

ABOUT KIMBER-ALLEN UK LTD.

Kimber Allen Ltd. was established in 1928 as an Electrical Engineering company. In the early 1930's we moved into coil winding and this brought about our first connection with the Organ Building trade through a contact with the organ builders Henry Willis & Sons.

Since that time we have designed and developed the range of electro-mechanical organ products which we now offer, and which are used in installations all over the world.

With over 75 years of experience to count on you can use KA Products with confidence.

KA currently occupy the 22,000 square foot factory which we moved into in 1958, and which can be seen on the right. We have a workforce of 30, many of whom have over 20 years experience with the Company below.

Our in house production capabilities include Tool Design and manufacture in our own Tool room , Power Press Manufacturing up to 180 Tonnes, Milling, Turning, Drilling, Hand and Machine Thread Rolling, Coil Winding, Plastic Injection Moulding (in house and contract), Brazing and Assembly work.

All KA products are designed and built on our premises, which is why we are confident to offer our 5 year guarantee on KA manufactured goods.

On 1st. April 2005 Kimber Allen moved into a new, and exciting phase when David Allen decided to take retirement as Managing Director and owner of the Company. Kimber Allen Continues, without interruption, with a slight change to the name to Kimber-Allen UK Ltd., under the combined directorship of Alan Ramsell, who has been with K-A for over 25 years, and Mike Harvey, John Morrell and Mike Cutler all of whom have had a close manufacturing relationship with us for over 20 years and bring considerable technical skill to the Company. David Andrews continues as Works Manager. We are sure that with this new team we can not only continue the excellent relationship we already have with our existing customers, but develop these relationships even further through mutual exchange of ideas, and forge new contacts with Organ Builders worldwide. To this end we ask that any Organ Builders who have requirements, that we do not currently meet, contact us to discuss their needs.

As well as our dedicated range of organ products, we undertake tool and component design and manufacture for other engineering companies, in a wide range of fields such as, audible warning devices, telecommunications, components for double glazed windows, security, automotive and marine pumps.



KIMBER-ALLEN UK LTD.

KIMBER-ALLEN has an international reputation for the design, manufacture and supply of high quality organ components for the organ builder. The name of KIMBER-ALLEN is our customers' assurance of built in quality and reliability and that our products are the finest available.

On the following pages are listed the KIMBER-ALLEN range of:

Electrical Units.

Miscellaneous Fittings and Materials.

Mechanical Action.

Wood Products.

Solid State Switching.

Supplying direct enables us to offer the lowest costs possible, and for our many friends to have direct contact with us, the producers.

Our Head Office and Works are conveniently situated adjacent to Junction 3 on the M25 motorway. The nearest railway station is Swanley on Network South East.

For visitors arriving at Heathrow Airport direct access is on M25 motorway in an anticlockwise direction, following signs to Dartford Tunnel. Time approx 1¼ hours. From Gatwick Airport M23 motorway to intersection with M25 motorway then anticlockwise following signs to Dartford Tunnel. Time approx ¾ hour.

All United Kingdom and overseas customers are supplied direct from Swanley.

An open invitation is always available for Organ Builders to visit our works to inspect our facilities and to discuss any technical details with our qualified staff.

You may be sure of always receiving polite and helpful service with all your enquiries.

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Fax: + 44 (0)1322 668318

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Conditions of sale

PRICES. All prices shown in the price list are ex Swanley, packing, delivery and VAT, where applicable, being charged extra, Prices are correct at the time of publication but may be subject to change without notice if necessary.

TERMS OF PAYMENT. Nett monthly account to approved customers i.e. payment due by the last day of the month following that in which the goods were Invoiced. Title in all goods supplied remains with Kimber-Allen UK Ltd, until the goods have been paid for in full. Customers not having a credit account will be required to pay in advance against a Pro-Forma Invoice. Overseas customers are requested to make payment by sterling bank draft or credit card.

5 YEAR WARRANTY. The products of Kimber-Allen UK Ltd. when properly installed are guaranteed against faulty materials or workmanship for a period of five years from date of purchase. This warranty does not apply where we are reselling other manufacturers goods, where their own shorter term warranty is applicable. This is relevant to items such as certain solid state items, Transformer Rectifier Units etc, in these instances the manufacturer's warranty will apply. If you are unsure as to warranty cover on any item please ask. This warranty does not apply to any products that have been modified by the purchaser in any way that, in the seller's judgment would affect the reliability of the product, nor does it apply to any products which have been subject to misuse, negligence or accident. The seller shall not be liable for any consequential damage nor for the cost of removing, shipping or re-installing products the subject of this warranty, but shall repair or replace any faulty product. The foregoing is in lieu of all other warranties expressed or implied by statute and none of our employees is authorized to vary any of these terms.

RETURN OF MATERIAL. Products may only be returned for credit if prior permission has been given by Kimber-Allen UK Ltd and if returned in 'as new' condition within thirty days of original shipment. Ten percent of the purchase price may be deducted from all credit notes as a restocking charge.

When returning any Solid State items under warranty, they must be repackaged in any anti static packaging in which they were originally supplied, Failure to do this will invalidate the warranty.

Due to the escalating cost of catalogues it may be necessary to make a charge in future, In these circumstances this will be refundable on receipt of your first order valued at £50 or over.

Electrical Section		Miscellaneous Fittings & Materials		Mechanical Action Parts	
Barrel Thumb Pistons	15	Aluminium Squares	45	Adjustable Locking Collar	56
Cable Junction Strips	25	Bedding Tape	53	Aluminium Rollers	64
Chest Magnets	16	Brown Shutter Felt	52	Collar Screws	65
Contact Assemblies	11	Bushed Pull Down Wires	39	Grub Screws	65
Contact Wipers	13	Bushed Eyes	39	Locking Collar	56
		Centres	40	Nut Driver	65
Department Labels	5			Opening Pliers	65
Direct Pallet Magnets	24	Chest Brass	53	Pivot Pins	55
Direct Pallet Magnets no. 2	24	Colloidal Graphite	53	Pivot Support Fixed	55
Drawtop Bushes	7	Combined Springs and wipers	53	Pivot Support Plain	55
Drawstop Extension Rods	7	Cork Sheets	52	Pivot Support with locking Collar	55
Drawstop Knobs	6	Felt & Leather Pallets	47	Rectangular Trackers	64
Drawstop Solenoids	8	Fibreboard and Miliboard Discs	48	Removable Bush	57
Engravings	5	Fibreboard & Millboard Valves	47	Roller Bracket with Bush	56
Free Lever Magnets	23	Flexible Tubing	46	Roller Screws	65
Heavy Duty Lever Magnets	26	Gold Clad Wire	50	Roller Connector Assembly	57
Inverted Sprung Levers	23	Green Felts	52	Standard Bush	57
Light Pattern Magnets	22	Pedal Felt	52	Stand Off Bracket	58
Multi Contact Switches	27	Key check wires	41	Tracker Connector	58
Nameplates (Builders)	5	Key Hooks	41	Tracker Ends	59
Pallets for Magnets	24	Leather Buttons	38	Tracker Wire End Clip	58
Pedal Piston Discs	5	Multi-Core Cable	51	Tracker Wires	64
Pedal Jacks	10	Music Desk Hooks	38		
Piston Selector Switches	14	Non Adhesive Plastic Tape	51	Roller Arms -	61
Relay	10	Pallet Springs	40	Intermediate Arms & Squares	
Reverse Units	12	Pedal End Wires and Buttons	43		
Slider Motors	28	Pedal Heel Springs	43	Pivoted Ends	
Slider Solenoids	29	Pedal Heel Plates	43	Roller Arms	61
Sprung Lever	23	Pedal Pipe Feet	48	Intermediate Arms	61
Stop Keys	1-3	Pedal Toe Springs	43	Squares	61
Stop Tab Unit	4	Phosphor Bronze Wire	52		
Swell Pedals	13	Pipe Feet	48	K-A Removable Bushing	
Tabs	4	Pipe Hooks	42	Roller Arms	61
Thumb Piston Unit	15	Plastic Buttons	38	Intermediate Arms	61
Toe Pistons	19-20	Pallets	47		
Transformer Rectifiers	31-32	Pointed Pins	41	Standard Bushing	
Vertical Pallet Magnets	21	Polyurethane Covered Wire	51	Roller Arms	61
Volt Meters	12	PVC Covered Copper Wire	51	Intermediate Arms	61
		Rack Pillars	50	Squares	61
Coil Data of Electrical Units		Rear Key Springs	41		
End of Electrical Section	35	Red Cloth	52	Tracker Wire End Clip	
		Red Cloth Washers	38	Roller Arms	61
Application Data of Direct Pallet Magnets		Red Thread	53	intermediate Arms	61
End of Electrical Section	35	Reed Tuning Wires	44	Squares	61
		Reed Wedges	44		
		Resin Cored Solder	52	KA Tracker Assembly Method	66
		Roller Arms	45		
Conversion Chart		Roller Board Studs	45	Wood Products	
Miscellaneous Section	37	Rubber Cloth	52	Keyboards	72
		Silver Wire (Nickel Silver)	51	Bellows	73
Solid State Switching		Silver Wire	50		
Dedham Diode System	68	Sound Board Bushes	39		
2 Wire Processor System	69				
Piston Selector Panel	70	Tapped Wires	40		
Pedal Derivation Driver	70	Test Pins	51		
Melodic Bass Unit	70	Tinned Copper Braid	51		
Reverser Unit	12	Tracker Wires	39		
		Waxed Thread	53		

Electrical Components

On the following pages of the electrical section can be found details of the wide range of Kimber-Allen's electrical components.

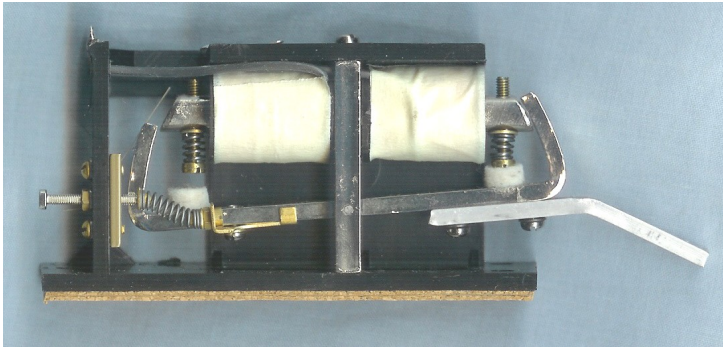
They have all been designed, tooled and manufactured by Kimber-Allen. From raw material to final assembly, strict quality checks and inspections have been carried out.

As standard, all units are designed to operate on a regulated voltage of 15 volts DC with a tolerance of plus or minus 3 volts. Some units can be supplied with coils specially wound for 24 volts. Details of this option on application.

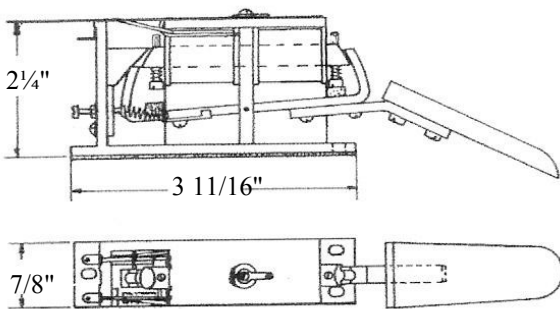
To give the best possible protection against corrosion, all steel parts have been nickel plated to a minimum average thickness of 0.0005". This has been carried out before assembly. This method gives the most reliable protection possible.

As with all electrical equipment, K-A units should not be modified in any way, and used to conform with current wiring and safety regulations.

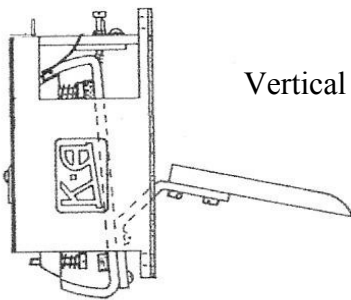
To help us process your electrical requirements efficiently, please state with your order the Product Reference and Code.



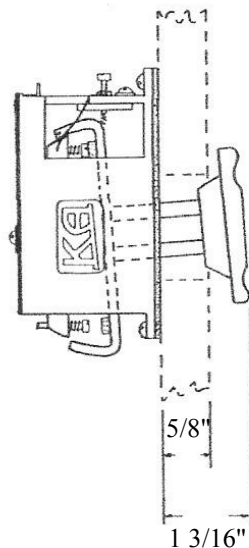
Original Stop Key Unit



Horizontal Mounting



Vertical Mounting



Vertical Tilting Tab

This K-A Design is intended both for horizontal and vertical mounting. The unit is housed in a tough, moulded body open on one side for maximum accessibility, the toggle action has easy adjustment. Tab movement is adjustable by two screws.

Spark suppression is not fitted as standard, but diodes can be factory fitted if polarity is indicated with order,

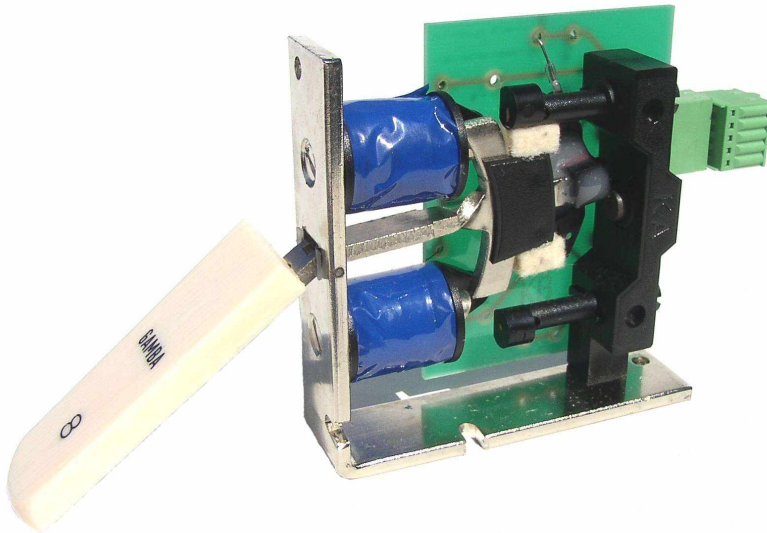
KA 10 solid state combination system relays, Code FS256 (page 14), can be factory fitted. Details of this option on request.

