

Anthony Romrell's Notes for Advanced Rigging

See Starter Notes for Basic Rigging

I. Build Joint Structure

- ☐ A. Create FK Rig
- ☐ (1) >Joint Tool, ☐ Setting:
Orientation None
- ☐ (2) Rename Joints
- ☐ (3) Parent Joints
- ☐ (a) Select Child
- ☐ (b) Select Parent
- ☐ (c) Hit "p" Key
- ☐ (4) >Mirror Joints, ☐ Settings:
Mirror Across YZ

I. Hand

- ☐ B. Create IK Rig
- ☐ (1) >IK Handle Tool ☐ Setting: RPSolver
- ☐ (a) Select Shoulder Joint First
- ☐ (b) Select Wrist Joint Last
- ☐ C. Build Constraints,
- ☐ (1) Create Curve
- ☐ (2) Snap Curve Center To
IK Handle at Wrist Joint
- ☐ (3) Select Curve, shift select
IK Handle
 >Constrain>point
 ☐ Setting: *maintain offset*
- ☐ (4) Select Curve, shift select
Wrist Joint
 >Constrain>orient
 ☐ Setting: *maintain offset*
- ☐ (5) Create Curve
- ☐ (6) Snap Curve Center behind
Elbow Joint
 "d" Key Adjusts Center
 "v" Key Snaps To Point
- ☐ (7) Select Curve, shift select
IK Handle
 >Constrain>pole vector
- ☐ D. Rename Handle and Controls

2. Feet

- ☐ B. Create IK Rig
- ☐ (1) >IK Handle Tool ☐ Setting: RPSolver
- ☐ (a) Select Hip Joint First
- ☐ (b) Select Ankle Joint Last
- ☐ (2) >IK Handle Tool ☐ Setting: SCSolver
- ☐ (a) Select Next Joint in Hierarchy
- ☐ (b) Select Next Joint in Hierarchy
- ☐ (c) Repeat until every joint has an
IK Handle
- ☐ C. Build Constraints,
- ☐ (1) Create Curve
- ☐ (2) Snap Curve Center To
IK Handle at Ankle Joint
- ☐ (3) Select Curve, shift select
First IK Handle at foot
 >Constrain>parent
- ☐ (4) Repeat for every IK handle
in foot
- ☐ (5) Create Curve
- ☐ (6) Snap Curve Center in front
of Knee Joint
- ☐ (7) Select Curve, shift select
IK Handle at the Ankle
 >Constrain>pole vector
- ☐ D. Rename Handle and Controls

3. Back

- ☐ A. Create IK Spline Rig
- ☐ (1) >IK Spline Handle Tool
 ☐ Setting:
 Root on Curve
 Auto Create Curve
 Turn all other Setting Off
- ☐ (a) Select Joint above Root First
- ☐ (b) Select Joint under Neck Last
- ☐ B. Create Clusters,
- ☐ (1) Select Curve
- ☐ (2) Switch to Component Mode
- ☐ (3) Select Appropriate CVs
- ☐ (4) >Deform > Cluster
 ☐ Setting: *Relative off*
- ☐ (5) Repeat until every CV is a part
of one of Three Clusters
- ☐ C. Build Constraints,
- ☐ (a) Create 3 Curves
- ☐ (b) Snap each Curve Center To
a Cluster
- ☐ (c) Select a Curve,
Select adjacent Cluster,
- ☐ (d) >Constrain>parent
- ☐ (e) Repeat until all 3 clusters are
constrained to adjacent 3 Controls
- ☐ D. Rename all Joints, Handles and Controls
- ☐ E. Hide Clusters and back curve
- ☐ F. Select IK Spline Handle
- ☐ (1) Select "Twist" in Chanel Box
- ☐ (2) Right Click "Twist" and Select
> Expressions
- ☐ (3) create expression:
 hanndleName.twist =
 UpperBack.ry - LowerBack.ry
(Use one line and change variables for the
controls Real Name)

4. Head, and Neck, and Shoulders

- ☐ A. Build Constraints,
- ☐ (1) Create Curve
- ☐ (2) Snap Curve Center To
Joint, Handle or Cluster
- ☐ (3) Select Curve,
Select Joint To Constrain,
 >Constrain>orient
- ☐ (4) Now reverse order:
Select Joint, Select Curve
To Constrain,
 (5) >Constrain>point
- ☐ B. Rename all Controls

5. Driven Animation for Fingers and Jaw

- ☐ A. Create Driven Key
- ☐ (1) >IK Handle Tool (both RP, and SC Solvers)
- ☐ >Animate>Set Driven Key >Set>☐
- ☐ (a) Load Driver
- ☐ (b) Load Driven
- ☐ (c) Key "Neutral" Position
- ☐ (d) Reposition Driver
- ☐ (e) Reposition Driven
- ☐ (f) Key "New" Position
- ☐ (g) Repeat Process