

A COSMOLIGHT DIVISION





MAX DROP UP TO 4M MAX LOAD 40KG

The Telescopic Drop Arm is a simple and economic suspension for installations in which frequent variations in height are not required (i.e.: for cyclorama lighting, news studios or to realise studios with a small budget).

Used to sustain luminaires or equipment at variable heights. The extension is regulated by loosening the regulating nut and manually extending the arm to the desired position and tightly blocking the nut. The standard version is equipped with a 1 1/8" male attachment in the upper part and 1 1/8" female attachment in the lower part. The "D" version is equipped with a 1 1/8" male attachment in the lower part. The "D" version is equipped with a 1 1/8" male plus a 5/8" male in the lower part. The stirrup version is equiped with a handle to allow the hanging of pipe clamps or barrel clamps. The Telescopic Drop Arm is manufactured in accordance with the DIN 15560-46.

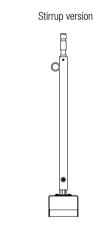
3 DIFFERENT MODELS AVAILABLE

"D" version

15mm

closed height





PART NUMBER STANDARD VERS.	FF3842	FF3841	FF3840	FF3844Y25	FF3844Y30	FF3844Y35	FF3844Y40
PART NUMBER "D" VERSION	FF3842D	FF3841D	FF3840D	FF3844YD25	FF3844YD30	FF3844YD35	FF3844YD40
PART NUMBER STIRRUP VERS.	FF3842ST	FF3841ST	FF3840ST	FF3844YST25	FF3844YST30	FF3844YST35	FF3844YST40
Max load	40kg	40kg	40kg	40kg	40kg	40kg	40kg
Max drop	0.65m	1.23m	2m	2.5m	3m	3.5m	4m
Closed height	0.44m	0.73m	1.13m	1.38m	1.63m	1.88m	2.13m
Self weight	1,8kg	3,2kg	4,2kg	6kg	7kg	7,9kg	8,6kg



The innovative design of the pantograph allows lights to be placed closer to the ceiling than ever before. A complete new range of top and bottom attachments have been designed to reduce at minumum the closed length. Entirely produced in Aluminum (P-AI MgSi UNI3569) and according to DIN 15560-46 it is available in two different extension: 2m (79") and 3.8m (150") long. The load is supported by a steel cable of 2mm diameter (safety factor 12). Loads up to 12kg (26.4lbs) can be supported by the patented friction device, while loads up to 18kg (39.7lbs) require the use of optional springs.

By turning the coulored notched ring you can adjust the pantograph friction; this will ensure that the load remains stable when set in position, but that it will move smoothly up and down when necessary. In any case, it is always advisable to use the springs to aid raising your pantograph.

One important feature of this pantograph is the possibility to customize it in order to meet your needs. You just need to choose between the two different extension (2m - 79" or 3.8m - 150"), then decide the proper top and bottom attachment and, if necessary, add one or two counterbalance spring depending of the foreseen load.

HOW TO BUILD THE PRODUCT CODE:

- 1° Choose the pantograph lenght and write the Ref code in Field 1
- 2° Choose the SPRING type and put the Ref code in Field 2
- 3° Choose the TOP ATTACHMENT and put the Ref code in Field 3
- 4° Choose the BOTTOM ATTACHMENT and put the Ref code in Field 4

			PRODUC	CT CODE	
		FIELD 1	FIELD 2	FIELD 3	FIELD 4
COMPONENTS	REF	FF3512	А	5	9
PANTOGRAPHS		1	1	1	1
PANTOGRAPH 2M - 79"	FF3512				
PANTOGRAPH 3.8M - 150"	FF3514				
SPRINGS					
TYPE 4	А				
TYPE 4+4	В				
TYPE 12	С				
TYPE 4+12	D				
NONE	Ν				
TOP ATTACHMENTS		-			
FF3540 TYPE 60 CARRIAGE	0				
FF3541 TYPE 80 CARRIAGE	1				
FF3545 28MM - 1-1/8" PIN	5				
FF3546 16MM - 5/8" PIN	6				
FF3547 COUPLER	7	-			
FF3548 16MM - 5/8" BUSHING	8				
BOTTOM ATTACHMENTS		-			
FF3546 16MM - 5/8" PIN	6				
FF3548 16MM - 5/8" BUSHING	8				
FF3549 28MM - 1-1/8" BUSHING	9	-			
FF3544 M10X30 SCREW AND NUT	4	-			
FF3543 28F - 16M/F BUSHING	3	-			

