

**Beech**

*Bonanza*  
**A36**



**N818PR**

v12

## General Information

### KRHV [0700-2200]

ATIS: 125.2  
GROUND: 121.65  
TOWER: 119.8 (RWY 13L/31R)  
126.1 (RWY 13R/31L)  
APPROACH: 120.1 — 133.95 — 134.5  
DEPARTURE: 121.3  
WX ASOS at SJC: 408-969-0838 — 126.95  
WX ASOS at NUQ: 650-604-1529 — 124.175  
VOR CHECK: SJC 114.1 097° 6.5nm  
OSI 113.9 086° 22.4nm

### FREQUENCIES

EMERGENCY: 121.5  
FLIGHTWATCH: 122.0  
FSS: 122.2  
AIR-AIR: 122.75 (HI-ALT 122.975)  
AIR SHOWS: 122.775 — 123.325 — 123.425

### TRANSPONDER CODES

LOST COM: 7600  
EMERGENCY: 7700

### SPEED/DISTANCE

Kt	100	120	135	150	160	170	180	200
Min/NM	0.60	0.50	0.44	0.40	0.38	0.35	0.33	0.30

### CLIMB GRADIENT AT 100KT

ft/min	200	400	600	800	1000	1200	1400	1600
ft/NM	120	240	360	480	600	720	840	960

## Performance and Configuration

Phase	MP	RPM	Pitch	FF	Gear	Flaps	IAS	VSI	Trim
<b>Initial Climb</b>	WOT	2700	+10°	34	Up	Up	100	+800-1000	U3-U6
<b>Cruise Climb (ROP)</b>	WOT	2700	+10°	34	Up	Up	120	+700-800	U2-U4
<b>Cruise Climb (LOP)</b>	WOT	2700	+8°	17.5	Up	Up	120	+500-600	
<b>Cruise</b>	WOT	2500	0°	17.5	Up	Up	155	0	D1
<b>En Route Descent</b>	WOT	2500		17.5	Up	Up	170	-500	
<b>Initial Approach</b>	19	2500	+3-5°	14	Up	Up	120	0	D1.5
<b>Final Descent</b>	19	2500	-3°	14	Down	Up	120	-500-600	
<b>Level at MDA</b>	30	2500	+0-2°	17.5	Down	Apr	120	0	
<b>Missed Approach</b>	WOT	2700	+10°	34	Up	Up	120	+700-800	

## Airspeed Limitations

	<b>SPEED</b>	<b>KIAS</b>	<b>REMARKS</b>
<b>VNE</b>	Never Exceed Speed	<b>205</b>	Do not exceed this speed in any operations.
<b>VNO</b>	Maximum Structural Cruising Speed	<b>167</b>	Exceed this speed only in smooth air.
<b>VA</b>	Maneuvering Speed	<b>136 - 4000lb</b> <b>141 - 3650lb</b> <b>132 - 2900lb</b>	Do not make abrupt control movements above this speed.
<b>VFE</b>	Maximum Flap Extended Speed	<b>154 kts - 12°</b> <b>124 kts - 30°</b>	Do not exceed this speed with flaps down
<b>VLO</b>	Maximum Landing Gear Operating/ Extended	<b>154 kts</b>	Do not extend, retract or operate with gear extended above this
<b>VY</b>	Best Rate of Climb	<b>100 kts</b>	
<b>VX</b>	Best Angle of Climb	<b>84 kts</b>	
<b>VS</b>	Stall Speed Clean	<b>68 kts</b>	
<b>VSO</b>	Stall Speed Landing Configuration	<b>61 kts</b>	

## Preflight Inspection

### Cabin

Parking Brake .....	SET
Control Lock .....	REMOVE
Landing Gear Handle .....	DOWN
Cowl Flaps .....	OPEN
Magnetos .....	OFF
Avionics Master .....	OFF
Battery .....	ON
Landing Gear Position Lights .....	CHECK (3 green)
Fuel Quantity .....	CHECK
Lights .....	CHECK, AS REQUIRED
All Switches .....	OFF

### Right Fuselage

Utility Doors .....	CHECK
Static Pressure Button .....	UNOBSTRUCTED
All Antennas .....	CHECK
Lower Rotating Beacon .....	CHECK
Emergency Locator Transmitter .....	ARMED

