

Figure 1 This wire previously hooked up to your splitter - you found the right one and hooked it up to the Xtender input on the Supercombiner



Figure 2

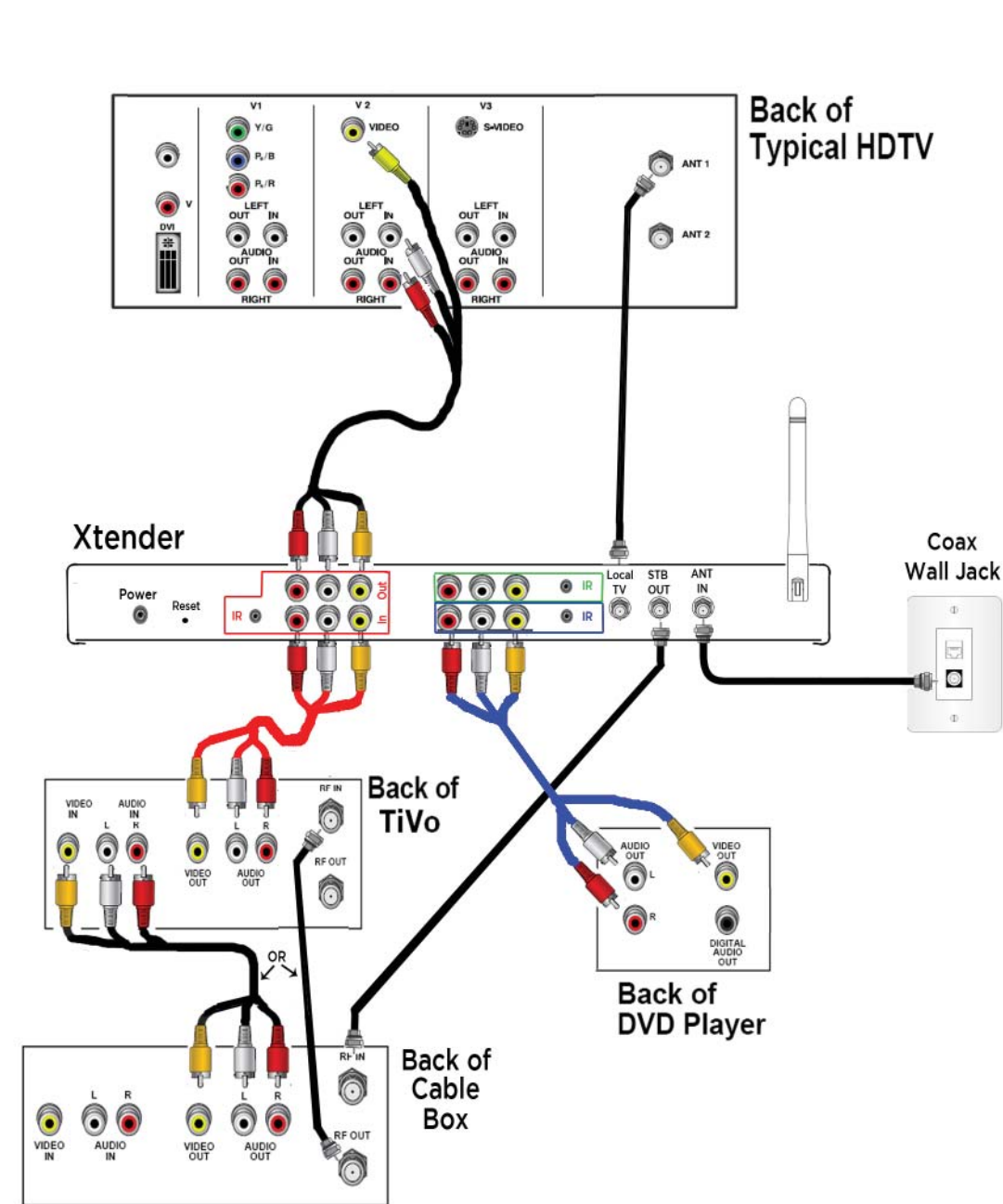


Figure 3

## Step 1: Install SuperCombiner:

The Supercombiner (Included with the Xtender kit) looks like a Cable TV splitter, is installed "above" your main existing Cable splitter, and it is the device that allows Xtender to distribute your new TV channels all over the home. Supercombiner needs power supplied over the COAX wire from Xtender, so it needs to be installed in a very specific way.

