

SECTION 9

Pilot's Operating Handbook Supplement AS-07

COM Transceiver GARMIN SL40



This supplement is applicable and must be inserted into Section 9 of the POH when the GARMIN SL40 COM Transceiver is installed in the AQUILA AT01-100. The information in this supplement adds to or replaces information in the basic POH.

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Dokument Nr.:	Ausgabe:	ersetzt Ausgabe:	Datum:	Seite:
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 1

0.1 RECORD OF REVISIONS

Issue	Reason for Change	Effected Pages	Date of Issue
A.01	Initial Issue	All	28.05.2013
A.02	Editorial Changes	All	15.10.2013

0.2 LIST OF CURRENT PAGES

Page	Issue	Date
1 - 6	A.01	28.05.2013
1 - 6	A.02	15.10.2013

Page	Issue	Date

0.3 TABLE OF CONTENTS

1. GENERAL	3
2. OPERATING LIMITATIONS.....	3
3. EMERGENCY PROCEDURES	3
4. NORMAL PROCEDURES.....	4
5. PERFORMANCE.....	4
6. WEIGHT AND BALANCE	4
7. SYSTEM DESCRIPTION.....	5
8. HANDLING, SERVICE AND MAINTENANCE	10

Dokument Nr.:	Ausgabe:	ersetzt Ausgabe:	Datum:	Seite:
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 2

1. GENERAL

This supplement provides a general description of the COM Transceiver GARMIN SL40, its basic operation and integration into the AQUILA AT01-100. For a more detailed description of the GARMIN SL40 and full operating instructions, please refer to the current issue of the SL40 Pilot's Guide, P/N 560-0954-XX.

The information contained within this supplement must be used in conjunction with the complete POH. In addition, it is required that the SL40 User's Guide be carried on board the aircraft during operations.

2. OPERATING LIMITATIONS

The GARMIN SL40 COM Transceiver is optional equipment and failure is not critical in any phase of flight.

The operating limitations of the basic POH apply without any changes or restrictions.

3. EMERGENCY PROCEDURES

This section defines standard procedures which must be observed in the event of a failure of the COM transceiver as well as for the transmission of radio messages on the international emergency frequency. All emergency procedures in the basic POH remain valid and are only supplemented by the following procedures. Particularly in the case of an electrical fire or burning cables, the emergency procedures listed in the basic POH must be observed.

FAILURE OF THE COM TRANSCEIVER UNIT

In the event of a COM transceiver unit failure of the SL40, proceed in accordance with the standard emergency procedure defined in the basic POH using transponder code 7600 and the corresponding flight practices.

TRANSMITTING ON THE INTERNATIONAL EMERGENCY FREQUENCY 121.5 MHZ:

In the case of an emergency during flight, radio messages may be transmitted on the international emergency frequency 121.5 MHz. This standard emergency channel is stored in the COM memory of the SL40 and may be selected in different ways:

<i>Dokument Nr.:</i>	<i>Ausgabe:</i>	<i>ersetzt Ausgabe:</i>	<i>Datum:</i>	<i>Seite:</i>
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 3

MANUAL SELECTION (121,5 MHZ):

- Manually tune the emergency frequency using the frequency selector knobs
- Press the **Frequency Flip/Flop** button to activate the emergency frequency
- Transmit radio messages as required/desired

SELECT FROM COM FREQUENCY MEMORY:

- Press the **EC** button. The emergency frequency appears as the STANDBY-Frequenz
- Press the **Frequency Flip/Flop** button to activate the emergency frequency
- Transmit radio messages as required/desired

MALFUNCTIONS OF THE SL40 COM TRANSCEIVER

In the event of malfunctions of the SL40 COM transceiver, refer to the SL40 User's Guide, P/N 560-0954-XX, for trouble-shooting and corrective actions. Any necessary maintenance or repair work must be conducted and certified by an authorized maintenance/repair organization or the manufacturer of the equipment.

