

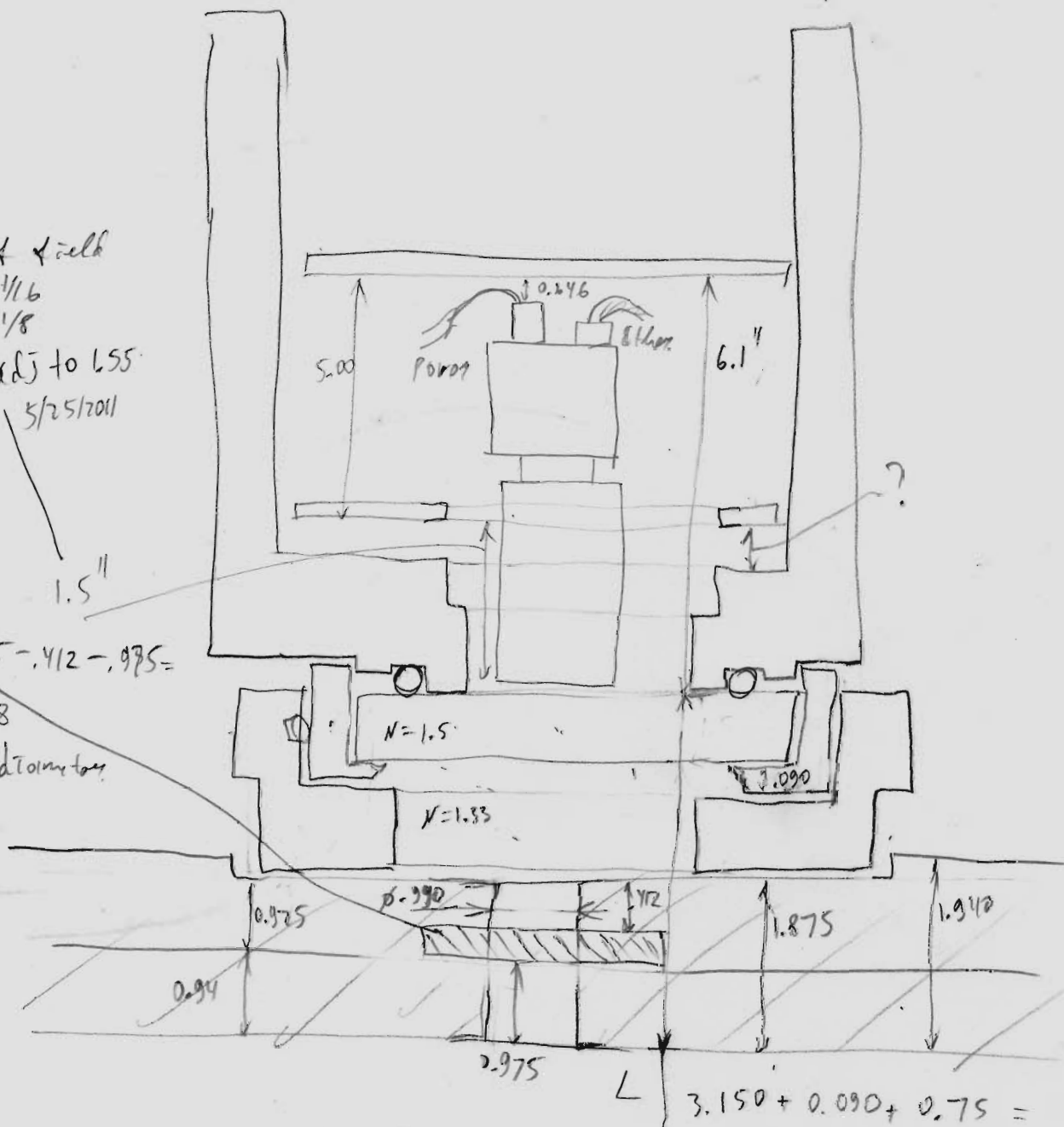
depth of field
 $3.22 + \frac{1}{16}$
 $- \frac{1}{8}$
 adj to 6.55
 5/25/2011

1.5"

$$1.875 - .412 - .975 =$$

$$= .488$$

~ 1.5" diameter



$$\frac{1.2}{1.5} + \frac{0.090 + 3.150}{1.33} = 3.23 = 4"$$

optical distance.

$$L = 1.2 + 0.09 + 3.15 = 4.44 \text{ geometrical distance}$$

$$L = 4.468 \text{ measured on actual parts}$$

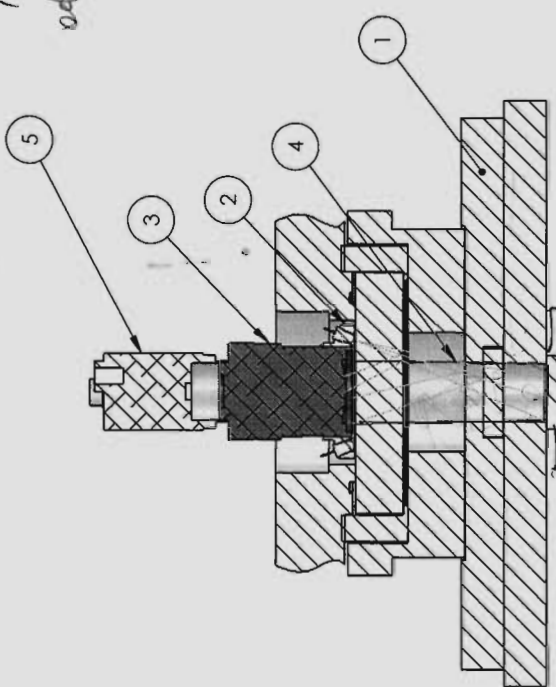
4.968

6/7/2011

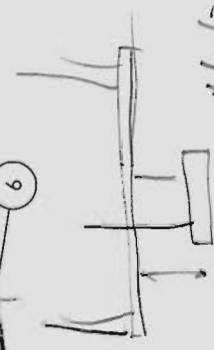
marking on the lens
Focus adjustment

distance
of viewing

3.25"
3.35"
3.45"