### Empennage

Control Surfaces .....	CHECK
Tie-Down .....	REMOVE
Navigation Light and Rotating Beacon .....	CHECK
Cabin Air Intake .....	CHECK

### Left Fuselage

Cabin Air Exhaust .....	CHECK
Static Pressure Button .....	UNOBSTRUCTED

### **Left Wing Trailing Edge**

Protruding Fuel System Vent .....UNOBSTRUCTED  
Flap .....CHECK  
Aileron .....CHECK  
Aileron Trim Tab .....CHECK  
Wing Tip .....CHECK

### **Left Wing Leading Edge**

Navigation Light .....CHECK  
Stall Warning Vane .....CHECK  
Pitot Tube .....CLEAR  
Tie Down .....REMOVE  
Fuel Tank .....CHECK QUANTITY  
Filler Cap .....SECURE  
Cabin Air Intake .....CHECK

### **Left Landing Gear**

Wheel Well Doors, Tire, and Strut .....CHECK  
Landing Gear Uplock Roller .....CHECK FOR ROTATION  
Flush Fuel Vent .....UNOBSTRUCTED  
Fuel Sump .....DRAIN  
Fuel Selector Valve Sump .....DRAIN  
Chocks .....REMOVE

### **Nose**

Left Cowl Flap .....CHECK  
Exhaust Pipe .....SECURE  
Engine Oil .....CHECK  
.....9 qts minimum for flight  
Engine Oil Cap .....SECURE  
Engine (Left Side) .....CHECK GENERAL CONDITION  
Left Cowl .....SECURE

Propeller .....CHECK  
Wheel Well Doors, Tire, and Strut .....CHECK  
Chocks .....REMOVE  
Landing and Taxi Lights .....CHECK  
Induction Air Intake .....CLEAR  
Engine (Right Side) .....CHECK GENERAL CONDITION  
Right Cowl .....SECURE  
Right Cowl Flap .....CHECK

### **Right Landing Gear**

Fuel Sump .....DRAIN  
Flush Fuel Vent .....CHECK  
Wheel Well Doors, Tire, and Strut .....CHECK  
Landing Gear Uplock Roller .....CHECK FOR ROTATION  
Chocks .....REMOVE

### **Right Wing Leading Edge**

Cabin Air Intake .....CHECK  
Fuel Tank .....CHECK QUANTITY  
Filler Cap .....SECURE  
Tie Down .....REMOVE  
Navigation Light .....CHECK

### **Right Wing Trailing Edge**

Wing Tip .....CHECK  
Aileron .....CHECK  
Flap .....CHECK  
Protruding Fuel System Vent .....UNOBSTRUCTED

## Normal Operations

### Before Starting Engine

Preflight Inspection .....	COMPLETE
Xavion / Track Recorder .....	ON
Passengers .....	BRIEFED
Rudder Pedals .....	ADJUST
Seats .....	POSITION AND LOCK
Seat Belts and Shoulder Harnesses .....	SECURE
Parking Brake .....	SET
Emergency Gear Handle.....	STOWED
Avionics Circuit Breakers .....	IN
Flaps .....	UP
Cowl Flaps .....	OPEN
Landing Gear Handle .....	DOWN
All Subpanel Switches .....	OFF
Alternate Static Air Source .....	NORMAL
Left Side Circuit Breakers .....	IN
Fuel Selector .....	CHECK OPER, THEN FULLEST TANK
Battery .....	ON
Alternator .....	ON
Standby Alternator .....	ON
Beacon .....	ON
Landing Light.....	ON
Fuel Quantity Indicators .....	CHECK FUEL QUANTITY
Controls .....	FREE AND CORRECT



### **Starting Engine (Cold)**

This technique generally works hot or cold in N818PR

Mixture .....FULL RICH  
Propeller .....HIGH RPM  
Throttle .....OPEN  
Auxiliary Fuel Pump .....HI UNTIL FF PEAKS, THEN OFF  
Throttle .....OPEN ~1/2"  
Propeller Area .....CLEAR  
Magneto/Start Switch .....START  
Throttle .....1000-1200 RPM AFTER START

### **Starting Engine (Flooded)**

Mixture.....IDLE CUTOFF  
Propeller .....HIGH RPM  
Throttle .....HALF  
Magneto/Start Switch .....START  
As Engine Starts  
    Throttle .....IDLE  
    Mixture .....FULL RICH

### **Starting Engine (Hot)**

Mixture.....IDLE CUTOFF  
Propeller .....HIGH RPM  
Auxiliary Fuel Pump .....HI FOR 30-60 SEC, THEN OFF

Then follow cold start procedure (run fuel pump as required)

\*Do not engage starter for more than 30 seconds in any 4 minute period.

