

**Both the SPS-5 and the Repeater are Considered "Transmitters".**

The Repeater will "Listen" for the Paging Signal from the Paging Transmitter. When it "Receives" a Paging Signal, it will then "Re-Send" or "Re-Transmit" (Repeat) the Paging Signal.

The Repeater should be Installed where it can Receive a "Good/Clean" Signal from the Paging Transmitter every time.

The Repeater will "Extend" the Paging Signal into Areas where the Original Paging Signal could Not Reach effectively and consistently.

See Page 2 for an Explanation of Overlap Signals caused by using two Transmitters and what can done to help this Problem.

Using a Repeater the Pager is now Receiving the Complete Message every time

The Repeater Extends the "Reach" of the Paging Signal into the Problem areas

Outside the Coverage Area This is the Problem Area On this Side of the Dash Line

In this Area there is No Paging Signal

? No Alert  
Pager

Pager Not Responding

No Signal or a Intermittent Signal

Pager Not Receiving any Message or a Garbled Message

More Transmitter Power or a Repeater is Required

MATERIAL	FINISH NONE	DATE 6.15.12
TITLE Description of Transmitter used with a Repeater		DWN BY Bob Clyburn
		APP.
WAVEWARE TECHNOLOGIES GARLAND, TEXAS 972-479-1702	DWG. NUMBER	REV. 1

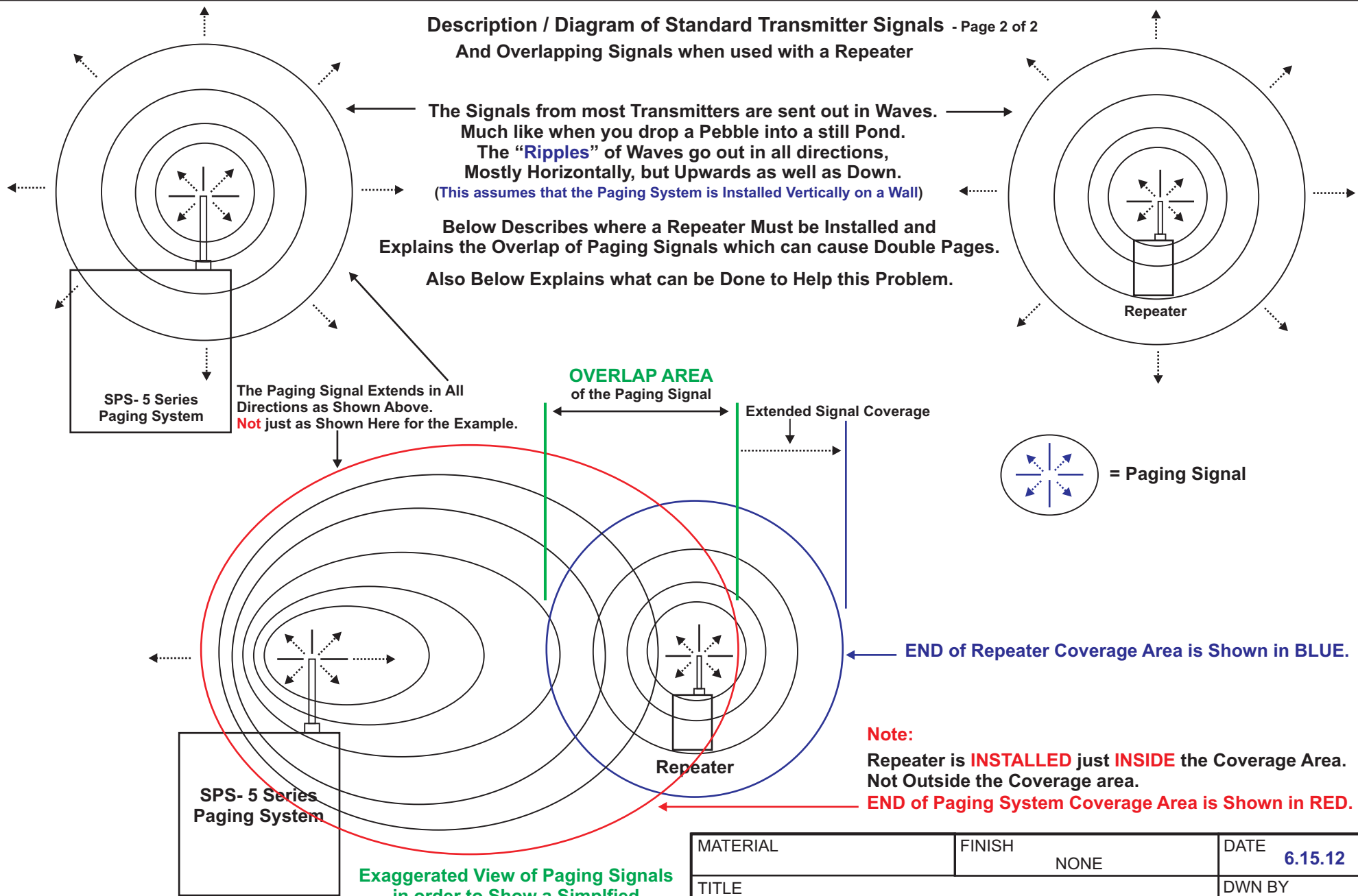
**Description / Diagram of Standard Transmitter Signals - Page 2 of 2**

