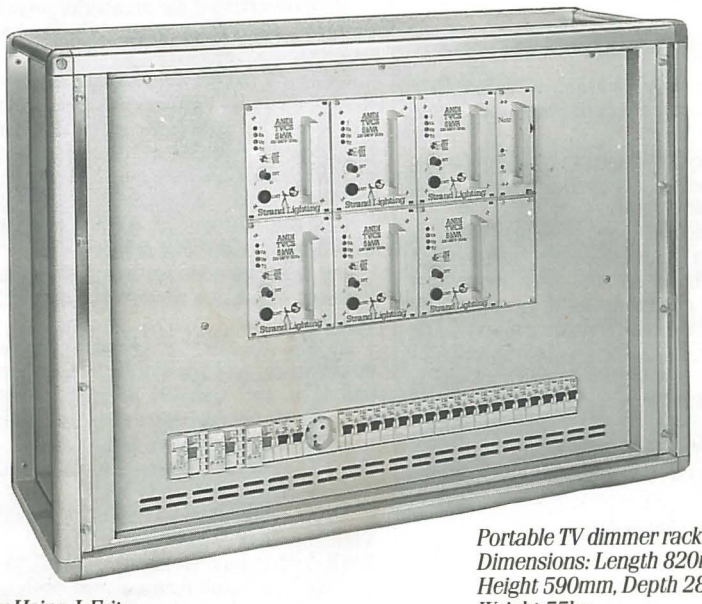
A Uniquely High Quality Portable Dimmer Rack from Strand, Germany



Portable TV dimmer rack 6 x 5kVA Dimensions: Length 820mm, Height 590mm, Depth 280mm, Weight 55kg.

by Heinz J. Fritz

When I joined Strand in 1963, which now seems a little while ago, my first task was to accompany G. T. Wood – better known around the world as Woody – on a tour through Europe with the latest invention of the Strand Electric & Engineering Company, a portable TV dimmer rack.

It was at that time that I met Ludwig Pani in Austria and old man Eichenberger in Zürich, who unfortunately are no longer with us, but whose companies are still Strand agents.

The rack was fitted with 3 SCR (silicon controlled rectifier) dimmers now known as Thyristor dimmers and the design was taking technology a big step ahead. Strand was at that time still commonly using resistance dimmers, which offered remote facilities by means of a pair of magnetic clutches from a common uni-directional shaft powered by a variable speed motor.

The transformer dimmers which followed never seem to have really taken off the ground, although in Germany magnetic amplifier dimmers became the fashion and have proved a very reliable dimming source.

Beautifully built control systems were offered with this electro-mechanical dimmer technology consisting of banks of presets with grouping facilities like the Lightset consoles, but this is not really the subject of this article.

The SCR dimmers were equipped with heavy chokes for filtering, restricting the portable dimmer rack to three units, as otherwise the American understanding for portable as "transportable" would have been more precise.

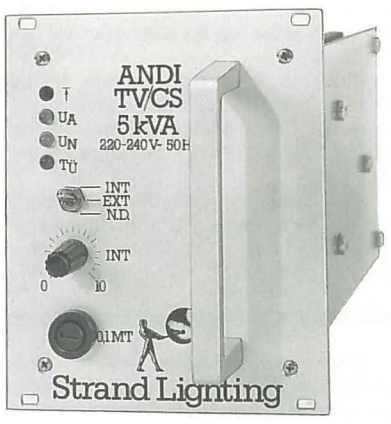
The new dimmer found great interest in Germany, Austria and Switzerland and started endless discussions on noise and interference, as the technology was not known and practical experience not yet existing.

To honour history it is probably worthwhile to mention that Woody had invented a dimmer based on the Thyratron valve before, a principle which AEG in Germany favoured for quite some time, but again this development has shown no real future and was thus discontinued.

The first installation of SCR dimmers in Europe to my knowledge went into a studio in Cologne. 120 dimmers were installed and controlled by a Strand Lightscene system.

The dimmers worked to customers' satisfaction, although I remember that mains filters had to be installed initially to stop the pulse switching on the street lights affecting all lights in the studio to go up and down. It took some time to find out that this was caused by the street lights and happened only at dawn, because the producers complained to the technicians in the morning, when they were not able to reproduce the fault.

Ever since this initial experience Strand has sought to produce a portable TV dimmer rack meeting specifications, although it is probably worthwhile in this context to mention that our ACT 6 and Tempus portable racks have been successfully used throughout Europe on the various location jobs.



Front panel of dimmer module with indicators, change over switch for remote/local/non-dim and potentiometer.

