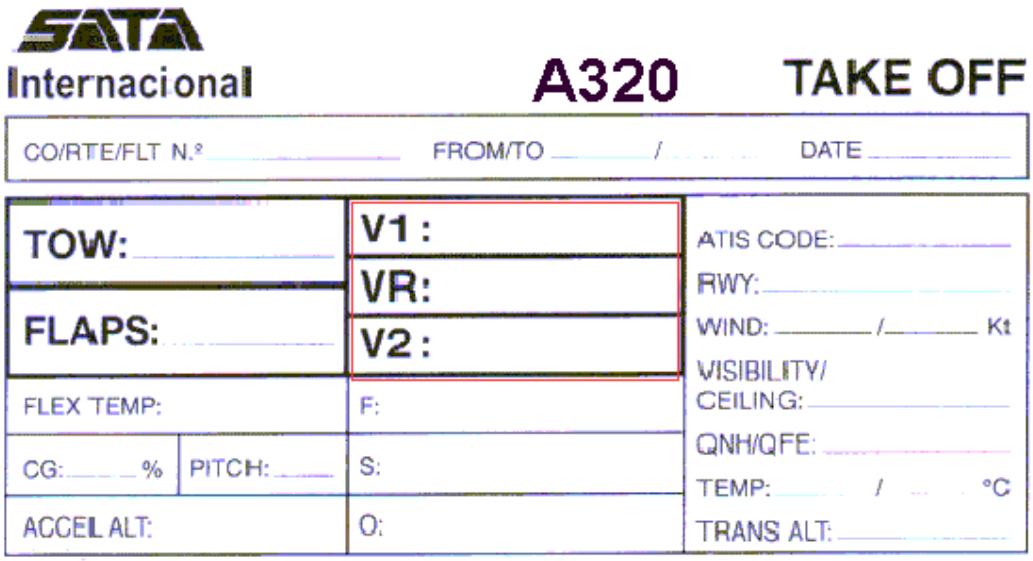


SATA Internacional — A320 TAKE OFF

CO/RTE/FLT N.º _____ FROM/TO ____ / ____ DATE _____

TOW: _____	V1 :	ATIS CODE: _____
	VR:	RWY: _____
FLAPS: _____	V2 :	WIND: ____ / ____ Kt
		VISIBILITY/ CEILING: _____
FLEX TEMP:	F:	
CG: ____ % PITCH: ____	S:	QNH/QFE: _____
		TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT: _____

6. V1, VR, V2, they are: Take Off decision speed; Rotate speed and TakeOff safety speed. These values are available in the aircraft speed reference table.



SATA Internacional — A320 — TAKE OFF

CO/RTE/FLT N.º _____ FROM/TO ____ / ____ DATE _____

TOW: _____	V1 :	ATIS CODE: _____
FLAPS: _____	VR:	RWY: _____
	V2 :	WIND: ____ / ____ Kt
FLEX TEMP:	F:	VISIBILITY/ CEILING: _____
CG: ____ % PITCH: ____	S:	QNH/QFE: _____
ACCEL ALT:	O:	TEMP: ____ / ____ °C
		TRANS ALT: _____

7. In this chart section you have to introduce the Flexible Temperature (if used), the Gravity Centre and Pitch Trim for TakeOff.

   Also you will take note of your accelerate altitude, so you will take that altitude like a reference, once you are reaching that altitude the aircraft will change from Take Off power to Climb power, and that's when you start do "clean" the plane by retracting flaps, slats, etc.

SATA Internacional **A320** **TAKE OFF**

CO/RTE/FLT N.º _____	FROM/TO ____ / ____	DATE _____

TOW: _____	**V1 :**	ATIS CODE: _____
	VR:	RWY: _____
FLAPS: _____	**V2 :**	WIND: ____ / ____ Kt
		VISIBILITY/ CEILING: _____
FLEX TEMP:	F:	QNH/QFE: _____
CG: ____ % PITCH: ____	S:	TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT: _____

8. Here you have to input tree reference speeds. F = flap speed to maintain when airborne with Take Off power, S = reference speed when retracting from flap position to slat position and O (Green Dot) = when reaching this speed the pilot must “clean” the aircraft by retracting slats and powering the aircraft to a climb power as climb speed.