4. NORMAL PROCEDURES

No change to the basic POH. A short description of the operation of the SL40 COM transceiver is contained in section 7 of this supplement.

5. PERFORMANCE

No change to the basic POH.

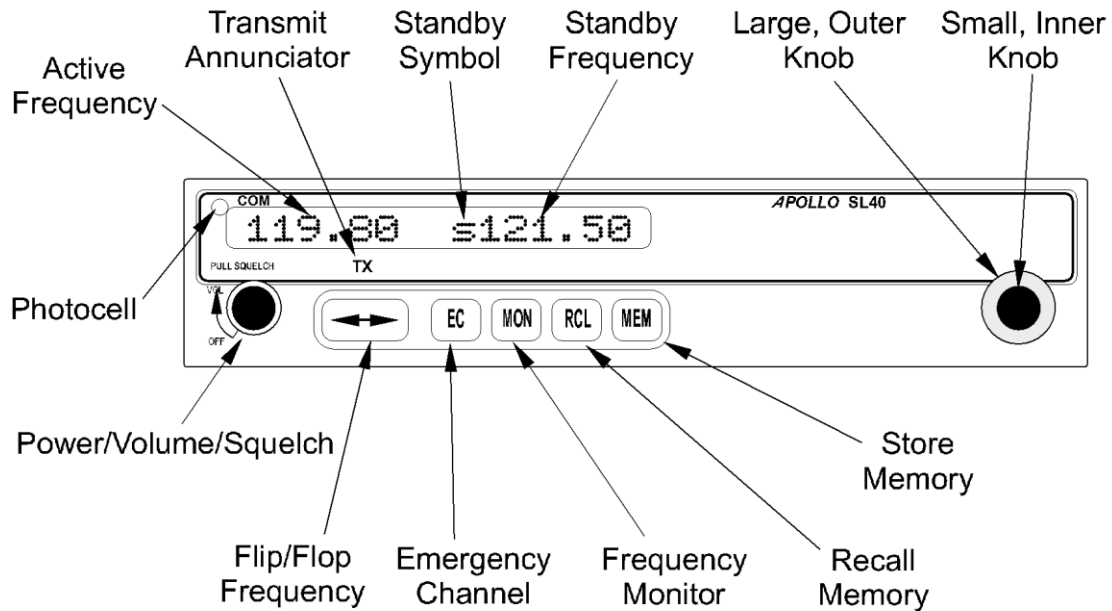
6. WEIGHT AND BALANCE

The change in empty weight and the corresponding center of gravity after the installation or removal of the GARMIN SL40 must be determined and recorded in accordance with section 6 of the basic POH.

<i>Dokument Nr.:</i>	<i>Ausgabe:</i>	<i>ersetzt Ausgabe:</i>	<i>Datum:</i>	<i>Seite:</i>
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 4

7. SYSTEM DESCRIPTION

GARMIN SL 40 FRONT VIEW



GENERAL DESCRIPTION

The GARMIN SL40 is a powerful 760 channel VHF communications transceiver with functions and capabilities comparable to those found in the COM transceiver unit of the GARMIN SL30. It also incorporates workload-reducing functions such as frequency memory lists which contain manually stored channels and the eight last-used active frequencies as well as pre-stored channels. In addition to the communications transceiver unit, the GARMIN SL40 also contains an independent voice-activated INTERCOM system.

Together with the active COM frequency, the tuned-in STANDBY frequency is displayed on the alphanumeric display of the SL40. Furthermore, the SL40 offers the opportunity to monitor the tuned-in STANDBY frequency in the background. The tuned-in STANDBY frequency is activated by pressing the **frequency flip/flop** button. To ensure good visibility of the display and to prevent glare and reflections caused by the display, a photocell is located in the top left corner of the front panel display which automatically adapts the light intensity of the display to the current light conditions.