SECTION C-C

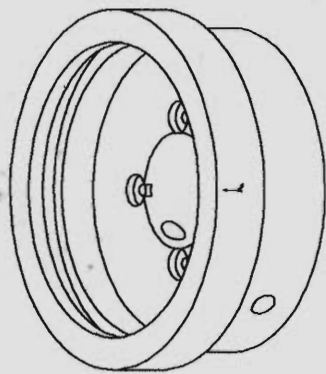


lens 23.4mm
steady
80mA
at 12V

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	901027-101 - Optical Thickness		1
2	901027-AS09 - LED Cluster		1
3	Lens Computar 11A		1
4	Lens optical envelope		1
5	Camera ProSilica GC1380		1
6	901027-102 - Diffuser-Slide		1
7	901027-103 - Camera Housing		1

Step / Q.C.	INSTRUMENT	DATE	05/16/2011
Inspector	DRN	DESIGN	05/16/2011
Shop foreman	ENGINEER	LAST UPDATE	05/16/2011
Signature	CHECKED	PROJECTED	05/16/2011
NEXT ASST Description	PROJECT	SCALE	1:2
Application	PROJECT	SCALE	1:2
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE MBARI P.O. Box 24700 Marina del Rey, CA 90419 PH: (818) 775-1700 FAX: (818) 775-1701 DRAWING NAME AND RELEASE 901027-AS10 - SES Camera REV. 1 901027-AS10			

1



SECTION C-C

Dimensions: 0, .400, (.320), 1/8 NPT, .400

6.090

5.009

2.611

1.631

1.271

1.160

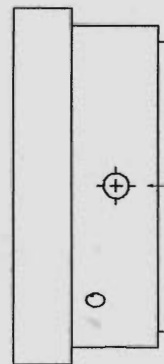
0

SECTION A-A

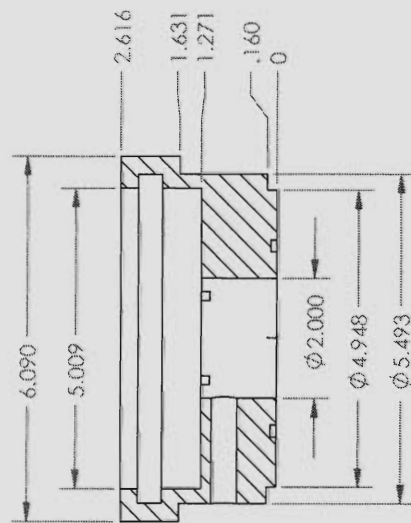
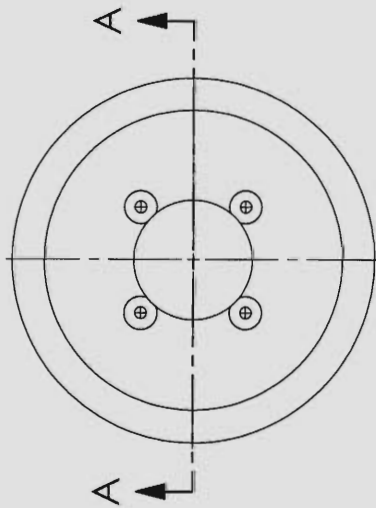
2.000

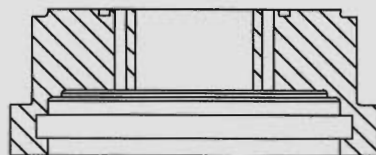
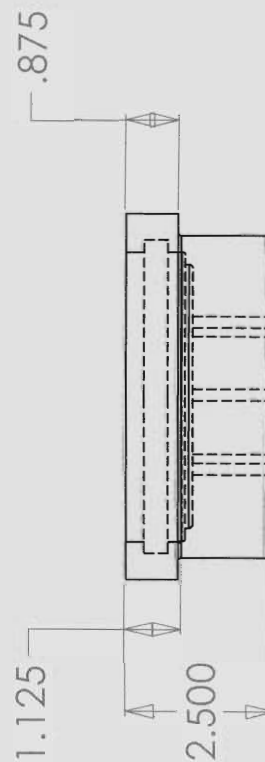
4.948

5.493

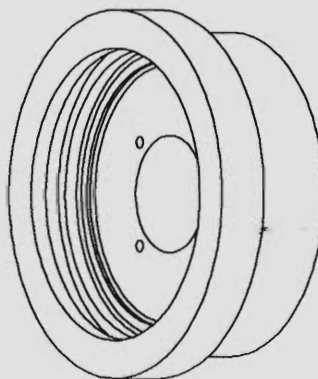
1

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[illegible]



