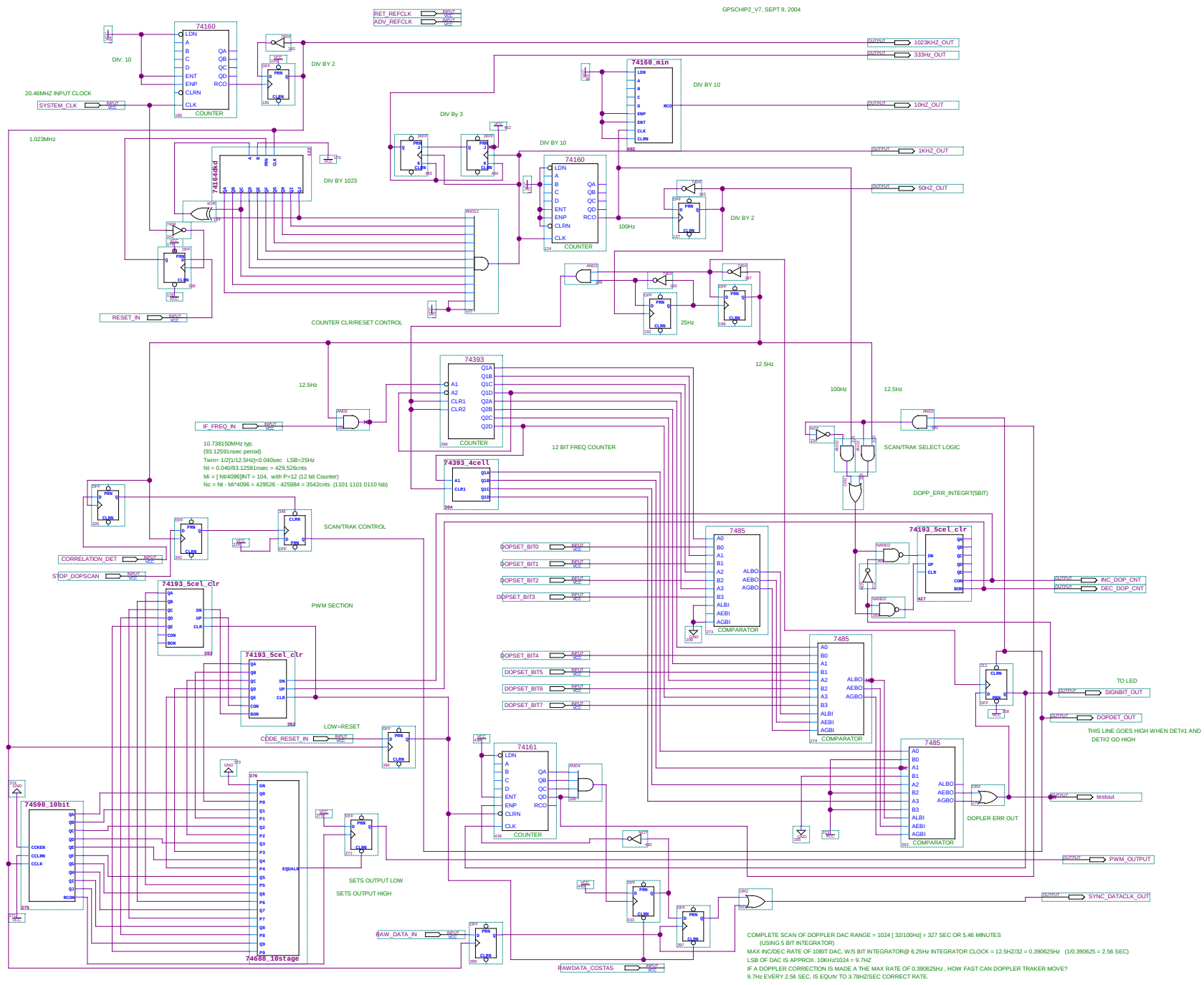
GPSCHIP2_V7, SEPT 9, 2004
74160
COUNTER
DIV. 10
DIV BY 2
20.46MHZ INPUT CLOCK
SYSTEM_CLK
1.023MHz
74164dkd
DIV BY 1023
RESET_IN
COUNTER CLR/RESET CONTROL
RET_REFCLK
ADV_REFCLK
DIV By 3
DIV BY 10
74160_min
1023KHZ_OUT
333Hz_OUT
10HZ_OUT
1KHZ_OUT
50HZ_OUT
100Hz
25Hz
12.5Hz
74393
12 BIT FREQ COUNTER
IF_FREQ_IN
10.738150MHz typ.
(93.12591nsec period)
Twin= 1/2[1/12.5Hz]=0.040sec LSB=25Hz
Nt = 0.040/93.12591nsec = 429,526cnts
Mi = [Nt/4096]INT = 104, with P=12 (12 bit Counter)
Nc = Nt - Mi*4096 = 429526 - 429984 = 3542cnts (1101 1101 0110 lsb)
74393_4cell
SCAN/TRAK SELECT LOGIC
DOPP_ERR_INTEGRT(5BIT)
SCAN/TRAK CONTROL
CORRELATION_DET
STOP_DOPSCAN
74193_5cel_clr
PWM SECTION
DOPSET_BIT0
DOPSET_BIT1
DOPSET_BIT2
DOPSET_BIT3
DOPSET_BIT4
DOPSET_BIT5
DOPSET_BIT6
DOPSET_BIT7
7485
COMPARATOR
INC_DOP_CNT
DEC_DOP_CNT
TO LED
SIGNBIT_OUT
DOPDET_OUT
THIS LINE GOES HIGH WHEN DET#1 AND DET#2 GO HIGH
LOW=RESET
CODE_RESET_IN
74161
DOPLER ERR OUT
testout
74590_10bit
74688_10stage
SETS OUTPUT LOW
SETS OUTPUT HIGH
PWM_OUTPUT
SYNC_DATACLK_OUT
RAW_DATA_IN
RAWDATA_COSTAS
COMPLETE SCAN OF DOPPLER DAC RANGE = 1024 [32/100Hz] = 327 SEC OR 5.46 MINUTES
(USING 5 BIT INTEGRATOR)
MAX INC/DEC RATE OF 10BIT DAC, W/5 BIT INTEGRATOR@ 6.25Hz INTEGRATOR CLOCK = 12.5HZ/32 = 0.390625Hz (1/0.390625 = 2.56 SEC)
LSB OF DAC IS APPROX. 10KHz/1024 = 9.7HZ
IF A DOPPLER CORRECTION IS MADE A THE MAX RATE OF 0.390625Hz , HOW FAST CAN DOPPLER TRAKER MOVE?
9.7Hz EVERY 2.56 SEC, IS EQUIV TO 3.78HZ/SEC CORRECT RATE.