CCT theatre lighting

6	Assign	Master									X1	F%
0	Stage X1	Preset		Fader	%						X2	%

ster	1	2	3	4	5	6	7	8	9	10	11	12
eset	100	101	102	103		106						
ne	1.5	30				12						
der	33	56	12	5		77						

ster	13	14	15	16	17	18	19	20	21	22	23	24
eset	1	2	3	4	5	6		C 1				T 1
ne	0.1	0.2	0.1	0.5	1.0	0.1						
der					82			82				

q	Prs	Out(Del)In	Auto Jump	Masters
6	6			
1	1			
2	2	1.2	1.6	
3	3		5.2	
4	4		8?	
5	5	1.2<2.1	1.5	
6	6			

AVAB 202

Choose the right 202 for your application:
48, 96, 120, 192 or 240 control channels

The best of all worlds: AVAB 202
The inexpensive solution to practically any problem in lighting control

AVAB's lighting revolution continues with one of the most powerful computer lightboards ever available for theatres and television studios regardless of price: AVAB 202. Never before has so much lighting control flexibility been squeezed into such a small package. And never before has such an attractive package had an equally attractive price: a combination that is exceedingly hard to beat.

Hands-on control of every feature
The 202 uniquely combines the reassuring "hands-on"-feeling of a manual lightboard with all the refinements only a computer lightboard can offer. The faders can be used to set individual channel levels or to master entire presets. With the split crossfader crossfades can be executed manually. Fade times can be modified with the "joystick". There is fingertip access to every aspect of the lighting program.

The 202 seriously challenges much larger and more expensive lightboards by offering well thought-out features in compact form at an affordable price. Virtually all programming functions can be combined with no practical limitations. Flash a light organ effect, for instance, or set up a conditional loop in the sequence of presets which in themselves contain chase programs. Override the sequence of presets, master critical channels or make last-minute corrections during playback. In short, however intricate the production, whatever the challenge, the 202 ensures trouble-free lighting control.

Powerful means versatile
AVAB has designed the 202 as an extremely versatile control system with enough software capability to handle any lighting situation. The special effects so important to stage performances complement the submastering functions which are indispensable to television lighting. Even though one type of production, more than the other, may utilize certain portions of the software, the 202 makes them all accessible in one interactive package. Even that 'once-a-year' effect that used to mean extra peripheral devices is no problem for the 202.

Here are some highlights of the standard operational program:

fast channel selection, by either fader or numerical entry on the keypad via the "CHANNEL +", "CHANNEL -" and "THRU" functions

switchable channel/submaster faders which can be used to build time groups for up to 24 fades-within-fades

individual delays and fade times for all 24 channel/submaster faders

10 programmable chase effects

10 programmable light organ effects

a choice of sequences for preset playback in either numerical or random order

automatic crossfading and sequential loops

subroutines in the playback sequence for preset loops, which can be switched on and off manually or by prerecorded times

immediate control of every aspect of playback with "GO", "STOP" and "INVERT" crossfading functions

a special "GO" function to start the next crossfade before the current one is complete

the joystick "accelerator/brake" with unprecedented control accuracy of every fade time, including time groups, delays and automatic crossfades

remote triggering of crossfader and submaster fades via external hand or foot switch

advanced channel tracking functions to allow the location of selected channels in recorded presets or on the submasters and crossfader

quick and easy access to previously unused channels or presets

integrated 3.5-inch floppy disk drive with convenient storage compartment for library diskettes

input-output ports for: video, light organ, printer, external triggering, infrared remote control and digital multiplex control

Powerful means integrated
The 202 does away with the extra peripheral devices which have often been needed for special effects by including 10 chase sequences and 10 light organ configurations in the operational program. What is even more important is that any effect can be recorded, from sequence loops to automatic submaster assignments, as part of the playback sequence, so that even the most complex chains of lighting events can be started by pressing a single key.

In this way the 202 overcomes operator fatigue which sets in when too many functions have to be executed by an explicit physical action. Fade times, special effects, even the loading of new presets from diskette all become implicit events during playback. The operator can concentrate on making any necessary corrections during the performance rather than on just making things happen in the first place!

