ADC TRANSFORMERS • PATCH CORDS AND PLUGS • FILTERS • JACKS AND JACK PANELS ADC

Catalog No. 46C

AUDIO DEVELOPMENT COMPANY

MINNEAPOLIS 7, MINNESOTA

- TRANSFORMERS
- PATCH CORDS AND PLUGS
- FILTERS
- JACKS AND JACK PANELS

Audio Develops the Finest

ADC TRANSFORMERS • PATCH CORDS AND PLUGS • FILTERS • JACKS AND JACK PANELS ADC

ADC
Audio DEVELOPMENT CO.
Transformers • Jacks and Plugs • Audiometers
2833-13th AVENUE SOUTH MINNEAPOLIS 7, MINN.

August 29, 1949

William R. Davis ATC USN
Project Service USNAMTC
Point Mugu, Calif.

Dear Mr. Davis:

We are pleased to enclose a copy of our catalog in response to your recent request.

We wish to thank you for the interest shown in our products and we shall look forward to having an opportunity of serving you.

Very truly yours,

AUDIO DEVELOPMENT CO.

D N Akenson

DNA:mab
Enc.

D. N. Akenson

PRINTED IN U.S.A.

"NEW MEMBERS OF AN OLD FAMILY"

IT IS OUR PURPOSE in this catalog to present two new lines of audio transformers, both reflecting in their performance the exceptional experience acquired by Audio Development Company through years of manufacturing such high quality transformers as the *Quality* series and *Industrial* transformers formerly produced.

In this catalog those who are old friends of **ADC** will find a severe reduction in the types of equipment offered. This has been done so as to include only those transformers which will be kept in stock and available at most times for immediate shipment.

However, for the convenience of those who have equipment containing our earlier style transformers which they wish to match in appearance, we shall continue to make up units on special order as promptly as possible.

QUALITY REMAINS FIRST AT ADC

As with other **ADC** transformers, the two new lines described in this catalog have been designed and constructed with only one thought in mind: *to make available the highest quality audio components.*

This refusal to compromise with quality has long been recognized by users of **ADC** products. For example, opinion polls conducted by independent sources (having no connection with **ADC**), indicate that broadcast station engineers throughout the country recognize **ADC** components as supreme in quality.

One of the reasons cited by broadcast engineers in their statements of preference was that **ADC** advertising claims are strictly adhered to. Our straightforward policy in this respect is guaranteed by the fact that *every transformer leaving our plant is carefully inspected and laboratory tested to make sure it meets ALL of our exacting requirements.*

For years our transformers and other components have been made available direct to radio stations, experimental laboratories, recording studios and other users of highest quality equipment. But today, while we continue to welcome manufacturers' requirements directly, our stock production has grown to such volume that it is virtually necessary to obtain the more economical distribution afforded by jobber organizations throughout the country.

So your jobber's shelf is our stockroom. And it is with a great deal of confident pleasure that we invite you to examine the specifications listed on the following pages. We hope this catalog will help you become more thoroughly acquainted with what we believe to be the finest in quality audio components today.

Audio DEVELOPMENT COMPANY

ADC QUALITY PLUS TRANSFORMERS

- ±½ db 30-15,000 cps, all types
- Low transmission loss
- Excellent longitudinal balance
- Power ratings at 30 cycles
- Either top or bottom mounting
- Extremely low hum pickup
- Humbucking winding on all Impedance, Output & Bridging types

For AM & FM Broadcast Stations and Recording Studios

IMPEDANCE MATCHING TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Max. Level	Case	Code
114A	600/250 (150/62.5)	600/250 (150/62.5)	2 mu-metal shields	+16	14A	Kaaba
114B	600/250 (150/62.5)	600/250 (150/62.5)	Cast case only	+20	14AD	Kabay
114C	10,000/600 (2500/150)	600/250 (150/62.5)	Bridging & line to line. 2 mu-metal shields	+16	14A	Kaber
114D	10,000/600 (2500/150)	600/250 (150/62.5)	Bridging & line to line. Cast case only	+20	14AD	Kabet
114E	10,000 (2500)	600/150 (150/37.5)	Bridging to line. 2 mu-metal shields	+16	14A	Kalium
114F	600/150 (150/37.5)	600/150 (150/37.5)	2 mu-metal shields	+16	14A	Kaffir
114G	600/150 (150/37.5)	600/150 (150/37.5)	Cast case only	+20	14AD	Kaiser

NOTE: All Bridging transformers have built-in primary resistors. Bridging impedance is twice primary winding impedance as listed above due to series resistors.

STANDARD LINE IMPEDANCES:

Throughout this catalog you will note that impedances obtainable by paralleling windings of transformers are given in parentheses. Thus a listing "600 (150) ohms" indicates a total impedance of 600 ohms, with 150 ohms obtainable by paralleling the two windings. With either connection windings are well balanced, but center tap is available only when both windings are connected in series. These transformers can be used with good results in matching 500 ohm circuits since the small resulting mismatch will produce very little shift of frequency response.

