

FPB/C.

20th April,..... 6.

SPECIFICATION OF LIGHT CONSOLE
BASED ON THE INSTALLATION
AT
GAUMONT PALACE, CHELSEA, S.W.

For the purpose of this price, it is assumed that the stage will be equipped in the same way as at Gaumont Palace, Chelsea, the only difference between the number of circuits controlled lies in the addition of eight special Re-actance Dips. These are installed as a substitute for the orthodox Special Effects Terminals on either side of the stage, as it is obviously contrary to the nature of the Console that any additional portable switchboards shall be used. It is expected that on a stage of this size these extra eight - 6.k.w. dips will cope with any temporary lighting arrangements, over and above the usual stage dip load.

In designing the Console, special attention has been paid to the fact that in a Cinema great publicity value lies in featuring this instrument. Therefore, provision has been made for certain apparatus which would not normally be required in the legitimate theatre, but which will be invaluable in the playing of lighting scenes, or the accompaniment of hot rhythm etc.

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In this description we are assuming that our brochure has been ready and therefore the reader is familiar with the general nature and methods of operation of this apparatus.

The Console itself will be similar in size to the organ console installed in The Dominion Theatre, Tottenham Court Road, W., and will contain three key-boards, each of twenty-eight double touch coloured keys, and nine double touch black keys. These keys will give, reading from right to left, groups of four (one per colour):-

Full-on.	First Touch, Momentary.
	Second " Sustained.
Fifth Speed.	First Touch, Raise.
	Second " Lower.
Fourth Speed.	First Touch, Raise.
	Second " Lower.
Third Speed.	First Touch, Raise.
	Second " Lower.
Second Speed.	First Touch, Raise.
	Second " Lower.
First Speed.	First Touch, Raise.
	Second " Lower.
Blackout.	First Touch, Momentary.
	Second " Sustained.

There will be no pedal keyboard, although certain pedal pistons, and balanced pedals for sustaining actions on the keys are provided.

The stop key lay-out and general accessories are as under:-

STOP KEY SCHEDULE.

Stops of each Manual will be grouped in their colours, and will be fitted with second touch cancel so that on pressing any stop key to second touch, the remainder of ^{the stops of} that colour on that manual will spring to off.

MANUAL I. (BOTTOM KEYBOARD).

1. Footlight.	Centre.	White.
2. "	"	Red.
3. "	"	Blue.

4.	Footlight.	Centre.	Green.
5.	Footlight Flood.		Red.
6.	" "		Blue.
7.	" "		Green.
8.	Batten 1.		White.
9.	"		Red.
10.	"		Blue.
11.	"		Green.
12.	Batten 2.		White.
13.	"		Red.
14.	"		Blue.
15.	"		Green.
16.	Roxy Flood.		White.
17.	"		Red.
18.	"		Blue.
19.	"		Green.
20.	Batten 3.	Centre.	White.
21.	"	"	Red.
22.	"	"	Blue.
23.	"	"	Green.
24.	Special Effects Dips P.		White.
25.	"		Red.
26.	"		Blue.
27.	"		Green.

MANUAL II.

1.	Float.	Ends.	White.
2.	"	"	Red.
3.	"	"	Blue.
4.	"	"	Green.
5.	Dips 1.		White.
6.	"		Red.
7.	"		Blue.
8.	"		Green.

9.	Dips 2.		White.
10.	"		Red.
11.	"		Blue.
12.	"		Green.
13.	Dips 3.		White.
14.	"		Red.
15.	"		Blue.
16.	"		Green.
17.	Dips 4.		White.
18.	"		Red.
19.	"		Blue.
20.	"		Green.
21.	Batten 3.	Ends.	White.
22.	"	"	Red.
23.	"	"	Blue.
24.	"	"	Green.
25.	Special Effects Dips.	<i>O.P.</i>	White.
26.	"		Red.
27.	"		Blue.
28.	"		Green.

MANUAL III. (TOP KEYBOARD).

Mostly duplexing stops on Manuals I & II.

1.	Circle Spots, 1, 3 & 5.		White.
2.	" " 2, 4 & 6.		White.
3.	Batten 1. Acting Areas 1.		White.
4.	" " 2.		Red.
5.	" " 3.		Blue.
6.	" " 4.		Green.
7.	Batten 2. Acting Areas 1.		White.
8.	" " 2.		Red.
9.	" " 3.		Blue.
10.	" " 4.		Green.
11.	Fly Plug P.1.		
12.	" P.2.		

