

USER MANUAL

Transceiver

Models : TX-125EN \ TX-125ENA

WARNING

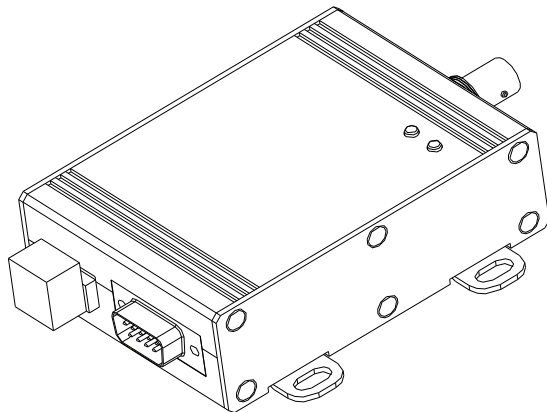
This Machine is a high-power and high-radiation product. When user installs the antenna and operates this product, it must be 2-3 meters or above the distance far away from the human body.

Attention

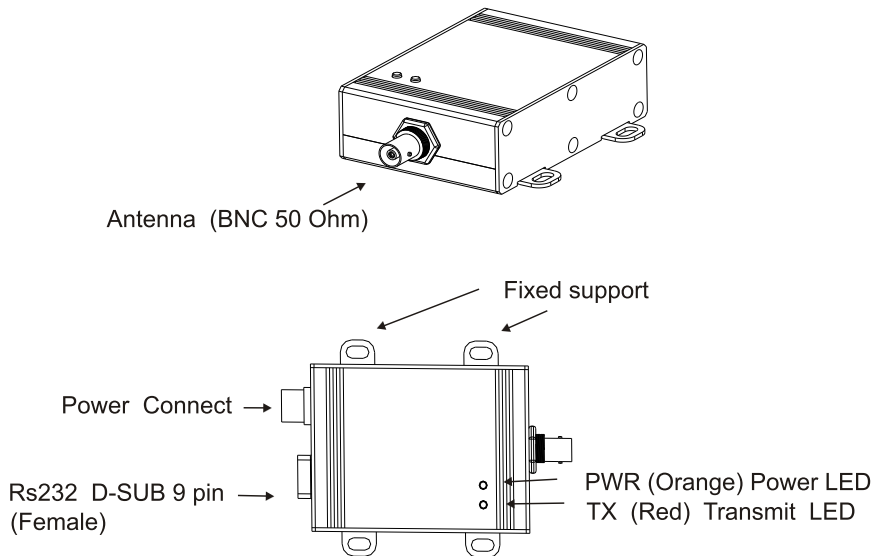
Be aware of following situations ,which will help to extend the life cycle of Transmitter :

- ☠ Don't change transmitter or tamper with its original appearance.
- ☠ Don't put transmitter close to a heat source or in direct sunlight.
- ☠ Don't put transmitter in dust , moisture or on uneven surface.
- ☠ Don't soak transmitter into the water.
- ☠ Never operate the device without the correct Gold Apollo antenna or a suitable artificial load , connected.
- ☠ Don't operate this equipment in environments containing explosive materials or vapor. This includes petrol service stations .

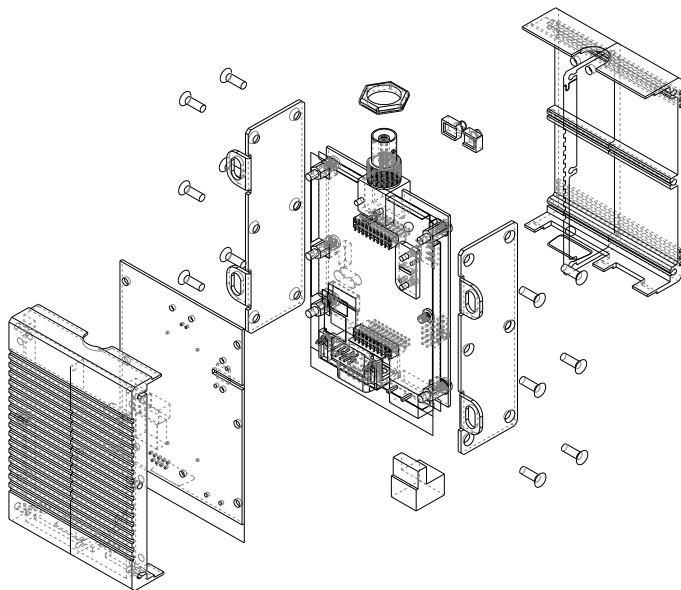
Outlook



Function \ Location



Internal structure



System Specifications :

