

**1296 MHz EME
Using a 1.5 Meter
Solar cooker**



Don W1FKF

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Show and Tell

Objective: Build a Hybrid (3D printed) Septum feed and mount for dish

Not Discussed Radio, AZ-EL Rotator, Amplifier

*Eastern VHF/UHF/Microwave
Conference
April 24, 2026*

**1296 MHz EME
1.5 Meter
Solar cooker**

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*Dish can be used
on other bands
up to 10 GHz.*



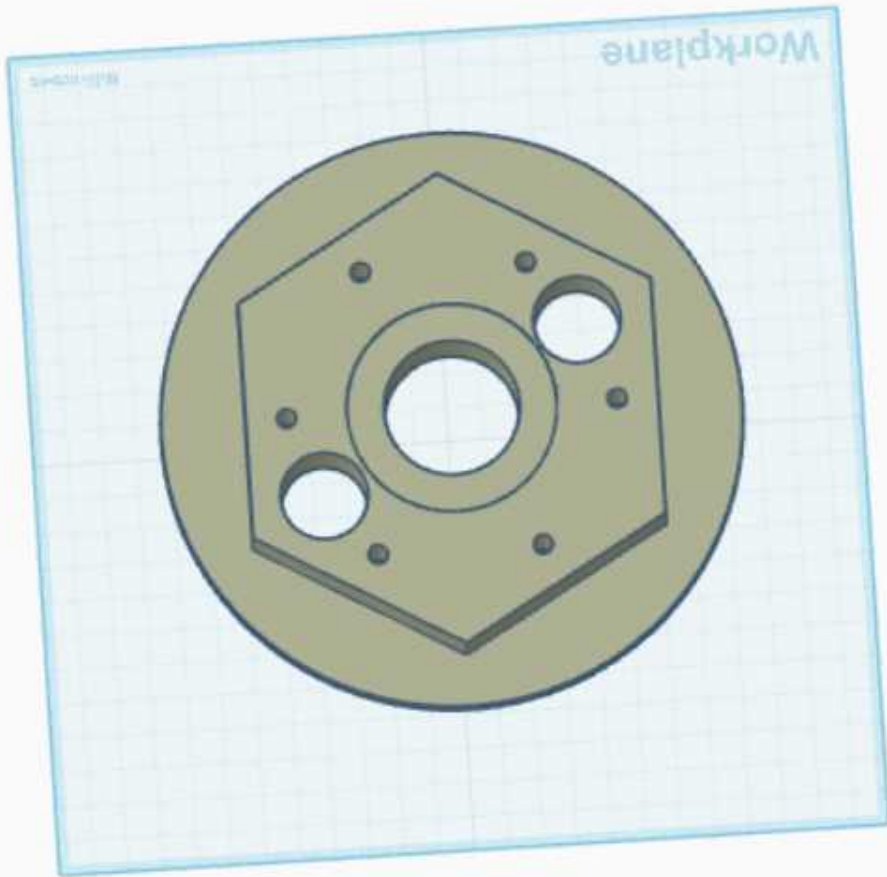
**1800W Parabolic
Solar Cooker
High Efficiency
Sun Oven 700-
1000°C Outdoor
Camping**

