G.Force Remote Control

Multi-Channel Receiver - Series II

INSTALLATION and OPERATING INSTRUCTIONS

The GATE COMMAND Remote Control is designed to provide the ultimate in convenience and safety to perform tasks remotely. It is a radio frequency (RF) controlled device that allows operation of a gate, chute, etc. from a hand held transmitter operated remotely. The Transmitter, which operates at 418 MHz FM, transmits encoded information to the Receiver, which then decodes the information and performs the desired function. When coupled to the electrical driver, this system may be used to operate a swinging gate, raise a chute, open a valve, etc. The Transmitter and Receiver are designed to operate within 300' but actual range is dependent on operating environment.

Features :

- Simplicity of design and quality of engineering.
- User selectable security code.
- Power On/Off switch on Receiver.
- LED Indicator lights.
- Latched or Momentary data selectable by channel.
- 9v Transmitter Battery
- Ease of installation.
- All controls can be by either Manual Switch or Remote Control
- Multiple Transmitters can operate a single Receiver.
- Multiple Receivers can be operated by a single Transmitter.
- Up to 4 different Channels can be operated by one Receiver

Manufactured By: **Brehon Agrisystems Inc.**

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Specifications:

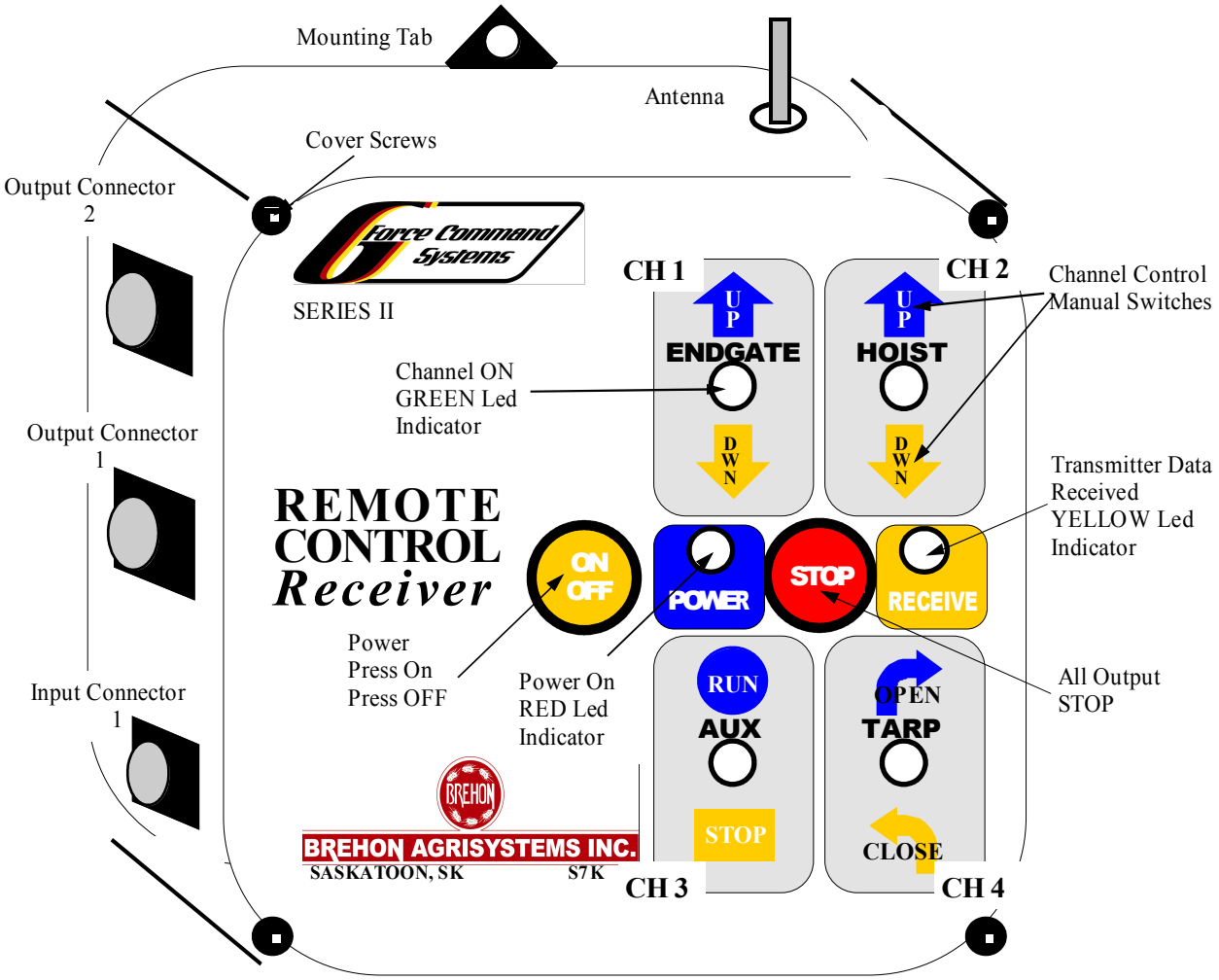
Transmitter:

Power:	9 volt dc battery
Frequency:	418 MHz
Modulation:	FM
Indicators:	Power/Transmit Red LED
Case Size:	2.5" x 6.2" x .8"
Weight:	.25 lb.
Range:	300'+ (depending on environment)
Antenna:	1.3" Fixed Mini Tuned
Security Code:	3^8 selections
Functions:	2 to 9 Button (depending on Model)

Receiver:

Power In:	12 vdc
Power Out:	12 vdc @ 10 amps max
Standby:	40mA
Security Code:	2^8 selections
Power Input:	8' non-terminated 16ga wire on Plug-and-Lock Connector
Outputs:	8' non-terminated 16ga wires on Plug-and-Lock Connector
Indicators:	Power On LED
	Receive RF Data Yellow LED
	Channel Active Green LED
Options:	Latched/Momentary Data
	Multi-Channel (1-4)
	Main Power On/Off Switch
	Manual Switch Control
Antenna:	7" Flexible Tuned
Case Size:	5" x 5" x 2.25"
Weight:	1 lb.

RECEIVER



INSTALLATION INSTRUCTIONS

Connecting Power to the Receiver:

Using sufficiently heavy gage wire, (not included), connect +12vdc and Ground wires to the Power Input wires as marked. The polarity **must** be correct as follows: **+12v on the WHITE wire**, and **GROUND on the BLACK** wire. Power may be supplied from the fused side of the ACCessories on the ignition switch so that the Receiver is only powered while the vehicle ignition key is on or alternatively, connected using an inline fuse (20 Amp recommended) directly to battery power. When the Power ON/Off switch on the Receiver is turned on the Red LED indicator light should be ON indicating normal operation. Press the "ON/OFF" button on the Receiver label to turn the power On and Off.

Connecting the Outputs:

Connect the channel output wires to the desired electrical drivers. The standard pinout configuration is as follows:

OUTPUT CONN 1 (Centre left side of case) (Pins ccw from "dot" pin 1 looking into connector)

CH 1 Pin 1 WHITE (+12vdc when "up" button pressed)
CH 1 Pin 2 BLACK (+12vdc when "down" button pressed)
CH 2 Pin 3 GREEN (+12vdc when "up" button pressed)
CH 2 Pin 4 RED (+12vdc when "down" button pressed)

OUTPUT CONN 2 (Top left side of case) (Pins ccw from "dot" pin 1 looking into connector)

CH 3 Pin 1 WHITE (+12vdc when "up" button pressed)
CH 3 Pin 2 BLACK (+12vdc when "down" button pressed)
CH 4 Pin 3 GREEN (+12vdc when "up" button pressed)
CH 4 Pin 4 RED (+12vdc when "down" button pressed)

If the driver operates in the wrong direction when activated, reverse the two wires.

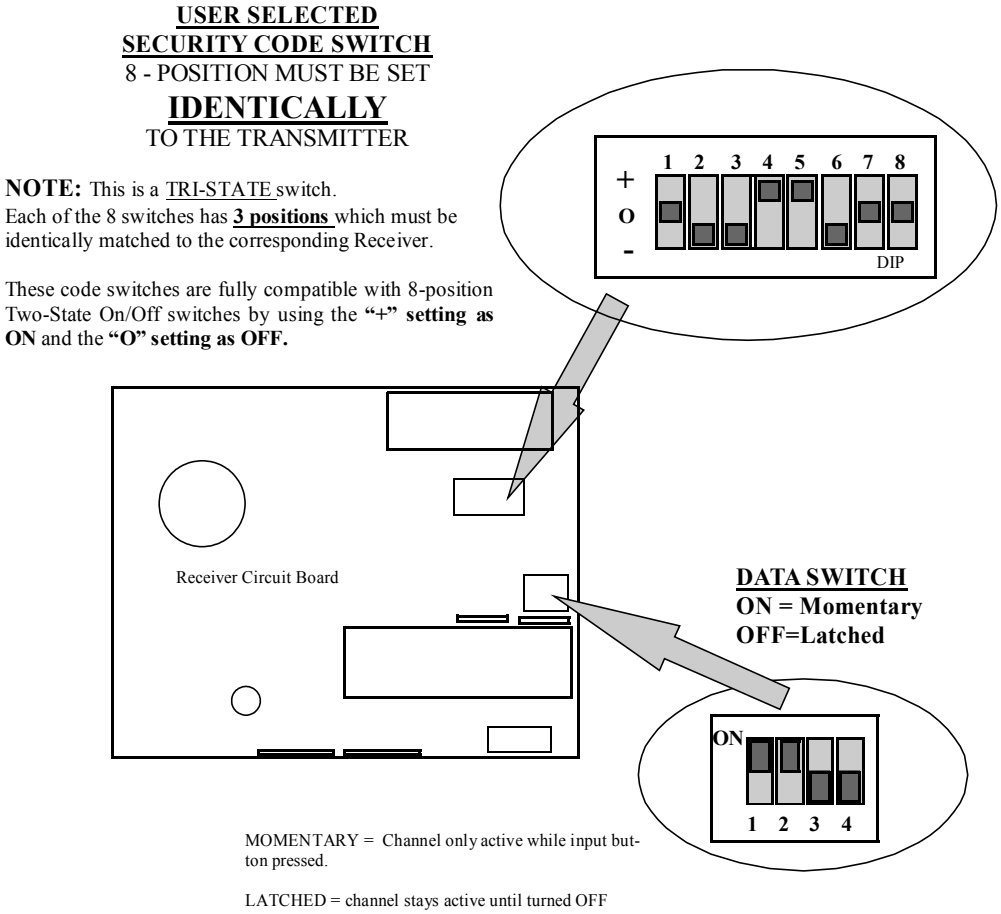
NOTE: If there is a second external control on a driver, it is recommended that diodes be installed to protect the equipment.

General Operation:

RECEIVER:

The Receiver is equipped with a Power On/Off switch on the front panel. When the switch is Pressed ON, the Red LED should be lit indicating normal operation. Press again to turn Off.

The Receiver is equipped with an 8-position switch used to set the USER SECURITY CODE. The security code is provided to prevent unwanted operation of the Receiver by other devices. Only a Transmitter with identical switch settings will be able to "talk" to this Receiver. When the switches are set identically and the transmitter "talks" to the Receiver, the yellow "RECEIVE" light will come on. This indicates that valid data with a matching security code has been received. Position these switches to any desired On/Off pattern for your own security code. REMEMBER: The 8-position switch on the Transmitter must be set IDENTICALLY. To access the security code switch, remove the four #8 x ½" screws on the Receiver front panel, and gently remove the panel.



Each Channel can be operated using the Transmitter, or alternatively, by pressing the desired UP/DOWN arrows on the Receiver to activate the Manual Switches. Whenever the selected channel is operating, the Green LED indicating power to that device, will be lit.

The DATA SWITCH is used to select how each output channel will operate when using the Transmitter. The four-position switch controls channels 1 to 4 respectively. Each channel can be individually set. If the Data Switch is set to **ON** (momentary operation) that **channel will only operate while the Transmitter button (or Manual Switch) is depressed**, and will stop when the button is released. If the Data Switch is set to **OFF** (latched operation) that **channel will continue to operate** after the Transmitter button is released, and until another signal is eventually received.

CHANNEL 3 CONTINUOUS: All of the channels EXCEPT Channel 3, can only be operated one at a time. That is to say, if channels 1, 2, or 4 are set for latched mode, operating a different channel will turn OFF the operating channel and perform the new function received. Channel 3 is specially designated in the software to continue to operate independently of the other channels. This is so that, for example,a clean out auger on channel 3 would continue to operate while the endgate is also opened/closed. As this is a function of the standard software program in each unit, please consult Brehon Agrisystems Inc. if additional functionality is required.

The ALL OUTPUT STOP button turns off ALL outputs and is only used where one or more of the channels is set to Latched Data.

The Receiver has two automatically resetting fuses. Fuse F1 (1 Amp) is intended to protect the RF receiver and data circuitry, and Fuse F2 (10 Amp) is intended to protect the relays from overload. These fuses will automatically reset when cooled

The Receiver power should be turned Off when not in use to prevent undesired operation.

TRANSMITTER:

The Transmitter is powered by a 9v battery which, when installed, should light the red "power" light when the OFF/STANDBY switch is in the STANDBY position and a function switch is pressed. If the battery does not exceed 7 volts the Power light will not light, indicating battery replacement is required.

Set the 8-position switch to your own security code which matches the code on the Receiver to which it is to "talk". Note that any number of Transmitters can "talk" to the same Receiver as long as they have the security code which matches the receiver.

The OFF/STANDBY switch (if equipped) must be in the STANDBY position before the Transmitter can be activated to prevent unintentional operation of the Receiver. The OFF/STANDBY switch does not control the Red led but the RED Led will NOT turn on when a transmitter function button is pressed if the switch is in the OFF position. To control the Receiver, slide the OFF/STANDBY switch to STANDBY, then press the desired channel function buttons. Slide the switch to OFF when no control is desired. The transmitter does not use any battery power with the switch in the STANDBY position unless a channel function control button is also pressed.

The STOP button turns off ALL Receiver outputs and is only used where one or more of the channels is set to Latched Data.

To access the Transmitter security code switch, remove the 4 screws from the back of the case and separate the case.

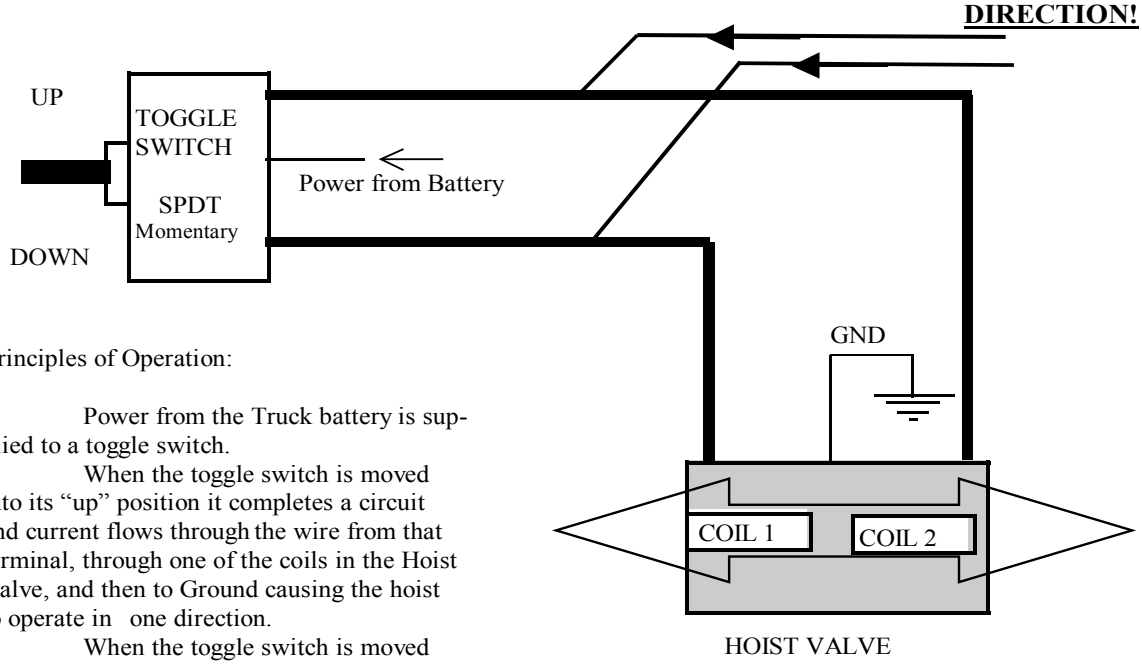
Think Safety:

Do Not install or operate where damage to property or persons may occur.

ELECTRIC HOIST SYSTEMS
Installation Instructions

System Type: Active 12v

DIODE WIRES
Connect to Hoist Channel Output from Receiver.
NOTE DIODE DIRECTION!



Principles of Operation:

Power from the Truck battery is supplied to a toggle switch.

When the toggle switch is moved into its "up" position it completes a circuit and current flows through the wire from that terminal, through one of the coils in the Hoist Valve, and then to Ground causing the hoist to operate in one direction.

When the toggle switch is moved into its "down" position it completes an alternate circuit and current flows through the wire from that terminal, through the other coil in the Hoist Valve, and then to Ground causing the hoist to operate in the opposite direction.

NOTE: There are other possible operating configurations. If your control does not match the one described contact the factory to ensure proper installation and operation.

The Gate Command remote control system equipped with Electric Hoist Output can be connected directly to an electric system hoist of this type, and both systems can continue to operate. Connect the two wires from the Gate Command Receiver directly to the Toggle Switch using the Diode Wires as marked.

If the Hoist operates in the wrong direction when activated then exchange the position of the two wires.

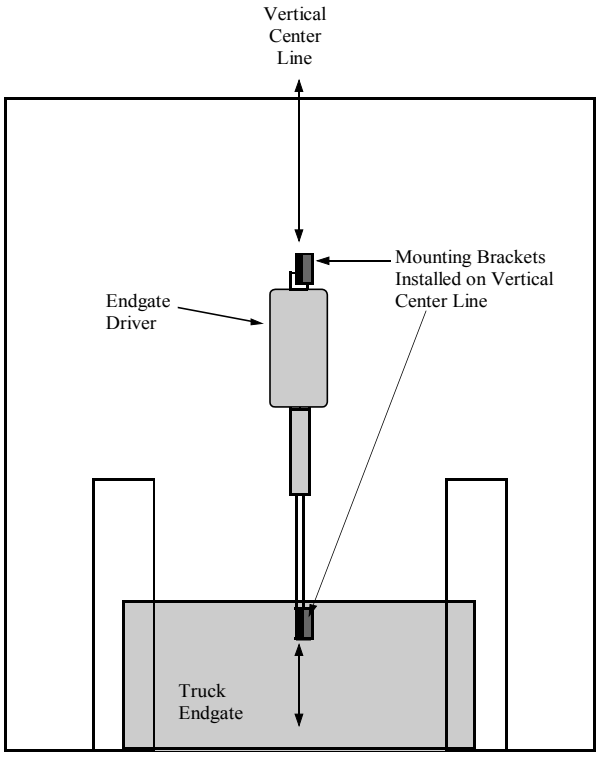
Electric Cylinder Installation:

Before mounting the Electric Cylinder on the end gate, determine the correct location for installing the mounting tabs by extending the cylinder and retracting to ensure required stroke. This can be accomplished once power is supplied to the Receiver by pressing the ENDGATE manual switches on the Receiver.

Ensure the grain chute operates freely. Position the mounting tabs such that when the grain chute is fully opened the cylinder should be almost fully retracted. Check to ensure that the distance to fully close does not exceed the electric cylinder stroke length and that the electric cylinder can be mounted free of any obstacles. Weld or drill/bolt the mount tabs in position on the vertical center-line of the grain chute and box end panel at the desired positions.

Attach the cylinder main body to the top mount tab using the bolt and locknut supplied. Attach the cylinder piston to the moveable grain chute with the snap pin supplied. Route the electrical wire and connect using the insulated crimp terminals supplied. Secure all wires using the cable ties provided.

NOTE: The existing lift handle on the endgate does not have to be removed, however, it must not be able to lock in any position. This could cause the electric cylinder to stall resulting in reduced service life or destruction.



ENDGATE DRIVER INSTALLATION DRAWING

Hoist Driver Installation:

Warning: Be sure truck hoist is securely blocked and valve lever activated safely in both directions before beginning installation!

Before beginning the installation carefully note which direction the lever arm on the valve moves for "up" and "down" and note the Hoist Driver movement as indicated on the label.

