



Stripmarking

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In some situations, the absence of strips can seriously disrupt the normal flow of operations.

LEARN MORE

In Air Traffic Control (ATC), tapes are used to record voice communications, computer software is used to record tracking information, and strips are used to record written information. Therefore, knowledge of stripmarking is an integral part of your job.



Purpose

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This lesson covers the basic outline for stripmarking and the associated symbols for En Route and Terminal options.



Objectives

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In this lesson, you will identify:

1. Meaning of selected abbreviations and symbols used in stripmarking
2. Purpose and legal requirements of flight progress strips
3. Content requirements of selected blocks in Terminal and En Route strips

You will meet the objectives in accordance with the following references:

- FAA Order JO 7110.65, Air Traffic Control





Flight Progress Strips

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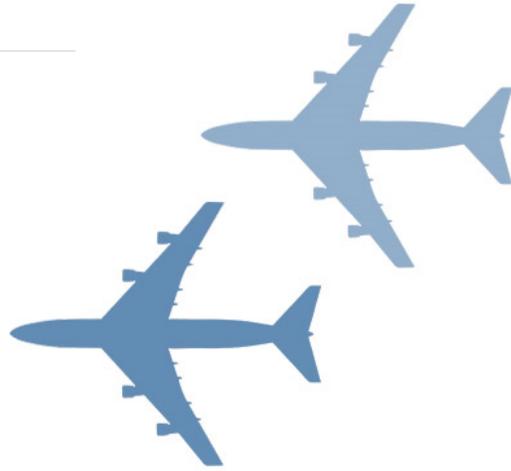
General

Unless otherwise authorized by a facility directive, use flight progress strips to:

- Post current data on air traffic
- Post clearances required for ATC control
- Record any other air traffic services

Strips are considered legal documents.

JO 7110.65, Chap. 2

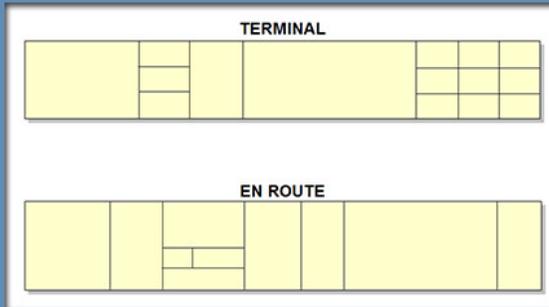




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Strips

Strips are sized and formatted differently for each air traffic option.

- Terminal
- En Route

In any option, strips are either printed out on special printers or hand-printed.

- Printers are normally located in the operation area close to the control positions.
- Hand-printed strips must conform to the format of machine-generated strips and must be modified to meet any changes in the machine-generated format.

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Commonly Used Equipment Suffixes

/A: VOR/DME, TRANSPONDER AND MODE C

/W = /A + RVSM

ADVANCED RNAV WITH TRANSPONDER AND MODE C:

/E, /F: FMS /G: GPS /R: RNP

ADVANCED RNAV WITH RVSM AUTHORIZATION:

/K = /F+RVSM /L = /G+RVSM /Q = /R+RVSM

Equipment Suffixes

Special aircraft equipment is identified by "/" and a suffix following the aircraft identification.

Examples: PA32/A, B733/I, C172/B, F16/P

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Terminal Strips - Terminal Option Only

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Designators

The terminal strip has three FAA designators:

- 7230-7.1 (Arrivals)
- 7230-7.2 (Departures)
- 7230-8 (Overflights)

These strips all look the same; however, some blocks on the strips have different meanings for each form.

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Terminal Strips - Terminal Option Only

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Terminal Strip Block Information

NOTE: In the following blocks of information, we will only cover selected flight strip entries. Appendices A and B explain the remainder of the entries. All block information and symbology will be covered in further detail when you enter the next phase of your training. These appendices will be useful for reference throughout your training.