\$70.52

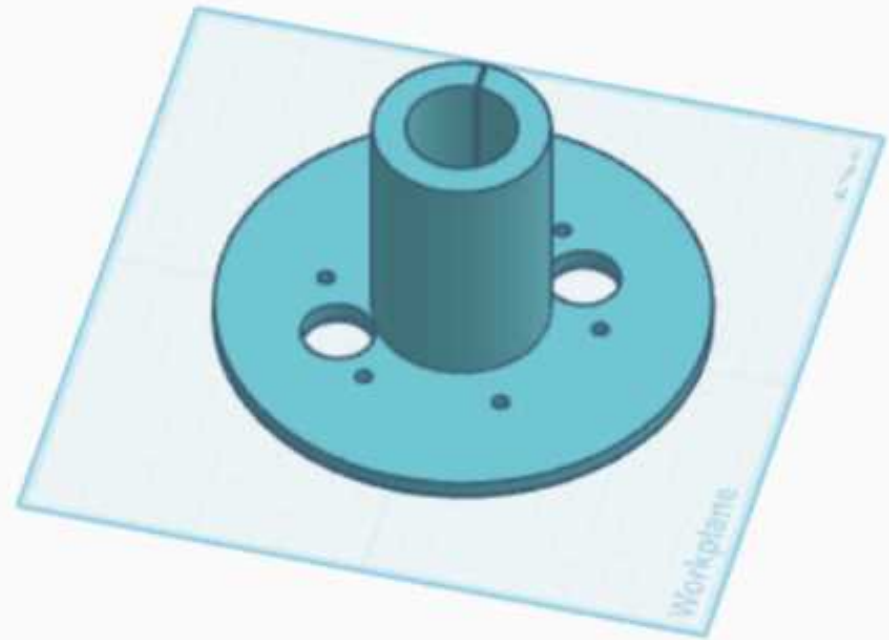
<https://www.amazon.com>

**Diameter 59 inches
Focal length roughly 23 inches
Material Steel**

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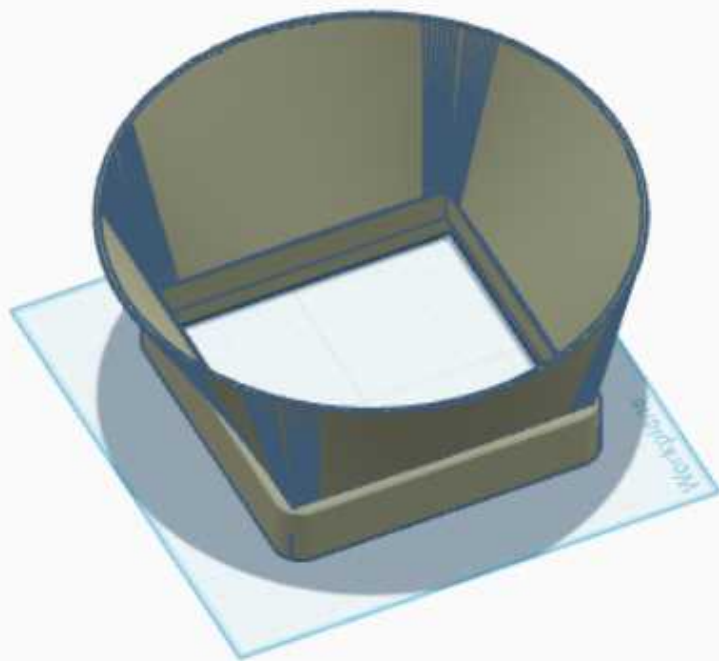
Center Support Feed Tube Front of dish



