


# ARES RACES EDVANTAGE CLASS


## WINLINK 101



HILLBOROUGH COUNTY  
**ARES RACES**  
EMERGENCY COMMUNICATIONS

1

WINLINK IS SOFTWARE DESIGNED  
WITH THE SOLE PURPOSE OF  
SENDING EMAIL  
OVER THE  
AIRWAVES



HILLBOROUGH COUNTY  
**ARES RACES**  
EMERGENCY COMMUNICATIONS

2

### WHAT WILL WE COVER


- What Software to Use
- Where do I find it
- How do I Configure it
- Lets USE it on UHF/VHF



HILLBOROUGH COUNTY  
**ARES RACES**  
EMERGENCY COMMUNICATIONS

3

SIGNALINK IS A DEVICE  
THAT CONNECTS  
YOUR RADIO  
TO  
YOUR LAPTOP



HILLBOROUGH COUNTY  
**ARES RACES**  
EMERGENCY COMMUNICATIONS

4

## WHAT HARDWARE

FOR TODAY WE WILL BE USING

- UHF/VHF FM Radio
- SignalLink USB
- Interface Cables



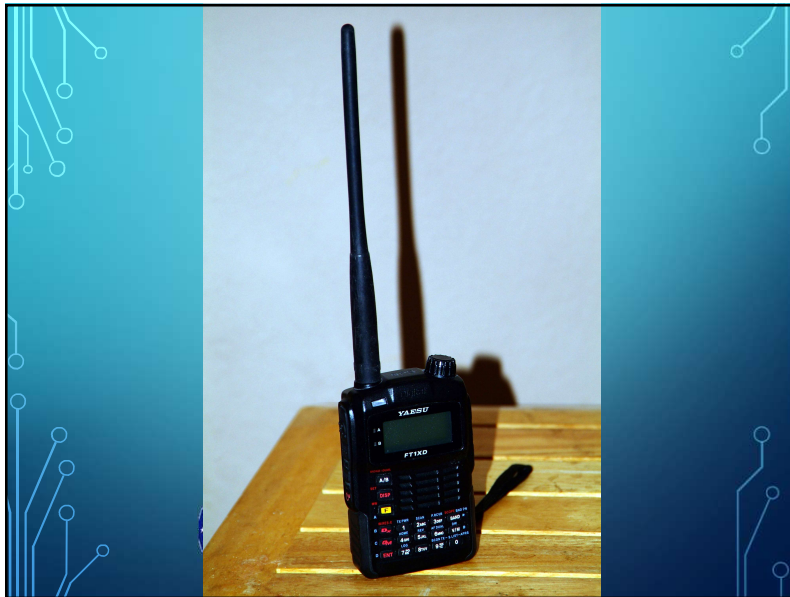
5

## WHAT RADIO DO YOU PLAN TO USE AT THE EVACUATION CENTER

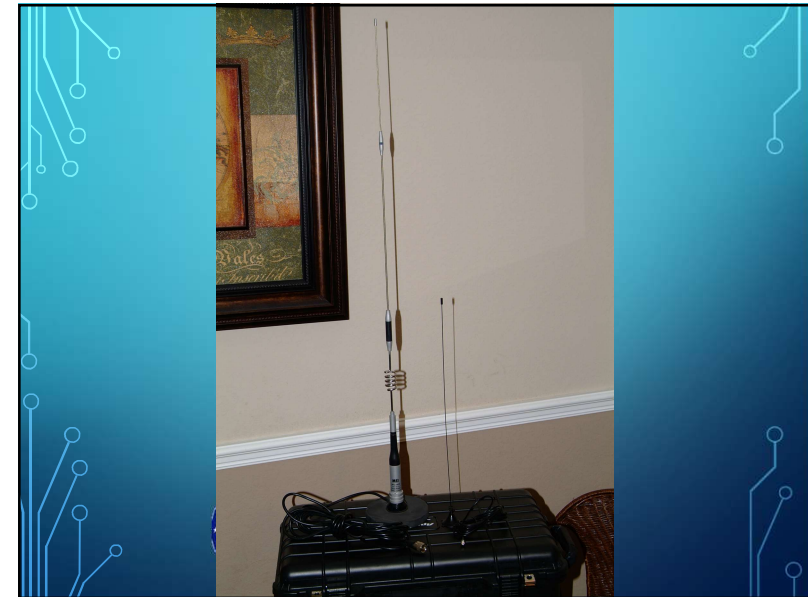
- How will you interface with your computer?
- How much power will I need?
- Do I need two radios?
- What about an antenna?



