

adverpost

Adverpost Handbook

13 September 2021



ONE WORLD
LED USA

Contents

0.1	Notices	2
0.2	Contact	2
1	Introduction	4
1.1	Features	4
1.1.1	Display Management	4
1.1.2	Selling to Third Parties	5
1.1.3	Advertising on Public Displays	5
1.2	Adverclient Hardware	5
2	Managing Displays	7
2.1	The Dashboard	7
2.2	Adding a New Display	7
2.3	Managing an Existing Display	8
2.4	Deleting a Display	8
2.5	Changing Display Brightness	10
3	Managing Media	11
3.1	Adding Media to Adverpost	11
3.2	Removing Media from Adverpost	12
3.3	Making Media Suitable for Your Display	12
3.3.1	LED Displays	12
3.3.2	LCD Displays	12
3.3.3	Other Considerations	12
4	Managing Campaigns	13
4.1	Campaign Editor	13
4.2	Creating a Campaign	13
4.3	Editing a Campaign	14
4.4	Deleting a Campaign	14
4.5	Previewing a Campaign	14
5	Scheduling on Your Own Display	16
5.1	Scheduling a Campaign	16
5.2	Modifying an Existing Campaign Schedule	17

6	Buying Space from Public Displays	19
6.1	Payments	19
6.2	Guarantees to the Buyer	19
6.3	View Public Displays	19
6.4	Scheduling a Campaign on a Public Display	20
7	E2V Sources	21
7.1	Adding E2V Sources in Adverpost	21
7.2	Scheduling E2V Sources in Adverpost	22
8	Users and Teams	23
8.1	Creating a New User	23
8.2	Creating a New Team	24
8.3	Adding New Users to an Existing Team	24
8.4	Deleting a Team	24
9	Selling Space on your Display	25
9.1	Important Information	25
9.2	Setting a Price Schedule	26
9.3	Setting a Loop Block Duration	26
9.4	Approving or Denying Campaigns	27
10	Using Stripe	28
10.1	Adding Payment Details to an Account to Make Purchases	28
10.2	Adding an Account to Sell Space	29
10.3	Managing Payment Details in Stripe	29
11	Appendix	30
11.1	Future Expansion	30
11.2	Troubleshooting and Configuration	30
11.2.1	General Troubleshooting	30
11.2.2	Network Condition Troubleshooting	30

0.1 Notices

- The Adverpost system is constantly being revised and improved, and any content within this handbook may become outdated after *13 September 2021*. It is recommended that the latest version be sought from <https://adverpost.com/> or your product distributor.
- Throughout this book items which require clicking are highlighted with a grey box.

0.2 Contact

Reseller

Reseller

Manufacturer and Developer

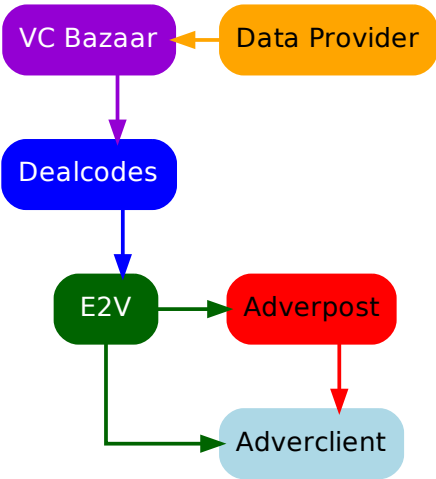
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Chapter 1

Introduction

Adverpost is a unique system allowing for the simple web-based management of LED/LCD signage. It provides a centralized, simple and accessible method of managing content on such displays, as well as the potential for monetization by optionally allowing for time slots to be sold to third parties. The following diagram shows the architecture of the Adverpost system (including potential data and V-Commerce integration).



1.1 Features

1.1.1 Display Management

The core feature of Adverpost is how it simplifies the management of displays. No technical knowledge is required to upload and manage content from the display, and displays can be managed by any personnel through a simple web interface, which can be accessed from any internet connected device. This allows end users to manage the display and removes the need for costly, specialised training or external staff.

1.1.2 Selling to Third Parties

A unique ability of the Adverpost platform is the ability to optionally sell advertising space on connected displays. This provides a publically accessible platform where potential advertisers can easily plan and pay for advertising campaigns, while still providing ultimate control to the display owner. Payment is managed by an automated internal system powered by Stripe, with pricing controlled by the display owner with a flexible system supporting scheduled prices. Owner approval of all third party advertising content is sought automatically by the Adverpost system prior to payment, preventing any inappropriate content from being shown on managed displays. These functions make Adverpost a powerful, yet simple tool for display monetization, particularly where a display might otherwise go unused. *Refer to Page 25 for more information on selling space on your display.*

1.1.3 Advertising on Public Displays

Adverpost also provides a simple system for potential advertisers, allowing almost instant access to a network of connected LED and LCD displays. Payment and campaign coordination is handled automatically by the Adverpost system. This provides a simple and cost effective method of displaying advertisements on displays ranging from Point of Service Terminals to Billboards, without having to deal with each display owner on an individual level. Advertising campaigns can be developed using the Adverpost system to fit almost all budgets, targets and requirements. *Refer to Page 19 for more information on buying space on public displays.*

1.2 Adverclient Hardware

The Adverclient is the hardware which enables Adverpost connectivity. It is connected to the display and the internet, and requires no maintenance once configured. All configuration can be done from the web interface. There are two different commonly sold models and custom solutions can be developed to fit specific requirements.

Standard Client The standard client *[Figure: 1.1a]* is compatible with most types of LED display, and provides support for all LCD (including 4k resolution) monitors. This option also allows for simple connectivity to ethernet, wireless and cellular networks and provides proven hardware reliability.