PLATE TO LINE PREAMPLIFIER SERVICE:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
314A	15,000	600/250 (150/62.5)	1 6J5, etc.	8	+23	14AD	Karos
314B	20,000	600/250 (150/62.5)	PP 6J5, etc.	1	+27	14AD	Karri

TUBE TO LINE AND V.C., POWER TYPE:

(±½ db response guaranteed on 600 ohm output only)

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
314C	5000/3000	600/16/8 (150/4/2)	AB_1, 2A3, 6A3, 6B4	5	+42	14D	Kasha
314D	8000	600/16/8 (150/4/2)	AB_1, 6F6 triode	1	+35	14D	Katub
314E	*10,000/8000	600/16/8 (150/4/2)	PP 6V6, 6F6 pentode	5	+43	14D	Katal
314F	*9000/6600	600/16/8 (150/4/2)	PP 6L6 pentode	5	+45	14D	Katha
314G	2500/1500	600/16/8 (150/4/2)	PPP 2A3 6B4, 6L6	5	+45	14D	Kevyt

***NOTE:** Feedback winding full 10% of primary turns.

Audio DEVELOPMENT COMPANY

ADC QUALITY PLUS TRANSFORMERS

INPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
214A	600/250 (150/62.5)	80,000	Line to 1 grid 3 mu-metal shields	0	+20	14A	Kairu
214B	600/250 (150/62.5)	80,000	Line to 1 grid Cast case	0	+20	14AC	Kaise
214C	600/250 (150/62.5)	60,000 (15,000)	Line to PP grids 3 mu-metal shields	0	+20	14A	Kakem
214D	600/250 (150/62.5)	60,000 (15,000)	Line to PP grids Cast case	0	+20	14AC	Kakar
214E	10,000/600 (2500/150)	60,000	Bridging & line to grid. 3 mu-metal shields	0	+20	14A	Kalid
214F	10,000/600 (2500/150)	60,000	Bridging & line to grid. Cast case	0	+20	14AC	Kakul

NOTE: All Bridging transformers have built-in primary resistors. Bridging impedance is twice primary winding impedance as listed above due to series resistors. May be used with excellent results on 500 ohm line.

INTERSTAGE:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
214H	10,000	80,000 (20,000)	Single plate to PP grids. Humbucking. Cast case	0	+26	14AC	Kappa
214J	20,000 (5000)	80,000 (20,000)	PP plate to PP grids. Humbucking. Cast case	1	+30	14AC	Karuk

F-M FREQUENCY REQUIREMENTS:

The wide frequency transmission requirements that Federal Communications Commission have required of frequency modulated radio stations demands that the quality of audio components be maintained at the highest possible level. This is particularly true of transformers. The transformers listed on these pages have been designed with these requirements in mind. Your transmitter or high fidelity receiver has a better chance of staying within prescribed limits if you use **ADC** components.

REACTORS:

Type	Description	Inductance	DC MA Current	Approx. DC Resistance	Case	Code
414A	PP plate or grid coupling {or plate coupling}	1000 (250)	1	8400/2100	14AD	Ketuk
414B	Preamplifier filter {or plate coupling}	100 hy	20	3200	14AD	Ketch
414C	Preamplifier filter	45 hy	30	1250	14AD	Kethu
414D	For tuned circuits	2.4hy (10KC)			14Y	Kever
414E	For tuned circuits	0.8hy (6KC)			14Y	Kevok

MU-METAL SHIELDING:

Because of the difficulty experienced in reproducing test results on the various methods employed, no statements are made here regarding exact shield efficiencies. The use of high permeability mu-metal for shielding, the incorporation of certain features in the design of the alloy shields and in the transformer windings, together with special balanced terminal arrangements, make these transformers far superior to competitive makes.

We welcome tests comparing any of these units with the best shielded transformers of other makes, regardless of price or claims made.

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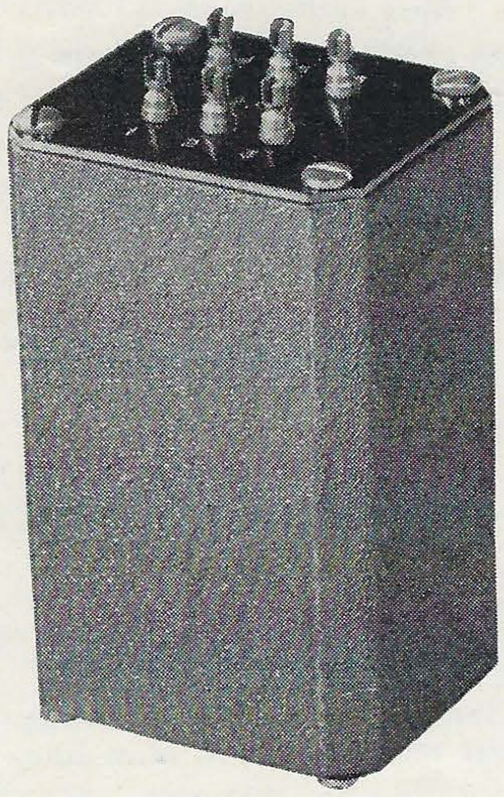
TYPE 14 TRANSFORMER CASES



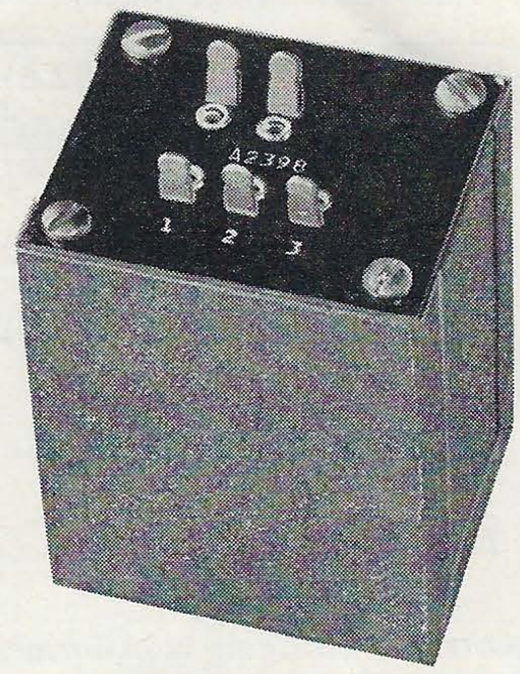
TYPE 14AD

ADC Type 14 Transformer Cases provide the rugged, neat housing these two fine lines of transformers deserve. They are fabricated from heavy folded steel plate* and finished in attractive gray wrinkle, truly distinguished in appearance.