The transmission and reception range of the SL40 VHF COM transceiver is between 118 and 136.975 MHz with 760 channels, i.e. the frequency distance between two selectable COM channels is 25 kHz.

Dokument Nr.:	Ausgabe:	ersetzt Ausgabe:	Datum:	Seite:
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 5

OPERATION OF THE SL40

In order to activate the SL40 COM transceiver, the switch **ALT1/BAT** and **Avionics** must be in the "ON" position.

TURNING THE SL40 ON AND OFF

The SL40 is turned on by rotating the power/volume knob clockwise past the notch. Further rotation of the knob clockwise increases the volume. Rotate the knob to the left to reduce the volume. After activation the last selected frequency will be displayed.

The SL40 is turned off by rotating the power/volume knob counter-clockwise until the knob notches in the end position.

FREQUENCY SELECTION

New frequencies are first selected as the STANDBY frequency and then switched to the active side when desired. The desired STANDBY frequency can be selected by means of the large and small frequency selector knobs located near the right edge of the SL40. The large frequency selector knob is used to change the frequency in 1 MHz increments. The small frequency selector knob is used to change the frequency in 25 kHz increments between 000 and 975 kHz. The STANDBY frequency is toggled to the active frequency by pressing the **frequency flip/flop** button. Only the STANDBY frequencies can be changed with the frequency selector knobs, not the active frequencies.

RADIO COMMUNICATION

VOLUME AND SQUELCH

The speaker and headphone volume is adjusted by rotating the power/volume knob. To disable the automatic squelch, the power/volume knob must be pulled. General adjustments to the automatic squelch of the headsets in use and to the overall noise conditions can be carried out in the SYSTEM CONFIGURATION MODE under the menu items "*MIC1 SQUELCH*" and "*MIC2 SQUELCH*".

TRANSMITTING

Pressing the push-to-talk button on the control column causes the SL40 to transmit. A transmit indicator („TX“) appears on the display during transition.

<i>Dokument Nr.:</i>	<i>Ausgabe:</i>	<i>ersetzt Ausgabe:</i>	<i>Datum:</i>	<i>Seite:</i>
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 6

FREQUENCY MONITORING FUNCTION

The FREQUENCY MONITORING function allows the user to monitor the STANDBY frequency, while listening to the active frequency, without activating it by pressing the **frequency flip/flop** button.

The FREQUENCY MONITORING function is activated by pressing the **MON** button. A small “m” (“monitoring”) appears on the display in front of the STANDBY frequency when FREQUENCY MONITORING is active. A small “s” (“stand-by”) is displayed when the FREQUENCY MONITORING function is inactive.

The FREQUENCY MONITORING function deactivates immediately and switches automatically to the active channel as soon as a signal is received on this frequency. When activity on the active frequency ceases, the unit will automatically return to the FREQUENCY MONITORING function so that the STANDBY channel can again be monitored. An arrow (< or >) on the display will point to the frequency to which the pilot is currently listening. A slight clicking sound can be heard in the background when the radio is checking the active frequency for communications.

To manually deactivate the FREQUENCY MONITORING function, the **MON** button must be pressed again. After deactivating of the FREQUENCY MONITORING function, a small “s” reappears in front of the STANDBY frequency.