## After Starting

Throttle .....	1000-12000 RPM
Oil Pressure .....	CHECK
	>10 psi within 30 sec
Start Annunciator .....	CHECK
.....	should illuminate during start and extinguish after start
Low Bus Volts Annunciator .....	CHECK
.....	should illuminate during start and extinguish after start
Mixture .....	LEAN AGGRESSIVELY
Alternator Load .....	CHECK
(load should decrease below 25 amps at 1000-1200 rpm after 2 minutes with no additional electrical equipment turned on)	
Bus Voltmeter .....	CHECK 28.5V
Avionics Master .....	ON
Interior Lights .....	AS REQUIRED
Exterior Lights .....	AS REQUIRED
Flaps .....	UP
Area .....	CLEAR
Parking Brake .....	RELEASE

## Taxi

Brakes .....	TEST
Instruments .....	CHECK
.....	compass, attitude indicator, HSI

## Before Takeoff

Parking Brake .....	SET
Seat Belts and Shoulder Harnesses .....	SECURE
Synthetic Vision .....	ON
Standby Attitude Indicator .....	CAGE IF NECESSARY
Flight Director .....	SET
Radios .....	SET
Transponder .....	SET
.....	set code and ensure standby or ground mode
Auxiliary Fuel Pump .....	OFF
Elevator & Aileron Trim .....	IN THE GREEN
.....	up 3° normally or 6° if only fronts seats are occupied
Fuel Selector .....	FULLEST TANK
Annunciator Test .....	PRESS
.....	annunciators, landing gear position and flap position
Throttle Friction .....	SET
<b>Throttle</b> .....	1700 RPM
.....	only after until oil temperature and pressure are in the green
Magnetos .....	CHECK INDIVIDUALLY
.....	variance between magnetos should not exceed 50 rpm
.....	maximum drop should not exceed 150 rpm
Propeller .....	CYCLE
<b>Throttle</b> .....	2000 RPM
Alternator .....	CHECK
Primary Alt .....	OFF
Stby Alt On Annunciator .....	CHECK ON
Loadmeter .....	STANDBY, CHECK, PRIMARY
<b>Throttle</b> .....	1000-1200 RPM
Low Bus Volt Annunciator .....	CHECK ON
Alternator .....	ON
Loadmeter .....	CHECK
Stby Alt On Annunciator .....	CHECK OFF
Low Bus Volt Annunciators .....	CHECK OFF
<b>Throttle</b> .....	CHECK IDLE, THEN 1200 RPM

Exterior Lights .....AS REQUIRED  
Flaps .....AS REQUIRED  
Doors and Windows.....SECURE  
Table.....STOWED  
Air Conditioner .....OFF  
Parking Brake.....RELEASE  
Takeoff Time .....NOTED

### **Normal Takeoff**

Flaps .....UP OR 12°  
Mixture .....RICH  
Propeller .....HIGH RPM  
Auxiliary Fuel Pump .....LOW FOR DA > 5000 ft  
Brakes.....HOLD  
Throttle .....20", CHECK INSTRUMENTS  
Brakes .....RELEASE  
Throttle .....FULL  
Rotate .....70-75 KIAS  
Landing Gear .....TAP BRAKES, RETRACT  
.....when positive rate of climb is established  
Climb Speed .....100 KTS

### **Short Field Takeoff**

Flaps .....12°  
Mixture .....RICH  
Propeller .....HIGH RPM  
Auxiliary Fuel Pump .....LOW FOR DA > 5000 ft  
Mixture .....LEAN TO TIT OF 1310-1380  
Brakes.....HOLD  
Throttle .....20", CHECK INSTRUMENTS  
Brakes .....RELEASE  
Throttle .....FULL  
Rotate .....70 KTS  
Landing Gear .....TAP BRAKES, RETRACT  
.....when positive rate of climb is established  
Initial Climb Speed.....84 KIAS  
Climb Speed .....100 KIAS  
Flaps .....RETRACT

## Enroute Climb

Airspeed .....115-120 KIAS .....< 10k ft MSL  
110-115 KIAS   10k-17k ft MSL  
105-110 KIAS       > 17k ft MSL

Autopilot can be set for 700-900fpm ROP, 500-700fpm LOP.