6



7



8




9

MOST PEOPLE USE HT'S  
AT A SHELTER

I will be using  
a YEASU FT-1

And we will consider a  
BAOFENG UV-5RAX



10



11

BUY INTERFACE CABLE



Or Build One Yourself



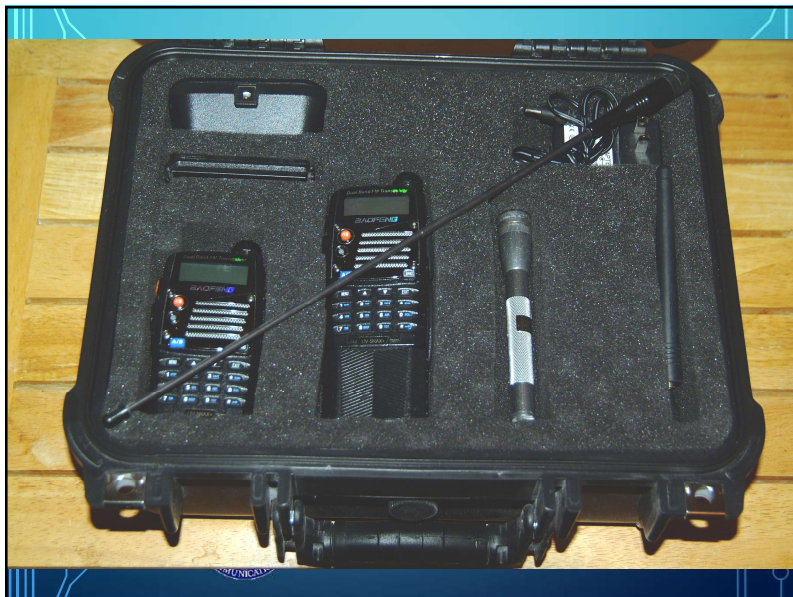
12



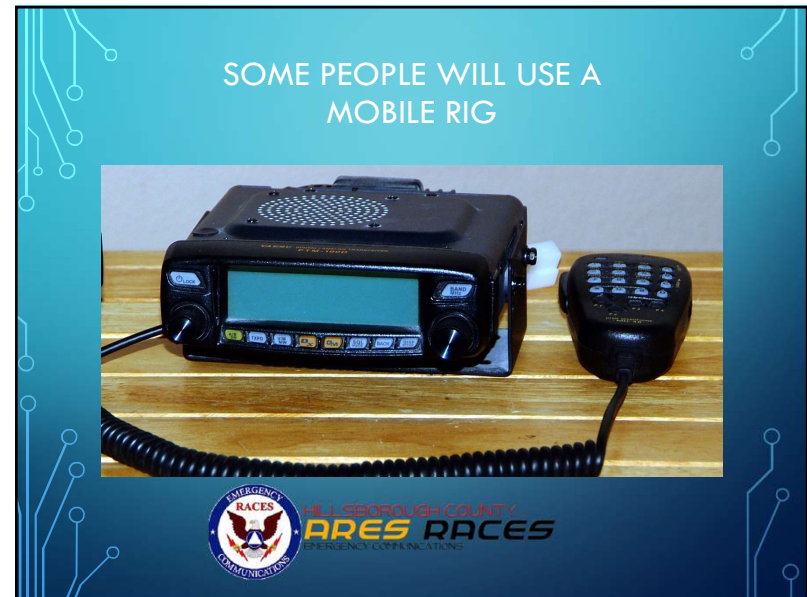
13



14



15



16

## AND WE ARE USING A TIGERTRONICS





17

## AND WE ARE GOING TO TEAR IT APART

- JP2 Increase Receive Audio
- JP3 Increase Transmit Audio
- JP4 Increase USB's Auto-PTT Circuit
- JP1 Is a bit more COMPLEX

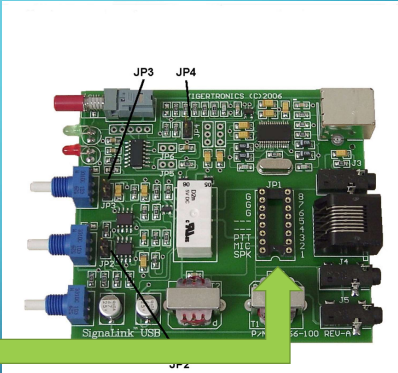



Figure 4 – Location of jumpers JP2, JP3 and JP4.



18

## SET UP FOR YOUR RADIO

[WWW.TIGERTRONICS.COM](http://WWW.TIGERTRONICS.COM)

### SUPPORT - SIGNALINK

**SignalLink™ Radio Cable #SLCABHTY**

This radio cable is designed to work with Yaesu HTs that use a 4-pin TRRS connector for the External Speaker/Mic jack. Our matching Plug & Play Jumper Module p/n SLMODHT is needed to configure the SignalLink for this connection, or you can install jumper wires and a resistor/capacitor inside the SignalLink as shown below (do NOT solder to the SignalLink's "JP1" socket!).

	8
G	7
G	6
---	5
PWR	4
PTT	3
MIC	2
SPKR	1

**Resistor/Capacitor Values** - The resistor value is 2.7K ohm, 1/4 watt. Do NOT use a larger wattage resistor, or the SignalLink's jumper socket may be damaged by the larger size leads.


The capacitor is 4.7µf, rated for 16 VDC. A polarized cap can be used with the positive side connected to the radio (pin #2). Be sure that the leads of the capacitor are no larger than those of a 1/4 watt size resistor, or the SignalLink's jumper socket may be damaged.

**NOTE:** The resistor/capacitor values are generally not critical. Something close to the values shown above will usually work fine with any radio.

**SignalLink™ Cable #SLCABHTW**

This radio cable is compatible with a variety of Baofeng, Kenwood, and Wouxun HTs (see our web site for a complete list). Our Plug & Play Jumper Module p/n SLMOD6PM is needed to configure the SignalLink for this connection, or you can install the jumper wires in the SignalLink as show below:

G	8
G	7
G	6
---	5
PWR	4
PTT	3
MIC	2
SPKR	1



19

## WHAT SOFTWARE DO I NEED

- WINLINK EXPRESS

<https://winlink.org/WinlinkExpress>

- Soundmodem100.zip

<http://uz7.ho.ua/packetradio.htm>



20

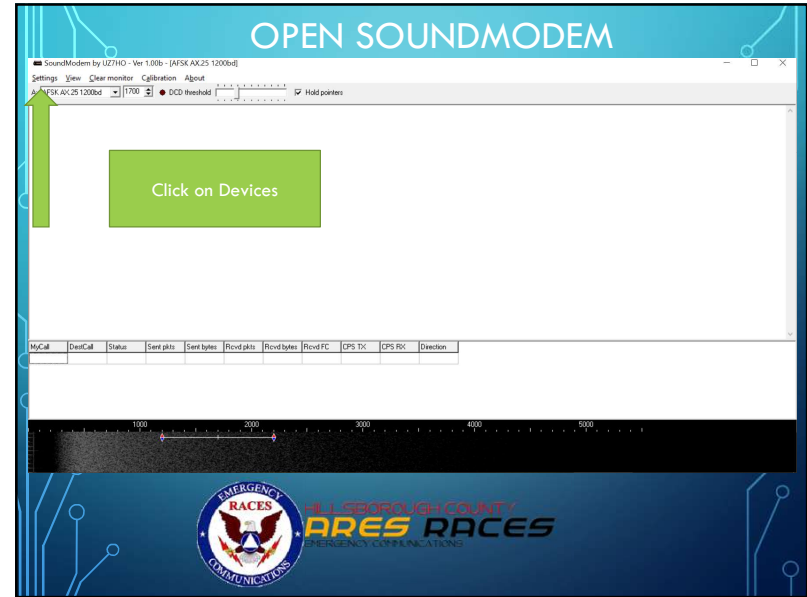
## FIRST LOAD YOUR SOFTWARE

- Soundmodem100 First
- We will cover VARA in a later session
- Then Load Winlink Express



