



**Aviation Medical Center**

**GPSS**

GLOBAL PILOT SELECTION SYSTEM

**SELECTION OF EXPERIENCED PILOTS  
FOR YOUR FLIGHT TRAINING**



## GLOBAL PILOT SELECTION SYSTEM

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## OPERATIONAL EXCELLENCE

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## GLOBAL PILOT SELECTION SYSTEM

A pilot's job entails an array of situations which often require sound judgment and decision making. During a flight, in addition to performing routine tasks, a number of challenging situations may arise, including technical difficulties, problems with colleagues or passengers, and unexpected events on the outpost. Such situations demand effective decision making in order to maintain a smooth, safe and pleasant flight which in turn ensures customer satisfaction. But can anyone do this job?



## OPERATIONAL EXCELLENCE

Operational excellence can only be achieved if the pilots in the market possess the required competencies. Years of research have shown that several criteria distinguish between successful pilots and unsuccessful pilots. It depends upon your ability to detect these competencies whether operational excellence for your airline remains a reality or not. Your ability to run an efficient, safe and customer friendly operation is tremendously enhanced with the aid of this test battery providing you with concrete and clear information. Testing material is specifically designed to measure competencies in experienced pilots.

The Aviation Medical Center also developed a Global Pilot Selection System for applicant abinitio pilots. In that test battery attention is given to the trainability of the pilot. Tests and questionnaires are adjusted to the level of experience of the pilot to be. Norms are developed specifically for this group. Selection prior to flight training is essential for operational excellence.





## SELECTION OF PILOTS FOR YOUR AIRLINE

The ability of your airline to maintain its competitive advantage will rely more and more upon your ability to select the right people for the job. But how can this best be achieved and what is the typical profile of a successful pilot?

The Aviation Medical Center (AMC) has developed a test battery comprising a balanced selection procedure that covers the required areas: cognitive level, flying adaptability and personality. These tests enable you to distinguish among pilots on several key features. Flying a plane is a complex and demanding job, hence the test battery contains 14 tests assessing different qualities. The content of this battery is a result of scientific research and considerable consultation with pilots and managers from several large airlines. Moreover, because the test battery is specifically developed for pilots, each test has a high level of face validity.

However, you say, conducting professional assessments of candidate pilots is the work of experts, isn't it? Indeed, experts have developed this test battery that is web-based and enables you to execute the entire procedure yourself from your home office. No difficult planning with external bureaus, no extra costs for tickets to fly them in for lengthy expensive procedures. You will be able to offer a state of the art selection procedure without the investment of additional manpower. All you have to do is: provide the candidate with a computer, log in to the system and wait for the report.

### CALCULATING

Although a pilot relies almost entirely on his instruments it is important that he has a good sense for figures himself. For this reason calculation is part of the test battery. During this test component the pilot is given relevant and redundant information which he must abstract and process to calculate in order to solve the problem at hand. The tasks usually represent every day operational demands and the student may use a calculator if required.

*In aircraft A 40% of the 240 passengers is a child. 50% of the children are seated in business class. In aircraft B 20% of the 330 pax is a child. 80% of them is a girl. What % of the passengers is a child?*

### VERBAL FIELD INDEPENDENCE

Verbal insight is the second of the three tests for assessing general ability. Pilots are not required to have a university degree; however the ability to discern between fact and assumption is imperative. The test therefore demands a critical approach from pilots to the situations described. This is more difficult for pilots who are influenced by people in their surroundings or by the situation at hand. These pilots tend to show group think. Group think must be avoided in the cockpit and therefore this test is a necessary component in the test battery. This quality measured with this test is known as field independence and is a vital quality for critical decision making on board.

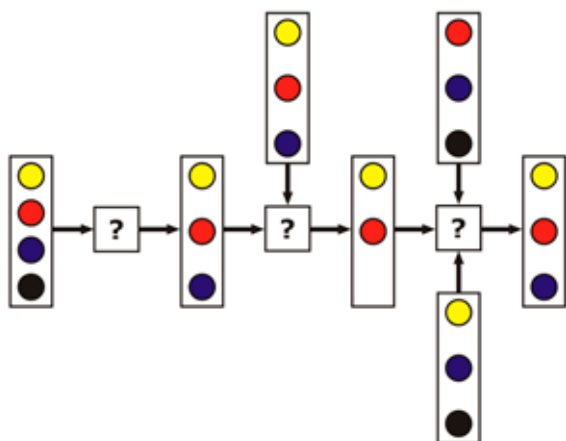
*The costs of aircraft maintenance have decreased substantially over the last few years. New technology has not only improved flight safety, but also decreased the budget spent on maintenance. This is the result of two important factors. First of all the life-cycle of aircraft parts have improved dramatically thus decreasing the annually required number of repairs and replacements. Another factor, however, is that the repairs and replacements itself take less time than before.*

- 1) The costs for the airline have decreased.*
- 2) The life-cycle of parts have improved.*
- 3) The number of replacements has not gone down.*



### LOGICAL REASONING

One particularly distinguishing factor between pilots is the ability to think logically. Whilst in flight a pilot is mostly following instructions, known as second hand information. Some situations, however, will require creative problem solving skills, known as first hand knowledge. This test is developed to find out whether the pilot is able to think analytically and solve problems with first hand knowledge. The questions contain various sorts of problems involving logical systems with information gaps, which the pilot must fill in by means of logical reasoning.