Custom Solutions The Adverpost system can be adapted for use in various custom systems, tailored specifically to meet the requirements of the project. These include embedded systems and systems designed to automatically access data sources. This includes a Stock Ticker which uses the Adverpost system to display updated stock indicators *[Figure: 1.1b]* and a gymnasium scoreboard which uses the Adverpost system to keep scores up to date through a simple web interface.



(a) The standard client based upon the ZBOX CI325 nano.



(b) Stock ticker custom solution for UniSA

Figure 1.1: Available Adverclient Models

Chapter 2

Managing Displays

Displays are the devices connected to an Adverclient. They only display scheduled content from the Adverpost system.

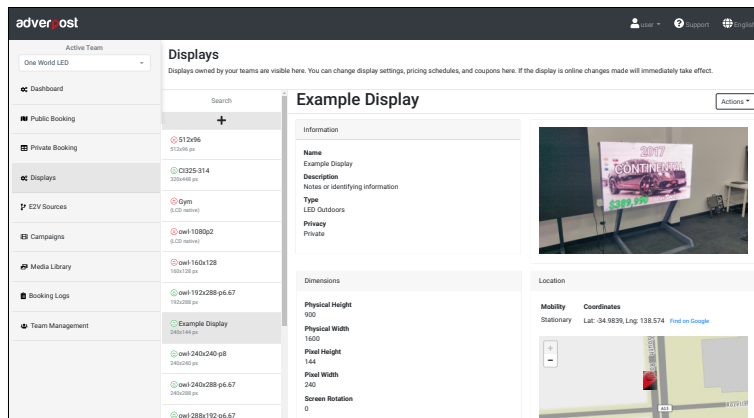


Figure 2.1: The interface provided for viewing and managing displays.

2.1 The Dashboard

All display control is handled through the Adverpost website. While logged-in, you are able to access real-time information about all your displays through the Dashboard. Each display registered to our network is connected through a secure protocol. The protocol allows for real-time information about display health and device diagnostics to be sent to you. The update rate of the dashboard is typically *under 10 seconds* but may vary according to the display's network connection and network quality.

2.2 Adding a New Display

Note: Your reseller may have already done this for you when they set up your account.

1. Once the hardware is professionally installed, power it on.

2. Select the Display tab from the Adverpost website and select the + icon.
3. Enter the code which is displayed on the screen (in the format of xxx.xxx.xxx).
4. Complete the prompts shown. Take note of the display type (incorrect selection could cause the display show black) and enter "0" for both pixel height and width (unless otherwise instructed by display reseller).
5. The display will automatically make a connection with the Adverpost servers and show the Adverpost idle screen [Figure 2.3] ready for use.

2.3 Managing an Existing Display

Note: All display settings changes will take effect immediately or shortly after internet connectivity is established if the display is not connected at the time.

1. From the Displays tab on the left menu, select the desired display.
2. Select Edit from the Action menu on the top right.
3. Make your desired changes and select Save.

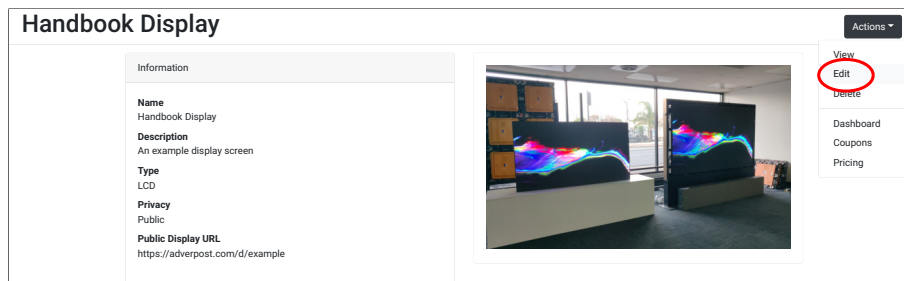


Figure 2.2: The display menu which details of your displays can be seen

2.4 Deleting a Display

1. From the Display tab select the desired display.
2. Select Delete from the Action menu.

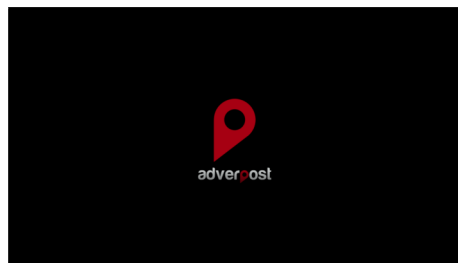


Figure 2.3: The idle screen shown when no content is scheduled

2.5 Changing Display Brightness

1. From the **Displays** tab on the left menu, select the desired display.
2. Select **Edit** from the Action menu.
3. Under the brightness control area, select your desired control method. “Maximum” will automatically set the display as high as possible, “Sensor” will automatically change the display brightness according to ambient brightness (where fitted) and “scheduled” allows for the brightness to be set to specific values at specific times.
4. When “Scheduled” is selected, set the percentage desired for each of the designated hours. Brightness will be switched smoothly to allow for less jarring transitions between different brightness settings as shown on the graph.