Center Support Feed Tube Back of dish

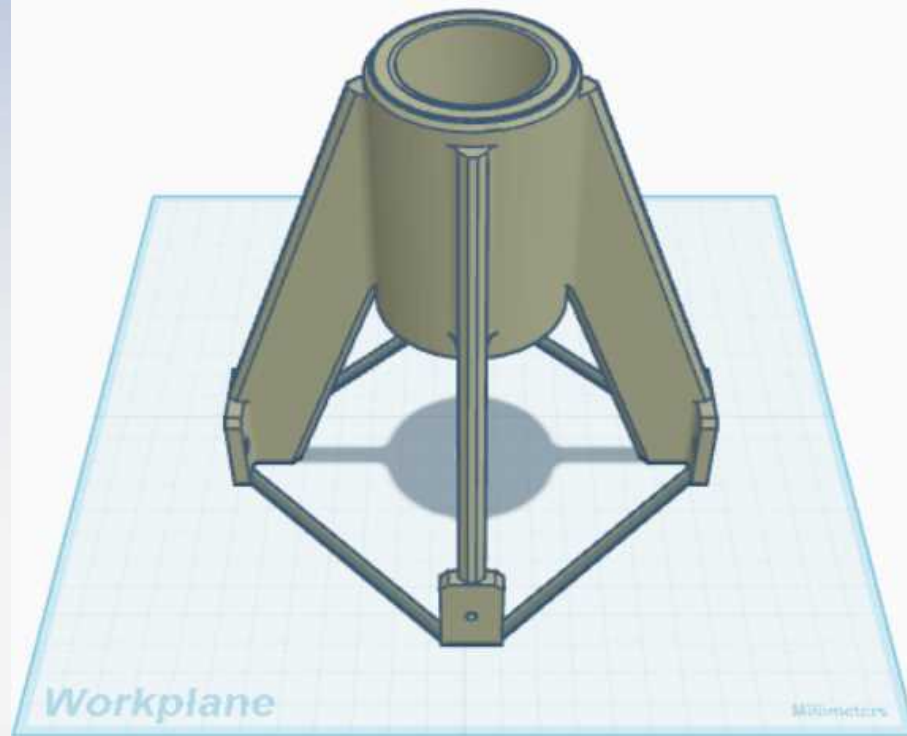
3D Printed PETG

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Square to round transition 100 mm high - 240 mm diameter

3D Printed PETG



!.5 inch Fiberglass Feed support

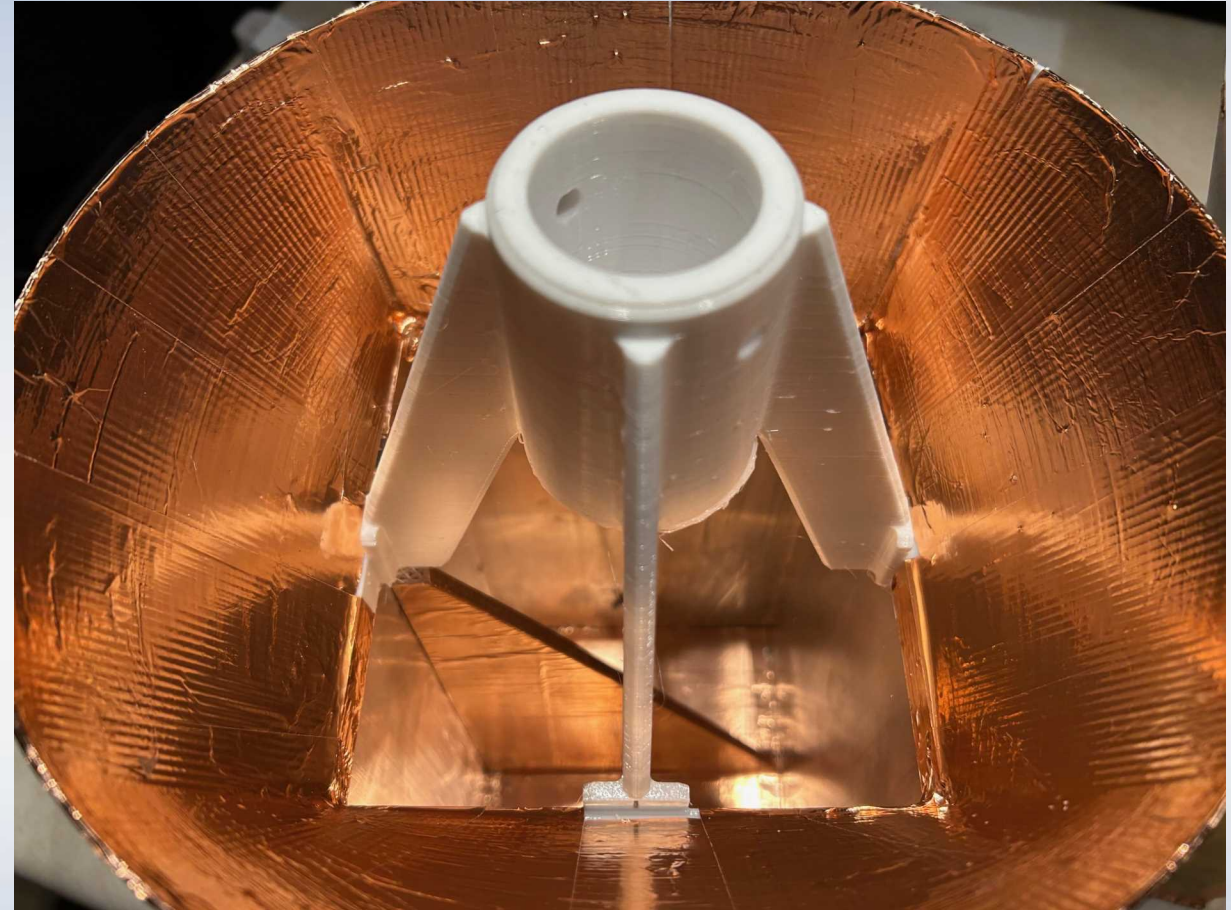
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3D printed (before Copper tape)