*Except where heavy annealed cast cases are indicated.

COMPLETE IMPREGNATION: All units are vacuum varnish, or wax impregnated, then sealed with a special non-hygroscopic potting compound, to assure freedom from corrosion and leakage.

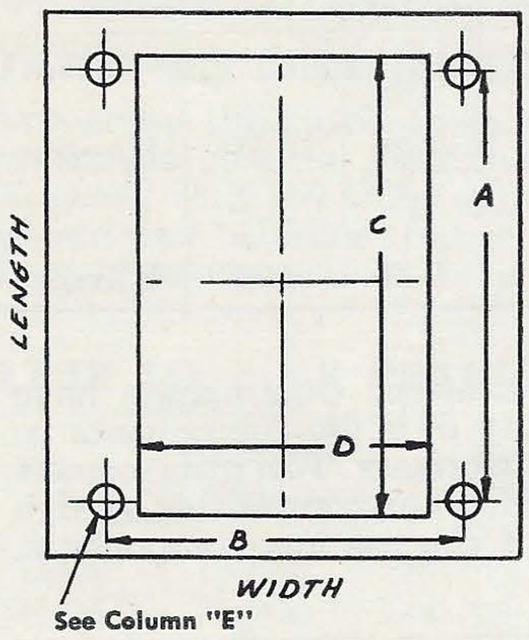
INSULATION throughout is of the highest grade materials. All insulation will withstand voltages far in excess of those normally required.



TYPE 14A

SILVER PLATED TERMINALS: Terminal lugs are of heavy, silver-plated brass, strong enough to withstand the abuse of repeated connecting and disconnecting of heavy gauge wire. The silver plating makes soldering easy even after long storage or years of use.

UNIVERSAL MOUNTING: Mounting is accomplished by means of four nickel-plated screws in both top and bottom. This permits units to be mounted either "top" or "bottom" terminals.



TYPE 14 TRANSFORMER CASE DIMENSIONS

Type	Length	Width	Height	Mounting Dimensions		Chassis Knock-Out for Max. No. of terminals		Mounting Hole†
				A	B	C	D	E
14AC*	2.375	2	3	1.875	1.5	2	1.125	.156
14AD*	2.375	2	3.5	1.875	1.5	2	1.125	.156
14A	2.375	2	3	1.875	1.5	2	1.125	.156
14B	2.75	2.375	3.5	2.25	1.875	2.5	1.375	.156
14C	3.5	3	4.25	3	2.5	2.875	2	.187
14D	4.125	3.5	5.125	3.625	3	3	2.5	.218
14E	5.5	4.125	5.125	5	3.625	4.5	3	.218
14Y	1.531	1.312	2	1.156	1	1.062 DIA.		.156

*Heavy annealed cast iron for low level shielding.

†Mounting screws: 6/32 machine screw except 8/32 for 14C and 10/32 for 14D and 14E.

POWER TRANSFORMERS

REGULATION: All power transformers here listed have better than 5% regulation.

TEMPERATURE RISE is limited to 40° C. in all units. With this low temperature rise for normal operation, moderate overloads will cause no damage.

Type	Hi AC Volts	Filament	Description	Case	Code
515A	275/0/275 V., 25 MA	6.3 V., .6 A 6.3 V., 1.8 A CT	Preamplifier Low density field	14C	Kines
515B	325/0/325 V., 50 MA	6.3 V., .6 A 6.3 V., 2 A CT	Preamplifier Low density field	14D	Kinky
515C*	400/100/0/400 V., 100 MA	5 V., 3 A 2.5 V., 5 A CT 6.3 V., 3 A CT	2A3, 6L6, etc.	14D	Kipsi
515D*	400/100/0/400 V., 200 MA	5 V., 3 A 2.5 V., 10 A CT 6.3 V., 4 A CT 6.3 V., 2 A CT tapped at 5 V	6L6, PPP, 2A3	14E	Kisel
515E	330/330 V., 100 MA	5 V., 2 A 6.3 V., 2.5 A CT	6V6, etc.	14C	Kitty

NOTE: Primaries 117 V., 50/60 cy. except (*) 50/60 cycle 110/115/120 V.

PLATE SUPPLY TRANSFORMERS:

Type	Volts ESC	DC Output with Choke Input Filter	Case	Code
515F	625	500 V., 300 MA	14E	Kobot
515G	750	600 V., 250 MA	14E	Kobis
515H	940	750 V., 250 MA	14E	Kobum

NOTE: All primaries 50/60 cycle, 110/115/120 V.

FILAMENT TRANSFORMERS:

Type	Secondary	Insulation Breakdown Test Voltage rms	Case	Code
515L*	2.5 V., 10 A CT	6,000	14C	Kitch
515M	5 V., 3 A CT	1,500	14A	Knife
515N*	5 V., 10 A CT	10,000	14D	Klieg
515P*	5 V., 20 A CT	10,000	14E	Knave
515Q	6.3 V., 2 A CT	1,500	14A	Knobe
515R	6.3 V., 4 A CT	1,500	14B	Knock
515S*	10 V., 7 A CT	1,500	14D	Knout

NOTE: Primaries 117 V., 50/60 cy. except (*) 110/115/120 V.