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13.	Fly Plug.	P.3.		
14.	"	O.P.1.		
15.	"	O.P.2.		
16.	"	O.P.3.		
17.	Batten 1.			White.
18.	"		} Duplexed from Manual 1.	Red.
19.	"			Blue.
20.	"			Green.
21.	Batten 2.			White.
22.	"			Red.
23.	"			Blue.
24.	"			Green.
25.	Dips 2.		} Duplexed from Manual 2.	White.
26.	"			Red.
27.	"			Blue.
28.	"			Green.
29.	Dips 4.			White.
30.	"			Red.
31.	"			Blue.
32.	"			Green.

MISCELLANEOUS STOP KEYS.

Sustainers.	1.	Manual I.		White.
"	2.	"		Red.
"	3.	"		Blue.
"	4.	"		Green.
"	5.	Manual II.		White.
"	6.	"		Red.
"	7.	"		Blue.
"	8.	"		Green.
"	9.	" III.		White.
"	10.	"		Red.
"	11.	"		Blue.
"	12.	"		Green.

- Batten 1. White. (Centre
(Ends.
- 2 Red. (Centre
(Ends.
- " Blue. (Centre
(Ends.
- " Green. (Centre.
(Ends.
- Batten 2. White. (Centre.
(Ends.
- " Red. (Centre.
(Ends.
- " Blue. (Centre.
(Ends.
- " Green. (Centre.
(Ends.

"Stage Pilots Off."

"Dead Blackout" to control entire installation (including magnetic blackout shutters on front of house, ^{arc spots} if fitted).

"Trailer Dimmers" On Float and Batten 1.

COUPLERS.

Manual II to I.

Manual III to I.

Manual III to II.

Manual I to Pedal

Manual II to Pedal.

Manual III to Pedal.

(These Stop Keys will be situated with stops of the Manual they augment).

THUMB PISTONS (PRESETS). Push Buttons situated in keyslips under keyboards.

Manual I. Eight "Adjustable Combinations," Single touch.
 One, "Circuits in Use" Combination, Single Touch.
 "Cancel."

"Circuits in Use" affecting all three Manuals, second touch adds II to I, and III to I.

Manual II. Eight, "Adjustable Combinations," Single Touch.
 One, "Circuits in Use" Combination.
 "Cancel."

Manual II (Contd). "Manual III to II." "On and Off".

Manual III. Eight, "Adjustable Combinations" (Single Touch).
One, "Circuits in Use" Combination (Single Touch).
"Cancel."

"General Piston" Couplers Off. (*affecting all Manuals*)

Setter Piston (With Lock). All adjustable pistons (Presets) may be set without leaving the console seat, by means of a setter piston in accordance with the latest Organ practice.

Pedals. Four Balanced Pedals (one per colour for sustaining) speed keys).

One Balanced Crescendo Pedal for Down Stage lighting (acting on F.O.H.Spots, Float, Battens and Dips).

One Balanced Crescendo Pedal for Up Stage lighting (Acting on Battens and Dips).

} With
} Indi-
} cators

Toe Pistons. Four Pedal Reverses "On and Off" with indicators.
Six Adjustable Pedal Combination Pistons (two for each manual).

Manual I. Sustainers Off.

Manual II. " "

Manual III. " "

Master. " "

Cancellors Off.

General Dim.

Spare pushes will be provided for Auditorium Decorative Lighting Dimmer Control, Curtain Controls and Signal Buzzers.

Sixteen dials for Position Indication will be fitted.

Space will be left for controls in connection with Loud Speaking Telephones from Console to Stage Manager's Corner, Front of House Arc Spot Box, etc.

RELAYS.

From the Console a flexible cable will run to Relay

Bank in dimmer room. (This room should be situated in some position convenient to keep cost of high voltage wiring down to a minimum).

Relays will be mounted in easily accessible dust proof cupboard, adjacent to the Main Dimmer Bank and Contactor Panel.

ACTION.

The action is all electric 15 volt and will be supplied from a suitable Motor Generator Set, which will be started from the Console and supplied in the General Contract.

PRELIMINARY SPECIFICATION OF DIMMER BANK.

GENERAL FRAMEWORK.

The dimmers will be mounted on an angle iron frame, and will be driven by a continuously revolving shaft. The shaft will be operated by an electric motor with a standby. The dimmers will be connected by means of 15 volt D.C. pairs of magnetic clutches to be driven in either direction (i.e. raise and lower). Dimmers will be of the "SUNSET" Element type, which have proved the most successful for this type of work, and will be fitted with 100 contacts. Working in conjunction with the magnetic clutches will be the special speed control, which will enable the clutches to travel in different directions either at the same or different speeds. Spring mercury limit switches will be provided to each end of travel of the clutch, as a safeguard. Each dimmer will be fitted with a Potentiometer Resistance working in conjunction with the dimmer arm, on the 15 volt supply, to give indication, in conjunction with the instruments on the Console, of the position of each dimmer. In addition to the dimmers there will be eight special timing switches, associated with the position controls (black notes).

