

# CANNON A-TYPE OUTDOOR CABINET

OUTDOOR ENCLOSURE PROTECTION FOR BASE STATION INFRASTRUCTURE



Cannon Technologies has been manufacturing cabinets for Indoor and Outdoor applications for over four decades. Cannon has a long history of product development both for military and civilian applications. This broad based experience has been fundamental to the development of a wide range of integrated outdoor railway/trackside enclosure systems. In addition to the cabinets shown Cannon offers thermal and diagnostic systems.

Among these are:

- **Conventional cooling:** using natural ambient air cooling
- **FanCell:** forced air cooling
- **CoolCell:** compact forced air high efficient heat exchangers
- **ChillCell:** Solid State chilling unit
- **FreezeCell:** compact air conditioning unit
- **CannonGuard:** a fully integrated life support system for the control and monitoring of all critical functions. Remote and attended diagnostic facility offering 40 or more discreet alarms.

## Product Range

Cannon has an extensive range of outdoor roadside & trackside enclosure systems for the transportation and communications markets, these include:

- FTTx – Copper/Fibre Optic Cabinets
- SISS/CIS Cabinets for security & info
- MK2 Telecommunications Cabinets
- StreetWise Active Cabinets
- Termination Boxes
- Type C Cabinets (For copper cables)
- CatWalk Pedestal Cabinets
- Apparatus/Location Cases (NR approved)

Products can also be manufactured to meet clients precise requirements.

Over its history Cannon has produced over 150 different designs of outdoor enclosures; these break out into four distinct categories. Cannon has named these differing types as follows:

- A-TYPE
- C-TYPE
- D-TYPE
- S-TYPE

“A-TYPE (AirWave)” is the name given to Cannon’s range of outdoor enclosure protection for Base Stations; these tend to be the most sophisticated enclosures manufactured and consequently use greatest amount of resources in both design and manufacturing.

Typically the cabinet will be environmentally controlled and managed by using either full air conditioning or air-to-air heat exchangers. Most have remote alarming and more customers are electing to use remote locking facilities to control third party access to the enclosure.

Due to the type of equipment housed within the enclosure i.e. high heat dissipating class “A” amplifiers used within the transmission equipment, the heat being dissipated from the equipment is very high and can be as much as 5-kwatts in total. The equipment demands high standards of cleanliness meaning that IP ratings of 65 are common.

The enclosure is constructed with a dual skin; this secondary skin acts as an insulator preventing the long wave radiation created by the solar gain from penetrating and effecting the internally controlled temperature.



A-TYPE active telecom equipment enclosure's are designed around the S-TYP outdoor cabinet and provides a multi-chamber design that houses all types of non rack mounting protocol (non 19"/ETSI equipment) products.

The enclosure is constructed with a dual skin to reduce the effect of solar gain radiating into the equipment chamber and are fully environmentally controlled, dependant on the heat dissipation figures and the required  $\Delta t$ . Cannon product specialists are able to advise whether to install either AC or DC air conditioning systems, air-to-air heat exchangers or force fan convection.

Our New Milton test facility can provide thermal testing to our enclosures along with written reports. Thermal loads can be either simulated or for effective heat analysis active customer equipment can be configured within the enclosure. The ambient air temperature can be maintained to within  $\pm 1^{\circ}\text{C}$  of that specified. Solar gain can also be applied to the surface of the enclosure to simulate the effect upon the internal equipment when subjected to long periods of sun light in different locations and upon various surface treatments.

The enclosure can be configured with a number of chambers which can be used to separate the different technologies. Battery chambers are normally separated from the main active equipment to ensure that any hydrogen given off during recharge periods is vented to atmosphere without any risk of it coming into contact with equipment. It is also easier to maintain the temperature recommended by the battery manufacturer in a separate chamber.



The chamber can be manufactured to suit various manufacturers' batteries, size and numbers; shelves can be fixed or telescopic and designed to withstand loads of 500-kilos. The cabinets can be designed to accept both shock and vibration, high EMC emission protection and to IP65. Cannon offers a variety of lock options from simple cam through to full remote activation.

Cannon has been manufacturing enclosures for over four decades and has supplied many enclosures for both track-side and road side applications. Our radio base station (A-TYPE) enclosures have been used in extremes of temperatures from areas such as Alaska to Nevada, MOD naval applications for Microwave systems. We have been a major supplier to the various alliances working for the rail industry etc. We are confident that what ever your requirements Cannon will be able to provide a solution to your enclosure needs.



#### FEATURES:

- Electronic Remote Access Locks
- Electronic Key Pads / RFID / Bio-Metrics
- Sensors (Thermal, humidity, alarms etc.) and Display/Alarm via SNMP and web based application
- Up-to IP65 sealing
- Thermal solution matched to equipment requirements
- Multiple chambers providing compartments to suit specific equipment mounting and thermal requirements.



S-TYP outdoor cabinet and is provides a multi-chamber design that houses all types of non rack mounting protocol products.

#### BENEFITS:

- Proven Designs both in test lab and in field and street-side operation.
- Thermal Solutions sized to provide energy efficient and operations cost savings.
- IP65 testing completed at an independent test house.
- Modular designs that can be modified to suit customer specific requirements



Chamber capable of maintaining air temperatures above the local ambient up-to a maximum 60°C with a solar gain of 1.1kW/m<sup>2</sup>

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Additional Products available from  
Cannon Technologies Group :

- Modular Data Centres
- Cannon Data Campus
- Cannon GLOBE TROTTER
- Cannon GMDC
- Cannon Mini/Micro DC
- Ruggedized DC Cases
- IT Infrastructure
- 19" Server Cabinets
- Patch Frames
- Free Form Containment
- Cold/Hot Aisle Containment
- Air Management
- Cooling Solutions
- UPS & Power
- Techni-Cabins
- Mobile-Cell & Mast Stations
- Outdoor Cabinets & Enclosures

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