SMOOTHING CHOKES:

Type	Inductance	Current DC MA	Max. DC Resistance	Test	Case	Code
415A	40	20	1,050	1500	14A	Keyed
415B	20	50	370	1500	14A	Kheda
415C	15	100	250	1500	14B	Kilef
415D	10	150	120	2000	14C	Kilta
415E	10	250	85	3000	14D	Kimon
415F	10	300	75	3000	14E	Kiloc

SWINGING CHOKES:

415G	5/25	200/25	140	3000	14D	Kinah
415H	8/40	300/30	115	3000	14E	Kindl

LINE VOLTAGE CHANGING TRANSFORMERS:

Type	Pri. Volts	Sec. Volts	Description	V.A.	Case	Code
515T	230	115	Isolation stepdown	100	14D	Kumra
515U	230	115	Isolation stepdown	250	14E	Kyack
515V	100/105/110/115/120/125		Auto-transformer	500	14D	Komat
515W	115/230 or 230/115		Stepup-down auto-transformer	500	14E	Krone

ADC INDUSTRIAL TRANSFORMERS

For Quality P. A. Systems and High Fidelity Music Reproduction

- ±1½ db 50-10,000 cps
- Dependable at lower cost
- Minimum insertion loss
- Power ratings at 50 cycles

IMPEDANCE MATCHING TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Watts	Case	Code
115A	600 (150)	600 (150)	Line to Line	0	8	14A	Kagan
115B	1/2/3/6/8/10/16/22/37/43/50/75/140/220/250/333/400/440/500/600		Auto transformer	0	20	14B	Kahal

INPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
215A	600 (150)	50,000	Line to single or PP grids. Humbucking windings.	0	+26	14A	Kalmu
215B	10,000	2200 Total	Single plate to Class AB_2 grids. 6F6, 6L6, etc.	10	+30	14A	Kamis
215C	10,000	80,000 CT	Single plate to PP grids. 45 6L6, 2A3, etc. (A, AB_1)	10	+30	14A	Kanak
215D	20,000	90,000	PP plates to PP grids. Humbucking windings.	.5	+33	14A	Kanga
215E	7500	60,000 CT	Line bridging to single or PP grids. (Bridging impedance 15,000 ohms)	0	+30	14A	Kanti

Audio DEVELOPMENT COMPANY

AUDIO DEVELOPMENT

INDUSTRIAL TRANSFORMERS

OUTPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Watts	Case	Code
315A	15,000	600/250 (150/62.5)	1 6C5, 6J5, 1 F5, etc.	8	½	14A	Kedge
315B	20,000 CT	600/250 (150/62.5)	PP 6C5, 6J5, etc.	.5	1	14A	Keeve
315C	5000	600/250/16/8/6/3/2/1	Single 6V6, etc.	35	6	14B	Kefir
315D	10,000/8000	600/250/16/8/6/3/2/1	AB_1, and AB_2, 6F6 6V6 pentode	2	15	14B	Kelep
315E	6000/3800	600/250/16/8/6/3/2/1	AB_1, AB_2, 6L6, 10% feedback winding	6	47	14D	Kelis
315F	5000/3000	600/250/16/8/6/3/2/1	2A3, 6B4, 6A3, 6L6 (A_1)	5	18	14C	Kenez
315G	2500/1500	600/250/16/8/6/3/2/1	PPP 2A3, 6B4, 6L6	10	30	14D	Kerac

LINE TO V.C.—±1½ db 30-15,000 cps.

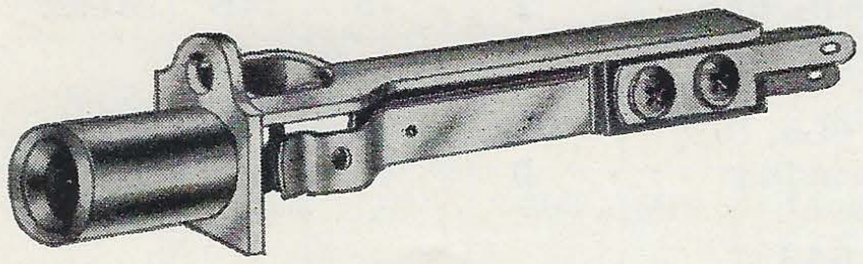
Type	Primary Impedance	Secondary Impedance	Watts	Case	Code
115M	3000/2400/1800/1200/600	20/16/8/4	15	14C	Kahan
115N	3000/2400/1800/1200/600	20/16/8/4	30	14D	Kaiak

FILTERS:

Type	Input Impedance	Output Impedance	Description	Case	Code
714A	600/6000	60/600/6000/60,000	400 cycle, narrow band pass measurements	14C	Kabob
714B	600/6000	60/600/6000/60,000	1000 cycle, narrow band pass measurements	14C	Kader
714C	10,000 ohm Plate	10,000	Amateur band pass 250-3000 cps.	14B	Kasin
714D	600	600/20/16/8/4	500 cy., 20 watt speaker cross over filter	14D	Kreme
715A	600	600	Aircraft range 1020 cps. band rejection	14B	Jowls
712C	600	600	Aircraft range 1020 cps. band pass & reject	14C	Jolly

