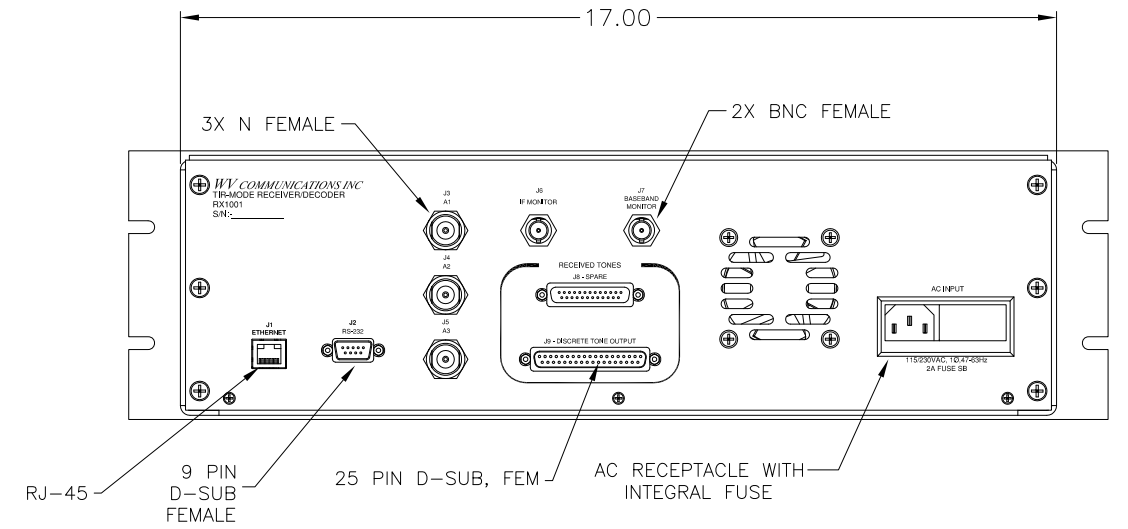
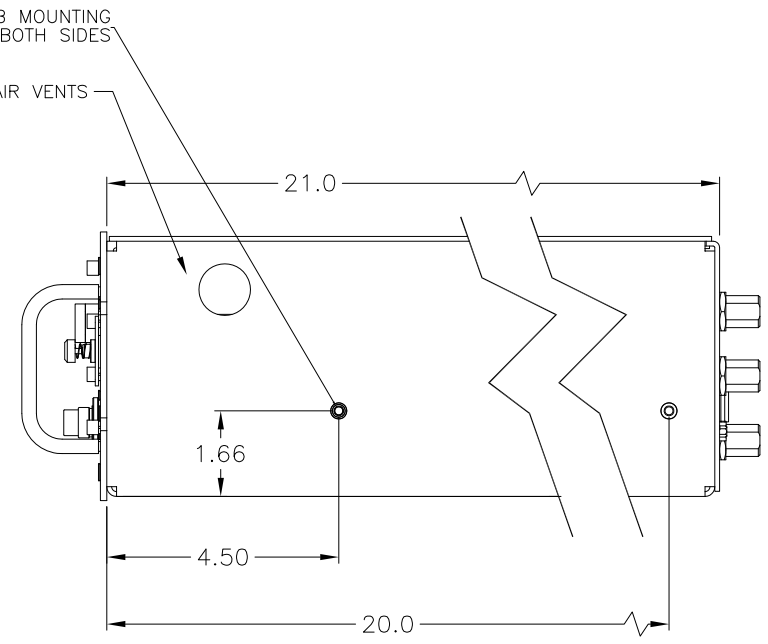
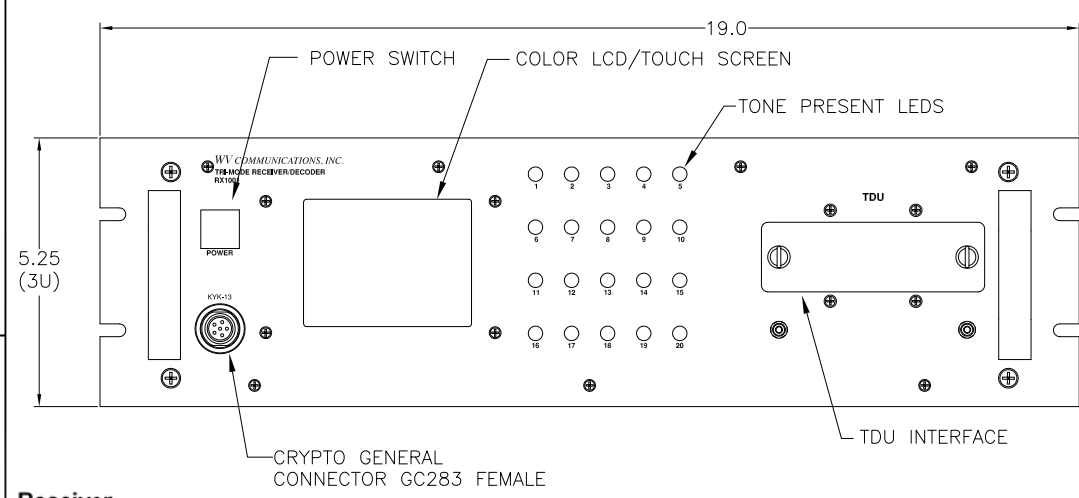


**** PROPRIETARY DATA ****
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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	RELEASED	10JUN09	GG