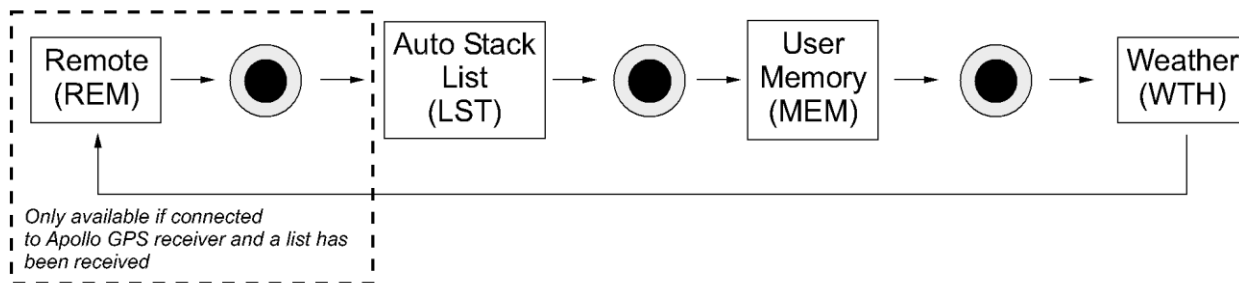
RECALLING STORED FREQUENCIES

In order to recall and select stored frequencies from the memory, proceed as follows:

- Press the **RCL** (RECALL) button to go to the frequency databases
- The different items of the basic menu (frequency memory lists, refer to the illustration on the next page) may be selected by turning the large frequency selector knob. To recall a manually saved frequency, select the frequency memory list (menu item) *USER MEMORY (MEM)* with the large frequency selector knob.
- The different sub-items available from the selected frequency memory list are selected by rotating the small frequency selector knob. To recall a manually saved frequency, scroll through the saved frequency channels with the small frequency selector knob until the desired channel is selected. The selected frequency appears in the STANDBY frequency position.
- The STANDBY frequency is activated by pressing the **frequency flip/flop** button.

<i>Dokument Nr.:</i>	<i>Ausgabe:</i>	<i>ersetzt Ausgabe:</i>	<i>Datum:</i>	<i>Seite:</i>
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 7

The following illustration shows the menu structure of the frequency memory lists available from the SL40 COM transceiver.



Menu Structure of the available frequency memory lists

The AUTO STACK LIST (LST) contains a list of the eight last-used active channels in chronological order and may be selected by rotating the small frequency selector knob. Duplicate frequencies are only saved in the list once.

All manually saved frequencies are stored in the *USER MEMORY* list (MEM), which can store a maximum of 8 different COM channels. If the user memory list is full, the message "*MEM FULL*" appears on the display. In this case, no additional frequency can be saved until at least one of the stored frequencies is deleted from the list.

How to recall the emergency frequency (121.5 MHz) from the frequency memory is described in section 3 of this supplement.

For a detailed description of each frequency memory list, please refer to the current issue of the SL40 User's Guide, P/N 560-0954-XX.

SAVING A COM CHANNEL TO THE FREQUENCY MEMORY LIST

Previously tuned STANDBY frequencies may be saved to the frequency memory list by pressing the **MEM** button. All manually saved channels are automatically stored in the *USER MEMORY* list (MEM) and may be recalled from there. Each stored frequency is assigned an alphanumeric identifier. For more details, please refer to the current issue of the SL40 User's Guide, P/N 560-0954-XX.

DELETING CHANNELS FROM THE FREQUENCY MEMORY LIST

In order to delete channels from the *USER MEMORY* list (MEM), the following steps must be undertaken:

- Press the **RCL** button to go to the frequency databases.
- Select the *USER MEMORY* list (MEM) by rotating the large frequency selector knob.
- Press the **MEM** button (memory)

