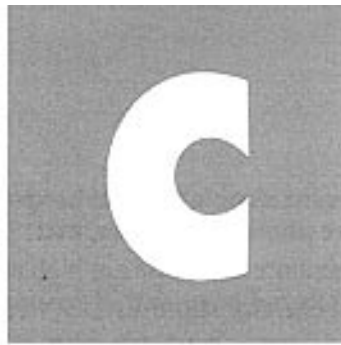




CONTENTS

Foreword	4
PART ONE	
Introduction	8
A. Word order	10
B. Location	15
C. Verb tenses	19
D. Instructions, procedures	26
E. Basic sentence structure	31
F. Word endings	38
G. Prefixes, suffixes	42
Review One	48
PART TWO	
Introduction	58
H. Physical characteristics	59
I. Dimensions	64
J. Purpose	70
K. Conjunctions	76
L. Actions	83
M. Possibility, probability, necessity, conditions	93
Review Two	98
PART THREE	
Introduction	104
N. Comparisons	105
O. Movement	111
P. Active and passive	123
Q. Processes	127
R. Functions	129
S. States, failures, damage	137
Review Three	157
PART FOUR	
Introduction	168
T. Connections	169
U. Installation	176
V. Units	185
W. False friends	190
X. Simplified English	195
Y. Maintenance words	203
Review Four	213
Z. Tips for further reading	219
Exercise Key	226
Index	242



VERB TENSES

NOTES

In technical documents the number of tenses used is very limited. All these tenses are direct variants of the basic form of the verb: the **INFINITIVE**. Most technical verbs are regular.

INFINITIVE: <i>to connect</i>				
PRESENT SIMPLE	IMPERATIVE	GERUND	PAST	FUTURE
<i>connects</i>	<i>connect</i>	<i>connecting</i>	<i>connected</i>	<i>will connect</i>
<i>connect</i>				<i>shall connect</i>

1 THE INFINITIVE

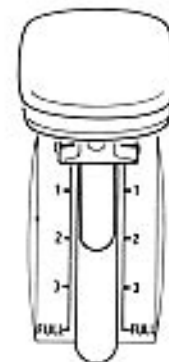
“To” + the basic form of the verb. In technical language it is used to express an action that is an objective, a reason or a purpose:

The lever is used *to extend* the flaps.

There is a knob *to set* the altitude.

To open the circuit, pull the circuit breaker.

(See also Module J: **PURPOSE**.)

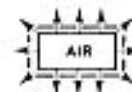


2 THE PRESENT SIMPLE

This is the essential tense of technical English and is the basic tense of all technical documentation. It is mainly used in the 3rd person singular (“it”) or 3rd person plural (“they”):

The light *illuminates* at 45 p.s.i. (singular)

The lights *illuminate* at 45 p.s.i. (plural)



The present simple is used to describe all generalities, systems, processes, repetitive phenomena, laws, etc:

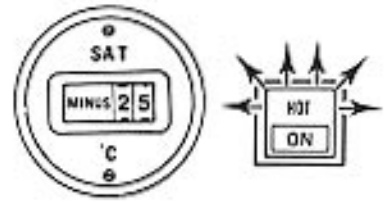
Air temperature *decreases* at high altitude.

The AC generator *supplies* 115 V current.

The cables *transmit* the order to the servocontrol.

The equipment *overheats* in hot weather.

Water *boils* at 100°C.



3 TO BE, TO HAVE

The verbs *to be* and *to have* are common.

To be indicates a state or condition:

The landing gear lever *is* at "down". (singular)

The probes *are* on the forward fuselage. (plural)

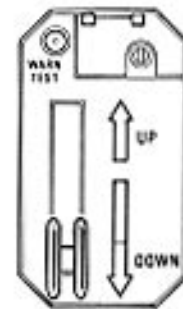
It is often followed by the past participle:

The window *is* cracked.

The valves *are* closed.

or by an adjective:

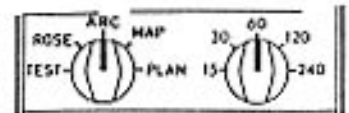
The seal *is* new.



To have indicates a possession or attribute:

The propeller *has* four blades. (singular)

The rotary selectors *have* five positions. (plural)



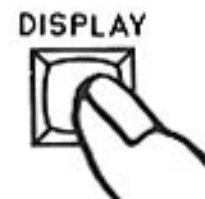
(See also Module P for TO BE and the PASSIVE.)

N.B. Do not confuse the present continuous, e.g. "The aircraft is taking off" (= now, at this moment) with the present simple: e.g. "The aircraft takes off after VR" (= in general, in all conditions).

4 THE IMPERATIVE

The imperative has the same form as the infinitive but without "to", e.g. "rotate", "disconnect", "set", "check", "touch":

Set the selector to IGN A+B.



In the negative form, it is preceded by “do not”:

Do not touch hot brakes.

