

DATE 9/17/57
 SH. 1 OF 2
 COMPILED BY
A.J.J.

TMC SPECIFICATION NO. S-347

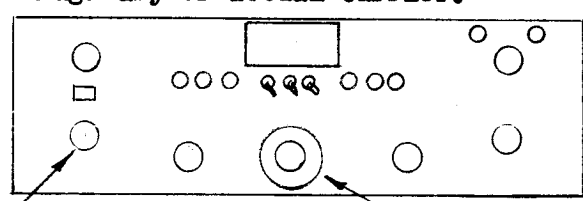
TITLE: DETERMINING CRYSTAL OR MO FREQUENCIES FOR THE JOB

APPROVED AJJ MODEL SBE Page Issued A

I. For Crystal or MO operation from 4.27 Mcs. - 32.27 Mcs.

$$F_{\text{xtal or mo}} = 2.000 (N) - F_{\text{output}} + .270$$

Where all frequencies are in Mcs. and F_{output} is assumed to be the position of the imaginary or actual carrier.



| <u>MODULATOR BAND</u> | <u>N</u> | <u>OUTPUT BAND</u> |
|-----------------------|----------|--------------------|
| 4.27 - 6.27 | 4 | 4 - 8 |
| 6.27 - 8.27 | 5 | 4 - 8 & 8 - 16 |
| 8.27 - 10.27 | 6 | 8 - 16 |
| 10.27 - 12.27 | 7 | 8 - 16 |
| 12.27 - 14.27 | 8 | 8 - 16 |
| 14.27 - 16.27 | 9 | 8 - 16 & 16 - 32 |
| 16.27 - 18.27 | 10 | 16 - 32 |
| 18.27 - 20.27 | 11 | 16 - 32 |
| 20.27 - 22.27 | 12 | 16 - 32 |
| 22.27 - 24.27 | 13 | 16 - 32 |
| 24.27 - 26.27 | 14 | 16 - 32 |
| 26.27 - 28.27 | 15 | 16 - 32 |
| 28.27 - 30.27 | 16 | 16 - 32 |
| 30.27 - 32.27 | 17 | 16 - 32 |

Example: Suppose an output frequency of 10.5 Mcs. is desired

$$F_{\text{xtal or mo}} = 2.000 (7) - 10.500 + .270$$

$$F_{\text{xtal or mo}} = 3.770 \text{ Mcs.}$$

DATE 9/17/57
SH. 2 OF 2
COMPILED BY
A. J. J.

TMC SPECIFICATION NO. S-347

TITLE: DETERMINING CRYSTAL OR MO FREQUENCIES FOR THE

JOB

APPROVED

AJJ

MODEL SBE

Page issued A

II. For Crystal or MO operation from 2 Mcs. - 4.27 Mcs.

| OPERATING FREQUENCY RANGE | MODULATOR BAND | OUTPUT BAND | CRYSTAL | MO | SEE NOTE |
|---------------------------------|-------------------|----------------|----------|----------|-------------|
| 2 - 3.73 | 2 - 4.27 | 2 - 4 | Fo + 270 | Fo + 270 | |
| 3.73 - 4.00 | 2 - 4.27 | 2 - 4 | Fo + 270 | Fo - 270 | 1 |
| 4.00 - 4.27 | 2 - 4.27 | 4 - 8 | Fo + 270 | Fo - 270 | 2 |

NOTES: 1. Upper and lower sidebands will be reversed in the region of 3.73 Mcs. to 4.00 Mcs. when using the MO.

2. Upper and lower sidebands will be reversed in the region of 4 Mcs. to 4.27 Mcs. when using the Crystal.

Crystal used: CR-27/U