The Horizontal and Vertical units can be factory fitted with:- Tabs AS039 and AS040 (page 4)

The Vertical Tilting Tab is designed for Tab AS042 (page 4). This Tab is supplied separately for the customer to glue to the special base provided to ensure correct line up. This assembly is intended for 5/8" thick facial panelling.

Order Details	Ref	Code
Horizontal mounting	SKH	FS001
Vertical mounting	SKV	FS002
Horizontal mounting (2nd touch cancel)	STH	FS003
Vertical Tilting Tab	SKT	AS006

K-A Magnetic Toggle Stop Key Unit

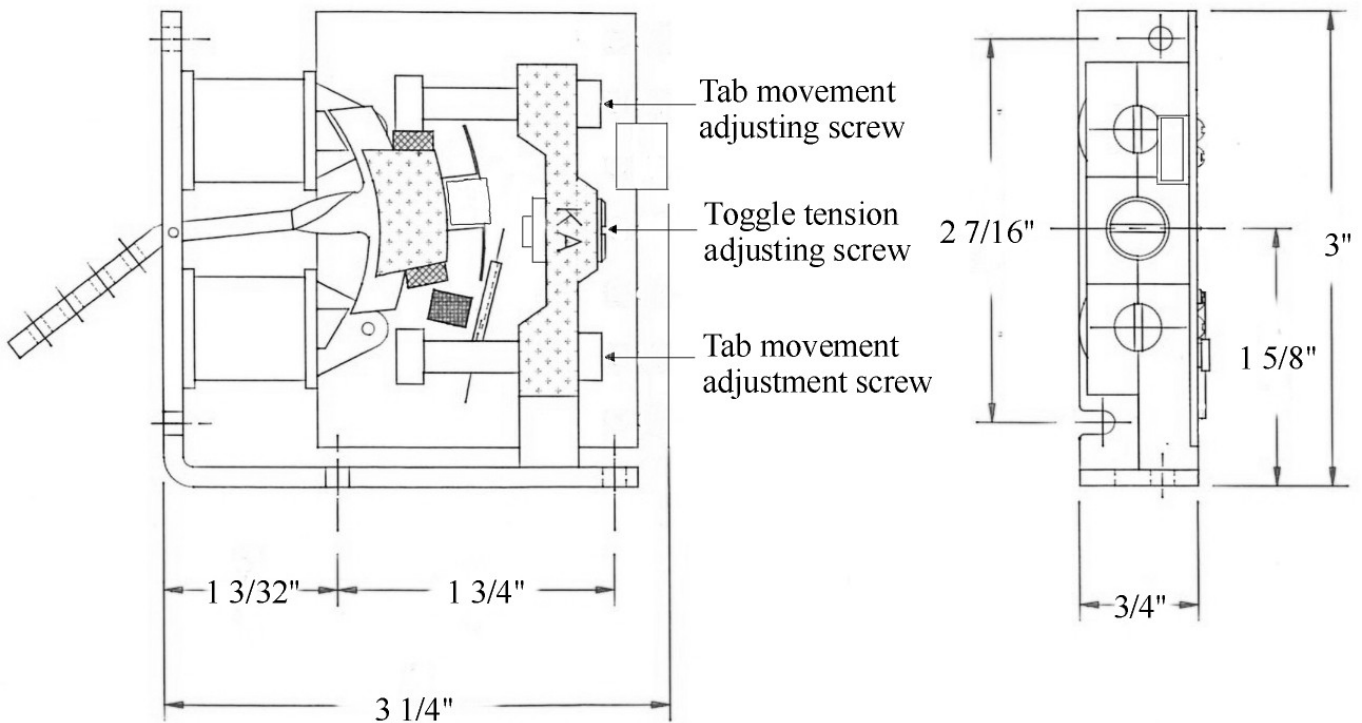


Key features

- ⇒ 32° standard arm angle
- ⇒ 30 ohm coils
- ⇒ Mounting by base or front face
- ⇒ Adjustable stroke
- ⇒ Reed switch contacts

Fitted with adjustable magnetic toggle and plug in connector for coils and reed switch Connections.

All setting adjustments are carried out from the rear of the unit.



Order details

- Stop Key Unit-Standard Tab
- Stop key-Tilting Tab - see page 3
- Stop Key Rocking Tab Assembly
- Combination relay

Ref

- SKR
- SKR/R
- KA11

Code

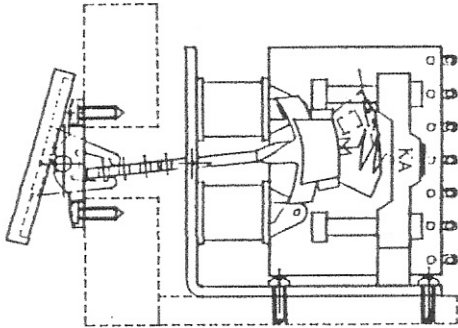
- FS007
- FS008
- FS009
- FS258

Extra, or alternate, reed switch position at customers request.

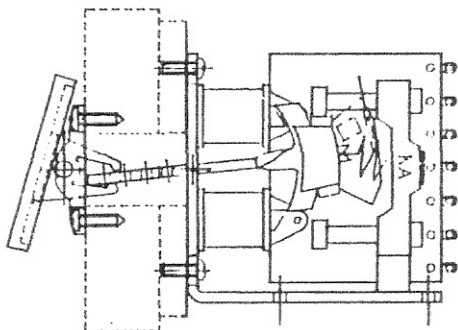
Rocking Tab Stop Key Unit

NOTE: Stop Key Units are now fitted with magnetic toggle action, see page 2.

Horizontal mounting



Vertical mounting



Overall dimensions of the Stop Key Unit remain unaltered .

The new model is designed with a straight end to the armature, over which is a felt sleeve. The tilting mechanism is a separate two piece moulding which is screwed to the front of the console facia panel. The rear end of the moulding engages over the sleeve of the armature: this ensures no lost motion and complete silence in operation.

The tab mounting section is designed to take either our TAB/M - AS042 or our new flat plastic tab AS043. It is equally suitable for use with customers own custom tabs

Rocking Tab Stop Key Unit

Order Details

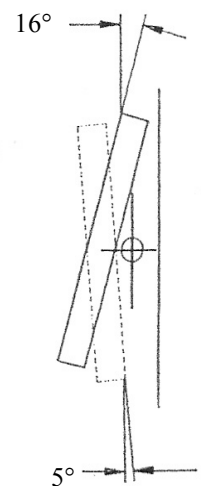
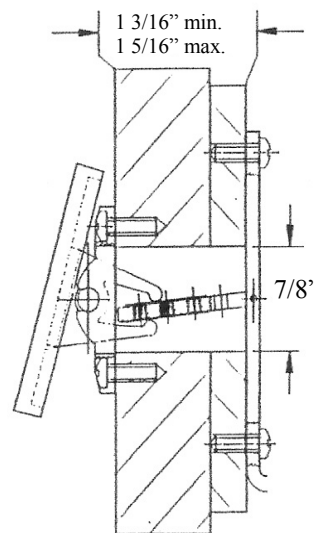
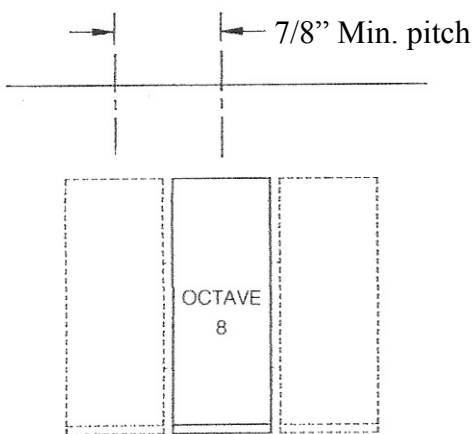
Rocking Tab
Stop Key Unit

Ref	Code
TAB/T	AS043
SKR/R	FSO08

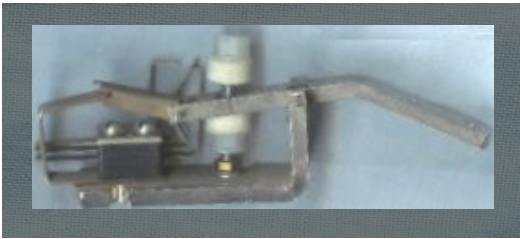
Rocking mechanism only

2 piece nylon moulding
~ clips together ~

SKR	FS009
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Stop Tab Unit



The KA Stop Tabs have a smooth manually operated toggle action. Movement of the Tab is adjustable by means of two felted stops. The contacts are nickel silver, and the solder connections are readily accessible at the rear of the unit.

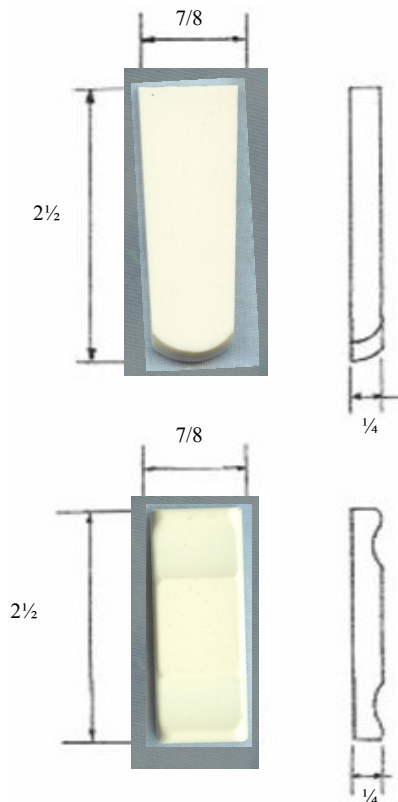
Normal Contacts are single pole changeover configurations, but a single make and break can be supplied.

The standard unit can be factory fitted with :
Tabs ASO39 and ASO40
The Tilting Tab is designed for Tabs ASO42 and ASO43 which are sold separately.

Order Details	Ref	Code
Standard	STU	FSO65
Tilting Tab	STU/T	ASO64

TABS

Two types of Stop Key Tabs are available, they can be factory fitted to KA Stop Keys and Stop Tabs or supplied separately, either plain or engraved.



Order Details **Ref** **Code**
Machined from solid grained ivorine. an excellent substitute for pure ivory.

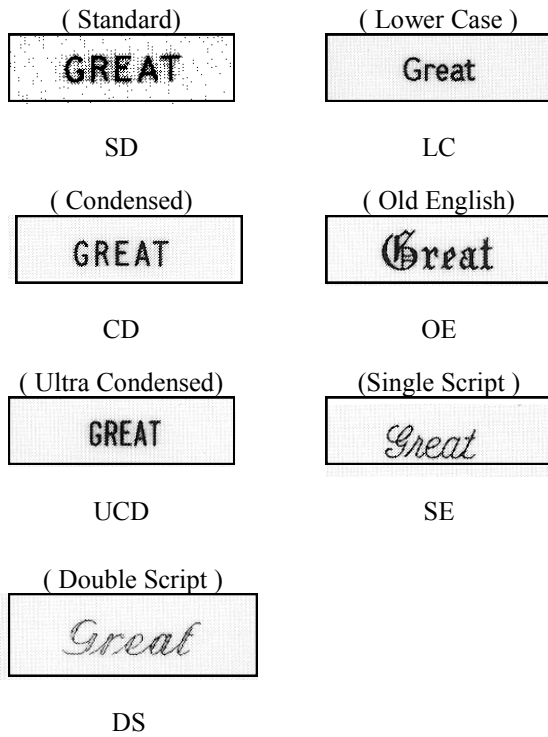
TAB/S ASO39

These are moulded from Ivory Cylolac. To ensure consistent shape, flatness, colour and finish they are a two-piece moulding permanently bonded together. Other colours to special order.

TAB/M2 ASO40

Tilting Tablets are moulded from Ivory Cylolac and have a recessed serrated area on the back face for gluing to the special Stop Tab arm.

TAB/M ASO42



Engraving

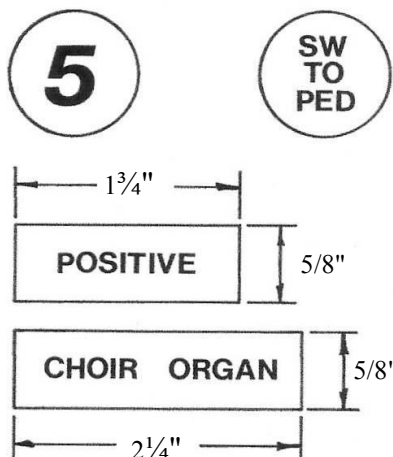
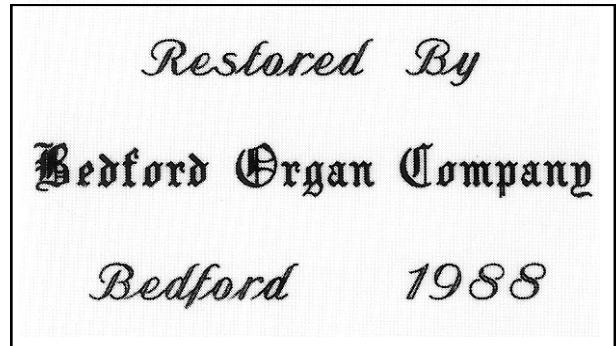
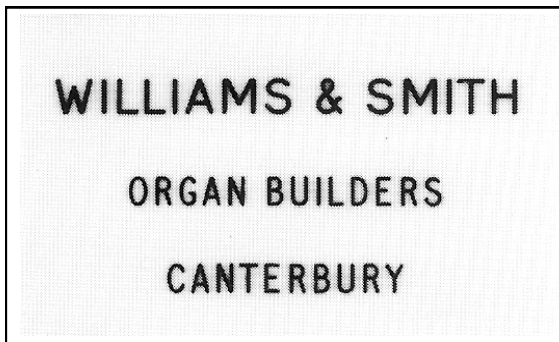
Kimber-Allen are fully equipped with the latest equipment to cope with all the Organ Builder's engraving requirements.