When choosing the additional spring(s) for your pantograph, you will first need to know exactly which model of pantograph you have, in order that you can select the spring of the correct length. If you have one of the new compact pantographs (with grey-painted "scissors"), look at the colour of notched ring the 2m (79") version has a red notched ring, while the 3.8m (150") version has a blue notched ring. After having identified the length of the pantograph, choose the appropriate spring(s) by referring to the table below.

Note: these new springs are not compatible with the old pantographs (black painted scissors)

ADDITIONAL SPRINGS

CODE	SPRING TYPE	COLOR	PANTOGRAPH
FF3531	Туре 4	Red	Top 2C
FF3532	Type 12	Red	Top 2C
FF3533	Туре 4	Blue	Top 4C
FF3534	Type 12	Blue	Top 4C



For your convenience we already build the codes for the most common version.

Pantograph with top 16mm-5/8" bushing and bottom 16 mm-5/8" pin

CODE	DESCRIPTION
FF3512N86	Pantograph Top 2C
FF3514N86	Pantograph Top 4C
Pantograph with top	p 28mm-1-1/8" pin and bottom 28mm-1-1/8" bushing
CODE	DESCRIPTION
FF3512N59	PANTOGRAPH TOP 2C
FF3512A59	PANTOGRAPH TOP 2C W/Type 4 Spring
FF3512B59	PANTOGRAPH TOP 2C W/2 Type 4 Springs
FF3512C59	PANTOGRAPH TOP 2C W/Type 12 Spring
FF3512D59	PANTOGRAPH TOP 2C W/Type 4&12 Springs
FF3514N59	PANTOGRAPH TOP 4C
FF3514A59	PANTOGRAPH TOP 4C W/Type 4 Spring
FF3514B59	PANTOGRAPH TOP 4C W/2 Type 4 Springs
FF3514C59	PANTOGRAPH TOP 4C W/Type 12 Spring
FF3514D59	PANTOGRAPH TOP 4C W/Type 4&12 Springs



COUNTER BALANCED WEIGHT
From 0 to 4kg (8.8lbs)
From 3kg (6.6lbs) to 8kg (17.6lbs)
From 8kg (17.6lbs) to 14kg (30.8lbs)
From 9kg (19.8lbs) to 16kg (35.3lbs)
From 13kg (28.6lbs) to 18kg 39.7lbs)



TOP ATTACHMENTS



Male attachment



carriage for IFF rail Type 80 and 50 female attachment

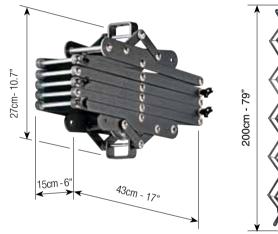
CODE: FF3514



diam 42÷52mm (1-1/4" ÷2")

PANTOGRAPHS

CODE: FF3512



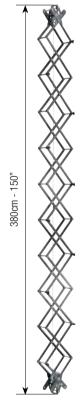
TECHNICAL SPECIFICATIONS

Lifting rope	2mm wire rope
Safety factor rope	12
Self weight	4.6kg - 10.1lbs
Max working load	18kg -39.7lbs
Closed length	27cm - 10.7"
Max extension	200cm - 79"

37cm - 14.6Ó'

