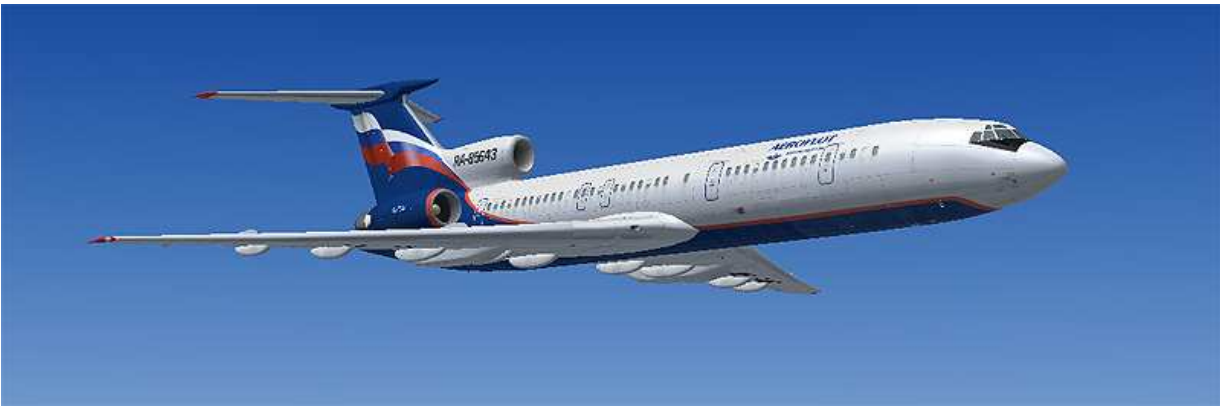


# **IGFly.com Tupolev 154M**



## **Manual And Flight Tables**

**[www.igfly.com](http://www.igfly.com)**

**Version 1**

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## **Introduction of Tupolev 154M**

Middle range passenger aircraft Tu-154M is designed for use on 500 km - 3900 km distance with commercial load up to 18 tones with cruising speed of 850 – 900 km/hour. Power-plant of Tu-154M consists of 3 turbofans engines D30 KU-154 with take-off thrust 10500 kgs each, located at the end of the fuselage. Side engines have a reverse system.

Aircraft Tu-154M equipped with high-lift devices which includes double-slotted flaps, slats, spoilers. Automatic Onboard Control System ABSU-154-2 guarantee safe operation any time of day with any weather regulated with ICAO III-A.

Aircraft Tu-154M may be operated under hot climate on airports with elevation of 2500 meters.

## **Specifications**

### **Geometry**

Wing span, m - 37,55

Length, m - 48,0

Height, m - 11,4

Max fuselage diameter, m - 3,8

Wing Sweep 1/4 chord, grad - 35

Wing Area, m<sup>2</sup> - 202

Tail plane area, m<sup>2</sup> - 42

### **Capacity**

Max seats, 152-176

Max commercial load, tones - 18

Flight crew, 3 - 4

### **Performance**

Max altitude, m - 12 800

Cruise altitude, m - 12 100

Max flight range, km - 3900\*

Cruise speed, km/h - 950

Minimal runway length, m - 2300

\*with max payload and fuel reserve

## **Common Limitations**

### **Weight Limits**

1. Max taxi weight - 100,5 t.
2. Max takeoff weight - 100 t.

3. Max landing weight - 80 t.
4. Max empty weight - 74 t.
5. Max payload - 18 t.

### **Possible Centering**

1. Max allowed front centering on take-off (gears extended) - 21% CoG
2. Max allowed front centering on landing (gears extended) - 18% CoG
3. Max allowed rear centering on take-off (gears retracted), in flight, on landing - 32% CoG

Notice: Critical centering on the ground - 52,5% CoG

### **Speed Limits and Mach Limits**

#### *Max Speed and Mach*

Cruise speed  $V_{max. c.}$  (  $V_{mo}$  ) and  $M_{max.}$  (  $M_{mo}$  ):

- with centering 32% CoG and lower:
- on altitudes up to 7000 m - 600 km/h
- on altitudes from 7000 m and higher - 575 km/h,  $M=0,86$ .
- with centering over 32% CoG on all altitudes - 525 km/h.