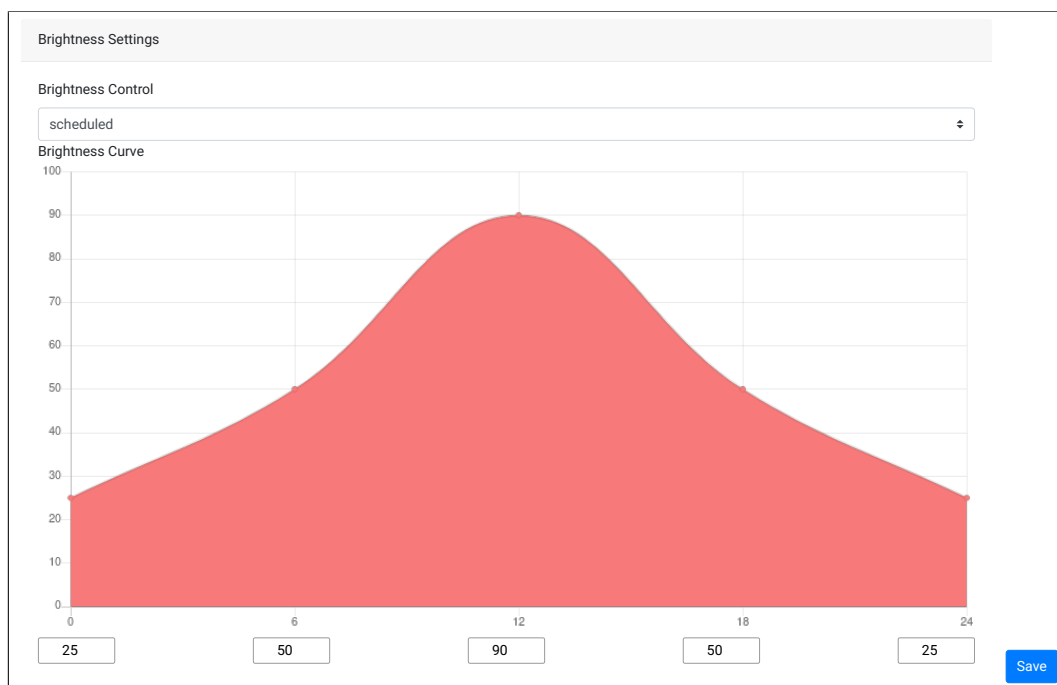


Figure 2.4: Control mode changed from the top and brightness values edited at the bottom

Chapter 3

Managing Media

Media files are required to make campaigns in Adverpost. They can be managed from within the Media tab of the Adverpost interface.

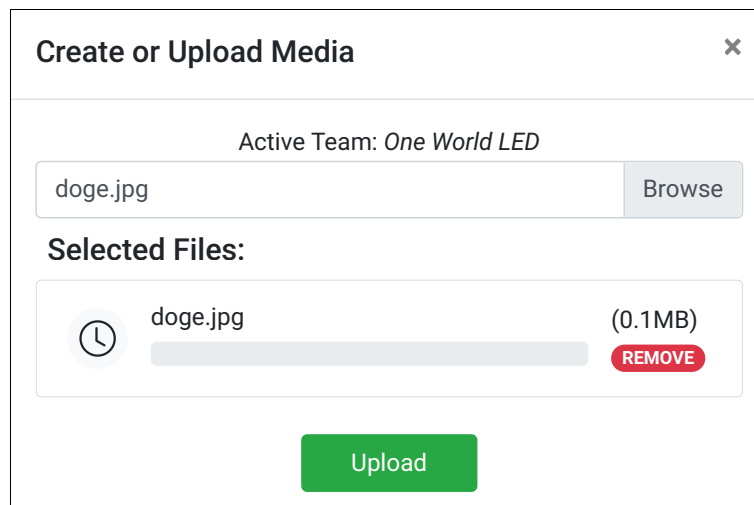


Figure 3.1: The file upload tool

3.1 Adding Media to Adverpost

Adding media is done from within the Media tab.

1. Click the Upload button.
2. For adding media files, drag the desired file to the designated box on the left. Files can also be added by clicking Browse.
3. After adding each item of media, click the Upload again and repeat until all desired media files are uploaded.

Note: Files should not exceed 128MB, and content should match the capabilities of your display (see associated section for more details).

3.2 Removing Media from Adverpost

Removing media is also done from within the **Media** tab.

1. Select the file you wish to delete.
2. If the file is not in use, a delete button will appear at the top-right corner of the popup below the exit button.

Note: Files cannot be deleted if they are in active or scheduled use.

3.3 Making Media Suitable for Your Display

Two display types are primarily managed through Adverpost. LED displays typically for outdoor use and standard LCD screens for indoor use. It is important to ensure content is suitable for its target display because both display types have different benefits and limitations for displaying content. Content made for use on third-party public displays should aim to be suitable for their type of display to increase likelihood of the display's owner accepting your offer.

3.3.1 LED Displays

LED displays are made up of discrete clusters of LED lights. They typically have a low resolution and are not backlit. Content made for this type of display should not rely on fine details or small text because the low resolution of the display will often be unable to render it. Because LED displays are additive in nature, it is more suitable to have darker content with bright highlights. Content which is primarily white may be overwhelming (particularly on indoor displays) and may shorten the life of the display. When creating media, it is highly recommended to contrast important details against the background or other elements to avoid glare and make your content easily seen. **Note:** Outdoor LED displays may have conditions (legal or cultural) placed on the content they display. It is recommended you consult your reseller or the display owner before creating any content for public exhibition.

3.3.2 LCD Displays

LCD displays often consist of consumer or professional television screens. They can have an extremely high resolution and are almost exclusively used indoors. Resolution is less important for this kind of display although clutter should be avoided as overly complicated detail may not be effective on public displays. Because LCD displays work by subtracting light from a white backlight, brighter content is recommended to attract attention. Contrast is recommended for good LCD content, although it is not as critical as with LED displays.

3.3.3 Other Considerations

Other considerations to be made when creating content for use through Adverpost is the aspect ratio of the content. Content should fit the display perfectly to avoid cropping, letterboxing or distortion. **Note:** More information on suitable content can be accessed in the *One World LED Screen Contents Primer* (available at <https://oneworldled.com/wp-content/uploads/2017/11/Screen-Contents.pdf>).

Chapter 4

Managing Campaigns

Campaigns are slideshows which are able to be scheduled on displays. They are managed from within the Campaigns tab of Adverpost.