JACKS AND JACK PANELS

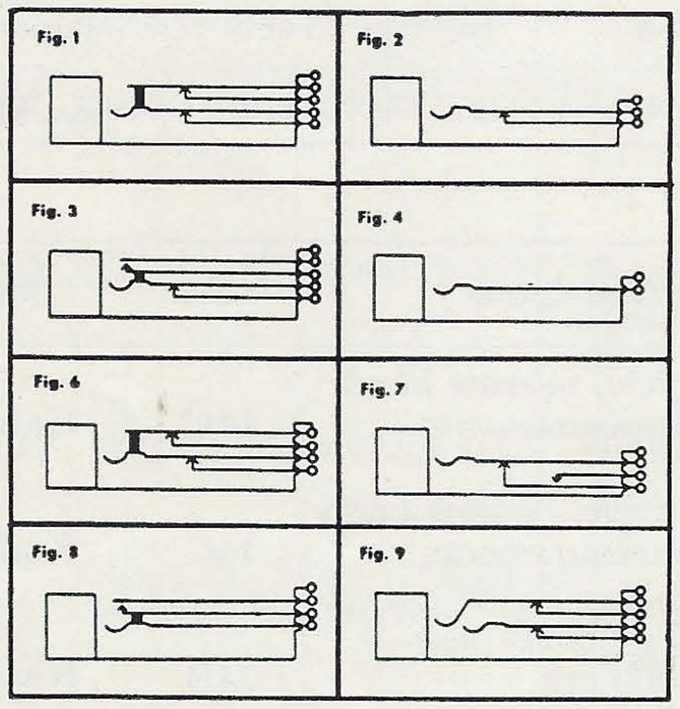
ADC JACKS of new streamlined design use heavier gauge metal for greater strength. The frame is die formed and press welded for utmost rigidity and dimensional accuracy. Silver alloy contacts and genuine nickel silver springs guarantee corrosion resistance. Dimensions are standard, interchangeable with any standard telephone type jacks using ¼" plug.

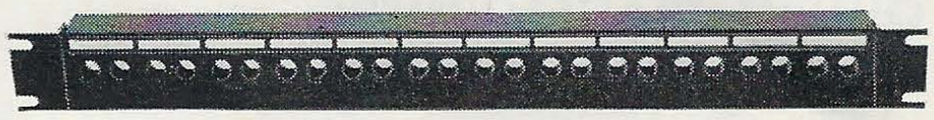


ADC JACK

Type	Fig. No.	Code
PJ-318	2	Resot

Jacks with other spring arrangements, as shown below, can be supplied on special order.

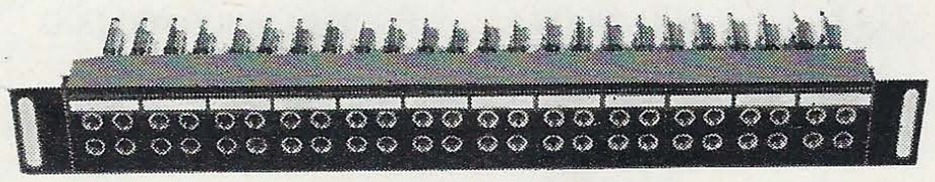




SINGLE ROW JACK PANEL

ADC JACK PANELS have standard spacing for use with any double plug. Mounting holes are drilled and tapped to fit all standard jacks. Pairs of holes are so spaced that plug cannot be inserted to connect one side of each of two circuits. Panels are made of solid bakelite reinforced with steel for greatest strength and rigidity, complete with slotted brackets for mounting on standard 19" relay rack. Improved designation strip eases removal and replacement of designation cards. Width of panel for double row of jacks is 2⅛". Width of panel for single row of jacks is 1¾". 48 jacks mount on a double row panel, 24 on single row.

Type	Description	Code
PJ-31	Double row jack panel complete with designation strip and slotted mounting brackets, but without jacks.	Reder
PJ-33	Single row jack panel complete with designation strip and slotted mounting brackets, but without jacks.	Regal
PJ-341	Unit consisting of one PJ-31 jack panel and 48 type PJ-318 jacks assembled.	Reque
PJ-343	Unit consisting of one PJ-33 jack panel and 24 type PJ-318 jacks assembled.	Revet



DOUBLE ROW JACK PANEL

OTHER WELL KNOWN ADC PRODUCTS

ADC Audiometers, the Otologist's standard

ADC Group Hearing Aid

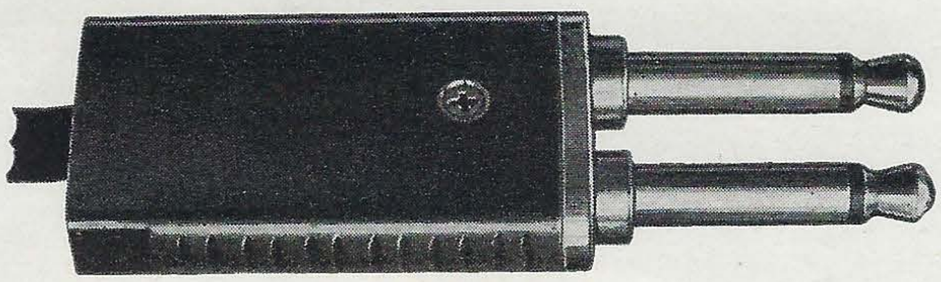
Please write for information on those in which you are interested

