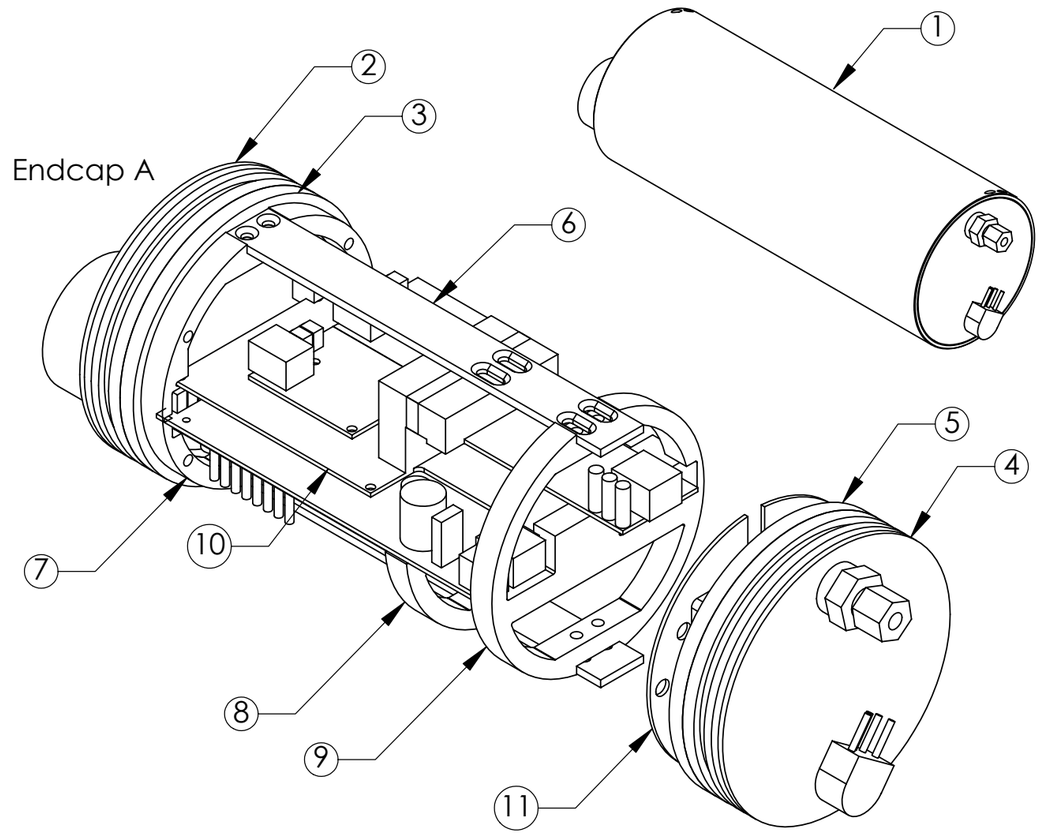
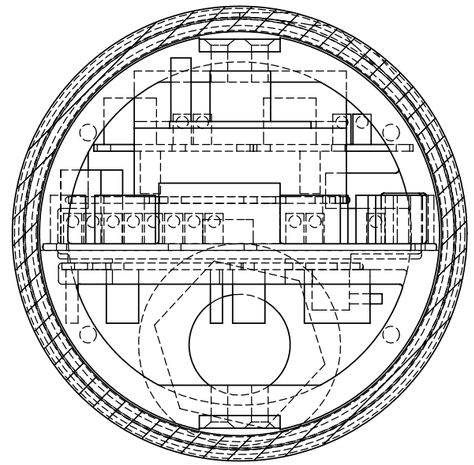
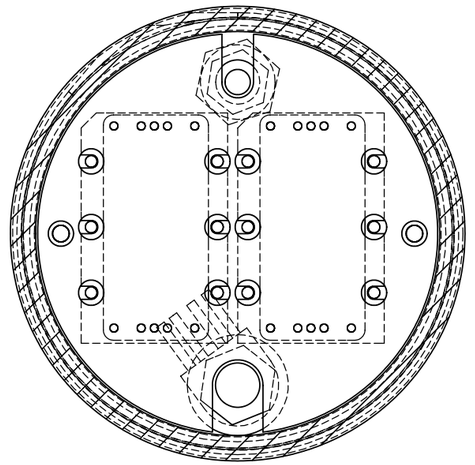
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



Endcap B

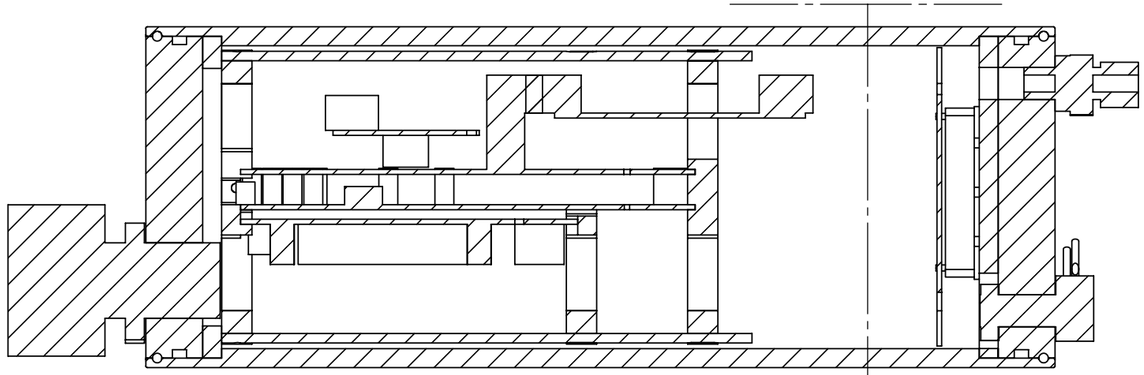


SECTION A-A
SCALE 1 : 1.5



SECTION B-B
(looking at Endcap B)
SCALE 1 : 1.5

Sections AA and BB



CROSS SECTION
SCALE 1 : 2

ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

NEXT ASSY	USED ON
APPLICATION	

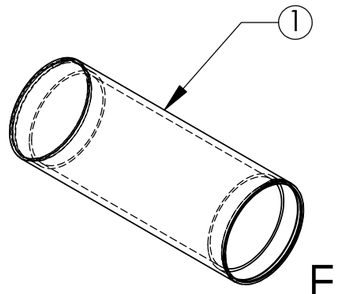
APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