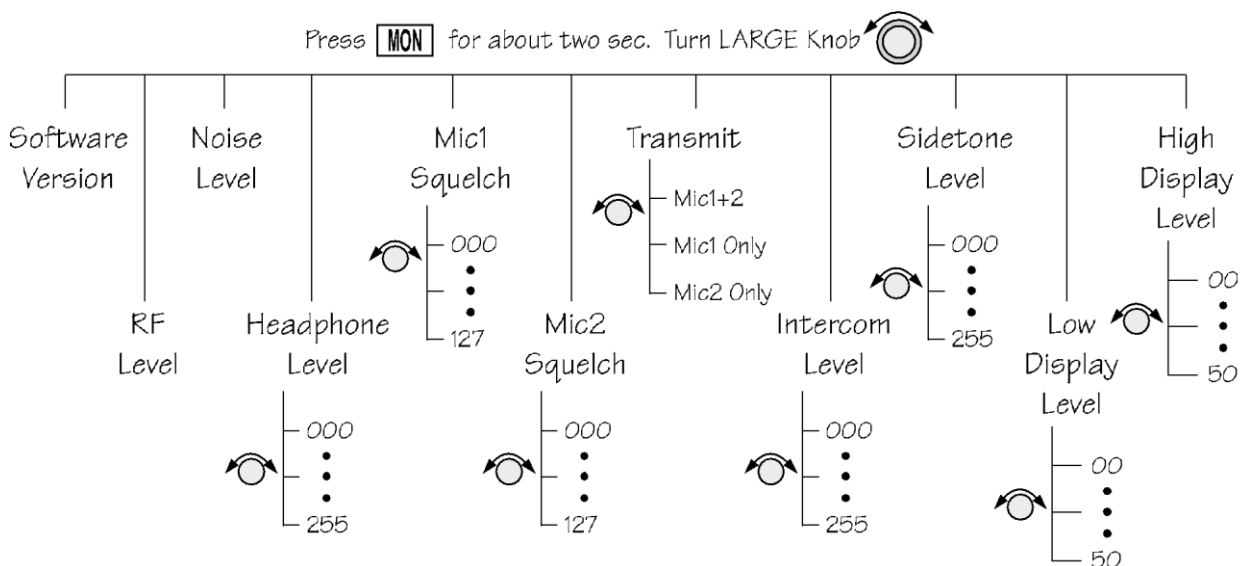
Dokument Nr.:	Ausgabe:	ersetzt Ausgabe:	Datum:	Seite:
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 8

- Rotate the large frequency selector knob until "REMOVE" is displayed.
- Select the desired channel to be deleted by rotating the small frequency selector knob.
- Press the **MEM** button to delete the selected channel.

If you want to leave the menu at this stage without deleting the selected frequency, turn the large frequency selector knob until "ABORT" is displayed. Then press the **MEM** button to leave the frequency memory list menu.

SYSTEM CONFIGURATION MODE

In order to make configurational changes to the SL40, switch to the SYSTEM CONFIGURATION MODE by pressing the **MON** button for at least 2 seconds. In the system configuration menu, general configuration or system information may be recalled or COM configuration options changed. The following illustration shows the general structure of the menus available. For more detailed information on each menu and possible configuration options, please refer to the current issue of the SL40 User's Guide, P/N 560-0954-XX.



INTEGRATION OF THE SL40 COM TRANSCEIVER INTO THE AQUILA AT01-100

The GARMIN SL40 COM transceiver is installed in the avionic rack in the midsection of the instrument panel among the other avionic equipment. Power is supplied to the SL40 through the avionics bus which is controlled with the Avionics Master switch (20A protective rocker switch). The SL40 is additionally protected by a 5A circuit breaker labeled "**COM1**" or, when the SL40 is installed as the second transceiver, "**COM2**". The circuit breakers are located with the other circuit breakers on the right hand side of the instrument panel.

Dokument Nr.:	Ausgabe:	ersetzt Ausgabe:	Datum:	Seite:
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 9

The GARMIN SL40 is attached to the aircraft's COM antenna.

For additional information and a detailed description of the integration of the SL40 COM Transceiver into the aircraft, its connection to the on-board electrical system, and the installation position of the COM antenna, please refer to the current issue of the AQUILA AT01-100 Maintenance Manual.

8. HANDLING, SERVICE AND MAINTENANCE

In order to increase the service life of the GARMIN SL40 COM transceiver, it should always be turned off during engine start-up and shut-down, as electrical surges during these phases may damage the unit.

<i>Dokument Nr.:</i>	<i>Ausgabe:</i>	<i>ersetzt Ausgabe:</i>	<i>Datum:</i>	<i>Seite:</i>
FM-AT01-1010-246	A.02	28.05.2013	15.10.2013	AS-07 - 10