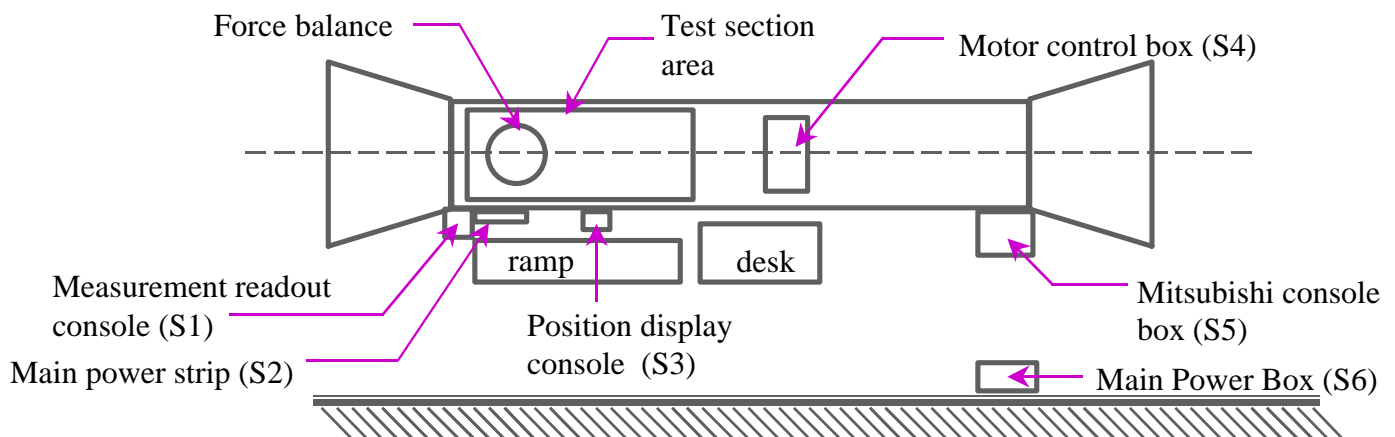
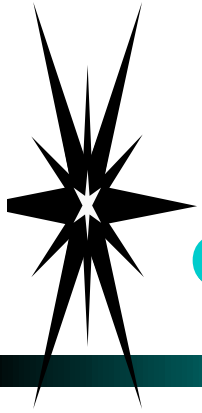


PRE-OPERATION CHECKLIST

► Tunnel Layout - Top View



- Verify main power switch (S6) is in the “on” position.
- Secure models to either balance, traverse or test section areas.
- Firmly secure test probes to either balance, traverse or test section areas.
- Check and remove any loose objects inside or near the tunnel inlet and outlet.
- Check the surrounding tunnels for loose objects.
- Secure all doors and ceiling slots.
- Visually inspect the inlet honeycomb for any debris, clean if necessary.



OPERATING PROCEDURES

➤ TUNNEL STARTUP

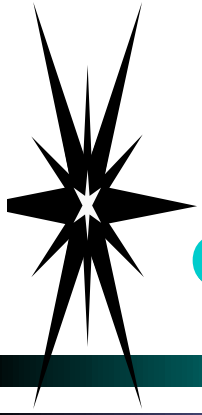
- Get keys and unlock main power box (S6).
- Turn the main power strip (S2) on.
- Turn on the power switch to measurement readout console (S1). Allow 30-45 minutes for electrical component warm up.
- Set speed pot on measurement display console (S1) fully counter-clockwise (off position).
- Zero airspeed readout on measurement readout console (S1).
- Turn on positioning display console (S3).



Main
Power
Box
(S6)



(S1) (S2) (S3)



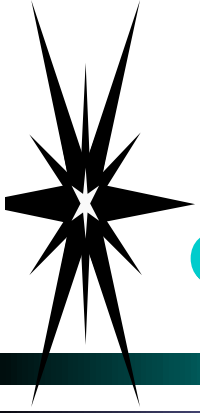
OPERATING PROCEDURES

- Turn on power switch to Motor Control Box (S4).
- Press “reverse” button on Mitsubishi console keypad (S5) to engage the fan.



Reverse

Mitsubishi console keypad (S5)



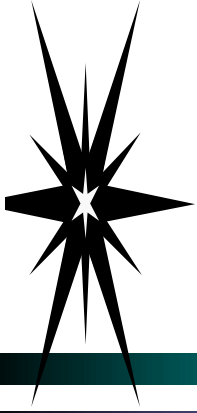
OPERATING PROCEDURES

➤ **ADJUSTING WIND TUNNEL AIRSPEED**

- Secure all loose objects around the tunnel.
- Adjust the tunnel fan airspeed by turning speed adjuster knob in measurement display console (S1).
 - ✧ clockwise to increase fan speed
 - ✧ counter-clockwise to decrease fan speed.

➤ **TUNNEL SHUTDOWN**

- Turn speed adjuster on measurement display console (S1) fully counter-clockwise to stop motor.
- Turn the switch “off” on the measurement display console (S1).
- Turn “off” position display console (S3).
- Turn “off” main power strip (S2).
- Turn “off” motor control box (S4).
- Press “stop” on Mitsubishi console keypad (S5).
- Turn off main power box disconnect (S6).
- Secure locks on main power box and Mitsubishi console box with padlocks.

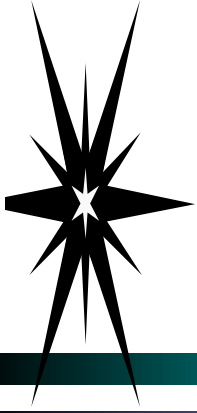


SAFETY CONSIDERATIONS

- Hold doors at the panel to prevent it from springing open.
- Be aware of force balance load limits. Possible for operators to overload the system with a relatively small load (i.e. large angle) on the turn table.

Lift	± 300 lb
Drag	± 50 lb
Pitching moment	± 70 ft-lb
Rolling moment	± 50 ft-lb
Yawing moment	± 50 ft-lb
Side force	± 150 lb

- Hearing protection recommended at all times, mandatory when running tunnel at 30 mph and over.
- Always check for loose objects inside and outside tunnel.
- Check surrounding tunnels.



SAFETY CONSIDERATIONS

➤ Noise Level Exposure

- Exposure to high levels should not exceed those listed in the table

Exposure Duration (hr)	TWA Noise Level (dB)
8	90
6	92
4	95
3	97
2	100
1	105
0.5	110
0.25	115

Ratings based on A scale of standard sound level meter at slow response.

- Sample calculation - hearing protection rated at NRR 25 reduces 110dB environment noise to 85 dB level.
- Standard E-A-R plugs rated at NRR 29 high frequency noise
- Ear muffs rated at NRR 29 low frequency noise
- TWA - Time Weighted Average exposure sound level
- NRR - Noise Reduction Rating is based on the attenuation of continuous noise