Receiver
 Frequency Range: 370.0 – 450.0MHz in 100.0KHz steps
 Frequency Stability: ± 0.002 % Maximum/Environment & 24 hours
 Noise Figure: 6dB Maximum
 Spurious & Image Rejection: -60dBc Maximum
 LO Reradiation: -60dBm Maximum
 RF Input Impedance: 50 Ohm Nominal
 VSWR Input: 2:1 Maximum (Ref 50 Ohm)
 RF Input Dynamic Range: -104 to +13dBm
 Signal Strength/Deviation Indication: Via front panel LCD & Ethernet
 Signal Strength Reporting Accuracy: ± 2dB Maximum
 Peak Deviation Reporting Accuracy: ± 7% Maximum of received carrier deviation @ RF Input Level +13 to -85 dBm

IF 3 dB Bandwidth: 500 ± 50 KHz
 IF 60 dB Bandwidth: 1500 ± 150 KHz
 Communication: Via Ethernet Command/Monitoring of Tones, RF Input Power, Tone Deviation, Messaging Status

IRIG Decoder
 Number of IRIG Tones: 20 Channels (See Tone Frequency Table)
 -2 dB Tone Bandwidth: ±1% Minimum
 -20 dB Tone Bandwidth: ±4% Maximum
 Simultaneous Tone Detection: 1 to 6 Tones
 Decoder Carrier Deviation Range: ± 30 KHz Nom/Tone (± 20 to ± 35 KHz range)
 Decoder Response Time: 10mSec Maximum
 Decoder Output: Via front panel LED & J1 Ethernet
 Optional Decoder Output: Via rear panel J9 TTL Levels
 Decoder Action: Should not latch. A continuous signal should be emitted while a tone is being received
 Tone Duration: 20mSec Minimum
 LED Action: Should not latch since IRIG tones are continuous; i.e. LED's are illuminated when tone(s) are being received

Secure Decoder
 Number of Tones: 8 Channels (See Table for Precise Tones)
 -2 dB Tone Bandwidth: ± 40Hz Minimum
 -20 dB Tone Bandwidth: ± 600Hz Maximum
 Simultaneous Tone Detection: 2 Tones
 Secured Tone Detection: Ethernet via J1
 Decoder Carrier Deviation: ± 30 to ± 3KHz for each tone
 Decoder Response Time: 10 ms Maximum (5 ms Typical)

EFTS Decoder
 Three modes:
 Encrypted, Error corrected raw
 Decrypted
 Decoded to commands and fields
 64-bit digital word per RCC 208-06
 144-bit message frame per RCC 208-06
 50 messages per second
 Manchester Bi-Ø Level Decoding per IRIG 106
 Triple Data Encryption Standard (DES) Unit (TDU)
 TDU support, including key selection and zeroing

Environmental
 Operating Temperature Range: 0 to +50°C
 Operating relative Humidity: 0 – 95 %
 Operating Altitude: 0-10,000 Feet
 MTBF: 20,000 hours Minimum
 MTTR: 1 Hour Maximum down to card level
 AC Input: 115/230 VAC, 1Ø 47-63Hz Auto-Switch at 2/1 Amp Maximum
 Front Panel Color: Gray per FED-STD-595 - 26307

J1 ETHERNET	
PIN NO.	PIN NAME
1	TX+
2	TX-
3	RX+
4	N/C
5	N/C
6	RX-
7	N/C
8	N/C

J2 RS-232C	
PIN NO.	PIN NAME
1	N/C
2	RX
3	TX
4	N/C
5	GND
6	N/C
7	N/C
8	N/C
9	N/C

J9, 25 PIN D-SUB					
PIN NO.	TONE/ INPUT	PIN NO.	TONE/ INPUT	PIN NO.	TONE/ INPUT
1	1	11	11	21	N/C
2	2	12	12	22	N/C
3	3	13	13	23	N/C
4	4	14	14	24	N/C
5	5	15	15	25	GND
6	6	16	16		
7	7	17	17		
8	8	18	18		
9	9	19	19		
10	10	20	20		

TONE ON= TTL '0' SHORT TO GND
 TONE OFF= TTL '1' OPEN

CRYPTO	
PIN LTR.	PIN NAME
A	REF/RTN
B	N/U
C	REQUEST
D	DATA
E	CLOCK
F	N/U

TONE/FREQUENCY TABLE				
TONE	IRIG FREQUENCY (KHz)	SECURE FREQUENCY (KHz)	TONE	IRIG FREQUENCY (KHz)
1	7.50	7.35	11	25.01
2	8.46	8.40	12	28.21
3	9.54	9.45	13	31.83
4	10.76	10.50	14	35.90
5	12.14	11.55	15	40.49
6	13.70	12.60	16	45.68
7	15.45	13.65	17	51.52
8	17.43	15.45	18	58.12
9	19.66	--	19	65.56
10	22.17	--	20	73.95

Secure Tone

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: <small>FRACTIONS DECIMALS ANGLES HOLES ± 1/64 .XXX.01 ±0°30' .XXX.005 .XXX.005 .XXX.003 .XXX.001 MACHINED FINISH: 32 RMS REMOVE BURRS .005 MAX</small>		APPROVALS	DATE	WV Communications 1176 Tourmaline Dr. Newbury Park, CA RECEIVER/DECODER TRI- MODE IRIG, SECURE, EFTS RX1001 SIZE CAGE CODE DWG. NO. REV D 1GFQ7 050-50710 A SCALE NONE SHEET 1 OF 1	
MATERIAL		DRAWN	G. GODDARD		10JUN09
FINISH		CHECKED	GUY G.		10JUN09
NEXT ASSEMBLY USED ON		MECH ENGR	GG		10JUN09
APPLICATION		ELEC ENGR	JT		10JUN09
DO NOT SCALE DRAWING		PRODUCTION	AM	10JUN09	
		Q.A.	UY	10JUN09	

REV. NO. 050-50710 DC-PH04-0011-3, REV. C, 06/09