SATA Internacional **A320** **TAKE OFF**

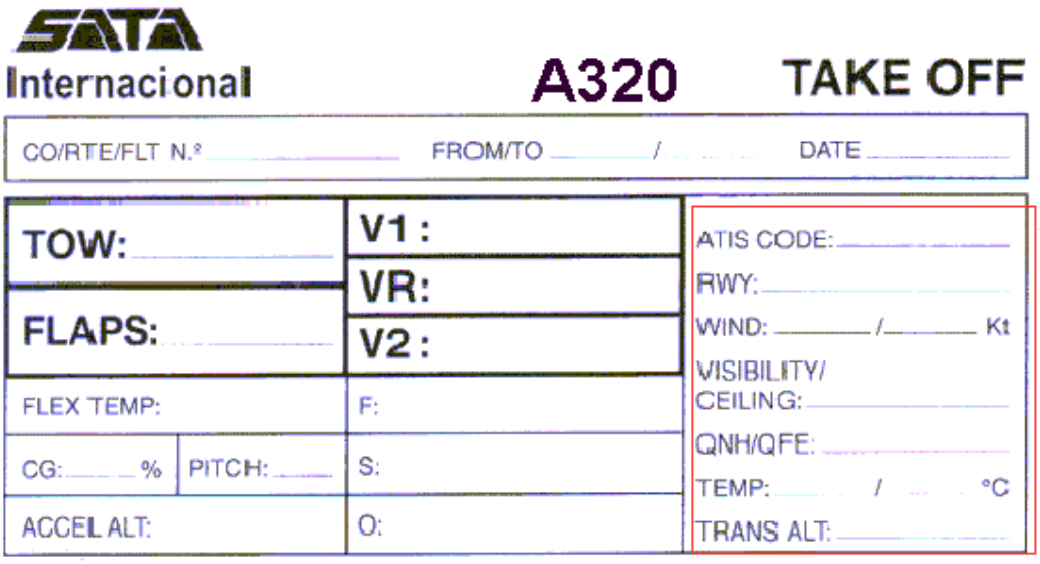
CO/RTE/FLT N.º _____	FROM/TO ____ / ____	DATE _____

TOW: _____	**V1 :**	ATIS CODE: _____
	VR:	RWY: _____
FLAPS: _____	**V2 :**	WIND: ____ / ____ Kt
		VISIBILITY/ CEILING: _____
FLEX TEMP:	F:	QNH/QFE: _____
CG: ____ % PITCH: ____	S:	TEMP: ____ / ____ °C
ACCEL ALT:	O:	TRANS ALT: _____

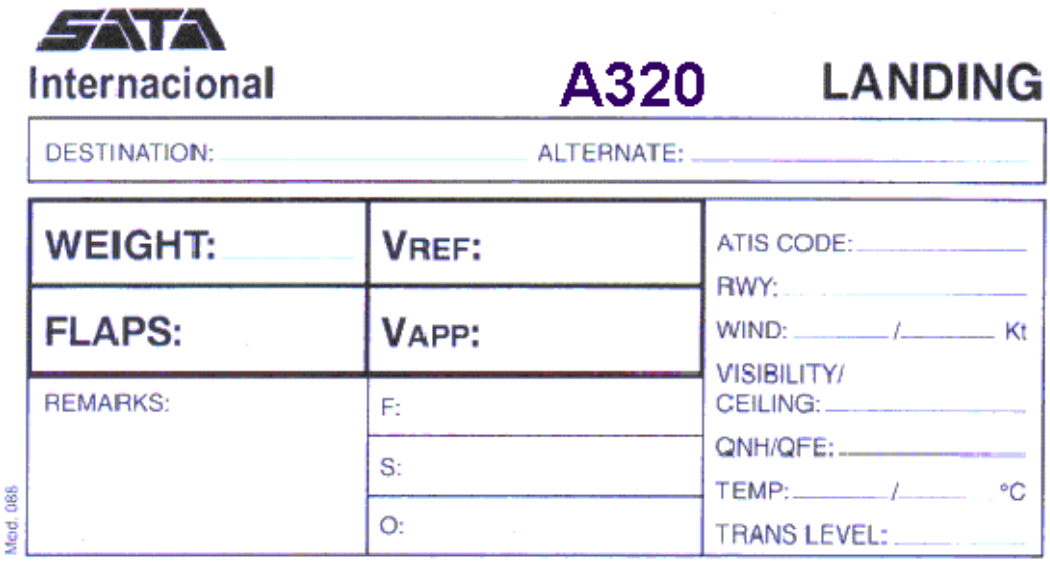
9. In this section you first take note of the ATIS (Air Terminal Information Service) frequency of your departure airport. Once you have this frequency you can easily get the rest of the important information. The ATIS will give you the runway in use, the wind (degrees°/speed Kt), visibility ceiling, the current QNH, the temperature and dewpoint (temperature°/dewpoint°) and the only thing the ATIS will not give you is the transition altitude (TRANS ALT).

