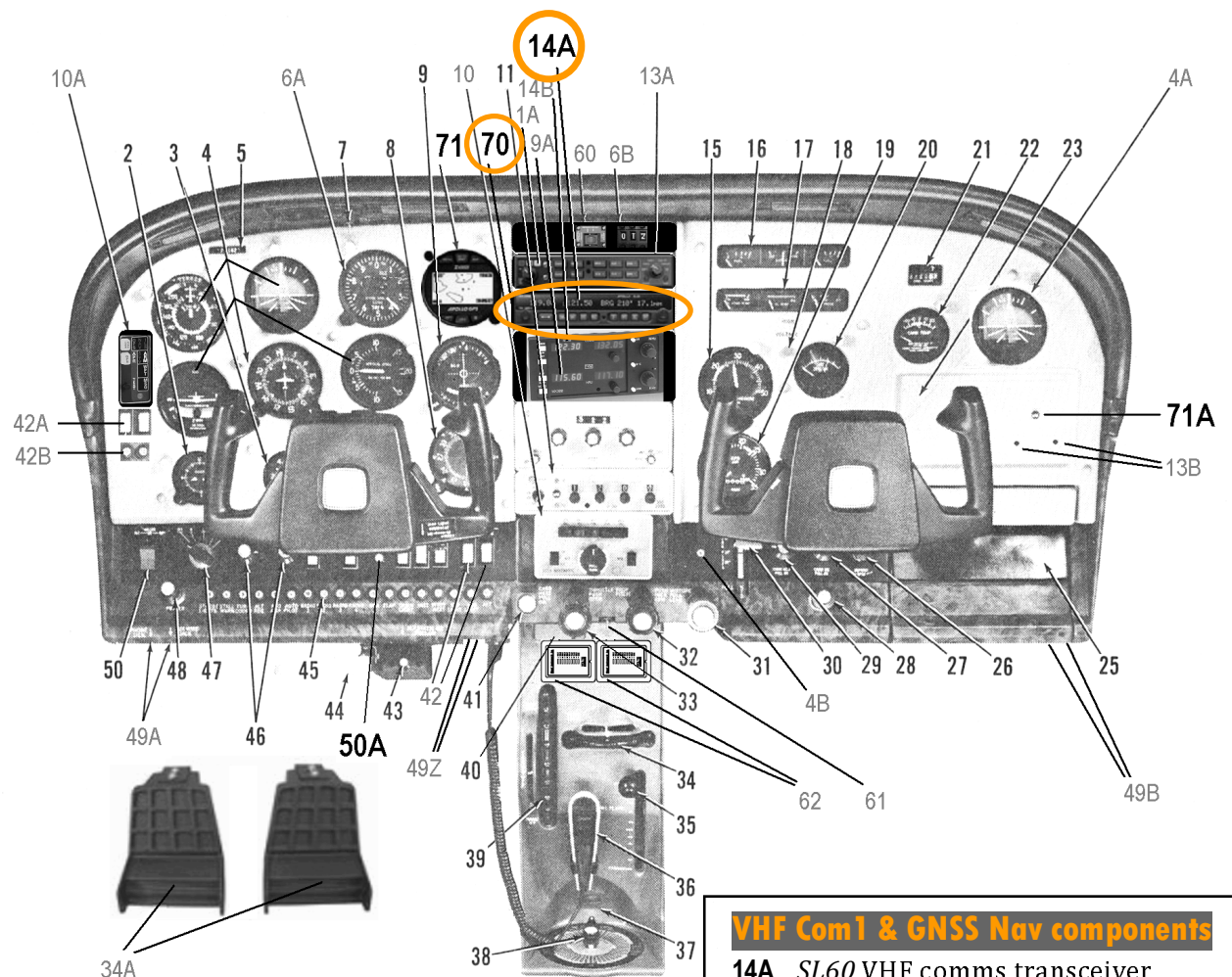


APOLLO SL60

VHF Communications Transceiver and GNSS (GPS) Navigation Receiver



VHF Com1 & GNSS Nav components

- 14A** SL60 VHF comms transceiver
- 70** SL60 GNSS navigation receiver
- 71** Apollo 360 map display
- 71A** Apollo 360 database update jacks
- 50A** Avionics Power switch/breaker

SL60 SECTION 1

GENERAL

This aircraft is fitted with an *Apollo SL60 VHF Communications Transceiver and GNSS Navigation Receiver*. A closeup image of the *SL60* and its location in the instrument panel are shown on the previous page.