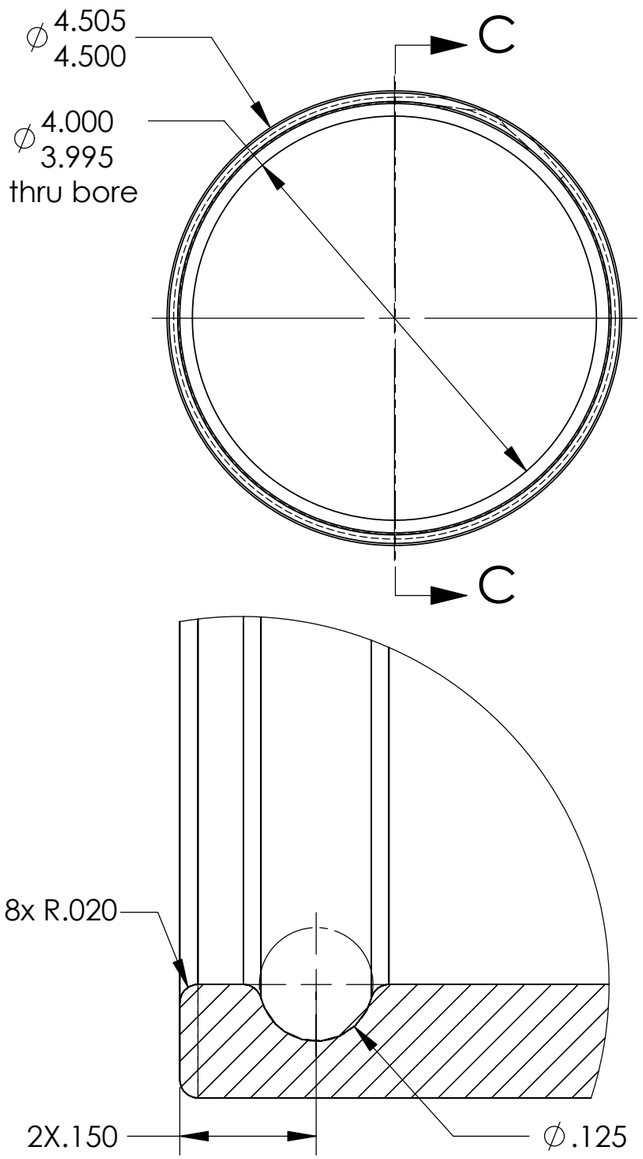
Monterey Bay Aquariur Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

Towfish Communication Housing

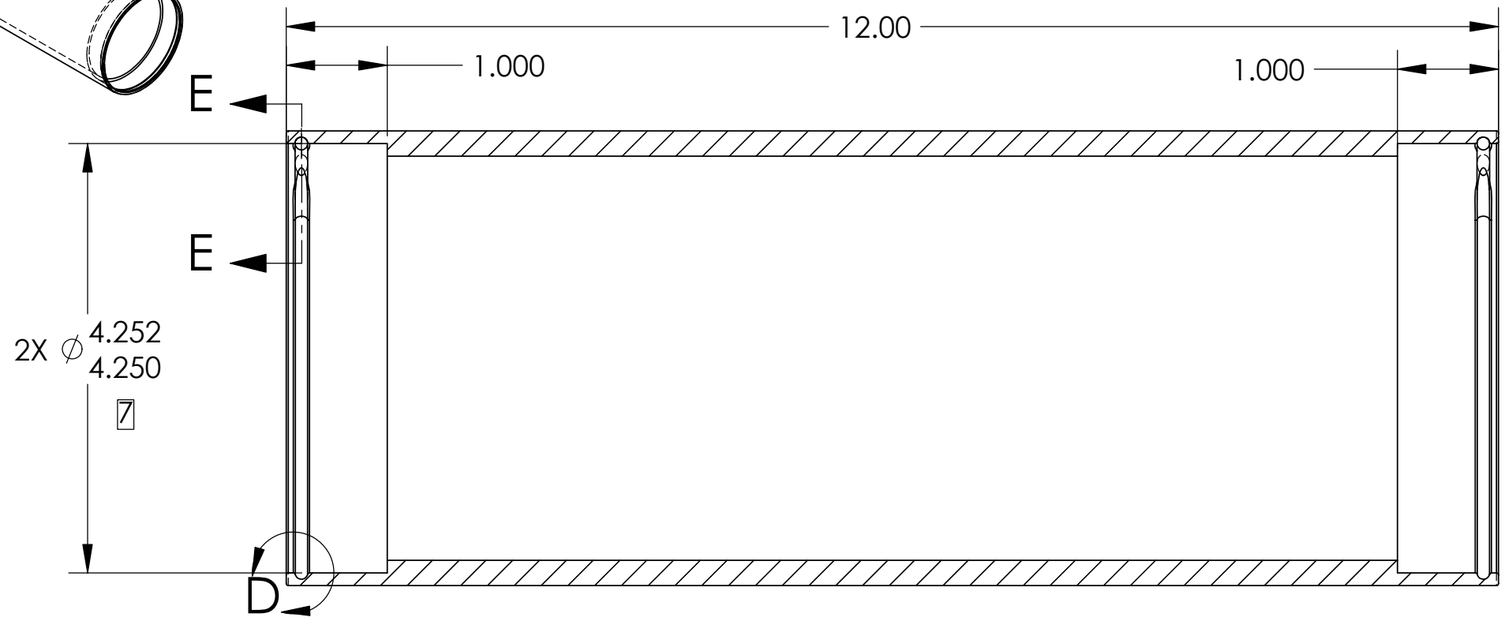
SIZE	DWG. NO.	REV.
B	120jaha-DWG	
SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