### ANALYTICAL THINKING

A pilot needs to understand systems. Not because he has to analyse the way they work, but to understand the link between instrument settings and system configurations. Insight in the logic of systems gives the pilot a head start in making decisions. This test gives insight in the ability of the pilot to understand the logic of a system and the ability to give meaning to system parts based on the purpose of the system.

	Mo	Th	We	Th	Fr
Aydin	DHX	DHX	DHX	DHX	DHX
Steven	DHX	DHX	DHX	DHX	DHX
Albert	DHX	DHX	DHX	DHX	DHX
Florence	DHX	DHX	DHX	DHX	DHX
Don	DHX	DHX	DHX	DHX	DHX
Edward	DHX	DHX	DHX	DHX	DHX
Ciann0	DHX	DHX	DHX	DHX	DHX

[Instructions](#)
[Scratchpad](#)
[Click here when ready](#)

### PLANNING

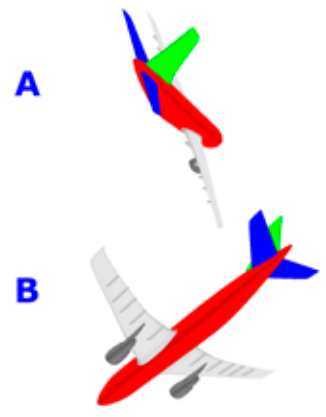
Although flight planning is not usually the pilot's responsibility, the ability to anticipate and plan is clearly an essential skill; and hence planning tasks are part of the test battery. While flying anticipation and pro-active actions are essential to see situations arise before they occur. Situational awareness, an essential characteristic for a pilot is, amongst others, the result of this ability.

### SITUATIONAL AWARENESS (GEOGRAPHICAL ORIENTATION - POSITION AWARENESS)

Geographical orientation is clearly an essential quality for every pilot. Finding your way in the circuit may be a challenging task for some pilots. Especially during line training when stress increases, any deficiencies in this area become clearly visible - often to the complete surprise of the pilot. An early diagnosis, however, can prevent problems during line training. The test requires the candidate to give his position relative to a number of markers.



Indicate the correct aircraft followup on the demand of the Flight Director Bars



### SPATIAL ORIENTATION

Another requirement to maintain situational awareness is the ability to think in three dimensions. This is a specific and crucial characteristic of flying. The pilot needs to create situational awareness in three dimensions based upon the two dimensional information of the instruments in the cockpit.

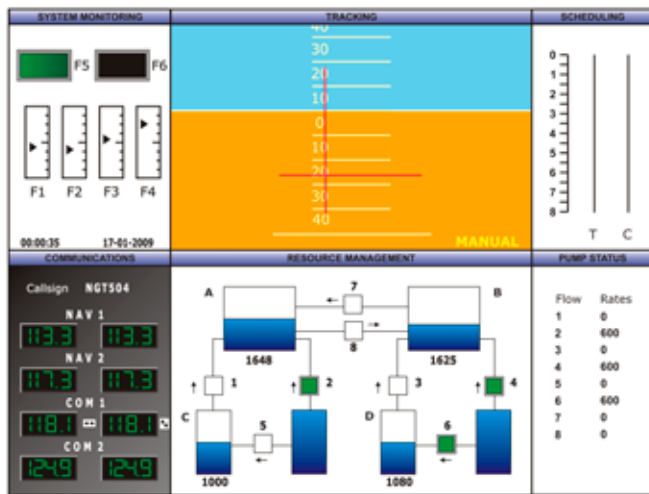
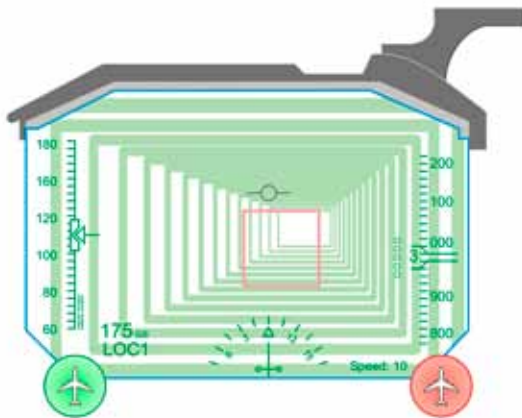
### MULTIPLE TASKING

For several decades now, research indicates that the ability to divide your attention is one of the best predictors of future pilots' performance. This test battery contains a number of multiple tasks to assess this crucial characteristic. However, the ability to divide your attention is often determined by the nature of the task. Therefore, multiple tasking in this test-battery is measured on three different levels.





These are:



- Skill based level
- Rule based level
- Knowledge based level

All three levels are part of one single test.