Maximal speed  $V_{max max}$  and  $M_{max max}$ :

- on altitudes up to 7000 m - 650 km/h;
- on altitudes from 7000 m. and up to 10300 m. - 625 km/h;
- on altitude from 10300 m. -  $M= 0,95$ .

Max speed with flaps extended:

- 15° - 420 km/h;
- 28° - 360 km/h;
- 36° - 330 km/h;
- 45° - 300 km/h.

Max speed while extending and retracting gears:

- in normal conditions - 400 km/h;
- in emergency descending – within values  $V_{max. c.}$  и  $M_{max. c.}$

Maximal speed with horizontal stabilizer in position different from flight mode – 450 km/h

Maximal speed while changing stabilizer position – 425 km/h

Maximal speed with slats extended – 425 km/h

Maximal speed while extending landing lights – 400 km/h

Max speed:

- Take-off nose wheel - 315 km/h
- Take-off primary gears - 325 km/h

- Landing primary gears - 280 km/h\*
- Landing nose wheel - 270 км/h\*
- Start of braking on roll with outside temperature:
  - + 30° C and lower - 240 km/h
  - over 30° C - 225 km/h

### **Cruising altitudes**

Flight Distance, km (over - to)	Altitude, m	
	Flight Direction	
	0 degree - 179 degree	180 degree - 359 degree
200 - 300	5700	6000
300 - 400	9100	8600
400 - 500	11100	10600
500 - 600	12100	11600
600 - 1500	12100	11600
1500 - 3200	11100 - 12100	11600
3200 and over	11100 - 12100	10600 - 11600

**Fuel consumption in flight.**

**Max distance mode – calm.**

<i>Distance in calm, km</i>	<b>Altitude 9600</b>				<b>Altitude 10600</b>				<b>Altitude 11600</b>				<i>Flight estimated time, h</i>
	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	
<b>500</b>	0.805	4600	50	150	0.82	4600	50	150	0.825	4550	50	150	<b>0.89</b>
<b>1000</b>	0.810	7400	150	200	0.82	7200	150	200	0.825	7050	150	200	<b>1.47</b>
<b>1500</b>	0.810	10300	250	300	0.82	9900	250	300	0.825	9650	250	300	<b>2.04</b>
<b>1600</b>	0.810	10900	300	350	0.82	10450	250	300	0.825	10150	250	300	<b>2.16</b>
<b>1700</b>	0.810	11450	300	350	0.82	11000	300	350	0.825	10650	250	300	<b>2.27</b>
<b>1800</b>	0.810	12050	350	350	0.82	11550	300	350	0.825	11200	300	350	<b>2.39</b>
<b>1900</b>	0.810	12650	350	400	0.82	12100	350	350	0.825	11700	300	350	<b>2.50</b>
<b>2000</b>	0.810	13250	400	400	0.82	12650	350	400	0.825	12250	350	350	<b>2.62</b>
<b>2100</b>	0.810	13800	400	400	0.82	13250	400	400	0.825	12750	350	400	<b>2.73</b>
<b>2200</b>	0.810	14400	400	450	0.815	13800	400	400	0.825	13300	350	400	<b>2.85</b>
<b>2300</b>	0.810	15000	450	450	0.815	14350	400	450	0.825	13850	400	400	<b>2.96</b>
<b>2400</b>	0.810	15600	450	450	0.815	14900	450	450	0.825	14400	400	450	<b>3.08</b>
<b>2500</b>	0.810	16200	500	500	0.815	15500	450	450	0.825	14950	450	450	<b>3.19</b>
<b>2600</b>	0.810	16800	500	500	0.815	16050	450	500	0.825	15500	450	450	<b>3.30</b>
<b>2700</b>	0.810	17400	550	500	0.815	16600	500	500	0.825	16050	450	500	<b>3.42</b>
<b>2800</b>	0.810	18000	550	550	0.820	17200	500	500	0.825	16600	500	500	<b>3.53</b>
<b>2900</b>	0.810	18650	600	550	0.820	17750	550	550	0.825	17150	500	500	<b>3.65</b>
<b>3000</b>	0.810	19250	600	600	0.820	18350	550	550	0.825	17700	550	550	<b>3.76</b>
<b>3100</b>	0.810	19850	600	600	0.820	18900	600	550	0.825	18250	550	550	<b>3.88</b>
<b>3200</b>	0.810	20400	600	600	0.820	19500	600	600	0.825	18800	600	550	<b>3.99</b>
<b>3300</b>	0.810	20950	600	650	0.820	20050	600	600	0.825	19400	600	600	<b>4.11</b>
<b>3400</b>	0.810	21500	600	650	0.820	20550	600	600	0.825	19950	600	600	<b>4.22</b>
<b>3500</b>	0.810	22050	600	650	0.820	21050	600	650	0.825	20450	600	600	<b>4.33</b>
<b>3600</b>	0.810	22600	650	700	0.820	21600	600	650	0.825	20900	600	650	<b>4.45</b>
<b>3700</b>	0.810	23100	650	700	0.820	22100	600	650	0.825	21400	600	650	<b>4.56</b>
<b>3800</b>	0.810	23650	650	700	0.820	22600	600	700	0.825	21850	600	650	<b>4.68</b>
<b>3900</b>	0.810	24150	700	750	0.820	23100	650	700	0.825	22350	600	650	<b>4.79</b>