Engine Gauges .....MONITOR  
Auxiliary Fuel Pump .....LOW FOR DA > 5000 ft  
Cowl Flaps .....OPEN UNLESS VERY COLD  
Flaps .....UP

### LOP

Mixture .....17.5 GPH  
Maximum CHT should not exceed 380°F.  
Lean to reduce CHT.

### ROP

Mixture .....1280-1300 TIT .....< 10k ft MSL  
1260-1280 TIT   10k-17k ft MSL  
1240-1260 TIT       > 17k ft MSL  
Maximum CHT should not exceed 380°F.  
Enrich or turn auxiliary fuel pump on low to reduce CHT.

## Cruise

Fuel Selector .....SWITCH IF NEEDED  
Cowl Flaps .....CLOSE  
Propeller .....2500 RPM  
Auxiliary Fuel Pump .....OFF  
Mixture .....17.5 GPH  
.....then set to 50° LOP  
Maximum CHT should not exceed 380°F.  
Lean to reduce CHT.

Monitor 121.5

## **Enroute Descent**

Altimeter.....SET  
Cowl Flaps .....CONFIRM CLOSED  
Power .....AS REQUIRED

## **Instrument Approach**

### **Brief Approach**

Approach.....REVIEWED

Overall Plan, Notes, Altitudes, Minimums, Missed Approach

### **During Descent**

ATIS/AWOS.....CHECK

Altimeter.....SET

COM Radios.....SET

NAV Radios.....SET

identify any nav aids

Autopilot.....CONFIGURED

Marker Beacon Audio.....ENABLED

### **Before Final Approach Fix**

Gear.....DOWN

Flaps.....12°

Airspeed.....120 KTS

## **Before Landing**

Seat Belts and Shoulder Harnesses.....SECURE

Seat Backs.....POSITION FOR LANDING

Table.....STOWED

Fuel Selector.....FULLEST TANK

Throttle.....AS REQUIRED

Landing Gear.....DOWN AND CHECK

Exterior Lights.....AS REQUIRED

Flaps.....DOWN

Airspeed.....85 KTS

Clearance.....VERIFY CLEARED

## **Go Around**

Mixture .....FULL RICH  
Propeller .....HIGH RPM  
Throttle .....FULL OPEN, 2700 RPM  
Landing Gear .....RETRACT  
.....when positive rate of climb is established  
Climb Speed .....100 KTS  
Flaps .....UP  
Cowl Flaps .....OPEN  
Flaps .....UP

## **After Landing**

Cowl Flaps .....OPEN  
Flaps .....UP  
Mixture .....LEAN AGGRESSIVELY  
Exterior Lights .....AS REQUIRED  
Elevator & Aileron Trim .....IN THE GREEN



## Shutdown

Electrical Equipment .....	OFF
Air Conditioner .....	OFF
Avionics Master .....	OFF
Throttle .....	1000 RPM
Magneto .....	CHECK GROUNDING
Mixture .....	IDLE CUTOFF
Magnetos .....	OFF
Standby Alternator .....	OFF
Alternator .....	OFF
Master .....	OFF
Time .....	NOTED

## Securing

Wheel Chocks .....	INSTALL
Tie-Downs .....	INSTALL
Pitot Tube .....	INSTALL COVER
Control Lock .....	INSTALL
All Switches .....	VERIFY OFF

## Emergency Procedures

### Engine Failure In Flight

Airspeed ..... 110 KTS  
Fuel Selector ..... SWITCH TANKS  
Magnetos ..... CHECK BOTH  
Auxiliary Fuel Pump ..... HI  
Mixture ..... FULL RICH, THEN LEAN AS REQUIRED

### **IMC**

Autopilot ..... PIT/ROL  
Then HDG or NAV to nearest suitable airport.  
Airspeed ..... PLAN  
Extra airspeed can help circle to land