SECTION A-A



SCRIPPS INSTITUTION OF OCEANOGRAPHY
UNIVERSITY OF CALIFORNIA, SAN DIEGO

FLUOROMETER WINDOW ADAPTER

SIZE	DWG. NO.	REV.
B	H2O SAMPLER SYSTEM -002	
SCALE	CAD FILE:	SHEET 1 OF 1
	C:\DWG-S\H2O	

4/25/2011

existing
ports

0.540

.728

0

0.300

0.690

0.980

1.340

0.360

0.312

.540

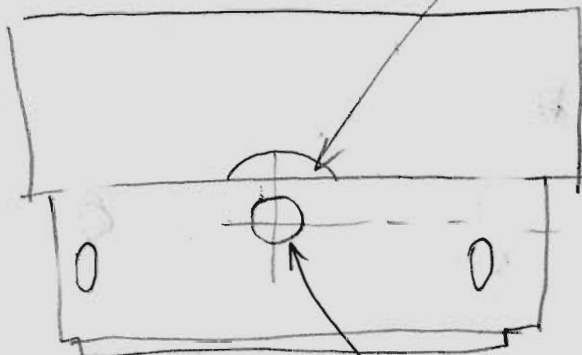
312 0

or $\phi 0.750$

$\phi 0.812$

↓.170

170

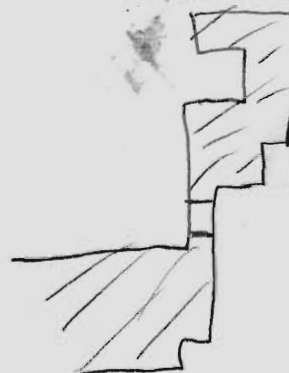


0.200

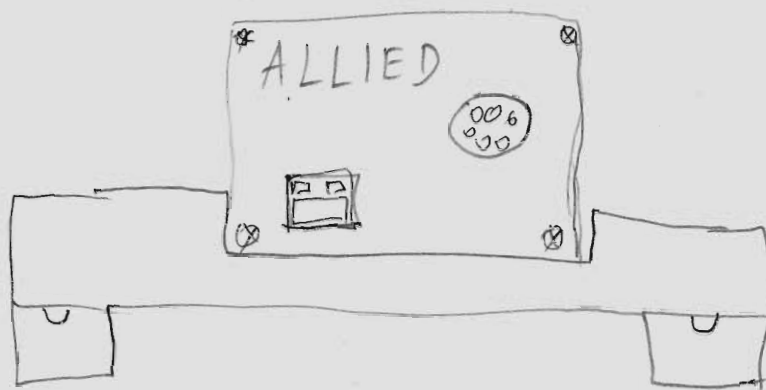
0.400

as made

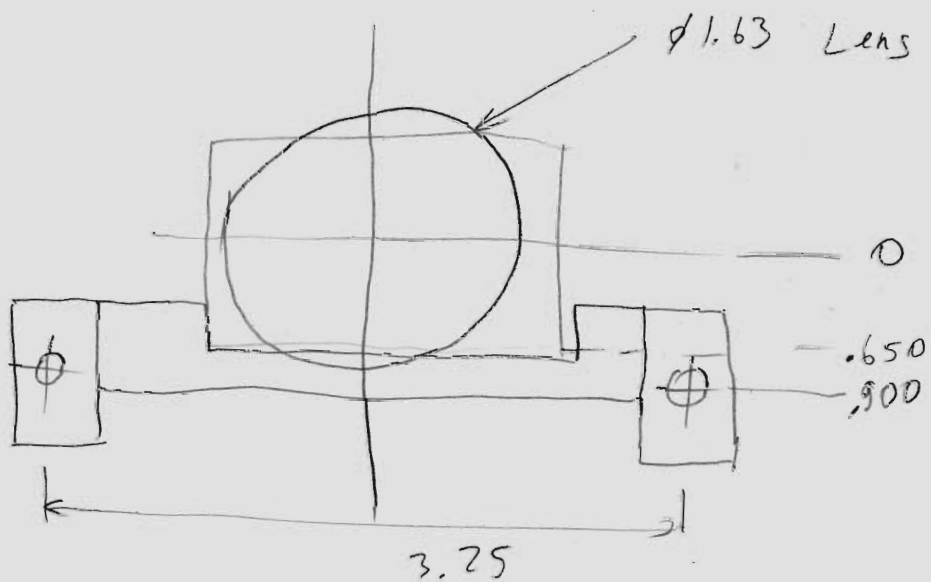
$\phi 0.32$ Thru wall



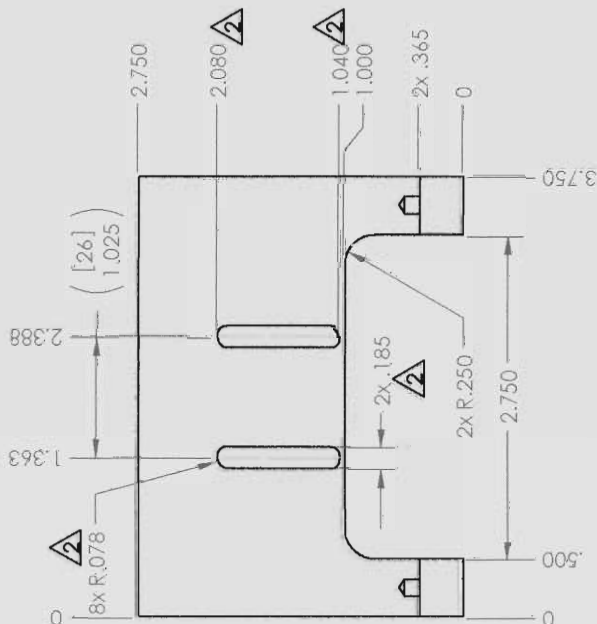
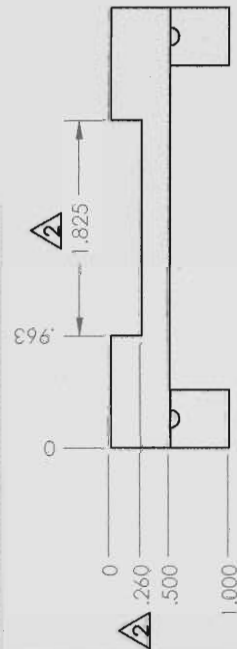
0.375



