PIONEER®

WORLD-FAMOUS BRAND IN HI-FI REPRODUCTION

CROSSOVER NETWORK DN-5 DN-6 DN-7

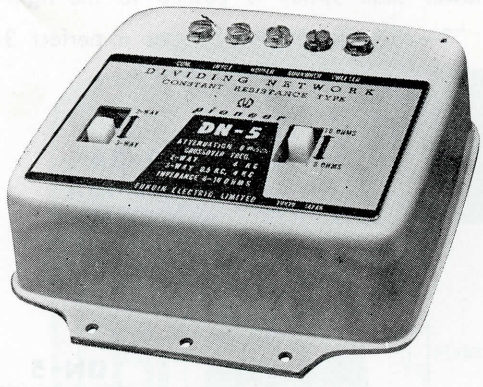
Although there is, for wide-range reproduction, a multi-channel amplifier system with separate speakers functioning for respective bands, much cheaper and simpler way of getting frequency crossover is a network system which divides frequencies on the secondary side of output transformer. Three kinds of newly announced networks···Models **DN-5, DN-6** and **DN-7**···are of immense utility value since they can be used either as a 2-way or 3-way network by simply manipulating a slide switch provided.

SPECIFICATIONS

Model No.	DN-5	DN-6	DN-7
Type :	Constant resistance parallel type	Constant resistance parallel type	Constant resistance parallel type
Attenuation :	6 dB/oct.	12 dB/oct.	12 dB/oct.
Crossover Frequency :	4,000 cps for two-way 500 cps and 4,000 cps for three-way (selected by slide switch)	4,000 cps for two-way 500 cps and 4,000 cps for three-way (selected by slide switch)	4,000 cps for two-way 500 cps and 4,000 cps for three-way (selected by slide switch
Impedance :	8 ohms and 16 ohms (selected by slide switch)	8 ohms	16 ohms
Maximum Transmitted Power :	30 watts	30 watts	30 watts
Dimension :	1⅝" × 4¾" × 5⅛"	1⅝" × 4¾" × 5⅛"	1⅝" × 4¾" × 5⅛"
Weight :	0.99 lbs.	1.21 lbs.	1.54 lbs.

USES OF DN-5, DN-6 AND DN-7

They are used for dividing frequencies of a speaker system into high and low (2-way) and high, medium and low (3-way).



DN-5

FEATURES OF DN-5

1. Switching of impedances possible

Almost all ordinary netwoks are of either 8-ohm or 16-ohm impedance, but with **DN-5,** either 8-ohm or 16-ohm impedance can be selected be simply shifting a slide switch.

2. Selecting by switch either 2-way or 3-way network

Since it can be used as a 2-way or 3-way network

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by means of the slide switch, it is very convenient to construct a 2-way speaker system first and then convert it into a 3-way system later on.

3. Ideal crossover frequency

As the most rational value is adopted for crossover frequency taking into consideration crossover frequencies of all available speakers, it can be used in combination with any type of speakers.

4. Accessory-like appearance

Unlike other conventional metal cases which are a result of over-emphasis on performance alone, **DN-5** makes use of exquisite plastic case and serves as a fine piece of accessories when placed on a speaker system.

METHOD OF USING DN-5

For wiring diagrams of **DN-5,** please refer to **Fig.1** and **Fig.2.** Five binding posts arranged in a row at the left on **DN-5** in **Fig.1** are input terminals from an amplifier and output terminals for a speaker. They are from the top in the following order: plus side of tweeter, plus side of squawker, plus side of woofer, plus side of amplifier and minus side of all speakers as well as amplifier. Of two slide switches at the extreme right in **Fig. 2,** the upper one is for selecting the proper impedance of network in accordance with the impedance of speaker to be used while the lower one is for switching in 2-way or 3-way system.

1. When using DN-5 as a 2-way network

A. Connecting to speaker and amplifier

When using **DN-5** as a 2-way network, please make connections as shown in **Fig. 1.**

First, connect the output cords of amplifier to the binding posts marked "IN". Next, for speaker connection, make connections from the binding post marked "Tweeter" to the plus side of speaker by way of a level control. For woofer, connect from the post marked "Woofer" directly to the plus side of speaker. Connect the minus sides of both tweeter and woofer to the lowest post. This means that three wires, one each from tweeter, woofer and amplifier, are connected together at the bottom post.

B. slide switches

Of two slide switches the upper one is for selecting impedances. By shifting either to right or left, desired impedance can be obtained.

By pushing the lower slide switch to left, it is converted into a 2-way network.

2. When using DN-5 as a 3-way network

A. Connecting to speaker and amplifier

The amplifier, woofer and tweeter are connected in the same manner as far 2-way, and then make connections from the terminal post marked "Squawker" to the plus side squawker by way of the level control (Refer to **Fig. 2.**)

B. Slide switches

Just as for 2-way, select proper impedance for the speaker to be used by using the upper slide switch (for impedance selection).

If the lower slide switch is pushed to the right side marked "3-way", it will function as a perfect 3-way network.

