

ASKHAT KHAFIZOW

AIRCRAFT INTERCOM SYSTEMS

Askhat Khafizow

**Aircraft
Intercom Systems
Study guide for pilots**

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INTRODUCTION

Intercom systems are used to transmit voice message signals.

In this book are considered the principles construction of intercom systems, schemes features, controls appointment and the features using.

The main element of the Intercom system is the audio panel or control panel, in which all controls and electronic circuits are concentrated, that providing the corresponding elements connection.

Understanding the processes that occurring in the intercom system is the basis the equipment flight operation on the competency level.

In this book, the processes are considered according to the principle “from simple to complex” - first, is considered the simplest scheme for pilot to pilot communication, then adding the new elements, and, finally, we get a real scheme of the modern control panel.

The control questions can also help you learn the material in a quality level.

The accent is made on the most using equipment, which is installed on the civil aviation aircrafts majority.

Enough detailed the equipment controls appointment and the using features are consideration.

This book can be useful for pilots, as well as anyone who wants to become a pilot.

Comments regarding this publication should be sent, in email form, to the following address: Xafizow@ukr.net

1 AIRCRAFT INTERCOM SYSTEMS

1.1 Purpose, tasks

In general, an intercom system should provide [1]:

a) For pilots:

- The conversations with each other, with the flight attendant, and also with the aircraft mechanic (when aircraft ground service);

- The announcements for passengers;
- The radio communication with the ATC through the on-board radio stations;
- The listening to the identification signals of the ground beacons;
- The listening to the special sound and voice messages which generating by airborne systems;
- b) For the flight attendant:
 - The conversations with the crew members;
 - The announcements for passengers;
 - The broadcast audio and video entertainment programs for passengers.

All messages which are transmitting through internal and external communication channels are recorded by the voice information recorder.

1.2 The structure and features of circuit solutions

The intercom composition and structure is depended of the aircraft`s purpose (passenger, transport), of the crew members number, of the on-board equipment composition, etc.

So, for example the passenger aircraft`s intercom should to provide, among other main things:

- The communication between the pilot and the flight attendant;
- broadcasting audio and video entertainment programs.

For the transport aircraft:

- The conversation with the cargo compartment personnel during the loading and unloading operations, etc.

Thus, the intercom system is a complex of equipment, the elements of which, in accordance with the tasks being solved, form different functional connections and the corresponding circuit solutions.

The main elements of the intercom system are: acoustic converters (headset, hand-held microphones, handsets, and speakers), amplifiers of electrical signals, switches or commutation buttons ("PTT" (*Push-To-Talk*)), control panels, and other elements. At the flight attendants workplaces of