15cm-6' 43cm- 17" **TECHNICAL SPECIFICATIONS**

Lifting rope	2mm wire rope
Safety factor rope	12
Self weight	7.2kg - 15.8lbs
Max working load	18kg -39.7lbs
Closed length	37cm - 14.6"
Max extension	380cm - 150"



BOTTOM ATTACHMENTS

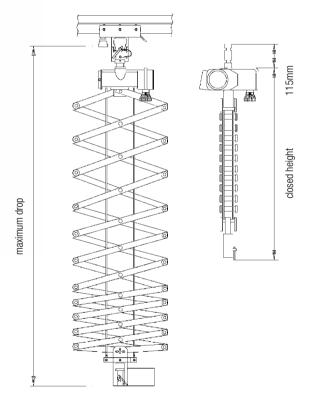




DROP FROM 3M TO 6M MAX LOAD 40KG

IFF Pole Operated Pantograph suspends and positions luminaires with loads of up to 40kg. It is a versatile suspension unit for small, medium and large studios.

The pantograph can be extended via twin wire ropes. A specially designed sheet metal scissors mechanism adds stability and supports the luminaire power cable. It is dynamically and statically irreversible thanks to its static and dynamic efficiency (<0.5). The pantograph is manufactured in accordance with the DIN 15560-46.



PART NUMBER

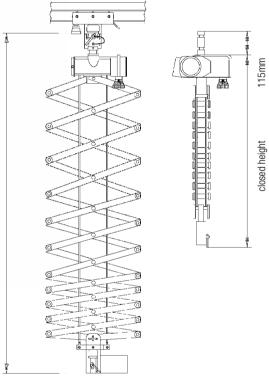
WITH BUSHING 28MM	FF3800Y30	FF3800Y40	FF3800Y50	FF3800Y60
WITH UNIVERSAL HEAD	FF3800Y31	FF3800Y41	FF3800Y51	FF3800Y61
Maximum load	40kg	40kg	40kg	40kg
Maximum drop	3m	4m	5m	6m
Closed height	0.59m	0.65m	0.71m	0.89m
Width	0.48m	0.48m	0.48m	0.48m
Self weight	13kg	14kg	15kg	16kg
Height adjustment	local pole operated	local pole operated	local pole operated	local pole operated
Lifting rope	Ø 2mm x 2pcs			
Top fixing	28mm (1 1/8") male spigot			
Bottom fixing with	28mm (1 1/8")	28mm (1 1/8")	28mm (1 1/8")	28mm (1 1/8")
bushing 28mm	female socket	female socket	female socket	female socket
Bottom fixing with universal head	28F - 16M/F	28F - 16M/F	28F - 16M/F	28F - 16M/F



DROP FROM 3M TO 6M MAX LOAD 40KG

IFF Pole Operated Pantograph suspends and positions luminaires with loads of up to 40kg. It is a stable and versatile suspension unit for medium and large studios.

This manual pantograph incorporates a twin wire rope system for raising and lowering the luminaire with a double scissors mechanism to provide stability and support the luminaire cable. The pantograph is dynamically and statically irreversible thanks to its static and dynamic efficiency (<0.5). The pantograph is manufactured in accordance with the DIN 15560-46.



maximum drop

PART	NUMBER	

JUO P.O. PANTOGRAPH

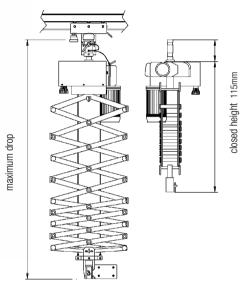
WITH BUSHING 28MM	FF3808Y30	FF3808Y40	FF3808Y50	FF3808Y60
WITH UNIVERSAL HEAD	FF3808Y31	FF3808Y41	FF3808Y51	FF3808Y61
Maximum load	40kg	40kg	40kg	40kg
Maximum drop	3m	4m	5m	6m
Closed height	0.64m	0.70m	0.76m	0.82m
Width	0.57m	0.57m	0.57m	0.57m
Self weight	16kg	18kg	21kg	22kg
Height adjustment	local pole operated	local pole operated	local pole operated	local pole operated
Lifting rope	Ø 2mm x 2pcs			
Top fixing	28mm (1 1/8") male spigot			
Bottom fixing with	28mm (1 1/8")	28mm (1 1/8")	28mm (1 1/8")	28mm (1 1/8")
bushing 28mm	female socket	female socket	female socket	female socket
Bottom fixing with universal head	28F - 16M/F	28F - 16M/F	28F - 16M/F	28F - 16M/F