Illustrated are our standard machine engraving styles, with colour fill to choice.

We engrave:

- KA Range of Drawknobs
- KA Tabs and Tilting Tabs
- KA Barrel and Thumb Pistons
- Customers' own items
- Special Builders' plates etc.

Ivory Builders nameplates—to spec.



Pedal Piston Discs

Order Details

Ref Code

Moulded Ivory Cyclocac
1 1/16" dia. Single or
Multi Characters

PPD ASO52

Ivory Dept Labels

Order Details

Ref Code

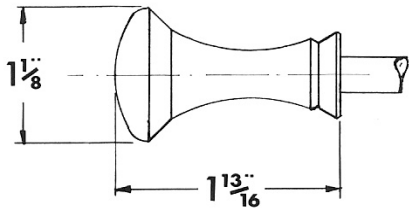
Single Word
Double Word

PDL ASO48
PDL ASO49

Standard K-A Drawstop Knobs

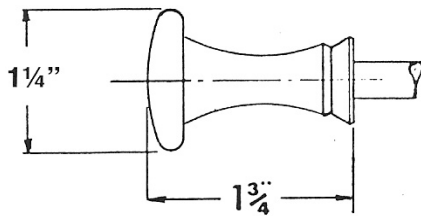
Plastic Moulded Knobs

- ⇒ Stem 5/16 dia. X 5/8 long aluminium as standard (can be modified)
- ⇒ Black and ivory colour combinations available on all parts.

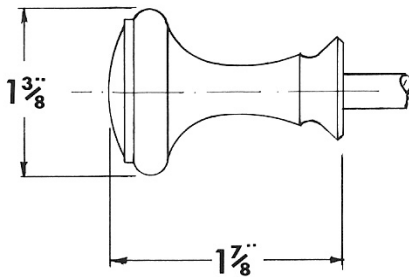


Ref Code

PH AS019
(Black/white combination available)



PH/2 AS020
(Black/white combination available)



PF AS025
(Black/white combination available)

Wooden Knobs



Dimensions

Head diameter 1 1/4 "
Length 2"
Stem diameter 5/16"

Options

- ⇒ Ivory Coloured ABS plastic insert.
- ⇒ Grained Ivorine insert.

Available in the following Materials:

- | | Ref. | Code |
|------------|-------------|-------------|
| ⇒ Maple | WH/1 | AS121 |
| ⇒ Rosewood | WH/2 | |
- ⇒ Also available are Rosewood drawstop rods Ref. RWR, 1 1/2" long x 5/8" diameter.
- ⇒ These parts can be supplied with natural or lacquered finish.

Rod Options

- Length** 1 5/16" white or black
 1 5/16" white & black
 1 1/2" white or black
 1 1/2" white & black

The above are standard rods as fitted to K-A Drawstop Solenoids.

- 2 " black or white
 2 3/4" black

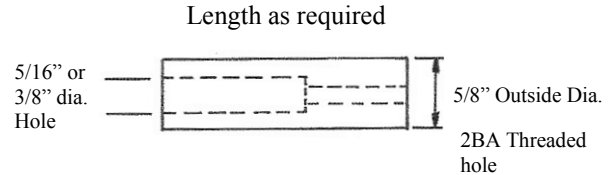
The two above rods have our standard fitting and are suitable for use with K-A Solenoids .

We now have available Rosewood Rods in our standard fitting and 1 1/2" long x 5/8" diameter.

Drawstop Extension Rods

Black, White, or Black & White combination plastic extension Rods threaded to fit K-A Drawstop Solenoids.

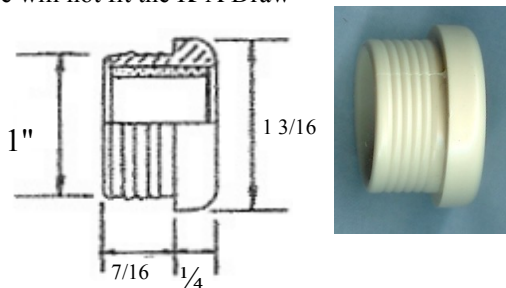
Basic Rod Dimensions



Order Details	Ref	Code
1 5/16" white or black	BR	FS027
1 5/16" white & black	BR	FS029
1 1/2" white or black	BR	FS028
1 1/2" white & black	1 1/2 B/W	
2" black	2 BR	FS032
2 3/4" black	2 3/4 BR	FS033

Drawstop Bushes

For direct insertion into Console Jams. Lined with red felt.
 NOTE:- These will not fit the K-A Draw-



Standard K-A Drawstop Solenoid Bush



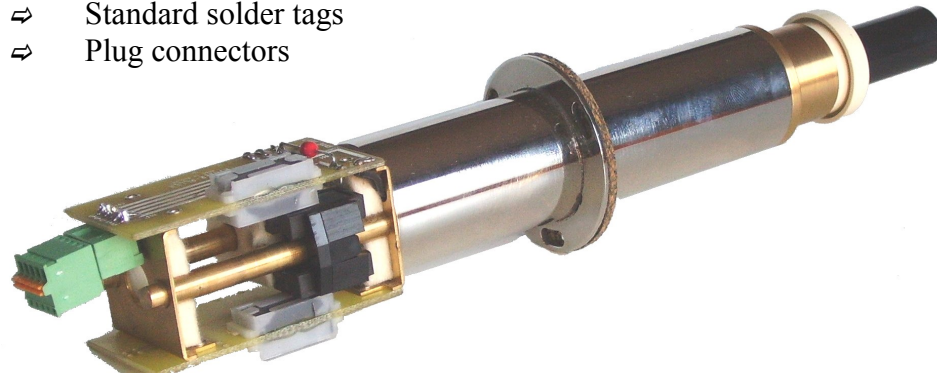
These units are fitted as standard to K-A drawstop Solenoids in black or white and felted in red

Order Details	Ref	Code
Black	BB	FSO30
Ivory/White	BW	FSO31

Drawstop Solenoids

Available with:

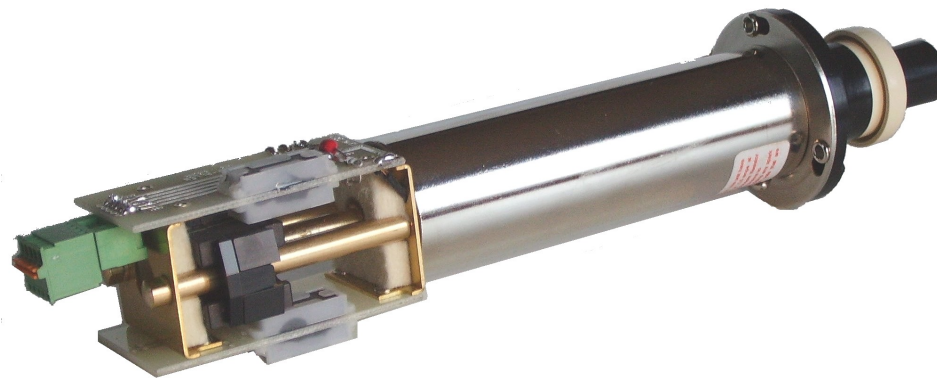
- ⇒ Standard solder tags
- ⇒ Plug connectors



LMT Drawstop 25mm stroke

Centre mount
Flange position can be customised.

Code : AS012-CM



LMT Long stroke 25mm stroke

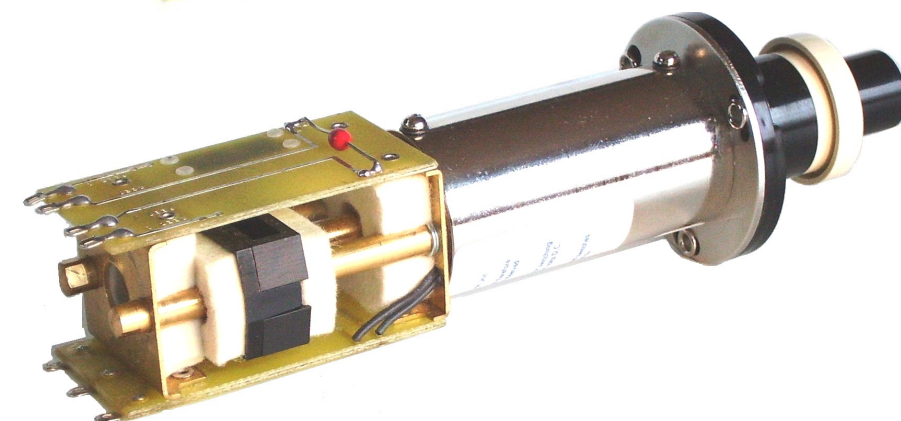
Quite action drawstop

Code : AS012



MT Mini drawstop 16mm stroke

Code : AS 013



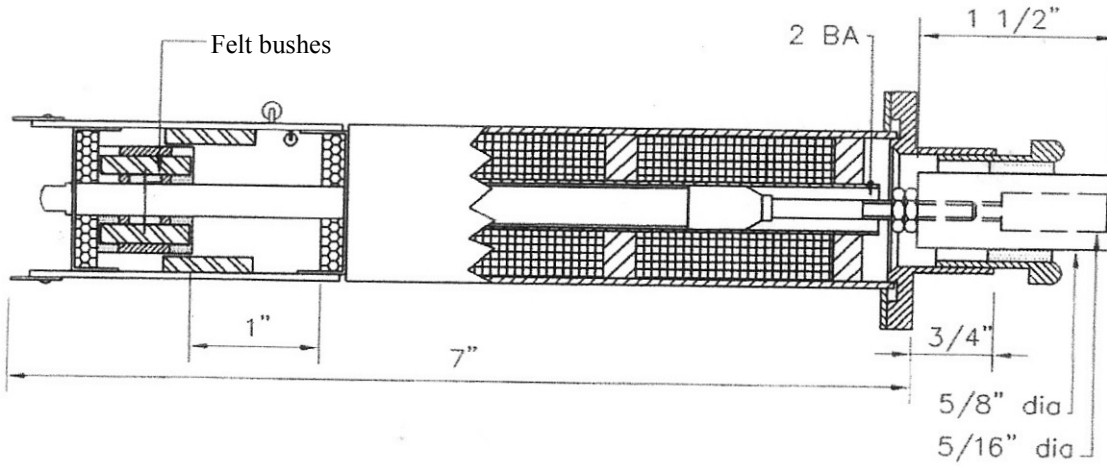
**MT/DL Quiet action
Drawstop 16mm stroke**

Code : AS014

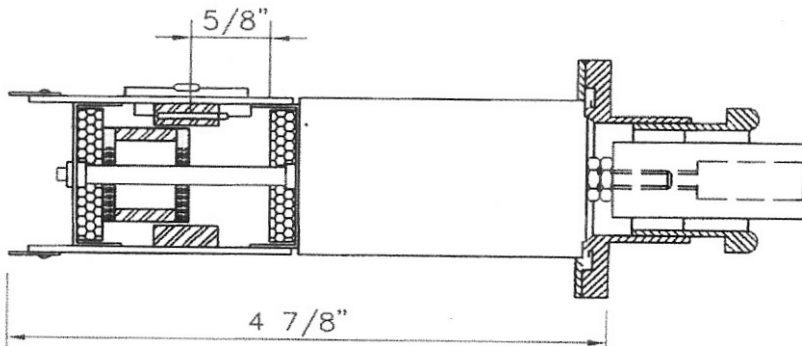
All Drawstops are supplied with black rod and white bush as standard

Drawstop solenoids

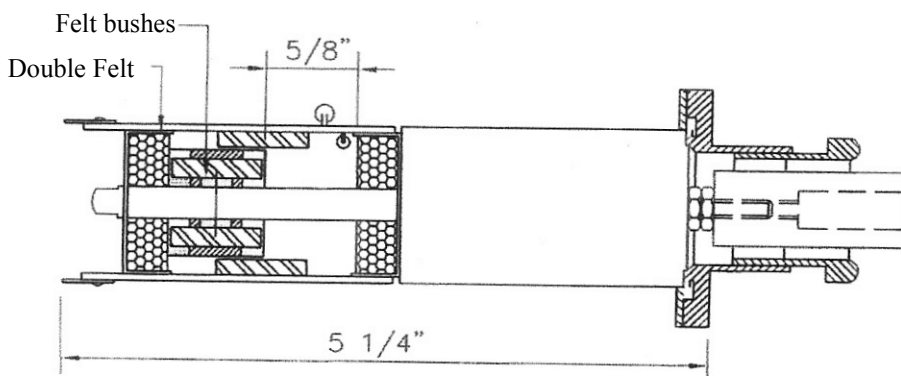
Order details	ref	code
1 " drawstop Long stroke	LMT	ASO12