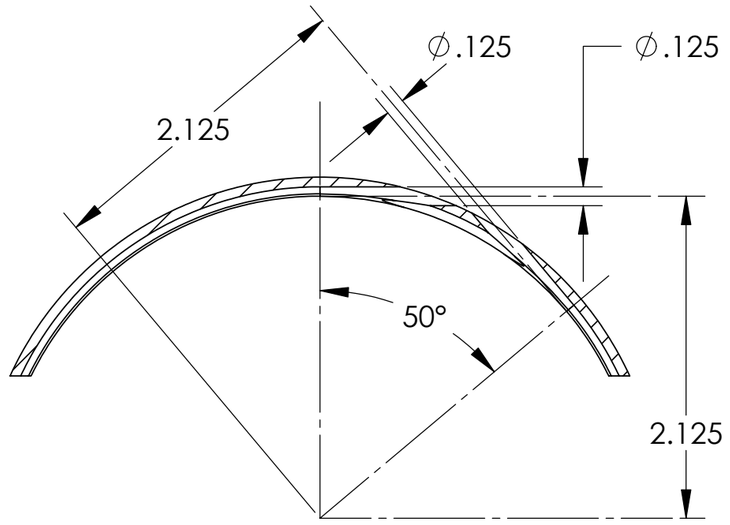


DETAIL D
SCALE 6 : 1
BOTH ENDS



SECTION C-C

SECTION C-C
SCALE 1 : 1.5



SECTION E-E
SCALE 1 : 1
BOTH ENDS
Both ends clocked

Note 7: For 2-242 O-rings

ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

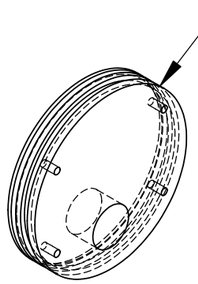
NEXT ASSY	USED ON
APPLICATION	

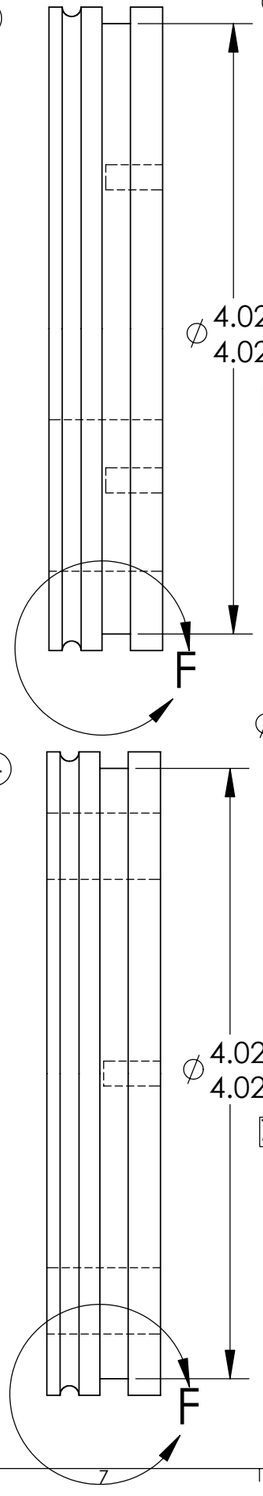
Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

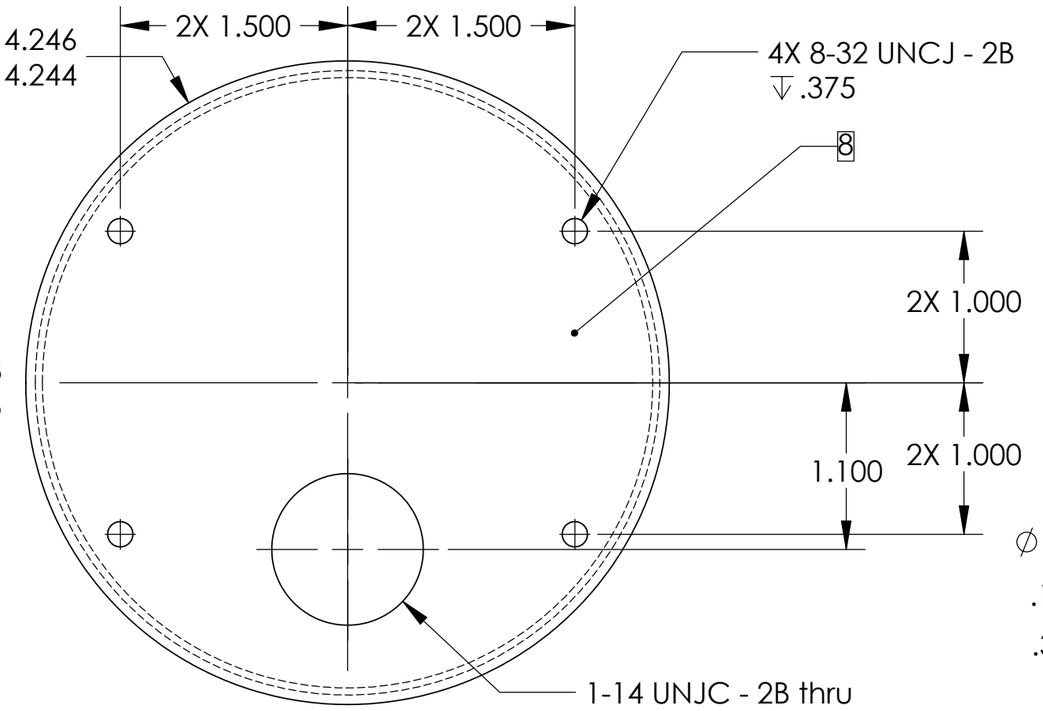
Towfish Communication Housing

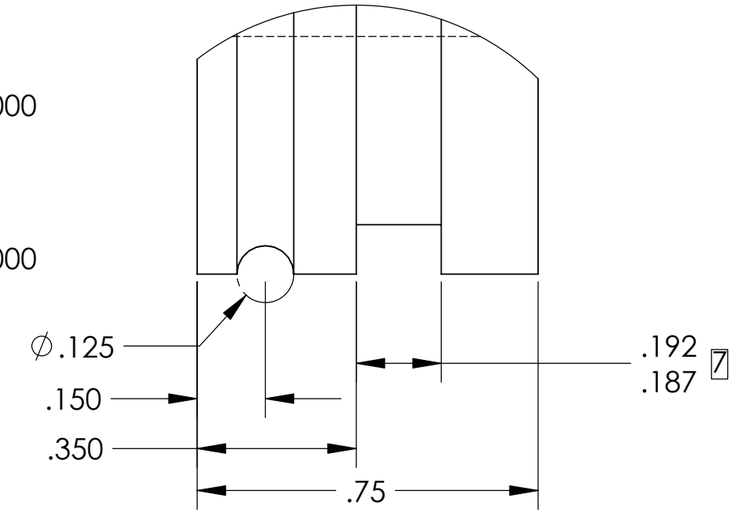
SIZE	DWG. NO.	REV.
B	120jaha-DWG	
SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		