Another multiple task that is included in the test battery was developed by NASA. It is a benchmarking test that was developed after years of research with the sole purpose to distinguish between successful pilots and those pilots who have certain difficulties with the task at hand. The test contains several tasks that assess critical features for a pilot. The Aviation Medical Center gained full authority to program and further develop this test. The test requires the pilot to monitor and keep track of the instruments, fill the fuel tanks and adjust navigation and radio instruments according to instructions from the tower.

## MEMORY

This too is a standard skill for pilots. Whilst interacting with the tower, pilots need to memorise information for short periods of time until the information is no longer needed and may then be discarded. This assessment component tests pilots' ability to memorise real-to-life details. Auditory memory, visual memory for text and for pictures are contained in this test. This test not only gives insight in the short term memory (working memory), but also in the long term memory.

## ENGLISH PROFICIENCY

ICAO requires a sufficient level of English. This requirement refers to the level to which the pilot understands and speaks English. This level can only be attained if the pilot at least shows a satisfactory vocabulary and basic understanding of the language. This understanding is tested with aviation phraseology and with common language for nonstandard situations. This test assesses the pilots' level of proficiency according to ICAO standards in both areas.

### *Expedite means*

- send off
- speed up
- travel
- return

## GENERAL AVIATION KNOWLEDGE

Pilots have different ways of retrieving information from the outside world and different ways of processing this information in their brain. Nowadays knowledge about the brain and the way information from the outside world is processed enables us to distinguish between effective and non-effective strategies. This test of general aviation knowledge provides insight in the way pilots store knowledge in the brain and how accessible this knowledge is. The test contains several questions with basic aviation knowledge. These questions are either verbal or visual of markers.

## PILOT BEHAVIOUR QUESTIONNAIRE

This questionnaire assesses differences in behaviour between pilots. The questionnaire contains statements, preferences, styles and real life situations. The candidate has to come up with solutions for events that may happen en-route. Depending upon style and preference of the pilot several qualities are assessed. Among many others these are: work attitude, discipline, sense of responsibility, socialising, task and people orientation.



## 10 FACTOR PILOT QUESTIONNAIRE

Personality is more and more a distinguishing factor between an average performance and a good performance. Lately personality is increasingly in the focus of the selection process. Several characteristics are known for their ability to predict the pilot's performance. The 10FP is a personality questionnaire that was developed specifically for the profession of pilot. To complete the competence profile the test battery comprises the 10 Factor Pilot Test, the results of which provide a clear indication of the applicant's personality in relation to his job. In order to detect possible false information, the test also includes a lie detection mechanism. The 10FP gives you insight in 10 major scales of personality, all divided into 3 sub-scales, so that you get information on over 30 personality features. These personality characteristics are:

### Leadership

- Organising
- Dominance
- Natural authority

### Emotional Stability

- Emotional balance
- Patience
- Unconcern

### Decision making

- Consciousness
- Decisiveness
- Independence

### Ambition

- Aspirations
- Performance-motivation
- Competition

### Straightforwardness

- Assertiveness
- Atmosphere-indifference
- Agression

### Orientation towards others

- Supportiveness
- Helpfulness
- Empathy

### Perseverance

- Tenaciousness
- Stamina
- Goal orientation

### Attitude towards work

- Accuracy
- Neatness
- Methodical approach

### Extraversion

- Openness
- Adjustability
- Sociability

### Social values

- Reliability
- Integrity
- Tolerance

## THE REPORT

The GPSS generates a full report giving you insight in all required competencies. Below you will find an example of the report. The competencies of the pilot are visualised in the table. The full reports contain 10 pages with the results.

The result of the assessment will be summarised in the table below. For all three different areas, Cognitive level, Flying aptitude and Personality, a percentage of performance is given relative to other pilots. This makes it easy to point out his weaknesses and strong points, thus making the report a useful diagnostic tool. You have access to the report immediately upon completion of the tests.

	Low	Below Average	Average	Above average	High
<b>MT-P</b>					
<b>Skill-based multi-tasking</b>			■		
<b>Rule-based multi-tasking</b>			■		
<b>Knowledge-based multi-tasking</b>			■		
<b>Workload management</b>				■	
<b>Benchmarking</b>			■		

	Low	Below Average	Average	Above average	High
<b>Work attitude</b>			■		
<b>Stamina</b>				■	
<b>Discipline</b>			■		
<b>Goal orientation</b>			■		

## DURATION OF THE TEST

Depending upon the pace of work of the student it takes approximately 4 to 5 hours to complete the test battery. The test-system gives the student 3 brakes in between. It is advisable to give the student the opportunity to leave the room and have some refreshment.

## QUALITY ASSURANCE

To guarantee the quality of this test battery, the tests are monitored by a team of experienced aviation psychologists. Norms are adjusted frequently to give you up-to-date information. Tests are adjusted to the newest standards and based upon the world wide validation results. The Aviation Medical Center holds an ISO-9001:2000 certificate.



## INFORMATION

If you require additional information regarding this test battery, contact :

### Aviation Medical Center

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You can also visit

[www.aviationmedical.com](http://www.aviationmedical.com)

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