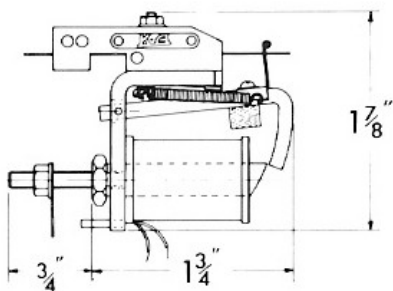
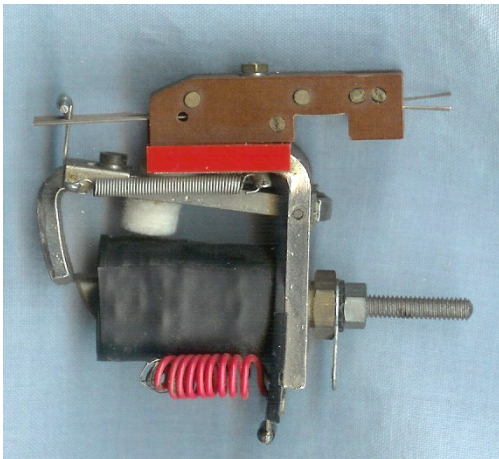
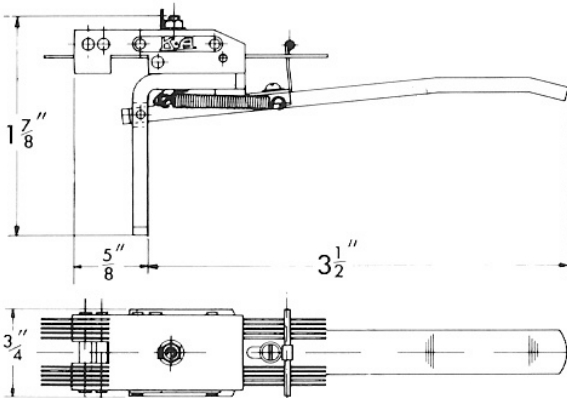
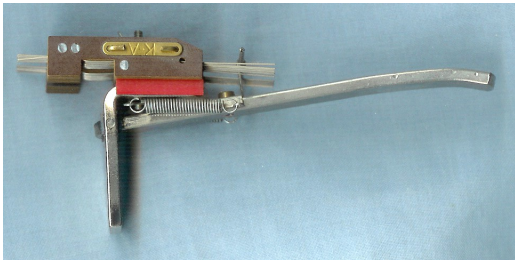


Order details	ref	code
5/8 " drawstop	MT	ASO13



Order details	ref	code	
5/8 " drawstop Quiet action	MT/DL	ASO14	Can be adapted for 7/8 stroke





Pedal Jack

A pedal contact unit which is designed to give the correct action and function of pedal contacts. It is a simple unit of robust construction with the movement of the arm controlled by tensioned return springs. It has a stainless steel pivot with plastic shims between armature and frame to ensure a frictionless movement. The contact block is located by a tight tolerance moulding to ensure the pure silver contact wires are held square to the nickel silver wiper bar.

Order Details

Ref. Code

4 Silver contacts	P.J. 4 FS066
10 Silver contacts	P.J.10 FS067
18 Silver contacts	P.J. 18 FSO68
24 Silver contacts	P.J. 24 ASO69

Note: Pedal Jacks can be fitted with all additional spring to aid speed of return.

Relay Units

Standard Relay

This relay unit is compact with a simple one hole fixing, the 70 ohm coils have diode spark suppression. The contact block is located by a tight tolerance moulding to ensure the silver contact wires are held square to the nickel silver wiper bar.

Order Details

Ref

Code

6 Contacts	RL6	FS164
10 Contacts	RL10	FS165
18 Contacts	RL18	FS166
24 Contacts	RL24	AS167
32 Contacts	RL32	AS168

Insulated Relay

This unit is similar to the standard unit, but the contacts are individual pairs operated by an insulated wiper bar.

Order Details

Ref

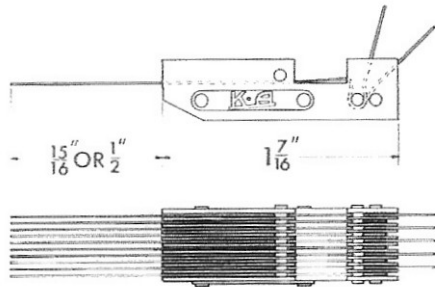
Code

4 Pairs	IRL 4	AS169
8 Pairs	IRL 8	AS170
12 Pairs	IRL12	AS171

Contact Assemblies

K-A Contact Assemblies consist of a lamination of smooth faced paxolin layers to ensure free movement of the contact wires; plastic rods are inserted through the assembly to locate each wire and impart the correct degree of spring tension.

Contact wires are manufactured in gold clad for very low current applications as found in electronics, and solid silver for all normal pipe organ applications. Non standard assemblies can be made to special order.



Types of Straight wires

- CAL - 15/16" Straight Silver Wires
- CAS - 1/2" Straight Silver Wires
- LG - 15/16" Straight Gold Wires
- SG - 1/2" Straight Gold Wires

Order Details

	Ref	Code
3 Silver Wires 15/16"	CAL3	FS075
4 Silver Wires 15/16"	CAL4	FS076
6 Silver Wires 15/16"	CAL6	FS077
8 Silver Wires 15/16"	GAL8	FS078
9 Silver Wires 15/16"	CAL9	AS079
10 Silver Wires 15/16"	CAL 10	AS080
4 Silver Wires 1/2"	CAS4	AS083
6 Silver Wires 1/2"	CAS6	AS084
8 Silver Wires 1/2"	CAS8	AS085
4 Gold Wires 15/16"	LG4	AS087
6 Gold Wires 15/16"	LG6	AS088
8 Gold Wires 15/16"	LG8	AS089
4 Gold Wires 1/2"	SG4	AS091
6 Gold Wires 1/2"	SG6	AS092
8 Gold Wires 1/2"	SG8	AS093

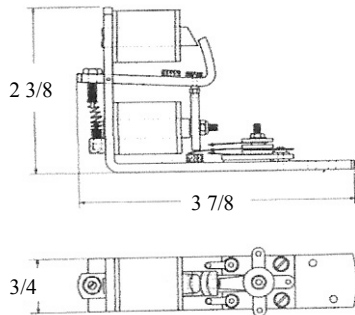
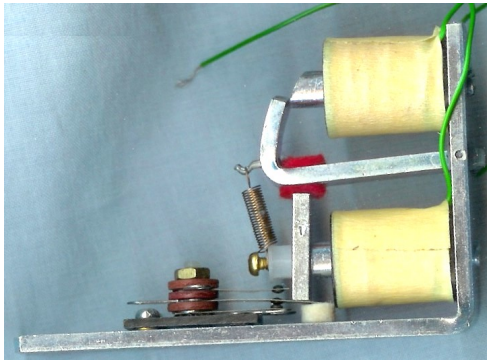


Order Details

	Ref	Code
Single pole changeover Gold Wires	GJ	FS094
2 pairs Gold Wires	GB	FS095
3 pairs Gold Wires	GC	FS096
4 pairs Gold Wires	GE	FS097
5 pairs Gold Wires	GH	FS098

Types of Paired wires

- GJ - 15/16" Gold Single Pole Changeover
- GB - 15/16" 2 pairs Gold Wires
- GC - 15/16" 3 pairs Gold Wires
- GE - 15/16" 4 pairs Gold Wires
- GH - 15/16" 5 pairs Gold Wires

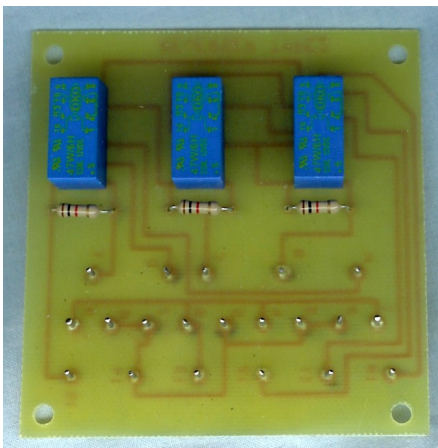


Reverser Units

KA are able to offer two types of electro mechanical Reverser units.

This is our original unit which has been and still is very popular with many organ builders. It has a sturdy construction with a balanced and frictionless pivot. It is operated by a pair of 100 Ohm coils and the contacts are solid silver.

Order Details	Ref	Code
Reverser unit	REV	FS112



Electro mechanical reverser

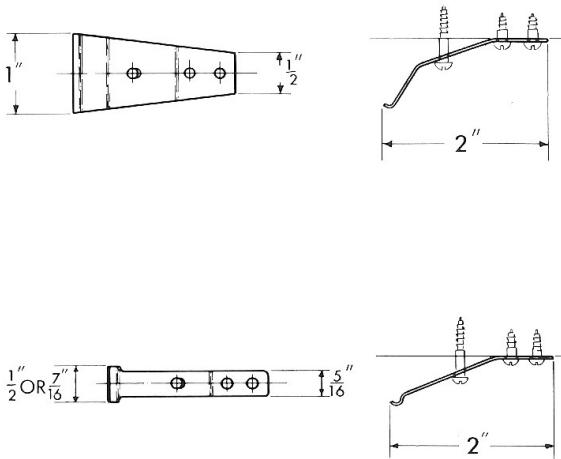
Order Details	Ref	Code
Reverser type 2	KA25	FS255



Volt Meter

The KA Volt meter has a polished chrome rim and a 2" dia. dial. It is an ideal meter for the console fascia.

Order Details	Ref	Code
Volt Meter	VM	FS119



Contact Wipers

KA Contact wipers are manufactured from spring tempered phosphor bronze with a solid silver inlay along the contacting edge. Primarily supplied for keys and pedals, they can also be used for a variety of contacting applications.

Order Details	Ref.	Code
Key Wiper - 7/16" wide	CWKS 7/16"	FS099
Key Wiper - 1/2" wide	CWKS 1/2"	FS100
Pedal Wiper- 1" wide	CWPS	FS101

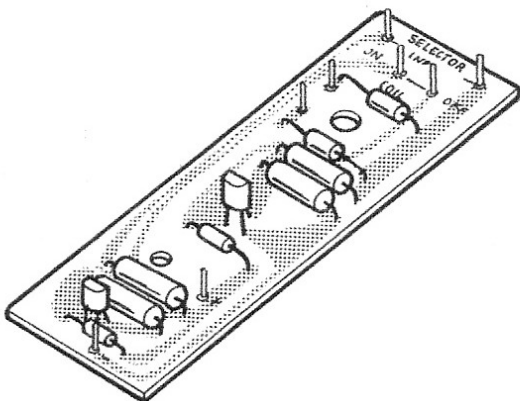
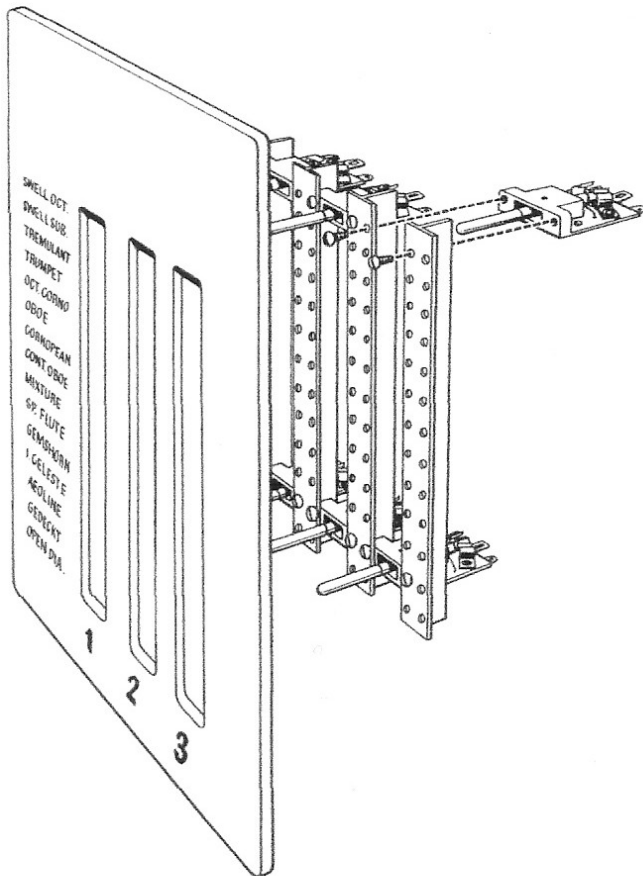
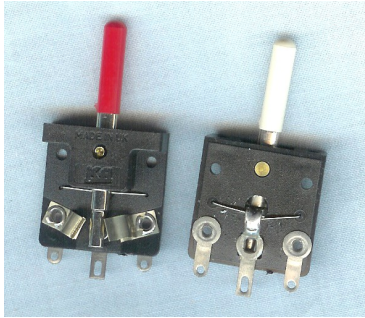


Swell Pedals

This is a very robust unit ready to be fitted into the console. It has a strong steel frame, with a smooth operating centre pivot. The action is firm and smooth and will remain in position when the foot is removed. The contacting system has a good wiping action. Supplied with a natural unpolished oak foot plate.

Order Details	Ref	Code
16 Silver contacts 'Make'	SP16	FS113
32 Silver contacts 'Make'	SP32	FS114
16 Silver contacts 'Break'	SP16/R	FS115
32 Silver contacts 'Break'	SP32/R	FS116
No contacts	SP	FS117

Piston selector



Piston Selector Switches and Adjustable Combination Action

The KA Piston Selector Switches are specially manufactured for adjustable piston combinations. The main moulded body is fitted with double sided contacts of nickel silver, with 'On' 'Off' and neutral positions. The switch is available in four colours and will bank up to 3/8" pitch to give the ideal spacing of fascia panel engraving. They are mounted on special 'Tee' section aluminium which can be supplied as a separate item.