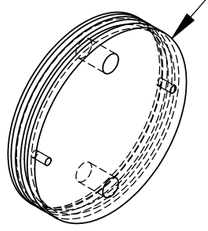


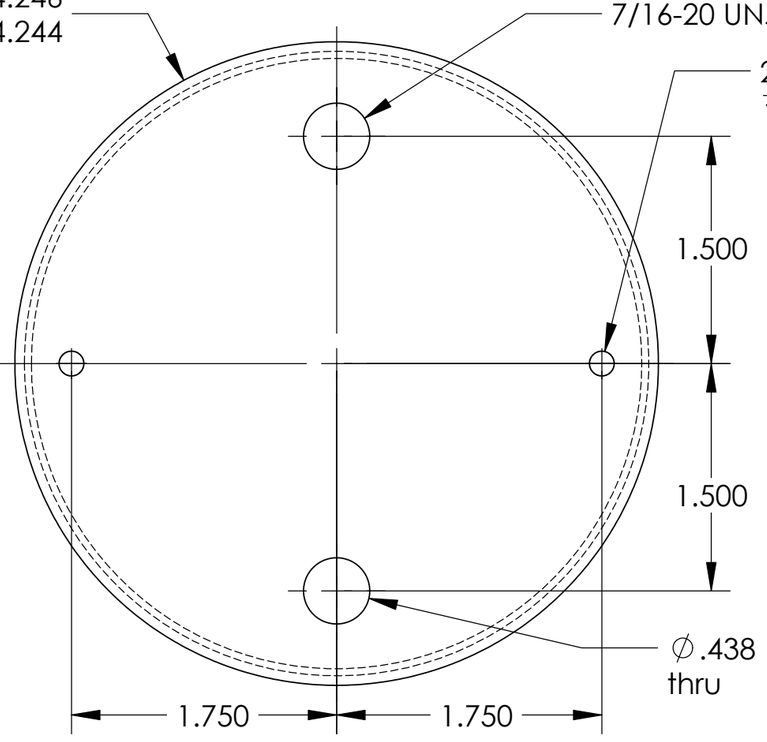




DETAIL F
SCALE 3 : 1

Note 7: Use 2-242 O-rings
Note 8: Both sides optically clear





ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

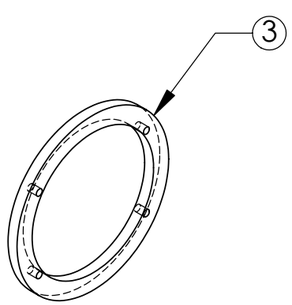
NEXT ASSY	USED ON
APPLICATION	

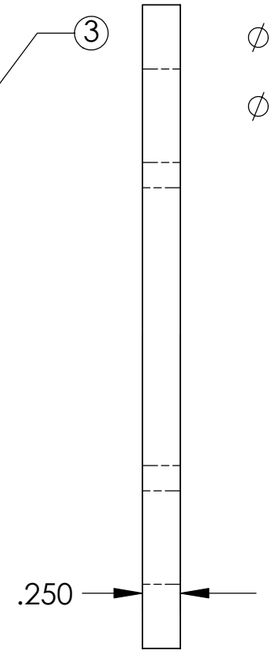
Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

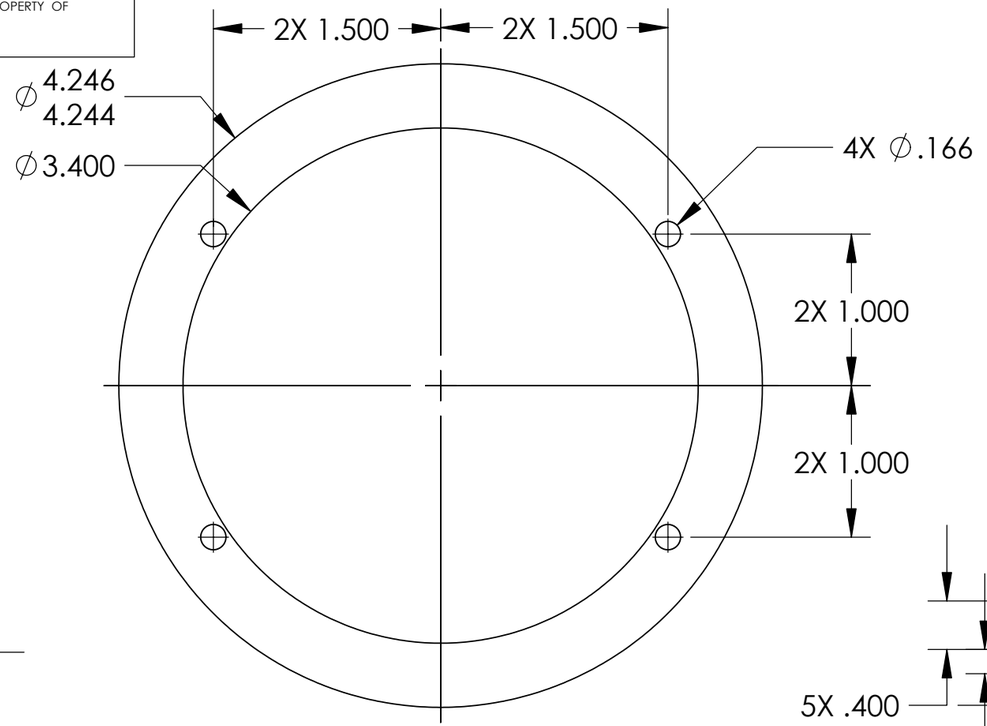
Towfish Communication Housing

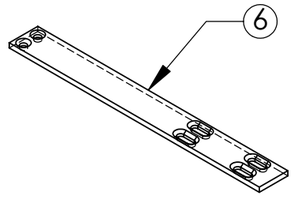
SIZE	DWG. NO.	REV.
B	120jaha-DWG	
SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

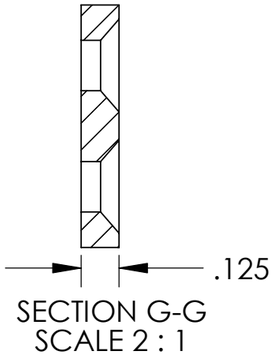
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