Beyond the basic communication functions, the *SL60* is quite complex. Before flight, all pilots are required to become competent using the equipment by reading and understanding the documentation provided. The documentation includes:

- this Information Sheet
- the *Apollo SL50 and SL60 User's Guide*
- the *Apollo SL60 Quick Reference Guide*, and
- a *II Morrow SL60 brochure*.

All of the above documents are stored in the aircraft's glovebox as a single booklet. They can also be viewed as individual documents via the Internet — go to the **SkyRentals** website www.skyrental.com.au and select:

HIRE Cessna 182 ► GOTO tech info ► menu option 5_ AVIONICS and INSTRUMENTS

OPERATING CAUTIONS

- ALL PILOTS: Other devices in the aircraft — such as the *Apollo 360 Map*, the *Artex G406-4 ELT*, and the autopilot's GPS NAV steering — rely on GNSS reception by the *Apollo SL60*. The *Apollo SL60* must be switched on, receiving, and outputting valid GNSS location and roll steering data for the *360 Map*, *G406-4 ELT* and autopilot to work optimally.
- IFR PILOTS: At the present time, the *Apollo SL60* is a VFR only installation and is not to be relied on for any IFR navigation.

SL60 SECTION 1

OPERATING CAUTIONS cont'd

NOTE

To avoid confusion and distraction, pilots who are not familiar with the correct operation of the *SL60* should switch it off for the duration of their flight. With the *SL60* switched off, all VHF voice communications will have to be made using the *TKM MX300 VHF Communications Transceiver* via the *SL15M Audio Control Panel*.

OPERATING SUMMARY

- PREREQUISITES:
For the *Apollo SL60's GNSS receiver* to work,
 - the aircraft's BAT MASTER rocker switch must be **ON**, and
 - the AVIONICS POWER toggle switch/circuit breaker must be **ON**.For the *SL60's VHF communications transceiver* to work,
 - the aircraft's BAT MASTER rocker switch must be **ON**, and
 - the AVIONICS POWER toggle switch/circuit breaker must be **ON**,
and
 - the push-pull circuit breaker labelled COM #1 must be in.

NOTE

If the COM #1 circuit breaker is out, a communications failure message will appear on the *SL60's* screen: **COMM RADIO FAILURE! : SERVICE NOW**. Even if that message has been displayed, the GNSS receiver in the *SL60* should continue to work.

- POWERING UP THE SL60: The power switch for the *SL60* is in the left-side control knob. To switch the *SL60* on, grip the left-side control knob and turn it slowly clockwise until it clicks.

SL60 SECTION 1

OPERATING SUMMARY cont'd

- **COM VOLUME:** The left-side control knob adjusts the volume for the *SL60's* VHF communications receiver. Turn the knob clockwise to increase the receiver's volume, anticlockwise to decrease it. (Make sure the **Com1** button is selected on the *SL15M Audio Panel* beforehand.)
- **COM SQUELCH:** The left-side control knob can unsquelch the *SL60's* VHF communications receiver to help check the volume level or to hear weak signals. Pull the knob out to unsquelch, push it back in to squelch. (Make sure the **Com1** button is selected on the *SL15M Audio Panel* beforehand.)
- **COM FREQUENCIES:** Push the **COM** button to display the frequencies being monitored by the *SL60's* VHF communications transceiver — the active frequency is on the left of the screen, and the standby frequency is next to it. Pushing the arrow $\leftarrow \rightarrow$ button swaps the active with the standby. The right-side control knobs (inner and outer) change the standby frequency.
- **COM MONITOR:** Pushing the **COM** button selects either 1 or 2 frequencies to be monitored at the same time — an **S** displayed means only the active frequency will be heard (i.e. the standby frequency is silent), whereas an **M** means the standby frequency is also being monitored along with the active. Note: In the **M** mode, a signal received on the active frequency will override a signal being heard on the standby frequency. This monitoring feature may be useful, for example, to listen to an ATIS or AWIS on the standby.
- **GNSS RECEIVER:** Push the **NAV** button to display information about the *SL60's* GNSS navigation receiver. The right-side control knobs (inner and outer) change the information displayed.
- **GNSS NAVIGATOR:** Push the **SYS** button to display information about the *SL60's* flight planner/database. The right-side control knobs (inner and outer) change the information displayed — the outer knob selects from a menu, the inner knob then selects from a sub-menu.