**And Overlapping Signals when used with a Repeater**

The Signals from most Transmitters are sent out in Waves. Much like when you drop a Pebble into a still Pond. The "Ripples" of Waves go out in all directions, Mostly Horizontally, but Upwards as well as Down. (This assumes that the Paging System is Installed Vertically on a Wall)

Below Describes where a Repeater Must be Installed and Explains the Overlap of Paging Signals which can cause Double Pages.

Also Below Explains what can be Done to Help this Problem.



SPS- 5 Series  
Paging System

The Paging Signal Extends in All Directions as Shown Above. **Not** just as Shown Here for the Example.

**OVERLAP AREA**  
of the Paging Signal

Extended Signal Coverage

Repeater

= Paging Signal

SPS- 5 Series  
Paging System

Repeater

END of Repeater Coverage Area is Shown in BLUE.

**Note:**

Repeater is **INSTALLED** just **INSIDE** the Coverage Area. Not Outside the Coverage area.

**END of Paging System Coverage Area is Shown in RED.**

**Exaggerated View of Paging Signals in order to Show a Simplified View of Signal Overlap.**

**Note:**

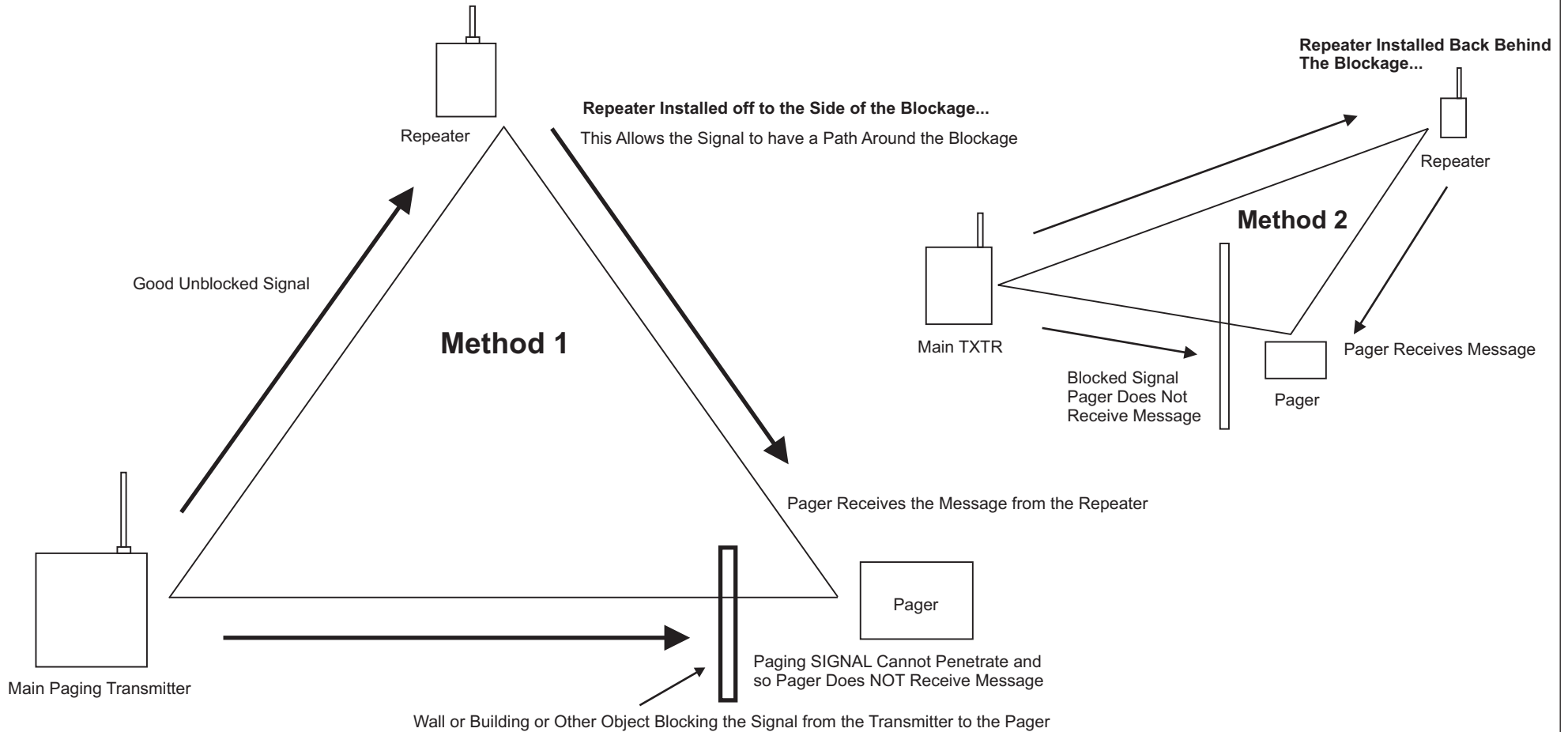