So here it is – the answer to the really demanding TV-customer. A portable rack with six plug-in Thyristor dimmers, separate power supply for the control electronics, earth leakage circuit breakers, fuses, indicators, all being housed in a compact rack which is fully isolated.

The NF-filters are fitted in the bottom of the rack via vibration mounts. They are specially wound to reduce the mechanical hum during operation and provide adequate TV filtering.

The whole rack is ventilated by a plug-in fan tray between dimmers and chokes with specially designed deflecting blades to improve the air flow.

To prevent the whole rack supply from failing three earth leakage circuit breakers 63/0,03 Amp are fitted.

All connections are made from the sides so when placed around a cyclorama all cable connections come from the rear leaving a free gateway.

One side of the dimmer rack contains all load sockets (Weinert 25A) with two Schuko sockets (10A) wired in parallel, individually fused at the front panel, which therefore contains 18 circuit breakers – 6 circuit breakers 25A and 12 circuit breakers 16A.

The other side of the rack contains the mains power inlet socket CEE 17, 63A, for three phase supply.

Mounted below is a plug and socket system (39 pins) for analogue control according to DIN 41618, which allows daisy chaining of 6 racks with manual control desk.

Also fitted is a demux-card – as used with ACT 6 – so that up to 384 dimmer circuits can be connected by one pair screen microphone cable.

All connectors are mounted recessed in the housing, which is built out of Hostalit-Z and thus fully isolated.

The portable rack weighs 55kgs, and proper handles are part of the frame structure. For ease of transport they are fitted with ball bearings in the chassis and several racks stack on top of each other.

The core of the construction is a compact plug-in Thyristor dimmer, closed loop, hard firing with additional HF-filters mounted close to the Thyristor pack. An overtemperature cut-off is fitted.

The front panel has indicators for mains, load voltage and overtemperature and a comfortable handle for ease of operation. A switch below the indicators allows selection of local, remote and non-dim functions.

If the dimmer is switched to local, it can be controlled by the potentiometer.

A fuse protects the transformer supplying the control voltage to the trigger circuit.

Obviously such truly highly specified products can never be cheap but the benefits are that the racks can be distributed with little restrictions on location offering the flexibility TV people require.

The design allows for rough treatment and is in size equal to standard distribution racks.

If a job is worth doing, it's worth doing well. We certainly have taken our time to do it well, but now believe to be number 1 in portable dimmer rack again. Woody would certainly be delighted to be able to carry six dimmers instead of the three he offered in 1963.

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First cancelled O.B.

The early days of television lighting and a Coronation that never happened

A pre-war Strand Pagent IK, highly directional beam. These units would have been used for television lighting in Westminster Abbey for the coronation of Edward VIII – if it had ever happened.

The fiftieth anniversary of high definition television has been the occasion for much reminiscence. Most of this has, quite naturally, concerned the programmes. Many a clip of ladies singing to us with South Kensington accents have appeared, while a BBC TV play 'The Fools on the Hill' told us of the first few months at Alexandra Palace.

This play did deal to some extent with the rival Baird and Marconi systems – of which the latter required lighting while the former occurred in the dark-and dramatically re-created some of the transmission uncertainties. But the lighting that is the whole beginning of any transmitted picture, was not mentioned – probably because it was non-controversial and totally reliable.

Lighting for Entertainment was the slogan of Strand Electric, the company who supplied the world's very first television lighting control, a theatre type switchboard known as a Grand Master, and fifty years later, almost to the day, the same company commissioned a modern Gemini system at the BBC's Leeds studio. In 1936, the main source of entertainment lighting work was the super cinema. In the shoe box multi-auditoria cinemas of the eighties, one can easily forget that the thirties predecessor often had a stage of Drury Lane proportions, equipped with six rows of overhead three colour compartment battens, a row of similar footlights and those now defunct artefacts – Flood Towers – in the wings. The purpose of all this expensive hardware was little more than to flood the stage drapes with changing coloured light between films.

The theatre of the period was still firmly locked in the batten and footlight era, going back to Irving with only acting area floods and Pageants pointing the way towards the totally directional style that is today's universal stage lighting practice.

When the BBC were considering the lighting for their new service, they must, I imagine, have first considered using film studio lighting. The fact that they never really adopted the methods of Hollywood or Pinewood arose from the very nature of the TV medium.

The central fact of film lighting is that from Mack Sennett to James Bond, each shot has been lined up and lit by the lighting camera man, the shot secured, and the next scene lit. Probably this system would have been adopted by television if, from the start, video recording had been available. But for the first twenty years not only was TV live, it was thus necessarily continuous. You couldn't strike after every shot and begin again.