Order Details	Ref	Code
Black Knob	PSB	FS123
Red Knob	PSR	FS124
White Knob	PSW	FS125
Green Knob	PSG	FS126
Tee Section Mounting Rail		FS127
Self Tapping Mounting Screw		GS116/05

Special machined black engraved fascia panels can be supplied complete to your own individual requirements. We can supply the piston selector switches mounted and wired to your specification. The assembly is suitable for all electro mechanical and solid state requirements.

Combination Action Relay

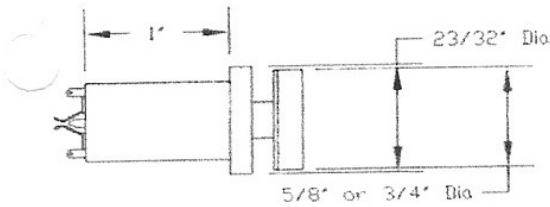
This unit forms the basis of a simple combination system. One of these double-pole relays is required for each Stop Key and Drawstop. Suppression of the coil outputs is included as standard. The units are supplied with loose plastic support mounts or can be factory fitted to KA Stop Key units as listed (page 1).

Order Details

Ref	Code
KA 10	FS256 (for SKH MT & LMT)
KA 11	FS258 (for SKR)



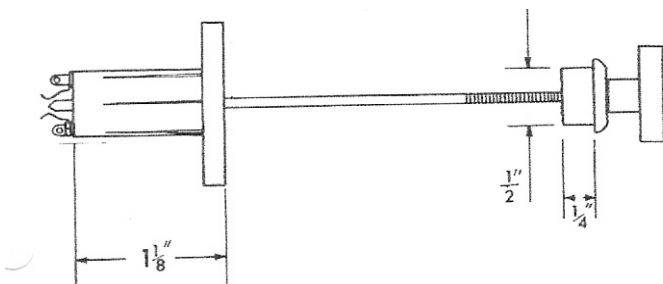
Standard Barrel Thumb Piston



Barrel Thumb Piston fitted with reed switch contacts and flying leads.



Standard Thumb Piston Unit



Barrel Thumb Piston

This is a simple and compact unit, designed for easy insertion into a bored hole. It is moulded in stain free Ivory White Cyclocac which imparts an excellent 'feel'. The unit has a choice of 5/8" and 3/4" dia head caps which form the head assembly. These can be supplied loose if required. The shank has a square section to prevent the head rotating. Solder connections are easily accessible at the rear. Second touch contacts can be fitted if required.

Units are supplied plain or engraved as illustrated (page 3).

Order Details

Ref Code

Barrel Piston 5/8" Reed	BTP/1/R	FS131
Barrel Piston 3/4" Reed	BTP/2/R	FS132
Barrel Piston 5/8" Dia	BTP/1	FS133
Barrel Piston 3/4" Dia	BTP/2	FS134
Barrel Piston 5/8" Dia 2nd Touch	BTP/3	AS135
Barrel Piston 3/4" Dia 2nd. Touch	BTP/4	AS136

Available with silver or gold plated contacts.

Barrel Thumb Pistons can be supplied fitted with reed switch contacts, single touch only, fitted with flying leads as standard.

Thumb Piston

Similar in design to the Barrel Piston this unit is intended to be fitted behind the front key rail by two screws. The phosphor bronze centre spindle can be supplied in any length, to suit individual requirements. This length should be advised when ordering.

Order Details

Ref Code

Thumb Piston 5/8" dia	TPU/1	AS137
Thumb Piston 3/4" dia	TPU/2	AS138
Thumb Piston 5/8" dia 2nd Touch	TPU/3	AS139
Thumb Piston 3/4" dia 2nd Touch	TPU/4	AS140

Altron Magnet

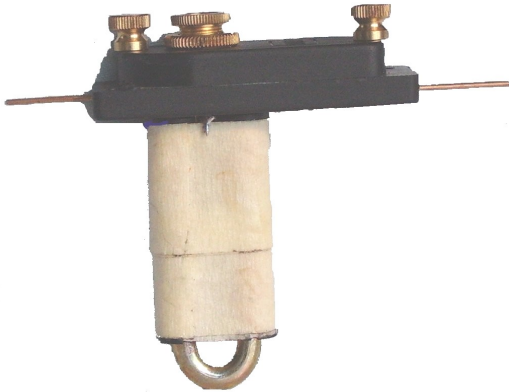
Very high speed / High wind unit designed for high repetition rates. A precision coil assembly and magnetic flux circuit provides high efficiency.

Available in north America via Nelson Barden & Associates.

Ref.	Code
AL1	FS220

Moulded in phosphor bronze leads are integral to base moulding.

- ⇒ 120 ohm coil
- ⇒ High degree of corrosion resistance



Chest Magnet

The standard and top note magnets have a strong section die cast base and cap. The valve is held in position in the cap by a stainless steel strip, it is easily adjusted by the knurled top and locking ring. The cap can be removed if necessary without disturbing the valve setting.



Order Details	Ref	Code
Corrosion resistant unit	DC1-S	FS217
Standard Unit	DC1	FS221
Loose armature unit	DC-1L	FS222
Top Note 1/8" dia insert	TN1	FS223
Top Note 3/16" dia insert	TN2	FS224
Top Note 1/4" dia insert	TN3	FS225

- ⇒ Various technical modifications have recently been made to increase the speed and power of this unit.
- ⇒ Many spare parts are available for restoration.
- ⇒ Corrosion resistant unit has stainless steel valve and armature connector. Fixed armature is detachable.
- ⇒ Available in 70 or 140 ohm coil

1/2" 9/16" & 3/4" COMPOUND MAGNET

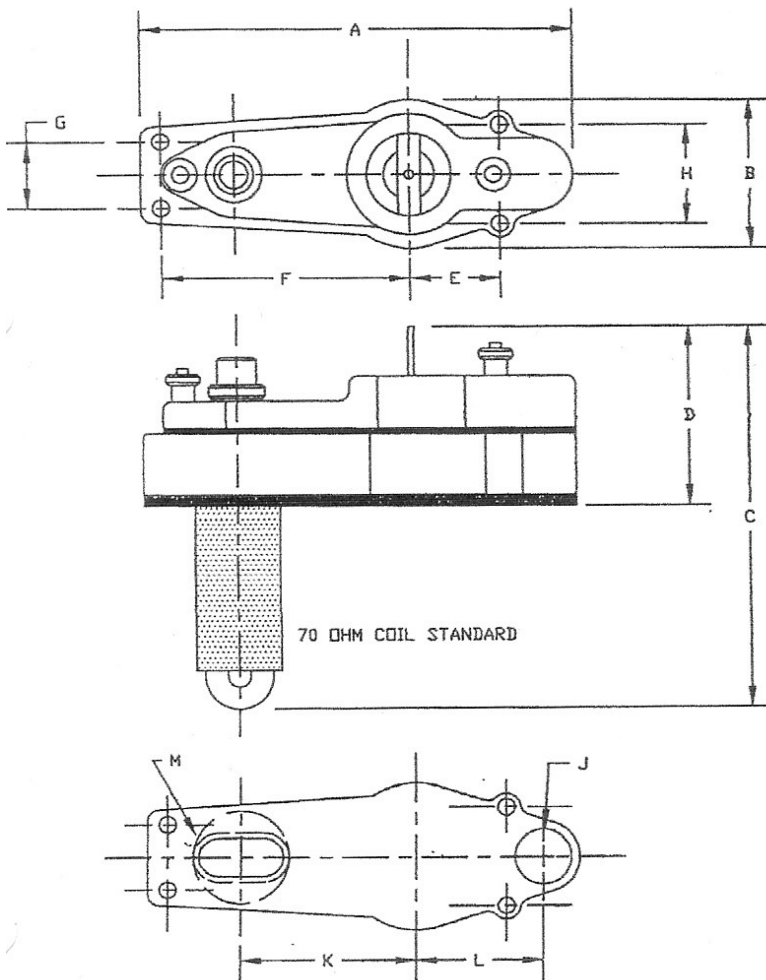
BRIEF DESCRIPTION

The Compound magnet combines the function of a chest magnet and a primary pneumatic stage in one compact assembly. Only the addition of an exhaust pneumatic power motor is needed to make a compact, quiet and fast electro-pneumatic action.

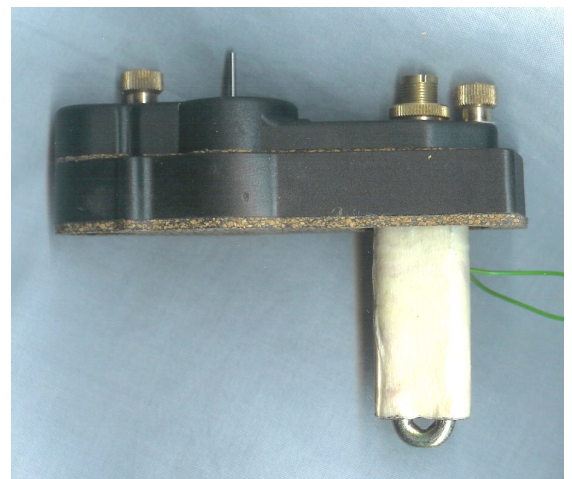
A typical sound board action would have the power motor glued to the upper surface of the bottom board and the compound magnet screwed to the underside with a boring connecting the two. Alternatively, a compound magnet can be used as the primary stage of an exhaust pneumatic chest action.

Compound magnet details:

DIMENSIONS:



CODE	1/2"	3/4"	9/16"
A	3.80"	5.12"	3.88"
B	1.37"	2.00"	1.37"
C	3.50"	3.69"	3.50"
D	1.62"	2.12"	1.62"
E	0.80"	0.87"	0.80"
F	2.20"	3.00"	2.20"
G	0.60"	0.90"	0.60"
H	0.90"	1.32"	0.56"
J	0.50"	0.75"	0.90"
K	1.55"	2.37"	1.55"
L	1.12"	1.37"	1.12"
M	0.67/1.10"	1.13"	0.67/1.13"



DESCRIPTION OF OPERATION

Chamber B is permanently connected to pressurised air through ports (not shown in the section drawing) that communicate with the boring for the magnet coil. The underside of the diaphragm is thus always pressurised, whether the magnet is energised or not.

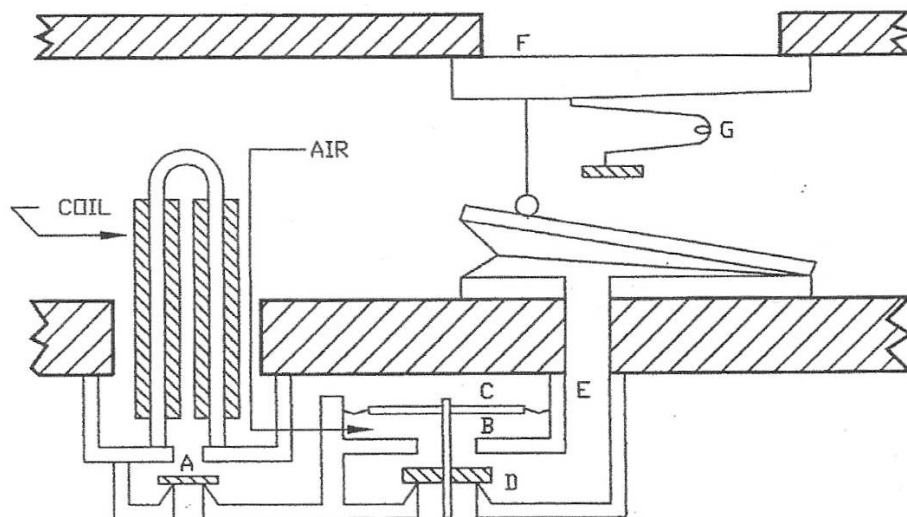
Magnet de-energised

Pressurised air flows through port A into chamber C. Both sides of the diaphragm (B & C) are at equal pressure so the diaphragm produces no net force. The air pressure in chamber B pushes the disc valve D downwards and pressurised air reaches port E and hence the inside of the pneumatic power motor.

Magnet energised

The armature lifts and chamber C is exhausted to atmosphere via port A. the pressure in chamber B is higher than that in chamber C. The diaphragm moves upwards because the area of the diaphragm is greater than the area of valve D. The pneumatic power motor exhausts to atmosphere via valve D.

COMPOUND MAGNET SECTIONED DIAGRAM



Order Details

1/2" compound magnet
 1/2" compound magnet
 9/16" compound magnet
 9/16" compound magnet
 3/4" compound magnet
 3/4" compound magnet

Ref

CO2
 CO2-F
 CO4
 CO4-F
 CO3
 CO3-F

Code

FS228 loose armature
 FS245 fixed armature
 FS230 loose armature
 FS247 fixed armature
 FS229 loose armature
 FS248 fixed armature

Toe Pistons

Both the square and round Toe Pistons have a solid die-cast body, with a centre nylon bearing bush to accommodate the spindle and contacts. The Caps are drawn from heavy gauge brass and designed to cover the main body at all times. The contacts are spring tempered phosphor bronze with a good wiping action on the polished centre spindle.

Square Toe Pistons	Ref	Code
Bronze Cap and Base	415E	FS146
Bronze Cap and Base with 2nd Touch	415E/DT	AS147
Polished Chrome Cap and Base	415E/EC	FS148



Round Toe Pistons	Ref	Code
Satin Black Body- Polished Brass Cap	TPW	FS149
Satin Black Body Polished Brass Cap with 2nd Touch	TPW/DT	AS150



Note: Other cap/body colour combinations to special order.

Solid brass Toe piston	Ref	Code
	TPB/1	AS151

KA Pattern, flanged body, plain cap, rear screw fixing.
Head diameter 1 3/4"
Flange diameter 2 3/16"
Shank diameter 1 1/2"
Bored hole 1 1/2" dia.

- ⇒ Can be fitted with reed switch operation upon request.
- ⇒ Unit is keyed and can be engraved if requested.



