Remote Control of Your Ham Station
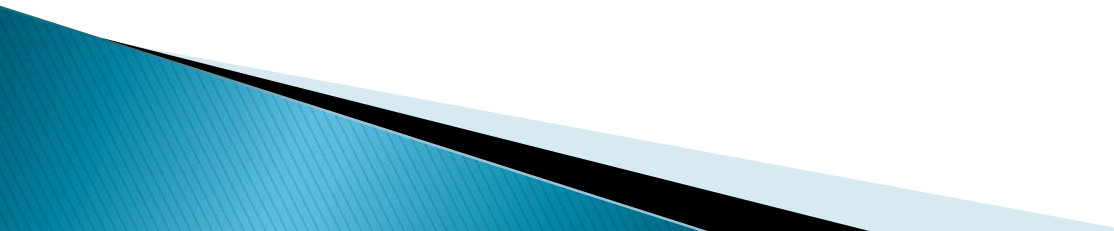
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Remote to major Dxing Stations (not yours)

- http://www.remotehamradio.com/
- shell of a radio that gets you to their station with all equipment, antennas etc.
- Range of access plans for $2999 – $5000 per year.
- Ref: Remote Ham Radio Station Network, QST, May 2013 Page 59.

ICOM Solution

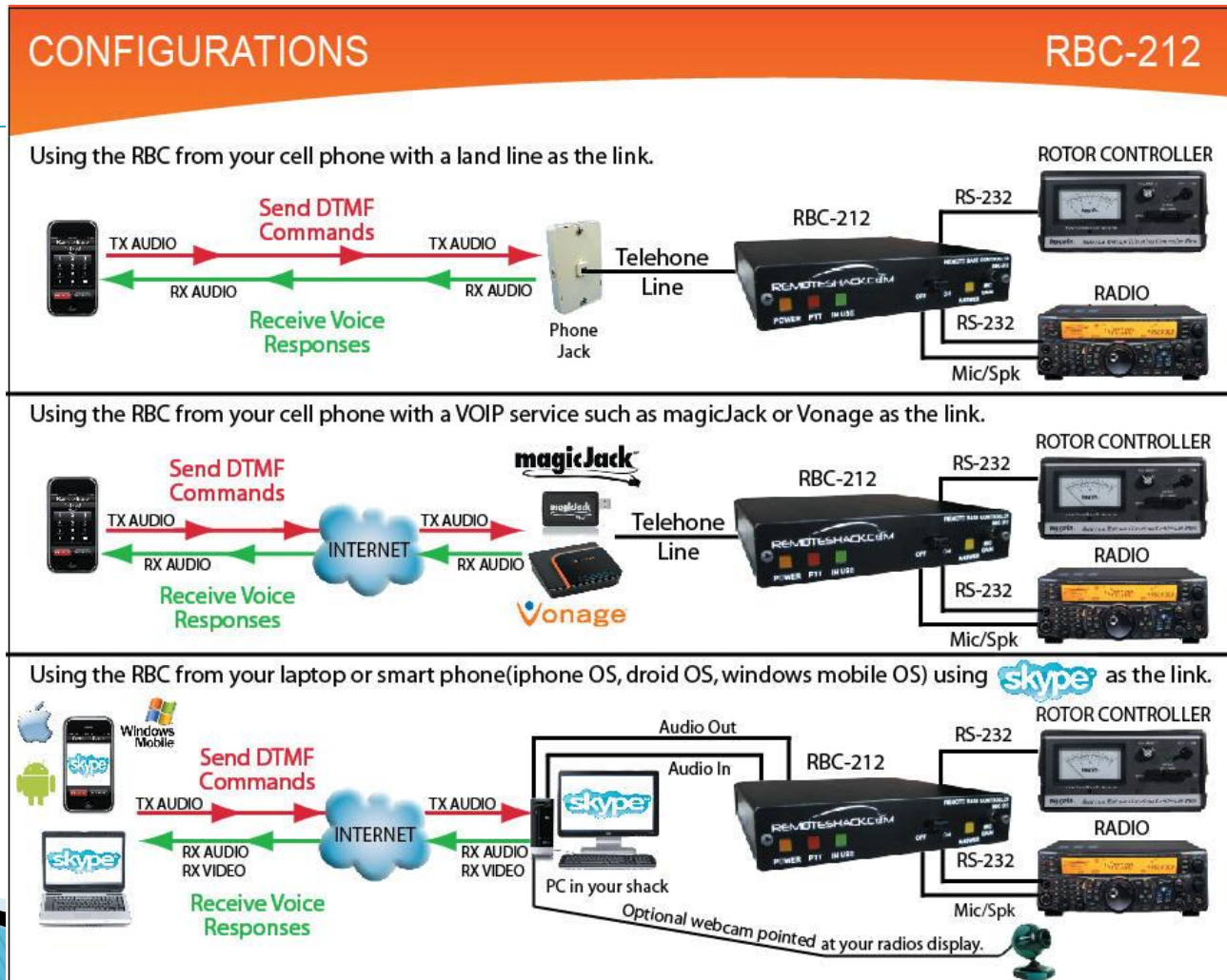- ICOM rigs only
  IC-RS-BA1
- IP REMOTE CONTROL SOFTWARE
- HRO Discount Price: **$95.95**
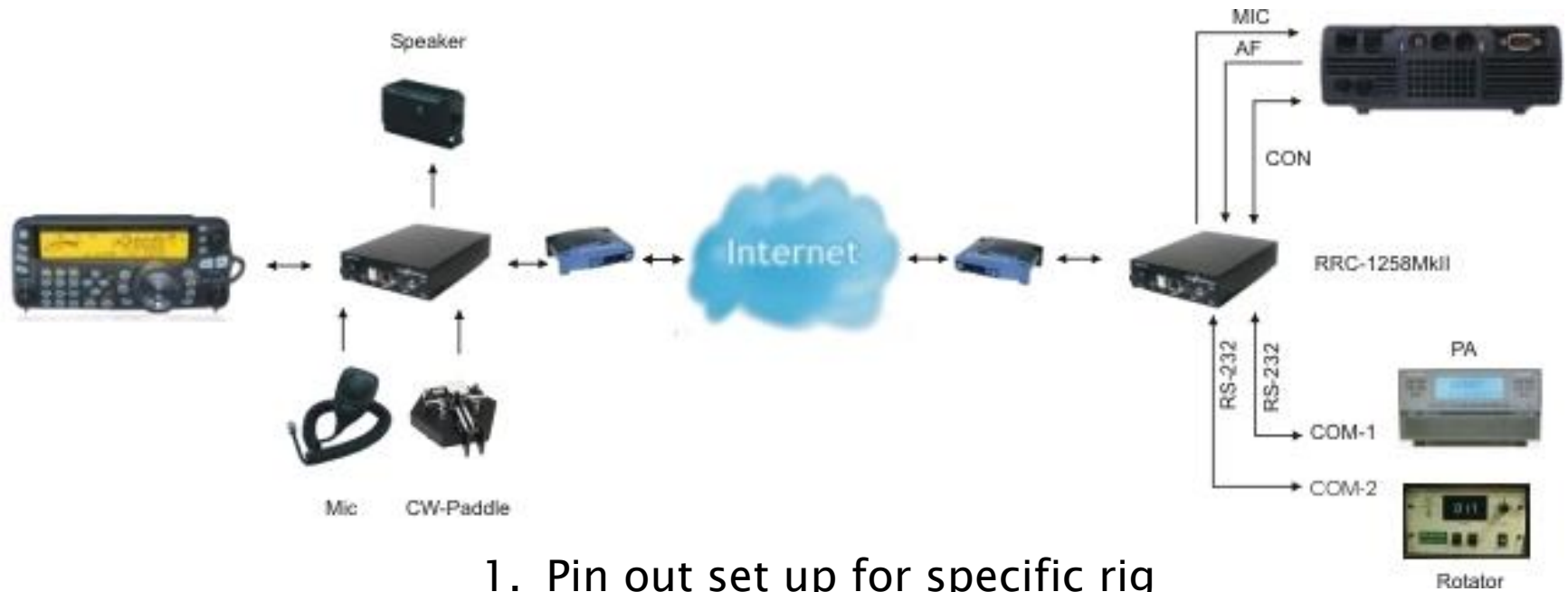
Hardware Approach
Remote Shack by MFJ

Controls rig through DTMF codes with voice response

Hardware Approach
Remote Rig by Microbit 2 AB

1. Pin out set up for specific rig
2. Hardware at both ends
3. Quick and easy
4. ~$500 for a set up
5. No software required.

Software Approach
by W3EX
(some hardware required)

▶ Basic Requirements
  ◦ Internet connection at host and remote
  ◦ Equipment power control
  ◦ Computer at each host and remote required for
    • Software to connect computers
    • Control of rig
    • Audio path
    • Accessory control (antenna switching, rotor, etc.)