   You have that information in the respective SID chart. When you pass this altitude after departure you must standardize your altimeter from the current QNH to a standard QNH (2992/1013).

   If you fly online you will not get the ATIS like I showed you. For the pilots who fly online there are other ways to get that. For example: Servinfo, SquawkBox.



Landing Chart



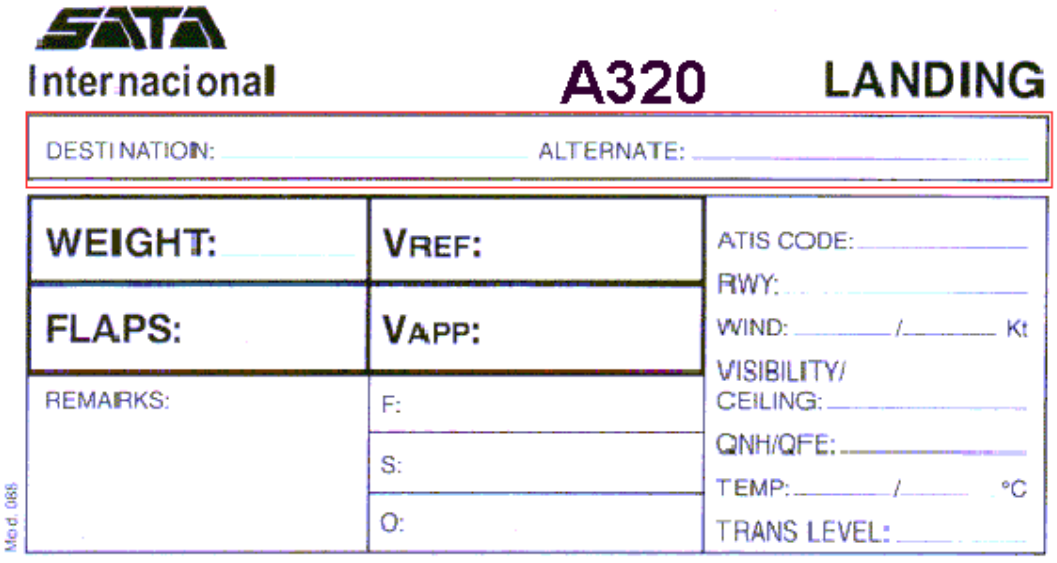
SATA Internacional A320 LANDING

DESTINATION: ALTERNATE:

WEIGHT:	VREF:	ATIS CODE:
FLAPS:	VAPP:	RWY:
REMARKS:	F:	WIND: / Kt
	S:	VISIBILITY/ CEILING:
	O:	QNH/QFE:
		TEMP: / °C
		TRANS LEVEL:

Mod. 088

1. First step in this chart is to insert the destination airport ICAO code for example (LPPD), and your alternate airport ICAO code for example (LPAZ).