Powerful means dynamic
The 202 uses dynamic memory organization to pack a maximum of information into the battery-buffered CMOS memory. When recording the lighting program the monitor displays the amount of memory space remaining. The show goes on even when the memory is full. Since all recorded presets can be stored on a 3.5-inch floppy disk, a special read-from-disk command can be recorded as part of the playback sequence. The 202 then fetches additional presets or effects from floppy automatically as needed, thus extending the playback sequence and offering virtually unlimited memory capacity. No other lightboard has succeeded in integrating this useful function so effortlessly in the lighting program.

```
V16  Assign    Master                                    X1  F%
120  Stage X1  Preset   Fader    %                       X2_ %
Master  1     2     3     4     5     6    7   8   9   10  11  12
Preset  100   101   102   103         106
Time    1.5   30                      12
Fader   33    56    12    5           77

Master  13    14    15    16    17    18   19  20  21  22  23  24
Preset  1     2     3     4     5     6        C 1            T 1
Time    0.1   0.2   0.1   0.5   1.0   0.1
Fader                     82                82

Seq Prs Out(Del)In  Auto Jump   Masters
6   6

1   1
2   2 1.2     1.6
3   3     5.2
4   4              A3.0
5   5 1.2(2.1 1.6
6   6

Page # 1                Time Fader              Memory: 100%
```

The first video display page shows all the information that is important during performance: a heading outlining the general parameters of the lightboard's status, the presets assigned to the submasters, along with their fade times, the playback sequence of events, including delays, fade times and special effects.


```
V16  Assign    Channel                                   X1  F%
120  Field X1  Preset   Fader    %                       X2  %
Channel
   1    2    3    4    5    6      7    8    9   10   11   12
  )38  )18  )  9  3   )53 )75    )38      )31 )49  )78  )24
  13   14   15   16   17   18     19   20   21   22   23   24
            )73               )38        )         )        )21
  25   26   27   28   29   30     31   32   33   34   35   36
                                                           66
  37   38   39   40   41   42     43   44   45   46   47   48
            60          6    6     6        61   69
  43   50   51   52   53   54     55   56   57   58   59   60
   6    6    6    6
  61   52   63   64   65   66     67   68   69   70   71   72
            6
  73   74   75   76   77   78     79   80   81   82   83   84
  85   86   87   88   89   90     91   92   93   94   95   96
                        24        24   24
  57   98   99  100  101  102    103  104  105  106  107  108
 109  110  111  112  113  114    115  116  117  118  119  120

Page # 2                Channel  43 Level  6            Memory: 100%
```

Channel level information: the channels under direct control of the 24 faders (highlighted on a yellow background) and the channels under control of the joystick (levels highlighted on a green background).


```
V16  Assign    Channel                                   X1  F%
120  Field X1  Preset   Fader    %                       X2  %
Chase
 1: 13= 1(0.1) 14= 2(0.1) 15= 3(0.1) 16= 4(0.1) 17= 5(0.1) 18= 6(0.1)
 2:
 3:
 4:
 5:
 6: 1=100(1.5)  2=101(2.0)  4=103(4.0)  3=102(0.2)
 7:
 8:
 9:
10:

Page # 4                Time Fader                      Memory: 100%
```

Programmed chase effects: for each of the 10 effects the faders, presets and times involved.
A similar page is reserved for light organ effects.

Powerful means digital

AVAB is taking full advantage of the benefits digital technology offers to stage and studio lighting. These benefits are evident both in advanced software for AVAB lightboards and in new dimmer developments.

The 202 is designed to communicate directly with AVAB digital dimmers. The control signal is digital multiplex, with the emphasis on "digital". The reliability and, above all, speed of this form of data transmission is superior to all others. The importance of speed becomes apparent if the lightboard has to handle chase or light organ effects, while maintaining a smooth crossfade.

The 202 goes all the way to eliminate the problem of speed, along with the additional one of external interference with control information to the dimmers. The superior digital multiplex solution makes the connection between lightbord and dimmers impervios to outside influences.

Even when interfaced to almost any of the standard analog dimmers on the market, the 202's digital multiplex output has the advantage of keeping the cabling simple by allowing remote positioning of the AVAB demultiplexer. A single digital cable is all that is needed to transmit the lighting program from the 202 to the demultiplexer, which converts the digital information into one of several selectable analog control voltages.

Powerful means efficient

The 202 has done away with long chains of commands to execute rudimentary programming routines. Press a key and the corresponding function is executed immediately or enter a number and define it with a functions key. It couldn't be simpler. Even more complex operations, such as programming chase effects, can be reduced to this concise method of data entry. Creating the lighting program is quicker and easier allowing adjustments during the performance with a minimum of effort.