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ARRIVAL					
DAL468	2605	E1314	100		
B733/I	SGF				
	PRYOR		TUL		
DEPARTURE					
N79839	5176	BVO	BVO TUL V4 SGF		
P28A/A	P1430				
	70				
OVERFLIGHT					
N721B	1106	E1537	90		
BE35/A	ATOKA		DAL V10 MKC		
	ZAE				



Terminal Strips - Terminal Option Only

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ARRIVAL STRIP

Block information is as follows:

Block	Information
1	Aircraft identification or call sign
3	Aircraft type including any special equipment or designation for aircraft (e.g., number in flight, heavy, Mode-C equipped, DME, etc.)
5	Aircraft type including any special equipment or designation for aircraft (e.g., number in flight, heavy, Mode-C equipped, DME, etc.)
6	ARRIVAL STRIP: Previous fix or inbound airway DEPARTURE STRIP: Proposed departure time OVERFLIGHT STRIP: Coordination fix
7	ARRIVAL STRIP: Coordination fix DEPARTURE STRIP: Requested altitude OVERFLIGHT STRIP: Overflight coordination indicator (usually identifies the facility to which flight data has been forwarded.)
8	ARRIVAL STRIP: Estimated time of arrival at the coordination fix or destination airport DEPARTURE STRIP: Departure airport OVERFLIGHT STRIP: Estimated time of arrival over coordination fix in Block 6
9	ARRIVAL STRIP: Altitude information in hundreds of feet and any additional remarks DEPARTURE STRIP: Route, clearance limit or destination, and remarks OVERFLIGHT STRIP: Altitude and route of flight through the terminal area
9a	ARRIVAL STRIP ONLY: Destination airport
10-18	Enter data as specified by a facility directive.

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1	5	8	9	10	11	12
3	6			13	14	15
	7		9a	16	17	18



En Route Strips - En Route Option Only

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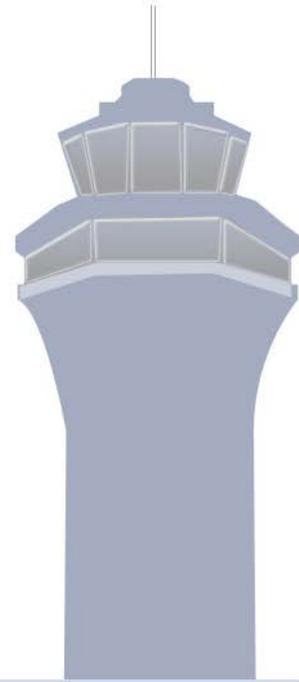
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En Route Flight Progress Strips

The FAA Form designation for the En Route strip

- 7230-19

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En Route Strips - En Route Option Only

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Posted Strips En Route

- At least one strip shall print at each sector which an aircraft will enter, based on the flight's route and altitude.
- The strip(s) will print automatically at a locally adapted time parameter prior to the aircraft's estimated time at the sector boundary.
- The data printed will be current at the time the strip is printed.





En Route Strips - En Route Option Only

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BLOCK NUMBERS

TWA72	1	2	MLC	09	31	16	210	21	DAL V9	MLC V7	27
B722/I			0922					22	TUL V4	SGF	28
480			13					23			
6	8		14	17	18			24			
7	9	10	14a	TUL		20a			26		29 30

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En Route Strips - En Route Option Only

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Block information is as follows:

Block	
3	Aircraft identification
4	Aircraft type including any special equipment or designation for aircraft (i.e., number in flight, heavy, Mode-C equipped, DME, etc.)
5	Filed true airspeed
11	Previous fix
12	Estimated time over previous fix
15	Center-estimated time over fix
19	Fix. For departing aircraft, add proposed departure time
20	Altitude information (in hundreds of feet)
25	Point of origin, route as required for control and data relay and destination
28	Miscellaneous control data (clearance limit, expect further clearance time, approach clearance information, etc.). (For departing aircraft, D-A indicates the aircraft is cleared to the destination airport as a clearance limit.)

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Hand Printed Characters

To prevent misinterpretation when data is hand-printed, use standard hand-printed characters.