SL60 SECTION 1

OPERATING SUMMARY cont'd

NOTE

An *Apollo 360 Map* is connected (slaved) to the *SL60*. Any user-defined waypoints programmed into the *360 Map* are not copied back into the *SL60* which has its own user-defined waypoint database. It is therefore recommended that user-defined waypoints be entered into the *SL60* and not the *360 Map*.

- MESSAGES: Push the **MSG** button to cycle through any messages generated by the *SL60*.

INFORMATION SPECIFIC TO VH-VMA

When reading the *Apollo SL60* User's Guide, be aware that the following information applies to the unit installed in VH-VMA. Referring to the *SL60* User's Guide:

- On page 90 'Intercom Function' — The *SL60* has a built-in 2-place intercom which is not normally used because the aircraft is fitted with an *SL15M Audio Selector Panel*. However, as a backup feature, the *SL60*'s intercom has been wired to two additional headset jacks under the instrument panel below the ALT circuit breaker; these are for use by one headset in situations requiring access to a VHF transceiver without using the *SL15M Audio Selector Panel*.
- On page 96 'Database Message' and on page 103 'Database Expired' — The waypoint database was last updated on 18 February 2004.

SL60 SECTION 2

LIMITATIONS

There is no change to the airplane's limitations when this avionic equipment is installed.

SL60 SECTION 3

EMERGENCY PROCEDURES

There is no change to the airplane's emergency procedures when this avionic equipment is installed.

If an immediate landing becomes necessary, the *Apollo SL60* can display the nearest airfield in its main database by pressing the **MSG** button twice (e.g. **ARPT 1 YBCS BRG 104° 0.2 NM**). Then, by turning the right inner knob clockwise, the *SL60* will try to display more nearest airfields (e.g. **ARPT 2 YMBA BRG 240° 22.0 NM**, and so on).

In the event of an inflight situation requiring shutdown of non-essential electrical systems, the *SL60* is considered to be essential and should be left **ON** as long as it will not make the emergency worse.

SL60 SECTION 4

NORMAL PROCEDURES

To operate the *Apollo SL60* competently, pilots must take the time to read and understand:

- this Information Sheet
- the *Apollo SL50 and SL60 User's Guide*
- the *Apollo SL60 Quick Reference Guide*, and
- a *Il Morrow SL60 brochure*.

All of the above documents are stored in the aircraft's glovebox as a single booklet. They can also be viewed as individual documents via the Internet — go to the **SkyRentals** website www.skyrental.com.au and select:

HIRE Cessna 182 ► GOTO tech info ► menu option 5_ AVIONICS and INSTRUMENTS

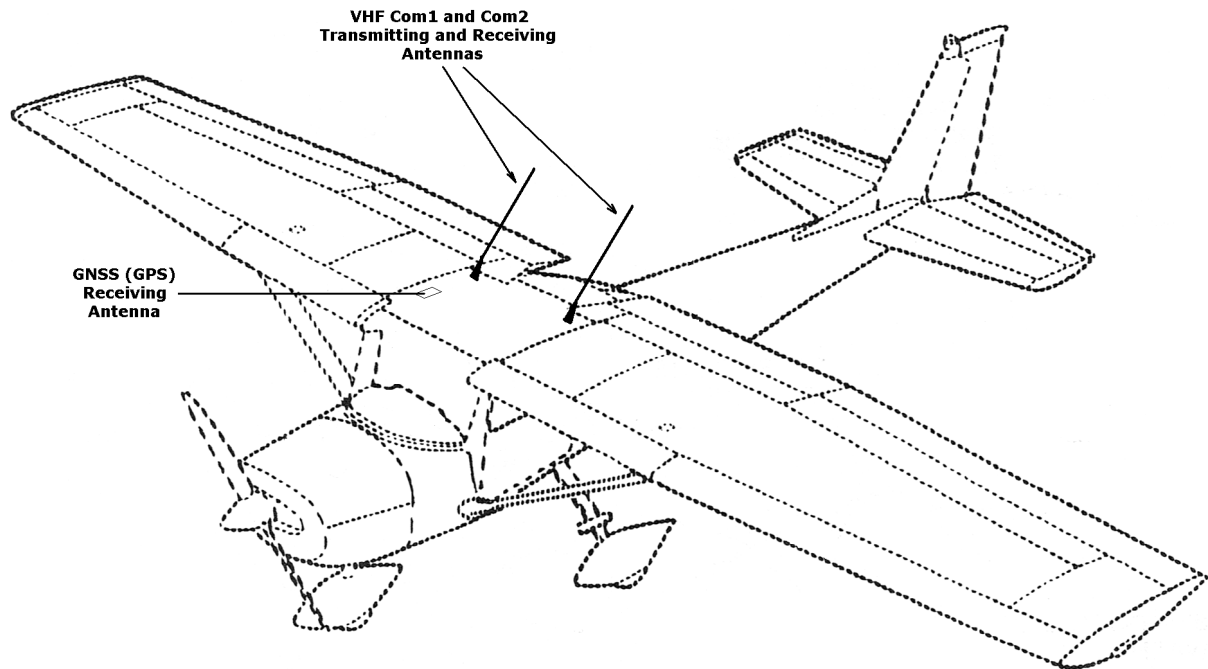
SL60 SECTION 5

PERFORMANCE

There is no change to the airplane's performance when this avionic equipment is installed. However, an externally mounted VHF or GNSS antenna, or several related external antennas, will result in a minor reduction in cruise performance.

- The VHF communication antennas for the *Apollo SL60* (and the *TKM MX300 Transceiver*) are located on top of the cabin roof above the rear seat;
- The GNSS (GPS) receiving antenna for the *SL60* is located on top of the cabin roof, above the front seat passenger.

SL60 SECTION 5 cont'd



SL60 APPENDIX 1

MENU OPTIONS SETTINGS

The *Apollo SL60* has a number of menu options with the following settings:

SYSTEM FUNCTION	DESCRIPTION	SETTING IN VH-VMA
Com Radio Info	COM RADIO SW VERSION	1.2
	RF SIGNAL LEVEL:	(varies with signal level from 0-255)
	AUDIO NOISE LEVEL:	(varies with noise level from 0-255)
	INTERCOM SQUELCH:	240 (230-250 is recommended)
	SIDETONE LEVEL:	050
Navigation Info	AIRSPACE SETUP	ALERTS: OFF
		AIRSPCE BUFFERS: 2nm 10min
		CLASS B: OFF B OUTER: ON
		CLASS C: OFF C OUTER: ON
		MOA: ON TRAINING: ON
		UNKNOWN: ON ALERT: ON
		CAUTION: ON DANGER: ON
		RESTRICT: ON PROHIBIT: ON
		WARNING: ON
	AUTONAV TIME:	1 SECONDS/PAGE
	NAV MODE DISPLAY PAGES ♦	ETE ---- --:-- BRG --- --.-NM
		--NAV FLAGGED-- BRG --- --.-NM
		DTK --- --.-NM TRK --- TAE ---
		TRK --- GROUNDSP ---KTS
		MINSAFEA -----' ENRTSAFEA -----'
		FLT TIME --:-- TIME 08:30 UTC
		ETA ---- --:-- ETA ---- --:--
	MAG VARIATION:	AUTO 07°E
	FLT TIMER TRIGGER:	At 20KTS
	DIRECT-TO	NEVER CLEARS ACTIVE
	CDI SCALING:	AUTO 5.00NM
System Info	APOLLO SL50/60	SW VERS 1.0 ♦
		SERIAL NUMBER: 6000188
		INTERNATIONAL DB: EXP: 02/18/04
		GPS SENSOR SW: 2.1 PN: _
		DISPLAY SW VERSION: 1.0
		COMM SOFTWARE VERSION: 1.2
	OWNER:	SKYRENTAL DOTCOM DOTAU ♦
		ADDRESS: PO BOX 137
		CITY: PALM COVE QLD 4879
		PHONE: AUSTRALIA 0408 697 515
		AIRCRAFT: VH VMA

SL60 APPENDIX 2

DOCUMENT REFERENCES

The *Apollo SL50 and SL60 User's Guide* referred to in this Information Sheet is:

- Apollo document number 560-0955-00, revision 01c, dated September 2003
- the entire guide (not an extract)
- published on the Garmin website at www8.garmin.com/support/userManual.jsp via the **In the Air ► Discontinued ► SL 50/60** selections.

The *Apollo SL60 Quick Reference Guide* referred to in this Information Sheet is:

- Apollo document number 561-0239-00, original issue, dated March 1997
- the entire guide (not an extract)
- published on the Garmin website at www8.garmin.com/support/userManual.jsp via the **In the Air ► Discontinued ► SL 50/60** selections.