DROP 5M - 6M MAX LOAD 40KG

The Studio Motorized Pantograph provides a very flexible system of suspending luminaires of up to 40kg with ease and precision.

This pantograph incorporates a twin wire rope system for raising and lowering the luminaire cable. The pantograph is dynamically and statically irreversible thanks to its static and dynamic efficiency (<0.5). Important: it is complete with electric reverse control for the up-down movement; it can be operated with a pole or from a distance by console. The pantograph is manufactured in accordance with the DIN 15560-46.



PART NUMBER		
WITH BUSHING 28MM	FF3820Y5T	FF3820Y6T
WITH UNIVERSAL HEAD	FF3820Y51T	FF3820Y61T
Maximum load	40kg (50kg including overload)	40kg (50kg including overload)
Maximum extension	5m	6m
Closed height	0.84m	0.90m
Width	0.57m	0.57m
Self weight	28kg	30kg
Motor	3Ph motor 0,12kw	3Ph motor 0,12kw
Lifting rope	Ø 2mm x 2pcs	Ø 2mm x 2pcs
Lifting speed	6m/min	6m/min
Top and bottom safety	1+1 adjustable switch for max and min position	1+1 adjustable switch for max and min position
Limit safety	1+1 limit switch	1+1 limit switch
Slack wire safety	2 safety switches (1 switch for rope)	2 safety switches (1 switch for rope)
Overload safety	1 safety switch	1 safety switch
Top fixing	28mm (1 1/8") male spigot	28mm (1 1/8") male spigot
Bottom fixing with bushing 28mm	28mm (1 1/8") female socket	28mm (1 1/8") female socket
Bottom fixing with	28F - 16M/F	28F - 16M/F

universal head



MAX DROP 9.4M MAX LOAD 80KG

Manufactured in accordance with the most severe safety regulation DIN 15560-46, the Fusi Lift is the result of IFF innovations in the field of suspension systems. It is definitely a clever product, absolutely unique in its concept. The Fusi Lift is the meeting point between pantographs and hoists, as it combines the movability of the former and the rigidity of the latter. Available in 6 models with loads from 55 to 80kg, this extraordinary product is the result of the patented invention of a special double-scissors system, which operate joined together. Projectors, illuminators and a countless range of loads will then have the most flexible possibility of movement, at the advantage of the set organisation. The Fusi Lift accepts Manfrotto and Avenger clamping systems, as well as being modular with the Top Rail System, and can also be equipped with bars or brackets for the positioning of luminaires, scanners, monitors and others.

maximum drop (B)

	ineigin (A)
	CIUSEU I

Total gear ratio = 100:1 - Angle of slope = $2^{\circ}40'$

Power = 0.55 - 1400rpm kW 3-phase

Slack wire = 2(1 each rope) - 0 verload = 1

1 + 1 adjustable = 1 + 1 limit

Ø 2.5mm x 2 ropes

90mm/sec

	0	

TECHNICAL FEATURES

Average lifting speed

Motor

Lifting ropes

Safety switches

MODELS	Folded A (m)	Max B (m)	Max load (kg)
FF2000Y050	0.54	5.2	80 (100*)
FF2000Y060	0.62	6.2	80 (100*)
FF2000Y070	0.70	7.3	70 (90*)
FF2000Y080	0.78	8.3	70 (90*)
FF2000Y090	0.87	9.4	60 (70*)

* including overload

FUSI LIFT APPLICATION EXAMPLES



Some ideas of the extreme flexibility of the Fusi Lift in lifting any kind of loads, balanced or unbalanced, meeting the requests of the most demanding operators.