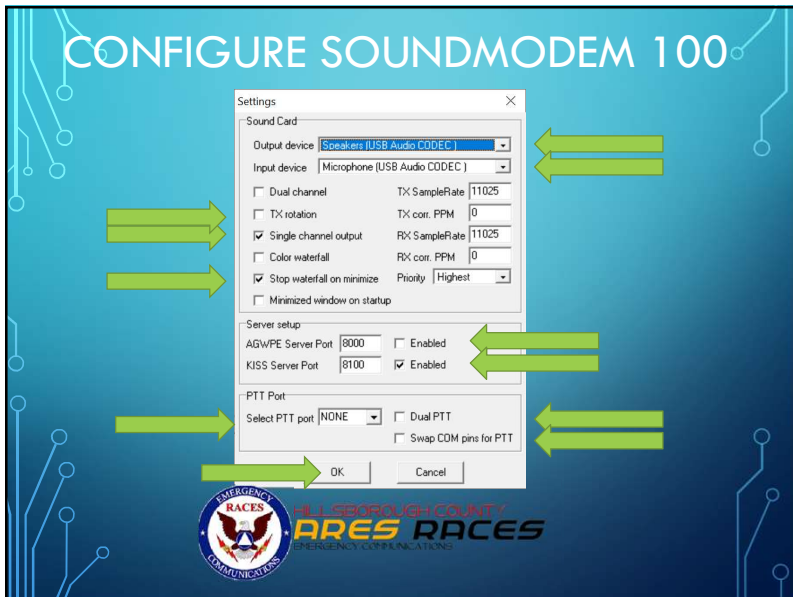
21

## OPEN SOUNDMODEM



22

## CONFIGURE SOUNDMODEM 100



**Settings**

Sound Card

Output device: **Speakers (USB Audio CODEC)**

Input device: **Microphone (USB Audio CODEC)**

Dual channel TX SampleRate: 11025

TX rotation TX con: PPM: 0

Single channel output RX SampleRate: 11025

