



## ARDI – Setting Up Augmented Reality

---

Optrix Pty. Ltd.

### **ABSTRACT**

This documentation covers the steps required to set your ARDI system up for use with the ARDI-AR Augmented Reality client.

# Overview

## What Does This Document Cover?

This document details the simple steps required to set up your system for use with Augmented Reality.

## Assumed Knowledge

This document is for ARDI administrators.

<b>ABSTRACT</b>	<b>1</b>
<b>Overview</b>	<b>2</b>
What Does This Document Cover?	2
Assumed Knowledge	2
Copyright	2
<b>Setting AR Marker Numbers</b>	<b>3</b>
The Process	3
What are Marker Numbers	3
Setting the Marker Number	3
Apply or Set First	4
Overlapping Marker IDs	4
<b>Installing Markers</b>	<b>5</b>
Markers Should Be Flat	5
Markers Should Not Pick Up Glare	5
Markers Should Not Be in Deep Shadows	5
Markers Should Be a Suitable Size	5
Markers Should Be High-Contrast	5

# Copyright

Copyright © Opatrix Pty. Ltd, 2016

All rights reserved.

No part of this publication may be distributed, or transmitted outside the organisation owning an ARDI license in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of noncommercial uses permitted by copyright law.

Opatrix Pty. Ltd.  
10/75 Cygnet Avenue, Shellharbour City  
Center, NSW, Australia  
[www.opatrix.com.au](http://www.opatrix.com.au)

# Setting AR Marker Numbers

## The Process

ARDI is ready for Augmented Reality applications straight away – you only need a single change to get AR working immediately.

You need to **set the AR tag number** for each asset with a marker.

## What are Marker Numbers

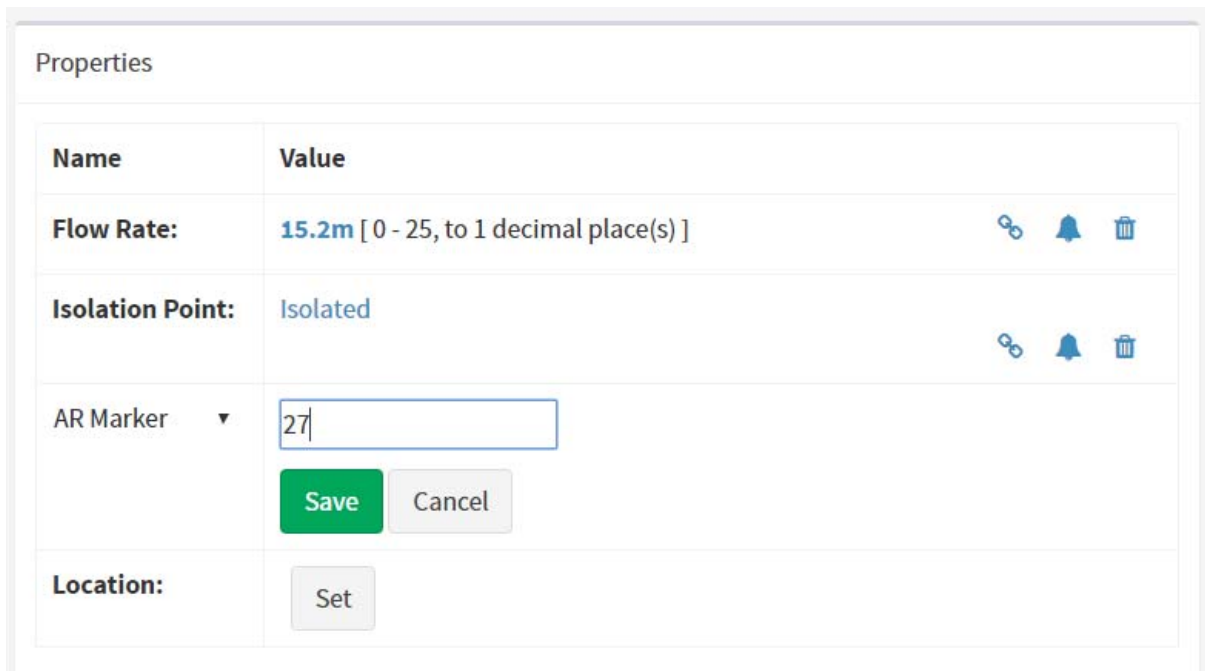
Each of the AR markers provided with your ARDI documentation package have a unique ID number (the file name gives the ID number).

All you need to do is go to the *details* for each asset when you attach a marker, and assign the “AR Marker” property.







## Setting the Marker Number

AR marker IDs are set just like any other property.

- Go to the ‘Details’ page for the asset
- In the droplist at the bottom of the list of properties, choose **AR Marker**
- Type in the marker number for the asset



The screenshot shows a 'Properties' form with a table of asset attributes. The 'AR Marker' property is currently selected and being edited.

Name	Value	
Flow Rate:	15.2m [ 0 - 25, to 1 decimal place(s) ]	  
Isolation Point:	Isolated	  
AR Marker ▾	<input type="text" value="27"/>	
	<input type="button" value="Save"/> <input type="button" value="Cancel"/>	
Location:	<input type="button" value="Set"/>	

## Apply or Set First

You can either apply the markers to your assets first, or do it the other way around – assign numbers first, then attach the markers.

However, the *fastest* method is to...

- Take a set of markers and a mobile device into the field
- Attach a marker to an asset
- Update the assets AR Marker ID in ARDI
- Verify it works by scanning the marker

This way you don't need to waste time in trying to find the *right* number from the pile – you simply attach it, set it and test it all in one go. It's the most time-efficient method of setting up your system.

## Overlapping Marker IDs

If you have densely packed or difficult-to-access instruments, several assets can *share* a marker ID. When someone scans the marker in ARDI, they'll be given a list of assets to choose from.

This can make it much easier to deal with cabinets and instrumentation at a distance.

# Installing Markers

There are a couple of guidelines when it comes to attaching the markers themselves.

## Markers Should Be Flat

For the best recognition, your markers should be installed on a flat, even surface. While customers have had some success attaching them to smooth curves such as pipes, flat surfaces are significantly better.

## Markers Should Not Pick Up Glare

If your markers are glossy, they should be installed where they don't pick up 'glare' (visible, bright reflections) from nearby light sources. This reflected light makes it impossible to accurately read the marker.

## Markers Should Not Be in Deep Shadows

If you have a brightly-lit area, it's best not to place markers in deep shadows – the lack of contrast can make it difficult for markers to be read from a distance.

This rule is *relative* though. If the entire area is dark, then there is no issue – the problem only occurs if you have a marker hiding in an area that is **much darker than its surroundings**.

## Markers Should Be a Suitable Size

The bigger your marker, the greater the distance it will read from. You should choose a marker size that is suitable for the distance you plan to read it from.

In good lighting conditions, a 50mm (2") marker can usually be read from 1-1.5m away, while larger markers like the 100mm (4") can be read from 2-3m.

## Markers Should Be High-Contrast

The media you print your markers on needs to have a lot of contrast between the *printing* and the *background*. Normally, we print our markers black on white vinyl, giving maximum contrast between the black squares and the white media.

They can also be printed on coloured backgrounds and stainless steel. The key here is that when viewed in black-and-white, the printed areas appear *dark* and the non-printed areas appear *light*.

Printing in colours other than black-and-white *may* effect recognition accuracy and distance, depending on local lighting.