NOTES:
1. PLYWOOD MAY BE OVER OR UNDER 3/4 THICK WHEN PURCHASED. ADJUST DIMENSIONS ACCORDINGLY.
2. FILL ALL PLYWOOD EDGE VOIDS WITH WOOD FILLER AND SAND EDGES SMOOTH BEFORE PAINTING. SAND ALL OTHER WOOD PIECES TO ELIMINATE SHARP EDGES AND CORNERS.
3. PRIME ALL WOOD AND METAL SURFACES BEFORE APPLYING FINAL COAT OF PAINT.
4. IT IS EXTREMELY IMPORTANT THAT THE BEARING HOLE IN WHEEL IS POSITIONED ACCURATELY. WHEEL MUST RUN TRUE AND FREE AND MUST BE BALANCED.
5. THE TWO BALL BEARINGS USED IN THIS PROJECT WERE PURCHASED FROM A FARM SUPPLY STORE. BEARINGS OF DIFFERENT SIZE MAY BE USED BUT RECOMMEND BEARINGS NOT SMALLER THAN THE ONES USED HERE.
6. STUDY SUGGESTED DIMENSIONS OF FLAPPER ACTION MATERIAL. ORIGINAL MODEL USED LEATHER APPROXIMATELY 1/4 INCH THICK BY 2 INCH WIDE. THE MATERIAL USED IS VERY IMPORTANT TO OBTAIN PROPER ACTION OF WHEEL ROTATION STOPPING TIME.
7. IT IS VERY IMPORTANT THAT THE HOLE FOR THE BEARINGS IN THE WHEEL BE CAREFULLY DRILLED BOTH FOR PRECISION A PRECISION FIT AROUND THE BEARINGS AND PERPENDICULAR TO THE WHEEL SURFACE. THE WHEEL MUST RUN TRUE WITH NO OR MINIMUM WOBBLE.
8. HOLE IN THE WHEEL FOR THE PINS MAY BE DRILLED AFTER THE SEGMENTS ARE PAINTED AND VARNISHED IF DESIRED.
9. KEEP BEARING HOLE FREE FROM PAINT AND VARNISH TO EASE LATER ASSEMBLY.
10. BALL BEARINGS USED WERE 1 5/8 O.D. X 5/8 I.D. X 1/2 THICK. PURCHASED FROM A FARM EQUIPMENT STORE.
11. WITH WHEEL ASSEMBLED ON SHAFT AND MOUNTED ON POST WITHOUT FLAPPER INSTALLED, BALANCE WHEEL, IF REQUIRED, USING SHORT PIECES OF 1/4 DIA STEEL ROD GLUED INTO HOLES DRILLED INTO EDGE OF WHEEL OPPOSITE HEAVY SIDE.
12. USE BEARING PLATE AS DRILLING JIG WHEN DRILLING MOUNTING HOLES IN WHEEL. INSTALL BALL BEARING IN WHEEL THEN MATCH ONE BEARING PLATE TO BEARING AND DRILL 4 HOLES.

MATERIAL LIST
1. 1/2 SHEET OF 3/4 MDO PLYWOOD. GOOD BOTH SIDES.
2. 1 PIECE 3/4 X 2 1/2 X 3 1/8 HARDWOOD.
3. 1 PIECE 3/4 X 1/2 X 3 HARDWOOD.
4. QTY 2 - 1 5/8 O.D. X 5/8 I.D. X 1/2 THICK BALL BEARINGS.
5. QTY 2 - 1/4 OR 3/8 THICK X 5 DIA ALUMINUM.
6. WOOD FILLER AND WOOD GLUE.
7. SMALL BRADS OR NAILS.
8. DRYWALL SCREWS.
9. NUMBER 6 AND 8 MACHINE SCREWS AND LOCK NUTS.
10. QTY 56 - NUMBER 10 FLAT WASHERS.
11. QTY 48 - NUMBER 10 LOCK NUTS.
12. RUBBER OR SIMILAR MATERIAL FOR BASE PADS.
13. APPROXIMATELY 12 FEET OF 1/4 DIA STAINLESS STEEL ROD.
14. BLACK, PLUS 6 OTHER COLORS OF PAINT, PAINT PRIMER AND CLEAR VARNISH.
15. 5/8 I.D. FLAT WASHERS.
16. 5/8 LOCK NUTS.
17. 1/4 WIDE GRAPHIC TAPE.
18. 1/4 DIA ROD FOR BALANCE WEIGHTS.
19. 1/4 DIA BOLTS AND LOCK NUTS FOR BEARING PLATE TO WHEEL MOUNTING.