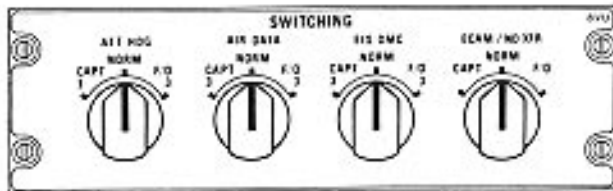
It is the simplest form of the verb. It is used for all instructions, procedures, checklists, etc.

(See also Module D: INSTRUCTIONS, PROCEDURES.)

5 THE GERUND

The gerund is the basic form of the verb + “ING”, e.g.

locking switching landing testing



It expresses a function or an activity.

It can be the subject of a sentence. e.g.

Smoking is forbidden.

NO SMOKING

Downlocking is indicated on the gear panel.

Setting the switch to “off” closes the valve.



The gerund (or present participle) can also qualify a word.

It indicates its function, e.g.

cooling unit

retaining ring

uncoupling solenoid

(See also Module F:
WORD ENDINGS.)



6 THE PAST PARTICIPLE

The past participle of regular verbs is the basic form of the verb + "ED" (just "D" when a verb ends in "E" and, if the last consonant is preceded by a vowel, the consonant is usually doubled):

tested checked selected timed transmitted

(See also Module F: **WORD ENDINGS**.)

Most technical verbs are regular, but here are some common irregular past participles:

INFINITIVE	PAST PART.	INFINITIVE	PAST PART.
<i>be</i>	<i>been</i>	<i>meet</i>	<i>met</i>
<i>do</i>	<i>done</i>	<i>override</i>	<i>overridden</i>
<i>draw</i>	<i>drawn</i>	<i>read</i>	<i>read</i>
<i>drive</i>	<i>driven</i>	<i>send</i>	<i>sent</i>
<i>feel</i>	<i>felt</i>	<i>set</i>	<i>set</i>
<i>fly</i>	<i>flown</i>	<i>shut</i>	<i>shut</i>
<i>hang</i>	<i>hung</i>	<i>stick</i>	<i>stuck</i>
<i>go</i>	<i>gone</i>	<i>tear</i>	<i>torn</i>
<i>have</i>	<i>had</i>	<i>wear</i>	<i>worn</i>
<i>lose</i>	<i>lost</i>	<i>wind</i>	<i>wound</i>

The past participle indicates a state, a condition, the result of an action, an action done, e.g.

Check LO LEVEL lights. ... *Extinguished*.

The antenna is *located* on the vertical stabilizer.

The contactor is *operated* by the switching logic.

The position is *monitored* by two magnetic indicators.

The leading edge is *damaged*.

(See also Module S: **STATES, FAILURES, DAMAGE**.)

7 THE FUTURE

The future is simply *will* (or *shall*) + the basic form of the verb:

The aircraft *will take off* at 09.45.

Will can be used for an intention or an action in the future. *Shall* indicates a necessity, an imperative or regulatory action and is usually used with *to be*, e.g.

The tanks *shall be drained* before the first flight of the day.

(See also Module M: **POSSIBILITY, PROBABILITY, NECESSITY, CONDITIONS**.)



8 SOME MORE EXAMPLES

- The pack *regulates* the air temperature to between -7° C and $+73^{\circ}$ C.
- When the gear *reaches* its fully extended position, the Piston Rod Locking Fingers *come* into contact with the Locking Sleeve.
- *Add or release* dry air or nitrogen to obtain correct dimension "x".
- *Do not loosen* valve body until shock strut has been deflated.
- The indicator clip will shear off *to indicate* that the cartridge should be replaced.
- *Setting* the switch to 'Trip' de-energizes the APU generator field.
- The light *will come on* when the control moves from the first detent to full up.
- Steering is *controlled* by a wheel on either side of the flight deck.



VERB TENSES

EXERCISES

1 Choose the correct form of the verb to fill in the blanks below. Use the **INFINITIVE**, the **PRESENT SIMPLE** (with or without "s"), the **GERUND** or the **PAST PARTICIPLE**. Look at the example:

The sensor *detects* (DETECT) the temperature.

1. The oil is (COOL) by a heat exchanger.
2. The DC tie contactor (CONNECT) DC BUS 1 and DC BAT BUS
3. The recorder is used (RECORD) flight data.
4. The EMER EXIT LTswitch (HAVE) three positions.
5. If an overpressure is (DETECT), the valve opens.
6. (OPEN) the Bleed Valve causes one engine to supply both wings.
7. The engine parameters (BE) displayed on the panel.
8. Filter (CLOG) is indicated on the screen.
9. The outflow valve opens (DEPRESSURIZE) the cabin.
10. There (BE) an "audio cancel" push button on the center pedestal.
11. (REMOVE) the safety pin before aircraft departure.
12. The unit is (LOCATE) in the avionics bay.
13. The engine (DRIVE) the generator.
14. The probes (BE) electrically (HEAT)
15. Generator (OVERLOAD) causes load shedding.
16. (OPEN) the door (HAVE) access to the refuel/defuel coupling.