Color waterfall RX con: PPM: 0

Stop waterfall on minimize Priority: Highest

Minimized window on startup

Server setup

AGWPE Server Port: 8000  Enabled

KISS Server Port: 8100  Enabled

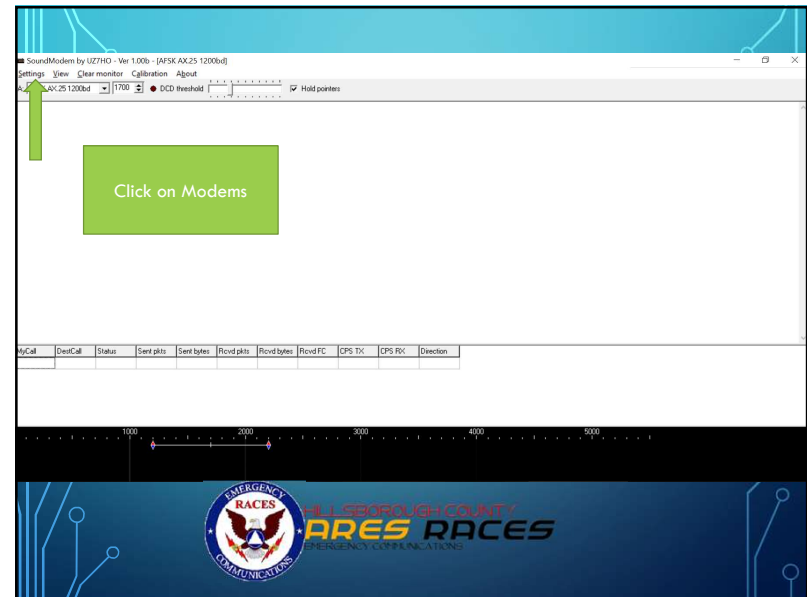
PTT Port

Select PTT port: **NONE**  Dual PTT