Solid brass Toe Piston	Ref	Code
	TPB/2	AS153

Harrison & Harrison pattern, flanged body, concentric ring textured cap, through hole, countersunk fixing.
Head diameter 1 5/8"
Flange diameter 2 3/16"
Shank diameter 1 1/8"
Bored hole 1 1/8"

- ⇒ Can be fitted with reed switch operation upon request



Solid brass Toe Piston

Ref **Code**
 TPB/3 AS154

Manders pattern, plain cap, no flange, body fastened by clamp on Rear flange.

NOTE: Downward force on piston is taken between underside of cap and front face of jamb.

Head diameter 1 3/4"

Shank diameter 1.400"

Bored hole 36 mm dia.

⇒ Can be fitted with reed switch operation upon request.

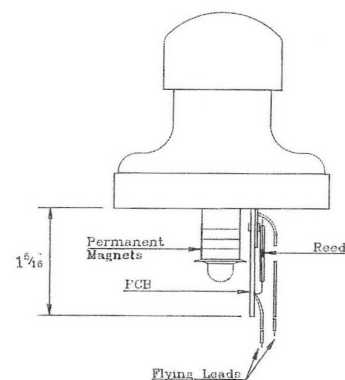
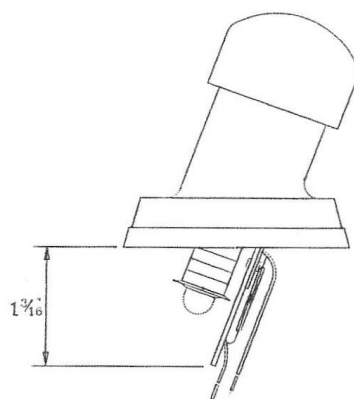


Reed Switch operation for Toe Pistons

All Kimber Allen Toe Pistons are now available with the option of reed switch contacts specifically for use where solid state circuitry is employed. The reed switch is mounted on a fibreglass board and actuated by permanent ring magnets fitted to the moving plunger; this arrangement ensures that there is only one make and break signal for each operation of the piston.

The reed switch contacts have a maximum current rating of 0.5 amps @ 20 volts D.C. and if required can be fitted with a voltage dependent resistor for spark suppression.

The dimensions of the reed switch unit are the same as for K-A mechanical contact Toe Pistons and as such can be retrofitted to existing installations without alteration to clearance holes



Round Toe Pistons

Ref

Code

Square Toe Pistons

Ref

Code

Satin Black Body
 Polished Brass Cap

TPW/R

FS149/R

Bronze Cap and Base
 Polished Chrome Cap
 and Base

415/R

FS146/R

415E/EC/R

FS148/R

Note: Other colour combinations of cap and base are available to special order. We can also fit weaker springs for a quiet return action.



Vertical Pallet Magnet

This is a solenoid-operated direct pallet magnet with 70 ohm coil and diode suppression. The unit has a unique method of adjustable air damping to give correct pipe speech and to control the speed of opening and closing of the pallet. To ensure correct seating, the pallet has a flexible mounting.

The solenoid armature is finished in polished hard chromium plate, sliding in a fine bore brass tube. The unit which should only be mounted vertically has a simple one screw fixing through a key hole slot. When tightened the slight concave foot is designed to prevent any unwanted movement.

Note: These units should only be used in a dry and clean location.

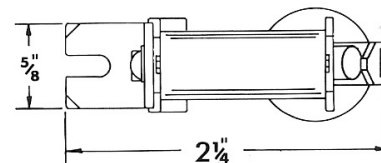
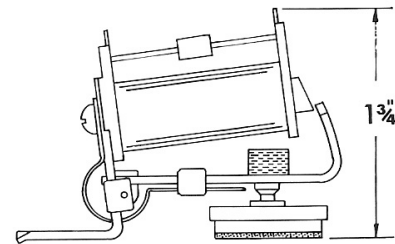
Order Details	Ref	Code
AD 1 1/4"	Vertical pallet magnet 70 ohm coil	FS206
AD 7/8"	Vertical pallet magnet 70 ohm coil (Both items fitted with stronger return spring)	FS215
AD 1 1/4" /B	Vertical pallet magnet 100 ohm coil	FS207
AD 7/8" /B	Vertical pallet magnet 100 ohm coil (use in clean condition environment fitted with weaker spring)	FS208
AD/P	7/8 pallet only	
AD/P	1 1/4 pallet only	
AD/S	Heavy return spring	

⇒ Units can be fitted with either strong or weak springs upon request.

Light Pattern Magnet

Key Features

- ⇒ 1 screw fitting—claw base grip
- ⇒ Stainless Steel pivot
- ⇒ Adjustable spring tension
- ⇒ Adjustable pallet height
- ⇒ High repetition rates
- ⇒ Available with a range of 4 pallet sizes & 3 coil ranges
- ⇒ The unit has been designed to give high repetition rates via a very efficient magnetic circuit that locks the armature without any valve bounce.



Order Details	Ref	Code
LPM 5/8"	Light pattern magnet 5/8" pallet , 90 ohm coil	FS159
LPM 5/8"G	Light pattern magnet 5/8" pallet , 60 ohm coil	FS140
LPM 5/8"R	Light pattern magnet 5/8" pallet , 50 ohm coil	
LPM 3/4"	Light pattern magnet 3/4" pallet , 90 ohm coil	FS160
LPM 3/4"G	Light pattern magnet 3/4" pallet , 60 ohm coil	FS141
LPM 3/4"R	Light pattern magnet 3/4" pallet , 50 ohm coil	
LPM 1"	Light pattern magnet 1" pallet , 90 ohm coil	FS162
LPM 1"G	Light pattern magnet 1" pallet , 60 ohm coil	FS142
LPM 1"R	Light pattern magnet 1" pallet , 50 ohm coil	
LPM 1 1/8"	Light pattern magnet 1 1/8" pallet , 90 ohm coil	FS161
LPM 1 1/8"G	Light pattern magnet 1 1/8" pallet , 60 ohm coil	FS143
LPM 1 1/8"R	Light pattern magnet 1 1/8" pallet , 50 ohm coil	
LPM /9	Light pattern magnet (no leads ,diode or pallet 90 ohm coil)	AS144
LPM /6	Light pattern magnet (no leads ,diode or pallet 60 ohm coil)	AS145



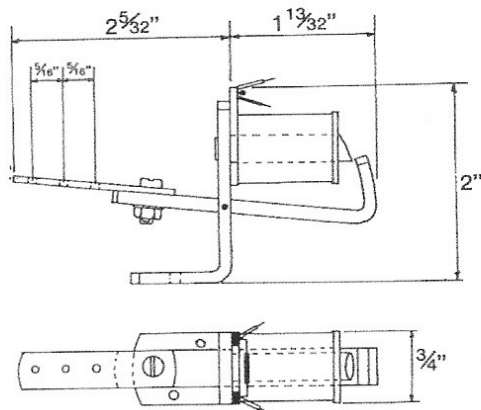
Lever Magnets

Kimber Allen's three types of Lever Magnets have the common features of a strong steel frame and armature, with a non magnetic retentive pole. The stainless steel pivot has a plastic leaf inserted between the frame and the armature to ensure silent and frictionless operation. Diode suppression is fitted as standard to the colour coded coils. Black 100 ohms, Green 70 ohms, Red 50 ohms.

⇒ Solid extension arm available

Free Lever Magnet

The Free lever is a simple magnet with an adjustable extension arm, having three .090" dia holes intended for tapped wires etc.



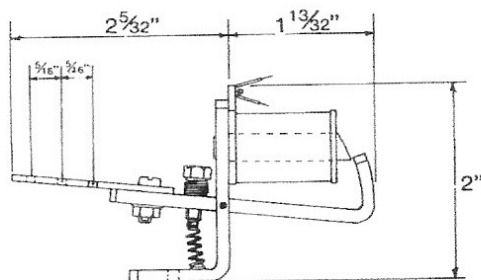
Order Details

Ref Code

Free Lever 100 ohm coil	FLB	AS177
Free Lever 70 ohm coil	FLG	AS178
Free Lever 50 ohm coil	FLR	AS179

Sprung Lever

The Sprung lever is similar to the Free Lever with the addition of an adjustable return spring fitted to the rear end of the armature.



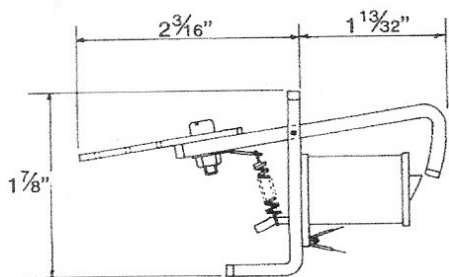
Order Details

Ref Code

Sprung Lever 100 ohm coil	SLB	AS180
Sprung Lever 70 ohm coil	SLG	AS181
Sprung lever 50 ohm coil	SLR	AS182

Inverted Sprung Lever

The Inverted Lever is similar to the Sprung Lever, but with an inverted action.



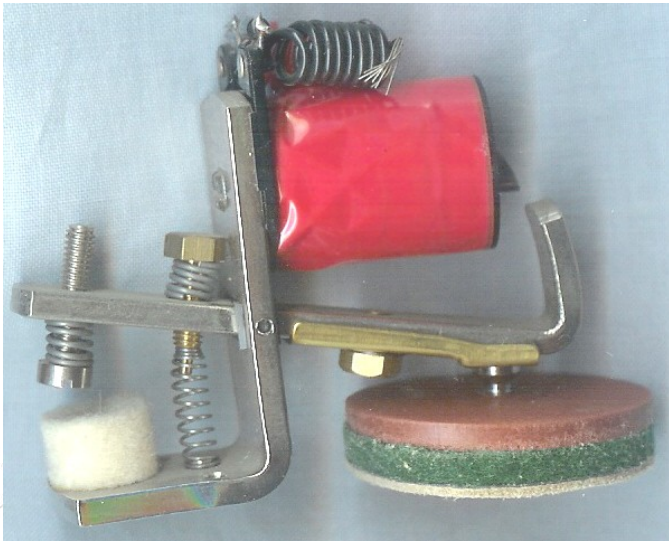
Order Details

Ref Code

Inverted Lever 100 ohm coil	ISB	AS183
Inverted Lever 70 ohm coil	ISG	AS184
Inverted Lever 50 ohm coil	ISR	AS185

Direct Pallet Magnets

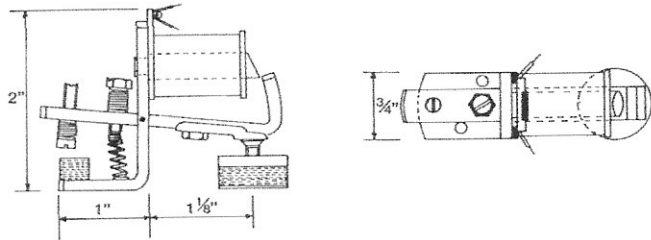
These two types of magnets follow the general design features of the lever magnets. They are intended for direct pallet operation, and are easily installed and have full adjustment of the return spring and regulation of the armature. The coils follow the same colour coding as the lever magnets and have diode suppression.



Direct Pallet Magnet

This Direct magnet has an adjustable pallet and pallet shoe. Pallets illustrated at the bottom of this page can be supplied as separate items or can be factory fitted. If this is required please state pallet size required.

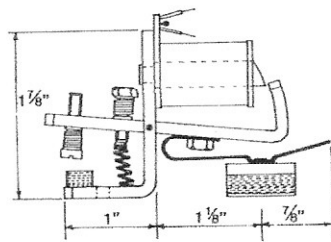
Order Details	Ref	Code
Direct Pallet 100 ohm coil	DPB	AS191
Direct Pallet 70 ohm coil	DPG	AS192
Direct Pallet 50 ohm coil	DPR	AS193



Pallet Magnet No.2

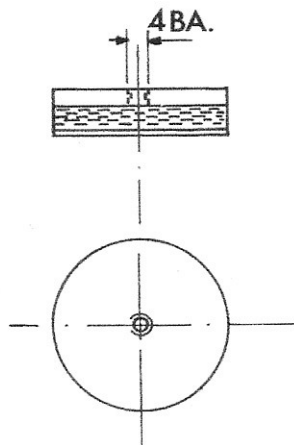
The No.2 magnet is similar in general design to the direct magnet above. It features an alternative method of pallet regulation by means of a brass arm which can be manipulated to suit any special requirements. As the pallet is factory fitted, pallet size must be given with order.

Order Details	Ref	Code
No.2 Pallet 100 ohm coil	DPV/B	AS207
No.2 Pallet 70 ohm coil	DPV/G	AS208
No.2 Pallet 50 ohm coil	DPV/R	AS209

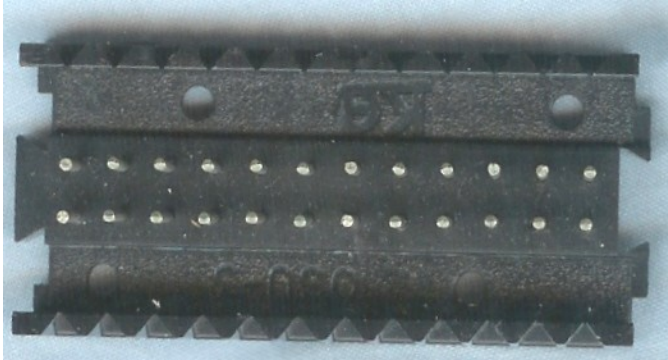


Pallets for Direct Pallet Magnets

Bonded assembly of red fibre board backing with green felt and quality chrome leather facing. Details of other Pallets on page 47.



