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// motors.cpp: Source file of hardware abstraction for motors and slewing
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#include "../include/motors.hpp"

void motor_t::set(int _power) {
    power = motors::slew::list[port].power = _power * inverted * scale;
}

namespace motors {
    void set(motor_t motor, int power) { motor.set(power); }

    int get(motor_t motor) { return motor.power; }

    motor_t init(unsigned char port, int inverted, float slewRate, float scale) {
        motor_t motor;
        motor.port = port;
        motor.inverted = inverted;
        motor.slewRate = slewRate;
        motor.scale = scale;
        slew::list[motor.port] = motor;
        return motor;
    }

    namespace slew {
        motor_t list[11];
        TaskHandle handle;

        void _slew(void* none) {
            unsigned long int current;
            while (true) {
                current = millis();
                for (size_t i = 1; i <= 10; i++) {

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        motorSet(i,
            (int)(((list[i].power - motorGet(i)) * list[i].slewRate) +
                ((list[i].power >= motorGet(i))
                    ? (current - list[i].tlast - slewWait)
                    : (-1 * (current - list[i].tlast - slewWait)))) +
            motorGet(i)));
        list[i].tlast = current;
    }
    delay(slewWait);
}
free(none);
}

void init(void) {
    motor_t default_motor;
    default_motor.inverted = 1;
    default_motor.slewRate = 1;
    default_motor.scale    = 0;
    for (size_t i = 1; i <= 11; i++) {
        list[i]            = default_motor;
        default_motor.port = i;
    }
    handle = taskCreate(&_slew, TASK_DEFAULT_STACK_SIZE, NULL,
        TASK_PRIORITY_DEFAULT + 1);
}
} // namespace slew
} // namespace motors

```