1. Frequency Range : UHF=440MHz~470MHz
2. Channel Spacings : 12.5KHz , 25KHz
3. RF Output Power : 5W , 1W
4. Modulation Type : F3D , F3E
5. Intermediate Frequency : 45MHz & 450KHz
6. Number of Channels : 16
7. Frequency Source : Synthesizer
8. Power Supply : DC 10V~14V
9. Temperature Range : -30°C~60°C
10. Current Consumption
 - Standby : 100mA ,
 - TX(5W) : <2A ,
 - TX(1W) : <1A ,

Transmitter :

1. Carrier Power

Hi : 5W+/-0.5dB ,
Low : 1W+/-0.5dB .

2. Frequency Error :+/-5ppm@VHF , +/-3ppm@UHF .

3. Frequency Deviation

25KHz Channel Spacing : 5KHz~3.8KHz(Peak)
12.5KHZ Channel Spacing : 2.5KHz~1.8KHz(Peak)

4. Audio Frequency Response : 300KHz~2.5KHz-6dB

5. Adjacent Channel Power : <70dBc

6. Conducted Spurious Emission : -57dBc

Receiver

1. Sensitivity (@12dB SINAD) : $<-118\text{dBm}$
2. Adjacent Channel Selectivity
 - 25KHz Channel Spacing : $>60\text{dB}$
 - 12.5KHZ Channel Spacing : $>52\text{dB}$
3. Spurious Response Rejection : 70dB
4. Image Response : $>70\text{dB}$
5. IF Response : $>70\text{dB}$
6. Intermodulation Response Rejection
 - $\pm 25\text{kHz}/50\text{kHz}$: 65dB
 - $\pm 50\text{kHz}/100\text{kHz}$: 65dB
7. AF Distortion : $<5\%$
8. LO Frequency Temperature Stability : $<3\text{ppm}$

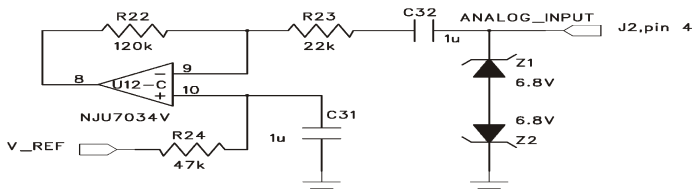
1. I/o PORT : DB-9 Connector

PIN 1.-----NC (FOR TX125EN) ; ALARM 1 (FOR TX125ENA)
PIN 2.-----TXD
PIN 3.-----RXD
PIN 4.-----Audio MOD IN
PIN 5.-----GND
PIN 6.-----Carrier DET OUT
PIN 7.-----NC (FOR TX125EN) ; ALARM 2 (FOR TX125ENA)
PIN 8.-----RTS
PIN 9.-----Audio OUT

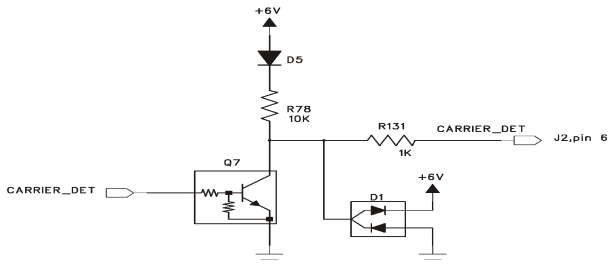
- 2. PTT Input Level** : 0-5V (TTL)
- 3. Digital Modulation Input Level** : 0-5V (TTL)
- 4. Audio Modulation Input Level** : 1Vp-p@1kHz
- 5. Audio Output Level** : 1vp-p@8 OHM Load
- 6. Carrier DET Output Level** : 0-5 V (TTL)
- 7. TX IND Output Level** : 0-5V (TTL)
- 8. TXD & RXD Level** : +/-12V (RS-232)

3. PIN 4. Analog input .

Analog modulation input , 1V p-p for $\pm 4\text{kHz}$ deviation.