SCHEDULE OF DIMMER LOADINGS.

WHITE.

Footlight.	Centre & Ends.	2140 w. (Plus or minus 1/3rd
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WHITE (CONTINUED).

Batten 1.	Centre & Ends.	2025 w.	(Plus or minus 1/3rd).
Batten 2.	" "	2025 w.	" "
Batten 3.	Centre.	3000 w.	
Batten 3.	Ends.	4000 w.	
Dips. 1.		1500 w.	(Plus or minus 1/3rd).
" 2.		1500 w.	" "
" 3.		1500 w.	" "
" 4.		1500 w.	" "
Roxy Flood.		1000 w.	

BLUE.

Footlight.	Centre & Ends.	2140 w.	(Plus or minus 1/3rd).
"	Flood.	500 w.	
Batten 1.		2025 w.	(Plus or minus 1/3rd).
" 2.		2025 w.	" "
" 3.	Centre.	3000 w.	
" 3.	Ends.	4000 w.	
Dips. 1.		1500 w.	(Plus or minus 1/3rd).
" 2.		1500 w.	" "
" 3.		1500 w.	" "
" 4.		1500 w.	" "
Roxy Flood.		1000 w.	

GREEN.

Footlight.	Centre & Ends.	1915 w.	(Plus or minus 1/3rd)
"	Flood.	500 w.	
Batten 1.	Centre & Ends.	2025 w.	(Plus or minus 1/3rd)
" 2.	Centre & Ends.	2025 w.	" "
" 3.	Centre.	3000 w.	
" 3.	Ends.	4000 w.	
Dips. 1.		1500 w.	(Plus or minus 1/3rd)
" 2.		1500 w.	" "
" 3.		1500 w.	" "
" 4.		1500 w.	" "
Roxy Flood.		1000 w.	

RED.

Footlight.	Centre & Ends.	1915 w.	(Plus or minus 1/3rd)
"	Flood.	500 w.	
Batten 1.	Centre & Ends.	2025 w.	(Plus or minus 1/3rd)
" 2.	" "	2025 w.	" "
Batten 3.	Centre.	3000 w.	
" 3.	Ends.	4000 w.	
Dips. 1.		1500 w.	(Plus or minus 1/3rd)
" 2.		1500 w.	" "
" 3.		1500 w.	" "
" 4.		1500 w.	" "
Roxy Flood.		1000 w.	

INDEPENDENTS.

Fly Plug. P.1.		1500 w.	(Plus or minus 1/3rd)
" " P.2.		1500 w.	" "
" " P.3.		1500 w.	" "
" " O.P.1.		1500 w.	" "
" " O.P.2.		1500 w.	" "
" " O.P.3.		1500 w.	" "
Circle Spots, 1, 3 & 5.		3000 w.	
" " 2, 4 & 6.		3000 w.	
Batten 1. Act. Area 1, 2,3, 4.		4/1000 w.	
" " " 1, 2,3, 4.		4/1000 w.	

SPECIAL EFFECTS P.

FOUR. Reactance dimmers of a capacity of up to 6.k.w. each.

SPECIAL EFFECTS O.P.

FOUR. Reactance dimmers as above.

SPECIAL CONTACTORS.

6-way, Change Over, Footlight and No. 1. Batten to trailer dimmers.

CONTACTOR BOARD.

Inter-connected with the dimmer bank will be a Contactor Bank, carrying for each circuit a normally closed, magnetically

opened contactor and a normally opened magnetically closed contactor. By this means circuits may be switched on irrespective of the position of the dimmer, or circuits may be blacked out, irrespective of the position of the dimmer. The operating coils for these contactors will be wound for 15 volt. D.C. current.

MOTOR GENERATOR.

A Motor Generator Set will be supplied to give sufficient output at 15 volts D.C. to meet with the requirements of the "action". A further small 50 volt Generator will also be provided, as part of the speed control.

GENERAL REMARKS.

The whole job will be balanced over 230 volts 3-phase. Circuit fuses and necessary low voltage protection will also be provided.

PRICE.

Including installation and supply of all apparatus as specification above, supply of low voltage wiring and high voltage internal wiring of dimmers and contactors.

.....£

Stand-by Battery, with Battery Charging Panel if required.

.....£

OPERATION.

.. Contract price includes for maintenance for one year after installation. Also the provision of fully qualified operator to work Console for rehearsals and for one month after inaugural performance. Special arrangements will be made for preliminary training of your operator (if considered suitable) on the Console already installed in our demonstration theatre, and subsequent instruction on the actual console when installed. Alternatively, we are prepared to put forward a suitable man. Furthermore, the services of Mr. Bentham (the inventor) will be loaned from time to time for special performances, where it may be desired to feature the console in a lighting scena or solo.