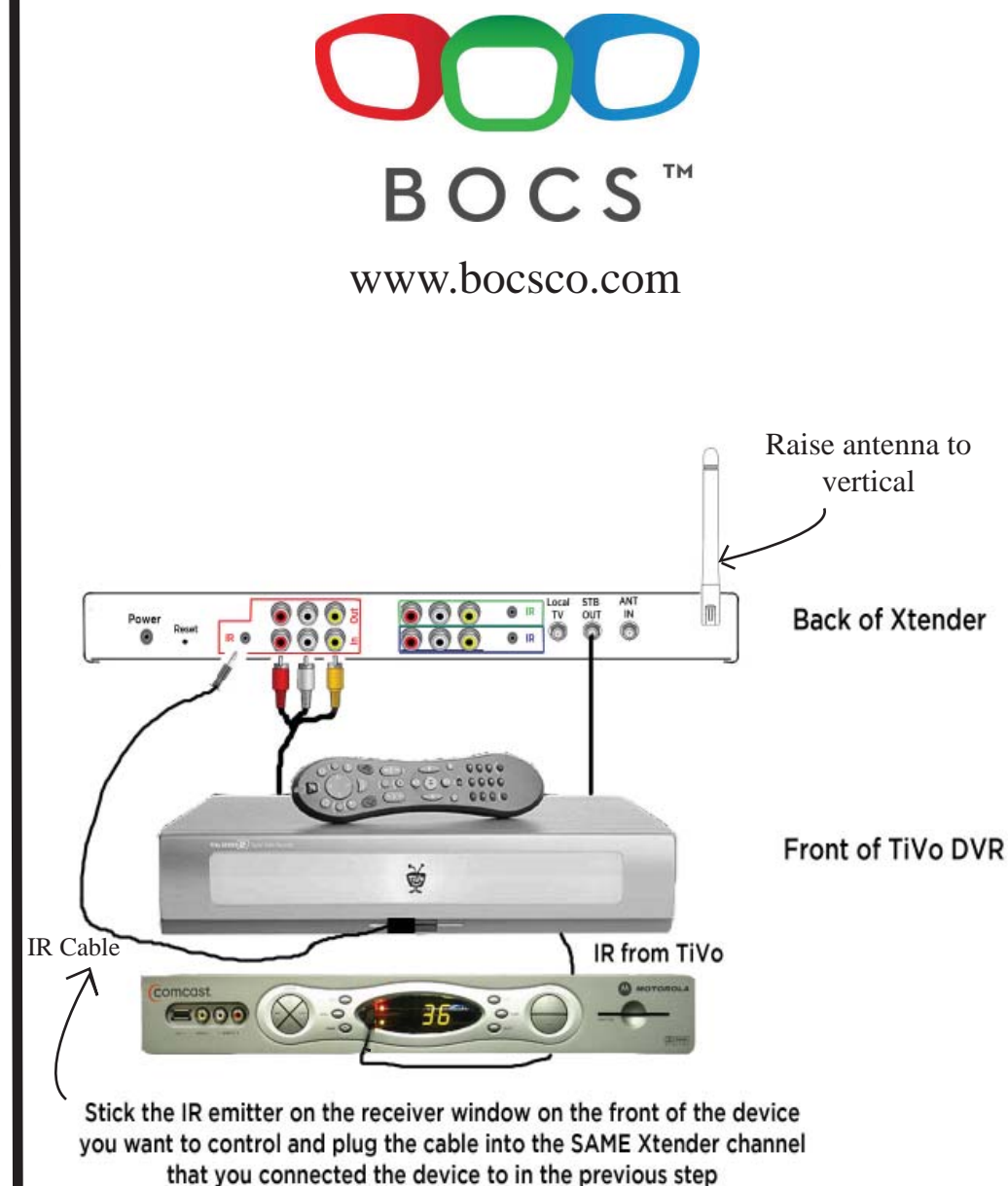
- Decide on Xtender location - near coax jack, power, and A/V devices
- **Connect cable finder power adapter** to wall coax jack at Xtender location, then attach Xtender power supply and plug into power. (figure 2)
- Find main home splitter, one at a time, disconnect and **test each wire** with cable finder tool - the one that illuminates the light is the wire back to where you plan to plug in Xtender. (figure 3)
- Insert the wire you just identified into the **Xtender port** on Supercombiner
- **Move the "main coax in"** (from Cable-TV company or your Antenna) from the input of your main splitter to the "RF-In" input of SuperCombiner
- **Connect the "RF-OUT"** output of supercombiner to input of main home splitter
- Your setup should now look like figure 1
- Return to Xtender location and disconnect power adapter from coax wall jack



## Step 2: Connect Xtender to A/V devices:

- Select up to three A/V devices to plug into Xtender - TiVo/STB and DVD shown as an example (RCA cables available in wiring pack - optional)
- Red channel has pass through for passing A/V direct to TV if desired
- "ANT IN" goes to COAX wall jack
- "ANT OUT" goes to devices that need cable/ant - i.e. TiVo, STB etc
- If you have a TV next to Xtender, connect a coax wire from "Local TV" on Xtender to Antenna input on TV.