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Inside Septum Feed



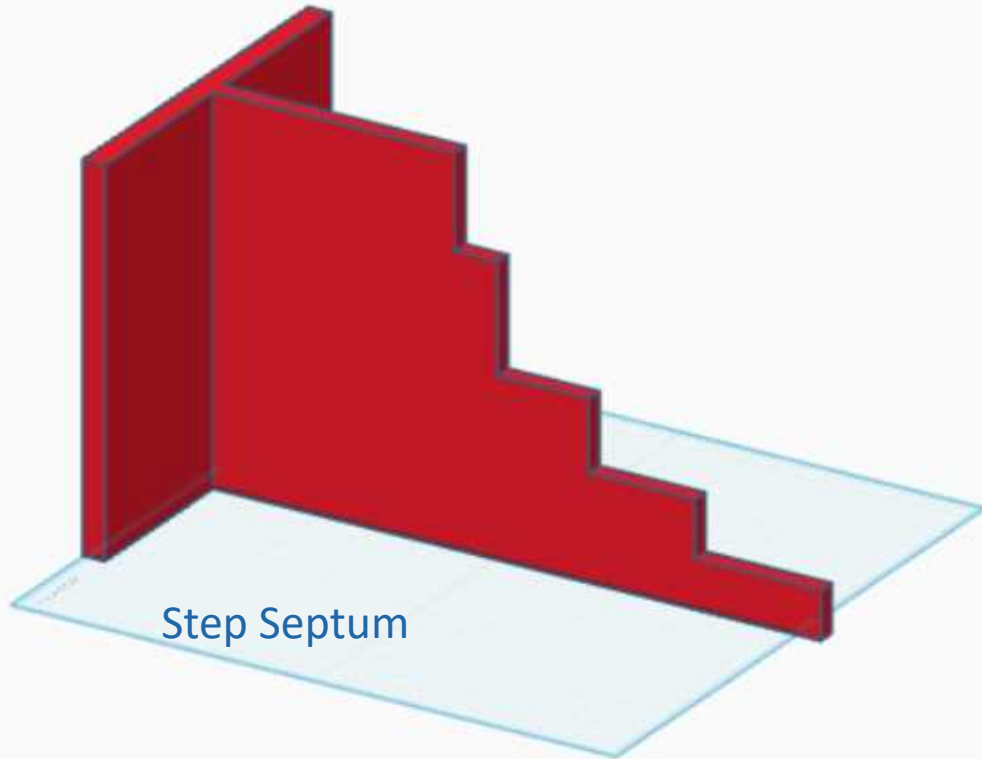
Spray UV coat all 3D printed pieces (Suggested)

