

This document was prepared by Electronics Etc. <http://www.electronicsworldwide.net>

The purpose of this document is to help our customers understand how to wire speakers on a 70 Volt system.

Most of our amplifiers have a 70V speaker output selection. We recommend using this output for commercial PA Systems with lots of speakers.

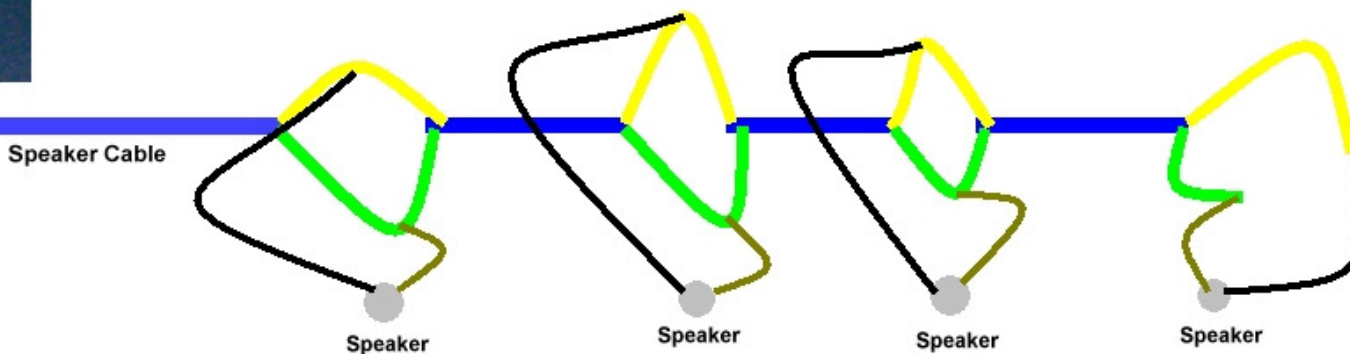
When using the 70 volt output, there is less chance of damaging your amp by mis-matching the speaker impedance . See all four pages below.

Wiring speakers to a 70 Volt Audio Output Using 70v Speakers or Speakers that have a 70v Transformer.

Back of Amp



On back of amp,
hook speaker wire conductors to the OUTPUT:
one conductor on the COM other on the 70V



It is very simple. Speaker wire or cable has two conductors.

You will only hook the one pair of conductors to the amp and then just run that one cable to the speakers.

There is no need to loop back to the amp. Simply run the cable out and hook the speakers up to the two conductors, then run out to the next speaker.

Imagine the speaker cable as a Railroad Track and you can hook a speaker anywhere along the track.

Again, no need to loop back.

See Diagram (crude) but effective..



This photo is the back of our WS-7020 speaker that has a built in transformer. Notice the numbers left to right are as follows:

3.8 – 7.5 – 15 – 30 – 60 – 8ohm.

These numbers in this example stand for wattage taps on the built in transformer. It is a good idea to set all speakers on the same value at first to get nice even volume through out all speakers.

In a lot of cases, we would start by setting all speakers on a 70V amp signal to the 7.5 value. Then power up and do some sound checks.

Here's the formula: Number of speakers X times the value selected in watts should not exceed the total watt output of the amp. This is a rule of thumb, a little variety will not do harm, but do not stray way out.

Example, say you have 10 speakers all set at 7.5 would equal 75 watts, then your amp should be able to produce approx 75 watts or more.

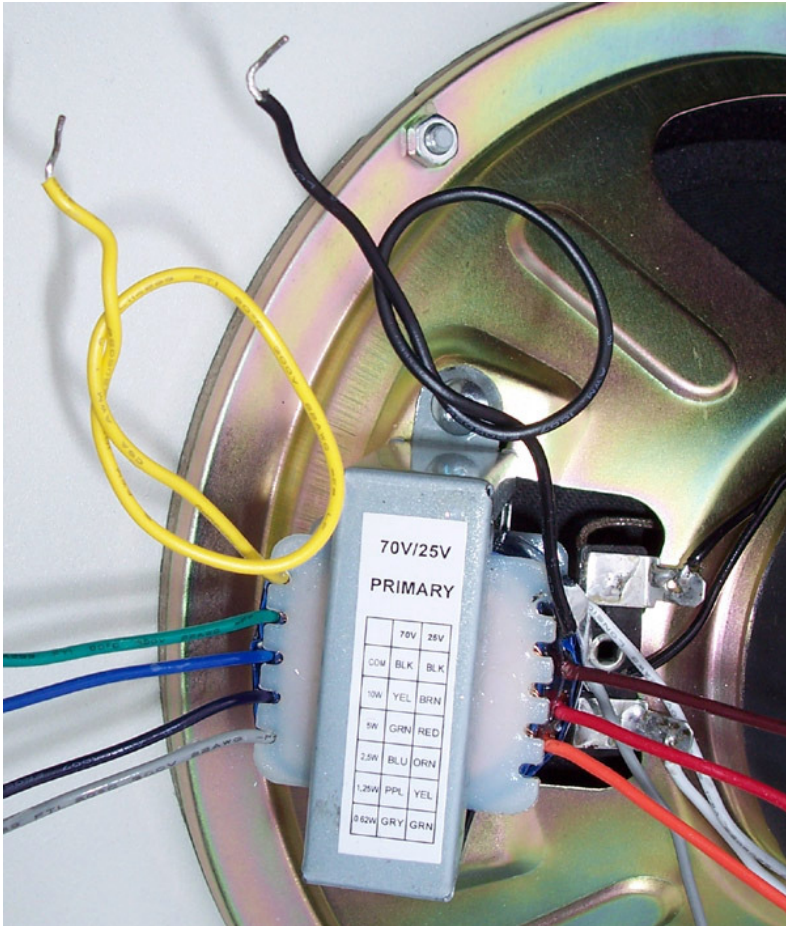


The photo above is from one of our outdoor HORN speakers.

Notice the 70V line on the chart and proceed accordingly.

Example, selecting the number 5 would produce a 10-watt load.

On this speaker if you have say 10 speakers in the field, we would probably start by selecting the number 6 = 5watt per speaker and start testing volume and sound quality from that point.



The above photo is an indoor ceiling speaker with a transformer attached.

On a typical 70v system we would tie our speaker wires to the yellow and black (as indicated by a loop in the photo)

One of your incoming 2 speaker wires will ALWAYS hook to the black (common) wire on the transformer.

If you wanted to reduce the volume on one of the speakers, you could unhook the yellow and move down to green, blue, purple or grey as indicated on the chart for different wattage taps.

Be sure to watch our video on this subject. You will find that video on our website at: <http://www.electronicsworldwide.net/videos-12.html>

If you have questions, feel free to email or call us: info@electronicsworldwide.net 800-515-3020