Another factor that must have scared the early Ally Pally men off film lighting would have been that the basic studio workhorse was the arc lamp. Transmission must have been quite fraught enough without adding the problems of a faulty carbon spluttering and flashing during a transmission, and emitting goodness knows what electro-magnetic interference.

Some film equipment was of course used. The sky-pan and the scoop had roles from very early days, and a colleague remembers seeing large frames fitted with up to forty or fifty 100 watt lamps being used at Alexandra Palace as softlights.

The continuous shoot principle must have been behind the provision of theatre type dimming right from the start. The adjustment of a light level by stretching a scrim in front of a lantern was very seldom a TV method. Today, even though studio live transmission is such a rarity, the television method calls for lighting dimming control systems every bit as sophisticated as at the largest opera house. In fact, the Galaxy control which was installed a few months ago at the London Coliseum for the English National Opera, is a very close cousin indeed to the two Galaxys recently commissioned at Television Centre.

As a small but relevant aside, it may be a pointer to television's influence on lighting that some of the feature films recently produced and now shooting are actually utilising theatre-TV lighting controls and dimmers so that lighting can be changed during a shot and to speed the actual lighting of a scene. (*The recent 'Peter the Great' aired on BBC is an example. See article by lighting cameraman Vittorio Storaro in Autumn '86 Strandlight*).

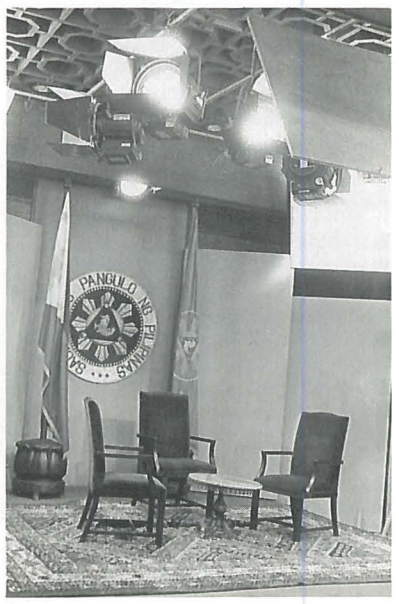
The Pageant lantern – a thousand watt light with a curved mirror reflector giving an intense narrow beam was the unit recommended for the world's first cancelled outside broadcast – the coronation of Edward VIII. In all the millions of words spilled on the subject of Edward and Mrs Simpson, I doubt if this little bit of history has previously been unearthed. ■

This article first appeared in 'Eyepiece' the Journal of the Guild of British Camera Technicians and is re-printed with their kind permission.

Presidential Sirios

The small studio in the Malacanang Palace (Manilla, Philipines) from where President Aquino's addresses and press conferences are broadcast. The set up is somewhat unusual with all eight Sirio's permanently rigged. ■

For President Corazon C. Aquino's T.V. studio, Malacanang Palace.



The Living HMI's *by Brian Hartley*

Strand's Quartzcolor Lighting on location for James Bond's latest adventure and two more hits.

What do Elliot Ness, James Bond and a group of battle weary G.I's have in common? The answer is Quartzcolor. To be precise, the actors portraying these real and fictional heroes of the silver screen were lit by a variety of Strand Lighting Quartzcolor equipment.

For the final frighteningly thrilling scene in Brian De Palma's "The Untouchables" Elliot Ness and his one remaining partner are involved in a shoot-out with Capone's hoodlums. The location is Chicago's Union Station and the scene was lit with 10,000W Vegas.

It is a far cry from gangsters in Chicago to battles in Afghanistan and romance in Vienna, but these are just two of the settings of the latest saga of 007 – "The Living Daylights". In Morocco, doubling for Afganistan, 600W Sirio HMI's provided appropriate 'living daylight' sources for the action packed sequences, as well as being prominent in Vienna running shots and static locations.

The jungles of the Philipines are not the easiest of film locations. The terrain is tough on equipment as well as on the actors and crew. That all three categories stood up so well is reflected in the successful release of 'Platoon', winner of four Academy Awards.

The quality of the equipment certainly had a hand in bringing the production home on time and on budget, the real workhorse lights of the shoot were the 12,000W Sirio HMI systems – which performed admirably in the bad terrain which stood in for Vietnam.

So three hit movies for 1987 – and three successes for Strand Lighting and Quartzcolor – three successes in which we take pride in our contribution. ■

"Quartzcolor 6000W HMI Sirio Systems provide the daylight for the latest 007 motion picture – "The Living Daylights" – on location in Morocco".

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