4.1 Campaign Editor

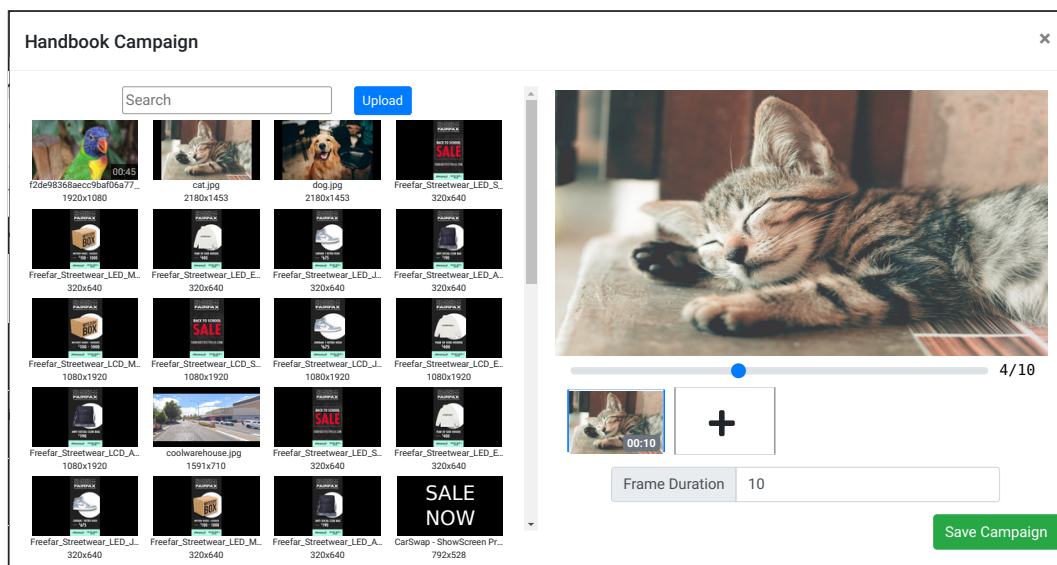


Figure 4.1: The powerful editor in Adverpost.

The editor for campaigns is similar to a simple video editor or slideshow program. Media can be added from the Available Media section on the left to campaign slides. Many slides can be added of various length.

4.2 Creating a Campaign

1. Select the Campaigns tab on the left and select the + icon to create a new campaign.

2. Enter the name of the campaign and assign it to a team. If you are only using/within a single team, it will be automatically assigned to your team. Teams are further described in chapter 8.
3. Use the editor to create the campaign slideshow.
4. Once satisfied with the campaign, it can be saved by clicking the save button on the bottom right.

4.3 Editing a Campaign

1. Select the campaign for editing
2. In the top-right corner select **Actions** and then **Edit**.
3. The same window and functions for editing will be presented as when creating a campaign.
4. Once satisfied with the campaign, it can be saved by clicking the save button at the bottom-right of the popup.

Note: Campaigns scheduled cannot be edited if they are currently booked on public displays.

4.4 Deleting a Campaign

1. Select the campaign for deletion.
2. In the top corner select **Actions** and then **Delete**.

Note: Campaigns currently scheduled to be displayed cannot be deleted.

4.5 Previewing a Campaign

1. Select the **Campaigns** tab
2. Select your campaign from the left menu. If there is a large amount of media, the search bar can be used to assist by filtering
3. Aspect ratios can be selected above the campaign media to preview the media's cropping/resizing
4. Assign tags on the bottom of the screen to search the campaign by

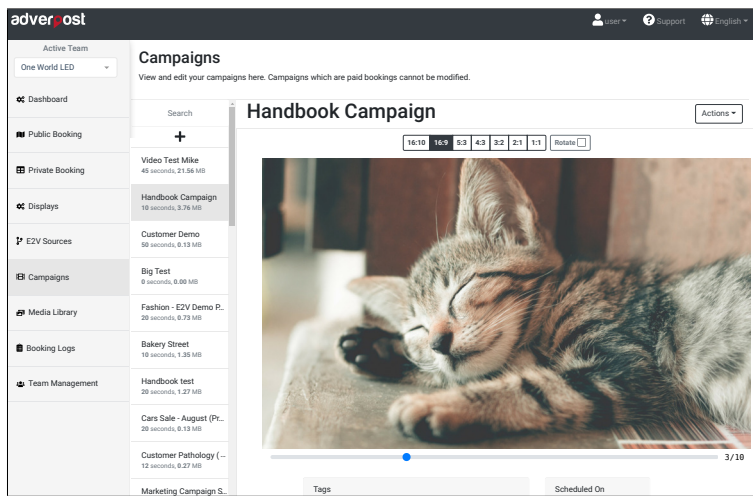


Figure 4.2: The campaign preview

Chapter 5

Scheduling on Your Own Display

Adverpost provides you with the ability to graphically schedule campaigns and modify existing campaign scheduling parameters on your own display in a table format. This allows for advanced and flexible scheduling using IPAM technology.