### Rough Running Engine

Auxiliary Fuel Pump ..... LOW  
Mixture ..... FULL RICH, THEN LEAN AS REQUIRED  
Magnetos ..... CHECK BOTH

### Emergency Descent

Throttle ..... IDLE  
Propeller ..... HIGH RPM  
Landing Gear ..... DOWN  
Flaps ..... 12°  
Airspeed ..... 154 KIAS

## Maximum Glide Configuration

Landing Gear .....	UP
Flaps .....	UP
Cowl Flaps .....	CLOSED
Propeller .....	LOW RPM
Airspeed .....	110 KIAS
Air Conditioning .....	OFF
ELT .....	ON
Transponder .....	7700
Nonessential Electrical Equipment .....	OFF

## Landing Without Power

Fuel Selector Valve .....	OFF
Mixture.....	IDLE CUTOFF
Magnetos .....	OFF
Flaps .....	30°
Landing Gear .....	DOWN or UP
.....	depending on terrain
Airspeed .....	85 KIAS
Alternator .....	OFF
Battery .....	OFF
Doors .....	OPEN
Passengers .....	BRIEFED
	Secure objects - Brace position - Exit locations

## **Landing With Gear Retracted (With Power)**

Throttle .....	CLOSED
Mixture.....	IDLE CUTOFF
Alternator .....	OFF
Battery .....	OFF
Magnetos .....	OFF
Fuel Selector Valve .....	OFF

Maintain wings level during landing  
Evacuate the airplane as soon as possible after stopping

## **Engine Fire During Start**

Fuel Selector .....	OFF
Mixture.....	IDLE CUTOFF
Alternator .....	OFF
Battery .....	OFF
Magnetos .....	OFF
Fire Extinguisher.....	EXTINGUISH FIRE

## **Engine Fire In Flight**

Firewall Air Control Knob .....	PULL TO CLOSE
Fuel Selector .....	OFF
Mixture.....	IDLE CUTOFF
Alternator .....	OFF
Battery .....	OFF
Magnetos .....	OFF

## Electrical Fire In Flight

Alternator .....OFF  
Battery .....OFF  
Firewall Air Control Knob .....PULL TO CLOSE  
.....if smoke or fire is present in engine compartment  
All Electrical Switches .....OFF  
Firewall Air Control Knob .....PUSH TO OPEN  
.....if engine is not source of smoke  
Overhead Vents .....OPEN  
Side Window .....OPEN  
Refer to POH

## Cabin Fire

Master .....OFF  
Fuel .....OFF  
Vents .....CLOSED  
Cabin Heat .....OFF  
Fire Extinguisher .....ACTIVATE  
Oxygen .....IF NEEDED

## Propeller Overspeed

Throttle .....RETARD  
Airspeed .....REDUCE UNTIL RPM < 2700  
Oil Pressure .....CHECK  
Land .....AS SOON AS PRACTICAL

## Landing Gear Manual Extension

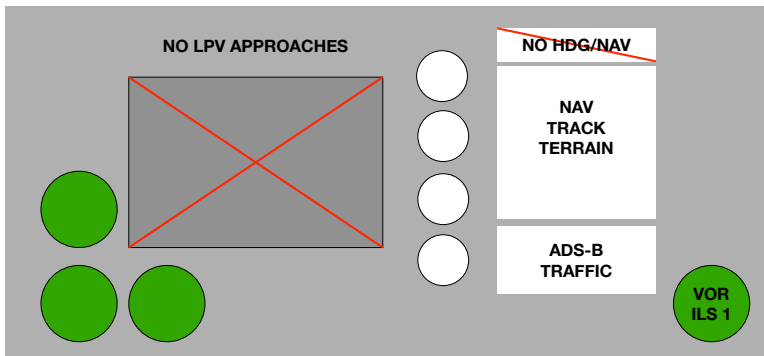
Airspeed .....	100 KIAS
Landing Gear Motor Circuit Breaker .....	PULL
Landing Gear Handle .....	DOWN
Handcrank Handle Cover .....	REMOVE
Handcrank.....	ENGAGE AND TURN
.....	COUNTERCLOCKWISE AS FAR AS POSSIBLE
.....	approximately 50 turns, adding power to maintain speed
Landing Gear .....	CONFIRM DOWN
Handcrank.....	DISENGAGE, THEN STOW