TWO LUMINAIRES ON 2M RAIL



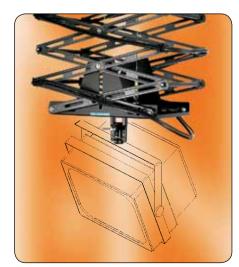
SINGLE ATTACHMENT



VIDEO PROJECTOR



SINGLE LUMINAIRE UNBALANCED



SINGLE ATTACHMENT FOR MONITOR



SINGLE LUMINAIRE

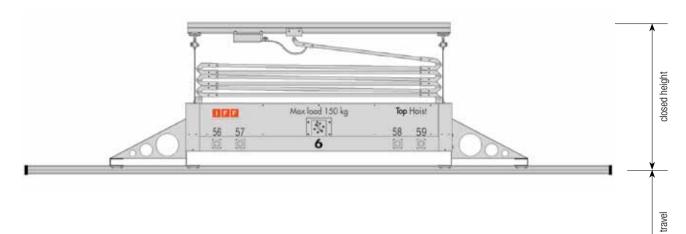


SCANNER









48MM BATTEN PIPE

optional bottom supports



48MM EXTENDABLE BATTEN PIPE optional bottom supports



MAX DROP UP TO 13M MAX LOAD UP TO 160KG

The Top Lift Hoist combines innovative design with the highest standards of construction and ease of installation for payloads up to 160kg.

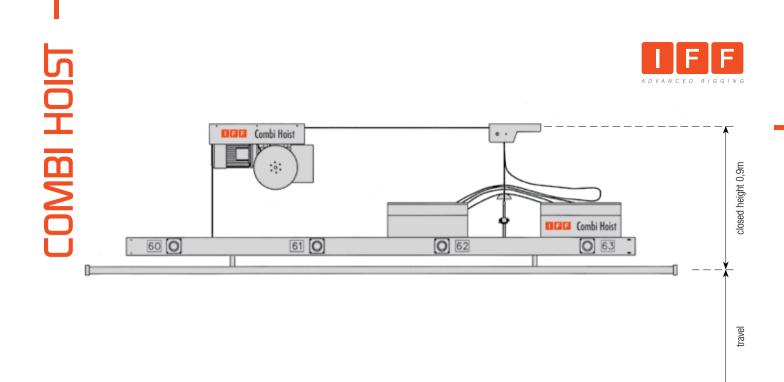
The Top Lift Hoist incorporates the luminaire suspension pipe or rail, the relevant safety switches luminaire power outlet, and a worm geared motor for raising and lowering the unit. To reduce the costs of the site installation and to simplify it, the Hoist is supplied with premounted rail to which the four wire ropes, the flip-flop power cable tray and electrical terminal box are already attached. According to the safety rules DIN 15560-46, our Hoist is provided with all latest safety devices.

TRAVEL ±1%	CLOSED HEIGHT	MAX LOAD without overload	MAX LOAD including overload	WEIGHT*
8m	1.10m	160kg	220kg	130kg ~
9.5m	1.18m	150kg	210kg	133kg ~
11.5m	1.24m	130kg	180kg	136kg ~
13m	1.30m	120kg	160kg	140kg ~

*without lighting system

STANDARD VERSION	FF3905
Attachment for lights	suitable for 2m-4.5m IFF rail or Ø 48mm pipe
Gear motor	total gear ratio 100:1
	angle of slope 3° 06'
	1.5kw three-phase
	max torque 290Nm
	permanent lubrication
Lifting rope	4x4mm diam 1200 kg breaking load/each
Lifting speed (average)	100mm/s
Safety switches	1+1 adjustable for max and min position
	1+1 for limit, 4 for slack wire (one for each rope)
	2 for overload (1 for each balancer)
Flip flop cable guide	aluminium profile 100mmx25mm
Electrical motor feed	flat cable for motor + control 4x2.5sqmm+2x1sqmm
Electrical luminaires feed	flat cable with size according to the sockets
Outlet options	32A IEC309, 16A IEC309, Schuko, DMX, Audio,
	Video or other on request
Terminal box	fitted and with connecting terminals