Order Details	Ref	Code
5/8" dia Pallet	5/8"	FS194
3/4" dia Pallet	3/4"	FS195
7/8" dia Pallet	7/8"	FS196
1 " dia Pallet	1 "	FS197
1 1/8" dia Pallet	1 1/8"	FS198
1 1/4" dia Pallet	1 1/4"	FS199
1 3/8" dia Pallet	1 3/8"	FS200
1 1/2" dia Pallet	1 1/2"	FS201



Cable Junction Strips

These are a useful aid to all D.C. wiring applications. Each moulding has 12 connected double pin terminals for either wire wrapping or solder connections, in line with these on each side are 'Vee' type grips which will firmly hold the wires to be terminated on the pins. The mouldings are interlocking and can form any length of strip. Pins and block length are the same as the KA Multi Contact Switch.

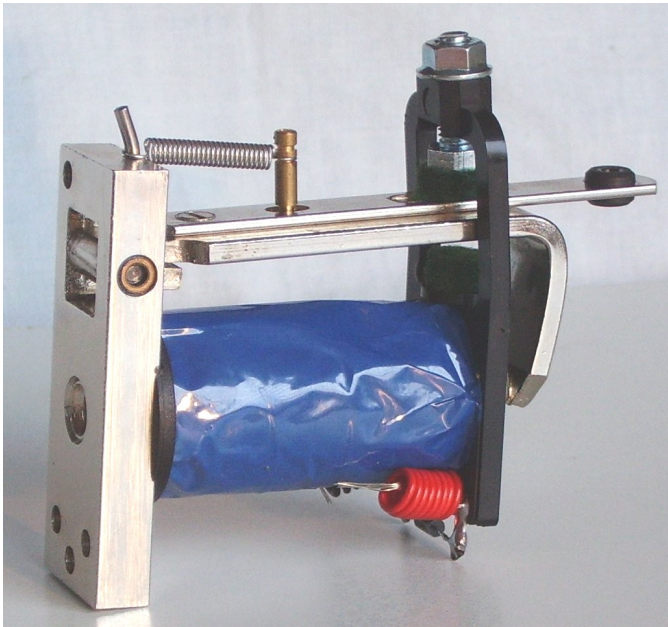
Order Details

Cable Junction Strip

Ref Code

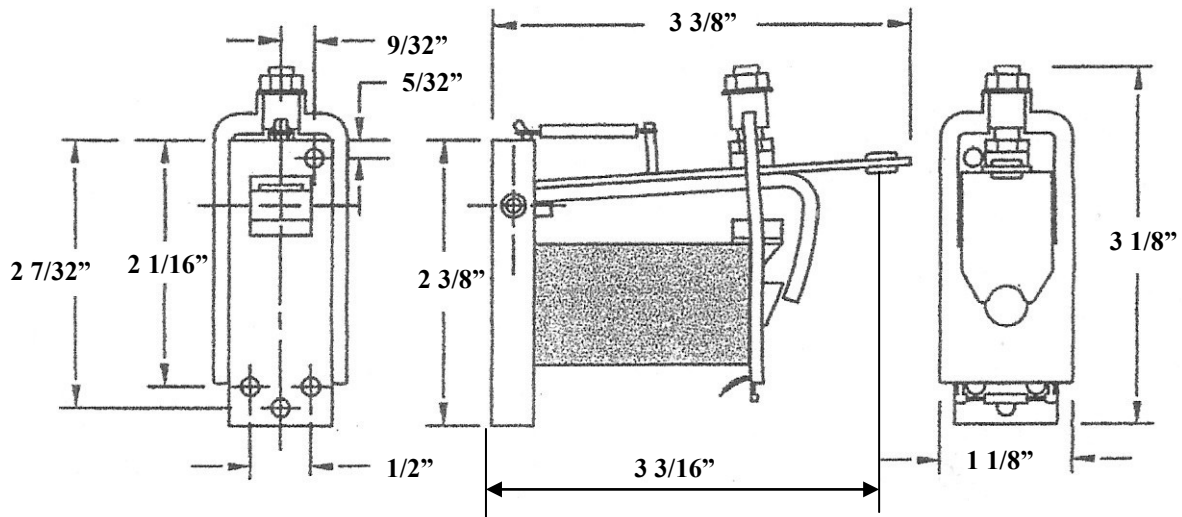
OSU3 FS591

- ⇒ Phosphor bronze bushing / stainless steel pivots / self lubricating.
- ⇒ 30 ohm high power unit
- ⇒ Quiet in operation
- ⇒ Powerful action
- ⇒ Base has 4 fixing holes
- ⇒ Base gasket available.
- ⇒ Choice of pallet and extension arms



Heavy duty lever magnet

Order details	Ref.	Code
No arm	HD-2	AS236
Short arm	HDA-2	AS237
Long arm 2" pallet	HDP-2	AS238
Long arm 2 1/2" pallet	HDP-2 1/2"	AS239
Mounting gasket		AS240



Multi Contact Switches

Each switch has 65 contacts arranged in 5 sets of 12 contacts and 1 set of 5 contacts. Each contact is of pure spring tempered silver, with excellent wiping action over nickel silver bus-bars. Each switch is assembled on a strong extruded aluminium base which ensures the unit is held rigid and true. Each set of bus-bars is heat sealed into interlocking moulded panels.

A clear perspex panel covers the switching area. The unit has solenoid operation with a 50 ohm coil with diode suppression. Solenoid movement is fully adjustable by felted buffer stops. A gravity-aided spring, returns the switch to the 'off' position, and for this reason the unit should be mounted vertically.

Switches are mounted on 1/2" x 1/2" aluminium Angle, either in singles or in banks with common bus-bars to suit any organ specification. Bus-bars can be cut to accommodate any extension stops.

Optional removable cable registers can be supplied. These give accessibility for soldering and give a neat appearance to cabling.

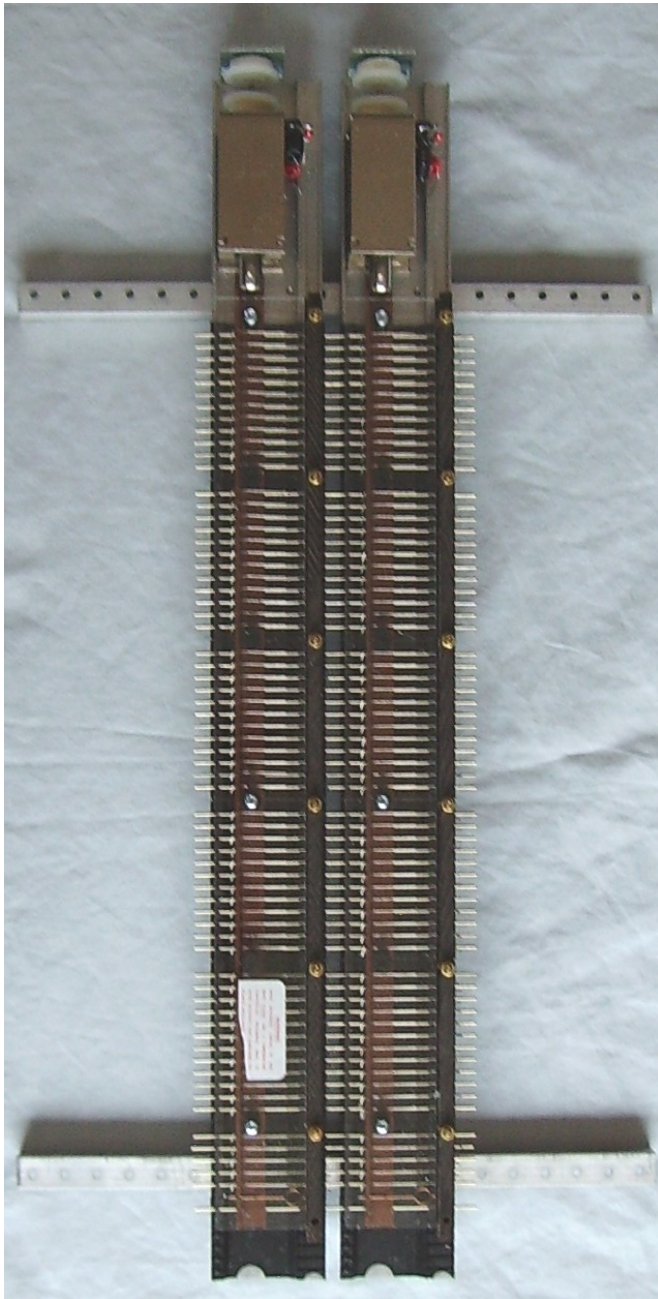
Principle Dimensions

Overall height 19"
 Overall Depth
 (including aluminium angle) 1 15/16"
 Overall Width
 (single switch) 2 3/8"
 Pitch of switches
 when ganged 2"

When ordering banks of switches please request the K-A specification sheets available free of charge.

Order Details	Ref	Code
Multi Contact Switch	M65	AS156
Spare Solenoid	SOL	AS157
Cable Register	SCR	AS158

A further aid to wiring with the K-A Cable Junction Strips FS591 can be found on (page 25).



2 Ganged unit shown

⇒ Available as single or ganged units.

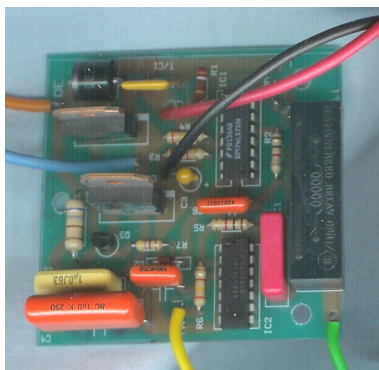
Slider Motor



This unit has been designed and specially built to provide reliable and silent movement to soundboard slides. It is powered by a motor exclusive to Kimber-Allen, which enables a compact low voltage D.C. motor to work light and heavy loads with equal ease. This is achieved by a series of integral nylon gears which are very tough, silent, and lubricated for life.

Movement from the motor is transmitted to the slide by means of a nylon roller working in a 'Tee Bar' channel which has positive clamping to the slide to prevent wear and slippage.

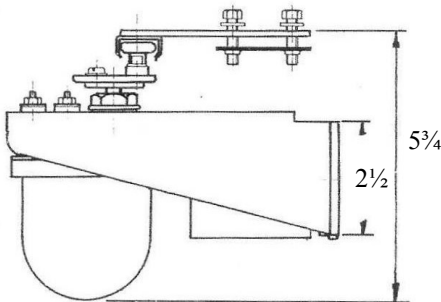
The main unit is attached to the chest by a pair of clamp plates which are initially screwed in the correct position on the chest. This arrangement allows the main unit to be removed at anytime and replaced in the correct position.



The control unit is clipped into the main chassis. It is a well-proven totally reliable solid state system well suited to all environmental conditions. It has automatic overload and reset facility.

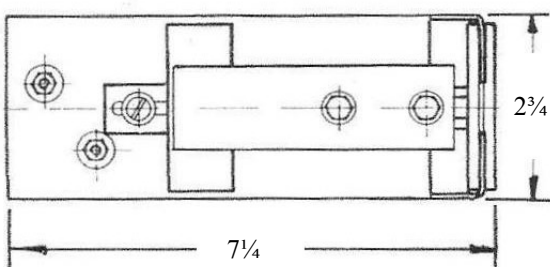
This unit is intended for use with wooden chests only, and should not be modified in any way.

General Specification



- Motor: 15 volts DC \pm 3 volts.
- Stroke: Adjustable 0 to 1 1/2".
- Approximate current consumption at 15 volts x 1 1/2" stroke.
 - 5 lbs - 1.8 amps
 - 10 lbs - 1.9 amps
 - 20 lbs - 2.6 amps
 - 30 lbs - 3.5 amps

Full installation details are supplied with each unit.



Order Details

Slider Motor
Spare Control Units

Ref Code

SM FS254
SMC FS257

Slider Solenoid

The Slider Solenoid unit has been developed to produce a powerful yet silent operation for Soundboard Slides : features include :

- ⇒ 3" dia Heavy duty Housing
- ⇒ Available with removable end flange enabling unit to be dismantled on site
- ⇒ Extended stroke available on request
- ⇒ Self Lubricating bearings
- ⇒ All internal parts Electro-Plated
- ⇒ Rubber Mountings fitted as standard

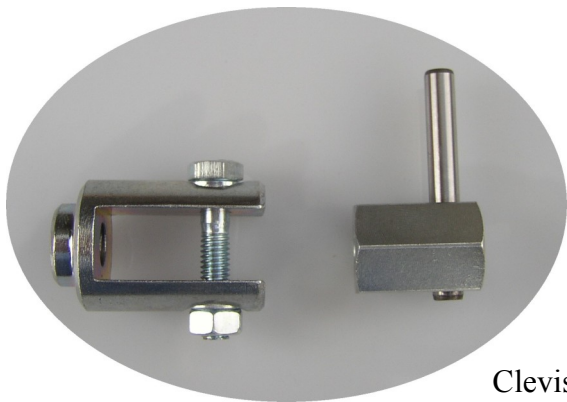
General Specification

Voltage	12 -18 Volts
Resistance	4.5 Ohms
Current @ 15 Volts	3.33 Amps
Pulling Power	5.5 Kg