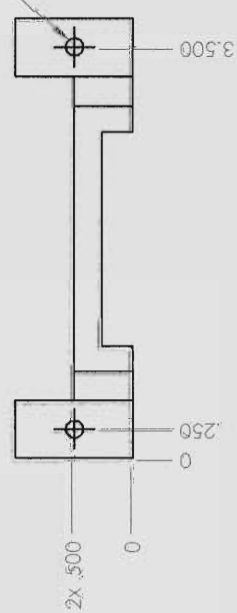
TOP VIEW



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$\phi .150$
UNC-2B 10-24 Ψ 0.37
2x



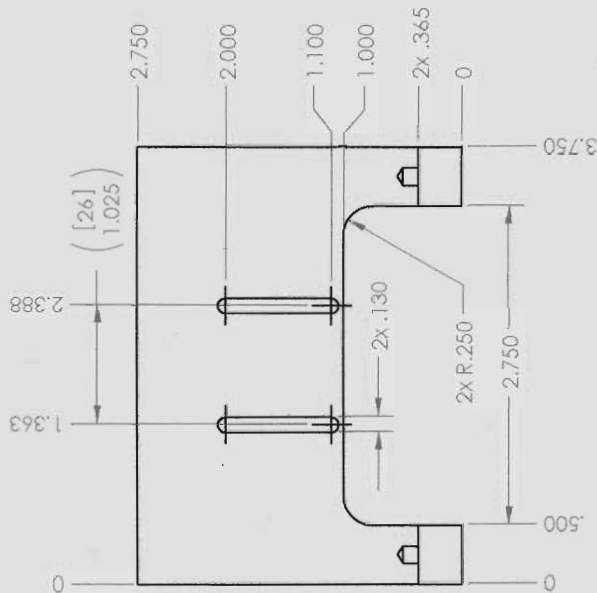
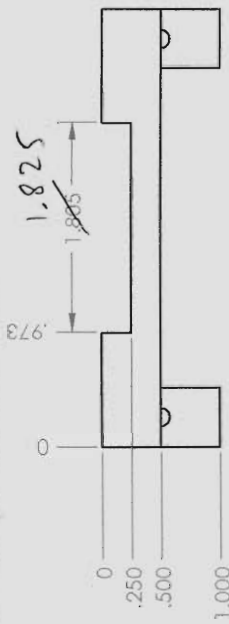
Material: Aluminum 6061

Rev1 (6/22/2011): as built 1 by Larry Bird
Rev2 (6/29/2011): modified for electrically isolated camera mounting

Step / Q.C.	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	INITIAL RELEASE	DATE	BY
Inspector	1. FRACTIONAL DIMENSIONS: .0005	4/18/2011	MBARI	
Shop Foreman	2. DECIMAL DIMENSIONS: .0005			
Engineer	3. HOLE LOCATIONS: .0005			
	4. MACHINED SURFACES: .0005			
	5. UNMACHINED SURFACES: .005			
	6. MACHINED SURFACES: .0005			
	7. MACHINED SURFACES: .0005			
	8. MACHINED SURFACES: .0005			
	9. MACHINED SURFACES: .0005			
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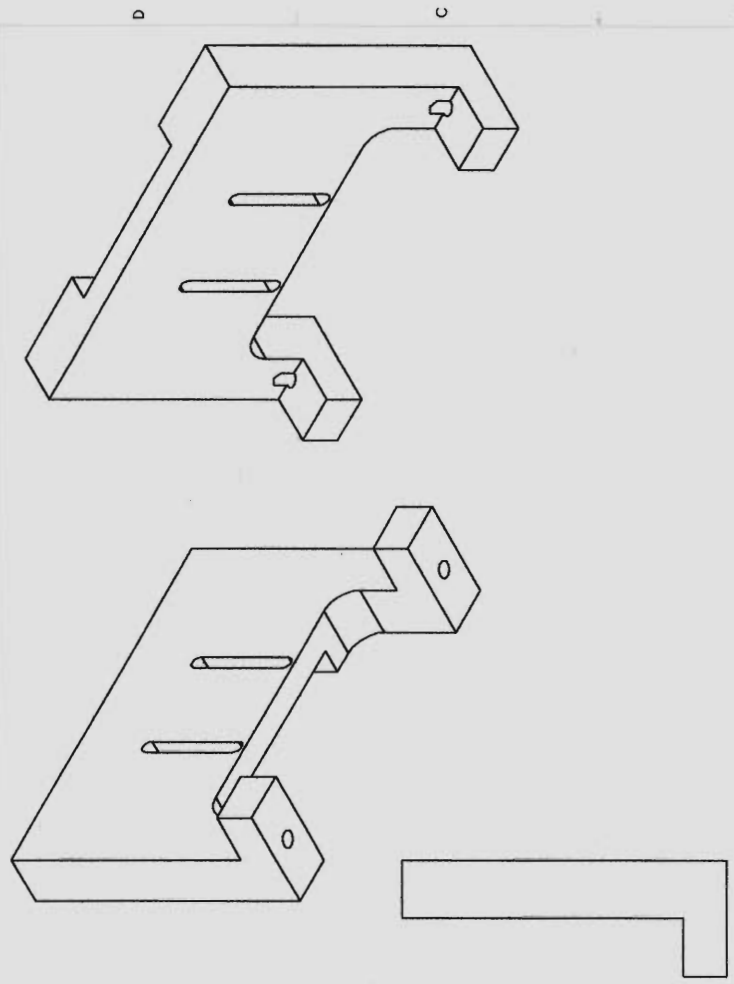
DATE: Monterey Bay Aquarium Research Institute
7700 Sandhills Rd.
Menlo Park, CA 94025
TEL: (650) 775-1700
FAX: (650) 775-1701
DRAWING NAME: 901027-104 - Camera Bracket
REV: 2
901027-104
SCALE: 1:1
SHEET 1 OF 1

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$\phi .150$
UNC-2B 10-24 ∇ 0.37
2x