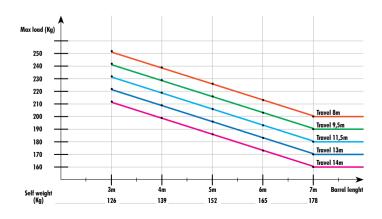


MAX DROP UP TO 14M STANDARD MAX LOAD UP TO 200KG

The Combi Hoist combines a simple design with the highest standards of construction and ease of installation for payloads up to 250kg.

The versatile Combi Hoist offers 2 key advantages; the lighting batten or rail can be customized between 3 to 7 meters in length and the ceiling mounting points can be adjusted to fit the studio structure. This versatility along with the price performance ratio for the hoist makes it a most valuable performer.

The Combi Hoist employs one motor with dual cable lifting drums and two diverter pulleys. The hoist has 4 wire rope lifting cables and complies with the European safety regulations DIN 15560-46



TECHNICAL FEATURES STANDARD VERSION

STANDARD VERSION	FF3907
Attachment for lights	suitable for 3m-7m IFF rail or Ø 48mm pipe
Gear motor	total gear ratio 100:1
	angle of slope 3° 06'
	1.5kw three-phase
	max torque 290Nm
	permanent lubrication
Lifting rope	4x4mm diam 1200 kg breaking load/each
Lifting speed (average)	100mm/s
Safety switches	1+1 adjustable for max and min position
	1+1 for limit,
	4 for slack wire (one for each rope)
	2 for overload (1 for each balancer)
Electrical motor feed	cable for motor + control
	4x2.5sqmm + 2x1sqmm
Electrical luminaires feed	flat cable with size according to the sockets
Outlet options	32A IEC309, 16A IEC309, Schuko, DMX, Audio,
	Video or other on request
Terminal box	fitted and with connecting terminals







MAX DROP UP TO 14M MAX LOAD UP TO 200KG

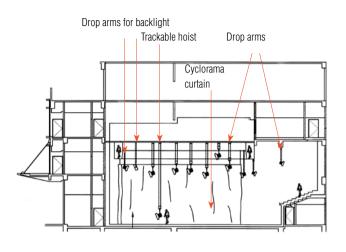


The Scenery Hoist combines innovative design with the highest standards of construction and ease of installation for payloads up to 200kg.

It is ideal for suspending scenery flats, curtains, lighting, speakers and a whole list more. It can be suspended by a hook, placed on a grid, on a manual carriage for IFF rail or IPE beam, on a motorized carriage for rail. The Scenery Hoist is manufactured in accordance with the DIN 15560-46.

TECHNICAL FEATURES	FF3927
Maximum load/ext.	200kg at 12m / 160kg at 14m
Hoist construction	L0,32mxW0,51mxH0,69m
Self weight motor unit	87kg
Counterweight hook	23kg
Gear motor	angle of slope 3°06'
	1.5kw three-phase
	max torque 290Nm
	permanent lubrication
Lifting rope	Ø 4mm x 2
	breaking load 1200kg
Lifting speed (average)	100mm/s
Top and bottom safety	1+1 adjustable switch
	for max and min position
Limit safety	1+1 limit switch
Slack wire safety	2 safety switches
	(1 switch for rope)
Overload safety	1 safety switches





IFF's experienced team is ready to help you through the entire process of outfitting your studio.

We will assist you with all aspects of design, budgeting, installation, operation and maintenance. From the preliminary on site consultation to the studio suspension layout, this service is totally free of charge. We will draw up your suspension requirements with the aid of CAD and 3-D Design software and give you an exact listing of all the necessary parts (telescopic hangers, rail components, motorized pantographs, hoists and all accessories).

