



METAR and TAF Decoding Guide

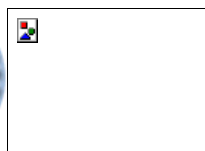


- FAA Written Test Prep
- Checkride Oral Exam Prep
- Pilot Logbook Software
- Aircraft Systems Reviews
- JAA ATPL Theory Test Prep
- UK PPL/IMC Theory Prep
- Aircraft Recognition Tutor
- SimPlates IFR Plates
- FAR/AIM Reference
- More Aviation Software
- Aviation Freebies
- Free Aircraft Checklists



Aviation Weather Services provide forecast (TAF - Terminal Aerodrome Forecast) and current condition reports (METAR - an abbreviation for "Routine Aviation Weather Observation" in French) in an encoded format. It's a good skill for any pilot to have to be able to decode METARs and TAFs.

The key below provides a comprehensive overview of METAR and TAF abbreviations



- Purchase Support Contact
- Home

KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

<p>TAF KPIT 091730Z 091818 15005KT 5SM HZ FEW020 WS010/31022KT FM1930 30015G25KT 3SM SHRA OVC015 TEMPO 2022 1/2SM +TSRA OVC008CB FM0100 27008KT 5SM SHRA BKN020 OVC040 PROB40 0407 1SM -RA BR FM1015 18005KT 6SM -SHRA OVC020 BECMG 1315 P6SM NSW SKC</p> <p>METAR KPIT 091955Z COR 22015G25KT 3/4SM R28L/2600FT TSRA OVC010CB 18/16 A2992 RMK SLP045 T01820159</p>		
Forecast	Explanation	Report
TAF	Message type: TAF -routine or TAF AMD -amended forecast, METAR -hourly, SPECI -special or TESTM -non-commissioned ASOS report	METAR
KPIT	ICAO location indicator	KPIT
091730Z	Issuance time: ALL times in UTC " Z ", 2-digit date, 4-digit time	091955Z
091818	Valid period: 2-digit date, 2-digit beginning, 2-digit ending times	
	In U.S. METAR : COR rected ob; or AUTO mated ob for automated report with no human intervention; omitted when observer logs on	COR
15005KT	Wind: 3 digit true-north direction, nearest 10 degrees (or VaRiAbLe); next 2-3 digits for speed and unit, KT (KMH or MPS); as needed, G ust and maximum speed; 0000KT for calm; for METAR , if direction varies 60 degrees or more, Variability appended, e.g. 180 V 260	22015G25KT
5SM	Prevailing visibility: in U.S., Statute Miles & fractions; above 6 miles in TAF Plus6SM . (Or, 4-digit minimum visibility in meters and as required, lowest value with direction)	3/4SM
	Runway Visual Range: R ; 2-digit runway designator L eft, C enter, or R ight as needed; "/ "; M inus or P lus in U.S, 4-digit value, F ee T in U.S. (usually meters elsewhere); 4-digit value V ariability 4-digit value (and tendency D own, U p or N o change)	R28L/2600FT

HZ	Significant present, forecast and recent weather: see table (below)	TSRA
FEW020	Cloud amount, height and type: SKY Clear 0/8, FEW >0/8-2/8, SCaTtered 3/8-4/8, BroKeN 5/8-7/8, OVeRcast 8/8; 3-digit height in hundreds of ft; Towering CUM ulus or CumulonimBUS in METAR ; in TAF , only CB . Vertical Vis ibility for obscured sky and height "VV004". More than 1 layer may be reported or forecast. In automated METAR reports only, CLear for "clear below 12,000 feet"	OVC010CB
	Temperature: degrees Celsius; first 2 digits, temperature "/" last 2 digits, dew-point temperature; Min us for below zero, e.g., M06	18/16
	Altimeter setting: indicator and 4 digits; in U.S., A -inches and hundredths; (Q -hectoPascals, e.g. Q1013)	A2992
WS010/31022KT	In U.S. TAF , non-convective low-level (<=2,000 ft) Wind Shear ; 3-digit height (hundreds of ft); "/" , 3-digit wind direction and 2-3 digit wind speed above the indicated height, and unit, KT	
	In METAR , ReMarK indicator & remarks. For example: Sea-Level Pressure in hectoPascals & tenths, as shown: 1004.5 hPa; Temp/dew-point in tenths °C, as shown: temp 18.2°C, dew-point 15.9°C	RMK SLP045 T01820159
FM1930	FRoM and 2-digit hour and 2-digit minute beginning time: indicates significant change. Each FM starts on a new line, indented 5 spaces.	
TEMPO 2022	TEMPO rary: changes expected for < 1 hour and in total, < half of 2-digit hour beginning and 2-digit hour ending time period	
PROB40 0407	PROB ability and 2-digit percent (30 or 40): probable condition during 2-digit hour beginning and 2-digit hour ending time period	
BECMG 1315	BECoMinG : change expected during 2-digit hour beginning and 2-digit hour ending time period	

Table of Significant Present, Forecast and Recent Weather -

Grouped in categories and used in the order listed below; or as needed in TAF, No Significant Weather.

QUALIFIER

Intensity or Proximity

- Light "no sign" Moderate + Heavy
 VC Vicinity: but not at aerodrome;
 in U.S. **METAR**, between 5 and 10SM of the point(s) of observation;
 in U.S. **TAF**, 5 to 10SM from center of runway complex
 (elsewhere within 8000m)

Descriptor

MI Shallow BC Patches PR Partial TS Thunderstorm
 BL Blowing SH Showers DR Drifting FZ Freezing

WEATHER PHENOMENA

Precipitation

DZ Drizzle RA Rain SN Snow SG Snow grains
 IC Ice crystals PL Ice pellets GR Hail GS Small hail/snow pellets
 UP Unknown precipitation in automated observations

Obscuration

BR Mist(>= 5/8SM) FG Fog(< 5/8SM) FU Smoke VA Volcanic Ash
 SA Sand HZ Haze PY Spray DU Widespread dust

Other

SQ Squall SS Sandstorm DS Duststorm PO Well developed
 FC Funnel cloud +FC tornado/waterspout dust/sand whirls

- Explanations in parentheses "()" indicate different worldwide practices.
- Ceiling is not specified; defined as the lowest broken or overcast layer, or the vertical visibility.

- NWS **TAFs** exclude turbulence, icing & temperature forecasts; NWS **METARs** exclude trend fcsts
- Although not used in US, **Ceiling And Visibility OK** replaces visibility, weather and clouds if: visibility $\geq 10\text{km}$; no cloud below 5000 ft (1500m) or below the highest minimum sector altitude, whichever is greater and no CB; and no precipitation, TS, DS, SS, MIFG, DRDU, DRSA, or DRSN.