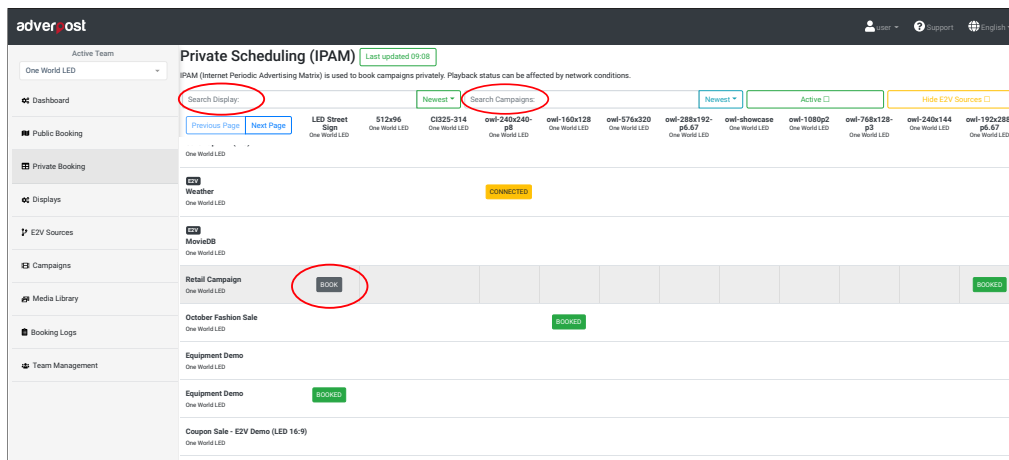


Figure 5.1: The interface for scheduling on your own displays in Adverpost.

5.1 Scheduling a Campaign

1. Select the **Private Booking** tab from the left menu. Available displays and campaigns will be shown as separate axes on a table.
2. Click on the intersection of the desired campaign and display to schedule a campaign on that device. Search bars may also be used for convenience if there is a large amount of devices or campaigns.
3. Here you may choose the range of dates and times as well as particular days of the week to display your campaign. Ticking the cycle button near the 'End Date' box will set the end date as never, running the campaign on the set schedule forever.
4. The 'Display Utilization' bar is a visual representation of how long each rotation of the campaign will last and how much of your booking covers the total time available.

5. Once happy with your booking, press **Schedule** on the bottom-right corner.

Schedule Retail Promotion on LED Street Sign

Booking Duration

Start Date
2021-08-05

End Date
2021-09-04

Mon Tue Wed Thu Fri Sat Sun

7 days selected.

Skip every: Do Not Skip

Daily Run Times

Start Time
00:00:00
Per Hour

End Time
23:59:59
Per Hour

Display Utilization

12 sec Booking

Total Available Time: 228/240 seconds
Campaign Duration: 160 seconds

Schedule

Figure 5.2: The interface for scheduling a campaign on a device.

5.2 Modifying an Existing Campaign Schedule

1. Select the **Private Booking** tab from the left menu.
2. Select the green **Booked** button on a campaign schedule you would like to remove.
3. Press **Add** to add another scheduled time or **Remove** to cancel the scheduled campaign.

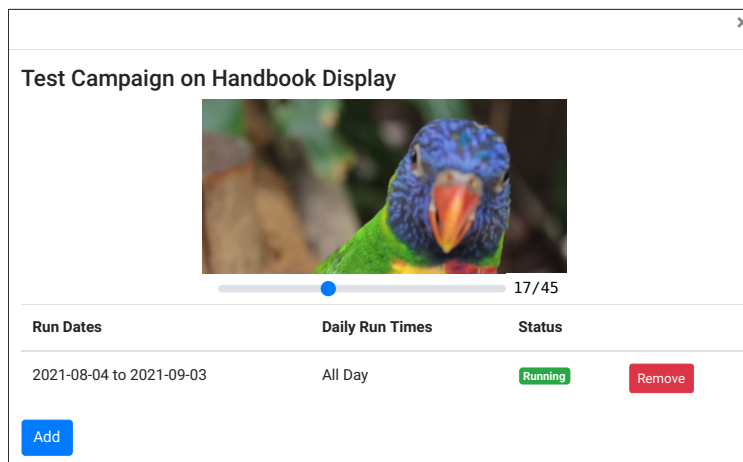


Figure 5.3: The interface for removing a campaign or adding another one.

Chapter 6

Buying Space from Public Displays

Purchasing time on a display through Adverpost is a simple two-step process of scheduling and approval. Campaigns which you create on the website can be scheduled to any public display. It is up to the display owner to decide whether to approve or deny your campaign for playback. If the request is approved then the paid block of time allocated for your advert is fixed until the campaign expires.

6.1 Payments

All payments on the website are handled through Stripe, a third-party payment provider. Stripe guarantees PCI-DSS (national credit card safety) compliance for your payment data. Charges that are incurred on the website carry a surcharge for all transactions. **Note:** *You can read more about Stripe, including their Terms of Service at <https://stripe.com/>.*

6.2 Guarantees to the Buyer

When a transaction is made, you will be guaranteed a minimum total number of plays based on the pricing schedule allocations which your campaign falls under. This is the amount that you are charged, and if the total loop time of a pricing schedule is not full then you will receive additional playtime due to the unused slot space. When your campaign is running, you will be able to see the real-time status of the display(s) involved. Any issues that arise with playback which are not related to the capabilities of the Adverpost system are held liable to the display owner. In the event that campaigns are not approved by the display owner, funds for that specific booking will be automatically refunded by Adverpost.

6.3 View Public Displays

1. Select the **Public Booking** tab on the left menu. A map containing all publicly available displays on the Adverpost system will be shown.