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<b>4000</b>	0.810	24700	700	750	0.815	23600	650	700	0.825	22800	600	700	<b>4.91</b>
<b>4100</b>	0.810	25250	700	750	0.815	24100	650	700	0.825	23300	650	700	<b>5.02</b>
<b>4200</b>	0.810	25750	750	750	0.815	24550	700	750	0.825	23750	650	700	<b>5.14</b>
<b>4300</b>	0.810	26250	750	800	0.815	25050	700	750	0.825	24200	650	750	<b>5.25</b>
<b>4400</b>	0.810	26800	750	800	0.815	25550	700	750	0.825	24700	650	750	<b>5.37</b>
<b>4500</b>	0.805	27300	750	800	0.815	26050	750	800	0.825	25150	700	750	<b>5.48</b>
<b>4600</b>	0.805	27850	800	850	0.82	26550	750	800	0.825	25600	700	750	<b>5.60</b>
<b>4700</b>	0.805	28350	800	850	0.82	27000	750	800	0.825	26100	700	800	<b>5.71</b>
<b>4800</b>	0.805	28850	800	850	0.82	27500	750	850	0.825	26550	750	800	<b>5.83</b>
<b>4900</b>	0.805	29350	850	900	0.82	28000	800	850	0.825	27000	750	800	<b>5.94</b>
<b>5000</b>	0.805	29900	850	900	0.82	28450	800	850	0.825	27450	750	800	<b>6.06</b>

