

# TSS

## Satellite Navigation System

TSS Satellite Navigation System operates with GLONASS and GPS satellites. The TSS is the smallest and lightest instrument of all those available in the market. Its maximum dimensions are 78x159x246 mm, so it can be used in situations when the problem of placing new equipment is especially severe in upgrading aircraft.



TSS Satellite Navigation System. Using both GPS and GLONASS satellites provide high reliability, accuracy and noise immunity. The product has a user-friendly interface which provides access to the main modes required in flight with a press of a single button. The system has a high-contrast 3.7" 640x480 display. Owing to the high resolution, naviga-

tional information is shown not only in the text form but also graphically, including display of the topographic map for the background. The unit has legible fonts and a contrasting background. This reduces pilot's fatigue and makes their work easier. The aeronautical database including information on the upper and lower airspace, terrain

database and a topographic map is stored on a Compact Flash. The product enables storage of and operation with two aeronautical databases (the current and next AIRAC cycle), which, along with the use of a compact flash, makes updating an easy process for the airlines.



Display of the aeronautical map



Measuring of distance on a card



Selecting SID/STAR/Approach procedures

The TSS system monitors integrity of information received from the satellites (the RAIM function). It implements adaptive selection of satellites used for calculating coordinates (the FDE algorithm), as well as prediction of information availability from satellites as the aircraft is proceeding along its route (the PRAIM algorithm). There is a possibility to receive and process information from the interfaced airborne equipment. These functions allow TSS to be used as the kernel of an integrated navigation system, to send control signals to the autopilot.

The TSS provides reception and output of signals for the onboard equipment and the automatic control system to enable its application on the large up-to-date airplanes and helicopters.

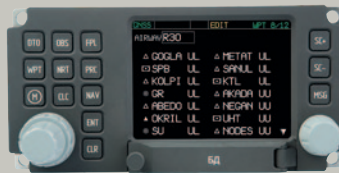
The product complies with all the KT-34-01 requirements (3rd edition) for classes A1, B1 and C1, the RNP 1 and RNP 5 requirements, and also includes a number of additional functions for more convenient handling. For example, routes can be planned by using points and airways. Furthermore, already formed routes can be viewed in the Flight Plan format. With the help of an elaborate filter system, the necessary procedure is readily selected and included in the flight plan.

The TSS system can serve as a display of the TTA-12 terrain awareness and warning system providing unprecedented terrain image quality in plan or in profile.

The function of recording flight information on the removable storage allows airlines to obtain printouts of the flight path overlaid on the topographic map, of various aeronautical information layers (standard procedures, restricted airspaces, etc).



Main navigation Page



Viewing airway data



Viewing the route

## MAIN TECHNICAL CHARACTERISTICS

<b>MAXIMUM DIMENSIONS AND WEIGHT</b>		<b>POWER SUPPLY</b>	
159 mm x 78 mm x 222 mm, 2.1 kg		27 V, 30 W	
<b>DISPLAY CHARACTERISTICS</b>			
<b>SCREEN SIZE</b>	<b>MATRIX RESOLUTION</b>	<b>CONTRAST RATIO</b>	<b>VIEW ANGLES</b>
3,7"	640 x 480 pixels	650:1 and 800:1 at the minimum and maximum brightness respectively	±80° horizontally and vertically
<b>ENVIRONMENTAL</b>			
DO-160D.[B4/A4]XBAB[SGR/(BA)(B1A)]XXXXFSAAAZZ[RR]MXXXX Operating temperature: from - 40°C to +55°C. Limit temperature: from - 60°C to +85°C			
<b>INTERFACE</b>	<b>SBKV.461531.103</b>	<b>SBKV.461531.103-01</b>	
ARINC-429	4 inputs/4 outputs	6 inputs/4 outputs	
ARINC 646	1 channel	1 channel	
RS 422	1 channel	1 channel	
RS-232	1 channel	1 channel	
Discretets	2 inputs/2 outputs	4 inputs/6 outputs	
5 V, 400 Hz	1 input	1 input	
1PPS	1 output	1 output	
+/- 10 V	-	1 output	
+/- 5 V	-	2 outputs	
sin/cos 8 V, 400 Hz	-	4 outputs	
Pressure altitude	-	1 input (ICAO code)	