Note: *Not all displays shown in this mode will be available for all kinds of bookings and are at the discretion of the display's owner.*

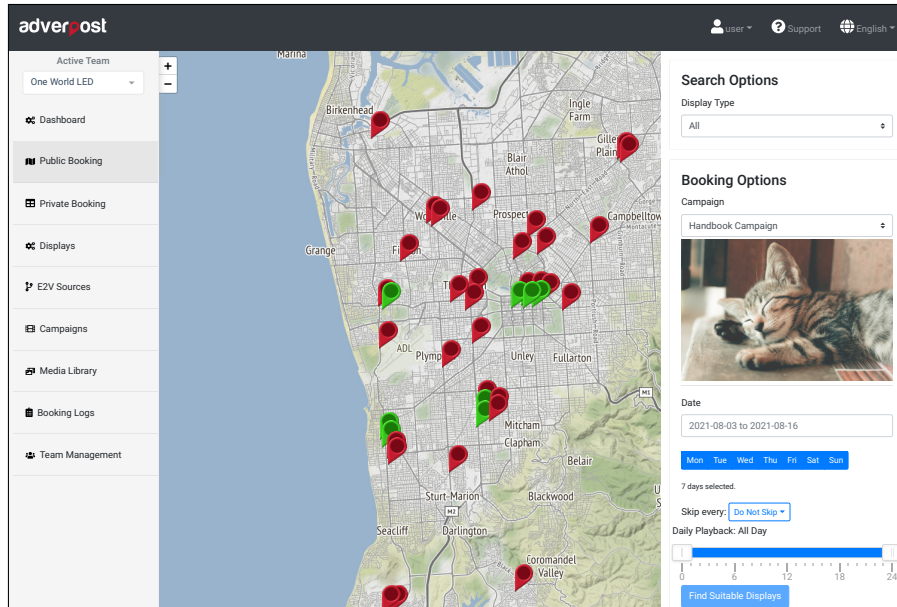


Figure 6.1: The interface for scheduling on public displays. The colors of the pins show the different kinds of display. Red for LED and Green for LCD.

6.4 Scheduling a Campaign on a Public Display

Note: This process assumes you have already created your campaign as described earlier in this manual.

1. Select the **Public Booking** tab. A map containing all displays on the Adverpost system will be shown.
2. Using the options on the right, select a campaign, a start and end date and what days and time period during those days you would like your campaign to be displayed for.
3. Click **Find Suitable Displays** on the bottom of the options. Public displays that are available during those defined times will appear with each of their booking prices.
4. To add a display to the cart, click either the display pin or its entry in the sidebar. click **Add to Cart**.
5. Once all desired bookings have been added to the cart, click **Checkout**.
6. Ensure all the details in the cart are correct and then click **Pay [amount]** to create the transaction.
7. Campaigns will begin after their scheduled time once the display owners approves it.

Note: Ensure reasonable time for the display owner to approve your campaign when making your booking. Bookings which begin before the display owner has approved will not succeed.

Chapter 7

E2V Sources

E2V sources allow compatible external systems to automatically generate campaigns and campaign elements for use in Adverpost. Examples include automatically updating product campaigns with live pricing, and real-time weather data. Ask your reseller for additional information about E2V compatible systems.

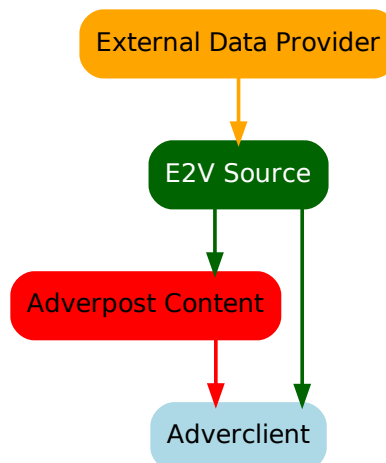


Figure 7.1: E2V allows your compatible system to automatically generate campaigns.

7.1 Adding E2V Sources in Adverpost

Adding E2V sources is done from within the **E2V Sources** tab.

1. Click the **+** button.
2. Enter the E2V source information provided by your system developer or reseller.
3. Ensure that the status information reflects what you have been provided.

4. Click the **Save** button.

Note: The URI and API Key fields are sensitive to capitalisation and spaces. If the status is marked Unavailable, please confirm that the keys are entered exactly.

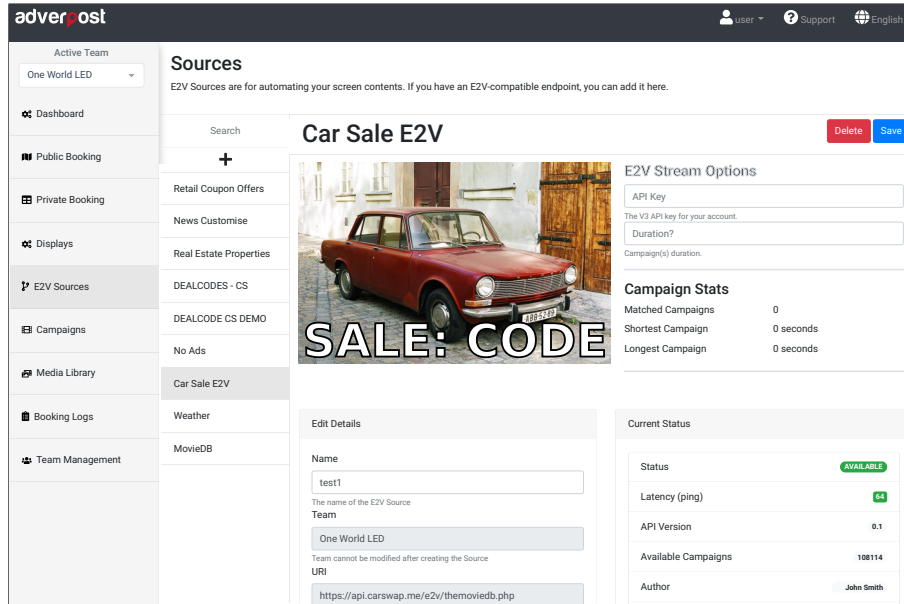


Figure 7.2: The interface for adding your E2V sources to Adverpost.

7.2 Scheduling E2V Sources in Adverpost

Scheduling E2V sources is almost the same as scheduling a regular campaign. In the current iteration of Adverpost it can only be done to displays controlled by your team.