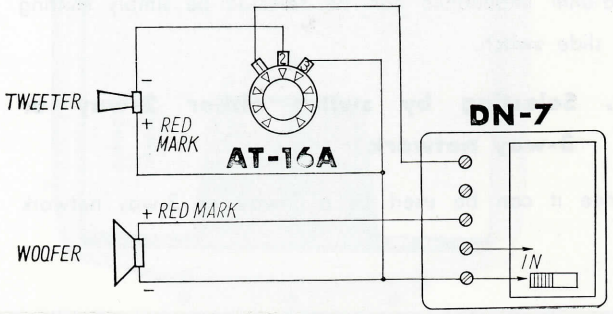


Fig. 1

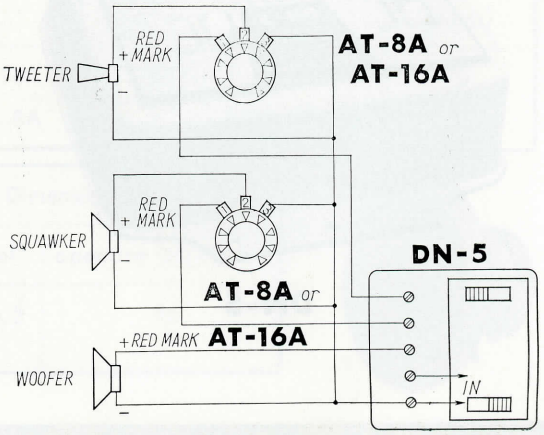


Fig. 2

DN-6 AND DN-7

DN-6 and DN-7 are identical in all respects except that the former is 8-ohm whil the latter is 16-ohm.

FEATURES OF DN-6 AND DN-7

1. As the attenuation characteristic is a sharp curve of 12dB/octave, there is absolutely no interference near crossover frequency, resulting in an even crossover.

2. For other features, they are just as excellent as those for **DN-5** as described in the foreqoing paragraphs on "Features of **DN-5**".

METHOD OF USING DN-6 AND DN-7

1. When using DN-6 and DN-7 as a 2-way network

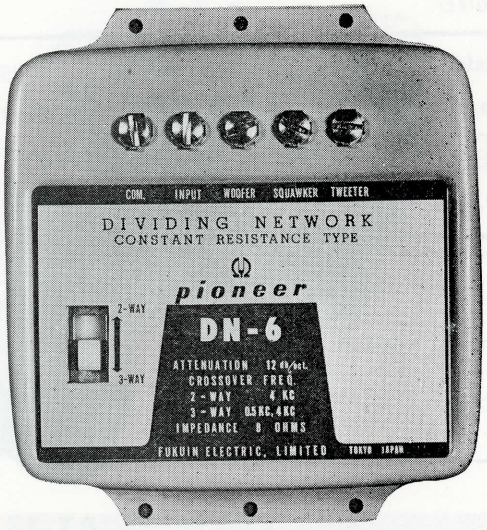
A. Connecting to speaker and amplifier

Refer to **Fig.3** for **DN-6** and **Fig.4** for **DN-7**

From the binding post marked "Tweeter" on the terminal board at left, make connections to the miuns side of tweeter by way of a level control. From the post tweeter "Woofer", connect dirrectly to the plus side of woofer. Then connect the plus side of tweeter and the minus side of woofer togeher to the post ot the bottom. Connect the output cords of amplifier to the posts marked "IN". It may seem a blunder to connect the minus of woofer and the plus of tweeter together, but as it is the right thing to do, Do not make a mistake in connecting them.

B. Slide switch

When the slide switch is pushed to left, it becomes a 2-way network.



DN-6

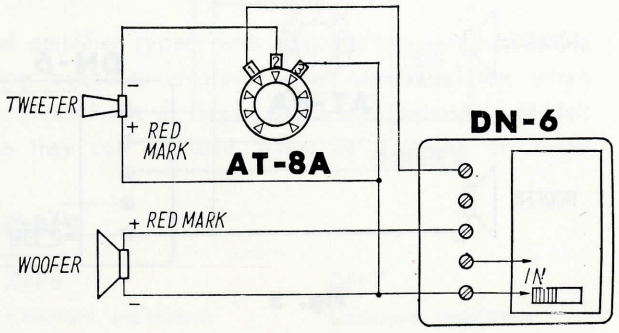


Fig. 3

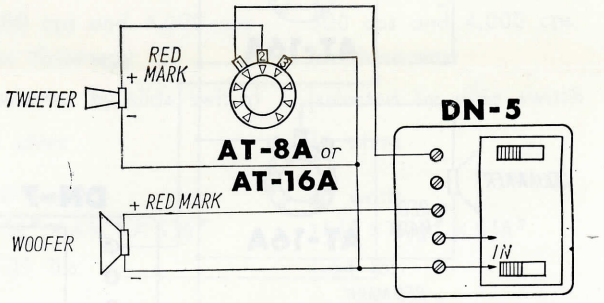


Fig. 4

2. When using DN-6 and DN-7 as a 3-way network

A. Connecting to speaker and amplifier

An amplifer and speakers are to be connected as shown in **Fig. 5** and **Fig. 6** Special caution should be exercised when making 3-way wiring as the plus and minus connections of tweeter for 3-way system become just opposite to those for the 2-way. Whenever a 2-way system is to be converted into a 3-way, make sure that tweeter connections are chaged also. In addition, make a special note of the fact that the plus side of spuawker is connected to the minus post of network.