Do not move the landing gear handle or reset the landing gear motor circuit breaker

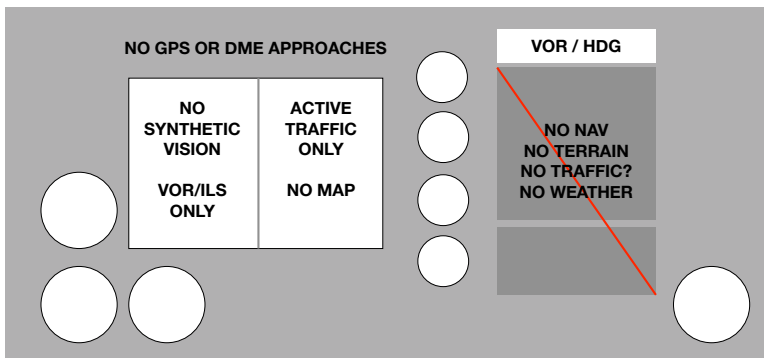
The landing gear should be considered unlocked until the airplane is on jacks and the system has been cycled and checked.

## Avionics Degraded Modes

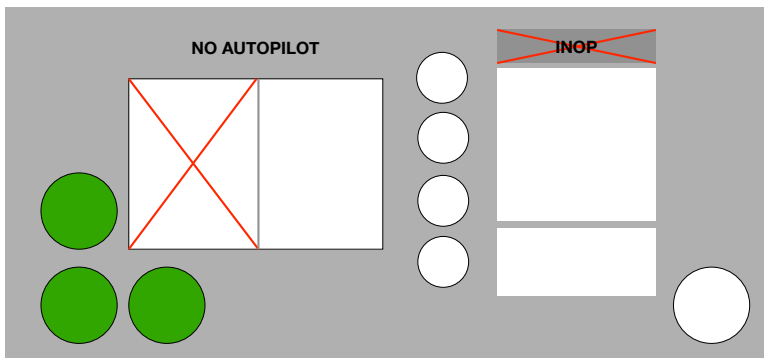
### LOSS OF G500 DISPLAY



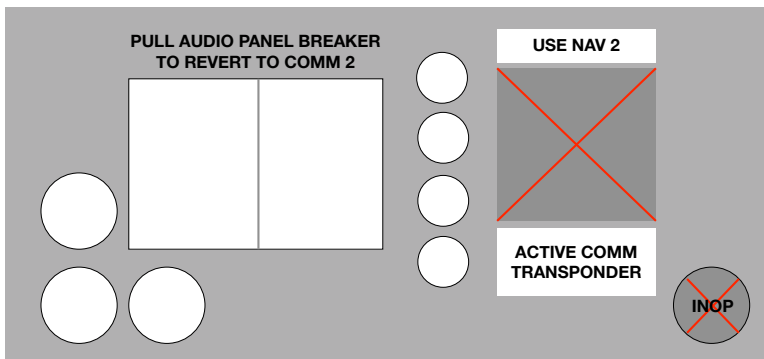
### LOSS OF GPS SIGNAL



### LOSS OF ADAHRS/ADC

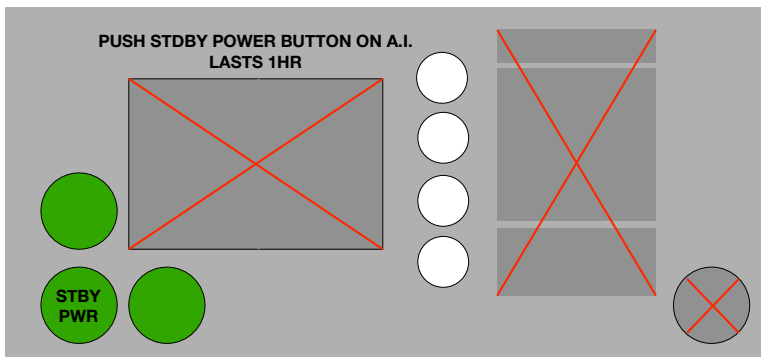


### LOSS OF GTN-750





## LOSS OF ELECTRICAL POWER



*Exported: 1/17/15*