Information succinctly and legibly displayed: the 202 Monitor

AVAB has paid careful attention to the design of the color video display. A wealth of informaton can be more distracting than useful if it is difficult to read. Nine different easy-to-read "pages" keep the screen uncluttered and offer the operator exactly the information he wants to know when he needs to know it. In addition, the 202 uses built-in LED's and numerical displays to put the most important information, such as the numbers of the presets involved in a crossfade, right at the operator's fingertips.

All things considered, the 202 represents a significant development in practical, versatile and affordable lighting control. AVAB has spared no effort to bring you all the features you want, no matter how complex your program happens to be. The AVAB 202 gives you the best of all worlds: the "hands on"-precision of manual control combined with the power of computer-controlled operations, the quick access of 24 channel/submaster faders augmenting a full range of special effects.

And probably the most attractive feature of all is the price.
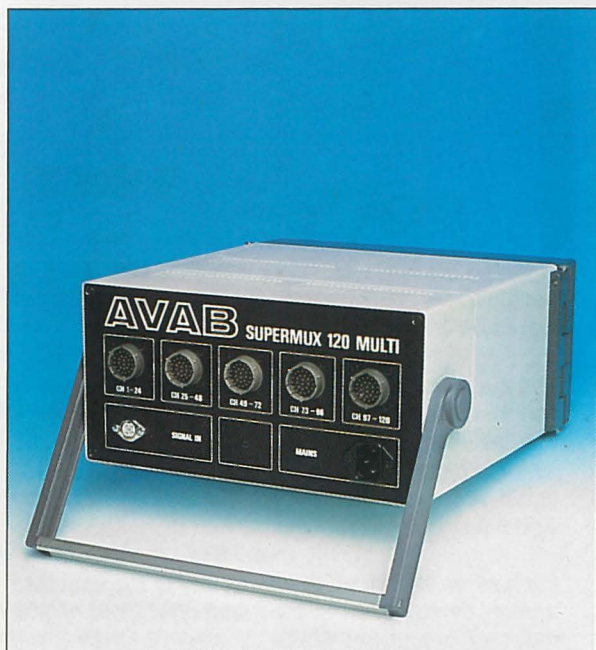
The AVAB demultiplexer converts the digital multiplex signals from the 202 into analog control voltages. AVAB makes demultiplexers for every application: for permanent installations, where the unit can be placed in close proximity to the dimmers, or for portable use, where it is completely self-contained with all necessary input/output ports. The control voltage can be adjusted internally to interface with most analog dimmers on the market.
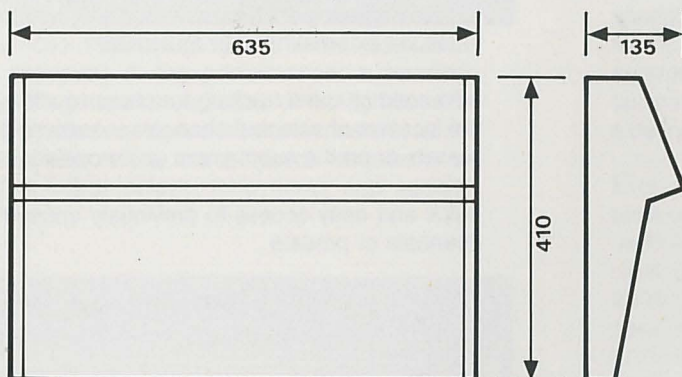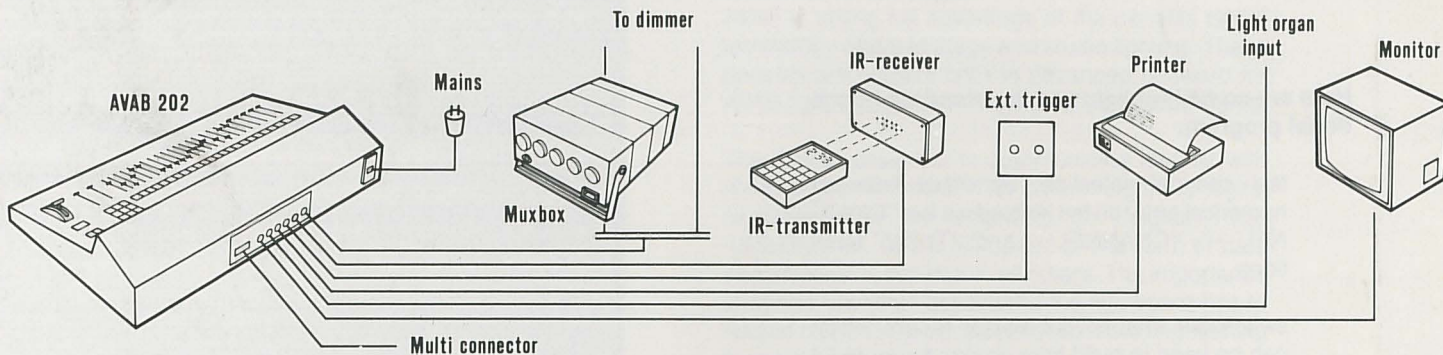