- Write legibly.

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Letters and Numbers

The following graphic shows the phonetic alphabet and numbers, including the hand-printed examples.

Typed	Hand-Printed	Typed	Hand-Printed	Typed	Hand-Printed	Typed	Hand-Printed
A	A	K	K	U	U	1	1
B	B	L	L	V	V	2	2
C	C	M	M	W	W	3	3
D	D	N	N	X	X	4	4
E	E	O	O	Y	Y	5	5
F	F	P	P	Z	Z	6	6
G	G	Q	Q			7	7
H	H	R	R			8	8
I	I	S	S			9	9
J	J	T	T			0	Ø



Symbols

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Control Symbology

Use authorized symbols or abbreviations for recording:

- Clearances
- Reports
- Instructions

The following charts of symbols and abbreviations are common to all ATC options:

- Terminal
- En Route

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Clearance Abbreviations

The following graphic shows selected clearance abbreviations.

Abbreviation	Meaning
A	Cleared to the airport (point of intended landing)
B	Center clearance delivered
C	ATC clears (when clearance relayed through non-ATC facility)
CAF	Cleared as filed
D	Cleared to depart from the fix
F	Cleared to the fix
H	Cleared to hold and instructions issued
L	Cleared to land
N	Clearance not delivered
O	Cleared to the outer marker
PD	Cleared to climb/descend at the pilot's discretion
Q	Cleared to fly specified sectors of a NAVAID defined in terms of courses, bearings, radials or quadrants within a designated radius
T	Cleared through (for landing and takeoff through intermediate point)
V	Cleared over the fix
X	Cleared to cross (airway, route, radial) at (point)
Z	Tower jurisdiction

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Miscellaneous Abbreviations

The following graphic shows the phonetic letters needed to describe miscellaneous abbreviations.

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Abbreviation	Meaning
BC	Back course approach
CT	Contact approach
FA	Final approach
FMS	Flight Management System approach
GPS	GPS approach
I	Initial approach
ILS	ILS approach
MA	Missed approach
MLS	MLS approach
NDB	Nondirectional radio beacon approach
OTP	VFR conditions-on-top
PA	Precision approach
PT	Procedure turn

Abbreviation	Meaning
RA	Resolution Advisory (pilot-reported TCAS event)
RH	Runway Heading
RNAV	Area Navigation Approach
RP	Report immediately upon passing (fix/altitude)
RX	Report crossing
SA	Surveillance approach
SI	Straight-in approach
TA	TACAN approach
TL	Turn left
TR	Turn right
VA	Visual approach
VR	VOR approach



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Control Symbols

All the symbols listed below are used to identify an ATC control instruction.

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Symbols	Meaning
T→()	Depart (direction, if specified)
↑	Climb and maintain
↓	Descend and maintain
→	Cruise
@	At
X	Cross
↔	Maintain
⇨	Join or intercept airway/jet route/track or course
≡	While in controlled airspace
△	While in control area
△	Enter control area
△	Out of control area

Symbols	Meaning
NW ↙ ↗ NE ↔ E	Cleared to enter, depart, or through surface area. Indicated direction of flight by arrow and appropriate compass letter. Maintain Special VFR conditions (altitude if appropriate) while in surface area.
250K	Aircraft requested to adjust speed to 250 knots.
-20K	Aircraft requested to reduce speed 20 knots.
+30K	Aircraft requested to increase speed 30 knots.
Ⓜ	Local Special VFR operations in the vicinity of (name) aircraft are authorized until (time). Maintain Special VFR conditions (altitude if appropriate).
>	Before
<	After or past



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CONTROL SYMBOLS (CONT'D)

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Symbols	Meaning
<u>170</u> (red)	Inappropriate altitude/flight level for direction of flight. (Underline assigned altitude/flight level in red).
/	Until
()	Alternate instructions
Restriction	Restriction
↓	At or below
↑	At or above
— (Dash)	From-to (route, time, etc.)
(Alt)B(Alt)	Indicates a block altitude assignment. Altitudes are inclusive and the first altitude shall be lower than the second. Example: 310B370
∇ <	Clearance void if aircraft not off ground by (time)

NOTE: The absence of an airway route number between two fixes in the route of flight indicates "direct"; no symbol or abbreviation is required.

