# TVHAM.com

## 23cm transmitter and receiver technical notes

This document contains technical information to help you use your 23cm transmitter and / or receiver. Latest technical information can be found at http://www.TVHAM.com.

### Power supply

The transmitter and receiver require a supply of 12 to 16V DC, **tip (center) positive**. Reverse polarity will cause very serious damage. Do NOT use less than 12V.

- The transmitter gives best output power at 13.8V or more.
- The heatsinks on the receiver get very hot over 15V, and run coolest at 12V.

### Video and audio connections

Video and audio connections (inputs on the Tx and outputs on the Rx) are as follows:

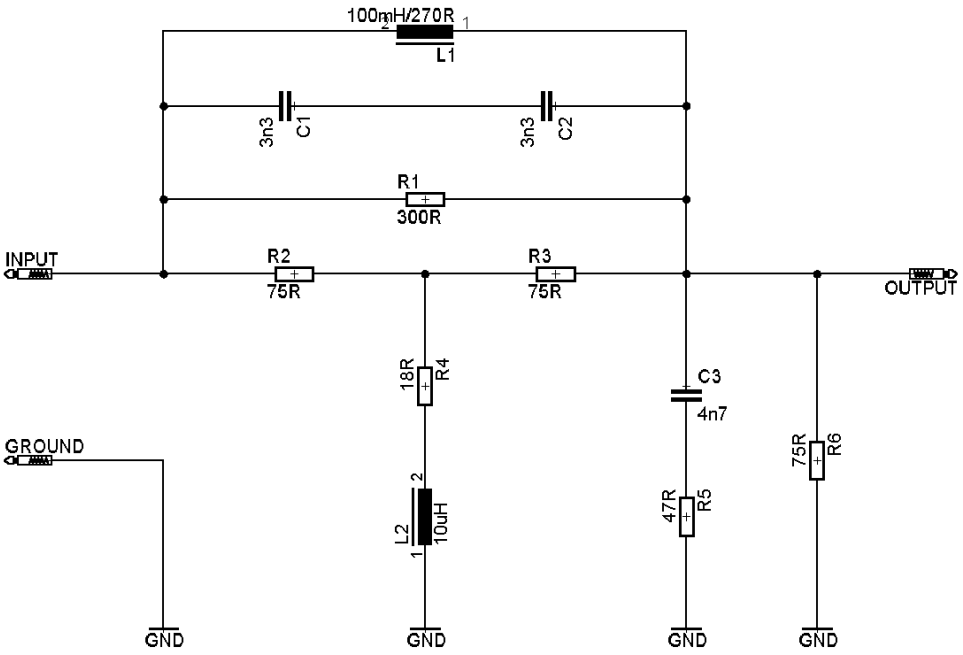
- Yellow socket - composite video
- White socket - audio for/from 6.0MHz subcarrier
- Red socket - audio for/from 6.5MHz subcarrier

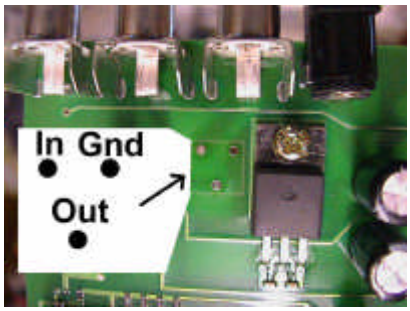
## Setting up the 23cm transmitter

As supplied, the transmitter has an input impedance in the region of 220 ohms, and the video gain (deviation) is set using the pre-set resistor on the board.

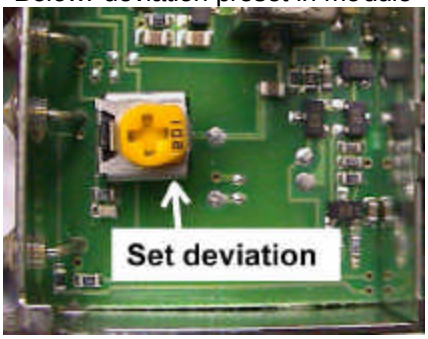
### CCIR pre-emphasis

The following circuit can be used to add CCIR pre-emphasis. Remove the existing deviation preset resistor to fit the circuit. Deviation can be set using the pre-set resistor inside the RF module.




*Above:* remove preset to fit circuit
*Below:* deviation preset in module




## Setting up the 23cm receiver

The pre-set resistor on the receiver is the video gain control. Set it for proper amplitude video output.

***Special notes for Gold and Platinum receivers***

These receivers are modified to improve the sensitivity and picture performance. On some receivers the receive center frequencies may shift slightly from those in the tuning charts shown here. This is only really noticeable when trying to receive weak signals, and the offset is constant across the band. You may get best results by tuning a little lower or higher than whatever frequency you want to receive. If you're brave, open the RF module and VERY SLIGHTLY adjust the air-spaced coil beside the larger IC. This is the video demodulator coil, and tweaking its length by the thickness of a hair will bring the receiver onto frequency. Be warned: the coil is fragile, and you only need to make a SLIGHT adjustment.

