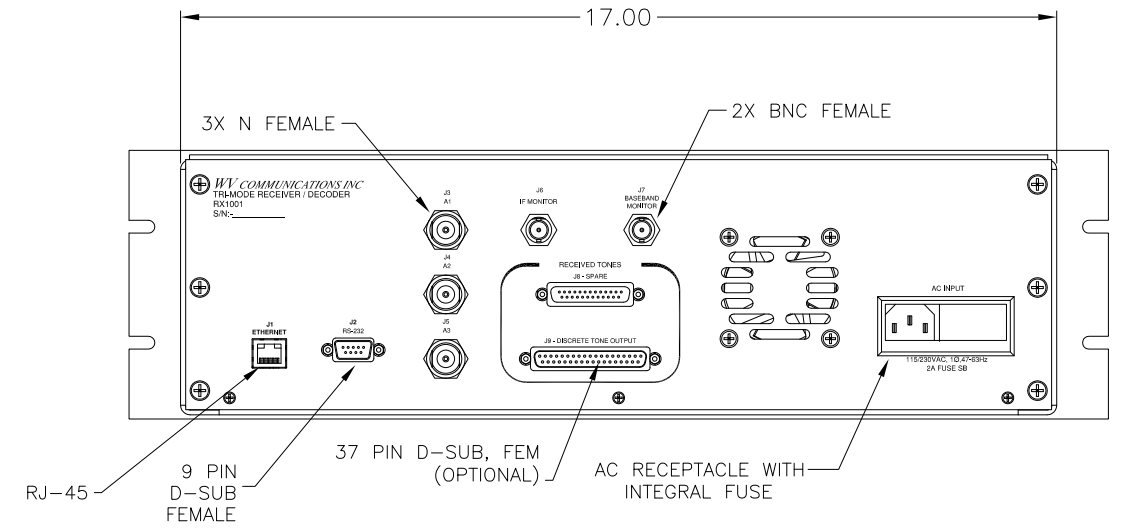
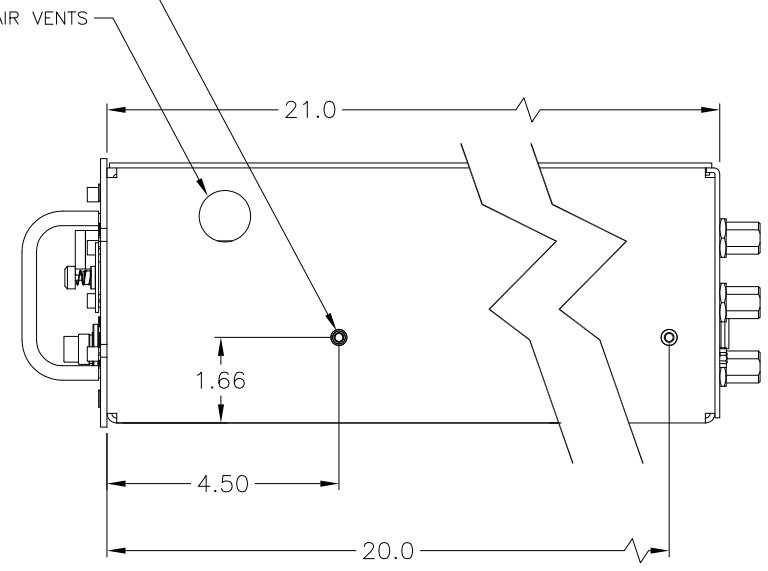
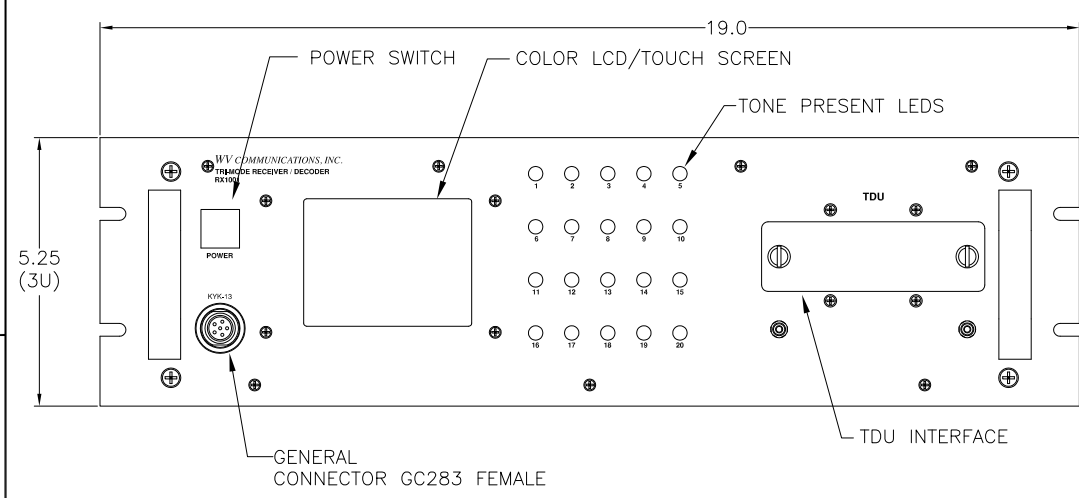


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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
A		RELEASED	1/11/2011	TT



**Receiver**  
 Frequency Range: 370.0 – 450.0MHz in 100.0KHz steps  
 LO Frequency Stability: ± 0.0005% Maximum/Environment & 24 hours  
 Noise Figure: 6dB Maximum  
 Spurious & Image Rejection: -60dBc Maximum  
 LO Reradiation: -60dBm Maximum  
 RF Input Impedance: 50Ω Nominal  
 VSWR Input: 2:1 Maximum (Ref 50Ω)  
 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: ±10% Maximum of received carrier deviation @ RF

IF 3 dB Bandwidth: 500 ± 50KHz  
 IF 60 dB Bandwidth: 1500 ± 150KHz  
 IF Monitor level: +6dBm Nominal over RF input -100 to +13dBm  
 Baseband Monitor level: 1V p-p for 30KHz peak Deviation into 50Ω Load  
 Communication: Via RS-232 & 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:  
 EFTS Command Format: Encrypted, Error corrected raw Decrypted  
 EFTS Message Format: Decoded to commands and fields  
 EFTS Bit & Message Rate: 64-bit digital word per RCC 208-06  
 EFTS Decoding: 144-bit message frame per RCC 208-06  
 Decryption Device: 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

KYK-13	
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        MACHINED FINISH: 32 RMS REMOVE BURRS .005 MAX</small>		APPROVALS	DATE
900-50256	RX1001	DRAWN G. GODDARD	6/10/2009
NEXT ASSEMBLY	USED ON	CHECKED GUY G.	10JUN09
		MECH ENGR GG	10JUN09
		ELEC ENGR JT	10JUN09
		PRODUCTION AM	10JUN09
		Q.A. UY	10JUN09

<b>WV Communications</b>		1176 Tourmaline Dr. Newbury Park, CA	
<b>VERIFICATION RECEIVER/DECODER TRI-MODE IRIG/SECURE KYK13/EFTS RX1001</b>			
SIZE	CAGE CODE	DWG. NO.	REV
D	1GFQ7	050-50710	A
SCALE	NONE	SHEET	1 OF 1

APPLICATION	DO NOT SCALE DRAWING
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DWG. NO. 050-50710  
 REV. C. 06/09