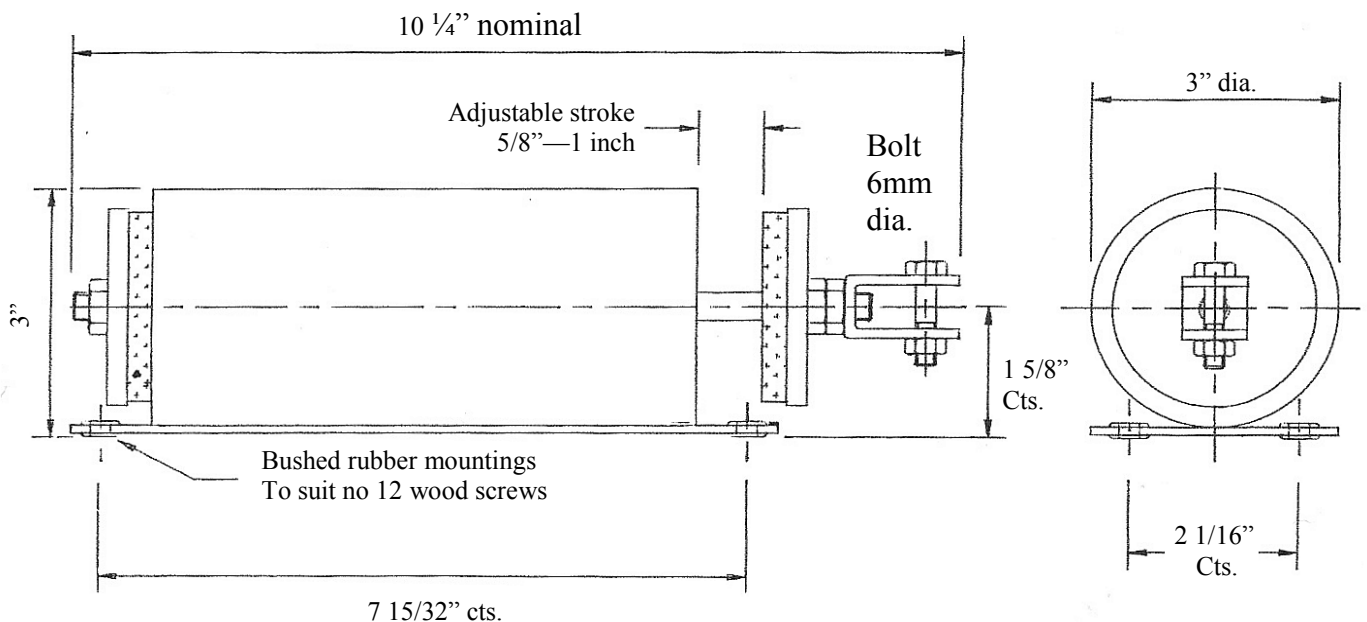


Slider Solenoid shown fitted with two Pin Drive End Assemblies and the latest Dual Control Card.

- ⇒ Power / speed adjustable independently in both directions.
- ⇒ Can be supplied with or without the Control Card, which can be either mounted on the solenoid or supplied loose for remote mounting.



Clevis Pin End Assembly and Pin Drive End Assembly



Slider Solenoid Solid State Control Unit FS262



General description

A single unit control card that can be either mounted directly on the solenoid or remotely as required, with speed / power adjustable, independently in both directions, by means of two screw adjustments accessible through the top cover.

Polarity is factory set to positive as standard but can be altered, after removal of the top cover, by repositioning of the +/- changeover slider switch.

Kimber –Allen also offer the solid state logic twin card for operating slider solenoids. Each card operates 2 slider solenoids with velocity control in each direction. Cards can be mounted within 10 or 20 card aluminium cabinet, or individually with a Kimber-Allen mounting kit for lesser quantities and additions to existing installations.

Slider Solenoid Order details

Ref.	Code	Item
SS	FS259	Slider solenoid
SSLL	FS262	Control Card—Dual Speed Control
SS6P	FS251	Pin mDrive End Assembly
SS6C	FS261	Clevis Pin End Assembly

General installation instructions

Please see current instructions before installation

Transformer Rectifiers

The K-A range of transformer rectifiers are specially designed as Pipe Organ power Supply units. They are widely used and incorporate the latest technical developments.

In the single phase 240 volt AC input there is a choice of 10-20-30 and 50 amp output units.

All units have generous heat sink cooled silicon rectification, with semi-conductor output fuse protection. In addition the single phase have Capacitor smoothing. All units incorporate individual fuse protection to each of the mains input.

The 10-20-30 and 50 amp single phase units have four position output voltage selection.

All units are housed in a robust well ventilated steel case. These require to be situated to receive natural air flow cooling .

Output voltage 12 14 16 18 d.c. nominal

Principle Dimensions

	Length	Height	Width
TS10	8"	10"	9 1/2"
TS20 & TS30	8"	11"	12"
TS50	14"	20 1/2"	18"

Order Details

Ref

Code

Single Phase 10 amp	TS10	FS241
Single Phase 20 amp	TS20	FS242
Single Phase 30 amp	TS30	FS243
Single Phase 50 amp	TS50	FS244

Note:When dispatched by carrier there will be an additional charge on these units for special packaging .

These units must be used to conform to current wiring regulations and installed by a qualified electrician.

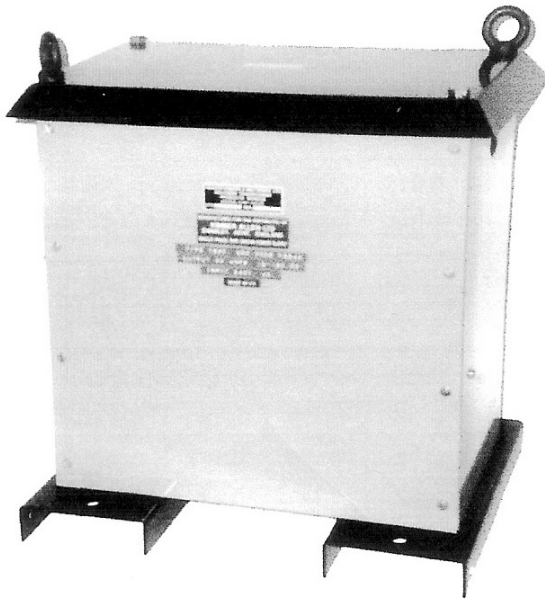
Output wiring should be protected by additional fusing relative to the current rating of cables being used.

These units are covered by a manufacturer's 1 year warranty.

Note: Dimensions and appearance may change at the manufacturer's discretion.



TS10-TS20-TS30



TS50

Transformer rectifiers 16/17 volt fixed d.c. output

A compact lightweight range of 3 sizes of transformer , very robust .
Designed for longevity of use.

General information

- ⇒ 20 and 30/50 Amp units built with ammeter & voltmeter
- ⇒ Input voltage—240v a.c.
- ⇒ Output voltage 16 / 17 volt d.c.
- ⇒ Fuse protected
- ⇒ Transformer / bridge rectifier / capacitor design



Dimensions and weight

10 Amp - 70 x 150 x 260 mm - 4kg
 20 Amp - 140x 150 x 250 mm - 10kg
 30/50 Amp - 135 x 220 x 300 mm - 17 kg

Order details

Order details	Ref.	Code
Transformer /rectifier 10 Amp	TR/10	FS246
Transformer /rectifier 20 Amp	TR/20	FS249
Transformer /rectifier 30/50 Amp	TR/30/50	FS250

Current consumption in amps for coils of varying resistance

i.e. 60 OHM coil with a 14 volt supply = 0.233 amps or 233 m/amps

Coil Resistance in OHMS	DC VOLTAGE										
	10	11	12	13	14	15	16	17	18	20	24
10	1.000	1.100	1.200	1.300	1.400	1.500	1.600	1.700	1.800	2.000	2.400
15	0.666	0.733	0.800	0.866	0.933	1.000	1.066	1.133	1.200	1.333	1.600
20	0.500	0.550	0.600	0.650	0.700	0.750	0.800	0.850	0.900	1.000	1.200
25	0.400	0.440	0.480	0.520	0.560	0.600	0.640	0.680	0.720	0.800	0.960
30	0.333	0.366	0.400	0.433	0.466	0.500	0.533	0.566	0.600	0.666	0.800
35	0.285	0.314	0.348	0.371	0.400	0.428	0.457	0.485	0.514	0.571	0.685
40	0.250	0.275	0.300	0.325	0.350	0.375	0.400	0.425	0.450	0.500	0.600
45	0.222	0.244	0.266	0.288	0.311	0.333	0.355	0.377	0.400	0.444	0.533
50	0.200	0.220	0.240	0.260	0.280	0.300	0.320	0.340	0.360	0.400	0.480
55	0.181	0.200	0.218	0.236	0.254	0.272	0.290	0.309	0.327	0.363	0.436
60	0.166	0.183	0.200	0.216	0.233	0.250	0.266	0.283	0.300	0.333	0.400
65	0.153	0.169	0.184	0.200	0.215	0.230	0.246	0.261	0.276	0.307	0.369
70	0.148	0.157	0.171	0.185	0.200	0.214	0.228	0.242	0.257	0.285	0.342
75	0.133	0.146	0.160	0.173	0.186	0.200	0.213	0.226	0.240	0.266	0.320
80	0.125	0.137	0.150	0.162	0.175	0.187	0.200	0.212	0.225	0.250	0.300
85	0.117	0.129	0.141	0.152	0.164	0.176	0.188	0.200	0.211	0.235	0.282
90	0.111	0.122	0.133	0.144	0.155	0.166	0.177	0.188	0.200	0.222	0.266
95	0.105	0.115	0.126	0.136	0.147	0.157	0.168	0.178	0.189	0.210	0.252
100	0.100	0.110	0.120	0.130	0.140	0.150	0.160	0.170	0.180	0.200	0.240
110	0.090	0.100	0.109	0.118	0.127	0.136	0.145	0.154	0.163	0.181	0.218
120	0.083	0.091	0.100	0.108	0.116	0.125	0.133	0.141	0.150	0.166	0.200
130	0.076	0.084	0.092	0.100	0.107	0.115	0.123	0.130	0.138	0.153	0.184
140	0.071	0.078	0.085	0.092	0.100	0.107	0.114	0.121	0.128	0.142	0.171
150	0.066	0.073	0.080	0.086	0.093	0.100	0.106	0.113	0.120	0.133	0.160
160	0.062	0.068	0.075	0.081	0.087	0.093	0.100	0.106	0.112	0.125	0.150
180	0.055	0.061	0.066	0.072	0.077	0.083	0.088	0.094	0.100	0.111	0.133
200	0.050	0.055	0.060	0.065	0.070	0.075	0.080	0.085	0.090	0.100	0.120
240	0.041	0.045	0.050	0.054	0.058	0.062	0.066	0.070	0.075	0.083	0.100
280	0.035	0.039	0.042	0.046	0.050	0.053	0.057	0.061	0.064	0.071	0.085

Resistance of coils and current consumption of units illustrated in this catalogue.

Standard units are supplied with coils suitable for 15 volt D.C. supply ± 3 volts.

Units can also be supplied with coils specially wound for 24 volts.

Page No.	UNIT	STANDARD UNIT				24 VOLT UNIT	
		RESISTANCE IN OHMS	CONSUMPTION IN AMPS			RESISTANCE IN OHMS	CONSUMPTION IN AMPS
			at 12v	at 15v	at 18v		
1	STOP KEYS	30	0.400	0.500	0.600	60	0.400
5	DRAWSTOP	32	0.374	0.464	0.557	80	0.300
6	RELAYS	70 100	0.171 0.120	0.214 0.150	0.257 0.180	180	0.133
8	REVERSER	100	0.120	0.150	0.180	180	0.133
12	CHEST MAGNETS	140 per unit 70 per unit	0.085 0.170	0.107 0.210	0.128 0.250	240 per unit	0.100
13	VERTICAL MAGNET	100 70	0.120 0.170	0.150 0.210	0.180 0.250	180	0.133
13	LIGHT PATTERN MAGNET	90 60 50	0.133 0.200 0.240	0.166 0.250 0.300	0.200 0.300 0.360	160	0.15
14	LEVER MAGNETS	100	0.120	0.150	0.180	180	0.133
14	LEVER MAGNETS	70	0.171	0.214	0.257	-	-
14	LEVER MAGNETS	50	0.240	0.300	0.360	-	-
15	DIRECT MAGNETS	100	0.120	0.150	0.180	180	0.133
15	DIRECT MAGNETS	70	0.171	0.214	0.257	-	-
15	DIRECT MAGNETS	50	0.240	0.300	0.360	-	-
16	HEAVY DUTY	30	0.400	0.500	0.600	60	0.400
17	M65 SWITCH	50	0.240	0.300	0.360	160	0.150
18	SLIDER SOLENOID	4.5	-	3.330	-	9.5	2.4

Direct Pallet Magnets

100 ohms 70 ohms 50 ohms Ref Page 24

This Chart is offered as a guide only to assist with the application of the Kimber Allen range of lever arm type direct pallet magnets.

Wind Pressure	VOLTAGE	11/8"	1"	7/8"	3/4"	5/8"	1/2"	3/8"	Pipe Supply Hole Diameter
		1 3/8"	1 1/4"	1 1/8"	1"	7/8"	3/4"	5/8"	Pallet Diameter
Inches		Ohms							
8"	11v	-	-	-	50	70	70	70	
	13v	50	50	50	70	70	70	100	
	15v	50	50	70	70	100	100	100	
7"	11v	50	50	70	70	70	70	70	
	13v	50	50	70	70	70	100	100	
	15v	50	50	70	70	100	100	100	
6"	11v	50	50	70	70	70	70	100	
	13v	50	50	70	70	100	100	100	
	15v	70	70	70	100	100	100	100	
5"	11v	50	50	70	70	70	70	100	
	13v	50	70	70	70	100	100	100	
	15v	70	70	100	100	100	100	100	
4"	11v	50	70	70	70	100	100	100	
	13v	70	70	100	100	100	100	100	
	15v	70	100	100	100	100	100	100	
3"	11v	70	70	100	100	100	100	100	
	13v	70	70	100	100	100	100	100	
	15v	100	100	100	100	100	100	100	
2"	11v	70	100	100	100	100	100	100	
	13v	100	100	100	100	100	100	100	
	15v	100	100	100	100	100	100	100	

i.e. 5/8" diameter pipe supply hole (7/8" pallet) on 6" wind pressure at 13 volts = 100 Ohms Coil