Contents

Arena Display 2
ARN_HEIGHT = 36 * _1_YARD; 3
ARN_WIDTH = 60 * _1_YARD; 3
ARN_CX = SCR_CX; 3
ARN_CY = SCR_CY; 3
ARN_C2KZL = 12 * _1_YARD; 3
ARN_E2GHL = 12 * _1_YARD; 3
ARN_GH_SZ = 3 * _1_YARD; 3
ARN_BNDRY_TOP_Y = ARN_CY - (ARN_HEIGHT/2); 3
ARN_BNDRY_TB_LHS_X = ARN_CX - (ARN_C2KZL); 3
ARN_BNDRY_TB_RHS_X = ARN_CX + (ARN_C2KZL); 3
ARN_BNDRY_BOT_Y = ARN_CY + (ARN_HEIGHT/2); 4
ARN_BNDRY_LHS_X = ARN_CX - (ARN_WIDTH/2); 4
ARN_BNDRY_RHS_X = ARN_CX + (ARN_WIDTH/2); 4
ARN_KZ_LHS_X = ARN_CX - (ARN_C2KZL); 4
ARN_KZ_RHS_X = ARN_CX + (ARN_C2KZL); 4
ARN_GH_LHS_X = ARN_BNDRY_LHS_X + ARN_E2GHL; 4
ARN_GH_RHS_X = ARN_BNDRY_RHS_X - ARN_E2GHL; 4
ARN_GH_LR_YT = ARN_CY - (2 * ARN_GH_SZ); 4
ARN_GH_LR_YM = ARN_CY; 4
ARN_GH_LR_YB = ARN_CY + (2 * ARN_GH_SZ); 4
ARN_BNDRY_LHS_CX = ARN_CX - (ARN_C2KZL); 5
ARN_BNDRY_LHS_CY = ARN_CY; 5
ARN_BNDRY_RHS_CX = ARN_CX + (ARN_C2KZL); 5
ARN_BNDRY_RHS_CY = ARN_CY; 5
ARN_BNDRY_SC_RADIUS = ARN_WIDTH/2; 5

Arena Display

Evaluating parameters for the Quidditch display dimensions

```
localparam _1_YARD    = 12;   // Number of pixels per yard. To be used in Arena Scaling
localparam SCR_EDGE_L = 20;
localparam SCR_EDGE_R = 780;
```

```
localparam SCR_EDGE_T = 40;

localparam SCR_EDGE_B = 560;

localparam SCR_CX    = (SCR_EDGE_R - SCR_EDGE_L)/2 + SCR_EDGE_L;

localparam SCR_CY    = (SCR_EDGE_B - SCR_EDGE_T)/2 + SCR_EDGE_T;
```

ARN_HEIGHT = 36 * _1_YARD;
= 36 * 12 = 432 pixels

ARN_WIDTH = 60 * _1_YARD;
= 60 * 12 = 720 pixels

ARN_CX   = SCR_CX;
//arena centre x coordinate

= 400px

ARN_CY   = SCR_CY;
//arena centre y coordinate

=300px

ARN_C2KZL = 12 * _1_YARD;
//arena centre to keeper zone line

= 12* 12 = 144 pixels

ARN_E2GHL = 12 * _1_YARD;
//arena edge to goal Hooper line

= 12*12 = 144 pixels

ARN_GH_SZ = 3 * _1_YARD;
//goal Hooper size

= 3*12 = 36 pixels

ARN_BNDRY_TOP_Y   = ARN_CY - (ARN_HEIGHT/2);
//Top edge of the arena

= 300 – (432/2) = 84px

ARN_BNDRY_TB_LHS_X = ARN_CX - (ARN_C2KZL);
// LHS of the central rectangle

= 400 – 144 = 256px

ARN_BNDRY_TB_RHS_X = ARN_CX + (ARN_C2KZL);
//RHS of the central rectangle

400+144 = 544px

ARN_BNDRY_BOT_Y = ARN_CY + (ARN_HEIGHT/2);
//Bottom edge of the area

300 + (432/2) = 516px

ARN_BNDRY_LHS_X = ARN_CX - (ARN_WIDTH/2);
// LHS edge of the arena

= 400 – (720/2) = 40px

ARN_BNDRY_RHS_X = ARN_CX + (ARN_WIDTH/2);
// RHS edge of the arena

= 400 + (720/2) = 760px

ARN_KZ_LHS_X = ARN_CX - (ARN_C2KZL);
// X coord of the keeper zone line LHS

= 400 – 144 = 256px

ARN_KZ_RHS_X = ARN_CX + (ARN_C2KZL);
// X coord of the keeper zone line RHS

= 400 + 144 = 544px

ARN_GH_LHS_X = ARN_BNDRY_LHS_X + ARN_E2GHL;
//goal hoop lhs x coord

= 40+144 = 184px

ARN_GH_RHS_X = ARN_BNDRY_RHS_X - ARN_E2GHL;
//goal hoop rhs x coord

= 760 – 144 = 616px

ARN_GH_LR_YT = ARN_CY - (2 * ARN_GH_SZ);
//top goal hoop y coord

= 300 – (2*36) = 228px

ARN_GH_LR_YM = ARN_CY;
//middle goal hoop y coord

= 300px

ARN_GH_LR_YB = ARN_CY + (2 * ARN_GH_SZ);
//bottom goal hoop y coord

= 300 + (2*36) = 372px

ARN_BNDRY_LHS_CX = ARN_CX - (ARN_C2KZL);
// Centre of the LHS Semi-circle X coord

= 400 – 144 = 256px

ARN_BNDRY_LHS_CY = ARN_CY;
// Centre of the LHS Semi-circle Y coord

= 300px

ARN_BNDRY_RHS_CX = ARN_CX + (ARN_C2KZL);
// Centre of the RHS Semi-circle X coord

= 400 + 144 = 544px

ARN_BNDRY_RHS_CY = ARN_CY;
// Centre of= the RHS Semi-circle Y coord

=300px

ARN_BNDRY_SC_RADIUS = ARN_WIDTH/2;
// Radius of the Semi circles

= 720/2 = 360px