Material: Aluminum 6061

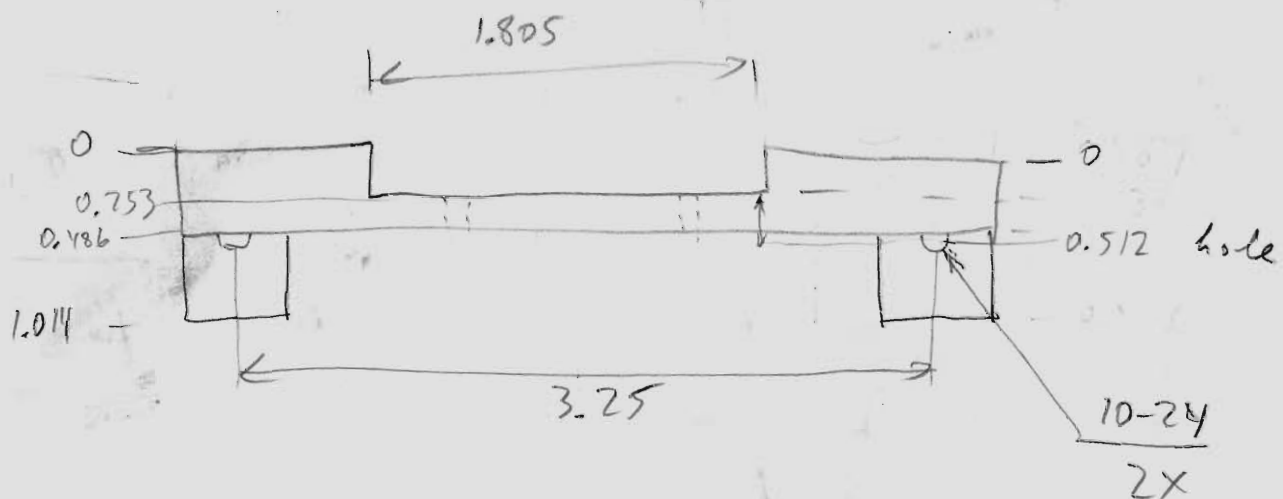
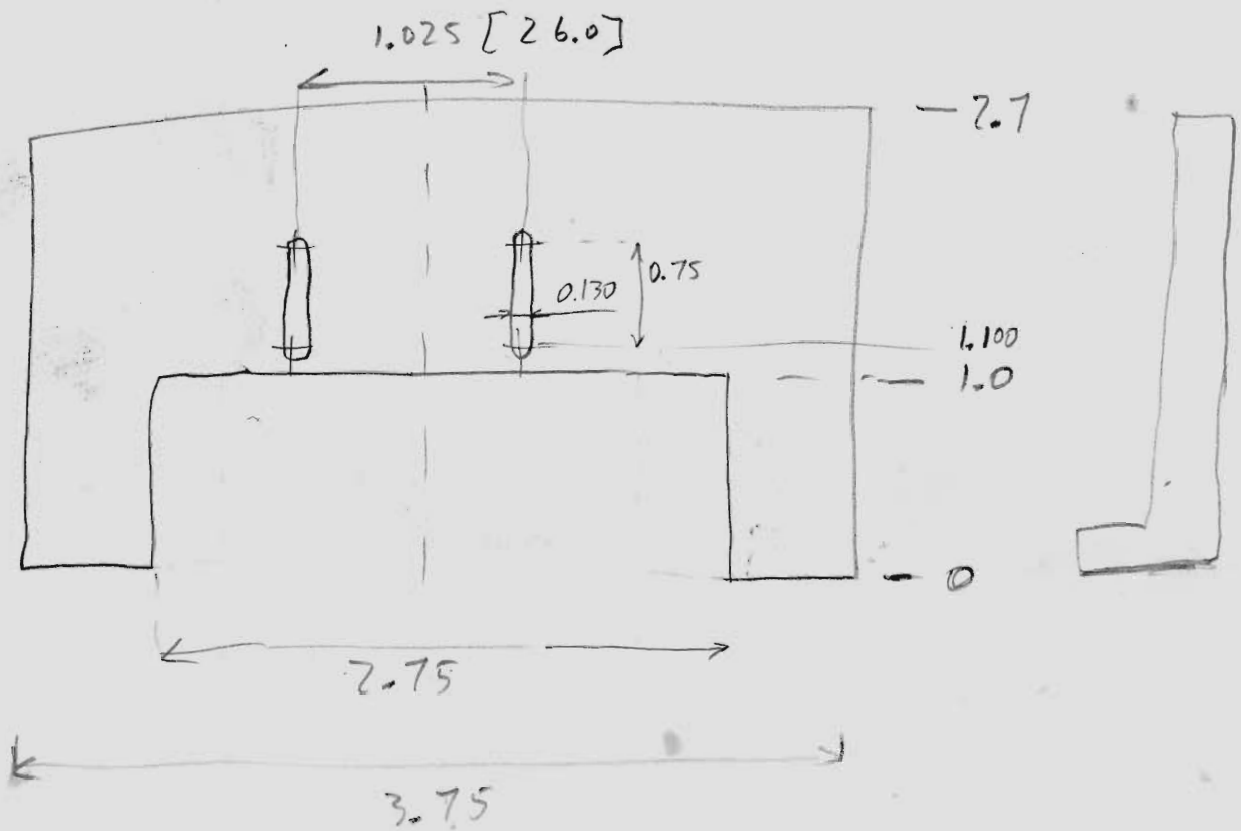