<i>Distance in calm, km</i>	<b>Altitude 10100</b>				<b>Altitude 11100</b>				<b>Altitude 12100</b>				<i>Flight estimated time, h</i>
	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	<i>Mach</i>	<i>Fuel consumption, kg</i>	<i>Wind Correction, kg</i>	<i>Fuel to compensate, kg</i>	
<b>500</b>	0.815	4600	50	150	0.82	4600	50	150	0.825	4550	50	150	<b>0.89</b>
<b>1000</b>	0.815	7300	150	200	0.82	7150	150	200	0.825	7000	150	200	<b>1.47</b>
<b>1500</b>	0.815	10100	250	300	0.82	9750	250	300	0.825	9550	250	300	<b>2.04</b>
<b>1600</b>	0.815	10650	300	300	0.82	10300	250	300	0.825	10050	250	300	<b>2.16</b>
<b>1700</b>	0.815	11200	300	350	0.82	10850	300	350	0.825	10550	250	300	<b>2.27</b>
<b>1800</b>	0.815	11800	300	350	0.82	11400	300	350	0.825	11100	300	350	<b>2.39</b>
<b>1900</b>	0.815	12350	350	350	0.82	11900	300	350	0.825	11600	300	350	<b>2.50</b>
<b>2000</b>	0.815	12900	350	400	0.82	12450	350	350	0.825	12100	300	350	<b>2.62</b>
<b>2100</b>	0.815	13500	400	400	0.82	13000	350	400	0.825	12650	350	400	<b>2.73</b>
<b>2200</b>	0.815	14100	400	400	0.825	13550	400	400	0.825	13150	350	400	<b>2.84</b>
<b>2300</b>	0.815	14650	450	450	0.825	14100	400	400	0.825	13700	400	400	<b>2.96</b>
<b>2400</b>	0.815	15250	450	450	0.825	14650	400	450	0.825	14250	400	450	<b>3.07</b>
<b>2500</b>	0.815	15800	450	450	0.825	15200	450	450	0.825	14750	400	450	<b>3.19</b>
<b>2600</b>	0.815	16400	500	500	0.825	15750	450	450	0.825	15300	450	450	<b>3.30</b>
<b>2700</b>	0.815	17000	500	500	0.825	16300	500	500	0.825	15850	450	500	<b>3.42</b>
<b>2800</b>	0.815	17550	550	550	0.825	16850	500	500	0.825	16400	500	500	<b>3.53</b>
<b>2900</b>	0.815	18150	550	550	0.825	17400	550	500	0.825	16950	500	500	<b>3.64</b>
<b>3000</b>	0.815	18750	600	550	0.825	18000	550	550	0.825	17500	550	500	<b>3.76</b>

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<b>3100</b>	0.815	19350	600	600	0.825	18550	550	550	0.825	18050	550	550	<b>3.87</b>
<b>3200</b>	0.815	19950	600	600	0.825	19150	550	550	0.825	18600	550	550	<b>3.99</b>
<b>3300</b>	0.815	20500	600	600	0.825	19700	550	600	0.825	19150	550	550	<b>4.10</b>
<b>3400</b>	0.815	21000	600	650	0.825	20250	550	600	0.825	19700	550	600	<b>4.21</b>
<b>3500</b>	0.815	21550	600	650	0.825	20700	550	600	0.825	20200	550	600	<b>4.33</b>
<b>3600</b>	0.815	22050	600	650	0.825	21200	600	650	0.825	20700	550	600	<b>4.44</b>
<b>3700</b>	0.815	22550	600	700	0.825	21700	600	650	0.825	21150	550	650	<b>4.56</b>
<b>3800</b>	0.815	23100	650	700	0.825	22200	600	650	0.825	21600	550	650	<b>4.67</b>
<b>3900</b>	0.815	23600	650	700	0.825	22700	600	700	0.825	22100	600	650	<b>4.79</b>
<b>4000</b>	0.815	24100	700	700	0.825	23150	650	700	0.825	22550	600	700	<b>4.90</b>
<b>4100</b>	0.815	24650	700	750	0.825	23650	650	700	0.825	23000	600	700	<b>5.02</b>
<b>4200</b>	0.815	25150	700	750	0.825	24150	650	700	0.825	23450	600	700	<b>5.13</b>
<b>4300</b>	0.815	25650	700	750	0.825	24600	700	750	0.825	23900	650	700	<b>5.25</b>
<b>4400</b>	0.815	26150	750	800	0.825	25100	700	750	0.825	24350	650	750	<b>5.36</b>
<b>4500</b>	0.815	26650	750	800	0.825	25550	700	750	0.825	24850	650	750	<b>5.48</b>
<b>4600</b>	0.815	27150	750	800	0.82	26050	700	800	0.825	25300	650	750	<b>5.59</b>
<b>4700</b>	0.815	27700	750	850	0.82	26500	750	800	0.825	25700	700	750	<b>5.71</b>
<b>4800</b>	0.815	28150	800	850	0.82	27000	750	800	0.825	26150	700	800	<b>5.83</b>
<b>4900</b>	0.815	28650	800	850	0.82	27450	750	800	0.825	26600	700	800	<b>5.94</b>
<b>5000</b>	0.815	29150	850	900	0.82	27900	750	850	0.825	27050	700	800	<b>6.06</b>

