

Art 2000i

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The Art2000i is the latest in the ART range, its flexible design makes it ideal for any installation where reliability and ease of installation and maintenance are important. Based on the proven ART2000 touring system the ART2000i is quick and easy to install, configure and operate. As with all ART2000 systems all circuits are fully rated. The easy disconnection of Live and Neutral conductors to each circuit makes annual (mandatory) checking simple. The Art2000i has twelve built in memories, twin fully patchable DMX inputs, load and circuit check and is RDM ready.

Options include: 16 or 32 Amp channels, RCB protection, Integral Hot Patch, Low cost 24 channel extension, Mains isolator.

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lighting - from rock to opera

ART2000i Install Dimming

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1. ART2000i – Introduction

The ART2000i is the latest in the ART2000 range. Designed using the knowledge gained in manufacturing tens of thousands of channels of touring dimming this install system combines the robustness of design from a touring system with the economy of a system which does not need to move (very often at least).

Care has gone into the design to ensure it is easy to install and you can be confident in the knowledge that using the ART2000i in any install design will make the installers job fast as well as giving the client trouble free operation for years to come.

The optional integral patching expands the possibilities of ART2000 including the of a mixture of touring and install systems enabling a smaller number of install channels with the knowledge that additional channels can be hired in or purchased as touring systems for larger productions.

As mentioned more than once in this document the exact specification you need can be built using a number of standard parts, these are listed at the end of the document but please contact us to ensure the most optimum system is put together.

1.1 Main features

24/48 16amp channels or 12/24 32 Amp channels, or permutations of this.

Size 1000high 500wide 200deep (Hotpatch increases this, see below).

Twin DMX inputs fully patchable + RDM ready.

Internal memories.

Panic input.

Hotpatch dimmer outputs to install circuits.

RCB protection.

Easily installed, electronics installed separately once building is clean.

Easy commissioning.

Easy disconnect of Live and neutral for building electrical testing.

240uS rise time.

Proven design, thousands of Art2000 in operation daily.

100% duty cycle.

2. Detailed specification

2.1 Physical

The sturdy mainframe is made from 1.5 mm folded, welded and powder coated steel.

The mainframe is 500mm wide 1000mm high and 200mm deep.

The mainframe with optional patch is 500mm wide 1150mm high and 200mm deep.

The mainframe weights 31 Kg.

The 16A power block 16 Kg.

The 32A power block 16 Kg.

Patch panel 6 Kg.

2.2 Channel types

The system is build around a mainframe and two power blocks. The power block variants are:

12 channel 16A 240 μ Sec rise time choke.

6 channel 32A 240 μ Sec rise time choke.

The Channel Phase allocation per power block is.

Phase 1 channels 1, 4, 7, 10.

Phase 2 channels 2, 5, 8, 11.

Phase 3 channels 3, 6, 9, 12.

All channels are rated at 100% duty cycle at 40 °C.

Cooling is achieved by 2 temperature dependant speed controlled fans which are switched off during inactive periods (all channels at 0%).

An optional air filter set is available for the air intake.

2.3 System permutations

A system consists of 1 master mainframe and optionally 1 slave mainframe. Each mainframe can hold 2 powerblocks, each powerblock containing either 12 channels of 16 Amps or 6 channels of 32 Amps per channel.

The possible configurations therefore are:

Single mainframe:

- 24 channel of 16A.
- 12 channels of 16A and 6 channels of 32A.
- 12 channels of 32A.

Master + Slave Mainframe (2 main frames linked)

- 48 channels of 16A.
- 36 channels of 16A and 6 channels of 32A.
- 24 channels of 16A and 12 channels of 32A.
- 12 channels of 16A and 18 channels of 32A.
- 24 channels of 32A.

2.4 Protection

The mainframe can be fitted with optional 30mA RCB protection for each power block.

2.5 Mains isolation

Single mainframes can be fitted with a 125A mains isolator, which can be locked in the off position. (The diversity factor is 1.)

Master mainframes can be fitted with a 160A mains isolator, which can be locked in the off position. (The diversity factor reduces to 0.62.)

2.6 Mains connection

The mains input uses 5 Wago cage clamp capable of receiving 35mm² cables without specialist crimping tools.

The system requires a 3-Phase 4 wire mains connection (TN-S or TN-C-S) 240V P-N/ 415 P-P/ 0V N-E.

The supply needs to be protected with maximum of 125A D type breaker or fused disconnector (160A D type for master slave).

The maximum Icu is 6kA..

The maximum withstand voltage is 2000V.

2.7 Load connection

Connection directly to the dimmer circuits

The mainframe load connection to the building wiring is through two multipin connectors allowing easy disconnection of both the neutral and phase connections for periodic wiring tests.

Using the integral patching option

An optional integral patch panel consists of two outlets per 16 amp dimmer channel and is complemented by a 48 circuit panel for connection to the installed circuits. Connection to this is via four multipin connectors for solid cable ensuring the panel can be closed, or direct into the Wieland connector if stranded building wiring is used. In the patch configuration periodic wiring test neutral and phase disconnection is achieved by unplugging the patch cable.

2.8 Installation

The system is specifically designed to be easily installed. The system consists of a cable entry box and the dimming box which contain the electronics etc. These two boxes fit together. The cable entry box is fitted first, and the mounting is very flexible to allow for situations where a hole cannot be drilled in an exact location. Holes for the dimming box are drilled at the same time using a template provided and a plumb line hanging point and tape measure fixing point are provided to ensure the system hangs vertically.

Once the cable entry box has been fitted all the wiring can be completed, whilst the dimmer box is kept in a 'safe' environment. Circuits can easily be tested using a test connector which mates with the cable entry box connectors.

The cable entry panel can have 24 PG13.5 knock-outs or be a flat plate which can be easily customized by the installer to suit the local installation.

When the dimming box is required, it is simply hung onto the entry box and screwed into place, and connectors mated to complete the installation. If necessary circuits can still be wired, the hanging of the dimming box does not obstruct the cable termination.

2.9 Control system

The system is fully digital, no trimming is needed.

2 DMX 512 inputs which can be individually addressed and merged on an HTP basis.

The system is RDM ready via software upgrade using a connection to a laptop computer.

Local channel control is through an intuitive encoder wheel and on-screen level matrix.

12 memories can be stored and replayed using the encoder wheel and on-screen level matrix.

Breaker and Load Status is displayed on screen, and through RDM when available.

Remote store and replay of memories by any ART dimmer family member

Memory 12 can be controlled by a 12V AC or DC panic input.

Intuitive user interface using a large 42 x 8 character graphics quality backlit LCD display.

Individual channels can be set to any of the available curves.







Individual channels can have a limit level set.

Individual Preheat for each channel.

Plug in Control card for easy maintenance.

Software upgradeable via a PC and download cable.

3. Part Numbers, Descriptions and Pricing

Part Number	Description		Notes
17-82-0010	Basic Stand-Alone Mainframe		basic case, controller, lid, manuals installation kit
17-82-0011	Basic Expansion Frame		basic frame, lid, link cables, installation kit
17-82-0020	Full Wieland ST17 Patch 2 Panels		dimmer outlet panel with 48 ST17 sockets patch outlet panel with 48 Wieland ST17 sockets terminating to 4 Harting 24 Ways connectors
17-82-0021	Half Wieland ST17 Patch 2 Panels		dimmer outlet panel with 24 ST17 sockets patch outlet panel with 24 Wieland ST17 sockets terminating to 2 Harting 24 Ways connectors, empty patch sockets blanked
17-82-0022	Patch Blanking Plate 1 Panel		blank plate to cover the dimmer patch out area
17-82-0030	Non Patch Pg13.5 Cable Entry		cable entry with 24 half punched PG13.5 holes, 5 PG13.5 holes for mains inlet and 4 11mm holes for DMX input
17-82-0031	Non Patch Plate Cable Entry		cable entry with a 1.5mm thick Zintex plate for custom holes(465x140mm)
17-82-0040	Patch Plate Cable Entry		cable entry for patch versions only with a 1.5mm thick Zintex plate for custom holes(465x140mm)
17-82-0050	125a Mains Switch		pad-lockable 125A mains switch
17-82-0051	160a Mains Switch		pad-lockable 160A mains switch
17-82-0052	2 Bay RCB Option		
17-82-0060	12x 16A Dimmer Block		12 x 16A C type breaker 100% duty cycle 240µS rise time
17-82-0070	6x 32A Dimmer Block		6x 32A C type breaker 100% duty cycle 240µS rise time

4. Example systems

Note that ALL systems use MCBs (Circuit Breakers) not fuses. The systems described below are only examples configurations there are many more possibilities.

Please contact Avolites for an ideal solution which meets your requirements.

4.1 *24 Channels of dimming, lowest cost system.*

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0030	PG13 cable entry
1	17-82-0022	Patch Blanking Plate
2	17-82-0060	16A Dimming Blocks
		total cost

4.2 *24 channels of 16 Amp Dimming with RCB protection.*

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0030	PG13 cable entry
1	17-82-0022	Cover Plate
2	17-82-0060	16A Dimming Blocks
1	17-82-0052	RCB protection
		total cost

4.3 *24 Channels with RCB and Patch.*

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0040	Patch system cable entry
1	17-82-0020	Patch
2	17-82-0060	16A Dimming Blocks
1	17-82-0052	RCB protection
		Total cost

4.4 24 Channels with RCB, Patch and mains isolator (full system).

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0040	Patch system cable entry
1	17-82-0020	Patch
2	17-82-0060	16A Dimming Blocks
1	17-82-0052	RCB protection
1	17-82-0050	Mains Isolator
		Total cost

4.5 12 Channels of 16 Amps, 6 channels of 32 Amps, RCB and mains isolator.

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0040	Patch system cable entry
1	17-82-0021	Half Patch
1	17-82-0060	16A Dimming Blocks
1	17-82-0070	6 * 32A dimming
1	17-82-0052	RCB protection
1	17-82-0050	Mains Isolator
		Total cost

4.6 Complete 48 channel system with patch, RCB protection and mains isolator.

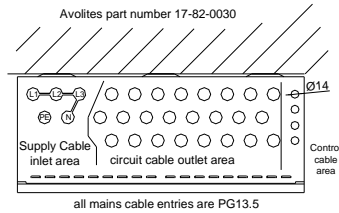
This comprises of two frames, which must be fitted side by side. There is a single set of electronics and a single mains feed. If a diversity factor of 1 is needed then two mains feeds can be used, or an external isolator. Contact Avolites for details and a quotation.

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0011	Expansion Frame
2	17-82-0040	Patch system cable entry
2	17-82-0020	Dimmer Patch
4	17-82-0060	16A Dimming Blocks
2	17-82-0052	RCB protection
1	17-82-0051	Mains Isolator 160A
		Total cost

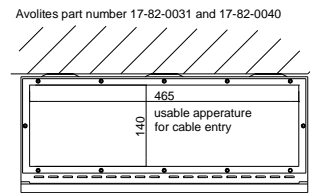
4.7 24 channels 16 Amps, 12 Channels 32 Amps, RCB protection and mains isolator.

Quantity	Part	Description
1	17-82-0010	Mainframe
1	17-82-0011	Expansion Frame
2	17-82-0040	Patch system cable entry
1	17-82-0020	Dimmer Patch
2	17-82-0022	Patch Blanking Plate
2	17-82-0060	16A Dimming Blocks
2	17-82-0070	6 * 32A dimming
2	17-82-0052	RCB protection
1	17-82-0051	Mains Isolator 160A
		Total cost

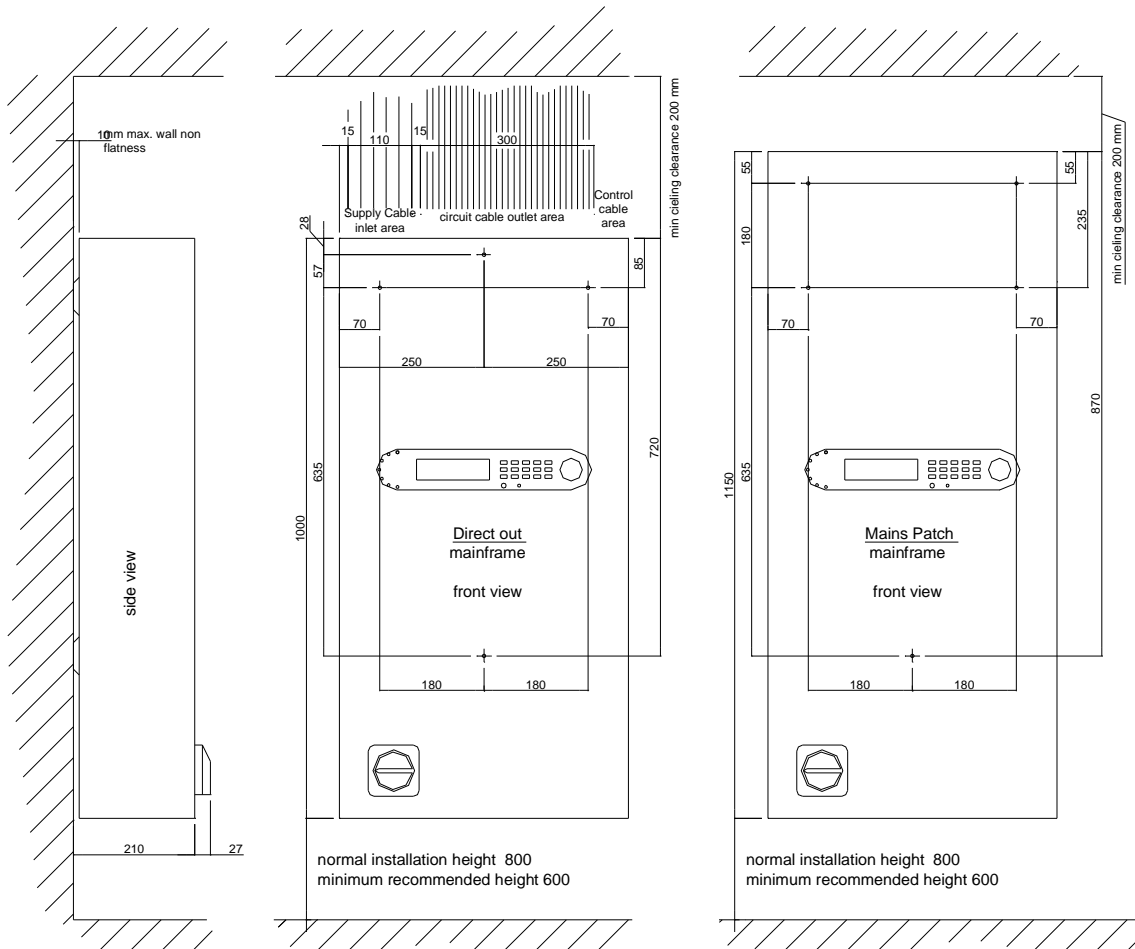
5. Installation drawing



Front of dimmer
top view



Front of dimmer
top view



6. The small print :

No Liability for Consequential Damages.

Avolites has a policy of continuous product and documentation improvement.
As such the detail within this manual may not match the operation of the product
it describes.

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