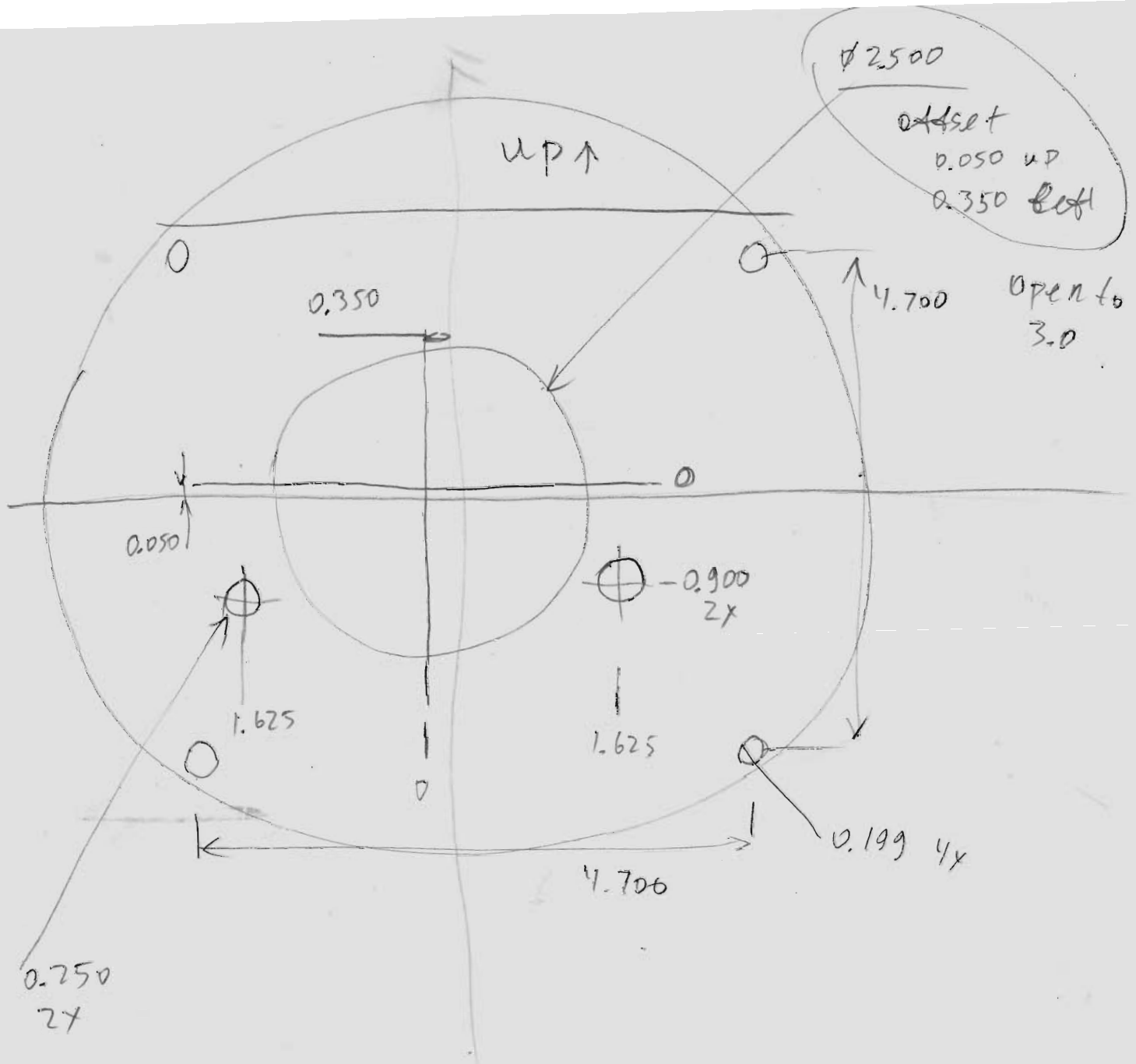
Step / Q.C.	UNLESS OTHERWISE SPECIFIED	INITIAL RELEASE	DATE	BY	DATE	BY
Inspector	1. UNLESS OTHERWISE SPECIFIED	DESIGN	4/11/2011	MBARI	DATE	BY
Shop Foreman	2. DIMENSIONS ARE IN INCHES	ENGINEER	4/11/2011	MBARI	DATE	BY
Engineer	3. REMOVE BURRS AND SHARP EDGES PER MAN.	CHECKED	4/11/2011	MBARI	DATE	BY
MEY ASST Description	4. CENTERLINE DIMENSIONS ARE GIVEN UNLESS OTHERWISE NOTED	PROJECT NO.	901027	901027-104 - Camera Bracket	SEE DWG. NO.	901027-104
Application	5. MACHINED SURFACES ARE TO BE FINISHED TO A MAXIMUM OF 32 RMS	PROJECT	901027	901027-104 - Camera Bracket	SCALE	1:1
	6. DO NOT SCALE DRAWING	SHEET 1 OF 1				