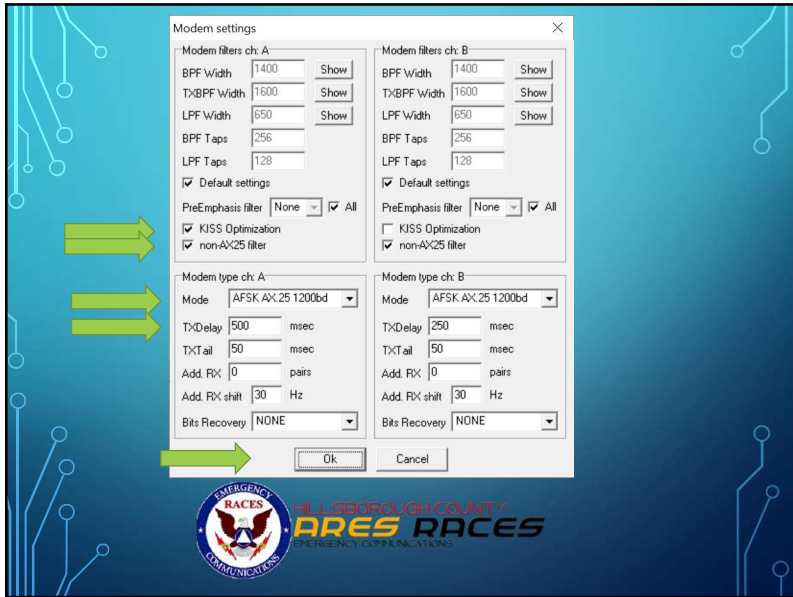
Swap COM pins for PTT

OK Cancel

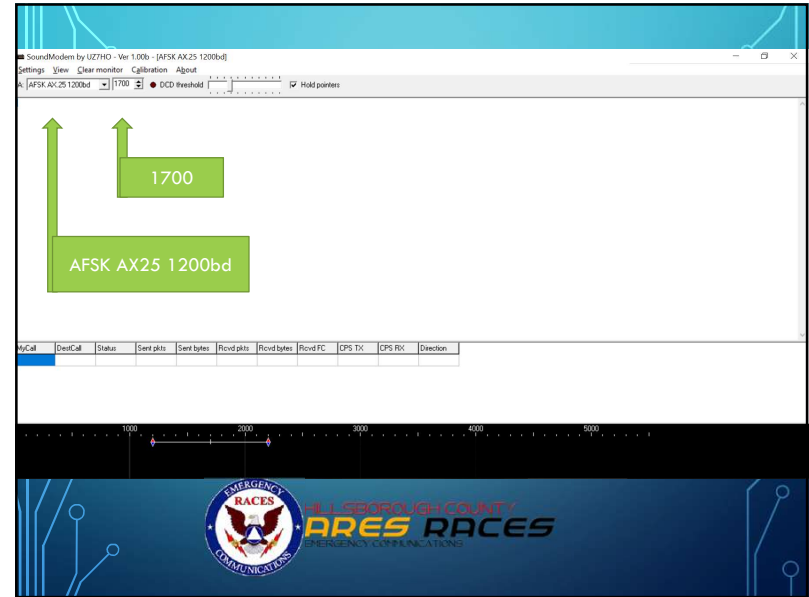
23



24



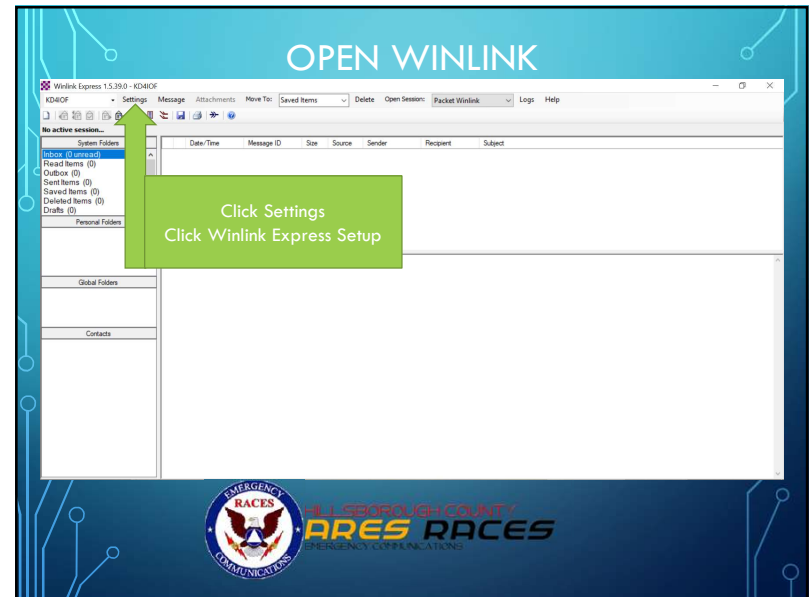
25



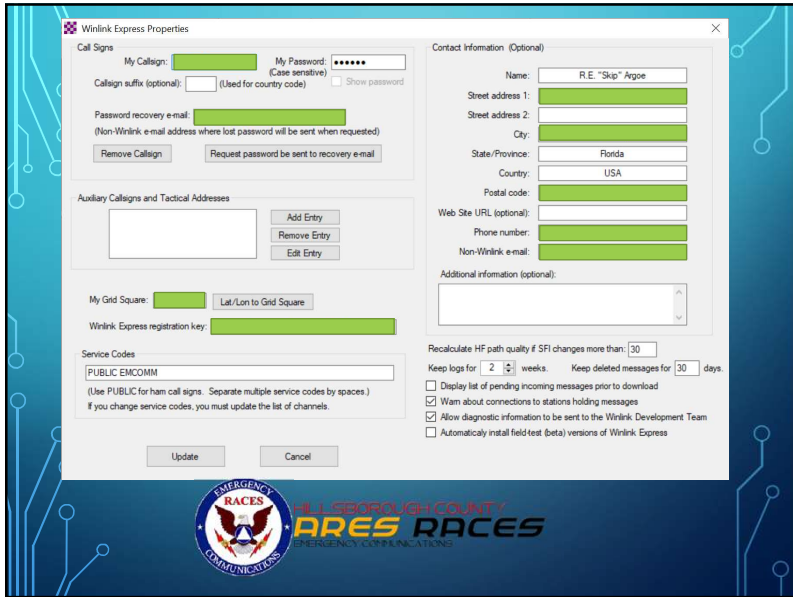
26



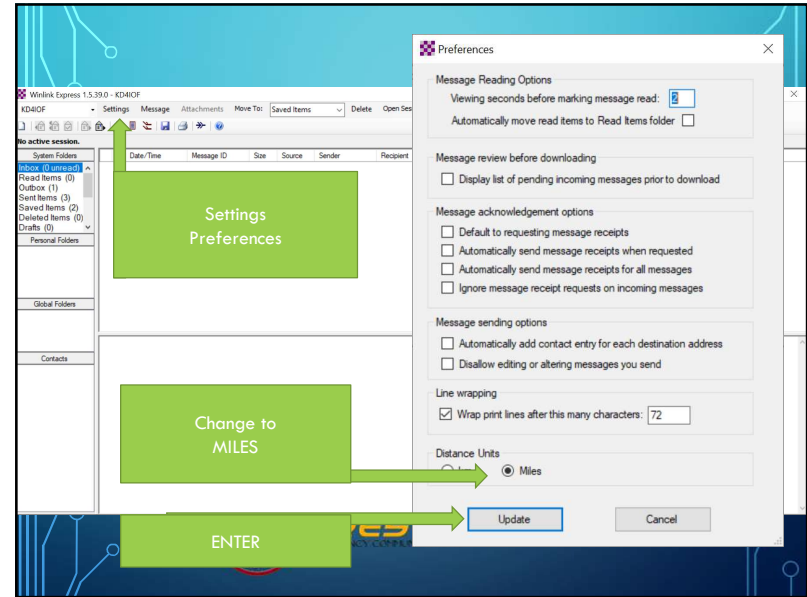
27



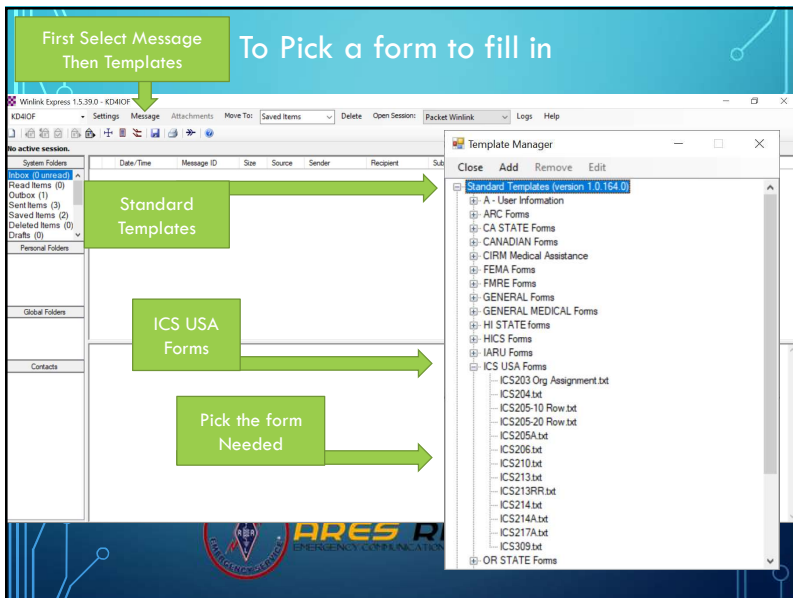
28