AVAB has made the popular infrared remote control an integral part of all of its computer-controlled lighting systems. This handy peripheral consists of wireless transmitter and receiver which is connected to the 202 via cable. To provide adequate coverage of extremely large areas, several receivers can be wired in parallel. The IR transmitter allows access to most of the features of the 202 from anywhere in the theatre or TV-studio: channel levels can be set, presets recorded, crossfades executed, thus extending the useful operating range of the 202 well beyond the confines of the lighting control room.

The external memory of the 202 is the new standard 3.5-inch floppy disk drive. Not only does the floppy disk drive provide library storage for all your lighting programs, but also extends the usable memory of the 202 during performance. A read-from-disk command, namely, accesses information on the diskette automatically as it is needed, thereby increasing the capacity of the 202 to provide as much memory as is required.
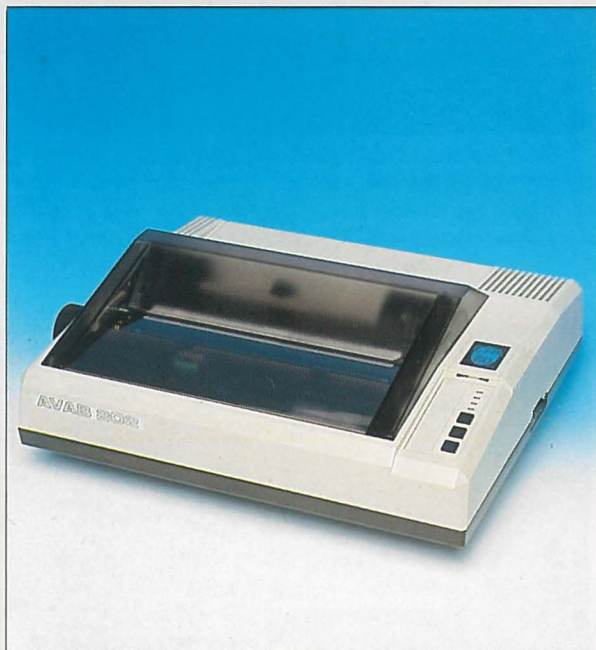
The 202 can be connected to just about any printer with an RS 232 serial interface. The printer provides a complete written record of every performance, with preset information, playback sequence, delays and fade times and all special effects.

Mains

To dimmer

AVAB 202

Muxbox

IR-receiver

IR-transmitter

Ext. trigger

Printer

Light organ input

Monitor

Multi connector

Dimensions

635

135

410

MECHANICAL DATA:

Width: 635 mm (25 inches)
Depth: 410 mm (16 inches)
Height: 135 mm (5.5 inches)
Weight: approx. 7 kg (15 lbs.)

ELECTRICAL DATA:

Mains power:
180–270 V, 50/60 Hz, 40 VA or
95–135 V, 50/60 Hz, 40 VA
internally switchable

Video signal:
B/W, 16 MHz
COLOR RGB + sync, 16 MHz

Light organ input:
Impedance: 100 kΩ
Input level for full excursion: 30 mV

Printer output:
1200 Baud, serial digital

Control signal output:
153.6 kBaud, serial

ELECTRONIC DATA

Accuracy:
Recorded values: 8 bits
Monitor: 1%
Crossfade: 16 bits
Output: 8 bits

Computer:
Program memory: 32 Kbytes
Information memory: 24 Kbytes

External memory:
3.5-inch floppy disk,
80-track, single-sided

Powerfail restart:
Instantaneous

AVAB ELEKTRONIK AB