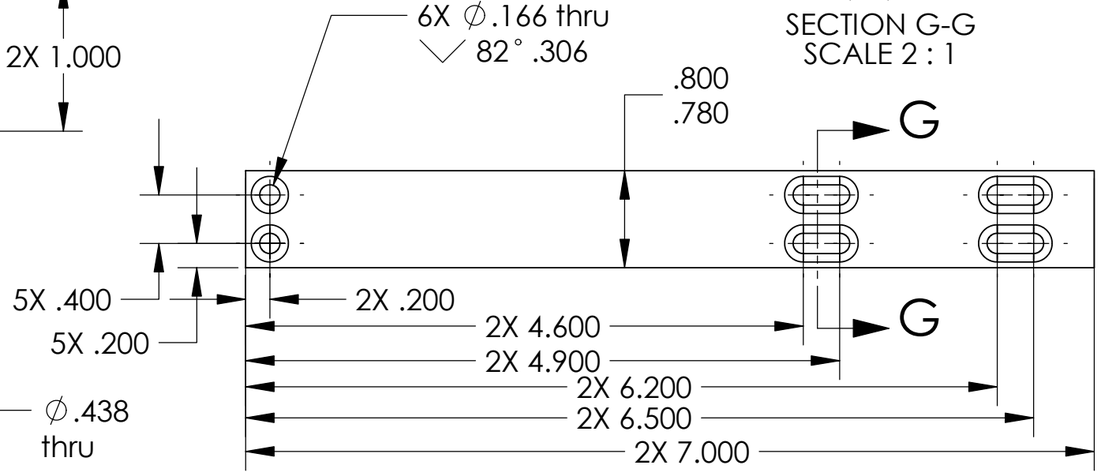


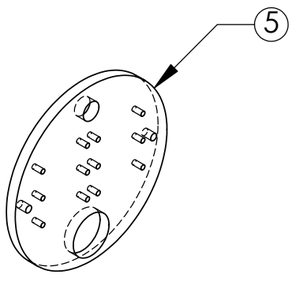


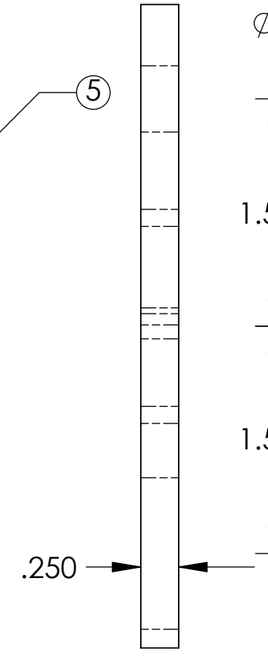


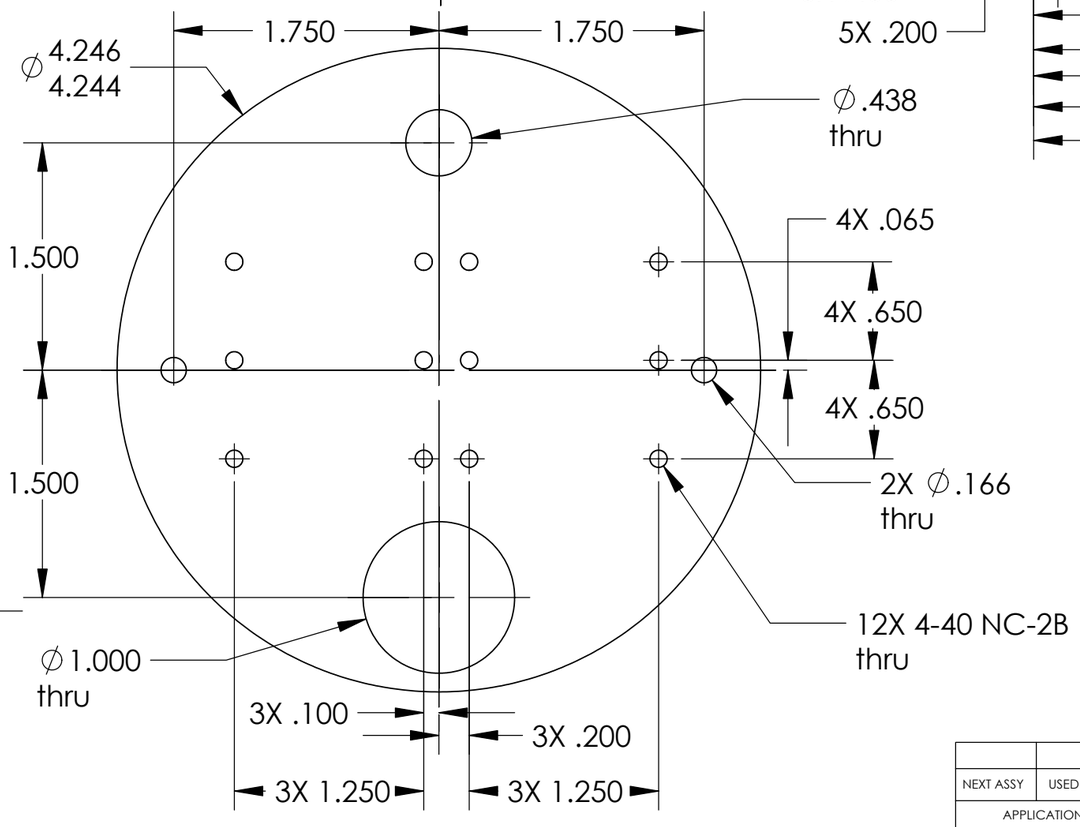












ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

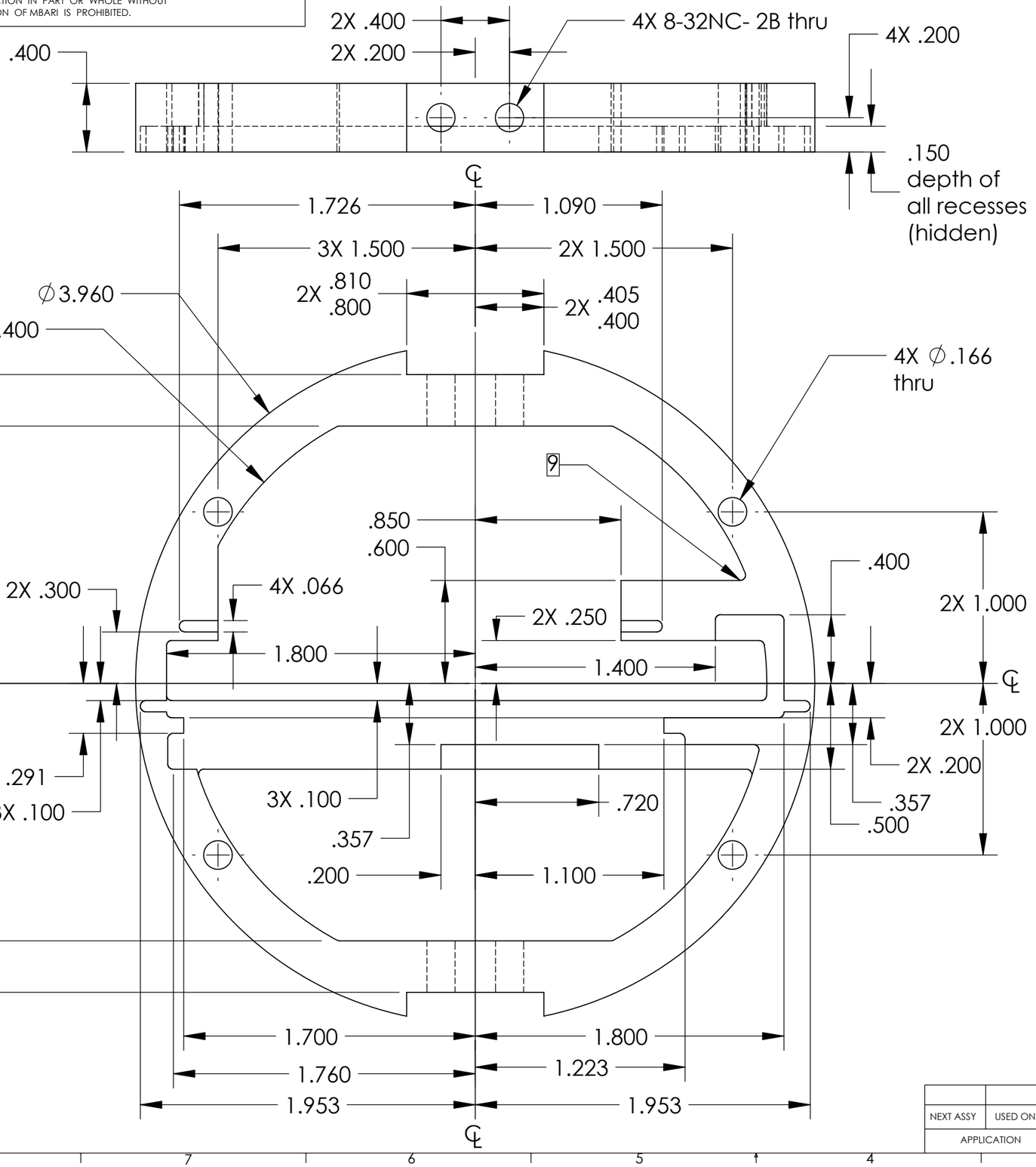
Monterey Bay Aquariur Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