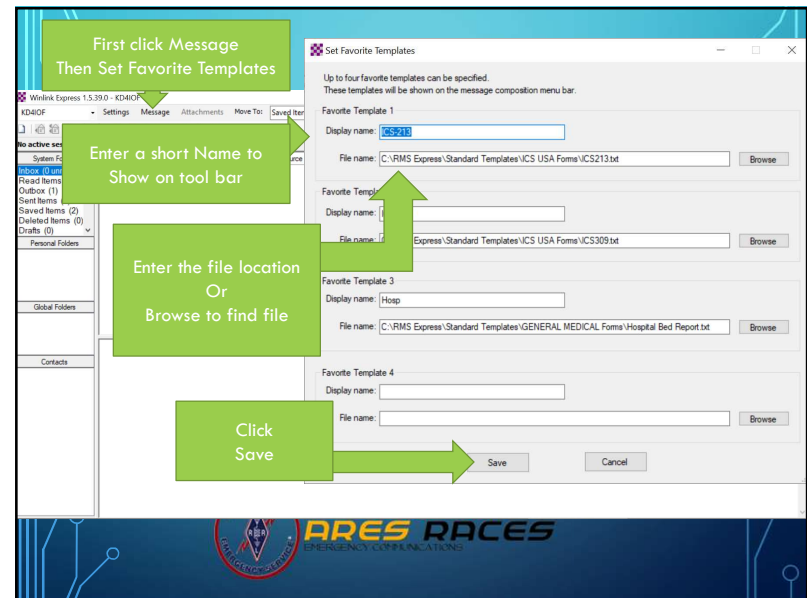
29



30

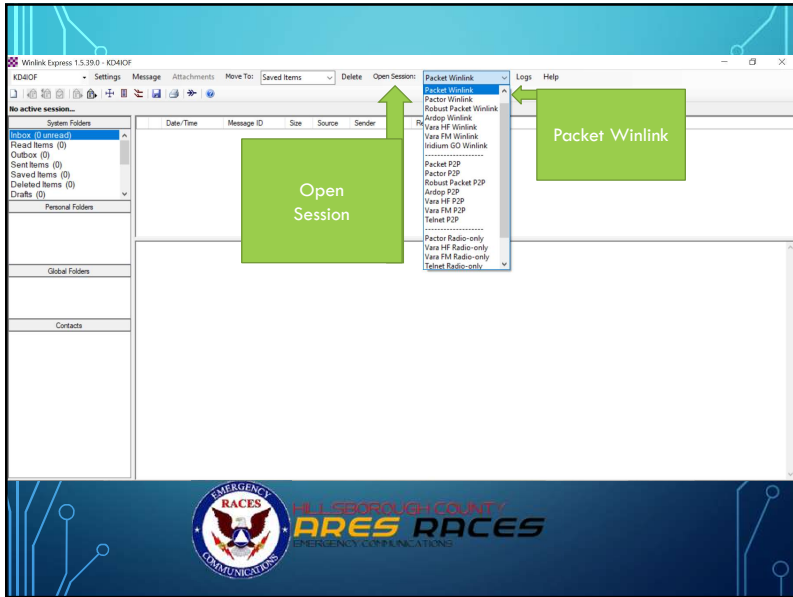


31

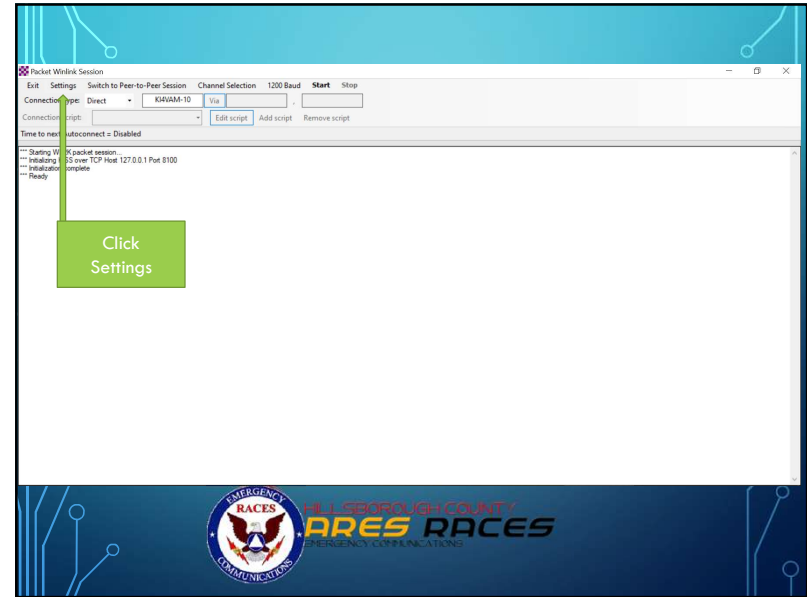


32

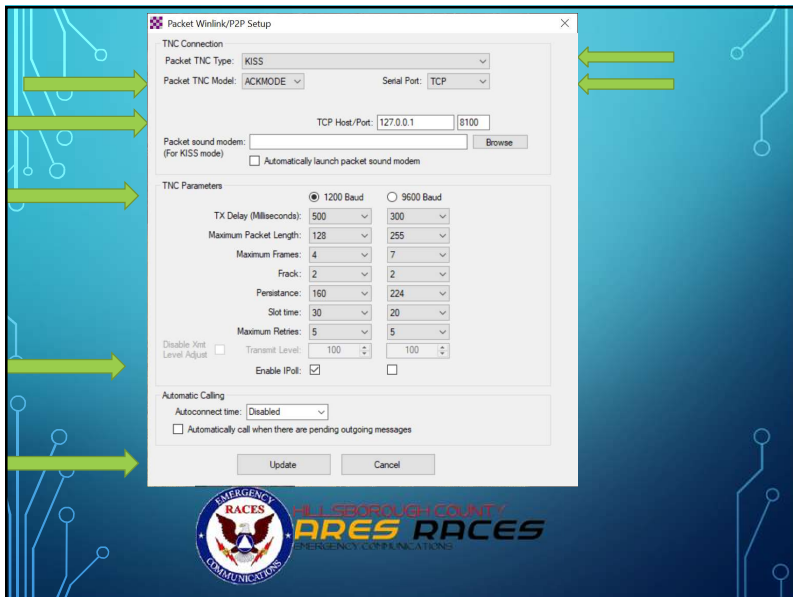




33



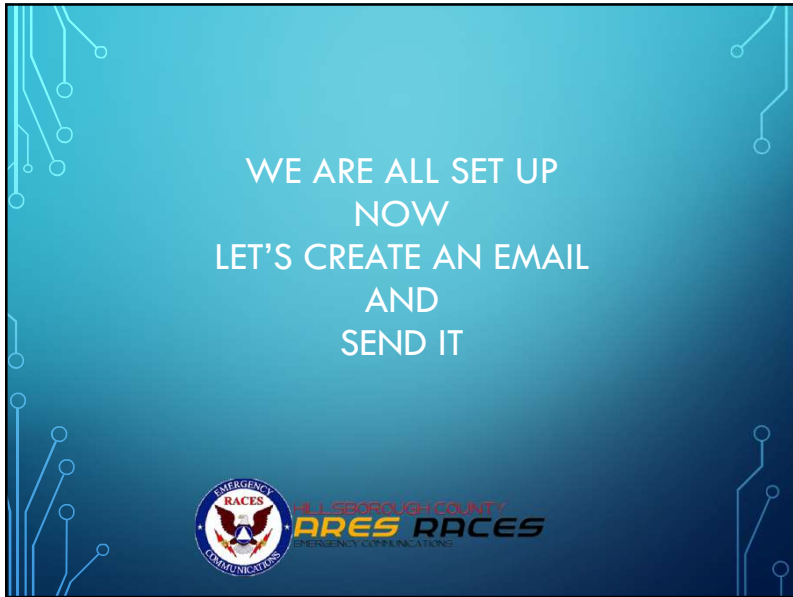
34



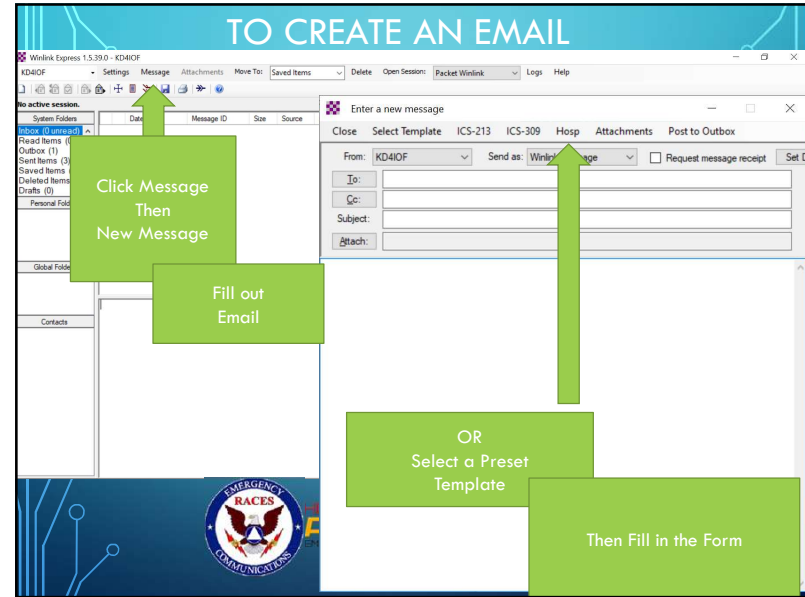
35



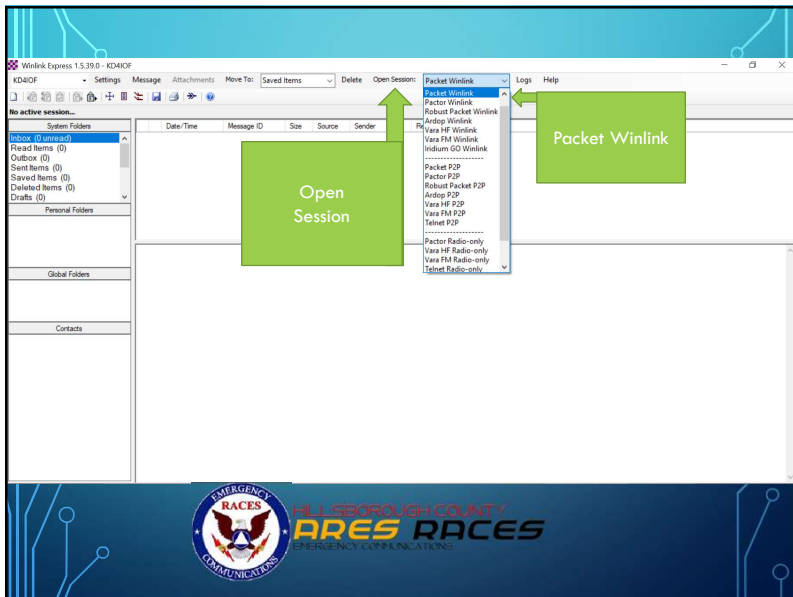