Station Power Control

- Web Power Switch 6
- http://www.digital-loggers.com/lpc.html
- Provides internet control of 8 switchable 110v outlets through simple web based software.
- Includes security, scripting, scheduling, and email alerts.
- ~$110.

W3EX Remote Setup
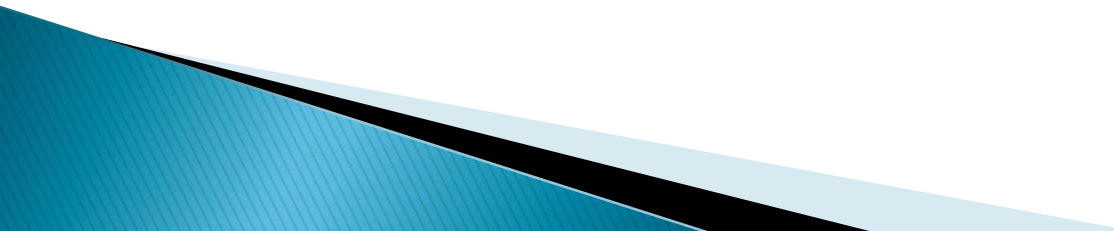## (Computer Control)

- Host Computer
  - Five year old machine running Windows 10 –recent addition of SS Drive
    - BIOS set for boot on power sensed
  - TeamViewer
    - Free for non-commercial use
    - Auto-connect configuration
      - Runs as a background service
    - Secure with software access
    - WAN IP resolution not required.

Control of Computer/Rig

- Interface between computer and rig
  - depends upon rig –rs232, usb, CI-V (icom)
- Software to control the rig and accessories
  - Generally not rig specific
  - Examples include
    - Ham Radio Deluxe – $99.95
    - TRX Manager – $75.00
    - Many others including free and paid with and w/o support

Audio Path

- Path is required to get audio between host and remote computer.
- Requires sound card or USB connection depending upon radio
- VOIP built in with hardware systems

W3EX Remote Setup
(Rig Control)

- Icom 746 and 7600 control
  - Icom CT-17 – control of 4 rigs
  - RS-232 interface through USB converter for CI-V commands
  - $136
- Ten-Tec Omni VII controlled through USB to RS232 port and ETHERNET.
- Ham Radio Deluxe v6.3
  - Interfaces with most modern rigs.
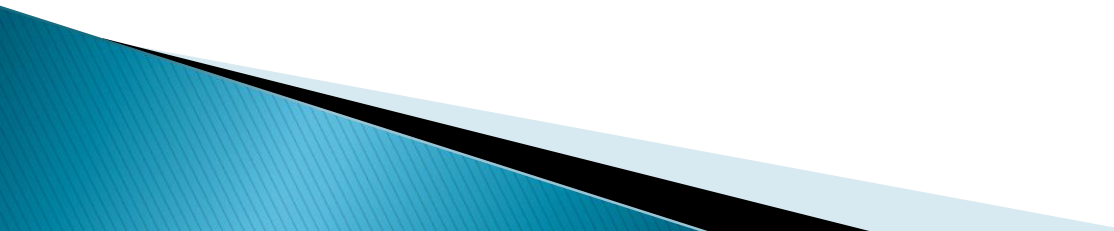 - This is the key to the system.
  - $99

W3EX Remote Setup
(Audio Path)

- **Three sound cards**
  - Internal to computer for computer use – no interface with rigs
  - Signalink USB – one for each rig
    - Simply an external addressable sound card
    - Configurable for many modern rigs through pc board jumpers and RJ-45 to rig accessory port cable.
    - $110 each

W3EX Remote Setup

- IC-7600 and others have direct USB capability but I have found it difficult to deal with.
- IC-746 does not have USB capability.

W3EX Remote Setup
(IP telephony)

▶ Skype
  ◦ Create a separate station skype name; ie yourcallradio
  ◦ Establish auto-answer mode
  ◦ Must manually switch audio between the two Signalink USB units.
  ◦ Skype has been highly dependable with minimal to no packet loss using Verizon FIOS at host location and DSL remote.

W3EX Remote Setup
(miscellaneous)

- Rotor control
  - Easy Rotor Control http://schmidt-alba.de/eshop/index.php?cPath=1
  - HRD control
- Antenna switching
  - Only what's available on the 7600
- All modes except CW (who needs it)
- Linear Amplifier
  - Currently unavailable

W3EX Remote Setup
(live demo)

1. Turn on Radios
2. Connect to computer
3. Connect with Skype
4. Launch HRD
5. Select radio to control
6. operate