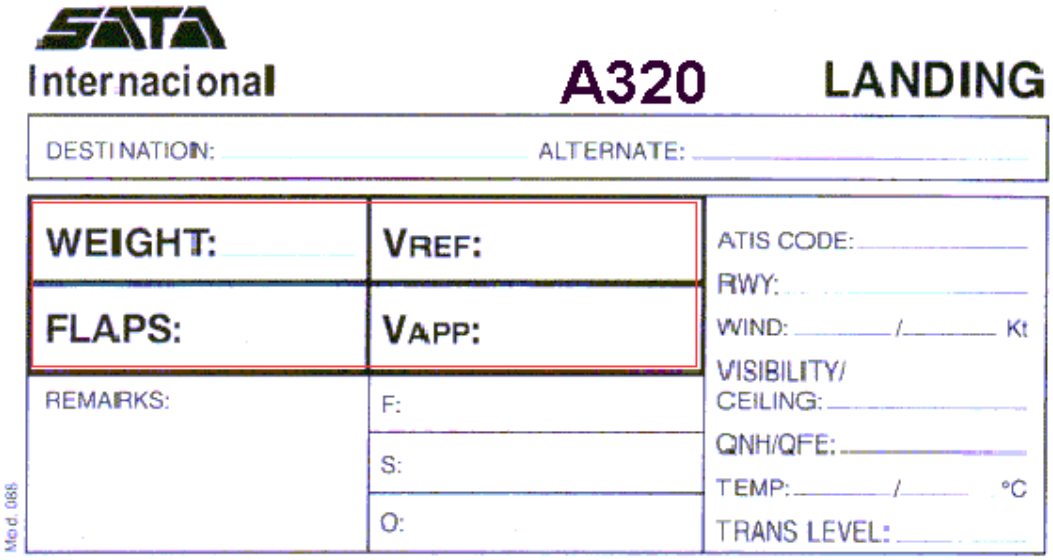
SATA Internacional A320 LANDING

DESTINATION: ALTERNATE:

WEIGHT:	VREF:	ATIS CODE:
FLAPS:	VAPP:	RWY:
REMARKS:	F:	WIND: / Kt
	S:	VISIBILITY/ CEILING:
	O:	QNH/QFE:
		TEMP: / °C
		TRANS LEVEL:

Mod. 088

2. In the second step, you will take note of your LDW (Landing Weight), your flap-landing configuration, your VREF (Landing Reference Speed) and your VAPP (Approach Reference Speed). The pilot can get these values by checking the respective speed reference table or simply checking the aircraft MCDU (Multi-Function Control and Display Unit).


SATA Internacional

A320 LANDING

DESTINATION: ALTERNATE:

WEIGHT:	VREF:	ATIS CODE:
FLAPS:	VAPP:	RWY:
		WIND: / Kt
REMARKS:	F:	VISIBILITY/ CEILING:
	S:	QNH/QFE:
	O:	TEMP: / °C
		TRANS LEVEL:

Mod 068

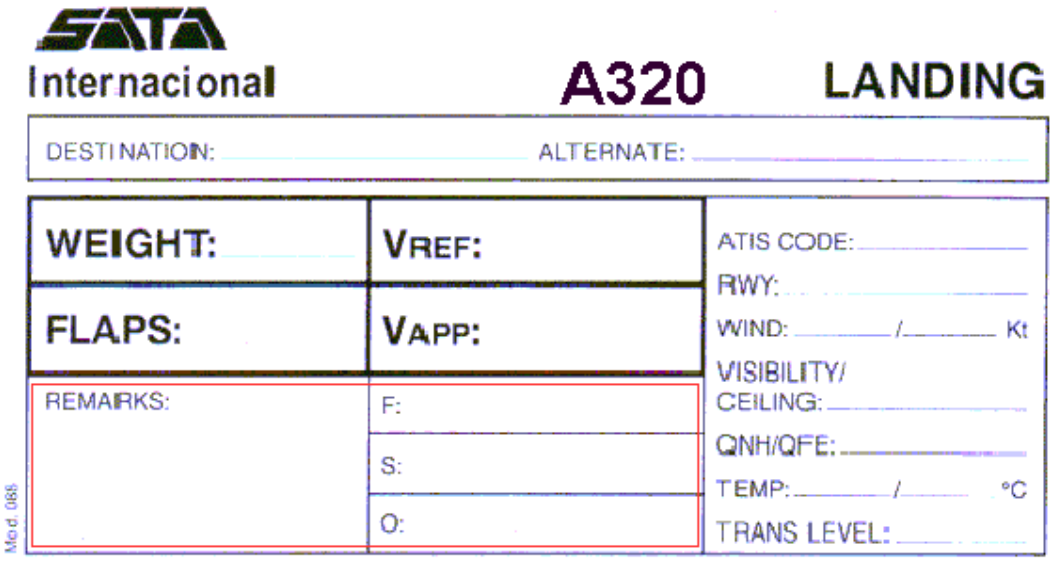
3. In the third step you can right any remarks that could help this flight phase.