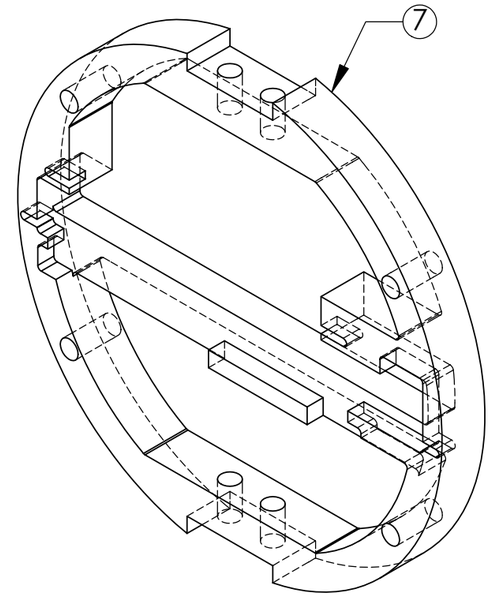
Towfish Communication Housing

SIZE	DWG. NO.	REV.
B	120jaha-DWG	

SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		





Note 9. All inside corners requiring radius: R.031

ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
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PROJECT NO. 200021	
PROJECT Fe Regulation	
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Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

Towfish Communication Housing

SIZE	DWG. NO.	REV.
B	120jaha-DWG	
SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
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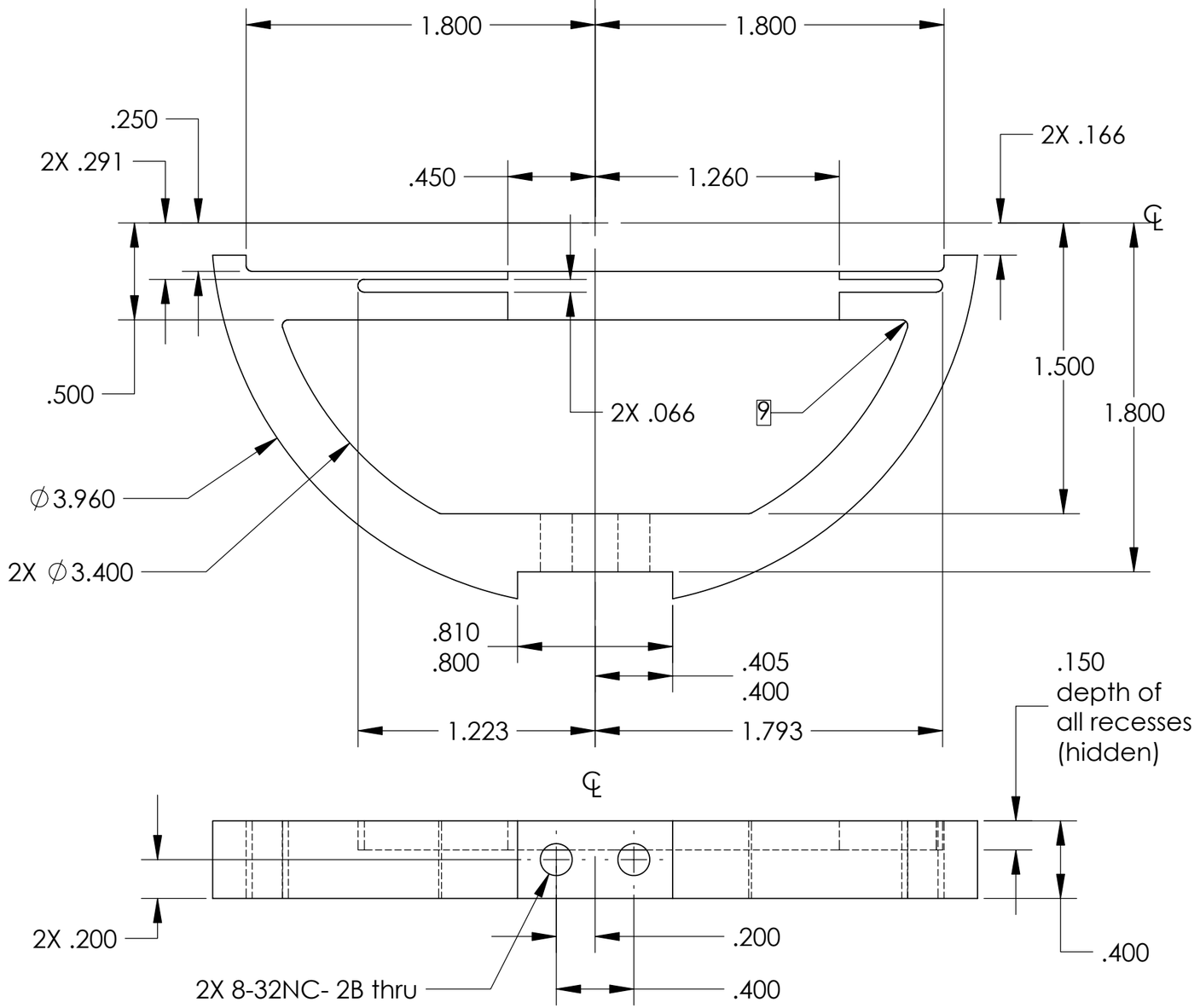

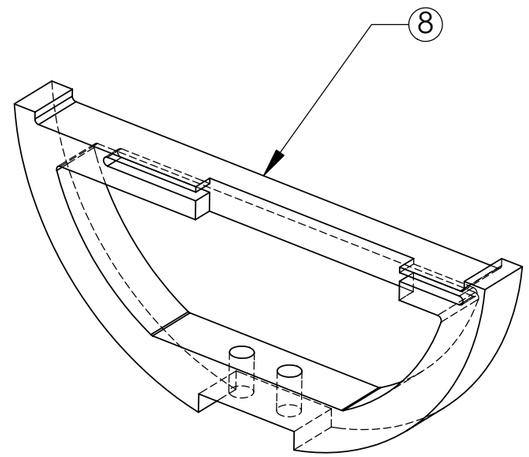

Note 9. All inside corners requiring radius: R.031

ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OOS
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