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**Post**

1. Use brads & wood glue to secure all pieces.
2. Use wood filler to fill all plywood voids & sand smooth.

**Flapper Bracket**

- 2 holes for screws to secure flex matl.
- Slot width and depth to hold flex matl.
- Slot to fit flex matl.
- Flapper bracket.
- Material: hardwood.
- Finish: varnish.
- Hole for no. 6 or 8 screw.

**Flapper**

- Rabbit, 3/8 x 3/8, 4 corners.
- End cap each end nail and glue in place.
- Material: 3/4 MDO plywood.

**Shaft**

- 3/4 dia.
- 5/8 thread for locknut, both ends.
- Leave just short of 3/4 so locknut can be tightened snug.
- Thread for no. 10 lock nut leaving minimum threads exposed beyond nut.
- Full spherical radius this end.
- Dia for no. 10 thread.
- Material: stainless steel.

**Pin**

- 1/4 dia.
- This end.

**Notes for Shaft:**
1. All dimensions are nominal and may require adjusting to satisfy variance in materials.
WHEEL OF FORTUNE

Ø30

Ø28 B.C.

48 HOLES FOR NO. 10 SCREW, EQUALLY SPACED

Ø1 5/8 OR BEARING O.D. FOR PRECISION FIT

MATERIAL: 3/4 MDO PLYWOOD

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Rockwell-Collins Retiree Volunteers

WHEEL OF FORTUNE

autoCAD 2000
NOTES:
1. DIVIDE WHEEL INTO 24 EQUAL SEGMENTS AND PAINT COLORS AS SHOWN.
2. MASK BEARING HOLE TO KEEP FREE OF PAINT AND VARNISH
3. PAINT OUTSIDE DIA AND REAR OF WHEEL GLOSS BLACK. USE COAT OF PRIMER FIRST.
4. APPLY 1/4 WIDE BLACK GRAPHIC TAPE BETWEEN SEGMENTS TO IMPROVE LOOKS.
5. USE 2 OR MORE COATS OF PAINT.
6. COAT ENTIRE FRONT OF WHEEL WITH 2 COATS OF VARNISH AFTER TAPE IS APPLIED.
7. PURCHASE TAPE FROM ARTIST SUPPLY STORE.

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NOTES:
1. DIA TO BE MIN CLEARANCE FIT WITH BEARING O.D.
2. ADJUST DIA TO ENGAGE BEARING OUTER RACE.
3. ADJUST DEPTH AS REQUIRED TO SECURE BEARING IN CENTER OF WHEEL. PAINT AND/OR GRAPHIC TAPE MAY AFFECT THIS DIMENSION
4. SUGGEST MATCH DRILLING BOTH PLATES TO INSURE B.C. ACCURACY.

MATERIAL: ALUMINUM
FINISH: PRIME AND PAINT GLOSS BLACK.

BEARING PLATE

FLAPPER ASSEMBLY

WHEEL ASSEMBLY

WHEEL, PIN ASSEMBLY DETAIL

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NOTES:
1. ATTACH POST TO BASE USING GLUE AND 4 DRYWALL SCREWS THROUGH BOTTOM OF BASE INTO BOTTOM OF POST.
2. PRIME AND PAINT BLACK.

RADIUS CORNERS TO REMOVE ALL SHARP EDGES ON ALL PARTS
ADD SKID PROOF PADS TO EACH BOTTOM CORNER

WHEEL LOCATED THIS SIDE

3/4 MDO PLYWOOD

POST AND BASE ASSEMBLY

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PLYWOOD CUTTING DIAGRAM

MATERIAL: 1/2 SHEET OF 3/4 MDO PLYWOOD GOOD BOTH SIDES. (48 X 48)

30 INCH DIA

16 X 16

3 X 3, 2 PIECES, CUT AS TRIANGLES FOR POST GUSSETS

2 1/2

2 PIECES EACH FOR POST SIDES

1 3/4

2 PIECES FOR POST TOP AND BOTTOM, 1 PIECE FOR HOLDER BASE

2 1/2

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