The Area of Overlapping Paging Signals will Cause Any Pager in the Overlap Area to get a Second Page, one from Both the Paging Transmitter and from the Repeater. If more than one Repeater is used, then any Pager within any of the Overlapping Signals will be Paged, so a Pager may get more than two Pages. **This Problem can be worked around by Re-Programming a Pager to Not Display any Duplicate Messages for 30 Seconds. This Change has to be Done using the Pager Software.**

MATERIAL	FINISH NONE	DATE <b>6.15.12</b>
TITLE <b>Description of Transmitter Signal Overlap</b>		DWN BY <b>Bob Clyburn</b>
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DWG. NUMBER		REV. <b>1</b>

# General Ideas of Installation Methods of the Repeater for a Blocked Signal

Install the Repeater in an Area that gets a Good Paging Signal so it can Receive and Resend the Signal

Repeater is Not Blocked and Receives Message and then Repeats the Message



NOTE:  
There is No Guarantee of Coverage even with a Repeater  
Too Many Variables per Site Location

TITLE <b>Repeater General Basic Installation Layout Diagram For a Blocked Paging Signal</b>		DATE <b>10.4.12</b>
WAVEWARE TECHNOLOGIES Garland, Texas 972-479-1702		DWN BY <b>Bob Clyburn</b>
DWG. NUMBER		REV. <b>1</b>