36



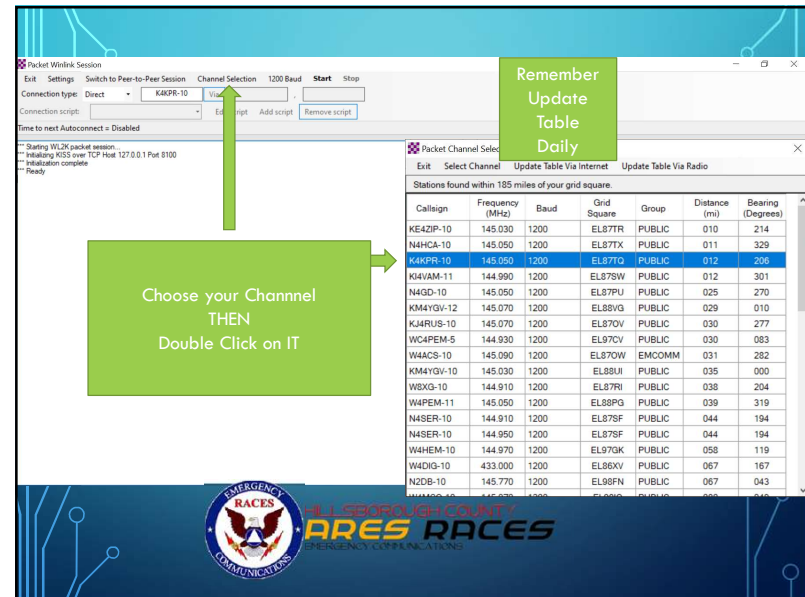
37



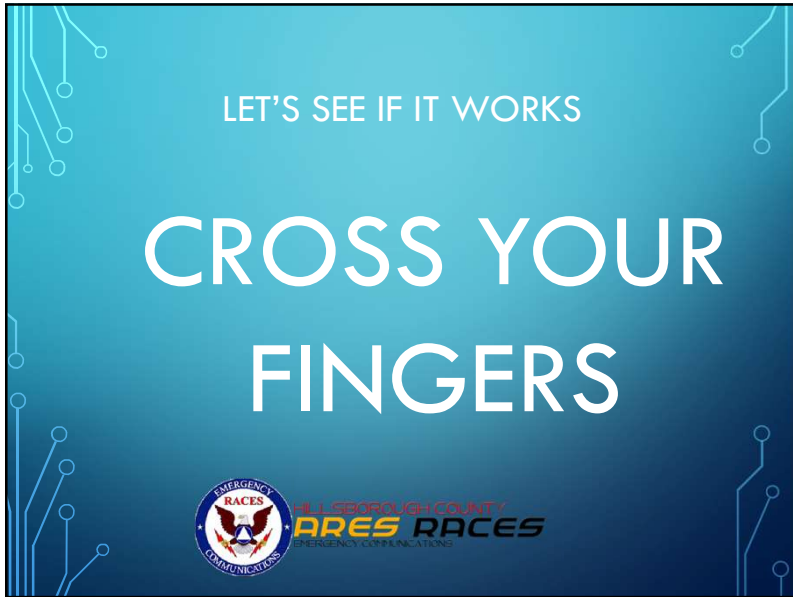
38



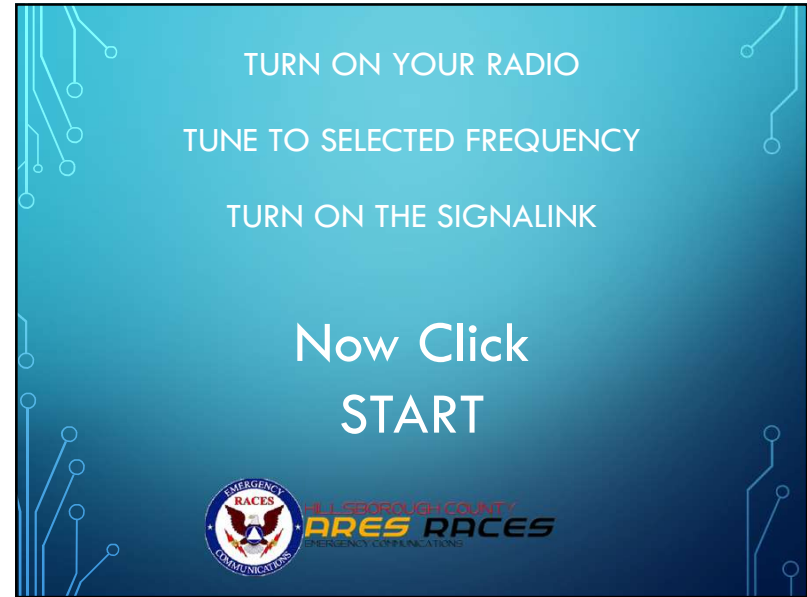
39



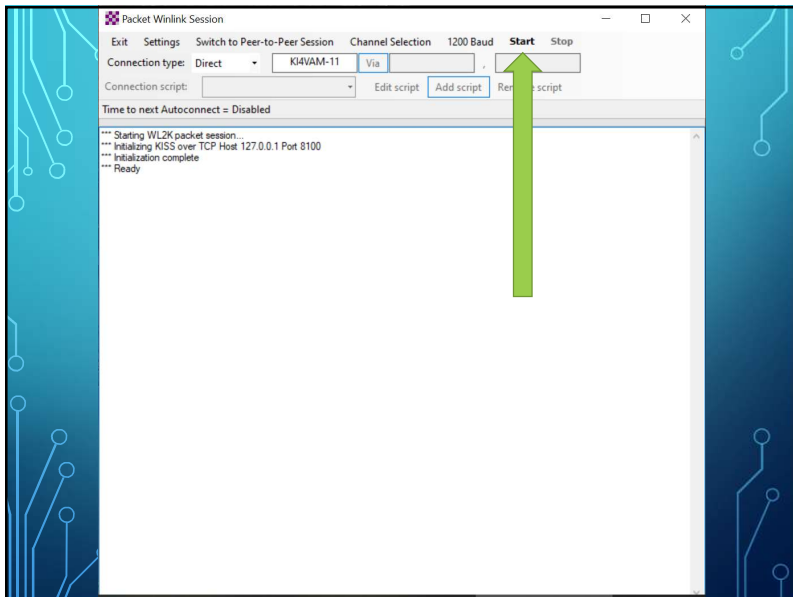
40



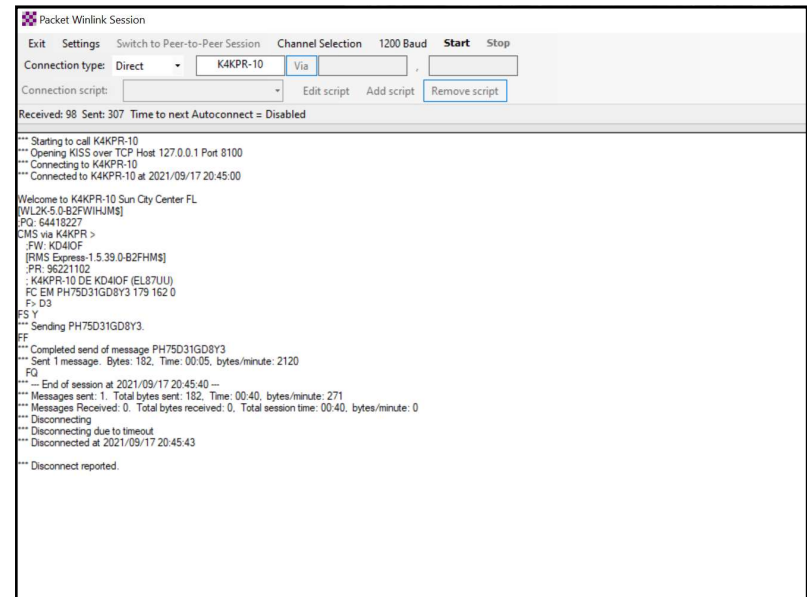
41



42



43



44

SoundModem by UZ7HO - Ver 1.00b - [AFSK AX.25 1200bd]