Note - in this example we show a TiVo and Cable box connected to the Red channel and a DVD player connected to Blue - but you can connect any Composite/ Stereo A/V device to any input and also connect a third device up to the Green channel.




Stick the IR emitter on the receiver window on the front of the device you want to control and plug the cable into the SAME Xtender channel that you connected the device to in the previous step

## Step 3: Connect Xtender IR cables and Power:

- Connect IR cables to each device - make sure device plugged into Red channel has its IR cable also plugged into Red channel (same for Green, Blue)
- Peel tape from IR emitter and stick on top of IR window on each A/V device
- Raise antenna to vertical
- Plug Xtender power supply into power and into Xtender power jack

## Step 4: Program Remote Controls:

### Pair each Remote to Xtender

- Press **"Pair"** button  on front of Xtender (The BOCS Logo) - lights will flash
- Hold down **"Menu" and "CH+"** Watch for double flash on power button

### Program IR Code for TV: (This needs to be done for each TV)

- Hold down **"Info" and "Local-TV"** - until power light turns on
- Point remote at the TV
- Enter five digit code (from IR Codebook) - double flash on power button indicates valid code entered - remote will attempt to turn TV on/off
- IF TV turns on/off you found the right code - **press OK to save** - double flash on power button indicates success. Make sure to check all keys that will be used for functionality as some codes are "close"
- IF TV does not turn on/off, enter next five digit code and continue with above step.
- **CODE SCAN** If you try all the codes for your brand and none fully function, try a code scan:
  - Hold down **"Guide" and "Local-TV"**
  - Press the Local-TV button (to indicate you want to scan for a TV)
  - **Hold down the up arrow** until your TV turns off/on. Note that as long as you hold down the arrow, the remote is scanning through the code database and sending power commands using each code. Once the right code is found and the TV turns off/on, unless you release the up arrow very quickly, the next code in the table will be sent - simply press the down arrow a few times until the TV turns off/on - then press **"OK" to confirm** and save - watch for the double power button flash to indicate success.
- If you still do not have a fully functional code you will need to "learn" the TV codes into the remote - call BOCS at (303) 442-6700 to purchase a learning upgrade for your remote control. For a small charge you will be given a code sequence to unlock the learning function in your remote.

### IF you are programming the remote for the TV near Xtender connected to "LOCAL TV" output of Xtender, Set the remote as **Master Remote**

- Hold down **"Menu" and "VOL+"** until power light comes on
- Press OK to confirm

### Program IR codes for Red, Green, Blue channels (Only needs to be done once per home using any of your Xtender remotes)

- Tune your TV to the Xtender channel you intend to program by pressing the Xtender channel button (Red, Green, or Blue)
- Hold down **"Info" and "Red"** (or Info/Green for green, Info/Blue for blue) until power light turns on
- Enter five digit code from IR Codebook for device plugged into that channel
- Power command is sent via IR cable to that device
- Note that some devices do not handle a power command well (TiVo and some DVRs - so you might manually have to check the code by pressing all the buttons on the remote and making sure they perform as expected)
- Press **OK to confirm** when you have the code you want (device power cycles) or enter next code to try another.
- If you don't find a fully functional code, try others within the same category/brand or do a code scan by:
  - Hold **"Guide" and "Red", "Green", or "Blue"** as appropriate
  - Press the mode button to indicate what you are scanning for (CBL, DVD, Aux)
  - Hold down the up arrow until your device turns off/on. Note that as long as you hold down the arrow, the remote is scanning through the code database and sending power commands using each code. Once the right code is found and the Device turns off/on, unless you release the up arrow very quickly, the next code in the table will be sent - simply press the down arrow a few times until the Device turns off/on - then press **"OK" to confirm** and save - watch for the double power button flash to indicate success.
- If you still do not have a fully functional code you will need to "learn" the A/V device codes into the Xtender (Xtender comes with learning by default) - follow the instructions under options settings section of this guide.

### Program other local devices as desired into AUX, DVD, and CBL keys using either direct entry or scan methods as described above.

- Hold "Info" & "DVD" -or- "CBL" -or- "AUX" for manual
- Hold "Guide" & "DVD" -or- "CBL" -or- "AUX" for scan mode



## Optional Settings:

### For all programming modes:

- Holding down two specific buttons for 2 seconds enters a programming mode (See table for options)
- When in programming mode, power button light will illuminate and remain on until mode is exited by completing the programming or no key is pressed in 10 seconds
- Successful programming is indicated with a double flash of the power light
- Errors are indicated with a rapid flash of the power button light

**Delay between digits:** Some TVs need more time between sending channel digits: possible value 1 through 6. Follow this procedure if your TV has trouble changing to the correct channel when the Red, Green, or Blue button is pressed:

- Hold down **"Menu" and "4"** - then press a value, 1 is shortest, 6 is longest. Default is 1, try each value until you find one that works, shorter is better. Press OK to confirm and save.