Our team knows the value of careful planning and is able to avoid many of the costly pitfalls that poorly coordinated installations face. These detailed drawings will allow installation crews to work in conjunction with electrical, ventilating and cooling contractors cutting expenses, installation time and most importantly saving you from unnecessary problems.

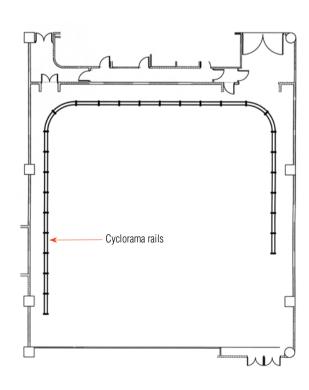
PLANNING A TV STUDIO

Step 1: The following information must be determined prior to starting the detailed planning stage:

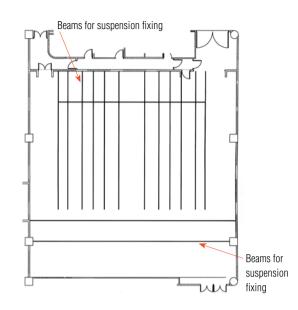
- A) Budget
- B) Type of production planned in the studio
- C) Studio dimensions



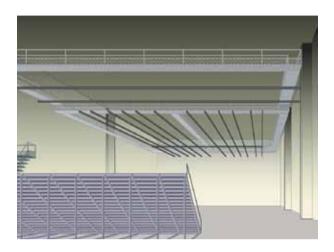
Step 2: Cyclorama System (if required) The position and height will determine the lighting production operational parameters to plan the lighting and scenery suspension.



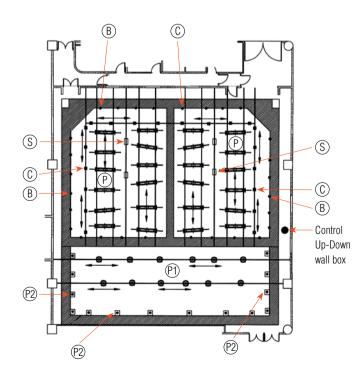


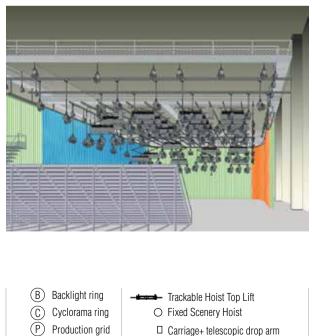


Step 3: Ceiling support structure, positioning of support rails and fixing points must be planned taking into account the existing ceiling structure, ventilation systems and what the intended use of the studio is for.



Step 4: Select appropriate suspension system. IFF will guide you to the most appropriate and cost effective solution, from their comprehensive range of suspension which includes Rail Systems, Pantographs and Hoists.





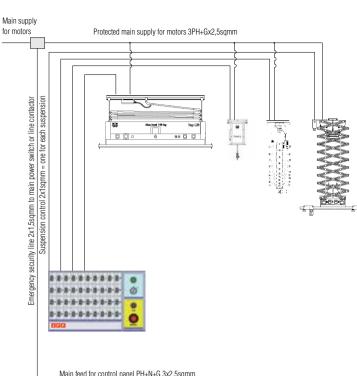
- Grip mounting+ telescopic drop arm
- S
 Production grid

 (P1)
 (P2)

 Audience area







How to choose a control panel.

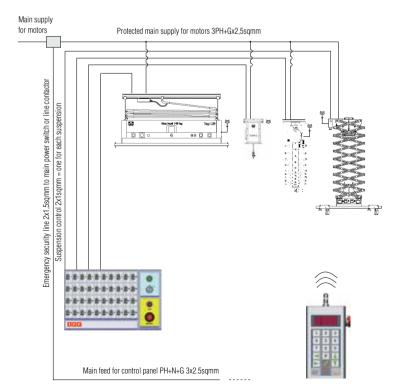
Thanks to the experience gained in TV studios all over the world, IFF has developed a wide range of suspension control panels, which offer the perfect solution of money and performance to any positioning requirements.