**Warning: In all situations fuel-weight must be not less than 5000 kg.**

Distance to dispersal airport, km	Altitude, m		Mach of horizontal flight	Landing weights at destination airport, kg		
	Flight Direction			7000	75000	80000
	0° - 179°	180° - 359°				
<b>100 and less</b>	3900	4200	0.62	3850	4000	4200
<b>150</b>	5100	5400	0.65	4050	4250	4450
<b>200</b>	5700	6000	0.68	4300	4450	4650
<b>300</b>	9100	8600	0.75	4700	4900	5100
<b>400</b>	10100	10600	0.82	5150	5350	5600
<b>500</b>	10100	10600	0.82	5550	5800	6000
<b>600</b>	11100	11600	0.82	5950	6250	6500
<b>700</b>	12100	11600	0.82	6400	6650	6950
<b>800</b>	12100	11600	0.82	6800	7100	7400
<b>900</b>	12100	11600	0.82	7200	7550	7850
<b>1000</b>	12100	11600	0.82	7650	7950	8350

<b>1100</b>	12100	11600	0.82	8050	8400	8750
<b>1200</b>	12100	11600	0.82	8450	8800	9200
<b>1300</b>	12100	11600	0.82	8850	9250	9700
<b>1400</b>	12100	11600	0.82	9300	9700	10100
<b>1500</b>	12100	11600	0.82	9700	10100	10550

Calculated table conditions:

- Calm
- Before landing aircraft stay in Holding zone at altitude ( 450 m ) 30 min.

**Calculated length of runway**

wind direction		tail-wind	cross-wind				
Wind speed, m/s.		5	5	10	15	20	
<b>Available runway length concerning its condition. m.</b>	<b>2100</b>	<b>Calculated runway length. m.</b>	1860	2220	2345	2465	2580
	<b>2200</b>		1950	2320	2453	2573	2695
	<b>2300</b>		2040	2420	2560	2680	2810
	<b>2400</b>		2128	2528	2670	2798	2930
	<b>2500</b>		2215	2635	2780	2915	3050
	<b>2600</b>		2303	2743	2890	3028	3168
	<b>2700</b>		2390	2850	3000	3140	3285
	<b>2800</b>		2478	2955	3110	3255	3403
	<b>2900</b>		2565	3060	3220	3370	3520
	<b>3000</b>		2658	3160	3320	3475	3630
	<b>3100</b>		2750	3260	3420	3580	3740
	<b>3200</b>		2833	3360	3525	3690	3845
	<b>3300</b>		2915	3460	3630	3800	3950
	<b>3400</b>		3023	3568	3740	3910	4060
	<b>3500</b>		3130	3675	3850	4020	4170
	<b>3600</b>		3220	3775	3950	4120	4280
	<b>3700</b>		3310	3875	4050	4220	4390
<b>3800</b>	3400	3978	4150	4325	4495		
<b>3900</b>	3490	4080	4250	4430	4600		
<b>4000</b>	3588	4180	4355	4520	4695		
<b>4100</b>	3685	4280	4460	4610	4790		

**Take-off speed with flaps extended to 28°.**

Take-off weights, t. Over - To	Rotate speeds, km/h. V1/VR	Safe Speed km/h. V2	Speed of climb with all engines. km/h. V2p	Speed at the moment of flaps retraction after take- off V3, km/h.	
				First Stage from 28° to 15°.	Second Stage from 15° to 0°.
80 - 82	230	265	290	280	345
82 - 84	235	270	290	285	345
84 - 86	235	275	295	290	350
86 - 88	240	275	300	290	355
88 - 90	240	280	305	295	360
90 - 92	245	285	305	300	365
92 - 94	250	285	310	300	365
94 - 96	250	290	315	305	370
96 - 98	255	295	315	305	375
98 - 100	255	295	320	310	375
100 - 102	260	300	325	315	385