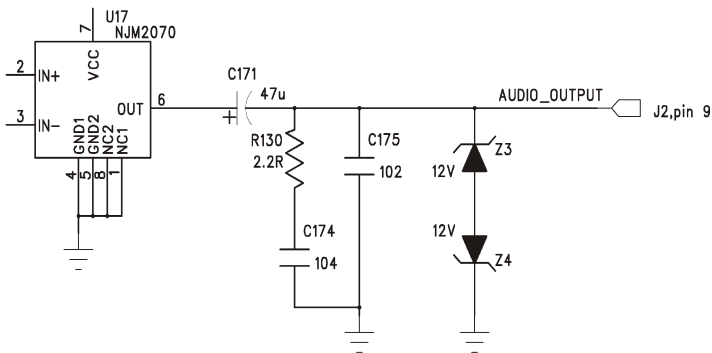


4. PIN5. GND. Input signal reference point. PIN6.Carrier detect output.
Indicate on the receiver frequency have a signal . TTL level active low.
The trigger level can be set by programmer software.

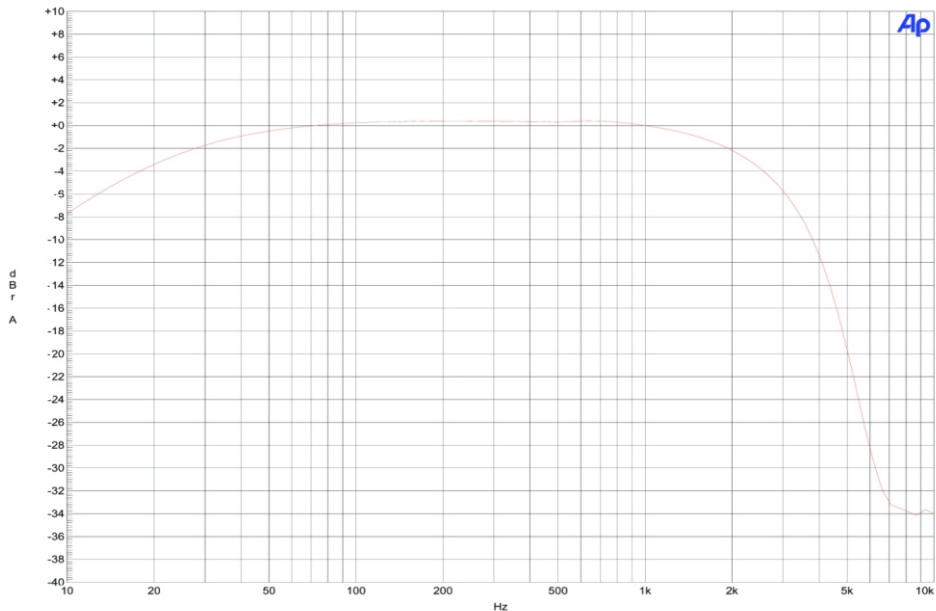


5. PIN 9. Audio output.

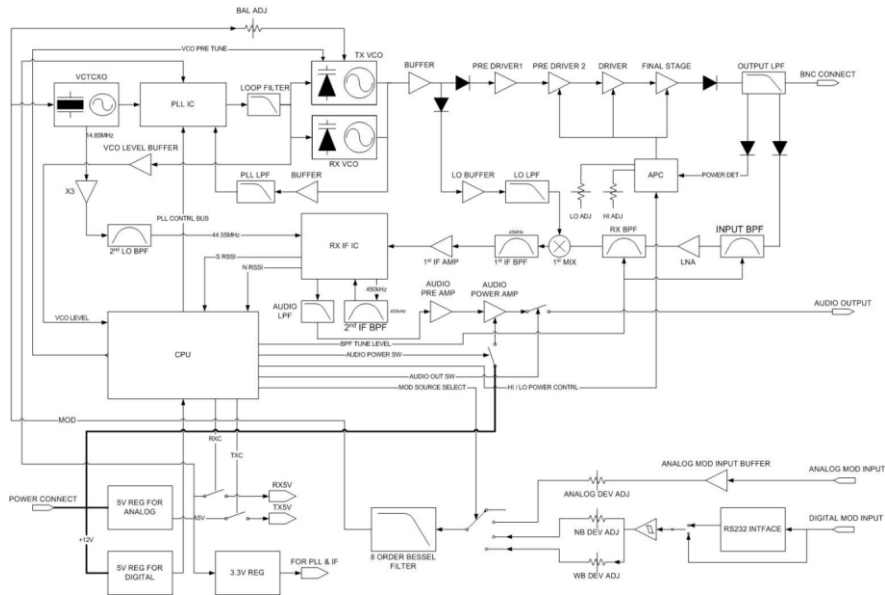
Demodulation signal output. Output level is 1vp-p @1kHz sin wave, 4kHz deviation.



Analog Modulation Frequency Response

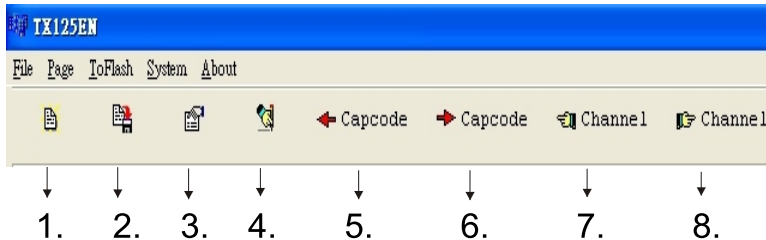


System Block Diagram



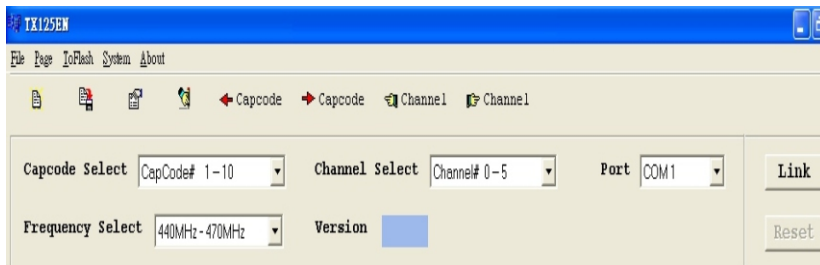
Instruction For Software Programming