B. Slide switch

When the slide switch is pushed to the right marked "3-way", it works as a perfect 3-way network.

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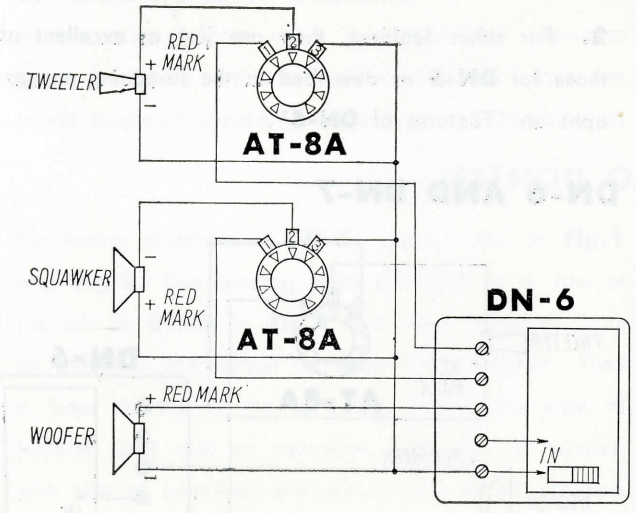


Fig. 5

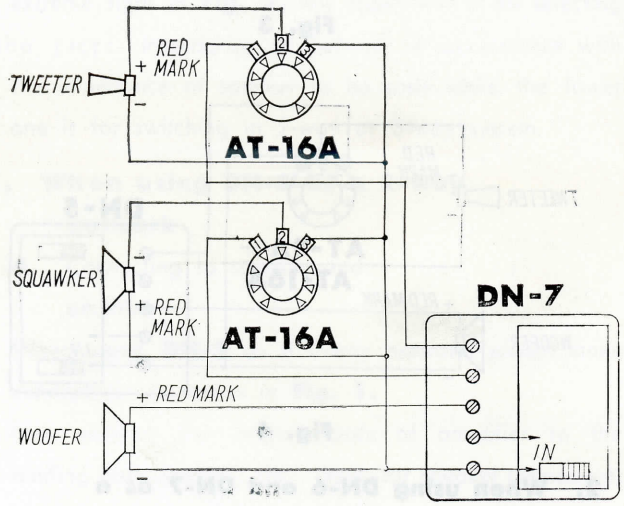
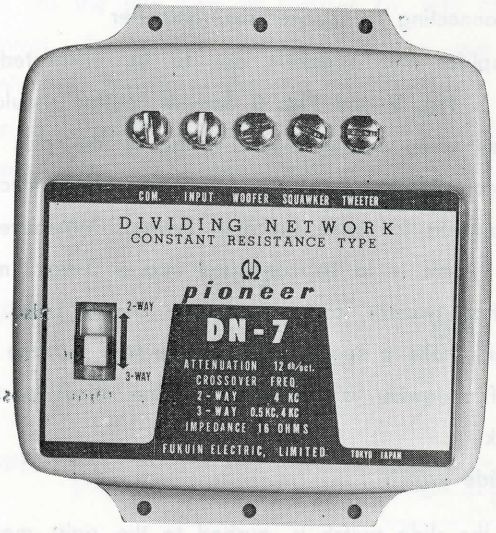


Fig. 6



DN-7

PRECAUTIONS FOR USING DN-5, DN-6 AND DN-7

1. Level contol

As both squawker and tweeter are generally highly efficient, if they are connected just as they are, high and middle ranges predominate resulting in hard and unpleasant tone. Therefore be sure to use a level control. As Level Controls Models **AT-8A** and **AT-16A** made by the Company are single-shaft, double-contact type attenuators with communication-type precision-wound resistors set in a double rows, the error in impedance is almost negligible and can be used with reassurance.

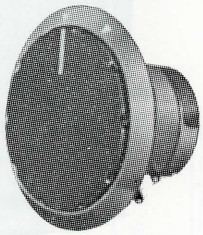
Of the numerals **1, 2** and **3** engraved on the terminal lugs of **AT-8A** and **AT-16A,** connect **1** to the tweeter teminal of network, **2** to a tweeter and **3** to the minus of netwerk; and when the level-control knob is turned completely to right, the volume of tweeter gets greatest, and when turned in opposite direction, the volume can be decreased to zero.

2. Phasing

When speakers are not in phase, dips will appear near crossover frequencies because of interferences, producing sound hard to bear and unpleasant to hear. As each speaker has + or a red mark on the plus side, make connecttions as indicated in diagrams, taking notice of the marker.

Model No.	Type	impedance (ohms)	Weight (grams)
AT-16A	Pioneer Special L	16	70
AT- 8A	〃	8	〃

Dimensions (inch)	
panel	aperture diameter
2½ × 2 〃	⅜ 〃



AT-16A