Symbols	Meaning
Ⓞ	Pilot canceled flight plan
✓	EN ROUTE: Aircraft has reported assigned altitude. Example: 80 ✓
✓	TERMINAL/FSS: Information forwarded (indicated information forwarded as required)
○ (red)	EN ROUTE: Information or revised information forwarded. Circle, in red, inappropriate altitude/flight level for direction of flight or other control information when coordinated. Also circle, in red, the time (minutes and altitude) when a flight plan or estimate is forwarded. Use this method in both inter-center and intra-center coordination.
Ⓟ	Other than assigned altitude reported (circle reported altitude)



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CONTROL SYMBOLS (CONT'D)

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Symbols	Meaning
$\begin{array}{ c } \hline 10 \\ \hline 6 \\ \hline \end{array}$	DME holding (use with mileages). Upper figure indicates distance from station to DME fix, lower figure indicates length of holding pattern. In this example, the DME fix is 10 miles out with a 6 mile pattern indicated.
$\overbrace{(\text{mi.})(\text{dir.})}$	DME arc of VORTAC, TACAN, or MLS.
\ominus (freq.)	Contact (facility) or (frequency), (time, fix, or altitude if appropriate). Insert frequency only when it is other than standard.
R	Radar contact
R	EN ROUTE: Requested altitude (preceding altitude information)
$\cdot\bar{R}$	Radar service terminated
\bar{R}	Radar contact lost
RV	Radar vector

Symbols	Meaning
$R\bar{X}$	Pilot resumed own navigation
\textcircled{R}	Radar handoff (circle symbol when handoff completed)
E (red)	EMERGENCY
W (red)	WARNING
P	Point out initiated. Indicate the appropriate facility, sector, or position. Example: PZFW
FUEL	Minimum fuel

NOTE: The absence of an airway route number between two fixes in the route of flight indicates "direct"; no symbol or abbreviation is required.



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Errors, Corrections, and Changes

Do not overwrite or erase any item.

- Use an "X" to delete:
 - A "climb and maintain" (↑) or a "descend and maintain" (↓) arrow
 - An "at or above" (I) or an "at or below" (I) symbol
 - A "cruise" (→) symbol
 - Any unwanted or unused altitude information

For other unused or unwanted symbols items:

- Draw a horizontal line through them.
- Write the new item immediately adjacent to the lined-through symbol and within the same space.

Do not draw a horizontal line through an altitude being vacated until after the aircraft has reported or is observed (Valid Mode C) leaving the altitude.

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TERMINAL ARRIVAL

UAL431	2601	E0010	400 X 60			
B753/Q	SGF					
001	PRYOR		TUL			

TERMINAL DEPARTURE

UAL431	2601	TUL	TUL V7 MKC			
B753/Q	P0100		X 120			
001	330					

TERMINAL ARRIVAL

UAL431	2601	E0010	400 X 40			
B753/Q	SGF					
001	PRYOR		TUL			



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AIRCRAFT REPORTED LEAVING EXAMPLES

EN ROUTE ARRIVAL

UAL 431	FSM	02	220	MEM/FSM FORTS1	3122
B753/Q	0153	02		TUL	
T438			110	(R) C	
025 01	+10	TUL	X WAGON @		

EN ROUTE DEPARTURE

UAL 431			230	SGF	TUL BOLDE	4114
B753/Q					SGF/ORD	
T438		D0305			R	
025 01		TUL P0300	-85-	330		

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Conclusion

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Lesson Summary



This lesson covered:

- Symbols
- Flight Progress Strips
- Terminal Strips
- En Route Strips

Note: Appendix A and B contain blank strips that are provided for practice.





Resources

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[Click here to access all the Appendices for Lesson 30.](#)

