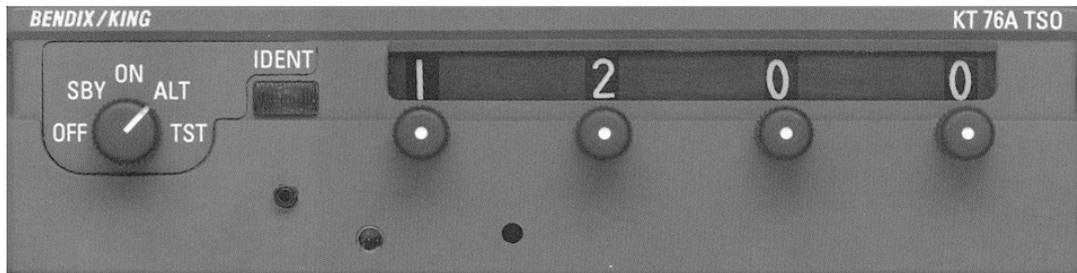


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1. KT 76A Front View



2. Description

The Bendix/King Transponder KT76A is a radio transmitter and receiver, which operates on radar frequencies. It receives ground radar interrogations at 1030 MHz. The transponder returns a coded response of pulses to ground-based radar on a frequency of 1090 MHz. Code selection is done with four control knobs. With each of them the numbers 0 - 7 may be selected that provide 4096 different identification codes. The individual codes differ in the timing and number of the transmitted pulses, not at the frequency. The transmitting frequency always remains at 1090 MHz. The coded replay pulses amplify the normal target, which appears on ATC Enroute, Approach, or Departure Control radar. If the Ident button is pressed, the replay pulses are additional amplified and the aircraft will be safely identified by the Air Traffic Controller.

The KT76 A is mounted into the center of the instrument panel, the antenna is located at the right bottom of fuselage under the co-pilot seat.

3. Circuit Protection

A panel-mounted circuit breaker (XPDR) is provided to stop the power supply in the event of an electrical overload (an internal short circuit, etc.).

4. Operation

The KT 76A can be powered on if the ALT/BAT switch, and the AVIONICS main switch in ON position. Refer to above shown figure for locations of keys and knobs mentioned below.

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4.1. Transponder Test

- (a) Turn the function selector clockwise into the STBY position. The Transponder must be operated approx. 60 seconds in this position to allow the transmitter tube to warm-up and to stabilize. Bypassing the position STBY does not shorten the warm-up time!
- (b) Turn the function selector clockwise into the TEST position and hold it (momentary switch): The REPLY lamp must illuminate.
- (c) Select the STBY position again.

4.2. Mode A Operation

- (a) Select the proper replay code by rotating the four control knobs.

NOTE

On principle, the control knobs must be operated only in the STBY mode to prevent an inadvertent adjustment and transmitting, even if momentarily, of a replay code that is reserved for emergencies.

- (b) Turn the function selector from STBY into the ON position.

The Transponder now returns response with the adjusted replay code.

4.3. Mode C Operation

For the mode C operation, a blind encoder or an encoding-altimeter is required.

- (a) Select the proper replay code by rotating the four control knobs (in the STBY mode).
- (b) Turn the function selector from STBY into the ALT position.

The Transponder returns response with the adjusted replay code and additionally transmits altitude information.

4.4. Ident key

On request of the Air Traffic Control (Squawk IDENT), the IDENT pushbutton is to be pressed briefly. The Transponder now responds for 20 seconds with a special replay impulse that allows the identification of the aircraft on Air Traffic Control radar screens immediately.

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5. General Notes

In order to increase the service life of KT 76A it should not be on during engine start and engine shut-down since electrical surges may cause damage to the unit.

NOTE

- On principle, the control knobs must be operated only in the STBY mode to prevent an inadvertent adjustment and transmitting, even if momentarily, of a replay code that is reserved for emergencies.
- Do not operate the Transponder with the codes 75**, 76** and 77**, since these are reserved for specific purposes, e.g. for emergencies.
- Do not use the code 0000, since then only the basic pulses will be transmitted, and an identification of the aircraft cannot be accomplished.

The following codes are reserved for emergencies:

7500 Hijacking
7600 Communications Failure
7700 Emergency

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