Then you write the speeds for each slat/flap configuration, like in Take Off chart.

O (Green Dot) = when reaching this speed the pilot must select Green Dot reference speed and set first slat/flap position – Flaps 1.

S = Below this speed select flaps 2 and 3.

F = This is the speed reference for the flap-landing configuration, the standard procedure is: reduce speed to VREF and select full flaps.


SATA Internacional

A320 LANDING

DESTINATION: ALTERNATE:

WEIGHT:	VREF:	ATIS CODE:
FLAPS:	VAPP:	RWY:
		WIND: / Kt
REMARKS:	F:	VISIBILITY/ CEILING:
	S:	QNH/QFE:
	O:	TEMP: / °C
		TRANS LEVEL:

Mod 088

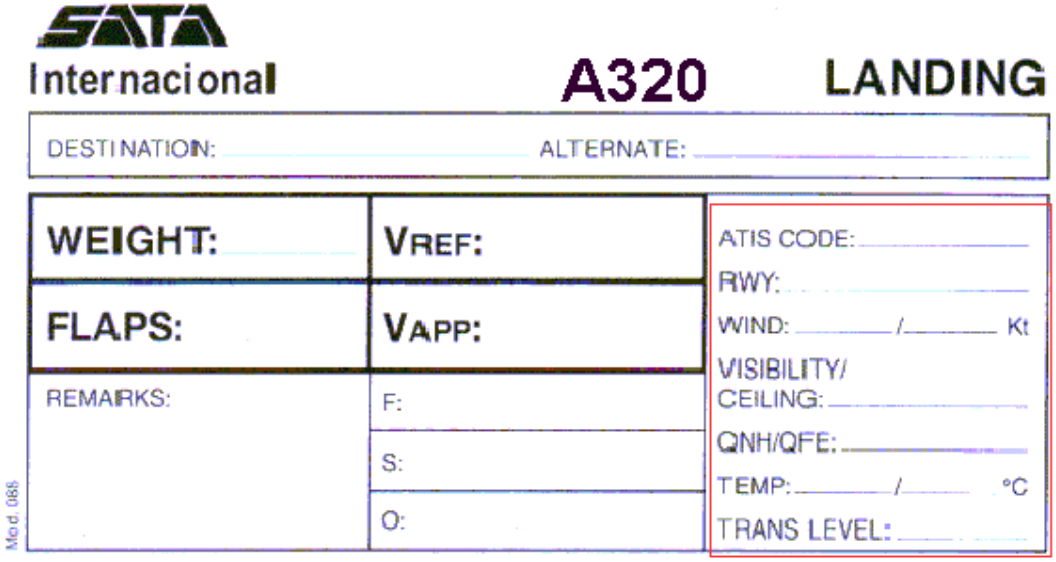
4. In this section you first take note of the ATIS (Air Terminal Information Service) frequency of your destination airport.

Once you have this frequency you can easily get the rest of the important information. The ATIS will give you the runway in use, the wind (degrees°/speed Kt), visibility ceiling, the current QNH, the temperature and dew point and the only thing the ATIS will not give you is the TRANS ALT.

You can find the TRANS ALT in the respective SID (Standard Instrument Departure) chart. When you pass this altitude after departure you must standardize your

altimeter from the current QNH to a standard QNH (2992/1013).

If you fly online you will not get the ATIS like I showed you. For the pilots who fly online there are other ways to get that. For example: Servinfo, SquawkBox.


SATA Internacional

A320 LANDING

DESTINATION: ALTERNATE:

WEIGHT:	VREF:	ATIS CODE:
FLAPS:	VAPP:	RWY:
REMARKS:	F:	WIND: / Kt
	S:	VISIBILITY/ CEILING:
	O:	QNH/QFE:
		TEMP: / °C
		TRANS LEVEL:

Mod. 088

Final Comments

First of all, I wish to thank Pedro Sousa and João Caracol for the help and support.

Now I think your flights will be more interesting. If you don't understand something or have any questions, don't miss the chance to contact me.

Captain Léneo Andrade
A320 Chief Pilot
SATA International
SATA Virtual Group
leneoandrade@satavirtual.org
http://www.satavirtual.org

Good Flights!