



AEROCOMM

A Wireless Systems Company

Federal Communications Commission
EQUIPMENT AUTHORIZATION BRANCH
7435 Oakland Mills Road
Columbia, MD 21046

Re: Frequency determining circuitry
FCCID: PJ6-5075TX-F-15

To Whom It May Concern:

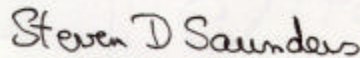
AeroComm, Inc. designed its own oscillator to determine the output frequency in our transmitter FCCID: PJ6-5075-F-15.

The architecture of the design of our transmitter does not allow the end user to change the pre-assigned frequency in the field. The unit is a crystal controlled Colpitts oscillator, (crystal specifications attached), and it will only be supplied to the end users as factory tuned.

The crystals that are supplied by the manufacturer, Bomar, are model # BC1AAF332-____ where the last 8 blanks are the frequency cut of the crystal. Using the multiplying factor of 36 will produce the output frequency of the transmitter.

The oscillator circuit is Q1 and is shown in the attached schematic 50757-04-14. The oscillator is controlled by crystal Y1. Y1 is a fundamental mode crystal and the cut is an At cut. This cut has a frequency vs. temperature profile, which is cubic. The oscillator feedback capacitors are C10 and C11: these capacitors have a negative temperature coefficient of N250. Oscillator frequency adjustment is made via the trimmer capacitor C4. Additional temperature compensation is provided by R7 and C5.

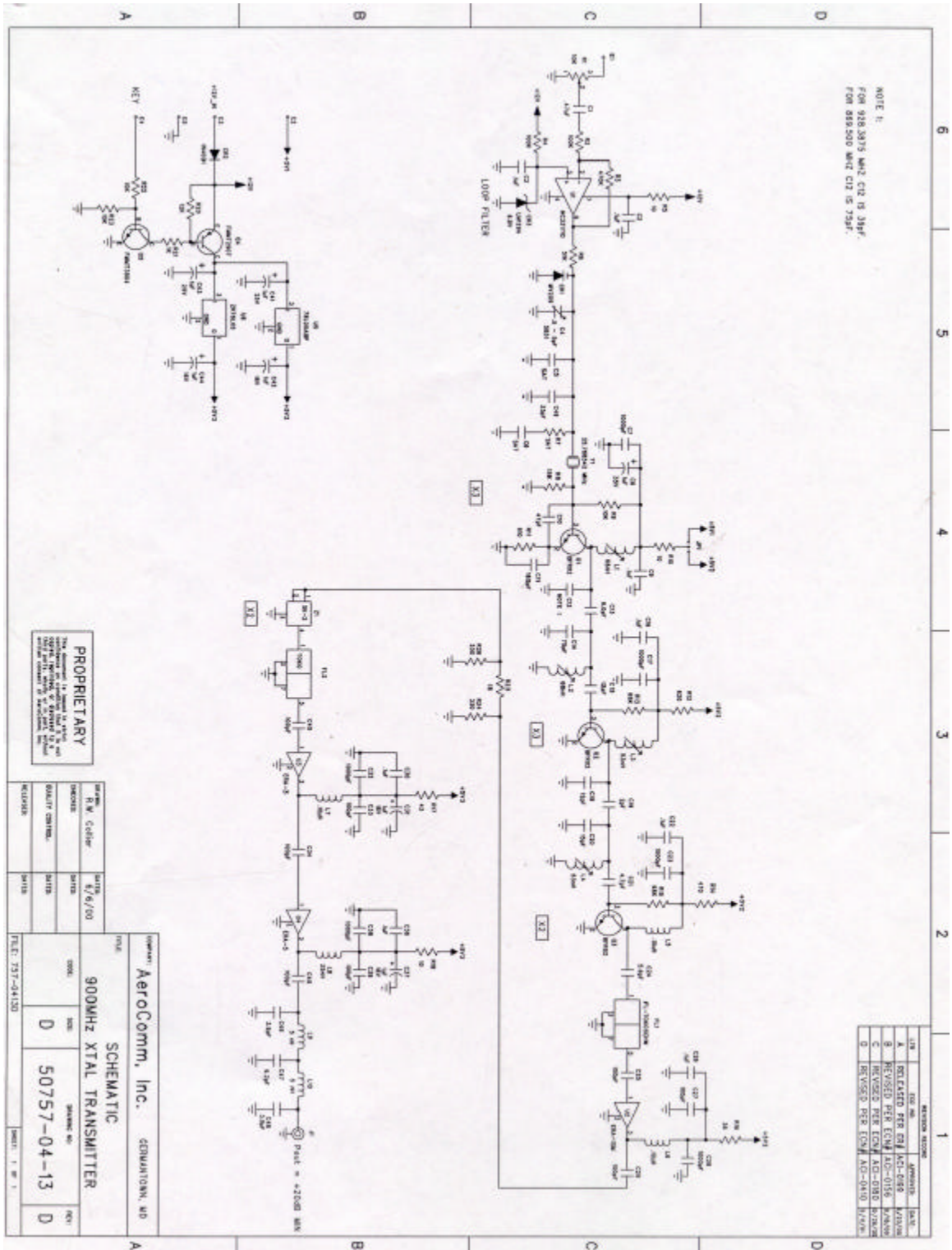
Sincerely,



Steven Saunders
Engineering
AeroComm, Inc.

NOTE 1:
 FOR 928.3875 MHz, C12 IS 38pF.
 FOR 959.500 MHz, C12 IS 75pF.

DATE	REV	DESCRIPTION	BY
1/18	1	INITIALS FOR ECU	AD-016
2/18	2	REVISED PER ECU	AD-016
3/18	3	REVISED PER ECU	AD-016
4/18	4	REVISED PER ECU	AD-016



PROPRIETARY
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AeroComm, Inc. COMMUNION, MD		SCHEMATIC	
900MHz XTAL TRANSMITTER		50757-04-13	
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1/18	1	INITIALS FOR ECU	AD-016
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TX Crystal Specifications:

RF Frequency (Fo):	928.00000 MHz
Crystal Use:	TX
XTAL Frequency:	25.77777778 MHz
Formula:	Fo/36
Overtone:	Fundamental
Circuit Condition:	24 pF
Holder Style:	HC45/U2
Calibration Temp:	25°C
Freq. Tolerance @Calibration:	± 5 ppm
Operating Temp. Range:	-30°C to +60°C
Freq. Tolerance Over Operating Temp. Range:	± 10 ppm
Drive Level:	0.5 mW
Equivalent Series Resistance:	20 Ω maximum
Parallel Capacitance;	5.20 to 6.20 pF typical