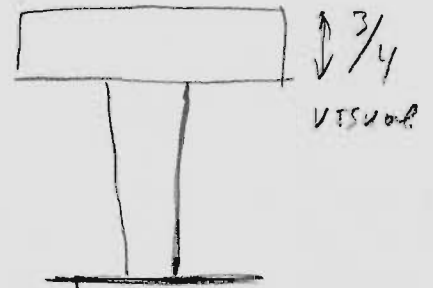
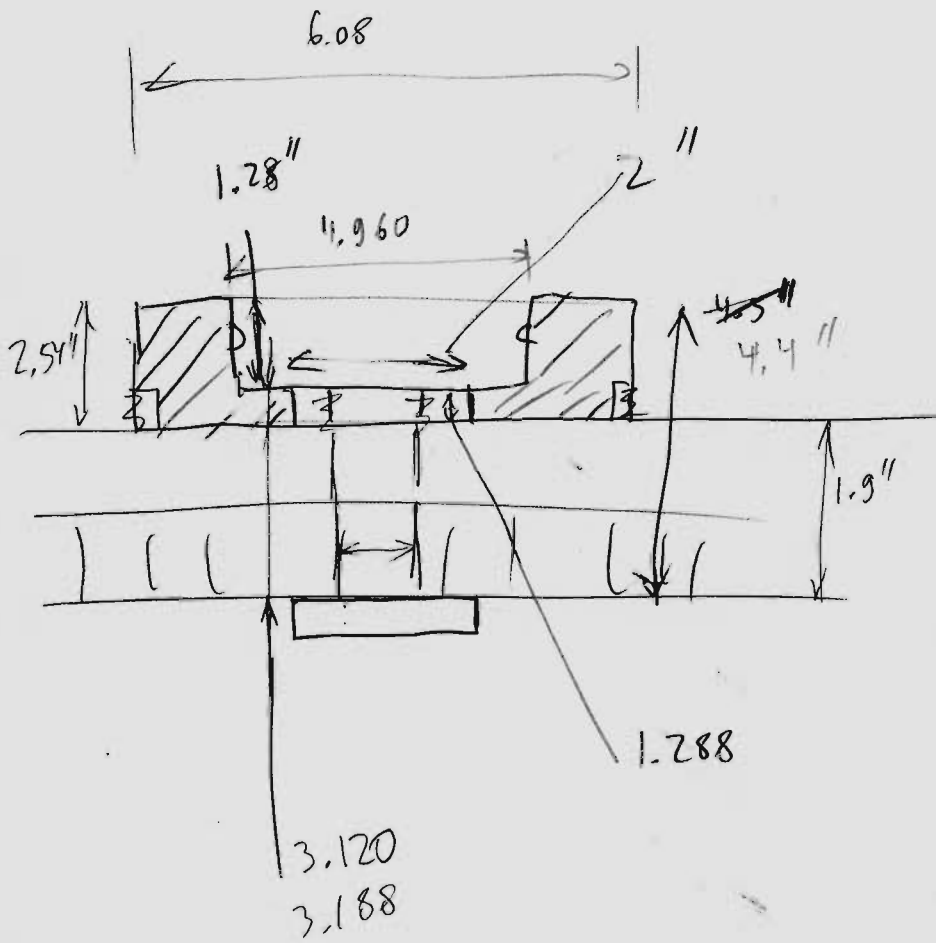
Monterey Bay Aquarium Research Institute
7700 Sandhill Rd.
Marine Laboratory
P.O. Box 24700
San Francisco, CA 94124-4700
Tel: (415) 775-1700
Fax: (415) 775-1701
E-mail: mbari@mbari.org