SM CONTROL

In the whole control panels range, it is the simplest and most inexpensive version for the positioning of suspensions in small and medium studios. Each button directly controls one suspension, so that it is not possible to either move or memorise pre-defined suspension groups.

This control panel is ideal for low budget productions or where there is a low frequency of studio re-setting.

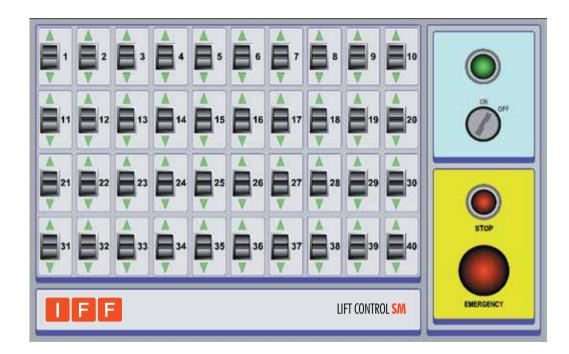
As an option you can combine this panel with the radio remote control RC2000.



RC2000 CONTROL

The RC2000 wireless remote control has been designed to satisfy requirements of flexibility and mobility in TV studios, but with particular attention to low budget projects. The economic advantage and technical performances, such as groups creation and memorisation, make of it the most profitable solution for studios up to 50 units. Designed to work in combination with the pole operating control or with the SM control, the RC 2000 is the ideal solution for studios which cannot bear the cost of models such as the PSM or the CSM, but at the same time do not want to renounce to speed and functional capacity of the most advanced control panels.





This is the most inexpensive and simple solution, for studios with 30-40 suspensions but, if required, also for higher quantity. The wall control box is placed in the studio to permit to carry out operations at sight. From the outside you can see a magneto-thermal main switch with light, an emergency pushbutton with light, a key-switch with light and the up-down switches to move the suspensions.



The system is composed of a radio transmitter and several receivers, one for each unit. It works on 433Mhz frequency. Therefore, in order to avoid interference, the firmware is processed with its own codes. All the receivers will automatically deactivate after a few seconds from the extinction of the transmitter. This to avoid the risk of having some machines on when the transmitter is off; if the receivers do not get any signal for a few seconds, they automatically switch off.

The receiver is composed of a RF part (homologated in accordance with the BST G130 and 938J specifications), a decoding part and a power one.

The power part sends microprocessor information to the motors and provides the lighting of the selection led.

A keyboard is on the front panel: 0-9 buttons, one clear button, four buttons for up, down, left and right controls. The transmitter can control from 1 to 8 machines simultaneously (this value is factory set on users specifications).

The number of desired machines will be digitised on the keyboard by the operator: it will be indicated on the display, then the enter button will be pressed. On the selected machine a led will light up to indicate that the machine is ready. In case the simultaneous control function of more than one machine is to be activated (max 8) the same procedure must be followed: digit the number of another machine, then press enter and so on. Once the selection is completed, press one of the up, down, left, right controls to move simultaneously all the selected machines.

The transmitter part is certified in accordance with BZT G130 and 939J specifications.

The transmitter is fed with rechargeable battery with external battery charger (supplied) and it is provided with a low battery indicator.



RADIO RECEIVER CARD

Whilst every effort has been made to ensure that the information contained in this catalogue is correct, COSMOLIGHT accepts no liability for errors and omissions. Technical specifications and data are provided for guidance only. Due to improvement in technology and/ or in products, we reserve the right to modify technical specifications, data, design and construction at any time and without prior notice. Pictures in this catalogue are not to scale. For technical reasons colour of products can differ from colour shown in this catalogue. COSMOLIGHT does not accept liability for improper or incorrect use of its products. All rights are strictly reserved.



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