**Speeds on take-off without flaps Vo.**

Take-Off weight, t. Over - To	80 - 82	82 - 84	84 - 86	86 - 88	88 - 90	90 - 92	92 - 94	94 - 96	96 - 98	98 - 100	100 - 102
Speeds without flaps V4, km/h.	370	375	380	385	385	390	395	400	405	410	415

**Take-off speed with flaps extended to 15°.**

Take-off weights, t. Over - To	Rotate speeds, km/h. V1/VR	Safe Speed km/h. V2	Speed of climb with all engines. km/h. V2p	Speed at the moment of flaps retraction after take-off V3, km/h.
80 - 82	250	270	295	335
82 - 84	250	275	295	335
84 - 86	255	280	300	340
86 - 88	260	280	305	345
88 - 90	260	285	310	350
90 - 92	265	290	310	355
92 - 94	265	290	315	355
94 - 96	270	295	320	360
96 - 98	275	295	320	365
98 - 100	275	300	325	365
100 - 102	280	305	330	370

**Approach speeds depending on landing weight and flaps angle (slats extended)**

Flaps angle, degr.		0	15	28	36	45	
Landing Weight, t.	Over - to	60 - 62	295	255	250	240	230
	62 - 64	300	260	255	245	235	
	64 - 66	305	265	260	245	240	
	66 - 68	310	270	260	250	245	
	68 - 70	315	275	265	255	245	
	70 - 72	320	280	270	260	250	
	72 - 74	325	280	275	260	255	
	74 - 76	330	285	275	265	255	
	76 - 78	335	290	280	270	260	
	78 - 80	340	295	285	270	265	
	80 - 82	340	295	285	275	-	
	82 - 84	345	300	290	280	-	
	84 - 86	350	305	295	280	-	
	86 - 88	355	305	295	285	-	
88 - 90	360	310	300	290	-		

**Metrics Convert**

Meters to feets	multiply by	3,281
feets to meters	multiply by	0,305
km/h to knots	multiply by	0,539
knots to km/h	multiply by	1,853
km to nm	multiply by	0,539
nm to km	multiply by	1,852
m/s to ft/m	multiply by	196,8
ft/m tp m/s	multiply by	0,0051
pounds to kg	multiply by	0,453
kg to pounds	multiply by	2,205
liters to gallons	multiply by	0,264
gallons to liters	multiply by	3,785
kg to gallons	multiply by	0,33 *
gallons to kg	multiply by	3,03 *

\* for avgas with density of 0,792 kg/l

## Prepare to flight

### Startup procedures

#### Flight engineer panel



#### Prepare to startup

ZONE 2:

200V from External Switch – ON

ZONE 3:

Main Battery Switch – ON

Main ~200V=27V Transformer Switch – MAIN

ZONE 2:

Generator Switch 1 - OFF

Generator Switch 2 - OFF

Generator Switch 2 - OFF

ZONE 1:

ABSU Yaw Channel Hydraulic Switch - ON

ABSU Bank Channel Hydraulic Switch - ON

ABSU Pitch Channel Hydraulic Switch - ON

ABSU Test Button - PRESS

ZONE 6:

Fuel Quantity Auto Equalizer Power Switch - ON

Fuel Flow Control Mode - AUTO

Auto Fuel Flow Power Switch - ON

Fuel Flow Indicators Power Switch - ON

Fuel Quantity Indicators Power Switch - ON

Engine 1 Fuel Switch - ON

Engine 2 Fuel Switch - ON

Engine 3 Fuel Switch - ON

Center Fuel Tank Pump 1 Switch - ON

Center Fuel Tank Pump 2 Switch - ON

Center Fuel Tank Pump 3 Switch - ON

Center Fuel Tank Pump 4 Switch - ON

Center 2 Fuel Tank Pump Switch - ON

Left Fuel Tank Pump Switch - ON

Right Fuel Tank Pump Switch - ON

Left Aux Fuel Tank Pump Switch - ON

Right Aux Fuel Tank Pump Switch - ON

Hydraulic Pump 1 Switch - ON

Hydraulic Pump 2 Switch - ON

Hydraulic Pump 3 Switch - ON

ZONE 7

Left Engine Control Devices Power – ON

Center Engine Control Devices Power – ON

Right Engine Control Devices Power - ON

### **APU Startup**

ZONE 4:

Common APU Switch - ON

Start/Rotate APU Switch – START

APU Start Button – PRESS

APU N1 Indicator – 100%

APU Bleed Air Switch – PRESS UNTIL:

ZONE 7:

Bleed Air Pressure – 6.5 kg/sq cm

ZONE 2:

200V from APU Switch –ON

200V from External Switch – OFF

### **Engine Startup**

ZONE 7:

Start/Rotate Switch – START

Engine Starter Selector – LEFT

Engine Start Button – PRESS

Generator 1 Switch - ON

Engine Starter Selector – CENTER

Engine Start Button – PRESS

Generator 2 Switch - ON

Engine Starter Selector – RIGHT

Engine Start Button – PRESS

Generator 3 Switch – ON

Engine Starter Selector – NONE

Start/Rotate Switch – ROTATE

APU Stop Button – Press

Start/Rotate APU Switch – ROTATE

**Overhead Procedures**



**ZONE 1**

- KLN 90 GPS Power – ON
- AUASP Power – ON
- Altimeters Power – ON
- EUP Power – ON
- AGR Power – ON
- Bank Control/BKK-18 Power – ON
- Trajectory System Power – ON
- Attitude Indicator/PKP Power – ON
- Attitude Gyro/MGV Power – ON
- TKS N1 Power – ON
- TKS N2 Power – ON

Gyro Aggregates Heat - ON

BGMK 2 N1 Correction - ON

BGMK 2 N2 Correction - ON

HIS/PNP Power - ON

Pitot System (SVS-PN) Power - ON

Pitot Heat Switch - ON

RSDN Power - ON

ВЭМ-72ПБ - ON

NAV 1/KURS MP Power Switch - ON

NAV 2/RSBN Power Switch - ON

Radio Altimeter RV-10 Power - ON

COM 1 Power Switch - ON

COM 2 Power Switch - ON

Main Gyro Compass - UNLOCKED

Intercomm - ON

#### ZONE 4

Doppler Radar (DISS) Power - ON

Doppler Radar Mode - LAND

#### ZONE 3

Windshield Heat Switch - ON

Devices Heat Switch - ON

#### ZONE 2

Transporter -



ADF 1 Radio and ADF 2 Radio



## Autopilot Procedures



### ZONE 1

- Wing Leveler Power – ON
- Attitude Hold Power – ON
- Arretir Gyro – ON
- Autopilots Dumpers Switch – ON
- NAV Power Switch – ON

### ZONE 2

- NAV System/NVU Power Switch – ON
- NavCalc Switch – ON



Heading Source Selector – LEFT HSI

Your aircraft is ready for flight.

## Keyboard Shortcuts

Alt-`	Interactive Help System
Z	Turn autopilot on/off
Ctrl-T	Turn pitch stabilization on/off
Ctrl-V	Turn bank stabilization on/off
Ctrl-Shift-R	Turn hold airspeed mode on/off (V mode)
Ctrl-M	Turn hold Mach mode on/off (M mode)
Ctrl-Z	Turn altitude stabilization on/off
Ctrl-H	Turn heading selector on/off
Ctrl-N	Turn VOR1 on/off
Ctrl-A	Turn approach mode on/off (ЗАХОД)
Ctrl-F	Turn flight director on/off
Ctrl-R	Turn airspeed hold by auto throttle mode on/off
Ctrl-Shift-G	Turn "go around" mode on/off (if possible)
Shift-L	Turn landing lights on/off

## Eastern Eggs

Panel.CFG

Section [IGFLy] - optional.

AutoLandEnabled= 0 or 1 – turn auto landing on/off. Default value 0 (OFF).

MinAutoRudderAltitude=20.0 – turn auto rudder always off when lower than specified altitude value, and always turned on when higher. Default value - 20. Possible values from 10 to 100. All values in meters.