NEXT ASSY	USED ON
APPLICATION	

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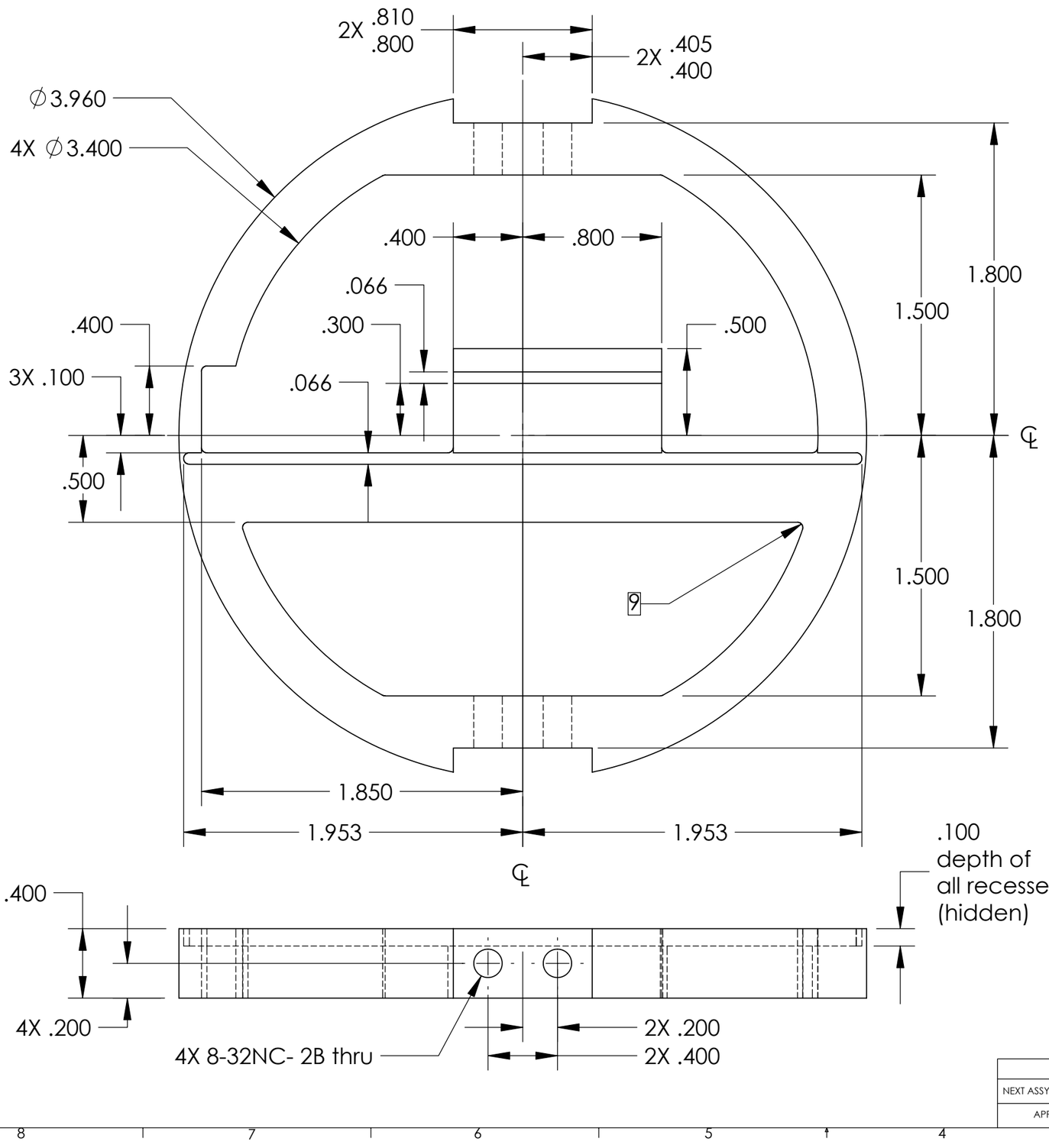
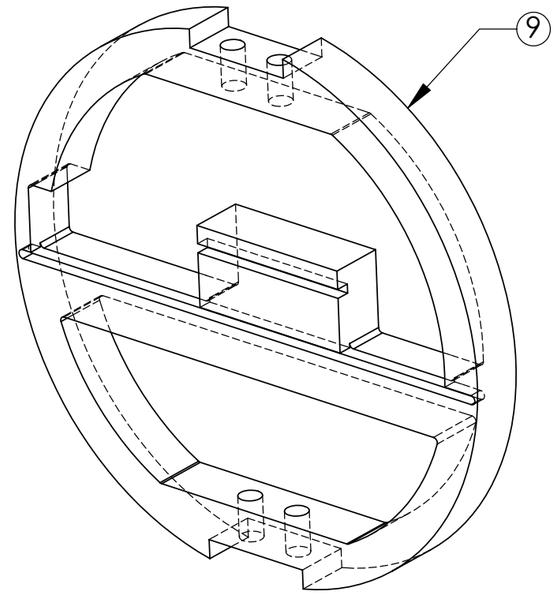
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

Towfish Communication Housing

SIZE	DWG. NO.	REV.
B	120jaha-DWG	
SCALE 2:1	CAD FILE: BARNACLE\ARCHIVE	SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		





Note 9. All inside corners requiring radius: R.031

ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
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4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OOS
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

APPROVALS	DATE
DRAWN Hans Jannasch	01/21/2002
ENGINEER	
CHECKED	
PROJECT NO. 200021	
PROJECT Fe Regulation	
WEIGHT	

Monterey Bay Aquarium Research Institute
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