4/18/70

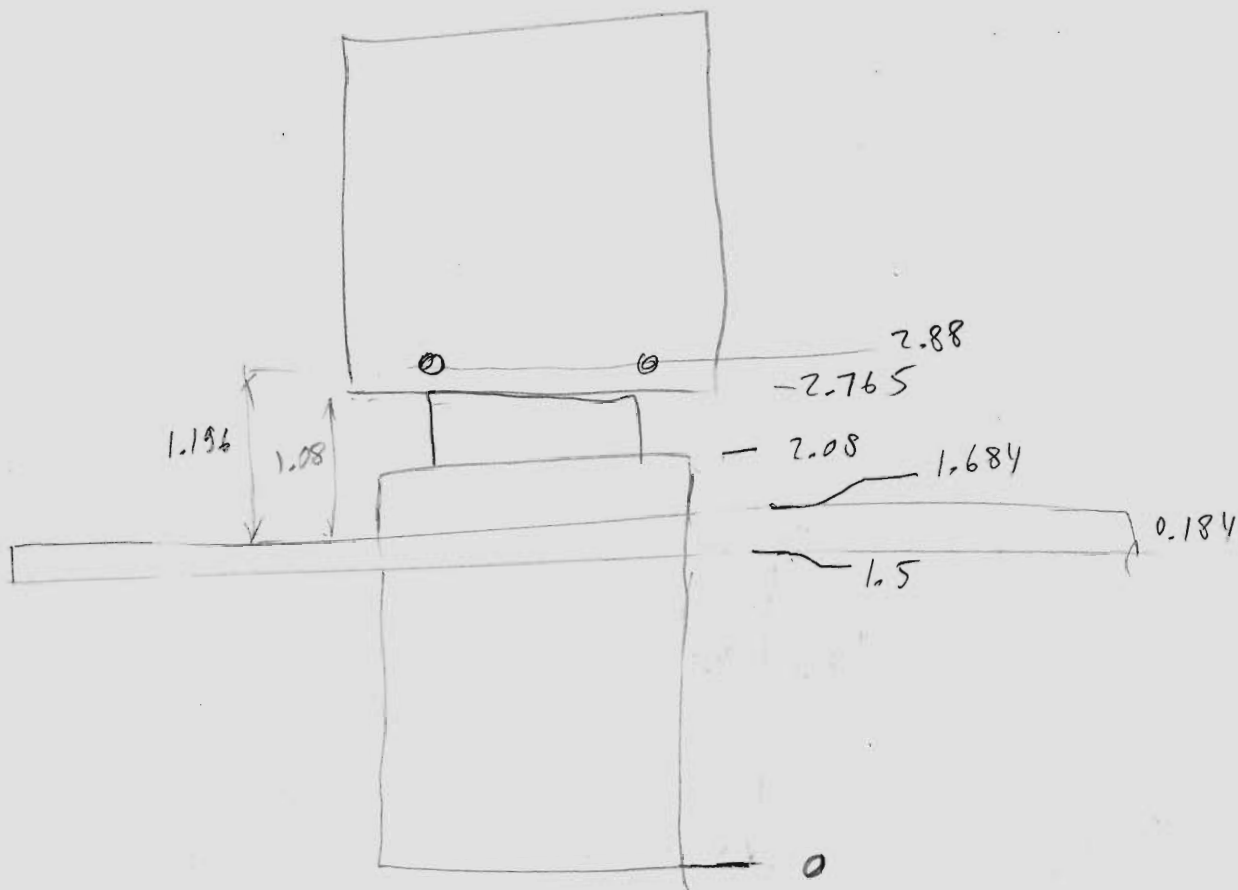




10000 SV



4/18/2011



3/8/2011

Sedimentation Event Sensor

SES

901027

Ken Smith

Paul McGill

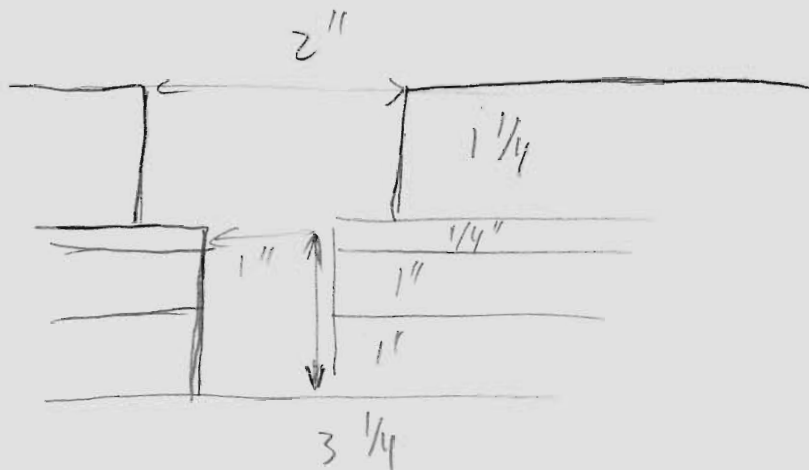
Briff Harrison

Alana Sheymat

Larry

Rich

Waky Board



Vet Labs fluorometer - try, validation.

if works →

use H2O fluorometer for
visual.

lens selection

The Sedimentation Event Sensor will consist of a collection funnel, with a 0.5-m²-mouth opening, mounted vertically within the structural frame (see Fig. 1). The tapered base of the collection funnel will be secured to an upper stationary Delrin disk that supports two cameras above and an offset rotating collection disk below with geared circumference. The drive motor that rotates the lower gear will be attached to the underside of the stationary disk. The rotating collection disk will have a polished glass plate forming the bottom of a cylindrical opening at the periphery of the lower disk to retain the sample during examination. As the rotating disk is driven counterclockwise by a motor, the glass sample plate becomes aligned with four different positions (stations).

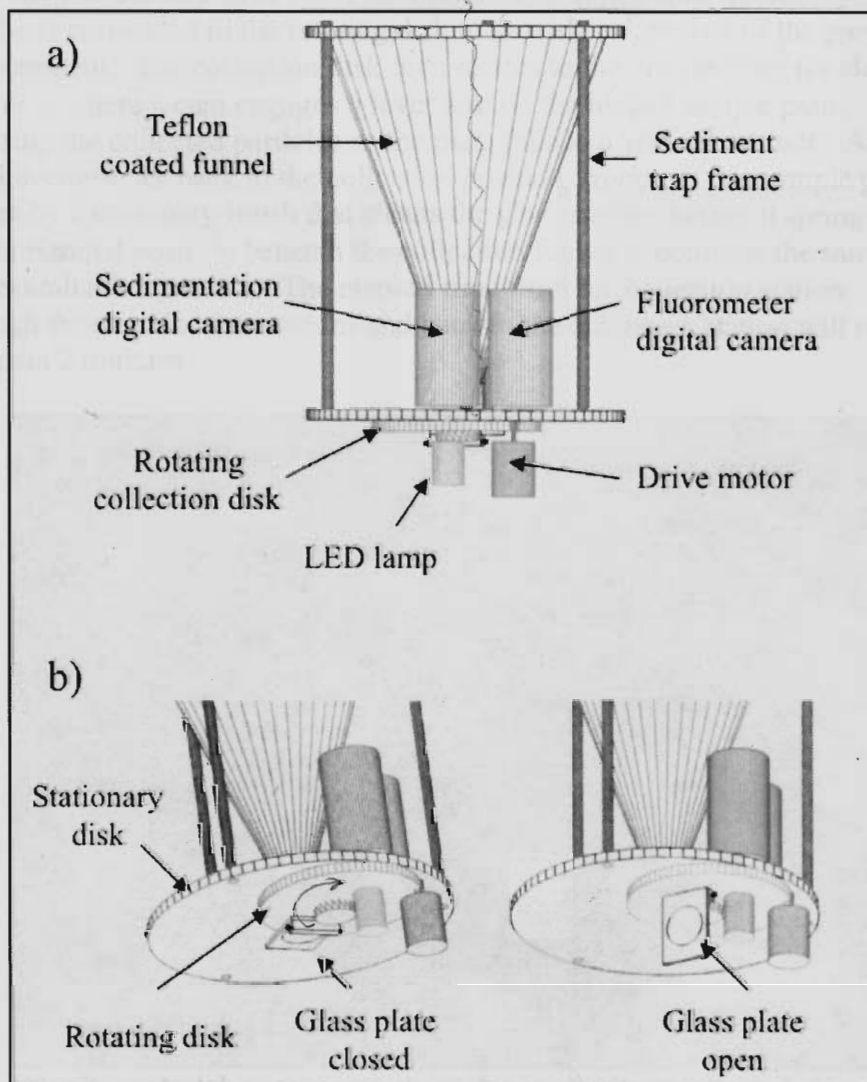


Fig. 2 - An early conceptual model of the Sedimentation Event Sensor showing a) the overall layout of the major components, excluding the controller, and b) detail views of the collection disk and the glass plate cleaning mechanism