PLUGS AND PATCH CORDS

ADC PLUGS

PJ-5 PLUG

Type	Identical To	No. Conductors	Code
PJ-5	PL-55, WE47	2	Raids



PJ-1 PLUG

Type	No. Conductors	Code
PJ-1	3	Rabet

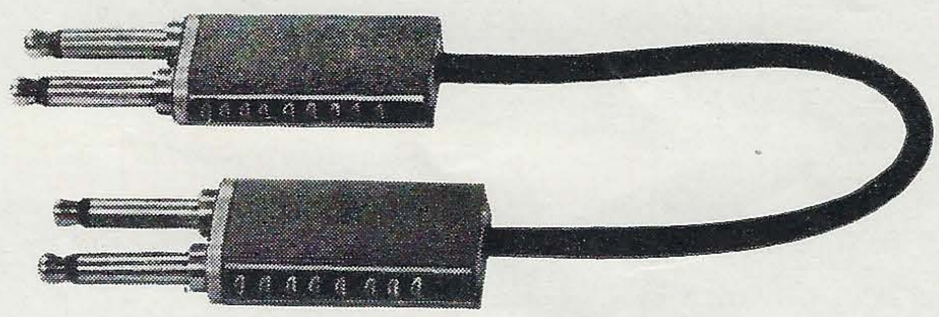
ADC PLUGS are interchangeable with similar standard plugs. They are designed for ease in cord replacement. Precision made from the finest materials, their safety features assure utmost dependability in service.

REPLACEMENT CORDS

These cords are the same fine quality 2 conductor cords as used on our patch cord sets and can be used with practically all makes of standard plugs without alteration.

Type	Length	Code
PJ-21	1 ft.	Realm
PJ-22	2 ft.	Reson
PJ-23	3 ft.	Rebin
PJ-24	4 ft.	Recan
PJ-25	5 ft.	Recip
PJ-20	10 ft.	Recol

ADC PATCH CORDS



PATCH CORD WITH PJ-1 PLUGS

ADC PATCH CORDS are made from the finest stranded, tinned copper 2 conductor wire well shielded and insulated. Heavy overall braid insures long dependable service. Six inch reinforcement on both ends. Shield connects to sleeves on both plugs.

Type	Length	Code
	PJ-1 Plugs on each end:	
PJ-11	1 ft.	Rafle
PJ-12	2 ft.	Raned
PJ-13	3 ft.	Rakin
PJ-14	4 ft.	Ranch
PJ-15	5 ft.	Randy
PJ-10	10 ft.	Ranks

Cords with shield grounded at one end only can be supplied on special order.

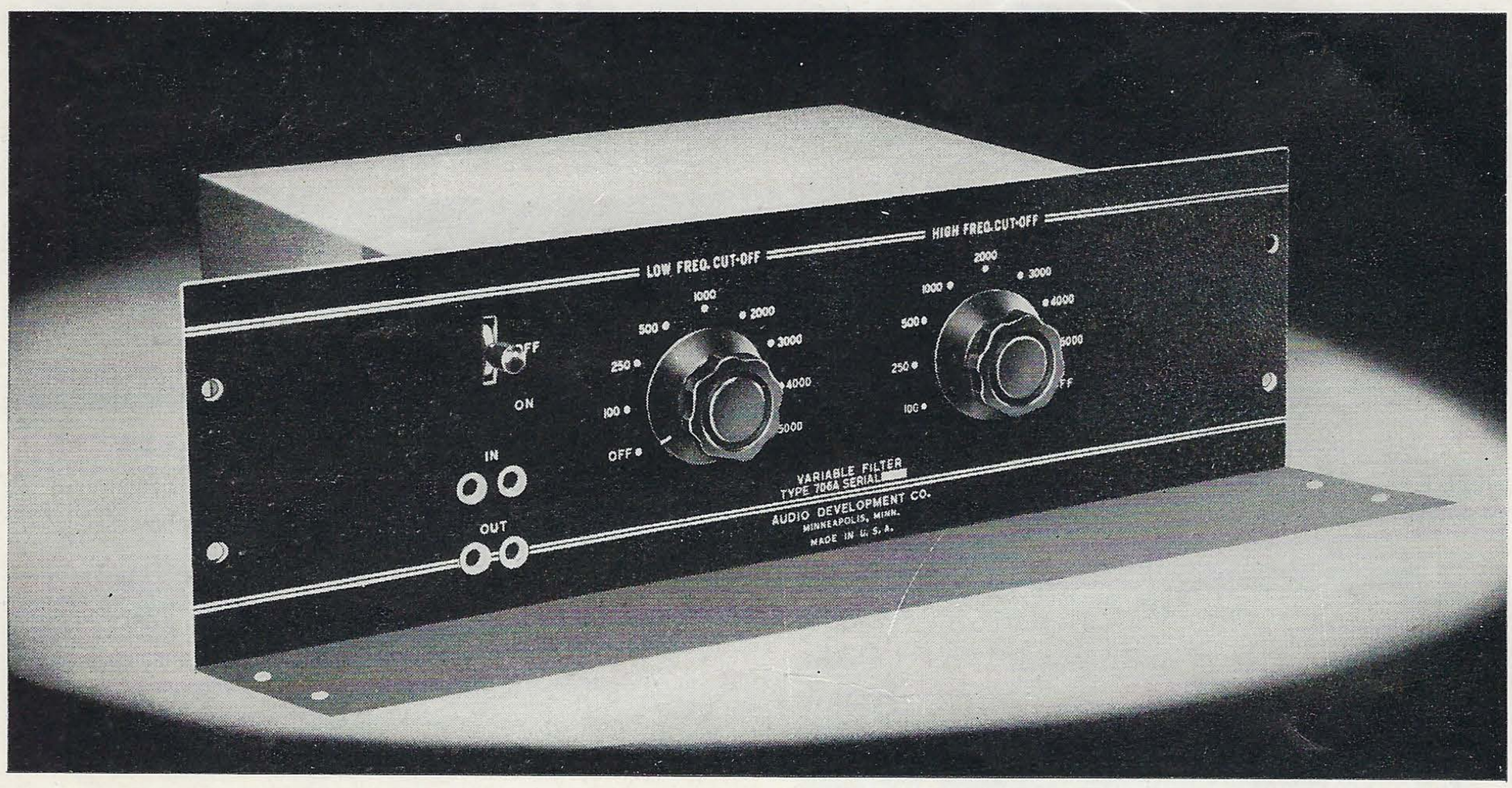
SPECIAL TRANSFORMERS

ADC has the facilities to design and build transformers to your exact requirements. Our Engineering Department is genuinely interested in assisting you and will gladly accept developmental projects in electronics, regardless of their size. Please give all details in first inquiry to avoid unnecessary delays. Your quotation request will bring a prompt reply.