**Channel Tuning mode:** Different TVs look for different direct channel input methods.

- Hold down **"Menu" and "5"**
- Press the number of the mode you desire:
  - 1 for "Send two digits for channels 99 and below, use +100 plus two digits for channels greater than 99"
  - 2 for "Always send three digits"
- Press "OK" to confirm and save

**Xtender Channel quality/power:** Set this to make Xtender channels the same quality as Cable/Antenna channels. Possible values are 1-16.

- Hold down **"Menu" and "1"**. Use up arrow to increase power, down arrow to decrease power
- 16 possible steps, if you reach the top or bottom, power light will rapid flash
- Observe an Xtender channels and adjust until best video quality is achieved
- Press OK to confirm/save.
- Check all TVs to insure setting is good everywhere

**Program a Repeater:** Near the Xtender...

- Press the "Pair" button on the front of the Xtender 
- Within 10 seconds, plug the repeater into an A/C outlet - the repeater light will flash 2-3 times and Xtender lights will stop flashing
- Unplug the repeater and plug it in where it will help extend remote control range - use a remote to find where the signal begins to get bad, plug the repeater in where the signal is still very good.
- Repeater light will blink when a BOCS button is pressed on the remote

**Volume Punch Through:** By default, the Volume button always controls the volume of the local TV. Some home setups use an audio receiver or other device as the audio source and the user would like the volume buttons to control that alternate device.

- Program your audio device into the AUX key on a remote for that room.
  - Hold down "AUX" and "Info", enter the five digit code for that device, if it turns off/on press "OK" to confirm and save, if not try the next code.
- Hold down **"AUX" and "VOL+"**, press "OK" to confirm and save
- Volume will now always use the volume control you set in the AUX device.
- To return VOL back to the TV - Hold down "LOCAL-TV" and "VOL+" then "OK" to confirm and save

**Channel Punch through:** By default, the Channel button always controls the channel of the TV directly (as well as Xtender channels sent to the TV). Some home setups use an external tuner to change channels and the user would like the channel button to control this external device.

- Program your external tuner device into the CBL key on a remote for that room.
  - Hold down "CBL" and "Info", enter the five digit code for that device, if it turns off/on press "OK" to confirm and save, if not try the next code.
- Hold down **"CBL" and "CH+"**, press "OK" to confirm and save
- Volume will now always use the volume control you set in the AUX device.
- To return tuning back to the TV - Hold down "LOCAL-TV" and "CH+" then "OK" to confirm and save

**Learning Remote Control Codes:** Note that TV codes are learned "into" the BOCS remote, and A/V sources (DVD etc) are learned "into" Xtender

- Learn TV codes - Press and hold **"Local TV" and "Enter"** remote power light will come on, point remotes nose to nose 2" apart, press button on BOCS remote you want to save to, then press button on OEM remote to learn from. Note that deliberate pressing for about half a second produces optimum results. A double blink on the power led indicates success, a fast flash indicates a failure. If it fails try again, if it succeeds proceed right away to the next button pair.
- Learn A/V source codes into Xtender - Press and hold **"Red", "Green", or "Blue" and "Enter"** (depending on where the device to be learned is plugged in, point OEM remote at the Xtender IR window 2" from the face of Xtender, press button on BOCS remote you want to save to, then press button on OEM remote to learn from. Follow same procedure as above.

## Programming Quick Reference:

Function	Keypress	Function	Keypress
Pairing	Xtender "Logo" button then	Vol punch through to Aux	"Aux" & "VOL+"
	Menu & CH+	Vol punch through to TV	"Local-TV" & "VOL+"
Manual IR Code program	Device & "Info" (R/G/B/TV/AUX/DVD/CBL)	Xtender channel Quality	"Menu" & "1" arrow u/d
Scan IR Codes	Device and "Guide" Category TV/AUX/DVD/CBL up/down arrow to cycle through codes	Learn IR Code	Device and "Enter" Press target on X remote Press source on Original Next key or wait to exit
Set Local Master Remote	"Menu" & "VOL+"	CH punch through to CBL	"CBL" & "CH+"
Remove Local Master	"Menu" & "VOL-"	CH punch through to TV	"Local-TV" & "CH+"
Show IR codes set	"Menu" & "2"	Set Inter-Digit Delay	"Menu" & "4" 1-6

## Understanding light flashes:

- Double power button flash** = successful programming
- Rapid power button flash** = error, try again
- Fast triple blink of all three Xtender channel buttons together** = Remote out of range - move closer to Xtender or buy a repeater

Remote will illuminate the device button that you command with each keypress - press play and you can tell where that command went by watching which Device LED illuminated