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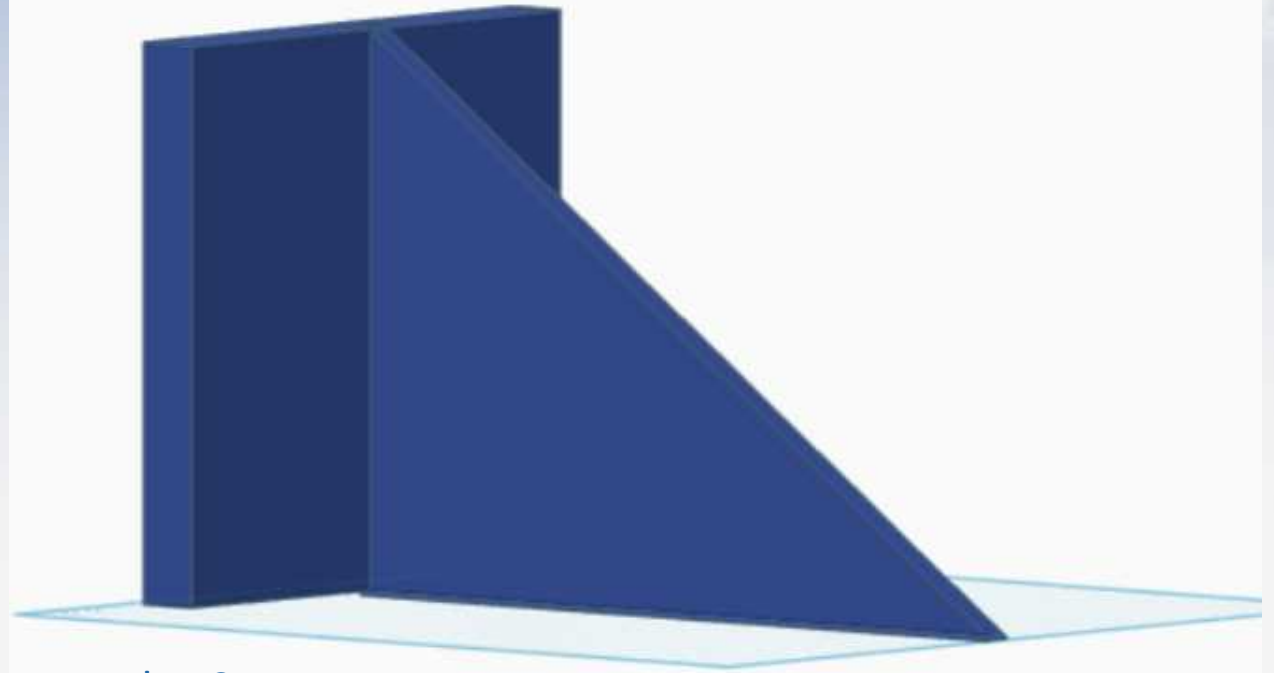


Copper Foil Tape
(2 inch X 66 FT)
with Conductive Adhesive
for Guitar and EMI Shielding, Crafts,
Electrical Repairs, Grounding
Size:50mmx20m-1p

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Step Septum



Wedge Septum
(The one I used)

**3D Printed PETG With Copper tape
Or
.25 inch aluminum plate
(expensive 6x21 inches \$96 plus shipping)**

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Septum Feed Square Tube
.125 wall X 6X6 inches

Metal Supermarkets

T6 Sharp Corner 6.000 X 6.000 X 0.125
ALUMINUM 6061 SQUARE TUBE

250 mm (13 inches) \$73 Plus shipping
350 mm (15 inches) \$84 Plus shipping

(Buy 2 and the price drops per piece)

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Septum Support Tube

MAX Gain Systems

1-1/2" OD, 1-1/4" ID Fiberglass Round Tube

Pultruded Fiberglass Tube
Made in USA

Nominal Dimensions

Outer Diameter: 1.50"

Inner Diameter: 1.25"

Wall Thickness: 0.125"

46.5 inches

Color: Gray

\$20.45 Plus Shipping

1-1/2" OD, 1-1/4" ID Fiberglass Round Tube

SKU: RT-112-4G

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Solar Cooker with
Mylar tape removed

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250 mm long feed
Test for Sun Noise