Settings View Clear monitor Calibration About

A: [AFSK AX.25 1200bd] 1700 DCD threshold [ ] Hold pointers

1:Fm KD4IOF To K4KPR-10 <SABM C P> [16:44:58T]  
 1:Fm K4KPR-10 To KD4IOF <UA R F> [16:45:00R] [+-]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S3 Pid=F0 Len=3> [16:45:00R] [+-]  
 Welcome to K4KPR-10 Sun City Center FL

1:Fm KD4IOF To K4KPR-10 <RR R R1> [16:45:01T]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S1 Pid=F0 Len=21> [16:45:03R] [+-]  
 [wL2k-5.0B2PvHJM\$]

1:Fm KD4IOF To K4KPR-10 <RR R R2> [16:45:04T]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S3 Pid=F0 Len=16> [16:45:09R] [+-]  
 CMS via K4KPR >

1:Fm KD4IOF To K4KPR-10 <REJ R R2> [16:45:09T]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S2 Pid=F0 Len=14> [16:45:11R] [+-]  
 FQ: 64418227

1:Fm KD4IOF To K4KPR-10 <RR R R3> [16:45:11T]  
 1:Fm K4KPR-10 To KD4IOF <RR C P R0> [16:45:21R] [+-]  
 1:Fm KD4IOF To K4KPR-10 <RR R F R3> [16:45:21T]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S3 Pid=F0 Len=16> [16:45:23R] [+-]  
 CMS via K4KPR >

1:Fm KD4IOF To K4KPR-10 <I C R4 S0 Pid=F0 Len=12> [16:45:24T]  
 FW: KD4IOF

1:Fm KD4IOF To K4KPR-10 <I C R4 S1 Pid=F0 Len=31> [16:45:24T]  
 [RMS Express-1.5.39.0B2HMS]

1:Fm KD4IOF To K4KPR-10 <I C R4 S2 Pid=F0 Len=14> [16:45:24T]

MyCall	DestCall	Status	Sent pkts	Sent bytes	Rcvd pkts	Rcvd bytes	Rcvd FC	CPS TX	CPS RX	Direction

1000 2000 3000 4000

45

SoundModem by UZ7HO - Ver 1.00b - [AFSK AX.25 1200bd]

Settings View Clear monitor Calibration About

A: [AFSK AX.25 1200bd] 1700 DCD threshold [ ] Hold pointers

FR: 9b2z11Uz

1:Fm KD4IOF To K4KPR-10 <I C P R4 S3 Pid=F0 Len=30> [16:45:25T]  
 :K4KPR-10 DE KD4IOF (EL87UU)

1:Fm K4KPR-10 To KD4IOF <RR R F R4> [16:45:27R] [+-]  
 1:Fm KD4IOF To K4KPR-10 <I C R4 S4 Pid=F0 Len=25> [16:45:28T]  
 FC:EM PH75D31G08Y3 179 162 0

1:Fm KD4IOF To K4KPR-10 <I C R4 S5 Pid=F0 Len=6> [16:45:28T]  
 F> D3

1:Fm K4KPR-10 To KD4IOF <RR R R R6> [16:45:31R] [+-]  
 1:Fm K4KPR-10 To KD4IOF <I C R6 S4 Pid=F0 Len=5> [16:45:31R] [+-]  
 FS Y

1:Fm KD4IOF To K4KPR-10 <I C R5 S6 Pid=F0 Len=128> [16:45:31T]  
 Test Friday0c%E7bmg\$@Aaai+&J0-aeg-sUFAABo,-uiZ&wNEM, zEu0/ pú QZUf IIIz&0&vçIN>6/ii 20Y~(Y6m8)+E&0%A28e,@A

1:Fm KD4IOF To K4KPR-10 <I C R5 S7 Pid=F0 Len=54> [16:45:31T]  
 BuK\_3& j&K@&EE?&S> ) syR0/ &S0W%4 m%+ i

1:Fm K4KPR-10 To KD4IOF <RR R R R0> [16:45:35R] [+-]  
 1:Fm K4KPR-10 To KD4IOF <I C R0 S5 Pid=F0 Len=3> [16:45:36R] [+-]  
 FF

1:Fm KD4IOF To K4KPR-10 <I C R6 S0 Pid=F0 Len=3> [16:45:36T]  
 FQ

1:Fm K4KPR-10 To KD4IOF <RR R R1> [16:45:39R] [+-]  
 1:Fm KD4IOF To K4KPR-10 <DISC C P> [16:45:41T]  
 1:Fm K4KPR-10 To KD4IOF <UA R F> [16:45:43R] [+-]

MyCall	DestCall	Status	Sent pkts	Sent bytes	Rcvd pkts	Rcvd bytes	Rcvd FC	CPS TX	CPS RX	Direction

46

## IT'S TIME TO MAKE CHOICES

- Pick your "Go Box Radio"
- Antenna that you will use
- Signalink or other sound device
- Buy or make the interface cables

Be at the PSOC on June 3<sup>rd</sup>  
 Bring YOUR equipment  
 Either get Help to connect it  
 OR Help someone else

EMERGENCY RACES  
 WILLIAMSBURG COUNTY  
**ARES RACES**  
 EMERGENCY COMMUNICATIONS

47

## IMPORTANT TO REMEMBER

- Practice sending a Winlink message weekly using VHF/UHF so that it becomes second nature
- Use different RMS servers to include N4HCA-10
- DURING AN ACTIVATION
- If Internet is available **USE IT**
- Fill out using the Message Forms

EMERGENCY RACES  
 WILLIAMSBURG COUNTY  
**ARES RACES**  
 EMERGENCY COMMUNICATIONS

48