SPECIAL ELECTRONIC ASSEMBLY

ADC production lines are well prepared to undertake many different kinds of electronic fabrication and assembly. If you have special problems along these lines, our production facilities and Engineering Department are at your disposal. Your inquiry will receive our prompt attention and earliest possible production schedule.

ADC SOUND EFFECTS FILTER



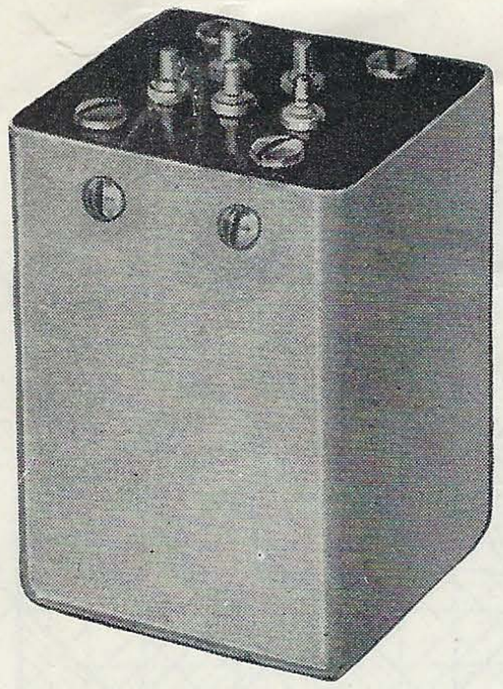
706-A VARIABLE FILTER

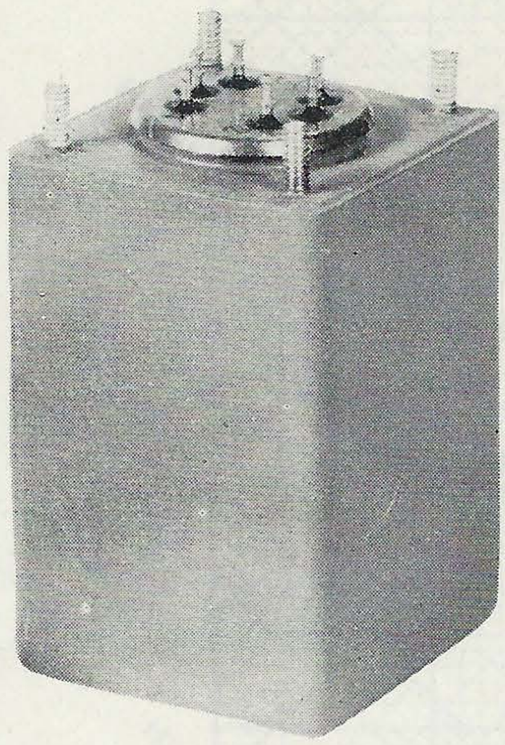
This unit is intended primarily for use as a sound effects filter, but is also adaptable for use wherever high or low pass filter units are required for the step frequencies illustrated. This filter was designed in collaboration with some of Broadcastings' foremost engineers.

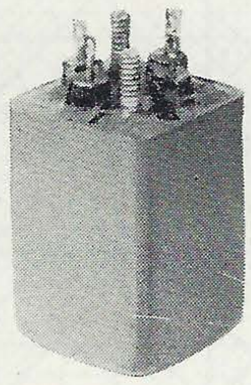
- **Frequency cut off adjustable from both ends**
- **600 ohm impedance without transformers**
- **Provision is made for mounting transformers within the unit to match any line conditions**
- **Insertion loss at pass band frequencies less than 1 db.**
- **Attenuation at least 18 db. per octave past cut-off frequency—increasing past this point**
- **Fits standard 19″ relay rack. Other mountings also available**
- **Permanent line connections in rear**
- **Patch jacks disconnect permanent lines from filter**

CUSTOM BUILT FILTERS can be supplied to fit your exact purpose, whether for simple needle scratch filtering or for complicated carrier frequency separation. Your specifications submitted to **ADC** will bring a prompt quotation and delivery information.

Audio **DEVELOPMENT COMPANY**







Audio Development Company has long been known as a supplier of special transformers for manufacturers, communication companies, geophysical laboratories, airlines, etc.