1. Button of the tool bar



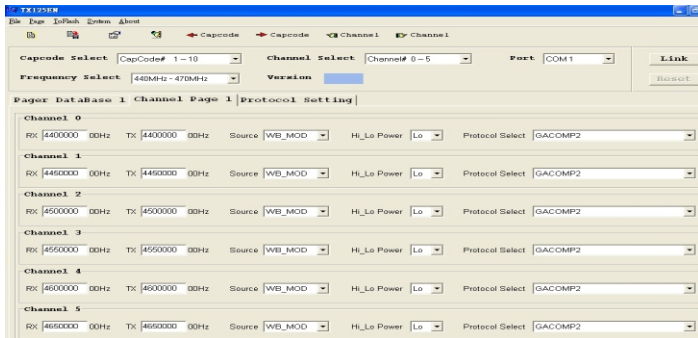
- Click the Button of**
1. *Open File*
 2. *Save File*
 3. *Read Data*
 4. *Transfer Data*
 5. *Previous Capcode Page*
 6. *Next Capcode page*
 7. *Previous Channel Page*
 8. *Next Channel Page*

Instruction For Software Programming



1. *Channel Select : Total 16 channels (channel 0~15)*
2. *Port : RS-232 Port of COM 1~5.*
3. *Frequency Select : Options of UHF*
4. *Link : Press "Link" to wait for the connection between TX-125 and PC and start programming (TX-125 and PC are connected RS-232 port to power on TX-125).*

2.Channel device



Channel select 1:

1. RX : Receiver Frequency.
2. TX : Transmit carrier Frequency .
3. Source : Select 2 Type : Wide Band \ Narrow Band .
4. Hi_Lo Power : Select High Power (5W) or Low Power (1W)
5. Protocol Selection: There are ten protocol selectable to Connect with PC. (GATAP , IPage 2 , WaveWave , Programming , GACOMP2 , POCSAG TEXT , POCSAG Numeric , COMP2 , COMP1 , SCOPE), Default serial port data format 9600,n,8,1

3. Pager Database Setting: (Only for COMP1, COMP2)

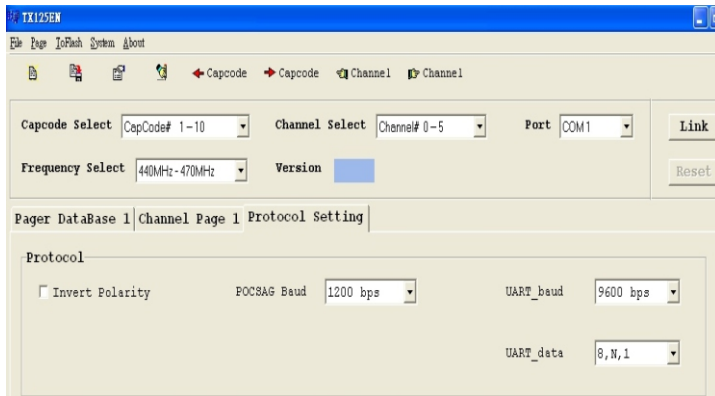
Index	Address	Type	Baud	FunBit
1	1234560	Alpha	1200 bps	0 0
2	1234561	Alpha	1200 bps	0 0
3	1234562	Alpha	1200 bps	0 0
4	1234563	Alpha	1200 bps	0 0
5	1234564	Alpha	1200 bps	0 0
6	1234565	Alpha	1200 bps	0 0
7	1234566	Alpha	1200 bps	0 0
8	1234567	Alpha	1200 bps	0 0
9	1234568	Alpha	1200 bps	0 0
10	1234569	Alpha	1200 bps	0 0

There are total 999 pager ID available and it's able to program Address, Pager Type, Baud Rate, Function bit for each ID.

The ID numbers above 100 are only set No. 100, No.200.....,No.900.

as representative number and the following number will be arranged in successive order.

4. Protocol Setting :



1. Invert Polarity : select the modulation singal phase to Positive/ Negative.
2. POCSAG Baud : the Baud Rate set for POCSAG TEXT and POCSAG Numeric
3. UART_band : the Baud Rate set for COM PORT of PC, when this unit .

5. ALARM Input:(For TX125ENA)

The screenshot shows the TX125ENA V1.0.0 software interface. The 'Alarm Message' tab is selected, displaying a table for configuring alarm messages. The table has columns for Call ID, Capcode, Type, Baud, FunBit, and Message. Two entries are shown: CALL #1 and CALL #2. Both are configured with Capcode 1234560 and 1234561 respectively, Type Alpha, Baud 1200 bps, and FunBit 0 0. The messages are 'Contact 123467' and 'Contact 23456789'.

Call ID	Capcode	Type	Baud	FunBit	Message
CALL #1	1234560	Alpha	1200 bps	0 0	Contact 123467
CALL #2	1234561	Alpha	1200 bps	0 0	Contact 23456789

Message Length < 60 Characters.

6. About Box (For TX125EN)



About Box (For TX125ENA)



Product Name : Transceiver
Models No. : TX-125EN / TX-125ENA

Gold Apollo Co., Ltd.
Rm.1, 3rd Fl., No.77, Sec.1
Hsin Tai Wu Road, Hsi-Chih, Taipei Hsien
Tel: 886-2698-8888
FAX: 886-2698-1750
Web site: <http://www.gapollo.com.tw>