## 23cm transmitter and receiver operating frequencies

The following tables show the DIP switch settings for both the transmitter and receiver. Note that 0=off and 1=on, and SW1 is the switch nearest the LED.

Cautions: An appropriate transmitting license is required to operate the transmitter.
Note that the transmitter is capable of operating well outside the 23cm amateur band - take care to stay legal.

| Frequency (MHz) | SW 1 | SW 2 | SW 3 | SW 4 | SW 5 | SW 6 | SW 7 | SW 8 |
|---|---|---|---|---|---|---|---|---|
| 1240.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1240.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1241.0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1241.5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1242.0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1242.5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1243.0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1243.5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1244.0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1244.5 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1245.0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1245.5 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1246.0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1246.5 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1247.0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1247.5 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1248.0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1248.5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1249.0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1249.5 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1250.0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 1250.5 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 1251.0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 1251.5 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 1252.0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1252.5 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1253.0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1253.5 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1254.0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1254.5 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1255.0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1255.5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1256.0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1256.5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1257.0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1257.5 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1258.0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1258.5 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1259.0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1259.5 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1260.0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 1260.5 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 1261.0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 1261.5 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 1262.0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1262.5 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1263.0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1263.5 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1264.0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 1264.5 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 1265.0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 1265.5 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 1266.0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1266.5 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1267.0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1267.5 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1268.0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 1268.5 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 1269.0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 1269.5 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 1270.0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1270.5 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1271.0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1271.5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1272.0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1272.5 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

| Frequency (MHz) | SW 1 | SW 2 | SW 3 | SW 4 | SW 5 | SW 6 | SW 7 | SW 8 |
|---|---|---|---|---|---|---|---|---|
| 1273.0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1273.5 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1274.0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1274.5 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1275.0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1275.5 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1276.0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1276.5 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1277.0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1277.5 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1278.0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1278.5 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1279.0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1279.5 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1280.0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1280.5 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1281.0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1281.5 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1282.0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1282.5 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1283.0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1283.5 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1284.0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1284.5 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1285.0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1285.5 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1286.0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| 1286.5 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |
| 1287.0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 1287.5 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 1288.0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1288.5 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1289.0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1289.5 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1290.0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1290.5 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1291.0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1291.5 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1292.0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1292.5 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1293.0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1293.5 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1294.0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1294.5 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1295.0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1295.5 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1296.0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 1296.5 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 1297.0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |

| Frequency (MHz) | SW 1 | SW 2 | SW 3 | SW 4 | SW 5 | SW 6 | SW 7 | SW 8 |
|---|---|---|---|---|---|---|---|---|
| 1297.5 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 1298.0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1298.5 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1299.0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1299.5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1300.0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 1300.5 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 1301.0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 1301.5 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 1302.0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1302.5 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1303.0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1303.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1304.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1304.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1305.0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1305.5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1306.0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1306.5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1307.0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1307.5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1308.0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1308.5 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1309.0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1309.5 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1310.0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1310.5 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1311.0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1311.5 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1312.0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1312.5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1313.0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1313.5 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1314.0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1314.5 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1315.0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1315.5 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1316.0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1316.5 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1317.0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1317.5 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1318.0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1318.5 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1319.0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1319.5 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1320.0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1320.5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1321.0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1321.5 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |

| Frequency (MHz) | SW 1 | SW 2 | SW 3 | SW 4 | SW 5 | SW 6 | SW 7 | SW 8 |
|---|---|---|---|---|---|---|---|---|
| 1322.0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1322.5 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1323.0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1323.5 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1324.0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1324.5 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1325.0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1325.5 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1326.0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1326.5 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1327.0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1327.5 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1328.0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1328.5 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1329.0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1329.5 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1330.0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1330.5 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1331.0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1331.5 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1332.0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1332.5 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1333.0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1333.5 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1334.0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1334.5 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1335.0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1335.5 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1336.0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1336.5 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1337.0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1337.5 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1338.0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 1338.5 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 1339.0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| 1339.5 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| 1340.0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1340.5 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1341.0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1341.5 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1342.0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1342.5 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1343.0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1343.5 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1344.0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1344.5 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1345.0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1345.5 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1346.0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1346.5 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1347.0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1347.5 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1348.0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1348.5 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1349.0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1349.5 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1350.0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1350.5 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1351.0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1351.5 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1352.0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 1352.5 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 1353.0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 1353.5 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 1354.0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1354.5 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1355.0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1355.5 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1356.0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1356.5 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1357.0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1357.5 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1358.0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1358.5 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1359.0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1359.5 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1360.0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1360.5 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1361.0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1361.5 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1362.0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1362.5 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1363.0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1363.5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1364.0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1364.5 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1365.0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1365.5 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1366.0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1366.5 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1367.0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1367.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |