

BlockDigitalPulseGen.java

```
package net.minecraft.src;

//Created by MoareAI

import java.util.Random;

public class BlockDigitalPulseGen extends BlockContainer
{
    //Class parameters
    public BlockDigitalPulseGen(int id, int textureon, int textureoff)
    {
        super(id, mod_LogicalGates.TextureGateOff, Material.circuits);
        setBlockBounds(0.0F, 0.0F, 0.0F, 1.0F, 0.125F, 1.0F);
        setLightValue(0.625F);
        setHardness(0.0F);
        if (!mod_MiscDigital.ReduceTexture)
        {
            TextureOn = textureon;
            TextureOff = textureoff;
        }
        else
        {
            TextureOn = mod_LogicalGates.TextureGateOn;
            TextureOff = mod_LogicalGates.TextureGateOff;
        }
    }

    //Use render types
    public boolean renderAsNormalBlock()
    {
        return false;
    }

    //Block texture
    public int getBlockTextureFromSideAndMetadata(int side, int meta)
    {
        if(meta <= 7)
            return blockIndexInTexture = TextureOff;
        else
            return blockIndexInTexture = TextureOn;
    }

    //Block type (preset)
    public int getRenderType()
    {
        return mod_MiscDigital.RenderGate;
    }

    //The function part 1
    public void updateTick(World world, int x, int y, int z, Random random)
    {
        int meta = world.getBlockMetadata(x, y, z);
        boolean InputA = func_InputA(world, x, y, z, meta);
        TileEntity tileentity = world.getBlockTileEntity(x, y, z);
        if(InputA && meta <= 11 && meta > 7)
        {
            world.setBlockMetadataWithNotify(x, y, z, meta-4);
        }
        world.setBlockTileEntity(x, y, z, tileentity);
    }

    //The function part 2
    public void onNeighborBlockChange(World world, int x, int y, int z, int id)
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# BlockDigitalPulseGen.java

```

{
    if(!canBlockStay(world, x, y, z))
    {
        dropBlockAsItem(world, x, y, z, world.getBlockMetadata(x, y, z));
        world.setBlockWithNotify(x, y, z, 0);
        return;
    }
    int meta = world.getBlockMetadata(x, y, z);
    boolean InputA = func_InputA(world, x, y, z, meta);
    TileEntityPulseGen tileentitypulsegen =
(TileEntityPulseGen)world.getBlockTileEntity(x, y, z);
    if(!InputA && meta <= 7 && meta > 3)
    {
        world.setBlockMetadataWithNotify(x, y, z, meta-4);
    }
    else
    if(InputA && meta <= 3)
    {
        world.setBlockMetadataWithNotify(x, y, z, meta+8);
    }
    world.scheduleBlockUpdate(x, y, z, blockID, tileentitypulsegen.pulse);
}

protected TileEntity getBlockEntity()
{
    return new TileEntityPulseGen();
}

//Signal out
public boolean isPoweringTo(IBlockAccess iblockaccess, int x, int y, int z, int
side)
{
    int meta = iblockaccess.getBlockMetadata(x, y, z);
    if(meta == 8 || meta == 12)
        return side == 3;
    if(meta == 9 || meta == 13)
        return side == 4;
    if(meta == 10 || meta == 14)
        return side == 2;
    if(meta == 11 || meta == 15)
        return side == 5;
    else
        return false;
}

