

# Announcement

## Repeater Coverage for South and Southeast Hillsborough County

By: Luis Romero - W4LT - VHF/UHF System Trustee

### Introduction

The Tampa Amateur Radio Club is pleased to announce the deployment of a new repeater designed to provide reliable coverage throughout south and southeast Hillsborough County, especially for stations operating with lower power or compromise antennas.

The new BridgeCom BDR4550 UHF FM/DMR-capable repeater operates on 443.025 MHz and is located in Ruskin near the junction of I-75 and SR-674. This new system is intended to improve regional coverage and expand access for operators throughout the area.

### Discussion

TARC staff installed our new BridgeComm BDR4550 UHF FM and DMR capable repeater on 443.025MHz on a 180ft tower supplied by Hillsborough County in Ruskin near the junction of I-75 and SR-674. The system is now on the air and available for use by all area licensed amateurs. This repeater's location will provide extensive, highly reliable indoor handheld coverage throughout the densely populated Sun City Center/Kings Point communities in addition to solid coverage as far east as Bowling Green, west through greater Pinellas County, south through the metropolitan Sarasota/Venice and north into central and south Tampa.

This repeater augments the already wide coverage area provided by TARC's 147.105 VHF repeater facilities for general amateur use and as a communications resource during civil and weather-related emergencies.

TARC is currently evaluating the system's coverage and will continue to operate our existing co-channel repeater located atop Raymond James Stadium, which will remain in operation as we prove coverage and reliability of the new Ruskin machine. Both TARC repeaters are on 443.025MHz and will continue to be available to users concurrently. During testing, the Ruskin machine is temporarily using a CTCSS tone of 100.0 and the Raymond James machine is using a CTCSS tone of 146.2. Best practice for operating with two co-channel repeaters this close together is to set your radio to have CTCSS on both transmit and receive and create two memories, each on the same frequency but programmed with the two different CTCSS tones. You can then choose what repeater to access by simply changing the channel. Since both repeaters transmit different CTCSS tones, your transceiver will only activate on the repeater you choose.

The above situation is temporary and after we prove the new repeater's viability, we will move the Raymond James machine to another frequency and change Ruskin to our standard 146.2 CTCSS tone. The change will be announced on our website homepage.

## Technical Information

N4TP/R is a BridgeComm BDR4550 repeater on 443.025MHz Positive Offset with a (temporary) CTCSS of 100.0 both TX and RX. The system uses a BridgeComm 4 cavity duplexer feeding a Sinclair Aurora SC34A antenna at 181.5 feet AGL with 6.5dBd gain. The antenna is fed with 200 feet of LMR1200 cable. Transmitter output is currently 20 watts with 15 watts out of the duplexer for an effective radiated power of 95.6 watts.

Predicted system coverage is illustrated on the attached plot. Email [info@hamclub.org](mailto:info@hamclub.org) if you have any questions or comments regarding this new repeater system.

## Coverage Map