With the truck box blocked and resting securely and the engine shut off, operate the hoist control in both directions to ensure there is no pressure on the hydraulic valve and the safety blocks are securely positioned.

Measure the distance the valve lever arm moves in either direction from its center rest position at the mounting pin.

The hoist driver replaces the existing flexible cable control by bolting directly in its place on the top of the hydralic valve/pump reservoir.

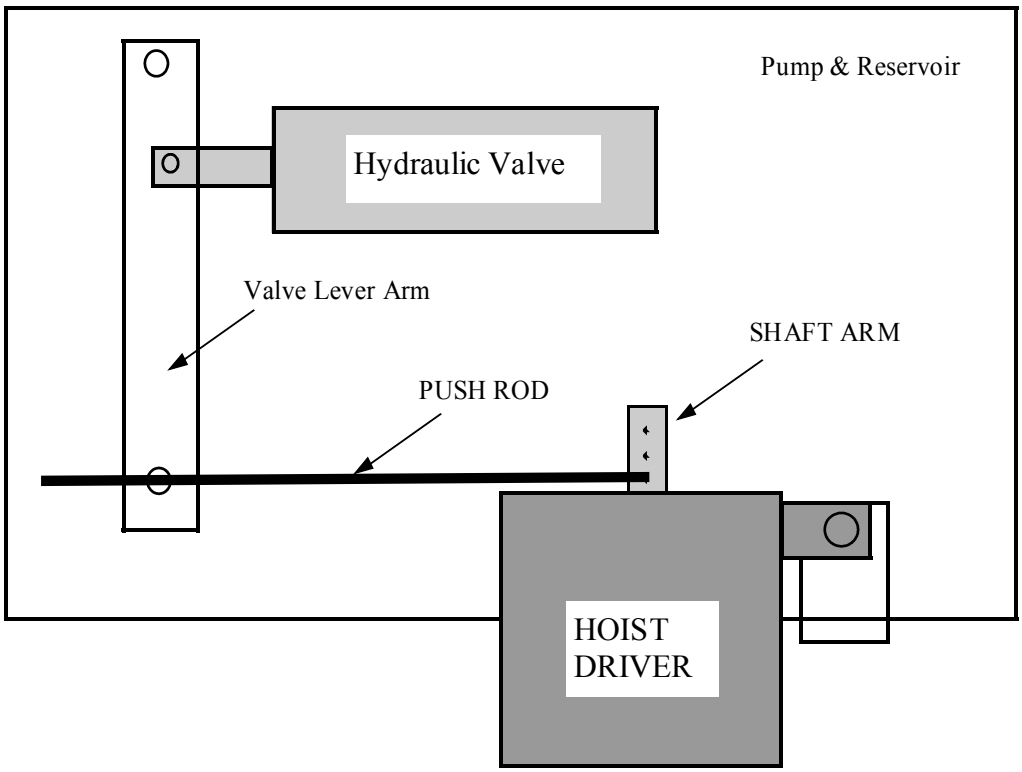
Disconnect the existing flexible cable control from the valve arm and unbolt the cable from the reservoir bracket.

Select the appropriate hole to install the Hoist Driver Push Rod. The distance from the center of the Hoist Driver Shaft Arm to the selected hole should be roughly the same as **but not greater than** the distance the valve lever arm moves in either direction from its center rest position at the mounting pin. The Hoist Driver Shaft Arm is designed to turn 80 degrees in either direction. If it is stalled in either direction because the valve lever arm is not free to move, the Hoist Driver may be damaged or destroyed.

Slide the Hoist Driver Push Rod through the valve lever arm cable clamp and bolt the Hoist Driver to the reservoir mounting tab using the 5/16 x ¾ bolt, nut, flat washer, and lockwasher, provided. Properly installed, the Hoist Driver Push Rod should be at right angles to the Hoist Driver Shaft Arm. Ensure there is clearance for the movement of the valve lever arm, push rod, and shaft arm.

Tighten the existing valve lever arm cable clamp on to the Hoist Driver Push Rod.

Connect one end of the pre-wired 4 conductor hoist cable back to the Hoist Driver. Route the other end to the Receiver and connect to the Receiver HOIST CONTROL connector. Secure the cable to the truck chassis as required. Note: It does not matter which end is which.



HOIST DRIVER INSTALLATION DRAWING