//Signal in, back
private boolean func_InputA(World world, int x, int y, int z, int meta)
{
    int side = meta%4;
    if (side == 0)
        return world.isBlockIndirectlyProvidingPowerTo(x, y, z+1, 3) ||
((world.isBlockIndirectlyProvidingPowerTo(x+1, y-1, z+1, 4) ||
world.isBlockIndirectlyProvidingPowerTo(x-1, y-1, z+1, 5) ||
world.isBlockIndirectlyGettingPowered(x, y-1, z+1)) && world.getBlockId(x, y, z+1) ==
Block.redstoneWire.blockID);
    if (side == 1)
        return world.isBlockIndirectlyProvidingPowerTo(x-1, y, z, 4) ||
((world.isBlockIndirectlyProvidingPowerTo(x-1, y-1, z+1, 3) ||
world.isBlockIndirectlyProvidingPowerTo(x-1, y-1, z-1, 2) ||
world.isBlockIndirectlyGettingPowered(x-1, y-1, z)) && world.getBlockId(x-1, y, z) ==
Block.redstoneWire.blockID);
    if (side == 2)
        return world.isBlockIndirectlyProvidingPowerTo(x, y, z-1, 2) ||
((world.isBlockIndirectlyProvidingPowerTo(x-1, y-1, z-1, 4) ||

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# BlockDigitalPulseGen.java

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world.isBlockIndirectlyProvidingPowerTo(x+1, y-1, z-1, 5) ||
world.isBlockIndirectlyGettingPowered(x, y-1, z-1)) && world.getBlockId(x, y, z-1) ==
Block.redstoneWire.blockID);
    if (side == 3)
        return world.isBlockIndirectlyProvidingPowerTo(x+1, y, z, 5) ||
((world.isBlockIndirectlyProvidingPowerTo(x+1, y-1, z-1, 3) ||
world.isBlockIndirectlyProvidingPowerTo(x+1, y-1, z+1, 2) ||
world.isBlockIndirectlyGettingPowered(x+1, y-1, z)) && world.getBlockId(x+1, y, z) ==
Block.redstoneWire.blockID);
        return false;
    }

    public boolean blockActivated(World world, int x, int y, int z, EntityPlayer
entityplayer)
    {
        TileEntityPulseGen tileentitypulsegen =
(TileEntityPulseGen)world.getBlockTileEntity(x, y, z);
        entityplayer.addChatMessage("Pulse Generator");
        ModLoader.OpenGUI(entityplayer, new GuiPulseGen(tileentitypulsegen));
        return true;
    }

    //Rotation when placed
    public void onBlockPlacedBy(World world, int x, int y, int z, EntityLiving
entityliving)
    {
        int meta = ((MathHelper.floor_double(((double)((entityliving.rotationYaw * 4F) /
360F) + 0.5D) & 3) + 2) % 4;
        world.setBlockMetadataWithNotify(x, y, z, meta);
        int id = blockID;
        onNeighborBlockChange(world, x, y, z, id);
    }

    //Notifies neighbor blocks when added
    public void onBlockAdded(World world, int x, int y, int z)
    {
        super.onBlockAdded(world, x, y, z);
        world.notifyBlocksOfNeighborChange(x+1, y, z, blockID);
        world.notifyBlocksOfNeighborChange(x-1, y, z, blockID);
        world.notifyBlocksOfNeighborChange(x, y, z+1, blockID);
        world.notifyBlocksOfNeighborChange(x, y, z-1, blockID);
        world.notifyBlocksOfNeighborChange(x, y-1, z, blockID);
        world.notifyBlocksOfNeighborChange(x, y+1, z, blockID);
    }

    //When dropped
    public int idDropped(int i, Random random)
    {
        return mod_MiscDigital.ItemPulseGen.shiftedIndex;
    }

    //Tests if the block is solid
    public boolean isOpaqueCube()
    {
        return false;
    }

    //Tests if the block may provide power. Used for drawing Redstone Wires
    public boolean canProvidePower()
    {
        return true;
    }

    //Tests where the block may be placed

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BlockDigitalPulseGen.java

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public boolean canPlaceBlockAt(World world, int x, int y, int z)
{
    if(!world.isBlockOpaqueCube(x, y - 1, z))
        return false;
    else
        return super.canPlaceBlockAt(world, x, y, z);
}

//Tests if the block may stay in the world
public boolean canBlockStay(World world, int x, int y, int z)
{
    if(!world.isBlockOpaqueCube(x, y - 1, z))
        return false;
    else
        return super.canBlockStay(world, x, y, z);
}
private final int TextureOn;
private final int TextureOff;
}
```