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Preliminary feed test

SWR better than 1.3 to 1
Port to port Insolation
better than 20 dB

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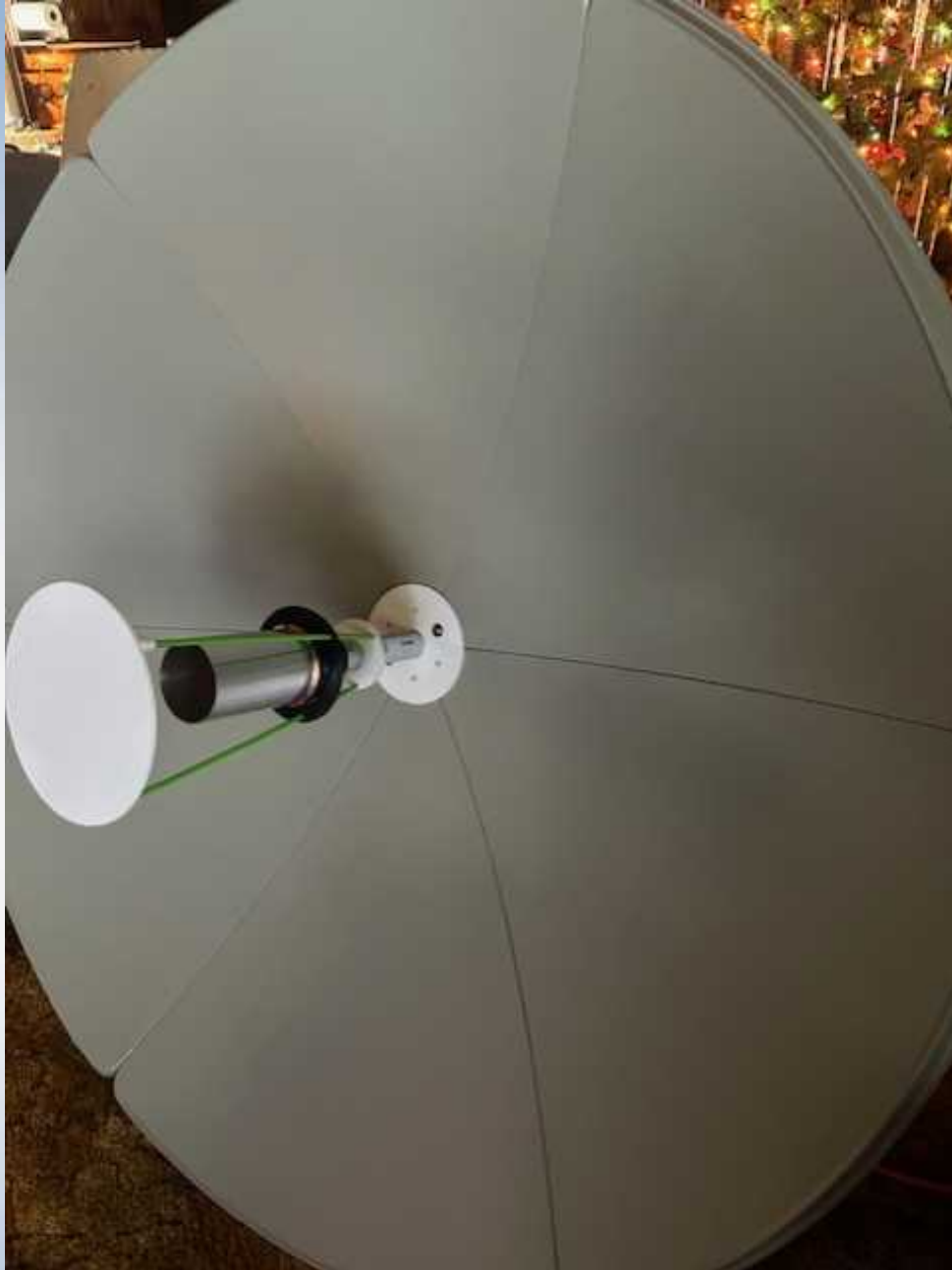


*Edge of Dish is a bit fragile
If rested on ground, seam is
strongest spot*



Reinforced dish edge with
3/4 Cable TV Hardline
Pop Rivet to edge

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5760 MHz
IMU feed W1GHZ Design
10 inch Sub Reflector

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Design of Septum feeds and dishes has been done by many Amateurs
This includes Optimization, Mounting, Positioners, Preamplifiers, Amplifiers

Some information Refer to:

Groups io- Moon Bounce <https://groups.io/g/Moon-Net/files>

KA1GT: https://bobatkings.com/radio/150cm_EME_dish.html

KB2SA: Feed Design

W2LPL: https://groups.io/g/Moon-Net/topic/1_5m_solar_cooker_23cm_4th/116720207

KB7Q: <https://kb7qgrid.blogspot.com/2025/09/15m-solar-cooker-conversion-for-emehttps://sub->

[Sub Lunar: lunar.com/products](https://sub-lunar.com/products)

EME News letter: <https://eme.radio/432-and-above-newsletter>

SimpleCalc:(OZ9AAR) <https://www.moonbounce.dk/hamradio/simplecalc.html>

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See you on
the Moon!

1296 MHz
2 meter Mesh dish

W6PQL amp
400 Watts at feed

QUESTIONS



1.5 meter OFFSet Dish

Soon for
5760 Mhz (50 Watts)
10 GHz (60 Watts)

QUESTIONS

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Another 3D printed Project Hybrid 10 GHz IMU feed for OFFSET dishes