1. Select the **Private Booking** tab. Displays and campaigns will be shown as separate axes of a table.
2. Campaigns with E2V sources are marked with an 'E2V' tag above their name. Click on the intersection of the desired E2V source and display to schedule a campaign.
3. Set the desired start and end dates and the daily run times. The daily run times are the times that the source will be played every day for the duration of the booking.
4. Under the heading **E2V Stream Options** enter the dealer ID given to you by your system developer or reseller.
5. Enter the desired duration for the E2V source.
6. Press **Schedule** to confirm the booking.

Note: If the actual duration of the E2V source is greater than the desired duration, the source will be played in segments ensuring all content is shown over time.

Chapter 8

Users and Teams

Teams allow multiple users to share resources like Displays and Media, and Adverpost has a very flexible team feature including permissions. A team is required for all functionality in Adverpost.

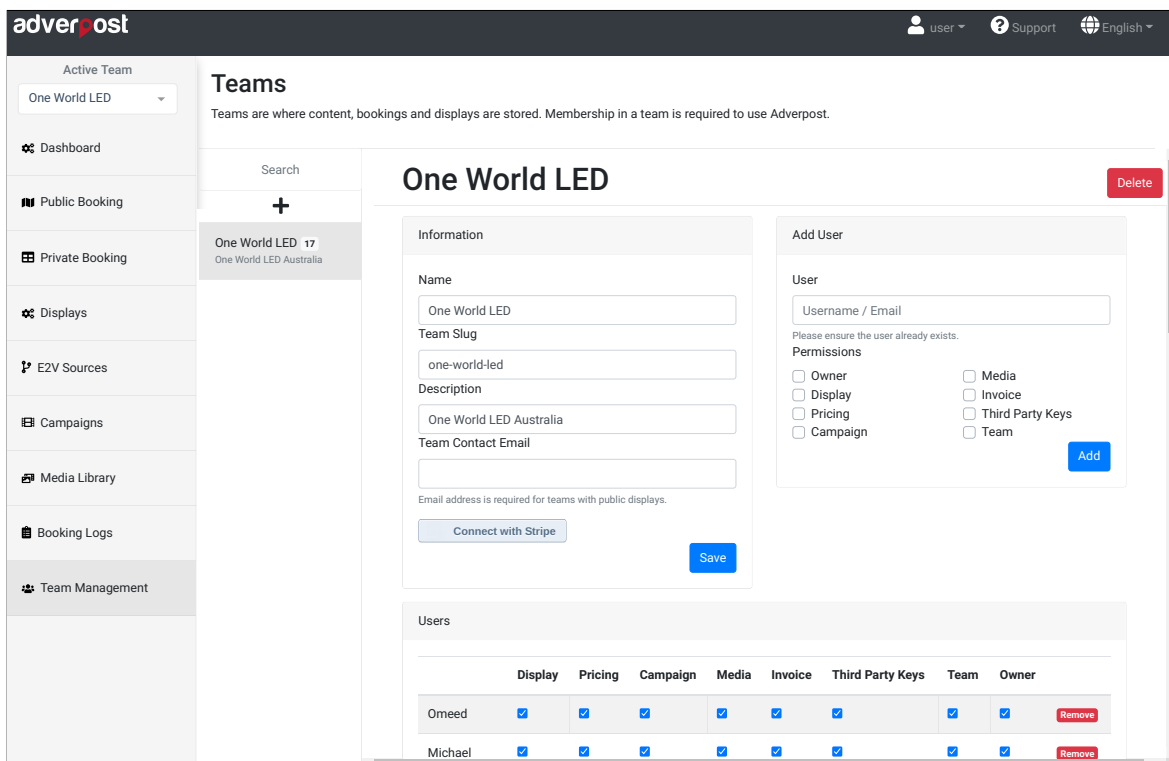


Figure 8.1: The interface for managing teams and users.

8.1 Creating a New User

1. Log out of the Adverpost system if you are not already out of the system.
2. Press **Register** at the top-right corner of the window.
3. Fill out the dialog prompt.

Note: Users without credit card information currently require manual approval by the Adverpost team to prevent fraudulent accounts.

8.2 Creating a New Team

1. From within the Team Management tab press the **+** icon.
2. Fill out the information dialogs when prompted.
3. Add any users you wish to the team.

8.3 Adding New Users to an Existing Team

1. From within the Team Management tab select the desired team.
2. In the **Add User** box, type in the username of the user you wish to add to the team.
3. Select the permissions you wish to give the new user and press **Add**.

8.4 Deleting a Team

Deleting a team will delete all objects associated with it. This includes all displays, campaigns and media associated with the team. It should be done with caution.

1. From within the Team Management tab select the desired team.
2. Click the **Delete** button on the top-right corner of the menu.
3. A window will appear with a warning. Because deleting a team is a significant action, you are required to type "DELETE" (case sensitive) in the text box before the **Yes** button is enabled.

Chapter 9

Selling Space on your Display

Having your display managed with Adverpost gives it online presence in three ways:

1. A marker listed on our public map and homepage
2. A special shortcode URL for your display i.e. `adp.st/spc32`
3. A profile page on the website for the display and your team

Each display you register in our system is indexable by search engines. Therefore, it is encourage to create a complete display profile page to significantly improve your SEO. Adverpost allows display owners to monetize a display simply and cost-effectively.

9.1 Important Information

Payments

All transactions are managed through the payment processing company Stripe. Stripe guarantees full PCI-DSS compliance. We do not store any of your confidential credit card data on Adverpost servers.

Privacy

We take privacy very seriously and do not sell, redistribute, or otherwise use information you provide to us for anything other than specified. Please refer to our Terms of Service for specific legal information.

Security

Where possible, all components of Adverpost are kept in closed, encrypted, private networks. The transmission and internet control of the Adverclient is not interceptable on the open internet. Adverclient systems also do not allow inbound traffic, which prevents tampering from a local network. No confidential or sensitive information is stored on the Adverclient device.