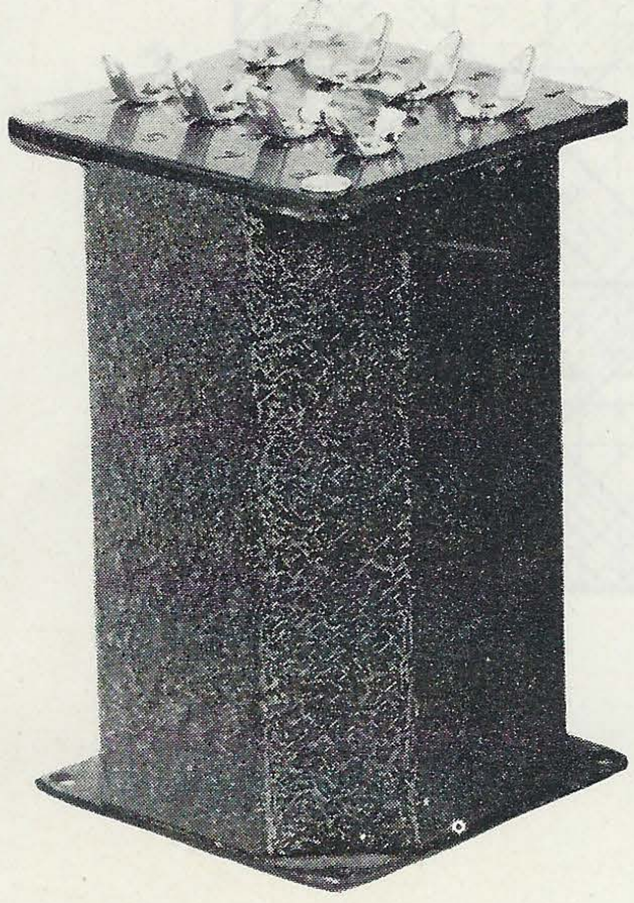
If you require custom built transformers or filters, contact the Transformer Department of Audio Development Company for recommendations. Since each custom built unit is special, it is necessary for us to have complete specifications before quoting. We shall gladly consider your special problems without any obligation on your part. Write us for any further information or specifications you desire, and we will give them our immediate attention.

This page illustrates a number of the special types which **ADC** has built.

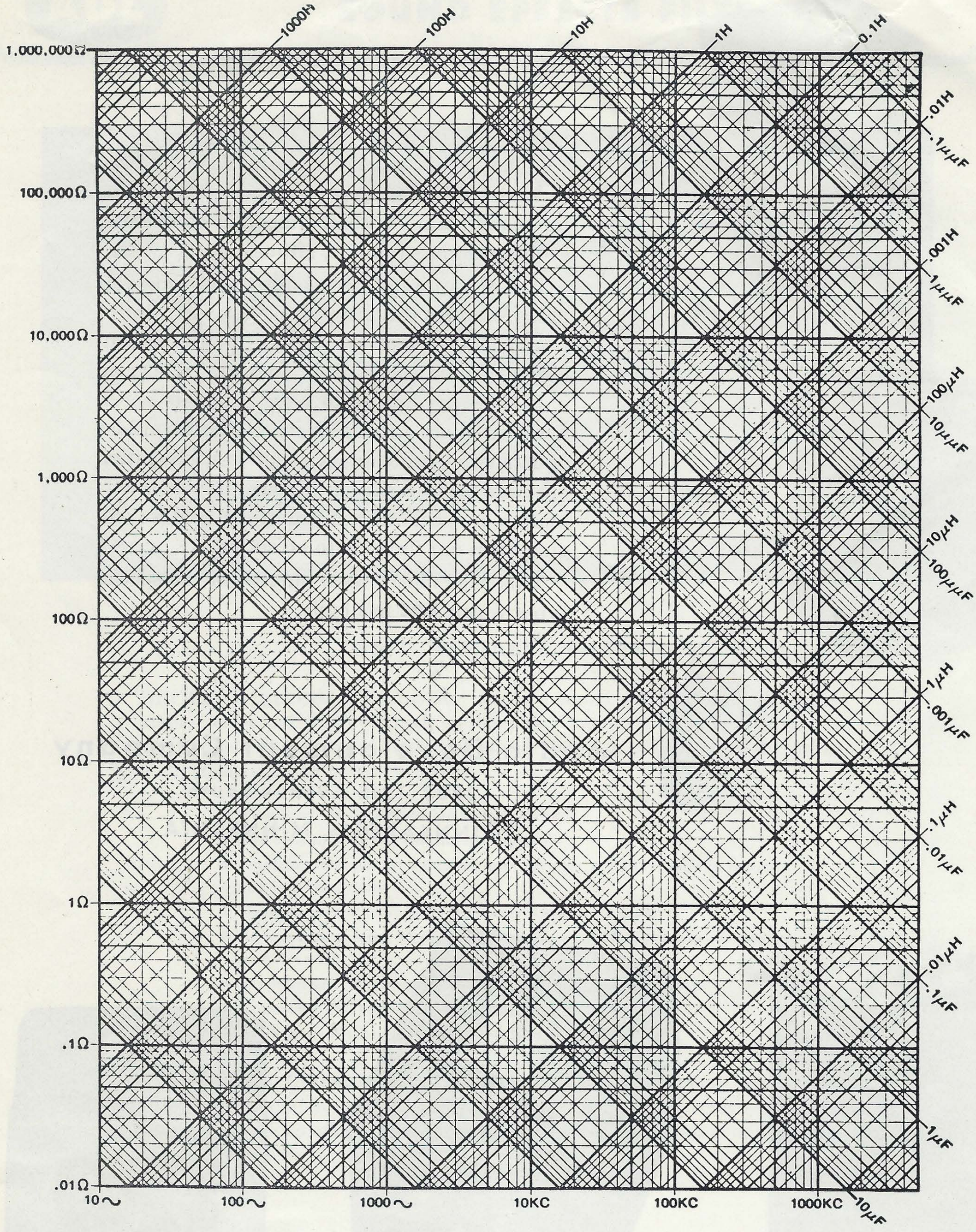
Audio Development Company

2833 13th Avenue South

MINNEAPOLIS, MINNESOTA



REACTANCE CHART



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ADC

The Last Word In

Quality Audio Components