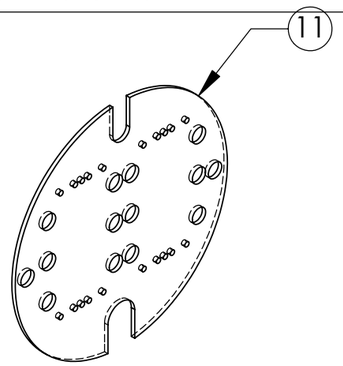
Towfish Communication Housing

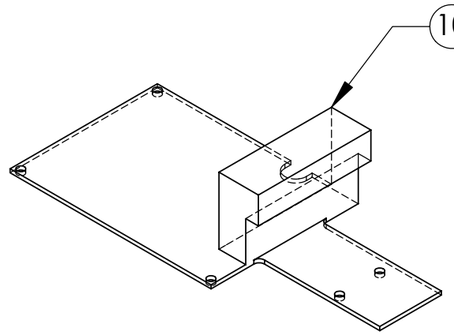
SIZE	DWG. NO.	REV.
B	120jaha-DWG	

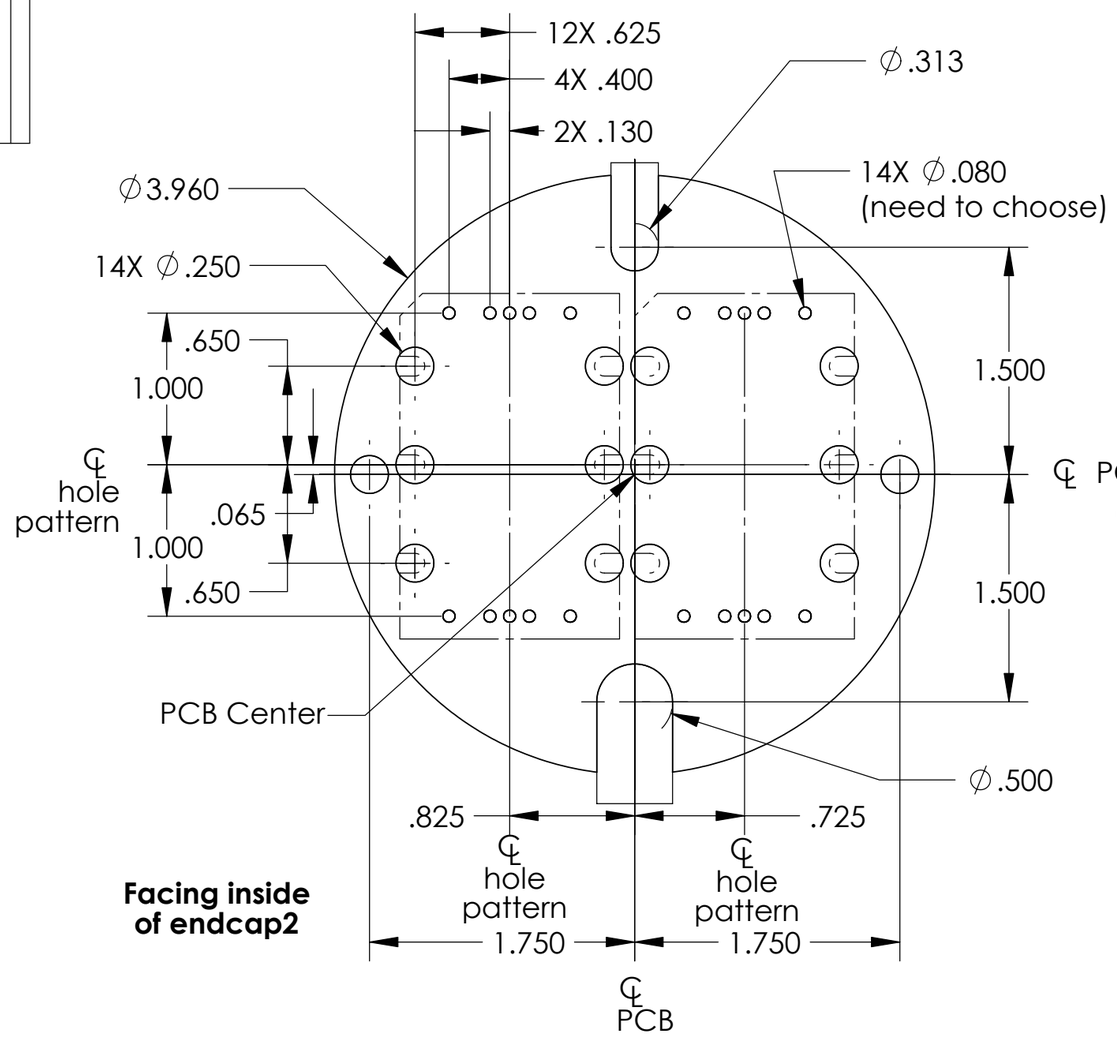
SCALE 2:1 | CAD FILE: BARNACLE\ARCHIVE | SHEET 1 OF 1

NEXT ASSY	USED ON
APPLICATION	DO NOT SCALE DRAWING

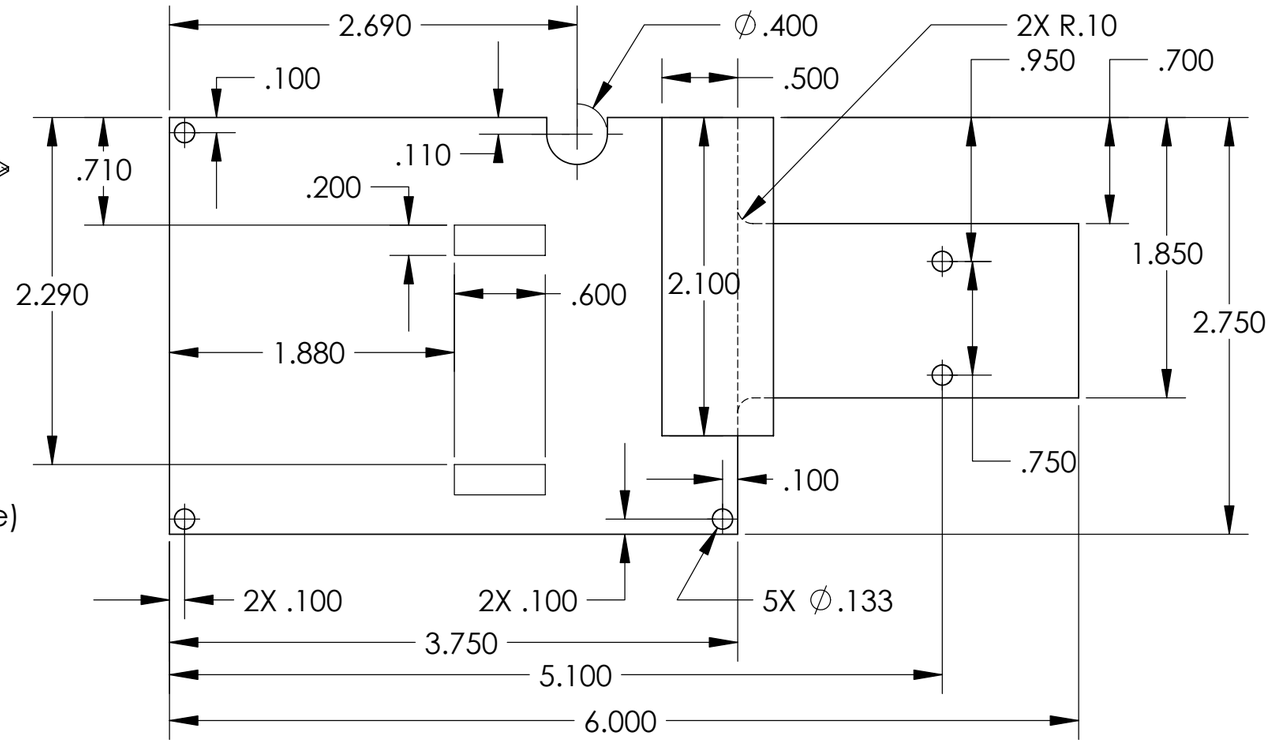
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	Clarify hole pattern	6/11/02	







Facing inside of endcap2



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ITEM NO.	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
11	1@		Power PCB	
10	1@		Switch PCB	
9	1@		PCB retainer C	PVC or polycarbonate
8	1@		PCB retainer B	PVC or polycarbonate
7	1@		PCB retainer A	PVC or polycarbonate
6	2@		Al rails	Aluminum
5	1@		Endcap B-Al	6061-T6 Aluminum annodized
4	1@		Endcap B-PC	Polycarbonate (clear)
3	1@		Endcap A-Al	6061-T6 Aluminum annodized
2	1@		Endcap A-PC	Polycarbonate (clear)
1	1@		Pressure housing	6061-T6 Aluminum annodized

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

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