Important Information for Display Owners

- As a display owner you are responsible for all content and have complete control over the display, including hardware/software configuration and pricing
- Displays cannot be removed from the system until all running campaigns have completed.
- Pricing schedules cannot be modified where they will impact existing campaigns.
- Adverpost does not provide any guarantee or warranty of network availability for campaign playback.
- **It is your responsibility to ensure the physical security and functional operation of the device.**

9.2 Setting a Price Schedule

Pricing schedules allow for different prices for advertising campaigns at different times (for example peak prices during busier periods).

1. From the **Displays** tab, select the display you wish to set prices for.
2. Select **Pricing** from the top-right Action menu.
3. From here you may set a baseline price. This will be the price which will be charged when no other price overrides it.
4. To create additional prices select the **Create** button and fill out the following window. Priority specifies which price should take precedence when multiple prices clash (for example if a one-off price occurs during a regularly scheduled price).

Note: *Prices set do not apply to campaigns run by the team that owns the display.*

9.3 Setting a Loop Block Duration

Loop block durations define the maximum available length of a campaign on a display. This time is used to calculate how many times a campaign should be shown within an hour, and how much paid advertising should be booked on a display at one time.

1. From the **Displays** tab, select the display you wish to set prices for.
2. Select **Pricing** from the Action menu in the top-right corner.
3. Under “Display Pricing Options”, enter the desired loop block duration.

Note: *Loop Blocks cannot be longer than an hour and are measured in seconds.*

9.4 Approving or Denying Campaigns

When selling advertising space to third parties, all campaigns that are not from the display's assigned team will require approval. This can be accomplished by navigating to the dashboard and selecting the **Pending** button. The display owner can preview the advertisement and then choose to either approve or deny the campaign. This gives the display owner the ability to prevent objectionable or inappropriate advertising from being shown on their displays. Once approved and paid for, a campaign cannot be cancelled by the display owner.

Chapter 10

Using Stripe

Payments in Adverpost are handled through Stripe, a third party payment processor. Any transaction that occurs in Adverpost happens through their secure and specialised payment systems. Charges that are incurred on the website carry a 6.75% + 30c surcharge for all transactions (as of February 2019, all charges in AUD). Any storage of payment and transaction information happens through Stripe and not Adverpost. **Note:** You can read more about Stripe, including their Terms of Service at <https://stripe.com/>.

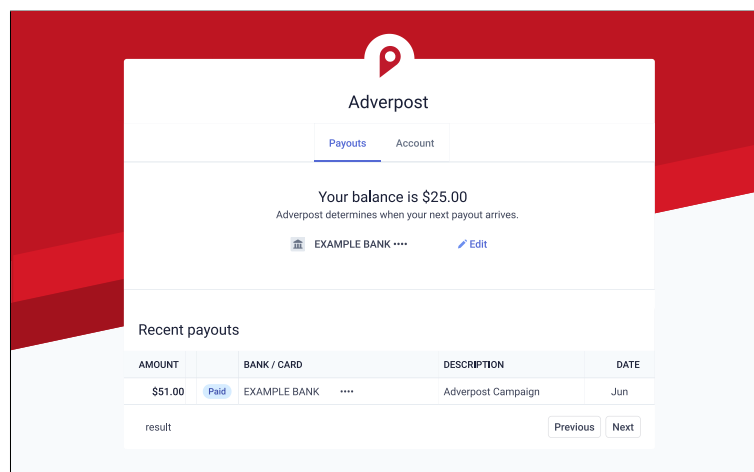


Figure 10.1: The Stripe dashboard provides a convenient and secure way to manage payment related information.

10.1 Adding Payment Details to an Account to Make Purchases

- Payment details can be added on account creation. In this case follow the prompts in the Stripe system when completing registration. This will save your credit card details to Stripe for future purchases.
- In other circumstances payment details are collected at checkout through Stripe. These details are saved to Stripe for future purchases.

10.2 Adding an Account to Sell Space

Note: Payments can be made to Individuals, Businesses and Non-Profits. Organisational accounts will require creation by someone with the legal ability to sign on behalf of the organisation.

1. From within the **Team Management** tab, click **Connect with Stripe** within the team information box.
2. Follow the third-party prompts to register the team's payment details through Stripe.

10.3 Managing Payment Details in Stripe

1. Once registered for Stripe access, click the **Stripe Dashboard** button within the **Team Management** tab.
2. You will be redirected to the payment tab in the Stripe Dashboard where you can see a history of transactions. Payment details can be updated from the Stripe Dashboard Account tab.

Chapter 11

Appendix

11.1 Future Expansion

The Adverpost system is continually expanding and aims to be the première method of transacting between data managers, data displays, data users, and data providers.

11.2 Troubleshooting and Configuration

11.2.1 General Troubleshooting

The Adverclient is designed to be resilient, particularly to network and electricity supply problems. Typically when network or electricity supply problems are encountered the client can reconnect itself within a reasonable timeframe, and most issues of this nature tend to resolve themselves quickly. A small delay between service restoration and client operation should be expected.

11.2.2 Network Condition Troubleshooting

If the Adverclient is having continued difficulties connecting to the Adverpost servers, it may be because of network filtering and firewall controls. This is particularly common on enterprise networks. The following is a list of outbound ports and domains which are required to be accessible for the client to function.

Required Ports 80 (HTTP), 123 (NTP), 143, 443 (HTTPS), 1112, 2600, 5670 (ZeroMQ), 6667, 6697, 8008, 8080

Required domains *.adverpost.com

Misc Outbound ICMP should not be blocked for the Adverclient. Adverclients must be able to access any E2V sources scheduled.

If it is not possible to provide such an environment, the Adverclient may require its own internet connection.